ISTRUZIONI

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Basta cliccare su un pulsante di collegamento per andare alla pagina indicata.

Si può continuare la consultazione scorrendo le pagine oppure usare i pulsanti di ritorno all'indice.

Il Catalogo Interattivo segue l'ordine delle pagine della pubblicazione cartacea,

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INSTRUCTIONS

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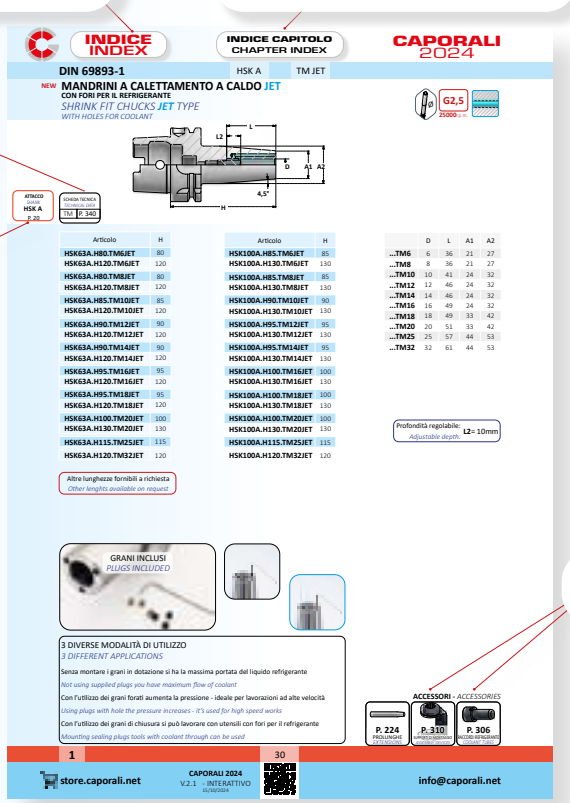
START

PORTA ALL'INDICE PRINCIPALE
TO MAIN INDEX

RIPORTA ALL'INDICE DEL CAPITOLO
TO CHAPTER INDEX

PORTA ALLA SCHEDA TECNICA DEL PRODOTTO
PRODUCT TECHNICAL DATA

PORTA ALLA PAGINA CON LE DIMENSIONI DELL'ATTACCO
TO PAGE WITH SHANK DIMENSIONS



Certificazione del Sistema di Gestione per la Qualità

ISO9001

Quality Management System Certification

IL CATALOGO

I DISEGNI SONO RAPPRESENTAZIONI ESEMPLIFICATIVE DELLE GAMME DI PRODOTTI

LE DIMENSIONI E LE CARATTERISTICHE TECNICHE DEI PRODOTTI POSSONO VARIARE NEL TEMPO

VARIAZIONI RILEVANTI DI DIMENSIONI O CARATTERISTICHE TECNICHE VERRANNO COMUNICATE VIA NEWSLETTER

LA VERSIONE DIGITALE DEL CATALOGO AGGIORNATA È DISPONIBILE SU **www.caporali.net** NELL'AREA DOWNLOAD

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PER ACQUISTARE ONLINE ISCRIVERSI AL PORTALE **store.caporali.net**

THE CATALOGUE

DRAWINGS ARE EXAMPLES OF RANGE OF PRODUCTS

SIZES AND TECHNICAL FEATURES OF PRODUCTS MAY VARY OVER TIME

IMPORTANT VARIATIONS IN SIZES AND TECHNICAL FEATURES WILL BE COMMUNICATED BY NEWSLETTER

*UPDATED DIGITAL VERSION OF CATALOGUE IS AVAILABLE ON **www.caporali.net** IN DOWNLOAD AREA*

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- Oggetto delle vendite regolate dalle presenti condizioni generali sono i prodotti indicati nei listini della Gaetano Caporali S.r.l. in vigore al momento dell'invio dell'ordine di acquisto da parte del cliente, con le specifiche ivi indicate.
- Ciascun ordine del cliente, da inviarsi alla G. Caporali S.r.l. per iscritto, si intende fermo e vincolante per il cliente sino alla relativa conferma d'ordine e comunque non oltre 7 giorni dal suo ricevimento. Si considerano inviati per iscritto dal cliente gli ordini ricevuti dallo store on-line (store.caporali.net) oppure tramite email.
- La consegna di una quantità di prodotti speciali a disegno che superi o sia inferiore del 10% rispetto alla quantità ordinata e accettata è da ritenersi conforme all'ordine.
- Salvo quanto diversamente pattuito per iscritto tra le parti, i prezzi dei prodotti sono quelli risultanti dal listino prezzi della G. Caporali S.r.l. in vigore al momento della conferma d'ordine.
- I prezzi non comprendono le spese di trasporto e di spedizione.
- Il pagamento si intende dovuto, a seconda delle condizioni di pagamento pattuite e confermate sulla fattura. Indipendentemente da quanto pattuito dalle parti con riferimento alla modalità di pagamento, qualsiasi pagamento si intende eseguito o dovuto presso la sede della G. Caporali S.r.l.. Il rilascio di effetti cambiari o assegni non vale quale pagamento. Sono in ogni caso a carico dell'acquirente il costo di bollatura degli effetti e le relative spese bancarie.
- La G. Caporali S.r.l., nel caso in cui il cliente ritardi totalmente o parzialmente un pagamento, può sospendere qualsiasi consegna in corso, risolvere il relativo contratto e trattenere a titolo di risarcimento, fino a concorrenza del danno patito, qualsiasi somma incassata anticipatamente, senza pregiudizio alcuno al diritto di pretendere ulteriori danni.
- La consegna dei prodotti è da intendersi Ex Works, (Incoterms 2000), Cinisello Balsamo, Milano, Italia. Il cliente si obbliga a nominare uno spedizioniere o un vettore entro la data di prevista consegna indicata dalla G. Caporali S.r.l. nella conferma d'ordine.
- La G. Caporali S.r.l. garantisce la conformità alla conferma d'ordine nonché l'assenza di difetti di materiale o lavorazione nei prodotti, purché impiegati in normali condizioni di utilizzo. Salvo quanto diversamente specificato per iscritto dalla G. Caporali S.r.l., la garanzia opera per un periodo di 12 mesi dalla data di consegna dei prodotti e non può in nessun caso essere sospesa o prolungata in conseguenza del mancato utilizzo dei prodotti, anche se dovuto ad interventi di riparazione in garanzia.
- L'importo minimo per l'evasione dell'ordine è di € 30,00 netti, IVA esclusa.
- L'importo minimo per il pagamento tramite ricevuta bancaria a fine mese è di € 100,00 netti, IVA esclusa; qualora tale valore non sia raggiunto la G. Caporali S.r.l. applicherà l'addebito di € 5,00 netti per il recupero parziale delle spese di gestione.
- Le segnalazioni di non conformità e richieste di reso devono essere inviate via e-mail all'indirizzo info@caporali.net.
- Le richieste di reso per errata ordinazione non saranno accettate d'ufficio se pervenute oltre 60 giorni dalla data del D.D.T. di vendita.
- In caso di reso per errata ordinazione il costo del trasporto è a carico del cliente.
- Ci riserviamo il diritto di rifiutare il reso in caso di merce usata o danneggiata e di applicare un addebito in caso di imballo originale non integro.

- The object of sales regulated by the present general sales conditions are the products indicated in the price lists of Gaetano Caporali S.r.l. applicable when the purchase order is transmitted by the client, with the specifications indicated.
- Every client's order, to be sent to G. Caporali S.r.l. in writing, will be considered firm and binding for the client until receipt of the relative confirmation and in any case no later than 7 days from receipt. Written orders sent by clients will be considered received by our store on-line (store.caporali.net) and email.
- The delivery of a quantity of special products in according to the drawing of the customer that exceeds or is less than 10% compared with the quantity ordered and accepted is to be considered compliant with the order.
- Save any other agreements made in writing between the parties, the prices of products are the ones indicated in the price list of G. Caporali S.r.l. applicable when the order confirmation is issued.
- Payment will be considered due ,in according with payment conditions confirmed in the invoice.
- Regardless of any agreements made between the parties with reference to payment methods, any payment will be considered made or due in the G. Caporali's offices. The emission of bills or cheques will not be considered as valid payment. All costs related to stamping of bills and relative back charges will be borne by the buyer.
- Prices do not include transport or despatch costs of the products and any other cost not specifically indicated in the order confirmation.
- If the client delays a payment totally or partially, G. Caporali S.r.l. may suspend any pending delivery, rescind the relative contract and withhold any amount paid in advance as compensation, until payment of the damage agreed, without compromising the right to claim for further damages.
- Delivery of the products is to be considered Ex Works, (Incoterms 2000) Cinisello Balsamo , Milano, Italy. The client undertakes to nominate a forwarding agent or a carrier within days from communication by G. Caporali S.r.l. to the client that the products are ready for despatch according to the expected despatch date indicated in the order confirmation.
- G. Caporali S.r.l. guarantees compliancy with the order confirmation as well as the absence of faults in the materials or production of the products, as long as they are used in normal conditions of use. Save any different specifications made in writing by G. Caporali S.r.l., the warranty will cover a 12 month period from the date of delivery of the products and will not, in any case whatsoever, be suspended or extended due to lack of use of the products, even if due to repair intervention covered by the warranty.
- The minimum amount to process the order is €30,00 net.
- Claims must be sent via email to info@caporali.net.
- Return requests for incorrect orders will not be accepted if received more than 60 days from the date of the invoice of sales.
- In case of return due to incorrect order, the transport cost is borne by the customer.
- We reserve the right to refuse returns if goods are used or damaged and to apply a charge if original packaging is damaged.

LEGENDA SIGLE CATALOGO — CATALOGUE ABBREVIATIONS

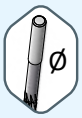
PORTAUTENSILI
TOOLHOLDERS

SIGLA	NORMATIVA	DESCRIZIONE
ERC	DIN ISO 15488 (DIN6499)	MANDRINI PORTAPINZA ER E PINZE ER *ER COLLET CHUCKS AND ER COLLETS*
ERC M	DIN ISO 15488 (DIN6499)	MANDRINI PORTAPINZA ER CON GHIERA MINI *ER COLLET CHUCKS WITH MINI NUT*
EOC	DIN ISO 10897 (DIN6388)	MANDRINI PORTAPINZA EOC E PINZE EOC *EOC COLLET CHUCKS AND EOC COLLETS*
SLC		MANDRINI PORTAPINZA SLC E PINZE SLC *SLC COLLET CHUCKS AND SLC COLLETS*
TM	DIN 69882-8	MANDRINI A CALETTAMENTO A CALDO *SHRINK FIT CHUCKS*
TM SL	DIN 69882-8	MANDRINI A CALETTAMENTO A CALDO SLIM *SLIM SHRINK FIT CHUCKS*
TM JET	DIN 69882-8	MANDRINI A CALETTAMENTO A CALDO CON FORI *SHRINK FIT CHUCKS WITH HOLES*
FS		MANDRINI A FORTE SERRAGGIO *POWER MILLING CHUCKS*
HY	DIN 69882-7	MANDRINI IDRAULICI *HYDRAULIC CHUCKS*
CPY		MANDRINI PER FRESE CON ATTACCO FILETTATO *SCREW IN MILL CHUCKS*
WE	DIN 1835-2 Form B	MANDRINI PORTAFRESA WELDON *END MILL HOLDERS WELDON*
WHN	DIN 1835-2 Form E	MANDRINI PORTAFRESA WHISTLE NOTCH *END MILL HOLDERS WHISTLE NOTCH*
DC	DIN 6358	MANDRINI PORTAFRESA COMBINATI *COMBI SHELL MILL HOLDERS*
DS	DIN 6357	MANDRINI PORTAFRESA FISSI *SHELL MILL HOLDERS*
CMP	DIN 6383	MANDRINI DI RIDUZIONE CONO MORSE PER PUNTE *MORSE TAPER ADAPTERS FOR DRILLS*
CMFV	DIN 6364	MANDRINI DI RIDUZIONE CONO MORSE PER FRESE *MORSE TAPER ADAPTERS FOR THREADED MILLS*
MCR		MASCHIATORI A CAMBIO RAPIDO *QUICK CHANGE TAPPING CHUCKS*
SY	DIN ISO 15488 (DIN6499)	MANDRINI PER MASCHIATURA SINCRONIZZATA *CHUCKS FOR SYNCHRONIZED TAPPING*
MD		MANDRINI MODULARI TIPO VARILOCK *MODULAR TOOLHOLDERS VARILOCK TYPE*
CK	ISO-R230	MANDRINI DI COLLAUDO *TEST ARBORS*
BCH		BROCCIATORI E BROCCE *BROACH TOOLHOLDERS AND BROACHES*
RM		PORTA ALESATORI FLOTTANTI *FLOATING REAMER HOLDERS*
CNP		CONTROPUNTE ROTANTI E ACCESSORI *LIVE CENTRES AND ACCESSORIES*
PS		TIRANTI / CODOLI DI TIRAGGIO *PULL STUDS*
LT		MANDRINI PER SEGHE CIRCOLARI / FRESE A DISCO *END MILL SHANK ADAPTERS FOR SAW BLADES*
SAS		FERMO BARRA ROTANTI COMPENSATI *ADJUSTABLE STOP - SHOCK ABSORBERS FOR LATHES*
RG		MANDRINI A CENTRATURA REGOLABILE *RUNOUT ADJUSTABLE CHUCKS*
AV		MANDRINI ANTIVIBRANTI *ANTIVIBRATION TOOLHOLDERS*
DR		DISTRIBUTORI ROTANTI *OIL HOLE HOLDERS*

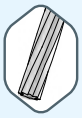
ATTACCHI
SHANKS

SIGLA	NORMATIVA
HSK	DIN 69893
CPT	DIN ISO 26623-1
TC	DIN ISO 7388 (DIN69871)
BT	MAS 403 (JIS B 6339)
ISO	DIN 2080
VDI	DIN ISO 10889 (DIN69880)
CM	DIN 228
TR	DIN 6327
D	DIN 1835-1 A
WE	DIN 1835-1 B

LEGENDA SIMBOLI CATALOGO — CATALOGUE SYMBOLS



PORTAUTENSILI E ACCESSORI PER UTENSILI CON GAMBO CILINDRICO
TOOLHOLDERS AND ACCESSORIES FOR TOOLS WITH CYLINDRICAL SHANK



PORTAUTENSILI E ACCESSORI PER ALESATURA
TOOLHOLDERS AND ACCESSORIES FOR REAMING



PORTAUTENSILI E ACCESSORI PER MASCHIATURA
TOOLHOLDERS AND ACCESSORIES FOR TAPPING



PORTAUTENSILI E ACCESSORI PER FORATURA
TOOLHOLDERS AND ACCESSORIES FOR DRILLING



PORTAUTENSILI PER UTENSILI CON PIANO SUL GAMBO CILINDRICO
TOOLHOLDERS FOR TOOLS WITH FLAT ON CYLINDRICAL SHANK



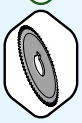
PORTAUTENSILI E ACCESSORI PER FRESE A MANICOTTO
TOOLHOLDERS AND ACCESSORIES FOR SHELL END MILLS



PORTAUTENSILI E ACCESSORI PER FRESE CON ATTACCO FILETTATO
TOOLHOLDERS AND ACCESSORIES FOR THREADED MILLS



PORTAUTENSILI E ACCESSORI PER BROCCIATURA
TOOLHOLDERS AND ACCESSORIES FOR BROACHING



PORTAUTENSILI E ACCESSORI PER FRESE A DISCO
TOOLHOLDERS AND ACCESSORIES FOR SAW BLADES



REFRIGERANTE ATTRAVERSO L'UTENSILE / PORTAUTENSILE A TENUTA
COOL THROUGH TOOL / SEALED TOOLHOLDER



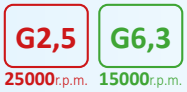
CANALINI O FORI PER REFRIGERAZIONE ESTERNA DELL'UTENSILE
CHANNELS OR HOLES FOR EXTERNAL COOLING



PASSAGGIO CENTRALE DEL REFRIGERANTE
COOLANT THROUGH CENTER



SISTEMA A DOPPIO CONTATTO CONO+FLANGIA
DOUBLE CONTACT TAPER+FLANGE SYSTEM



GRADO DI BILANCIATURA DEI PORTAUTENSILI
TOOLHOLDERS BALANCING GRADE



ERRORE MEDIO DI CONCENTRICITÀ
AVARAGE RUN-OUT ACCURACY

DIN ISO 15488 (DIN6499) ERC

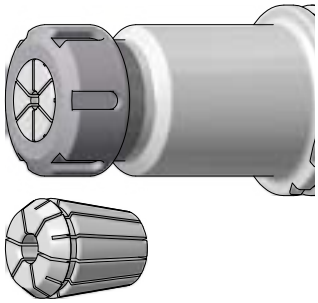
MANDRINI PORTAPINZA ER

ER COLLET CHUCKS



Ampia gamma di serraggio con un solo mandrino e set di pinze
Ampia scelta di pinze, ghiere e accessori per lavorazioni differenti
Ampia scelta di lunghezze e ingombri
Semplicità di serraggio

Wide clamping range with only one chuck and collet set
Wide choice of collets, nuts and accessories for different machining needs
Wide choice of lengths and dimensions
Easy tightening



RANGE SERRAGGIO *CLAMPING RANGE* Ø1 ÷ Ø40

LUNGHEZZE *LENGHTS* Min. H21 Max. H250

SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS* **PAG.** 338

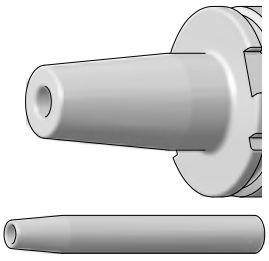
DIN 69882-8 TM

MANDRINI A CALETTAMENTO TERMICO

SHRINK FIT CHUCKS



Ideali per la lavorazione ad alta velocità, grazie all'assenza di parti meccaniche mobili
Trasferimento di coppia elevata per lavorazioni ad alte prestazioni
Tenuta del refrigerante meccanica, senza bisogno di accessori
NEW Disponibili con fori per lubrificazione esterna
Alta precisione e ripetibilità
Design sottile, disponibile in diverse lunghezze
Realizzati in acciaio termoresistente di alta qualità
Vite assiale forata per regolare la sporgenza dell'utensile
Bilanciati in grado G2,5 25000 giri/min



Ideal for high-speed machining, thanks to the absence of moving mechanical parts
High torque transfer for high performance machining
Mechanical coolant seal, without need for accessories
NEW *Available with holes for external coolant*
High precision and repeatability
Slim shape, available in different lengths
Made of high quality heat resistant steel
Axial screw with hole for tool position adjusment
Balanced in G2.5 grade 25000 rpm

RANGE SERRAGGIO *CLAMPING RANGE* Ø3 ÷ Ø32

LUNGHEZZE *LENGHTS* Min. H80 Max. H160

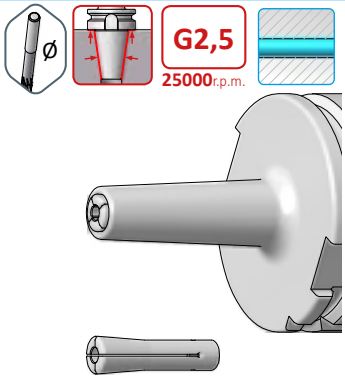
SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS* **PAG.** 340

SLC

NEW

MANDRINI PORTAPINZA SLC

SLC COLLET CHUCKS



Ampia gamma di serraggio con un solo mandrino e set di pinze
Ingombri ridotti rispetto ai sistemi con ghiera chiudipinza
Maggiore rigidità grazie al sistema di tiraggio posteriore
Maggiore uniformità di serraggio rispetto ai sistemi con ghiera chiudipinza
Bilanciatura a G2,5 25000 giri/min
Semplicità di serraggio

Wide clamping range with only one chuck and collet set
Reduced dimensions compared to systems with clamping nuts
Greater rigidity thanks to the rear pull system
Greater tightening uniformity compared to systems with clamping nuts
Balancing G2,5 25000 r.p.m.
Easy tightening

RANGE SERRAGGIO / *CLAMPING RANGE*: Ø3 ÷ Ø25

LUNGHEZZE / *LENGHTS*: Min. H70, Max. H170

FS

MANDRINI A FORTE SERRAGGIO

POWER MILLING CHUCKS



Facilità di serraggio tramite chiave in dotazione
Alta forza di serraggio fino a 1000 Nm
Alta rigidità grazie al contatto tra corpo portautensile e ghiera
Accessori per la tenuta del refrigerante
Possibilità di utilizzare le pinze cilindriche di riduzione 4SR

Easy tightening by supplied key
High clamping force up to 1000 Nm
High rigidity thanks to the contact between toolholder body and nut
Accessories for sealing available
Possibility of using 4SR cylindrical reduction collets

RANGE SERRAGGIO / *CLAMPING RANGE*: Ø20 (Ø4 ÷ Ø18), Ø32 (Ø6 ÷ Ø25)

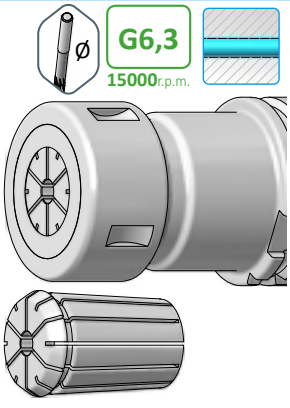
SCHEDA TECNICA E ISTRUZIONI / *DATA AND INSTRUCTIONS* **PAG.** 344

DIN ISO 10897(DIN6388)

EOC

MANDRINI PORTAPINZA EOC

EOC COLLET CHUCKS



Ampia gamma di serraggio con un solo mandrino e set di pinze
Maggiore lunghezza di serraggio che lo rende adatto lavorazioni più gravose
Semplicità di serraggio

Wide clamping range with only one chuck and collet set
Longer clamping length makes it suitable for hard machining
Easy tightening

RANGE SERRAGGIO / *CLAMPING RANGE*: Ø2 ÷ Ø32

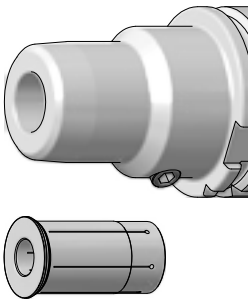
LUNGHEZZE / *LENGHTS*: Min. H70, Max. H130

DIN 69882-7 | HY

MANDRINI A SERRAGGIO IDRAULICO
HYDRAULIC CHUCKS



- Facilità di serraggio tramite vite laterale
- Scanalatura elicoidale per garantire una superficie di serraggio utensile pulita
- Il serbatoio dell'olio funge da agente di smorzamento delle vibrazioni
- Tenuta del refrigerante meccanica, senza bisogno di accessori
- Ampia gamma di lunghezze per tutti i tipi di attacco
- Possibilità di utilizzare le pinze cilindriche di riduzione 6SR
- Vite assiale forata per il passaggio del refrigerante
- Prebilanciati in grado G2,5 25000 giri/min



- *Easy tightening with side screw*
- *Helical groove to ensure a clean tool clamping surface*
- *The oil tank acts as a vibration damping agent*
- *Mechanical coolant seal, without need for accessories*
- *Wide choice of lenghts*
- *Possibility of using 6SR cylindrical reduction collets*
- *Axial screw with hole for coolant*
- *Pre-balanced in G2.5 grade 25000 rpm*

RANGE SERRAGGIO *CLAMPING RANGE*	Ø6 ÷ Ø32	LUNGHEZZE *LENGHTS*	Min. H65 Max. H200	SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS*	**PAG.** 342

DIN 1835-2 | WE

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON



- Ampia gamma di lunghezze
- Gamma speciale con lunghezza minima (extracorti)
- Disponibili con canalini per il passaggio del refrigerante
- Disponibili con grani inclinati di 2° per utensili con gambo secondo normativa DIN 1835-1 E



- *Wide range of lengths*
- *Special type with minimum length (extra short)*
- *Available with channels for coolant*
- *Available with 2 ° inclined screws for tools with shank according to DIN 1835-1 E*

RANGE SERRAGGIO *CLAMPING RANGE*	Ø6 ÷ Ø50	LUNGHEZZE *LENGHTS*	Min. H30 Max. H250	SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS*	**PAG.** 347

CPY

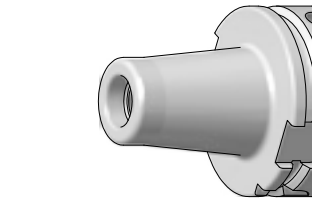
MANDRINI PER FRESE CON ATTACCO FILETTATO

SCREW IN MILL CHUCKS



- Alta precisione
- Ampia gamma di lunghezze per tutti i tipi di attacco
- Ampia gamma di prolunghe standard e HM
- Bilanciatura a G2,5 25000 giri/min

- *High precision*
- *Wide choice of lenghts*
- *Wide choice of extensions standard and HM*
- *Balancing G2,5 25000 r.p.m.*





RANGE SERRAGGIO *CLAMPING RANGE*	M8 - M10 - M12 - M16	LUNGHEZZE *LENGHTS*	Min. H55 Max. H229	SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS*	**PAG.** 346

DIN 6358 D C

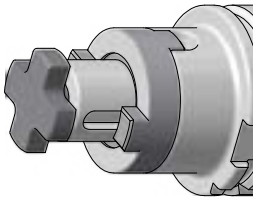
MANDRINI PORTAFRESA COMBI

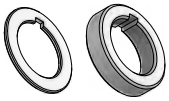
COMBI SHELL MILL HOLDERS



- Ampia gamma di lunghezze
- Utilizzabili per frese a disco e per frese a manicotto
- Ingombro minore rispetto ai portafresa fissi
- Ampia gamma di distanziali permette di variare la lunghezza portautensile

- *Wide range of lengths*
- *Usable for disc cutters and shell mills*
- *Smaller size than shell milling holders*
- *Wide range of spacers allows to vary the tool holder length*



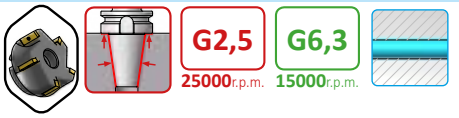


RANGE *RANGE*	Ø16 - Ø22 - Ø27 - Ø32 - Ø40	LUNGHEZZE *LENGHTS*	Min. H55 Max. H200	SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS*	**PAG.** 348

DIN 6357 D S

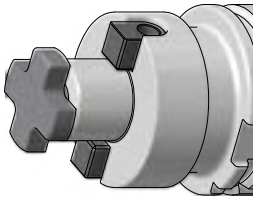
MANDRINI PORTAFRESA FISSI

SHELL MILL HOLDERS



- Ampia gamma di lunghezze
- Fori frontali per il passaggio del refrigerante
- Disponibili con sistema antivibrante

- *Wide range of lengths*
- *Front holes for coolant*
- *Available with anti-vibration system*



RANGE *RANGE*	Ø16 - Ø22 - Ø27 - Ø32 - Ø40 - Ø60	LUNGHEZZE *LENGHTS*	Min. H35 Max. H500	SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS*	**PAG.** 349

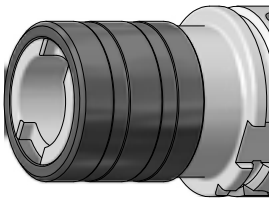
MCR

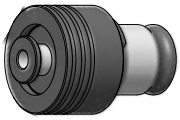
MASCHIATORI A CAMBIO RAPIDO E BUSSOLE PORTAMASCHI

QUICK CHANGE TAPPING CHUCKS AND ADAPTERS

Disponibili per maschiatura rigida e con compensazione
Ampia gamma di bussole con e senza frizione registrabile

Available for rigid and compensated tapping
Wide range of tapping adapters standard and with safety clutch





RANGE BUSSOLE / *RANGE ADAPTERS*: B0 - B1 - B2 - B3 - B4 / ø13 - ø19 - ø31 - ø48 - ø60

RANGE MASCHIATURA / *TAPPING RANGE*: M2 ÷ M45

SCHEDA TECNICA E ISTRUZIONI / *DATA AND INSTRUCTIONS*: **PAG.** 352

ERC SY

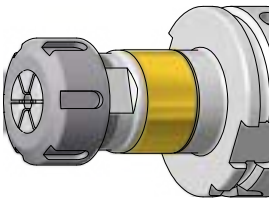
PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA

TAPPING CHUCKS FOR SYNCHRONIZED TAPPING

G6,3
8000r.p.m.

Passaggio del refrigerante
Adatto per maschiatura ad alte velocità
Sistema portapinze ER

Coolant through
Suitable for high speed tapping
ER collet system



RANGE MASCHIATURA / *TAPPING RANGE*: M3 ÷ M33

SCHEDA TECNICA E ISTRUZIONI / *DATA AND INSTRUCTIONS*: **PAG.** 353

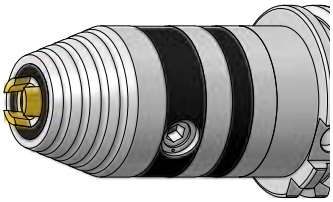
DCK CP

PORTAUTENSILI AUTOSERRANTI PER PUNTE

DRILL CHUCKS

Disponibili con rotazione destra e sinistra
Disponibili con passaggio centrale del refrigerante

Available with left and right rotation
Available with central coolant passage



RANGE / *RANGE*: Ø0,5 ÷ Ø16

HSK-A - DIN 69893-1	**PAG.** 44
TC - DIN69871	**PAG.** 100
BT - MAS403	**PAG.** 144
ISO - DIN2080	**PAG.** 166
CM - DIN228-B	**PAG.** 189
	PAG. 204

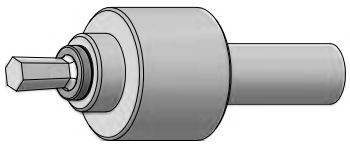
BCH

BROCCE E BROCCIATORI

BROACHING TOOLHOLDERS AND BROACHES



Brocce quadre ed esagonali e per chiavi Torx* in HSS
Brocce con rivestimento TiN disponibili a richiesta
Gamma di brocciatori fissi per brocce con lunghezza indicata a catalogo
Gamma di brocciatori registrabili per l'utilizzo di brocce lunghe o speciali



HSS broaches with square, hexagon and for Torx key*
TiN coated broaches available on request
Range of broach toolholders for broaches with length indicated in the catalogue
Range of adjustable broach toolholders for the use of long or special broaches

RANGE BROCCE QUADRATE *SQUARE BROACHES RANGE* Q3 ÷ Q20

RANGE BROCCE ESAGONALI *HEX BROACHES RANGE* E1,5 ÷ E25

SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS* **PAG.** 355

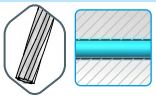
NEW BROCCE PER CHIAVI TORX* E CHIAVI TORX PLUS IP* *BROACHES FOR TORX* KEYS AND TORX PLUS IP* KEYS* T5 ÷ T60

* Torx: marchio registrato dalla Textron inc. Providence (Usa)
** Torx: trade mark registered by Textron inc. Providence (Usa)*

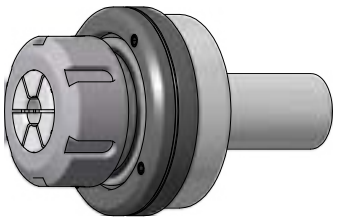
RM

PORTAUTENSILI E ACCESSORI PER ALESATURA

REAMING TOOLHOLDERS



Gamma di porta alesatori flottanti con passaggio del refrigerante
Pinze ER con movimento radiale per alesatori



Floating reamer holders with coolant through
Floating ER collets for reamers

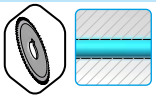
RANGE SERRAGGIO *CLAMPING RANGE* Ø1 ÷ Ø30

SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS* **PAG.** 354

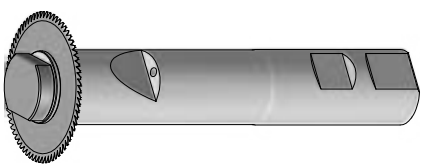
LT

MANDRINI PER FRESE A DISCO E SEGHE CIRCOLARI

END MILL SHANK ADAPTERS FOR SAW BLADES



Ampia gamma di attacchi cilindrici con piani weldon
Fori di refrigerazione laterali



Wide range of cylindrical attachments with weldon flats
Side cooling holes

RANGE UTENSILI MONTABILI *SUITABLE TOOLS RANGE* Ø16 ÷ Ø80

DIN 1835-1 **PAG.** 232

DR

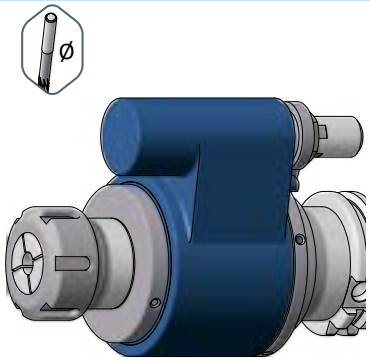
DISTRIBUTORI ROTANTI DI REFRIGERANTE

OIL HOLE HOLDERS

Per l'utilizzo del refrigerante su macchine senza adduzione interna
Disponibili con sede portautensile cilindrica o portapinza ER

Allows to use coolant on machines without internal supply
Available with cylindrical tool holder seat or ER collet holder

RANGE SERRAGGIO / *CLAMPING RANGE* Ø1 ÷ Ø40



TC - DIN69871 **PAG.** 106
BT - MAS403 **PAG.** 150

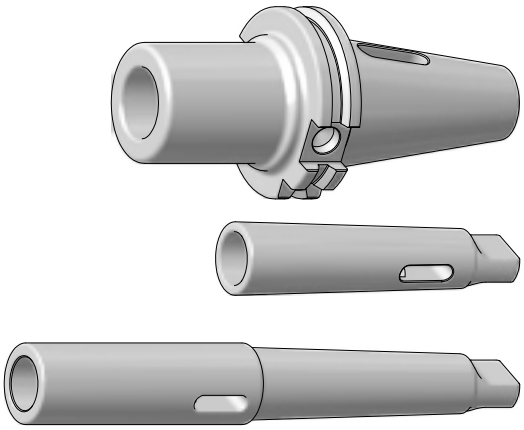
CM

RIDUZIONI CONO MORSE

MORSE TAPER TOOLHOLDERS AND ADAPTERS

Portautensili cono morse per punte - DIN6383
Portautensili cono morse per frese - DIN6364
Riduzioni cono morse - DIN2185
Prolunghe cono morse - DIN2187

Morse taper adapters for drills - DIN6383
Morse taper adapters for threaded mills - DIN6364
Morse taper reductions - DIN2185
Morse taper extensions - DIN2187



RANGE CONI / *TAPERS RANGE* CM1 - CM2 - CM3 CM4 - CM5 - CM6

SCHEDA TECNICA E ISTRUZIONI **PAG.** 350
DATA AND INSTRUCTIONS **PAG.** 351

RIDUZIONI E PROLUNGHE

REDUCTIONS AND EXTENSIONS

A / To / Da / From	**HSK** DIN 69893	**CPT** DIN ISO 26623-1	**TC** DIN69871	**BT** MAS 403	**ISO** DIN 2080	**TR** DIN 6327	**MD**
HSK DIN69893	**PAG.** 45	**PAG.** 45	-	-	-	-	**PAG.** 46
CPT DIN ISO 26623-1	-	**PAG.** 64	-	-	-	-	-
TC DIN69871	**PAG.** 104	**PAG.** 104	**PAG.** 105	**PAG.** 105	**PAG.** 105	**PAG.** 105	**PAG.** 97
BT MAS 403	**PAG.** 148	**PAG.** 148	**PAG.** 149	**PAG.** 149	**PAG.** 149	**PAG.** 149	**PAG.** 152
ISO DIN 2080	-	-	**PAG.** 168	**PAG.** 168	**PAG.** 168	-	-

BL

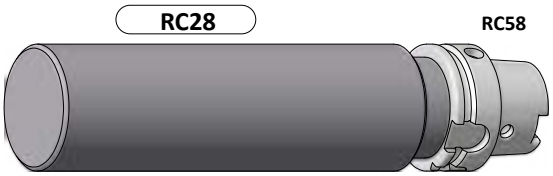
MANDRINI CON STELO TENERO LAVORABILE

BLANK ARBORS

Lo stelo tenero permette la creazione di portautensili personalizzati
Disponibili con diversi diametri e lunghezze

Soft shank allows the creation of customized tool holders
Available with different diameters and lengths

ATTACCHI / SHANKS:
HSK - CPT - TC - BT - ISO - VDI



CK

BARRE DI COLLAUDO

TEST ARBORS

PRECISIONE DEL CONO *TAPER SHANK PRECISION*	**AT2**
ERRORE DI ROTONDITÀ *ROUNDNESS ERROR*	**<0,001mm**
RUGOSITÀ *SURFACE ROUGHNESS*	**Ra <0,4**
ERRORE DI CONCENTRICITÀ *CONCENTRICITY ERROR*	**<0,003mm**

ATTACCHI / SHANKS:
HSK - CPT - TC - BT



SCHEDA TECNICA E ISTRUZIONI *DATA AND INSTRUCTIONS* **PAG.** 330

CNP

CONTROPUNTE ROTANTI CON COMPRESSIONE

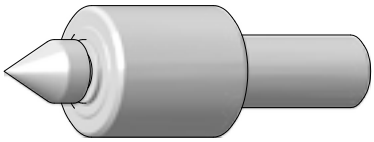
LIVE CENTRES WITH COMPRESSION

5 tipologie di cuspidi intercambiabili
Disponibili con attacco cono morse, cilindrico e VDI

5 types of interchangeable tips
Available with morse taper, cylindrical and VDI shank

GRANDEZZE CUSPIDI *TIPS SIZES* Ø14 ÷ Ø18 ÷ Ø28

CUSPIDI *TIPS* **PAG.** 311



ATTACCO SHANK	NORMATIVA NORM	PAG.
VDI	DIN 10889 (DIN 69880)	**183**
CM	DIN 228	**193**
D CILINDRICO	DIN 1835-1 Form A	**233**

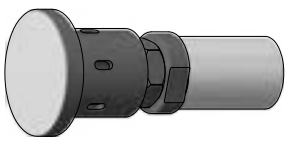
SAS

FERMO BARRA ROTANTI COMPENSATI

ADJUSTABLE STOP - SHOCK ABSORBERS FOR LATHES

Corsa di compressione: 3mm
Sporgenza H regolabile
Disponibili con attacco cilindrico e VDI

Compression stroke: 3mm
Adjustable lenght H
Available with cylindrical and VDI shank



ATTACCO SHANK	NORMATIVA NORM	PAG.
VDI	DIN 10889 (DIN 69880)	**183**
D CILINDRICO	DIN 1835-1 Form A	**233**

https://store.caporali.net

Lo store on-line è lo strumento B2B creato per facilitare l'esperienza di acquisto
e dare un accesso diretto alle informazioni riguardanti gli ordini e le disponibilità.
L'utilizzo dello store on-line per l'invio degli ordini riduce la possiblità di errori e velocizza i tempi di processazione,
permettendo di evadere gli ordini più velocemente rispetto a quelli inviati tramite email.
Nell'area download sono presenti le istruzioni più dettagliate per il corretto utilizzo della piattaforma.

The online store is a B2B tool created to facilitate purchases
and give direct access to information regarding orders.
Using online store to send orders reduces the possibility of errors and speeds up processing times,
allowing orders to be processed faster than those sent via email.
In the download area there are more detailed instructions for the correct use of the platform.

ACCESSO
LOGIN



Effettuate il **LOGIN** per visualizzare prezzi e disponibilità.
In caso di primo accesso bisogna effettuare la **NUOVA REGISTRAZIONE**.
Se siete già nostri clienti, potete richiedere Username e Password a info@caporali.net.
LOGIN *with Username and Password to see prices and availability on stock.*
For first access make ***NEW REGISTRATION****.*
If you are already our customer, send request for Username and Password to info@caporali.net.

RICERCA ARTICOLO PER CODICE
SEARCH ITEM BY CODE



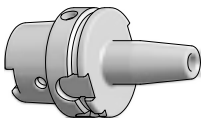
L'articolo può essere cercato scrivendo l'**intero codice** oppure **parti di codice**, secondo i criteri "inizia con", "contiene" o "termina con", utilizzati singolarmente o in combinazione. Questo permette di individuare più articoli con caratteristiche in comune.
An item can be searched by writing the entire ***code*** *or* ***parts of code****.*
It makes it possible to identify several articles with characteristics in common.

Inizia con/Begins with: TCB	Contiene/Contains:	Termina con/Ends with: ERC25
TCB40.H70.ERC25; TCB50.H100.ERC25; ecc...		
Inizia con/Begins with: TCB40	Contiene/Contains: ERC	Termina con/Ends with:
TCB40.H70.ERC25; TCB40.H200.ERC16M; TCB40.H96.ERC32RG; ecc...		
Inizia con/Begins with:	Contiene/Contains: TC40	Termina con/Ends with: 25
TC40.H70.ERC25; DTC40.H100.WE25; DTC40.H100.TM25		

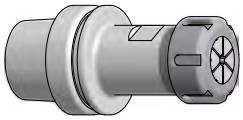
Lo store prevede anche la navigazione per **categorie** e **sottocategorie** con riferimento alle suddivisioni del catalogo scaricabile dall'area download.
You can also search items by ***categories*** *and* ***subcategories*** *with reference to the subdivisions of the catalogue which can be downloaded from the download area.*

ACQUISTO
PURCHASE

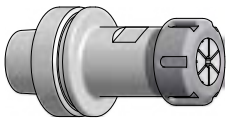
Eseguita la ricerca, gli articoli vengono proposti in un elenco dal quale possono essere aggiunti al carrello.
La quantità può essere scelta in questo momento o variata anche successivamente nel carrello.
Accanto ad ogni articolo si trova il prezzo, lo sconto e la quantità disponibile a stock.
In caso un articolo non sia a stock si invita a richiedere una previsione di consegna all'indirizzo info@caporali.net
Searched items are proposed in a list and can be added to the cart. Quantity can also be changed later in the basket.
Next to each item you will find the price, the discount and stock status.
If an item is not in stock, please request a delivery forecast writing to info@caporali.net
Seguendo la procedura di evasione del carrello l'ordine viene concluso e viene inviata conferma via mail che è pervenuto al nostro sistema.
La conferma d'ordine effettiva, con le date di evasione e le eventuali modifiche, verrà inviata dal nostro ufficio quando l'ordine verrà processato.
Following the shopping cart process is completed and a confirmation that it has reached our system is sent by email.
Actual order confirmation, with delivery dates and any changes, will be sent by our office when the purchase order is booked.



HSK-A **DIN 69893-1**
HSK50A - HSK63A - HSK100A
1-A P. 20

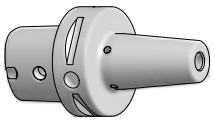


HSK-E **DIN 69893-5**
HSK50E - HSK63E
1-E P. 48

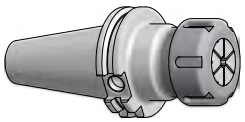


HSK-F **DIN 69893-6**
HSK63F
1-F P. 52

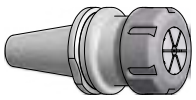
NEW



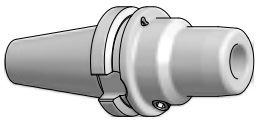
CPT **DIN ISO 26623-1** ATTACCO POLIGONALE
POLIGONAL SHANK
CPT32 - CPT40 - CPT50 - CPT63 - CPT80 - CPT100
2 P. 56



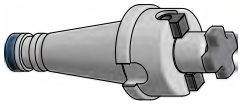
TC **DIN ISO 7388-1 (DIN69871)**
TC30 - TC40 - TC50
3 P. 66



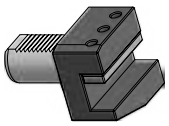
WD SENZA TACCHE - PER LAVORAZIONE DEL LEGNO E DELL'ALLUMINIO
WITHOUT SLOTS - FOR WOODWORKING AND ALUWORKING
WD30
3-WD P. 110



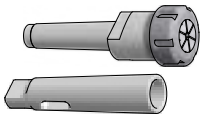
BT **MAS 403 (JIS B 6339)**
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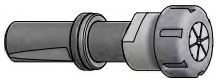
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VDI **DIN ISO 10889 (DIN 69880)**
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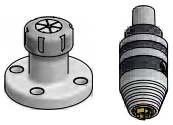
CM **DIN 228**
CM1 - CM2 - CM3 - CM4 - CM5 - CM6
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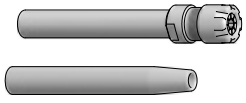
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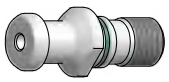
D PORTAUTENSILI CON GAMBO CILINDRICO
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Ø6 ÷ Ø60
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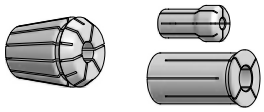
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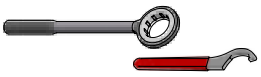
PINZE DI SERRAGGIO UTENSILE / *TOOL CLAMPING COLLETS* — 13 — P. 249



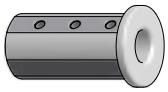
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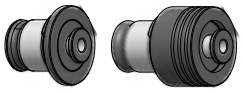
GHIERE DI SERRAGGIO PER PINZE / *CLAMPING NUTS FOR COLLETS* — 14 — P. 280



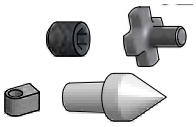
CHIAVI DI SERRAGGIO PER PORTAUTENSILI / *CLAMPING WRENCHES FOR TOOLHOLDERS* — 15 — P. 288



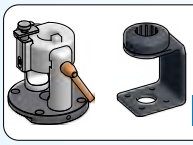
BUSSOLE DI RIDUZIONE CILINDRICHE / *CYLINDRICAL REDUCTION BUSHES* — 16 — P. 294



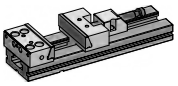
INSERZIONI PORTAMASCHI / *TAPPING ADAPTERS* — 17 — P. 298



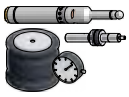
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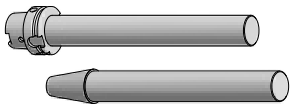
SUPPORTI DI MONTAGGIO / *TOOL ASSEMBLY DEVICES* — 19 — P. 310



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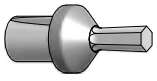


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UTENSILI — TOOLS



BCH — BROCCE / *BROACHES* — 22 — P. 332

NEW



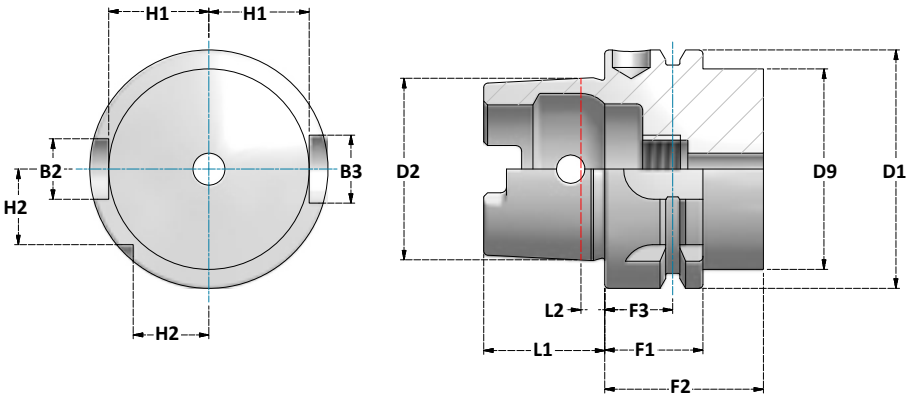
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TOOLHOLDERS

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MANDRINI HSK FORMA A
HSK FORM A TOOLHOLDERS



DIMENSIONI DELL'ATTACCO
SHANK DIMENSIONS

ATTACCO SHANK	D1	D2	D9	L1	L2	F1	F2	F3	H1	H2	B2	B3
	h10		max	0 -0,2		0 -0,1	min	±0,1	0 -0,2	0 -0,3	H10	H10
HSK50A	50	38,009	42	25	5	26	42	18	21	15,5	12	14
HSK63A	63	48,010	53	32	6,3	26	42	18	26,5	20	16	18
HSK100A	100	75,013	88	50	10	29	45	20	44	31,5	20	22

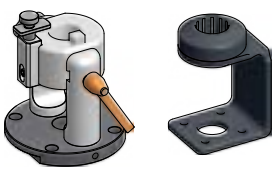
CARATTERISTICHE:
Tolleranza di precisione degli attacchi a norma DIN.
Costruiti in acciaio certificato in barre.
Eseguiti trattamenti termici da fornitori certificati.
Rettificati di precisione esternamente e internamente.
Controllati con strumenti di misura certificati.
Prebilanciati nei gradi indicati nelle pagine di catalogo.

FEATURES:
Precision tolerance of shanks according to DIN standard.
Made of certified steel.
Heat treatments performed by certified suppliers.
Precision grinding externally and internally.
Checked with certified measuring instruments.
Pre-balanced as indicated in the catalog pages.

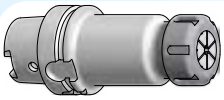
RACCORDI PER REFRIGERANTE *COOLING TUBES* **P.306**



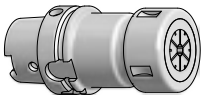
SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES* **P.310**



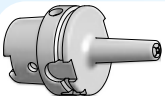
BILANCIATURA *BALANCING* **P.360**



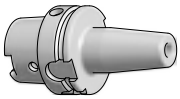
MANDRINI PORTAPINZA ER
COLLET CHUCKS ER
DIN ISO 15488 (DIN6499)
PAG. 22



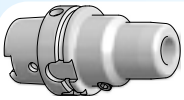
MANDRINI PORTAPINZA EOC
COLLET CHUCKS EOC
DIN ISO 10897 (DIN6388)
PAG. 26



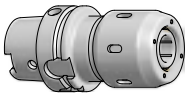
MANDRINI PORTAPINZA SLC
COLLET CHUCKS SLC
PAG. 27



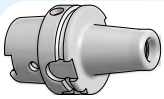
MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS
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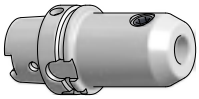
MANDRINI A SERRAGGIO IDRAULICO
HYDRAULIC CHUCKS
PAG. 31



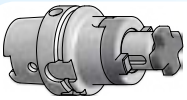
MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS
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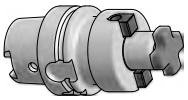
MANDRINI PORTAFRESA CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS
PAG. 33



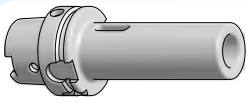
MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON
DIN 1835-2
PAG. 34



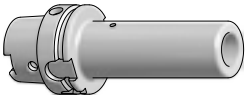
MANDRINI PORTAFRESA COMBI
COMBI SHELL MILL HOLDERS
DIN 6358
PAG. 39



MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357
PAG. 40



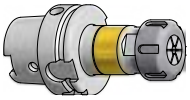
RIDUZIONI A CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS
DIN 6383
PAG. 42



RIDUZIONI A CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS
DIN 6364
PAG. 42



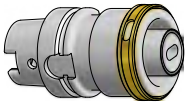
PORTAMASCHI
TAPPING CHUCKS
PAG. 43



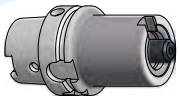
MANDRINI PER MASCHIATURA SINCRONIZZATA
CHUCKS FOR SYNC TAPPING
PAG. 43



MANDRINI PORTAPUNTA
DRILL CHUCKS
PAG. 44



RIDUZIONI
ADAPTERS
PAG. 45



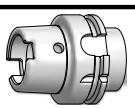
MANDRINI MODULARI TIPO VARILOCK
MODULAR TOOLHOLDERS VARILOCK TYPE
PAG. 46



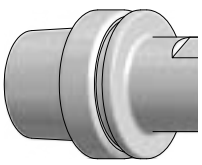
MANDRINI CON STELO LAVORABILE
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PAG. 47

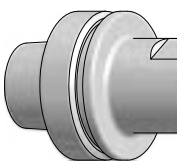


BARRE DI COLLAUDO
TEST ARBORS
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ATTACCO HSK
HSK SHANK

HSK FORM E
DIN 69893-5

PAG. 48

HSK FORM F
DIN 69893-6

PAG. 52

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS

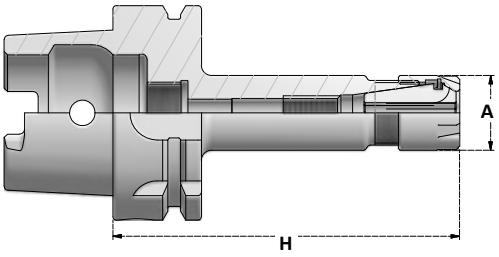
DIN ISO 15488 (DIN6499)

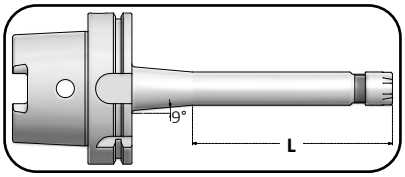
ERC MINI Pag. 22	**CON GHIERA MINI** *WITH MINI NUT*
ERC Pag. 23	**CON GHIERA STANDARD** *WITH STANDARD NUT*
ERC NF Pag. 24	**CON GHIERA "NF" SENZA TACCHE - BILANCIATI PER ALTE VELOCITÀ** *WITH "NF" NOTCH FREE NUT - BALANCED FOR HIGH SPEEDS*
ERC RG Pag. 25	**A CENTRATURA REGOLABILE** *ADJUSTABLE RUNOUT*

DIN 69893-1 | HSK | ERC MINI | **DIN ISO 15488** (DIN6499)

MANDRINI PORTAPINZA ER CON GHIERA MINI
ER COLLET CHUCKS WITH MINI NUT







ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

Articolo	H
HSK50A.H100.ERC11M	100
HSK50A.H100.ERC16M	100

Articolo	H
HSK63A.H100.ERC11M	100
HSK63A.H130.ERC11M	130
HSK63A.H160.ERC11M	160
HSK63A.H100.ERC16M	100
HSK63A.H130.ERC16M	130
HSK63A.H160.ERC16M	160
HSK63A.H100.ERC20M	100
HSK63A.H130.ERC20M	130
HSK63A.H160.ERC20M	160
HSK63A.H100.ERC25M	100
HSK63A.H130.ERC25M	130
HSK63A.H160.ERC25M	160

Articolo	H	L
HSK100A.H100.ERC16M	100	-
HSK100A.H130.ERC16M	130	-
HSK100A.H160.ERC16M	160	100
HSK100A.H200.ERC16M	200	100
HSK100A.H100.ERC20M	100	-
HSK100A.H130.ERC20M	130	-
HSK100A.H160.ERC20M	160	-
HSK100A.H200.ERC20M	200	-
HSK100A.H100.ERC25M	100	-
HSK100A.H130.ERC25M	130	-
HSK100A.H160.ERC25M	160	-

	A	Collets Range	Ghiera Nut
...ERC11M	16	1÷7	G11M
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M
...ERC25M	35	1÷20	G25M



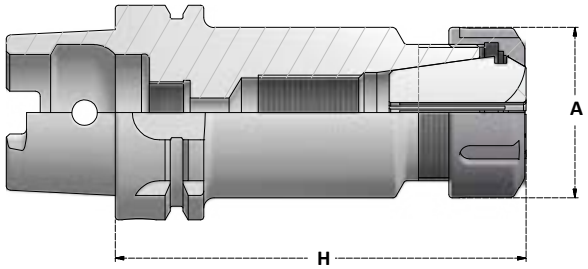
Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

ACCESSORI - *ACCESSORIES*



MANDRINI PORTAPINZA ER
ER COLLET CHUCKS

G6,3 18000r.p.m.



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

Articolo	H
HSK50A.H100.ERC16	100
HSK50A.H100.ERC20	100
HSK50A.H100.ERC25	100
HSK50A.H100.ERC32	100

Articolo	H
HSK63A.H100.ERC16	100
HSK63A.H130.ERC16	130
HSK63A.H160.ERC16	160
HSK63A.H200.ERC16	200
HSK63A.H100.ERC20	100
HSK63A.H130.ERC20	130
HSK63A.H160.ERC20	160
HSK63A.H200.ERC20	200
HSK63A.H100.ERC25	100
HSK63A.H130.ERC25	130
HSK63A.H160.ERC25	160
HSK63A.H200.ERC25	200
HSK63A.H80.ERC32	80
HSK63A.H100.ERC32	100
HSK63A.H130.ERC32	130
HSK63A.H160.ERC32	160
HSK63A.H200.ERC32	200
HSK63A.H100.ERC40	100
HSK63A.H130.ERC40	130
HSK63A.H160.ERC40	160
HSK63A.H200.ERC40	200

Articolo	H
HSK100A.H100.ERC16	100
HSK100A.H130.ERC16	130
HSK100A.H160.ERC16	160
HSK100A.H200.ERC16	200
HSK100A.H100.ERC20	100
HSK100A.H130.ERC20	130
HSK100A.H160.ERC20	160
HSK100A.H200.ERC20	200
HSK100A.H100.ERC25	100
HSK100A.H130.ERC25	130
HSK100A.H160.ERC25	160
HSK100A.H200.ERC25	200
HSK100A.H80.ERC32	80
HSK100A.H100.ERC32	100
HSK100A.H130.ERC32	130
HSK100A.H160.ERC32	160
HSK100A.H200.ERC32	200
HSK100A.H250.ERC32	250
HSK100A.H100.ERC40	100
HSK100A.H130.ERC40	130
HSK100A.H160.ERC40	160
HSK100A.H200.ERC40	200
HSK100A.H250.ERC40	250

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.HSK63A.ERC32-6	ERC32.D6-D8-D10-D12-D16-D20	HSK63A.H100.ERC32	CH32S
BX.HSK63A.ERC40-7	ERC40.D6-D8-D10-D12-D16-D20-D25	HSK63A.H100.ERC40	CH40S

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.HSK63A.ERC25	ERC25	D2÷16	HSK63A.H100.ERC25	CH25S
BX.HSK63A.ERC32	ERC32	D3÷20	HSK63A.H100.ERC32	CH32S
BX.HSK63A.ERC40	ERC40	D4÷26	HSK63A.H100.ERC40	CH40S
BX.HSK100A.ERC25	ERC25	D2÷16	HSK100A.H100.ERC25	CH25S
BX.HSK100A.ERC32	ERC32	D3÷20	HSK100A.H100.ERC32	CH32S
BX.HSK100A.ERC40	ERC40	D4÷26	HSK100A.H100.ERC40	CH40S



ACCESSORI - *ACCESSORIES*

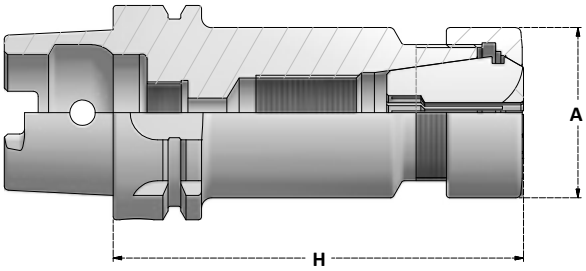


MANDRINI PORTAPINZA ER PER ALTE VELOCITA'
ER COLLET CHUCKS FOR HIGH SPEEDS



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338



	A	Collets Range	Ghiera Nut
...ERC11MNF	16	1÷7	G11NFM
...ERC16MNF	22	1÷10	G16NFM
...ERC20MNF	28	1÷14	G20NFM
...ERC25MNF	35	1÷20	G25NFM

	A	Collets Range	Ghiera Nut
...ERC16NF	28	1÷10	G16NF
...ERC20NF	34	1÷14	G20NF
...ERC25NF	42	1÷20	G25NF
...ERC32NF	50	2÷22	G32NF



Articolo	H
HSK63A.H100.ERC11MNF	100
HSK63A.H130.ERC11MNF	130
HSK63A.H160.ERC11MNF	160
HSK63A.H100.ERC16MNF	100
HSK63A.H130.ERC16MNF	130
HSK63A.H160.ERC16MNF	160
HSK63A.H100.ERC20MNF	100
HSK63A.H130.ERC20MNF	130
HSK63A.H160.ERC20MNF	160
HSK63A.H100.ERC25MNF	100
HSK63A.H130.ERC25MNF	130
HSK63A.H160.ERC25MNF	160

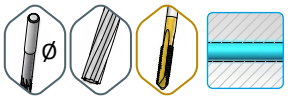
Articolo	H
HSK63A.H100.ERC16NF	100
HSK63A.H130.ERC16NF	130
HSK63A.H160.ERC16NF	160
HSK63A.H100.ERC20NF	100
HSK63A.H130.ERC20NF	130
HSK63A.H160.ERC20NF	160
HSK63A.H100.ERC25NF	100
HSK63A.H130.ERC25NF	130
HSK63A.H160.ERC25NF	160
HSK63A.H100.ERC32NF	100
HSK63A.H130.ERC32NF	130
HSK63A.H160.ERC32NF	160

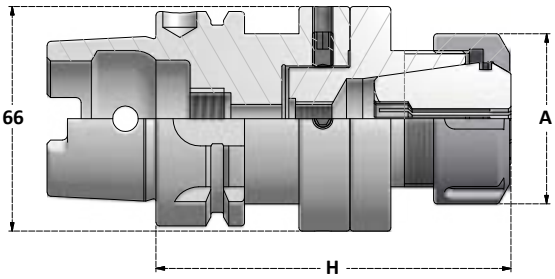
Mandrini prebilanciati a G2,5 / 25000r.p.m. forniti con ghiera "NF" senza tacche.
Toolholders balanced G2,5 / 25000r.p.m. supplied with "NF" notch free nut.

ACCESSORI - *ACCESSORIES*



MANDRINI PORTAPINZA ER A CENTRATURA REGOLABILE
RUNOUT ADJUSTABLE ER COLLET CHUCKS





±0,1mm Centratura regolabile
Adjustable runout

ATTACCO
SHANK
HSK A
P. 20

SCHEDA TECNICA
TECHNICAL DATA
ERC | P. 338

Articolo	H
HSK63A.H100.ERC16RG	100
HSK63A.H102.ERC20RG	102
HSK63A.H103.ERC25RG	103
HSK63A.H104.ERC32RG	104
HSK63A.H138.ERC40RG	138

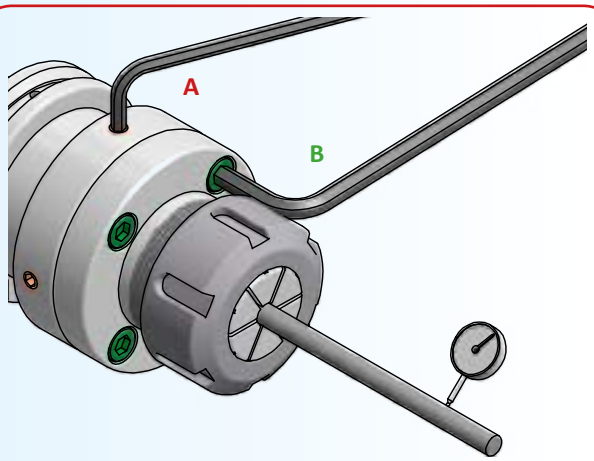
Articolo	H
HSK100A.H103.ERC16RG	103
HSK100A.H105.ERC20RG	105
HSK100A.H106.ERC25RG	106
HSK100A.H107.ERC32RG	107
HSK100A.H141.ERC40RG	141

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



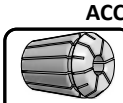
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S





Allentare le viti **B** e regolare la centratura tramite le viti **A**.
Loosen screws **B** and use screws **A** for radial adjustment.

ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

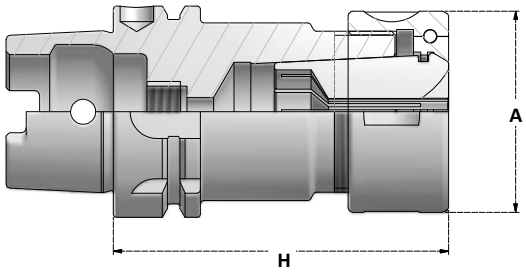

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAPINZA EOC
EOC COLLET CHUCKS

G6,3
15000r.p.m.



ATTACCO
SHANK
HSK A
P. 20

Articolo	H
HSK63A.H100.EOC16	100
HSK63A.H100.EOC25	100
HSK63A.H130.EOC32	130

Articolo	H
HSK100A.H130.EOC32	130

	A	Collets Range	Ghiera Nut
...EOC16	43	2÷16	G16OCC
...EOC25	60	2÷25	G25OCC
...EOC32	72	3÷32	G32OCC



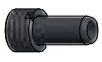
ACCESSORI - *ACCESSORIES*


P. 270
PINZE
COLLETS


P. 287
GHIERE
NUTS

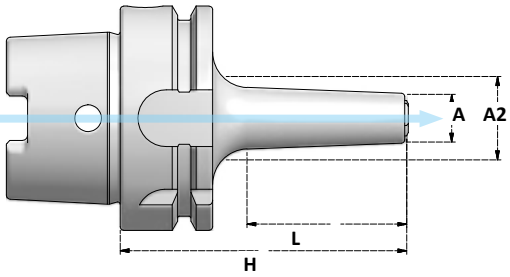

P. 289
CHIAVI
WRENCHES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 306
RACCORDI REFRIGERANTE
COOLANT TUBES

MANDRINI PER PINZE SLC
SLC COLLET CHUCKS






CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
HSK A
P. 20

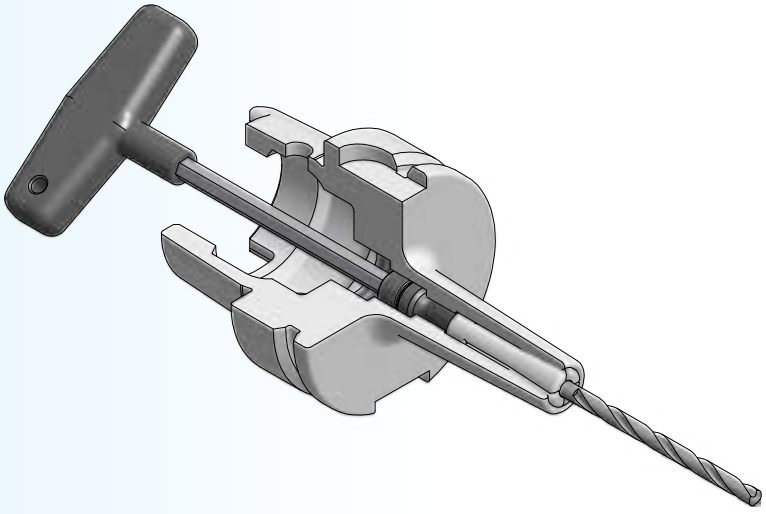
Articolo	H	L	A2
HSK63A.H80.SLC6	80	39	18
HSK63A.H120.SLC6	120	79	22
HSK63A.H110.SLC12	110	79	37
HSK63A.H150.SLC12	150	119	42

	A	Collets Range	MT
...SLC6	14	3÷6	12
...SLC12	26	3÷12	45
...SLC25	40	6÷25	90

Momento torcente consigliato:
Recommended tightening torque: **MT**

Articolo	H	L	A2
HSK100A.H120.SLC6	120	76	22
HSK100A.H120.SLC12	120	81	37
HSK100A.H150.SLC25	150	111	49

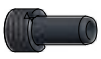
SISTEMA A TIRAGGIO POSTERIORE
BACK PULLING SYSTEM



ACCESSORI - *ACCESSORIES*


P. 273
PINZE
COLLETS


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 306
RACCORDI REFRIGERANTE
COOLANT TUBES

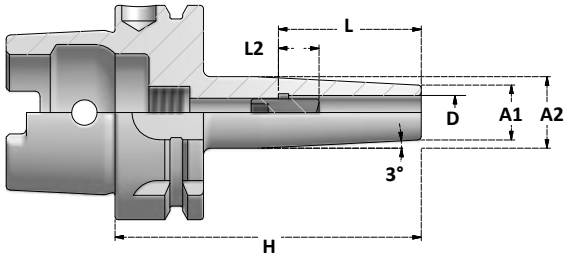
MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

TM SL	**SLIM**
Pag. 28	*SLIM FIT*
TM	**STANDARD**
Pag. 29	*STANDARD*
TM JET	**CON FORI DI LUBRIFICAZIONE**
Pag. 30	*WITH COOLANT HOLES*

HSK | TM SL

MANDRINI A CALETTAMENTO A CALDO SLIM
SLIM SHRINK FIT CHUCKS

Ø G2,5 25000r.p.m.



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* TM P. 340

Articolo	H	A2
HSK63A.H80.TM3SL	80	13
HSK63A.H120.TM3SL	120	16
HSK63A.H80.TM4SL	80	15
HSK63A.H120.TM4SL	120	20
HSK63A.H80.TM5SL	80	16
HSK63A.H120.TM5SL	120	20
HSK63A.H80.TM6SL	80	17
HSK63A.H130.TM6SL	130	19
HSK63A.H160.TM6SL	160	19
HSK63A.H80.TM8SL	80	19
HSK63A.H130.TM8SL	130	21
HSK63A.H160.TM8SL	160	21
HSK63A.H85.TM10SL	85	21
HSK63A.H130.TM10SL	130	23
HSK63A.H160.TM10SL	160	23
HSK63A.H90.TM12SL	90	23
HSK63A.H130.TM12SL	130	25
HSK63A.H160.TM12SL	160	25
HSK63A.H90.TM14SL	90	25
HSK63A.H130.TM14SL	130	27
HSK63A.H160.TM14SL	160	27
HSK63A.H95.TM16SL	95	29
HSK63A.H130.TM16SL	130	31
HSK63A.H160.TM16SL	160	31
HSK63A.H95.TM18SL	95	34
HSK63A.H130.TM18SL	130	35
HSK63A.H160.TM18SL	160	35
HSK63A.H100.TM20SL	100	39
HSK63A.H130.TM20SL	130	39
HSK63A.H160.TM20SL	160	39

		D	L	A1
TM3SL	*	3	12	9
TM4SL	*	4	16	10
TM5SL	*	5	20	11
TM6SL		6	36	12
TM8SL		8	36	14
TM10SL		10	41	16
TM12SL		12	46	18
TM14SL		14	46	22
TM16SL		16	49	24
TM18SL		18	49	28
TM20SL		20	51	32

Profondità regolabile: **L2**= 10mm
Adjustable depth:

* Senza vite di regolazione
** Without adjusting screw*

ACCESSORI - *ACCESSORIES*

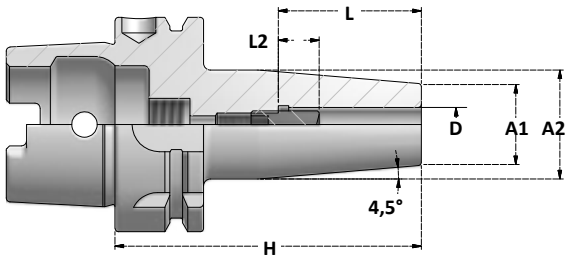

P. 224 PROLUNGHE *EXTENSIONS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

Articolo	H
HSK63A.H80.TM3	80
HSK63A.H120.TM3	120
HSK63A.H160.TM3	160
HSK63A.H80.TM4	80
HSK63A.H120.TM4	120
HSK63A.H160.TM4	160
HSK63A.H80.TM5	80
HSK63A.H120.TM5	120
HSK63A.H160.TM5	160
HSK63A.H80.TM6	80
HSK63A.H130.TM6	130
HSK63A.H160.TM6	160
HSK63A.H80.TM8	80
HSK63A.H130.TM8	130
HSK63A.H160.TM8	160
HSK63A.H85.TM10	85
HSK63A.H130.TM10	130
HSK63A.H160.TM10	160
HSK63A.H90.TM12	90
HSK63A.H130.TM12	130
HSK63A.H160.TM12	160
HSK63A.H90.TM14	90
HSK63A.H130.TM14	130
HSK63A.H160.TM14	160
HSK63A.H95.TM16	95
HSK63A.H130.TM16	130
HSK63A.H160.TM16	160
HSK63A.H95.TM18	95
HSK63A.H130.TM18	130
HSK63A.H160.TM18	160
HSK63A.H100.TM20	100
HSK63A.H130.TM20	130
HSK63A.H160.TM20	160
HSK63A.H115.TM25	115
HSK63A.H130.TM25	130
HSK63A.H160.TM25	160
HSK63A.H120.TM32	120
HSK63A.H160.TM32	160

Articolo	H
HSK100A.H85.TM6	85
HSK100A.H130.TM6	130
HSK100A.H160.TM6	160
HSK100A.H200.TM6	200
HSK100A.H85.TM8	85
HSK100A.H130.TM8	130
HSK100A.H160.TM8	160
HSK100A.H200.TM8	200
HSK100A.H90.TM10	90
HSK100A.H130.TM10	130
HSK100A.H160.TM10	160
HSK100A.H200.TM10	200
HSK100A.H95.TM12	95
HSK100A.H130.TM12	130
HSK100A.H160.TM12	160
HSK100A.H200.TM12	200
HSK100A.H95.TM14	95
HSK100A.H130.TM14	130
HSK100A.H160.TM14	160
HSK100A.H200.TM14	200
HSK100A.H100.TM16	100
HSK100A.H130.TM16	130
HSK100A.H160.TM16	160
HSK100A.H200.TM16	200
HSK100A.H100.TM18	100
HSK100A.H130.TM18	130
HSK100A.H160.TM18	160
HSK100A.H200.TM18	200
HSK100A.H105.TM20	105
HSK100A.H130.TM20	130
HSK100A.H160.TM20	160
HSK100A.H200.TM20	200
HSK100A.H115.TM25	115
HSK100A.H160.TM25	160
HSK100A.H200.TM25	200
HSK100A.H120.TM32	120
HSK100A.H160.TM32	160
HSK100A.H200.TM32	200

		D	L	A1	A2
TM3	*	3	12	10	20
TM4	*	4	16	15	25
TM5	*	5	20	15	25
TM6		6	36	21	27
TM8		8	36	21	27
TM10		10	41	24	32
TM12		12	46	24	32
TM14		14	46	24	32
TM16		16	49	24	32
TM18		18	49	33	42
TM20		20	51	33	42
TM25		25	57	44	53
TM32		32	61	44	53

* Senza vite di regolazione
** Without adjusting screw*

Profondità regolabile: *Adjustable depth:* **L2**= 10mm

ACCESSORI - *ACCESSORIES*

P. 224 PROLUNGHE *EXTENSIONS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

NEW

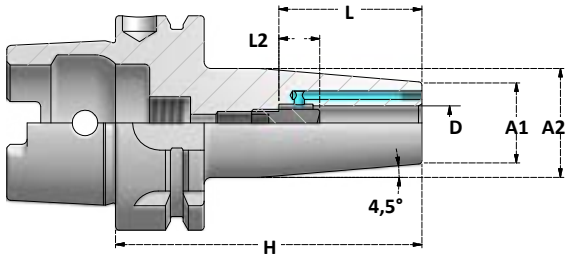
MANDRINI A CALETTAMENTO A CALDO JET

CON FORI PER IL REFRIGERANTE

*SHRINK FIT CHUCKS **JET** TYPE*

WITH HOLES FOR COOLANT

Ø G2,5 25000r.p.m.



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

Articolo	H
HSK63A.H80.TM6JET	80
HSK63A.H120.TM6JET	120
HSK63A.H80.TM8JET	80
HSK63A.H120.TM8JET	120
HSK63A.H85.TM10JET	85
HSK63A.H120.TM10JET	120
HSK63A.H90.TM12JET	90
HSK63A.H120.TM12JET	120
HSK63A.H90.TM14JET	90
HSK63A.H120.TM14JET	120
HSK63A.H95.TM16JET	95
HSK63A.H120.TM16JET	120
HSK63A.H95.TM18JET	95
HSK63A.H120.TM18JET	120
HSK63A.H100.TM20JET	100
HSK63A.H130.TM20JET	130
HSK63A.H115.TM25JET	115
HSK63A.H120.TM32JET	120

Articolo	H
HSK100A.H85.TM6JET	85
HSK100A.H130.TM6JET	130
HSK100A.H85.TM8JET	85
HSK100A.H130.TM8JET	130
HSK100A.H90.TM10JET	90
HSK100A.H130.TM10JET	130
HSK100A.H95.TM12JET	95
HSK100A.H130.TM12JET	130
HSK100A.H95.TM14JET	95
HSK100A.H130.TM14JET	130
HSK100A.H100.TM16JET	100
HSK100A.H130.TM16JET	130
HSK100A.H100.TM18JET	100
HSK100A.H130.TM18JET	130
HSK100A.H100.TM20JET	100
HSK100A.H130.TM20JET	130
HSK100A.H115.TM25JET	115
HSK100A.H120.TM32JET	120

	D	L	A1	A2
...TM6	6	36	21	27
...TM8	8	36	21	27
...TM10	10	41	24	32
...TM12	12	46	24	32
...TM14	14	46	24	32
...TM16	16	49	24	32
...TM18	18	49	33	42
...TM20	20	51	33	42
...TM25	25	57	44	53
...TM32	32	61	44	53

Altre lunghezze fornibili a richiesta
Other lenghts available on request

Profondità regolabile: *Adjustable depth:* **L2**= 10mm







3 DIVERSE MODALITÀ DI UTILIZZO
3 DIFFERENT APPLICATIONS

Senza montare i grani in dotazione si ha la massima portata del liquido refrigerante

Not using supplied plugs you have maximum flow of coolant

Con l'utilizzo dei grani forati aumenta la pressione - ideale per lavorazioni ad alte velocità

Using plugs with hole the pressure increases - it's used for high speed works

Con l'utilizzo dei grani di chiusura si può lavorare con utensili con fori per il refrigerante

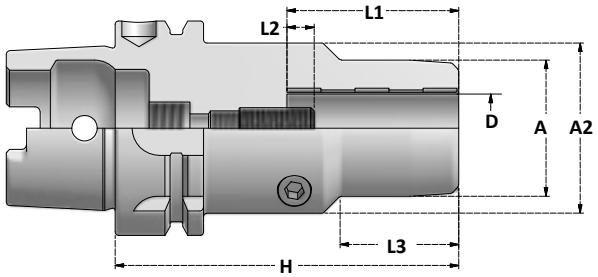
Mounting sealing plugs tools with coolant through can be used

ACCESSORI - *ACCESSORIES*

P. 224 PROLUNGHE *EXTENSIONS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI IDRAULICI
HYDRAULIC CHUCKS

Ø G2,5 25000r.p.m.



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* HY P. 342

Articolo	H	L3
HSK63A.H70.HY6	70	26
HSK63A.H150.HY6	150	105
HSK63A.H200.HY6	200	155
HSK63A.H70.HY8	70	26
HSK63A.H150.HY8	150	105
HSK63A.H200.HY8	200	155
HSK63A.H80.HY10	80	35
HSK63A.H150.HY10	150	105
HSK63A.H200.HY10	200	155
HSK63A.H85.HY12	85	40
HSK63A.H150.HY12	150	105
HSK63A.H200.HY12	200	155
HSK63A.H85.HY14	85	40
HSK63A.H150.HY14	150	105
HSK63A.H200.HY14	200	155
HSK63A.H90.HY16	90	46
HSK63A.H150.HY16	150	105
HSK63A.H200.HY16	200	155
HSK63A.H90.HY18	90	46
HSK63A.H150.HY18	150	105
HSK63A.H200.HY18	200	155
HSK63A.H90.HY20	90	46
HSK63A.H150.HY20	150	105
HSK63A.H200.HY20	200	155
HSK63A.H120.HY25	120	55
HSK63A.H125.HY32	125	60

Articolo	H	L3
HSK100A.H75.HY6	75	26
HSK100A.H150.HY6	150	105
HSK100A.H200.HY6	200	155
HSK100A.H75.HY8	75	26
HSK100A.H150.HY8	150	105
HSK100A.H200.HY8	200	155
HSK100A.H90.HY10	90	35
HSK100A.H150.HY10	150	105
HSK100A.H200.HY10	200	155
HSK100A.H95.HY12	95	40
HSK100A.H150.HY12	150	105
HSK100A.H200.HY12	200	155
HSK100A.H95.HY14	95	40
HSK100A.H150.HY14	150	105
HSK100A.H200.HY14	200	155
HSK100A.H100.HY16	100	46
HSK100A.H150.HY16	150	105
HSK100A.H200.HY16	200	155
HSK100A.H100.HY18	100	46
HSK100A.H150.HY18	150	105
HSK100A.H200.HY18	200	155
HSK100A.H105.HY20	105	46
HSK100A.H150.HY20	150	105
HSK100A.H200.HY20	200	155
HSK100A.H115.HY25	115	60
HSK100A.H120.HY32	120	65

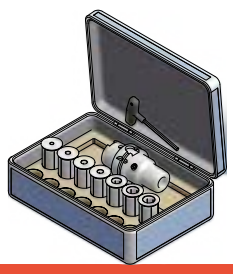
Profondità regolabile: *Adjustable depth:* **L2**= 10mm

	D	L1	A	A2
...HY**6**	6	37	26	49,5
...HY**8**	8	37	28	49,5
...HY**10**	10	41	30	49,5
...HY**12**	12	46	32	49,5
...HY**14**	14	46	34	49,5
...HY**16**	16	49	38	49,5
...HY**18**	18	49	40	49,5
...HY**20**	20	51	42	49,5
...HY**25**	25	57	49,5	55
...HY**32**	32	61	56	63

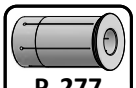
Forza di serraggio *Clamping force*	
HY**6**	**12**Nm
HY**8**	**30**Nm
HY**10**	**40**Nm
HY**12**	**70**Nm
HY**14**	**100**Nm
HY**16**	**135**Nm
HY**18**	**180**Nm
HY**20**	**220**Nm
HY**25**	**500**Nm
HY**32**	**700**Nm

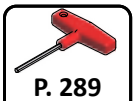
KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDERS, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.HSK63A.HY12	6SR12	D4 D6 D8 D10	HSK63A.H85.HY12
BX.HSK63A.HY20	6SR20	D6 D8 D10 D12 D16	HSK63A.H90.HY20
BX.HSK63A.HY32	6SR32	D6 D8 D10 D12 D16 D20 D25	HSK63A.H125.HY32
BX.HSK100A.HY12	6SR12	D4 D6 D8 D10	HSK100A.H95.HY12
BX.HSK100A.HY20	6SR20	D6 D8 D10 D12 D16	HSK100A.H105.HY20
BX.HSK100A.HY32	6SR32	D6 D8 D10 D12 D16 D20 D25	HSK100A.H120.HY32



ACCESSORI - *ACCESSORIES*


P. 277 PINZE *COLLETS*


P. 289 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS



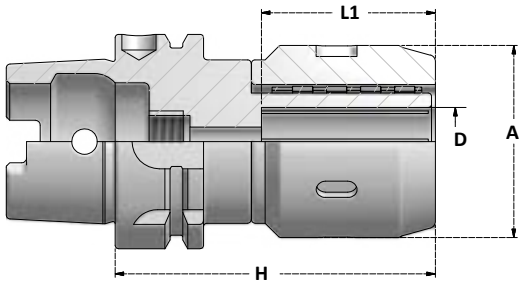


CANALINI
CHANNELS


CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
HSK A
P. 20

SCHEDA TECNICA
TECHNICAL DATA
FS | P. 344



Articolo	H
HSK63A.H120.FS20	120
HSK63A.H120.FS32	120

Articolo	H
HSK100A.H120.FS20	120
HSK100A.H120.FS32	120

	D	A	L1
...FS**20**	20	66	59,3
...FS**32**	32	69	71,7

Serrare la ghiera di bloccaggio fino al finecorsa
Tighten the locking nut up to the limit

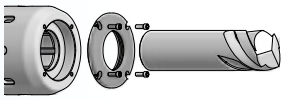
Forza di serraggio *Clamping force*	
FS**20**	**500**Nm
FS**32**	**1000**Nm

DISCHI DI TENUTA PER MANDRINI A FORTE SERRAGGIO
SEALED CAPS FOR POWER MILLING CHUCKS


A TENUTA
SEALED

DISCHI DI TENUTA PER DIAMETRO NOMINALE
SEALED CAPS FOR NOMINAL DIAMETER

Articolo	D
CFS20.D20	20
CFS32.D32	32

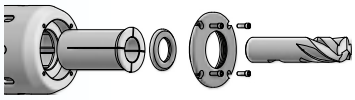






DISCHI DI TENUTA PER L'UTILIZZO DELLE PINZE DI RIDUZIONE
SEALED CAPS FOR REDUCTION COLLETS USING

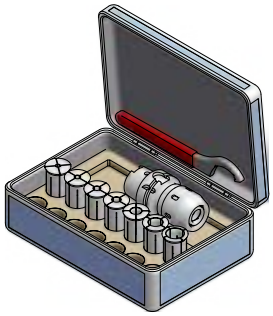
Articolo	D	RG Range
CFS20.RG	RG32	D4÷D16
CFS32.RG	RG40	D6÷D25





KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.HSK63A.FS20	4SR20	D6 D8 D10 D12 D16	HSK63A.H120.FS20
BX.HSK63A.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	HSK63A.H120.FS32
BX.HSK100A.FS20	4SR20	D6 D8 D10 D12 D16	HSK100A.H120.FS20
BX.HSK100A.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	HSK100A.H120.FS32

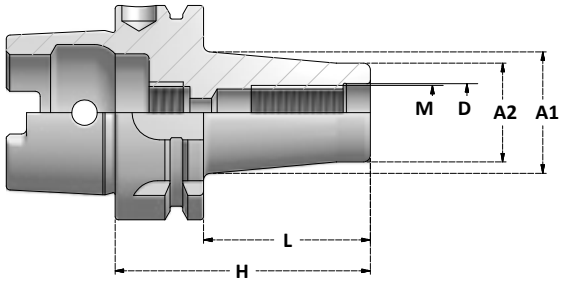


ACCESSORI - *ACCESSORIES*



MANDRINI PER FRESE CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS





ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* CPY | P. 346

Articolo	H	L	A1
HSK63A.H59.M8CPY	59	33	15
HSK63A.H84.M8CPY	84	58	23
HSK63A.H109.M8CPY	109	83	23
HSK63A.H134.M8CPY	134	108	25
HSK63A.H59.M10CPY	59	33	20
HSK63A.H84.M10CPY	84	58	25
HSK63A.H109.M10CPY	109	83	28
HSK63A.H134.M10CPY	134	108	28
HSK63A.H159.M10CPY	159	133	34
HSK63A.H176.M10CPY	176	150	34
HSK63A.H59.M12CPY	59	33	24
HSK63A.H84.M12CPY	84	58	24
HSK63A.H109.M12CPY	109	83	31
HSK63A.H134.M12CPY	134	108	31
HSK63A.H159.M12CPY	159	133	38
HSK63A.H176.M12CPY	176	150	42
HSK63A.H59.M16CPY	59	33	34
HSK63A.H84.M16CPY	84	58	34
HSK63A.H109.M16CPY	109	83	34
HSK63A.H134.M16CPY	134	108	39
HSK63A.H159.M16CPY	159	133	39
HSK63A.H184.M16CPY	184	158	39

	M	D	A2	Nm
M8CPY	M8	8,5	13	25Nm
M10CPY	M10	10,5	18	40Nm
M12CPY	M12	12,5	21	60Nm
M16CPY	M16	17	29	80Nm

Momento torcente consigliato: **Nm**
Recommended tightening torque:

Articolo	H	L	A1
HSK100A.H79.M8CPY	79	53	23
HSK100A.H79.M10CPY	79	53	23
HSK100A.H129.M10CPY	129	103	32
HSK100A.H179.M10CPY	179	153	36,5
HSK100A.H79.M12CPY	79	53	24
HSK100A.H129.M12CPY	129	103	33
HSK100A.H179.M12CPY	179	153	40
HSK100A.H79.M16CPY	79	53	34
HSK100A.H129.M16CPY	129	103	36
HSK100A.H179.M16CPY	179	153	42,5
HSK100A.H229.M16CPY	229	203	55

ACCESSORI - *ACCESSORIES*

P. 201 RIDUZIONI ER *ER ADAPTERS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

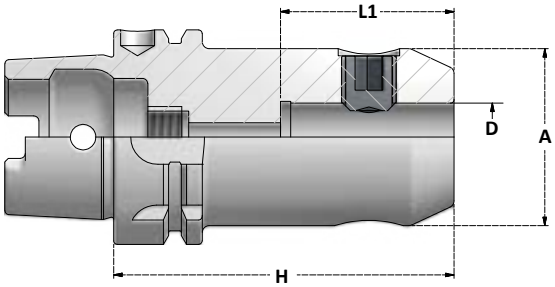
MANDRINI PORTAFRESA WELDON - DIN1835-2
END MILL HOLDERS WELDON - DIN1835-2

WE	**STANDARD**
Pag. 34-35	*STANDARD*
WE RG	**A CENTRATURA REGOLABILE**
Pag. 36	*ADJUSTABLE RUNOUT*
WE C	**CON CANALI DI LUBRIFICAZIONE**
Pag. 37	*WITH COOLANT CHANNELS*
WHN	**WHISTLE NOTCH - GRANI INCLINATI A 2°** (DIN 1835-2 Form E)
Pag. 38	*WHISTLE NOTCH - 2° INCLINED SCREWS* (DIN 1835-2 Form E)

HSK A | WE | **DIN 1835-2 Form B**

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON





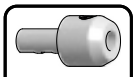
ATTACCO *SHANK* **HSK A** P. 20

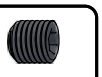
SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

Articolo	H
HSK50A.H65.WE6	65
HSK50A.H65.WE8	65
HSK50A.H65.WE10	65
HSK50A.H80.WE12	80
HSK50A.H80.WE14	80
HSK50A.H80.WE16	80
HSK50A.H80.WE18	80
HSK50A.H80.WE20	80

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

ACCESSORI - *ACCESSORIES*


P. 225 RIDUZIONI *ADAPTERS*

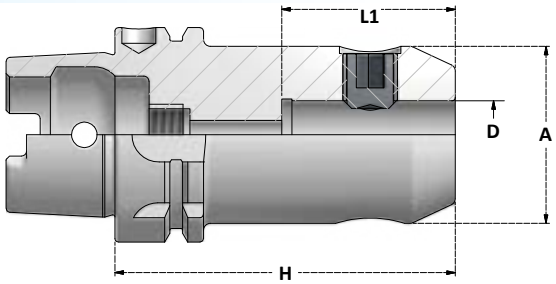

P. 303 GRANI *SCREWS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3 15000r.p.m.



ATTACCO *SHANK* **HSK A** P. 20

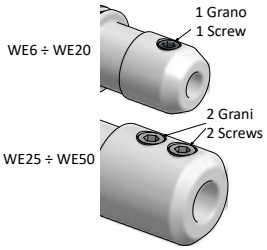
SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

Articolo	H
HSK63A.H65.WE6	65
HSK63A.H100.WE6	100
HSK63A.H130.WE6	130
HSK63A.H160.WE6	160
HSK63A.H65.WE8	65
HSK63A.H100.WE8	100
HSK63A.H130.WE8	130
HSK63A.H160.WE8	160
HSK63A.H65.WE10	65
HSK63A.H100.WE10	100
HSK63A.H130.WE10	130
HSK63A.H160.WE10	160
HSK63A.H80.WE12	80
HSK63A.H100.WE12	100
HSK63A.H130.WE12	130
HSK63A.H160.WE12	160
HSK63A.H80.WE14	80
HSK63A.H100.WE14	100
HSK63A.H130.WE14	130
HSK63A.H160.WE14	160
HSK63A.H80.WE16	80
HSK63A.H100.WE16	100
HSK63A.H130.WE16	130
HSK63A.H160.WE16	160
HSK63A.H80.WE18	80
HSK63A.H100.WE18	100
HSK63A.H130.WE18	130
HSK63A.H160.WE18	160
HSK63A.H80.WE20	80
HSK63A.H100.WE20	100
HSK63A.H130.WE20	130
HSK63A.H160.WE20	160
HSK63A.H110.WE25	110
HSK63A.H130.WE25	130
HSK63A.H160.WE25	160
HSK63A.H110.WE32	110
HSK63A.H130.WE32	130
HSK63A.H160.WE32	160
HSK63A.H125.WE40	125

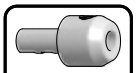
Articolo	H
HSK100A.H80.WE6	80
HSK100A.H130.WE6	130
HSK100A.H160.WE6	160
HSK100A.H80.WE8	80
HSK100A.H130.WE8	130
HSK100A.H160.WE8	160
HSK100A.H80.WE10	80
HSK100A.H130.WE10	130
HSK100A.H160.WE10	160
HSK100A.H200.WE10	200
HSK100A.H80.WE12	80
HSK100A.H130.WE12	130
HSK100A.H160.WE12	160
HSK100A.H200.WE12	200
HSK100A.H80.WE14	80
HSK100A.H130.WE14	130
HSK100A.H160.WE14	160
HSK100A.H100.WE16	100
HSK100A.H130.WE16	130
HSK100A.H160.WE16	160
HSK100A.H200.WE16	200
HSK100A.H100.WE18	100
HSK100A.H130.WE18	130
HSK100A.H160.WE18	160
HSK100A.H100.WE20	100
HSK100A.H130.WE20	130
HSK100A.H160.WE20	160
HSK100A.H200.WE20	200
HSK100A.H100.WE25	100
HSK100A.H130.WE25	130
HSK100A.H160.WE25	160
HSK100A.H200.WE25	200
HSK100A.H100.WE32	100
HSK100A.H130.WE32	130
HSK100A.H160.WE32	160
HSK100A.H200.WE32	200
HSK100A.H120.WE40	120
HSK100A.H160.WE40	160
HSK100A.H200.WE40	200
HSK100A.H130.WE50	130

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40
..WE50	50	83	100	2x	GR.WE50

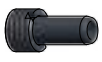


ACCESSORI - *ACCESSORIES*

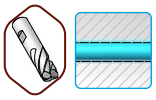

P. 225 RIDUZIONI *ADAPTERS*

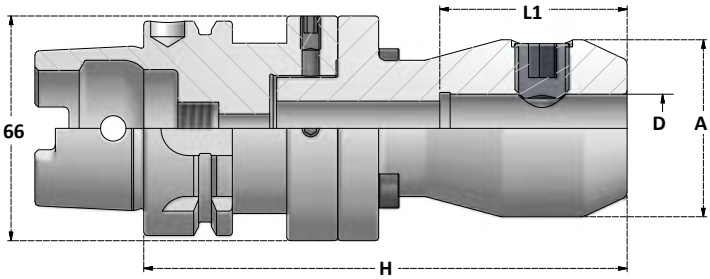

P. 303 GRANI *SCREWS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAFRESA WELDON A CENTRATURA REGOLABILE
RUNOUT ADJUSTABLE END MILL HOLDERS WELDON





±0,1mm Centratura regolabile *Adjustable runout*

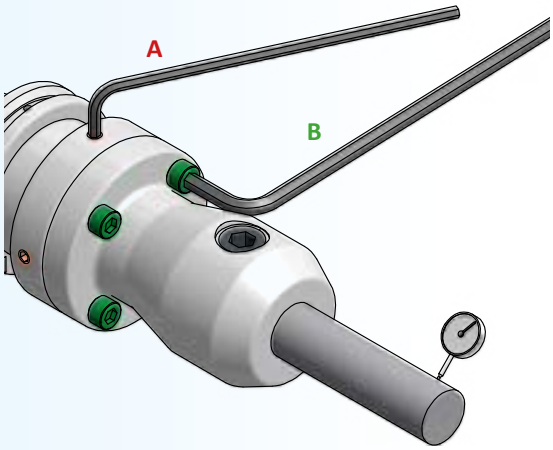
ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

Articolo	H
HSK63A.H107.WE6RG	107
HSK63A.H107.WE8RG	107
HSK63A.H107.WE10RG	107
HSK63A.H117.WE12RG	117
HSK63A.H117.WE14RG	117
HSK63A.H137.WE16RG	137
HSK63A.H137.WE18RG	137
HSK63A.H142.WE20RG	142

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

Articolo	H
HSK100A.H110.WE6RG	110
HSK100A.H110.WE8RG	110
HSK100A.H110.WE10RG	110
HSK100A.H120.WE12RG	120
HSK100A.H120.WE14RG	120
HSK100A.H140.WE16RG	140
HSK100A.H140.WE18RG	140
HSK100A.H145.WE20RG	145



Allentare le viti **B** e regolare la centratura tramite le viti **A**.
Loosen screws **B** and use screws **A** for radial adjustment.

ACCESSORI - *ACCESSORIES*



P. 303 GRANI *SCREWS*



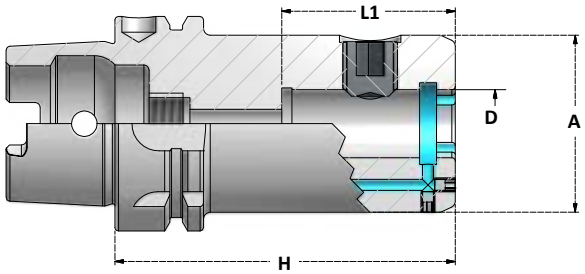
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*



P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAFRESA WELDON CON CANALI DI LUBRIFICAZIONE
END MILL HOLDERS WELDON WITH COOLANT CHANNELS

G6,3
15000r.p.m.




CANALINI
CHANNELS

ATTACCO
SHANK
HSK A
P. 20

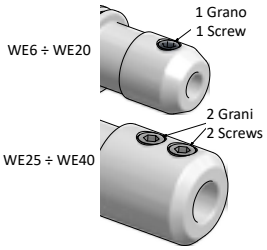
SCHEDA TECNICA
TECHNICAL DATA
WE | P. 347

Articolo	H
HSK63A.H75.WE6C	75
HSK63A.H75.WE8C	75
HSK63A.H75.WE10C	75
HSK63A.H80.WE12C	80
HSK63A.H80.WE14C	80
HSK63A.H80.WE16C	80
HSK63A.H80.WE18C	80
HSK63A.H80.WE20C	80
HSK63A.H110.WE25C	110
HSK63A.H110.WE32C	110
HSK63A.H120.WE40C	120

Articolo	H
HSK100A.H100.WE16C	100
HSK100A.H100.WE20C	100
HSK100A.H100.WE25C	100
HSK100A.H100.WE32C	100
HSK100A.H120.WE40C	120

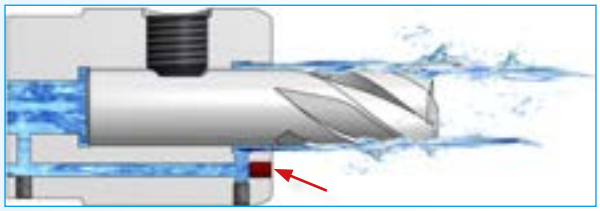
	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

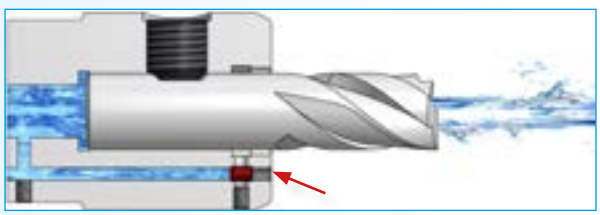
	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40



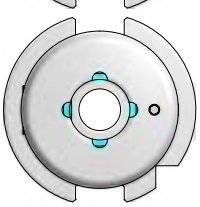
Regolando il grano si può scegliere se indirizzare il liquido refrigerante ai fori del mandrino o attraverso l'utensile.

Lock screw for coolant through tool.
Unlock screw for coolant through toolholder.






WE6C ÷ WE14C


WE16C ÷ WE40C

ACCESSORI - *ACCESSORIES*

P. 303
GRANI
SCREWS

P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

P. 306
RACCORDI REFRIGERANTE
COOLANT TUBES

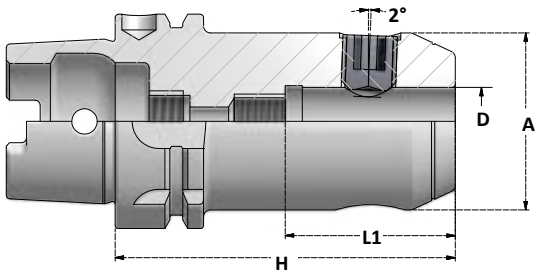
MANDRINI PORTAFRESA WHISTLE NOTCH

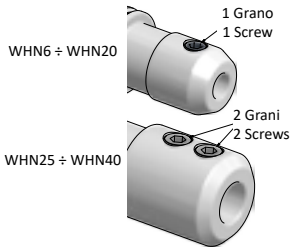
END MILL HOLDERS WHISTLE NOTCH

G6,3
15000r.p.m.

ATTACCO
SHANK
HSK A
P. 20

SCHEDA TECNICA
TECHNICAL DATA
WE | P. 347





Articolo	H
HSK63A.H80.WHN6	80
HSK63A.H80.WHN8	80
HSK63A.H80.WHN10	80
HSK63A.H90.WHN12	90
HSK63A.H100.WHN16	100
HSK63A.H100.WHN18	100
HSK63A.H100.WHN20	100
HSK63A.H110.WHN25	110
HSK63A.H110.WHN32	110

Articolo	H
HSK100A.H90.WHN6	90
HSK100A.H90.WHN8	90
HSK100A.H90.WHN10	90
HSK100A.H100.WHN12	100
HSK100A.H100.WHN16	100
HSK100A.H100.WHN18	100
HSK100A.H110.WHN20	110
HSK100A.H120.WHN25	120
HSK100A.H120.WHN32	120
HSK100A.H120.WHN40	120

	D	L1	A	Grano Screw
WHN6	6	37	25	GR.WE6
WHN8	8	37	28	GR.WE8
WHN10	10	41	35	GR.WE10
WHN12	12	46	42	GR.WE12-14
WHN14	14	46	44	GR.WE12-14
WHN16	16	49	48	GR.WE16-18
WHN18	18	49	50	GR.WE16-18
WHN20	20	51	52	GR.WE20

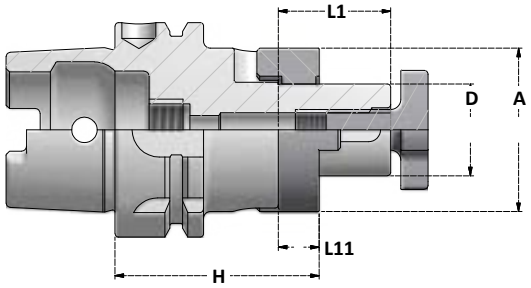
	D	L1	A		Grano Screw
WHN25	25	59	65	2x	GR.WE25
WHN32	32	63	72	2x	GR.WE32-40
WHN40	40	73	80	2x	GR.WE32-40

ACCESSORI - *ACCESSORIES*

P. 303 GRANI *SCREWS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

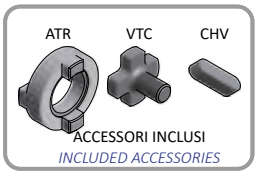
MANDRINI PORTAFRESA COMBINATI
COMBI SHELL MILL HOLDERS





ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* D C | P. 348



Articolo	H
HSK50A.H50.D16C	50
HSK50A.H50.D22C	50
HSK50A.H65.D27C	65
HSK50A.H65.D32C	65

Articolo	H
HSK63A.H60.D16C	60
HSK63A.H100.D16C	100
HSK63A.H160.D16C	160
HSK63A.H60.D22C	60
HSK63A.H100.D22C	100
HSK63A.H160.D22C	160
HSK63A.H60.D27C	60
HSK63A.H100.D27C	100
HSK63A.H160.D27C	160
HSK63A.H60.D32C	60
HSK63A.H100.D32C	100
HSK63A.H160.D32C	160
HSK63A.H70.D40C	70
HSK63A.H100.D40C	100

Articolo	H
HSK100A.H60.D16C	60
HSK100A.H100.D16C	100
HSK100A.H160.D16C	160
HSK100A.H60.D22C	60
HSK100A.H100.D22C	100
HSK100A.H160.D22C	160
HSK100A.H60.D27C	60
HSK100A.H100.D27C	100
HSK100A.H160.D27C	160
HSK100A.H60.D32C	60
HSK100A.H100.D32C	100
HSK100A.H160.D32C	160
HSK100A.H70.D40C	70
HSK100A.H100.D40C	100
HSK100A.H160.D40C	160

	D	A	L1	L11	ATR	VTC	CHV
D16C	16	32	27	10	ATR.D16	VTC.D16	CHV.D16
D22C	22	40	31	12	ATR.D22	VTC.D22	CHV.D22
D27C	27	48	33	12	ATR.D27	VTC.D27	CHV.D27
D32C	32	58	38	14	ATR.D32	VTC.D32	CHV.D32
D40C	40	70	41	14	ATR.D40	VTC.D40	CHV.D40

ACCESSORI - *ACCESSORIES*





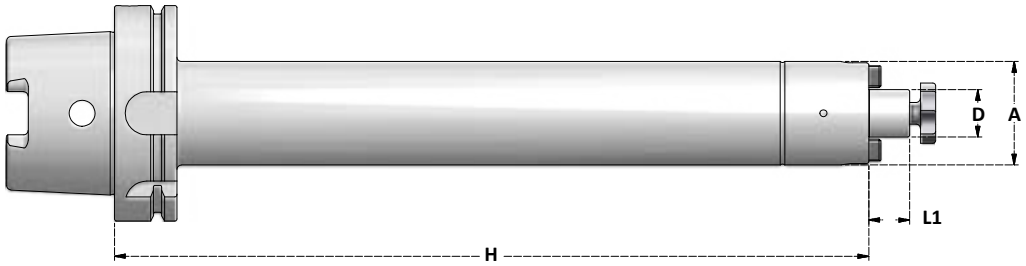


MANDRINI PORTAFRESA ANTIVIBRANTI
DAMPING VIBRATIONS SHELL MILL HOLDERS

CANALI PER REFRIGERANTE COOLANT CHANNELS
G6,3
15000r.p.m.

ATTACCO *SHANK* HSK A P. 20

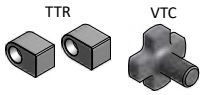
SCHEDA TECNICA *TECHNICAL DATA* D S P. 349



Articolo	H
HSK100A.H350.D22SAV	350
HSK100A.H400.D22SAV	400
HSK100A.H500.D22SAV	500

Articolo	H
HSK100A.H350.D27SAV	350
HSK100A.H400.D27SAV	400
HSK100A.H500.D27SAV	500

	D	A	L1	TTR	VTC
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27



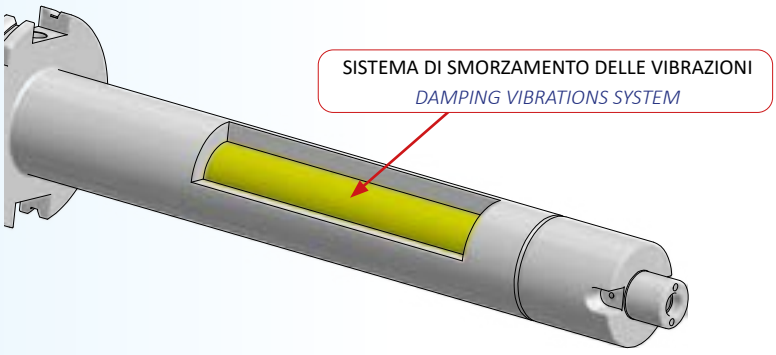
ACCESSORI INCLUSI
INCLUDED ACCESSORIES

I mandrini portafresa antivibranti sono dotati di un sistema interno che smorza le vibrazioni trasmesse dalla fresa all'attacco.
In questo modo viene prolungata la durata dell'utensile e del mandrino macchina.

Il sistema antivibrante consente di lavorare con sporgenze molto lunghe mantenendo parametri di taglio elevati.
Le lavorazioni sono più silenziose e stabili, e permettono di ottenere una migliore finitura superficiale.

Damping vibrations shell mill holders have an internal system that dampens the vibrations transmitted from the mill to the shank.
In this way, the life of the tool and the machine spindle is extended.

Damping vibrations system allows to work with very long overhangs while maintaining high cutting parameters.
The processes are quieter and more stable, and allow to obtain a better surface finish.



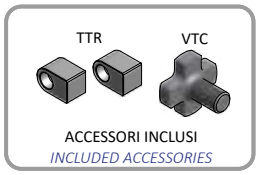
ACCESSORI - *ACCESSORIES*

P. 304-305 ACCESSORI *ACCESSORIES*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS

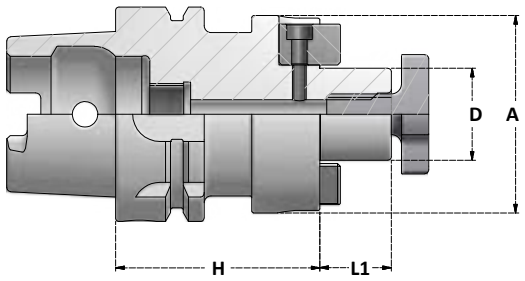






ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* D S | P. 349

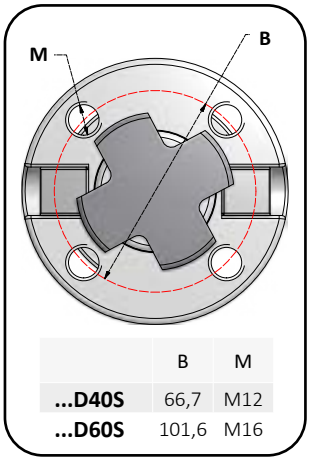


Articolo	H
HSK50A.H50.D16S	50
HSK50A.H60.D22S	60
HSK50A.H60.D27S	60
HSK50A.H60.D32S	60

	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40
...D60S	60	129	40	TTR.D60	VTC.D60

Articolo	H
HSK63A.H50.D16S	50
HSK63A.H100.D16S	100
HSK63A.H130.D16S	130
HSK63A.H160.D16S	160
HSK63A.H50.D22S	50
HSK63A.H100.D22S	100
HSK63A.H130.D22S	130
HSK63A.H160.D22S	160
HSK63A.H60.D27S	60
HSK63A.H100.D27S	100
HSK63A.H130.D27S	130
HSK63A.H160.D27S	160
HSK63A.H60.D32S	60
HSK63A.H100.D32S	100
HSK63A.H130.D32S	130
HSK63A.H160.D32S	160
HSK63A.H60.D40S	60
HSK63A.H100.D40S	100
HSK63A.H130.D40S	130
HSK63A.H160.D40S	160

Articolo	H
HSK100A.H50.D16S	50
HSK100A.H100.D16S	100
HSK100A.H130.D16S	130
HSK100A.H160.D16S	160
HSK100A.H200.D16S	200
HSK100A.H50.D22S	50
HSK100A.H100.D22S	100
HSK100A.H130.D22S	130
HSK100A.H160.D22S	160
HSK100A.H200.D22S	200
HSK100A.H50.D27S	50
HSK100A.H100.D27S	100
HSK100A.H130.D27S	130
HSK100A.H160.D27S	160
HSK100A.H200.D27S	200
HSK100A.H50.D32S	50
HSK100A.H100.D32S	100
HSK100A.H130.D32S	130
HSK100A.H160.D32S	160
HSK100A.H60.D40S	60
HSK100A.H100.D40S	100
HSK100A.H130.D40S	130
HSK100A.H160.D40S	160
HSK100A.H70.D60S	70



	B	M
...D40S	66,7	M12
...D60S	101,6	M16

ACCESSORI - *ACCESSORIES*



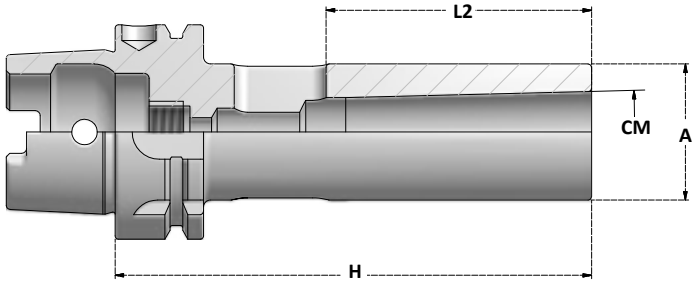




DIN 69893-1 | HSK A | CM P | **DIN 6383**

MANDRINI DI RIDUZIONE CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS

G6,3
15000r.p.m.



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* CM P | P. 350

Articolo	H
HSK63A.H100.CM1P	100
HSK63A.H120.CM2P	120
HSK63A.H140.CM3P	140
HSK63A.H160.CM4P	160

	CM	A	L2
...CM1P	1	25	56
...CM2P	2	32	67
...CM3P	3	40	84
...CM4P	4	48	107
...CM5P	5	63	135

Articolo	H
HSK100A.H110.CM1P	110
HSK100A.H120.CM2P	120
HSK100A.H150.CM3P	150
HSK100A.H170.CM4P	170
HSK100A.H200.CM5P	200

PER UTENSILI DIN228B CON TENONE

FOR TOOLS DIN228B WITH TANG

ACCESSORI - *ACCESSORIES*


P. 308 ESTRATTORI *PULLERS*

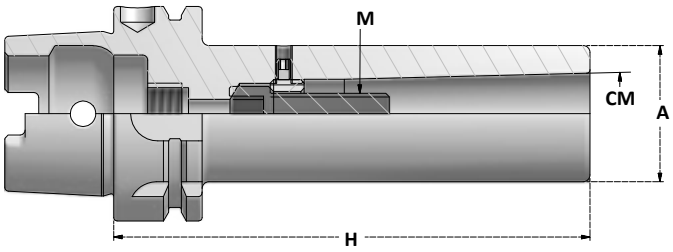

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

DIN 69893-1 | HSK A | CM FV | **DIN 6364**

MANDRINI DI RIDUZIONE CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS

G6,3
15000r.p.m.



SCHEDA TECNICA *TECHNICAL DATA* CMFV | P. 351

Articolo	H
HSK63A.H100.CM1FV	100
HSK63A.H120.CM2FV	120
HSK63A.H150.CM3FV	150
HSK63A.H170.CM4FV	170

	CM	A	M
...CM1FV	1	25	M6
...CM2FV	2	32	M10
...CM3FV	3	40	M12
...CM4FV	4	48	M16
...CM5FV	5	63	M20

Articolo	H
HSK100A.H120.CM1FV	120
HSK100A.H120.CM2FV	120
HSK100A.H150.CM3FV	150
HSK100A.H170.CM4FV	170
HSK100A.H200.CM5FV	200

PER UTENSILI DIN228A CON FILETTO

FOR TOOLS DIN228A WITH THREAD

FORNITI CON VITE SENZA FORO PER IL PASSAGGIO DEL REFRIGERANTE

SUPPLIED WITH SCREW WITHOUT COOLANT THROUGH

ACCESSORI - *ACCESSORIES*

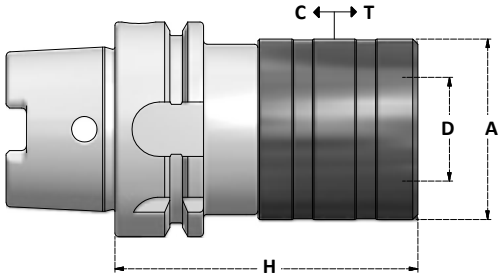

P. 275 PINZE *COLLETS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

DIN 69893-1 | HSK A | MCR TC

MASCHIATORI A CAMBIO RAPIDO CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION



ATTACCO *SHANK* **HSK A** P. 20

SCHEDA TECNICA *TECHNICAL DATA* MCR | P. 352

Corsa di compressione: *Compression stroke:* **C**

Corsa di trazione: *Extension stroke:* **T**

Articolo	H
HSK63A.MCR1TC	81
HSK63A.MCR2TC	119
HSK63A.MCR3TC	176

Articolo	H
HSK100A.MCR1TC	90
HSK100A.MCR2TC	138
HSK100A.MCR3TC	190
HSK100A.MCR4TC	225

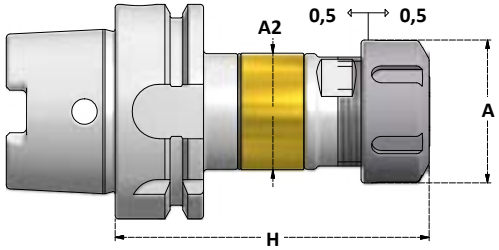
	Bussola Adapter	D	Tapping Range	A	T	C
MCR1	B1 / BF1	19	M2÷M14	36	7,5	7,5
MCR2	B2 / BF2	31	M6÷M27	53	12,5	12,5
MCR3	B3 / BF3	48	M14÷M45	78	20	20
MCR4	BF4	60	M22÷M45	96	22,5	22,5

ACCESSORI - *ACCESSORIES*



DIN 69893-1 | HSK A | ERC SY

MANDRINI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING



SCHEDA TECNICA *TECHNICAL DATA* SY | P. 353

VANTAGGI RISPETTO AL SISTEMA CON BUSSOLE
ADVANTAGES COMPARED TO ADAPTERS SYSTEM

- **PASSAGGIO DEL REFRIGERANTE**
- **ADATTO PER MASCHIATURA AD ALTE VELOCITÀ**
- **SISTEMA PORTAPINZE ER**

- *COOLANT THROUGH*
- *SUITABLE FOR HIGH SPEED TAPPING*
- *ER COLLET SYSTEM*

Articolo	H
HSK63A.ERC16MSY	89

Articolo	H
HSK63A.ERC16SY	89
HSK63A.ERC20SY	90
HSK63A.ERC25SY	94
HSK63A.ERC32SY	105
HSK63A.ERC40SY	133

Articolo	H
HSK100A.ERC16MSY	96

Articolo	H
HSK100A.ERC16SY	96
HSK100A.ERC20SY	97
HSK100A.ERC25SY	102
HSK100A.ERC32SY	110
HSK100A.ERC40SY	133
HSK100A.ERC50SY	133

	A	A2	Collets Range	Tapping Range	Ghiera Nut
ERC16MSY	22	34	3,5 ÷ 10	M3 ÷ M12	G16M
ERC16SY	32	34	3,5 ÷ 10	M3 ÷ M12	G16S
ERC20SY	35	34	3,5 ÷ 12	M3 ÷ M16	G20S
ERC25SY	42	45	3,5 ÷ 16	M3 ÷ M20	G25S
ERC32SY	50	45	3,5 ÷ 20	M3 ÷ M27	G32S
ERC40SY	63	62	6 ÷ 25	M5 ÷ M33	G40S
ERC50SY	78	62	8 ÷ 32	M10-M42	G50S

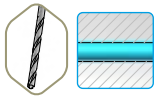
ACCESSORI - *ACCESSORIES*

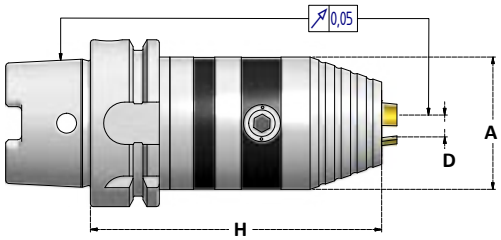


DIN 69893-1 | HSK A | CP

MANDRINI PORTAPUNTA CON PASSAGGIO DEL REFRIGERANTE ROTAZIONE DESTRA E SINISTRA

*DRILL CHUCKS **WITH COOLANT THROUGH** - RIGHT AND LEFT ROTATION*







ATTACCO
SHANK
HSK A
P. 20

Articolo	D	H	A	Chiave Wrench
HSK63A.H105.CP13S	1-13	105	50,5	CH.EX6
HSK63A.H110.CP16S	2,5-16	110	57	CH.EX6

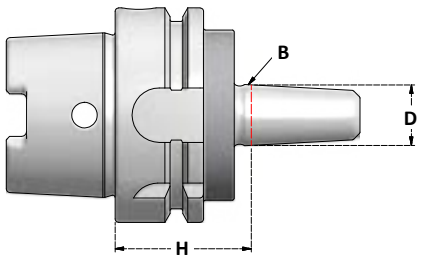
ACCESSORI - *ACCESSORIES*

P. 289 CHIAVI *WRENCHES*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

DIN 69893-1 | HSK A | B | DIN 238

ATTACCHI PER MANDRINI AUTOSERRANTI

DRILL CHUCKS ARBORS



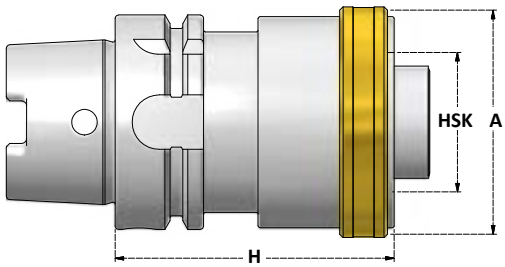
Articolo	H
HSK63A.H45.B12	45
HSK63A.H45.B16	45
HSK63A.H45.B18	45

B	D
...B12	12,065
...B16	15,733
...B18	17,78

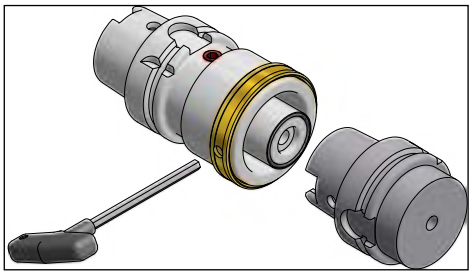
ACCESSORI - *ACCESSORIES*

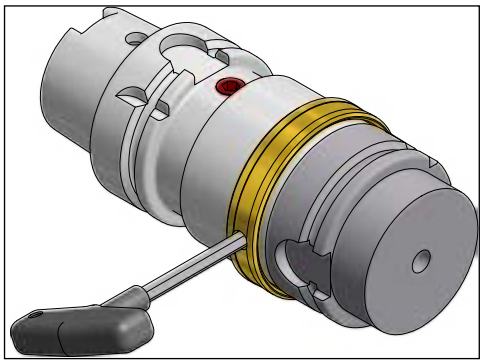
P. 204 AUTOSERRANTI *DRILL CHUCKS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

ADATTATORI HSK FORMA A/C
ADAPTERS HSK FORM A/C



ATTACCO *SHANK* **HSK A** P. 20





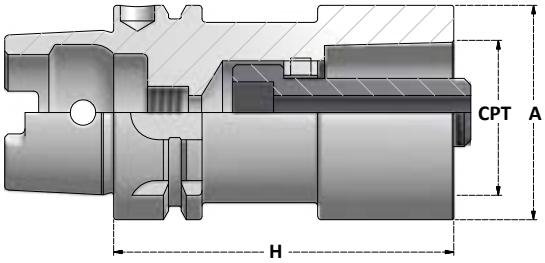
Articolo	H	A	HSK A/C
HSK63A.H80.HSK50AC	80	55	50
HSK63A.H80.HSK63AC	80	70	63
HSK63A.H120.HSK63AC	120	70	63

Articolo	H	A	HSK A/C
HSK100A.H100.HSK63AC	100	70	63
HSK100A.H140.HSK100AC	140	110	100
HSK100A.H200.HSK100AC	200	110	100

DIN 69893-1 HSK A CPT DIN ISO 26623-1

NEW

ADATTATORI CPT
ADAPTERS CPT



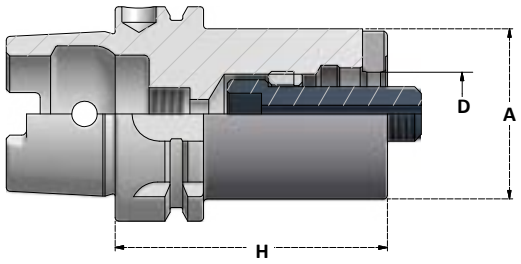
Articolo	H	A	CPT
HSK63A.H80.CPT40	80	40	40
HSK63A.H90.CPT50	90	50	50

Articolo	H	A	CPT
HSK100A.H90.CPT40	90	40	40
HSK100A.H100.CPT50	100	50	50
HSK100A.H110.CPT63	110	63	63
HSK100A.H120.CPT80	120	80	80
HSK100A.H155.CPT100	155	100	100

ACCESSORI - *ACCESSORIES*

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

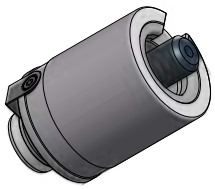
MANDRINI MODULARI TIPO VARILOCK
MODULAR TOOLHOLDERS VARILOCK TYPE



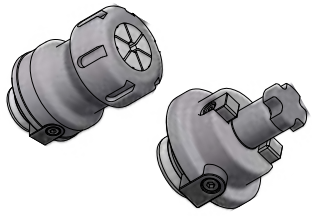
ATTACCO
SHANK
HSK A
P. 20

Articolo	A	H	D	Attacco
HSK63A.H80.MD50	50	80	27,3 / 27	MD50
HSK63A.H90.MD63	63	90	32,3 / 32	MD63

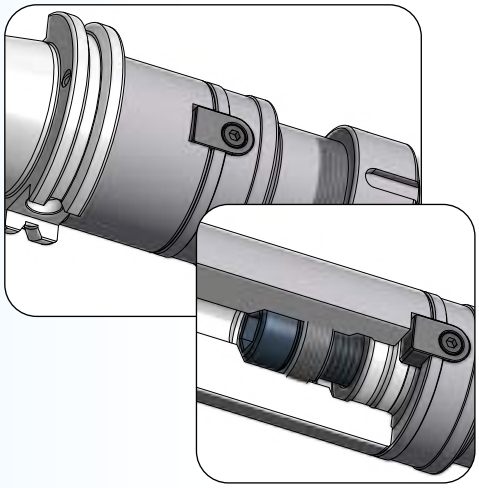
Articolo	A	H	D	Attacco
HSK100A.H85.MD50	50	85	27,3 / 27	MD50
HSK100A.H95.MD63	63	95	32,3 / 32	MD63
HSK100A.H95.MD80	80	95	32,3 / 32	MD80



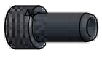
RIDUZIONI E PROLUNGHE
EXTENSIONS AND REDUCTIONS
PAG. 203



INSERZIONI PORTAUTENSILI
TOOLHOLDER ADAPTERS
PAG. 202



ACCESSORI - *ACCESSORIES*

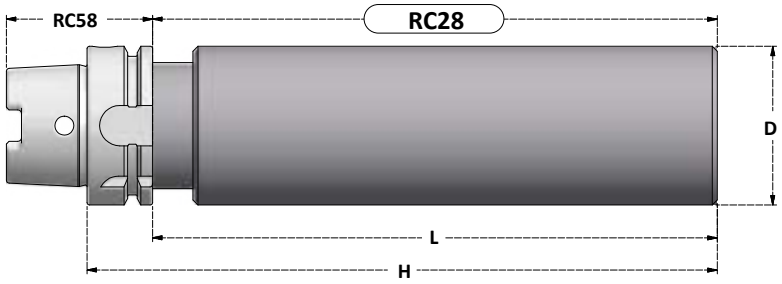


P. 306
RACCORDI REFRIGERANTE
COOLANT TUBES



P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

MANDRINI CON STELO LAVORABILE
BLANK ARBORS

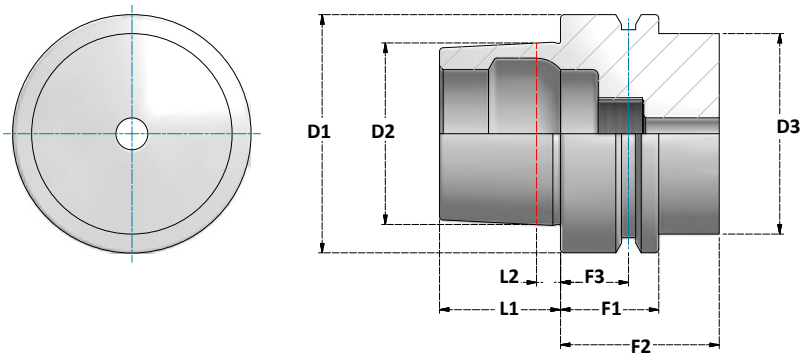


ATTACCO
SHANK
HSK A
P. 20

Articolo	D	H	L
HSK63A.H150.D63BL	63	150	124
HSK63A.H250.D63BL	63	250	224
HSK63A.H250.D80BL	80	250	224

Articolo	D	H	L
HSK100A.H250.D97BL	97	250	221

MANDRINI HSK FORMA E
HSK FORM E TOOLHOLDERS



DIMENSIONI DELL'ATTACCO
SHANK DIMENSIONS

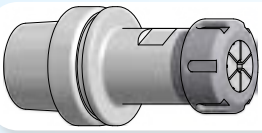
ATTACCO SHANK	D1	D2	D3	L1	L2	F1	F2	F3
	h10		max	0 -0,2		0 -0,1	min	±0,1
50	50	38,009	42	25	5	26	42	18
63	63	48,010	53	32	6,3	26	42	18

CARATTERISTICHE:
Tolleranza di precisione dei coni: AT2.
Costruiti in acciaio certificato in barre.
Eseguiti trattamenti termici da fornitori certificati.
Rettificati di precisione esternamente e internamente.
Controllati con strumenti di misura certificati.
Prebilanciati nei gradi indicati nelle pagine di catalogo.

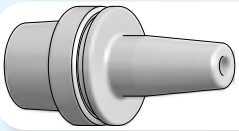
FEATURES:
The precision tolerance of tapers is AT2.
Made of certified steel.
Heat treatments performed by certified suppliers.
Precision grinding externally and internally.
Checked with certified measuring instruments.
Pre-balanced as indicated in the catalog pages.

SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES* **P.310**

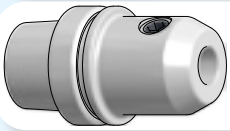




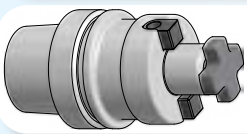
MANDRINI PORTAPINZA ER STANDARD
COLLET CHUCKS ER STANDARD
DIN ISO 15488 (DIN6499)
PAG. 49



MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS
PAG. 50



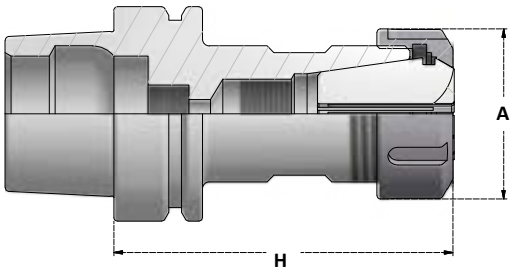
MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON
DIN 1835-2
PAG. 51



MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357
PAG. 51

MANDRINI PORTAPINZA ER PER ROTAZIONE DESTRA
RIGHT ROTATION ER COLLET CHUCKS

G6,3
24000r.p.m.



ATTACCO *SHANK* **HSK E** P. 48

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

Articolo	H
HSK50E.H100.ERC16	100
HSK50E.H100.ERC20	100
HSK50E.H100.ERC25	100
HSK50E.H100.ERC32	100

MANDRINI PER ROTAZIONE SINISTRA A RICHIESTA
LEFT ROTATION COLLET CHUCKS ON REQUEST

Articolo	H
HSK63E.H73.ERC32	73
HSK63E.H78.ERC40	78

MANDRINI PER ROTAZIONE SINISTRA A RICHIESTA
LEFT ROTATION COLLET CHUCKS ON REQUEST

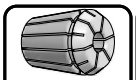
Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.



	A	Collets Range	Ghiera Nut
...ERC16	32	1÷10	G16WD
...ERC20	35	1÷14	G20WD
...ERC25	42	1÷20	G25WD
...ERC32	50	2÷22	G32WD
...ERC40	63	3÷30	G40WD

GHIERE **CONCENTRICHE**
***CONCENTRIC** NUTS WITH SLOTS*

ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

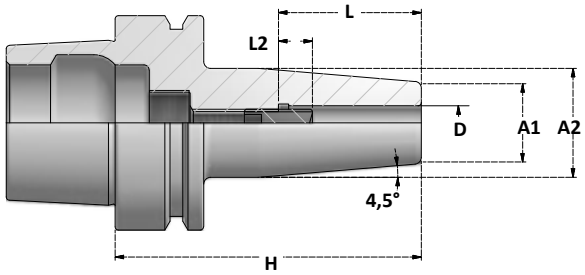

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* **HSK E** P. 48

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

Articolo	H
HSK50E.H80.TM3	80
HSK50E.H80.TM4	80
HSK50E.H80.TM5	80
HSK50E.H80.TM6	80
HSK50E.H80.TM8	80
HSK50E.H85.TM10	85
HSK50E.H90.TM12	90
HSK50E.H90.TM14	90
HSK50E.H95.TM16	95
HSK50E.H95.TM18	95
HSK50E.H100.TM20	100

Articolo	H
HSK63E.H80.TM4	80
HSK63E.H80.TM6	80
HSK63E.H80.TM8	80
HSK63E.H85.TM10	85
HSK63E.H90.TM12	90
HSK63E.H95.TM16	95
HSK63E.H95.TM18	95
HSK63E.H100.TM20	100

		D	L	A1	A2
TM3	*	3	12	10	20
TM4	*	4	16	15	25
TM5	*	5	20	15	25
TM6		6	36	21	27
TM8		8	36	21	27
TM10		10	41	24	32
TM12		12	46	24	32
TM14		14	46	24	32
TM16		16	49	24	32
TM18		18	49	33	42
TM20		20	51	33	42

Profondità regolabile: *Adjustable depth:* **L2**= 10mm

* Senza vite di regolazione
* *Without adjusting screw*

ACCESSORI - *ACCESSORIES*


P. 224 PROLUNGHE *EXTENSIONS*

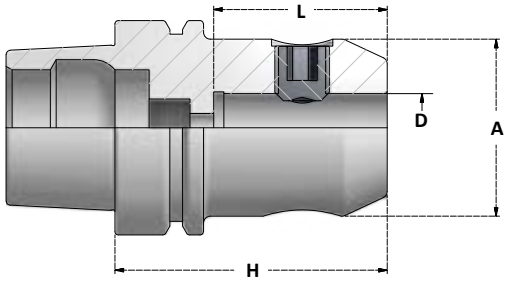

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

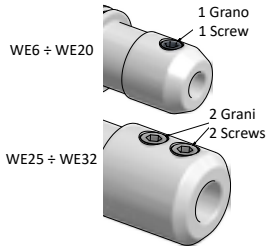

P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

DIN 69893-5 | HSK E | WE

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3 24000r.p.m.





ATTACCO *SHANK* **HSK E** P. 48

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

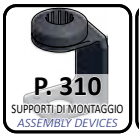
Articolo	H
HSK50E.H65.WE6	65
HSK50E.H65.WE8	65
HSK50E.H65.WE10	65
HSK50E.H80.WE12	80
HSK50E.H80.WE14	80
HSK50E.H80.WE16	80
HSK50E.H80.WE18	80
HSK50E.H80.WE20	80

Articolo	H
HSK63E.H80.WE16	80
HSK63E.H80.WE20	80
HSK63E.H110.WE25	110
HSK63E.H110.WE32	110

	D	L	A	Grano Screw
WE6	6	37	25	GR.WE6
WE8	8	37	28	GR.WE8
WE10	10	41	35	GR.WE10
WE12	12	46	42	GR.WE12-14
WE14	14	46	44	GR.WE12-14
WE16	16	49	48	GR.WE16-18
WE18	18	49	50	GR.WE16-18
WE20	20	51	52	GR.WE20

	D	L	A		Grano Screw
WE25	25	59	65	2x	GR.WE25
WE32	32	63	72	2x	GR.WE32-40

ACCESSORI - *ACCESSORIES*





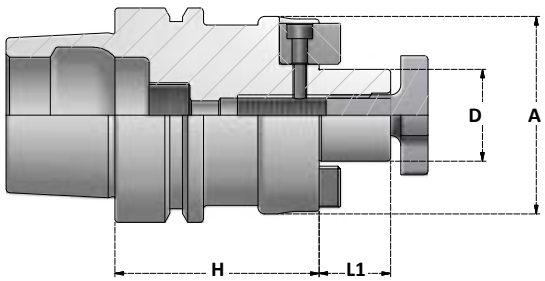




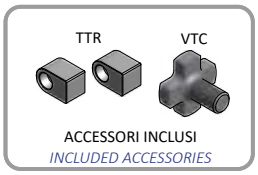
DIN 69893-5 | HSK E | D S

MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS

G6,3 24000r.p.m.







SCHEDA TECNICA *TECHNICAL DATA* D S P. 349

Articolo	H
HSK50E.H50.D16S	50
HSK50E.H60.D22S	60
HSK50E.H60.D27S	60
HSK50E.H60.D32S	60

Articolo	H
HSK63E.H50.D16S	50
HSK63E.H50.D22S	50
HSK63E.H60.D27S	60

	D	A	L1	TTR	VTC
D16S	16	38	17	TTR.D16	VTC.D16
D22S	22	48	19	TTR.D22	VTC.D22
D27S	27	58	21	TTR.D27	VTC.D27
D32S	32	78	24	TTR.D32	VTC.D32

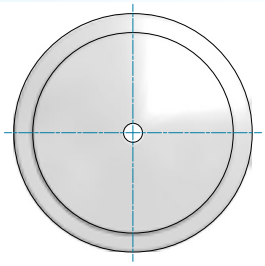
ACCESSORI - *ACCESSORIES*

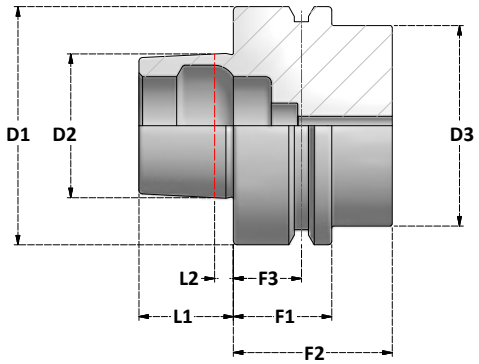






MANDRINI HSK FORMA F
HSK FORM F TOOLHOLDERS



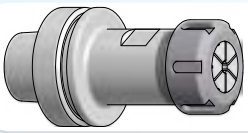


DIMENSIONI DELL'ATTACCO
SHANK DIMENSIONS

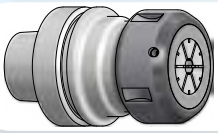
ATTACCO SHANK	D1	D2	D3	L1	L2	F1	F2	F3
	h10		max	0 -0,2		0 -0,1	min	±0,1
63	63	38,009	53	25	5	26	42	18

CARATTERISTICHE:
Tolleranza di precisione dei coni: AT2.
Costruiti in acciaio certificato in barre.
Eseguiti trattamenti termici da fornitori certificati.
Rettificati di precisione esternamente e internamente.
Controllati con strumenti di misura certificati.
Prebilanciati nei gradi indicati nelle pagine di catalogo.

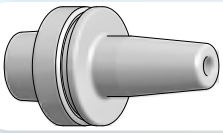
FEATURES:
The precision tolerance of tapers is AT2.
Made of certified steel.
Heat treatments performed by certified suppliers.
Precision grinding externally and internally.
Checked with certified measuring instruments.
Pre-balanced as indicated in the catalog pages.



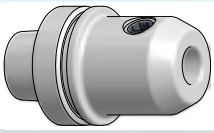
MANDRINI PORTAPINZA ER STANDARD
COLLET CHUCKS ER STANDARD
DIN ISO 15488 (DIN6499)
PAG. 53



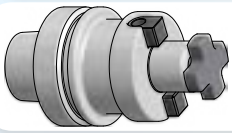
MANDRINI PORTAPINZA EOC
EOC COLLET CHUCKS
DIN ISO 10897 (DIN6388)
PAG. 53



MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS
PAG. 54



MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON
DIN 1835-2
PAG. 55



MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357
PAG. 55



MANDRINI DI COLLAUDO
TEST ARBORS
PAG. 330

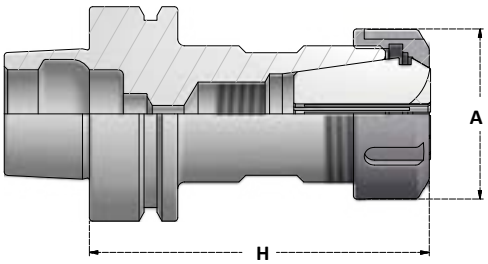
SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES* **P.310**



DIN 69893-6 | HSK F | ERC | **DIN ISO 15488** (DIN6499)

MANDRINI PORTAPINZA ER PER ROTAZIONE DESTRA
RIGHT ROTATION ER COLLET CHUCKS





ATTACCO *SHANK* **HSK F** P. 52

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

Articolo	H	Range ERC	Ghiera Nut
HSK63F.H70.ERC16	70	1÷10	G16WD
HSK63F.H100.ERC16	100	1÷10	G16WD
HSK63F.H70.ERC20	70	1÷14	G20WD
HSK63F.H100.ERC20	100	1÷14	G20WD
HSK63F.H70.ERC25	70	1÷20	G25WD
HSK63F.H100.ERC25	100	1÷20	G25WD
HSK63F.H73.ERC32	73	2÷22	G32WD
HSK63F.H100.ERC32	100	2÷22	G32WD
HSK63F.H78.ERC40	78	3÷30	G40WD
HSK63F.H100.ERC40	100	3÷30	G40WD



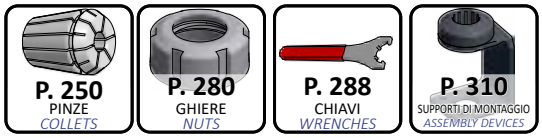
	A	Collets Range	Ghiera Nut
...ERC16	32	1÷10	G16WD
...ERC20	35	1÷14	G20WD
...ERC25	42	1÷20	G25WD
...ERC32	50	2÷22	G32WD
...ERC40	63	3÷30	G40WD

GHIERE **CONCENTRICHE**
CONCENTRIC *NUTS WITH SLOTS*

MANDRINI PER ROTAZIONE SINISTRA A RICHIESTA
LEFT ROTATION COLLET CHUCKS ON REQUEST

Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

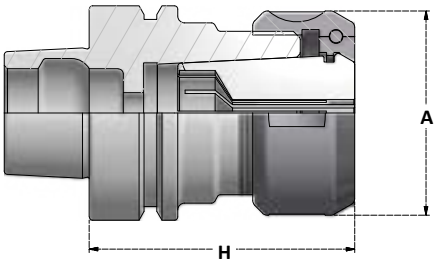
ACCESSORI - *ACCESSORI*



DIN 69893-6 | HSK F | EOC | **DIN ISO 10897**(DIN6388)

MANDRINI PORTAPINZA EOC PER ROTAZIONE DESTRA
RIGHT ROTATION EOC COLLET CHUCKS





Articolo	H	A	Range EOC	Ghiera Nut
HSK63F.H78.EOC25	78	60	2÷25	G25OCC

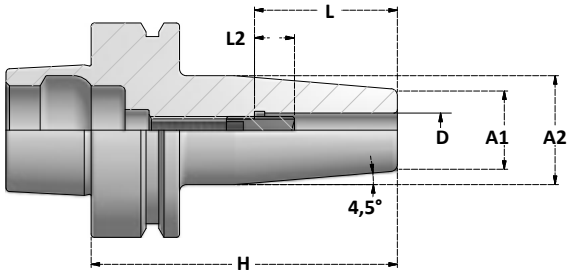
MANDRINI PER ROTAZIONE SINISTRA A RICHIESTA
LEFT ROTATION COLLET CHUCKS ON REQUEST

ACCESSORI - *ACCESSORI*



MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* **HSK F** P. 52

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

Articolo	H
HSK63F.H80.TM3	80
HSK63F.H120.TM3	120
HSK63F.H160.TM3	160
HSK63F.H80.TM4	80
HSK63F.H120.TM4	120
HSK63F.H160.TM4	160
HSK63F.H80.TM5	80
HSK63F.H120.TM5	120
HSK63F.H160.TM5	160
HSK63F.H80.TM6	80
HSK63F.H120.TM6	120
HSK63F.H160.TM6	160
HSK63F.H80.TM8	80
HSK63F.H120.TM8	120
HSK63F.H160.TM8	160
HSK63F.H85.TM10	85
HSK63F.H120.TM10	120
HSK63F.H160.TM10	160
HSK63F.H90.TM12	90
HSK63F.H120.TM12	120
HSK63F.H160.TM12	160
HSK63F.H90.TM14	90
HSK63F.H95.TM16	95
HSK63F.H120.TM16	120
HSK63F.H160.TM16	160
HSK63F.H95.TM18	95
HSK63F.H100.TM20	100
HSK63F.H160.TM20	160
HSK63F.H125.TM25	125
HSK63F.H125.TM32	125

		D	L	A1	A2
TM3	*	3	12	10	20
TM4	*	4	16	15	25
TM5	*	5	20	15	25
TM6		6	36	21	27
TM8		8	36	21	27
TM10		10	41	24	32
TM12		12	46	24	32
TM14		14	46	24	32
TM16		16	49	24	32
TM18		18	49	33	42
TM20		20	51	33	42
TM25		25	57	44	53
TM32		32	61	44	53

Profondità regolabile: **L2**= 10mm
Adjustable depth:

* Senza vite di regolazione
** Without adjusting screw*

ACCESSORI - *ACCESSORIES*

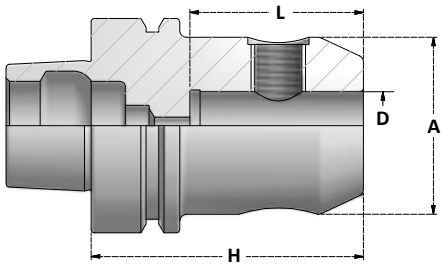

P. 224 PROLUNGHE *EXTENSIONS*

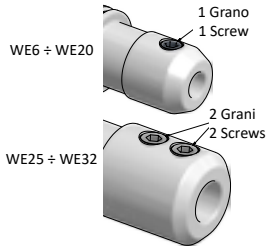

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

DIN 69893-6 | HSK F | WE

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3 24000r.p.m.





ATTACCO *SHANK* **HSK F** P. 52

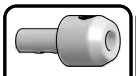
SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

Articolo	H
HSK63F.H65.WE6	65
HSK63F.H65.WE8	65
HSK63F.H65.WE10	65
HSK63F.H80.WE12	80
HSK63F.H80.WE14	80
HSK63F.H80.WE16	80
HSK63F.H80.WE18	80
HSK63F.H80.WE20	80
HSK63F.H110.WE25	110
HSK63F.H110.WE32	110

	D	L	A	Grano Screw
WE6	6	37	25	GR.WE6
WE8	8	37	28	GR.WE8
WE10	10	41	35	GR.WE10
WE12	12	46	42	GR.WE12-14
WE14	14	46	44	GR.WE12-14
WE16	16	49	48	GR.WE16-18
WE18	18	49	50	GR.WE16-18
WE20	20	51	52	GR.WE20

	D	L	A		Grano Screw
WE25	25	59	65	2x	GR.WE25
WE32	32	63	72	2x	GR.WE32-40

ACCESSORI - *ACCESSORIES*


P. 225 RIDUZIONI *ADAPTERS*

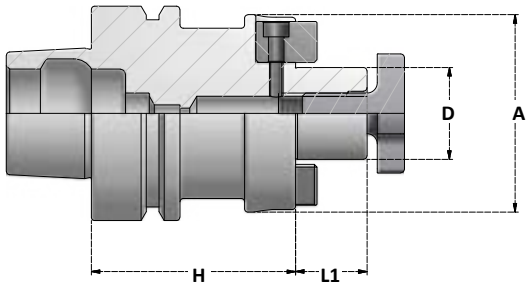

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

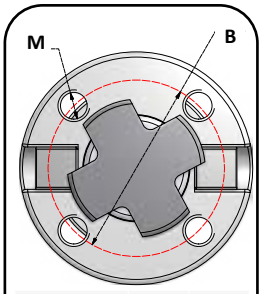

P. 303 GRANI *SCREWS*

DIN 69893-6 | HSK F | D S

MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS

G6,3 24000r.p.m.



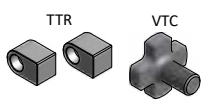


SCHEDA TECNICA *TECHNICAL DATA* D S P. 349

Articolo	H
HSK63F.H50.D16S	50
HSK63F.H50.D22S	50
HSK63F.H60.D27S	60
HSK63F.H60.D32S	60
HSK63F.H60.D40S	60

	D	A	L1	TTR	VTC
D16S	16	38	17	TTR.D16	VTC.D16
D22S	22	48	19	TTR.D22	VTC.D22
D27S	27	58	21	TTR.D27	VTC.D27
D32S	32	78	24	TTR.D32	VTC.D32
D40S	40	88	27	TTR.D40	VTC.D40

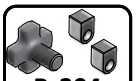
	B	M
...D40S	66,7	M12



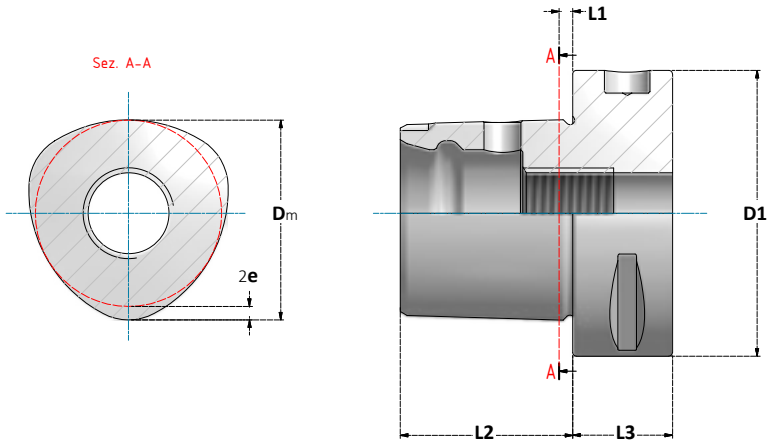
ACCESSORI INCLUSI *INCLUDED ACCESSORIES*

ACCESSORI - *ACCESSORIES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 304 ACCESSORI *ACCESSORIES*

ATTACCO POLIGONALE
POLYGONAL SHANK



DIMENSIONI DELL'ATTACCO
SHANK DIMENSIONS

ATTACCO SHANK	D1	Dm	e	L1	L2	L3
					±0,1	min
CPT50	50	35	1,12	3	30	20
CPT63	63	44	1,4	3	38	22

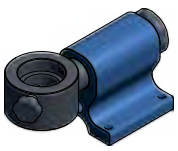
CARATTERISTICHE:
Costruiti in acciaio certificato in barre.
Eseguiti trattamenti termici da fornitori certificati.
Rettificati di precisione esternamente e internamente.
Controllati con strumenti di misura certificati.
Prebilanciati nei gradi indicati nelle pagine di catalogo.

FEATURES:
Made of certified steel.
Heat treatments performed by certified suppliers.
Precision grinding externally and internally.
Checked with certified measuring instruments.
Pre-balanced as indicated in the catalog pages.

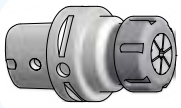
RACCORDI PER REFRIGERANTE *COOLING TUBES* **P.306**



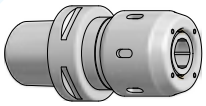
SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES* **P.315**



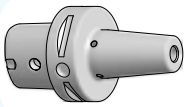
BILANCIATURA *BALANCING* **P.360**



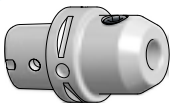
MANDRINI PORTAPINZA ER
COLLET CHUCKS ER
DIN ISO 15488 (DIN6499)
PAG. 58



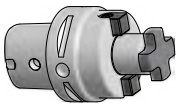
MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS
PAG. 59



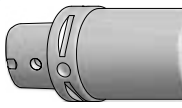
MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS
PAG. 60



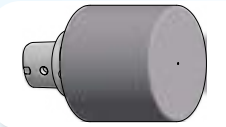
MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON
DIN 1835-2
PAG. 62



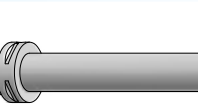
MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357
PAG. 63



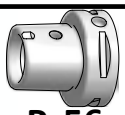
PROLUNGHE E RIDUZIONI
EXTENSIONS AND ADAPTERS
PAG. 64



MANDRINI CON STELO LAVORABILE
BLANK ARBORS
PAG. 65



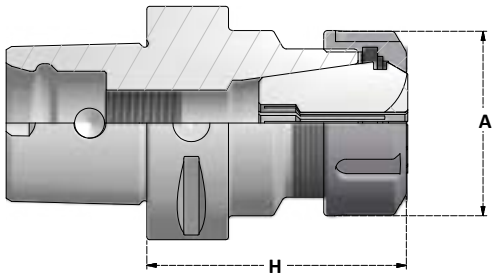
BARRE DI COLLAUDO
TEST ARBORS
PAG. 330



P. 56
ATTACCO CPT
CPT SHANK

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





ATTACCO *SHANK* **CPT** P. 56

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

Articolo	H
CPT50.H100.ERC16	100
CPT50.H55.ERC25	55
CPT50.H57.ERC32	57
CPT50.H100.ERC32	100

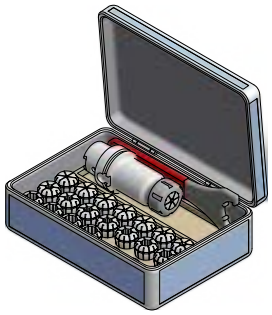
	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S

Articolo	H
CPT63.H100.ERC16	100
CPT63.H60.ERC20	60
CPT63.H100.ERC20	100
CPT63.H60.ERC25	60
CPT63.H100.ERC25	100
CPT63.H70.ERC32	70
CPT63.H100.ERC32	100
CPT63.H65.ERC40	65

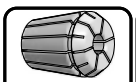
KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.CPT63.ERC32-6	ERC32.D6-D8-D10-D12-D16-D20	CPT63.H70.ERC32	CH32S
BX.CPT63.ERC40-7	ERC40.D6-D8-D10-D12-D16-D20-D25	CPT63.H65.ERC40	CH40S

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.CPT50.ERC25	ERC25	D2÷16	CPT50.H55.ERC25	CH25S
BX.CPT50.ERC32	ERC32	D3÷20	CPT50.H57.ERC32	CH32S
BX.CPT63.ERC25	ERC25	D2÷16	CPT63.H60.ERC25	CH25S
BX.CPT63.ERC32	ERC32	D3÷20	CPT63.H70.ERC32	CH32S
BX.CPT63.ERC40	ERC40	D4÷26	CPT63.H65.ERC40	CH40S



ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*


P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS

G6,3 15000r.p.m.

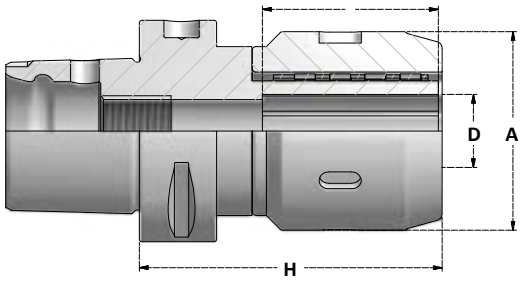
0,005

CANALINI *CHANNELS*

CHIAVE INCLUSA *WRENCH INCLUDED*

ATTACCO *SHANK* **CPT** P. 56

SCHEDA TECNICA *TECHNICAL DATA* FS P. 344



Articolo	H
CPT50.H75.FS20	75
CPT50.H90.FS32	90

	D	A
...FS**20**	20	26
...FS**32**	32	28

Articolo	H
CPT63.H75.FS20	75
CPT63.H85.FS32	85

Serrare la ghiera di bloccaggio fino al finecorsa
Tighten the locking nut up to the limit

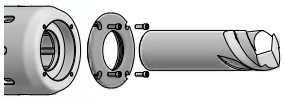
Forza di serraggio *Clamping force*	
FS**20**	**500**Nm
FS**32**	**1000**Nm

DISCHI DI TENUTA PER MANDRINI A FORTE SERRAGGIO
SEALED CAPS FOR POWER MILLING CHUCKS

A TENUTA *SEALED*

DISCHI DI TENUTA PER DIAMETRO NOMINALE
SEALED CAPS FOR NOMINAL DIAMETER

Articolo	D
CFS20.D20	20
CFS32.D32	32

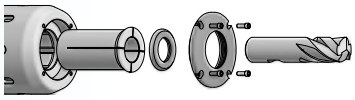






DISCHI DI TENUTA PER L'UTILIZZO DELLE PINZE DI RIDUZIONE
SEALED CAPS FOR REDUCTION COLLETS USING

Articolo	D	RG Range
CFS20.RG	RG32	D4÷D16
CFS32.RG	RG40	D6÷D25

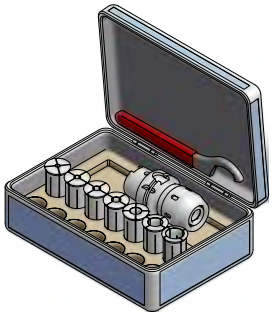


SCHEDA TECNICA *TECHNICAL DATA* FS P. 344

P. 284 DISCHETTI **RG** ***RG*** *SEALED DISCS*

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.CPT50.FS20	4SR20	D6 D8 D10 D12 D16	CPT50.H75.FS20
BX.CPT50.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	CPT50.H90.FS32
BX.CPT63.FS20	4SR20	D6 D8 D10 D12 D16	CPT63.H75.FS20
BX.CPT63.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	CPT63.H85.FS32



ACCESSORI - *ACCESSORI*

P. 276 PINZE *COLLETS*

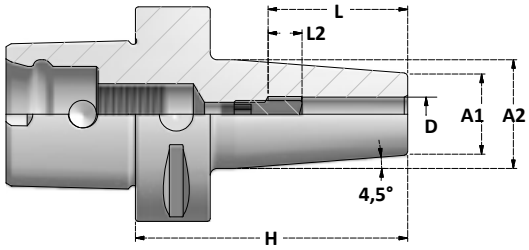
P. 289 CHIAVI *WRENCHES*

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* **CPT** P. 56

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

Articolo	H
CPT50.H75.TM6	75
CPT50.H75.TM8	75
CPT50.H75.TM10	75
CPT50.H75.TM12	75
CPT50.H80.TM14	80
CPT50.H80.TM16	80
CPT50.H80.TM18	80
CPT50.H85.TM20	85

Articolo	H
CPT63.H80.TM3	80
CPT63.H80.TM4	80
CPT63.H80.TM5	80
CPT63.H80.TM6	80
CPT63.H80.TM8	80
CPT63.H80.TM10	80
CPT63.H80.TM12	80
CPT63.H85.TM14	85
CPT63.H85.TM16	85
CPT63.H85.TM18	85
CPT63.H85.TM20	85
CPT63.H90.TM25	90
CPT63.H95.TM32	95

		D	L	A1	A2
TM3	*	3	12	10	20
TM4	*	4	16	15	25
TM5	*	5	20	15	25
TM6		6	36	21	27
TM8		8	36	21	27
TM10		10	41	24	32
TM12		12	46	24	32
TM14		14	46	24	32
TM16		16	49	24	32
TM18		18	49	33	42
TM20		20	51	33	42
TM25		25	57	44	53
TM32		32	61	44	53

* Senza vite di regolazione
** Without adjusting screw*

Profondità regolabile: *Adjustable depth:* **L2**= 10mm

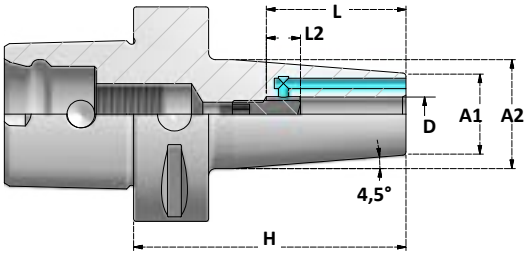
ACCESSORI - *ACCESSORIES*

P. 224 PROLUNGHE *EXTENSIONS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI A CALETTAMENTO A CALDO JET
CON FORI PER IL REFRIGERANTE

*SHRINK FIT CHUCKS **JET** TYPE*
WITH HOLES FOR COOLANT





ATTACCO *SHANK* **CPT** P. 56

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

Articolo	H
CPT50.H75.TM6JET	75
CPT50.H120.TM6JET	120
CPT50.H75.TM8JET	75
CPT50.H120.TM8JET	120
CPT50.H75.TM10JET	75
CPT50.H120.TM10JET	120
CPT50.H75.TM12JET	75
CPT50.H120.TM12JET	120
CPT50.H80.TM14JET	80
CPT50.H120.TM14JET	120
CPT50.H80.TM16JET	80
CPT50.H120.TM16JET	120
CPT50.H80.TM18JET	80
CPT50.H120.TM18JET	120
CPT50.H85.TM20JET	85
CPT50.H120.TM20JET	120

Articolo	H
CPT63.H80.TM6JET	80
CPT63.H120.TM6JET	120
CPT63.H80.TM8JET	80
CPT63.H120.TM8JET	120
CPT63.H80.TM10JET	80
CPT63.H120.TM10JET	120
CPT63.H80.TM12JET	80
CPT63.H120.TM12JET	120
CPT63.H85.TM14JET	85
CPT63.H120.TM14JET	120
CPT63.H85.TM16JET	85
CPT63.H120.TM16JET	120
CPT63.H85.TM18JET	85
CPT63.H120.TM18JET	120
CPT63.H85.TM20JET	85
CPT63.H120.TM20JET	120
CPT63.H90.TM25JET	90
CPT63.H120.TM25JET	120
CPT63.H95.TM32JET	95
CPT63.H120.TM32JET	120

	D	L	A1	A2
...TM6	6	36	21	27
...TM8	8	36	21	27
...TM10	10	41	24	32
...TM12	12	46	24	32
...TM14	14	46	24	32
...TM16	16	49	24	32
...TM18	18	49	33	42
...TM20	20	51	33	42
...TM25	25	57	44	53
...TM32	32	61	44	53

Profondità regolabile: **L2**= 10mm
Adjustable depth:

Altre lunghezze fornibili a richiesta
Other lenghts available on request







3 DIVERSE MODALITÀ DI UTILIZZO
3 DIFFERENT APPLICATIONS

Senza montare i grani in dotazione si ha la massima portata del liquido refrigerante
Not using supplied plugs you have maximum flow of coolant

Con l'utilizzo dei grani forati aumenta la pressione - ideale per lavorazioni ad alte velocità
Using plugs with hole the pressure increases - it's used for high speed works

Con l'utilizzo dei grani di chiusura si può lavorare con utensili con fori per il refrigerante
Mounting sealing plugs tools with coolant through can be used

ACCESSORI - *ACCESSORIES*

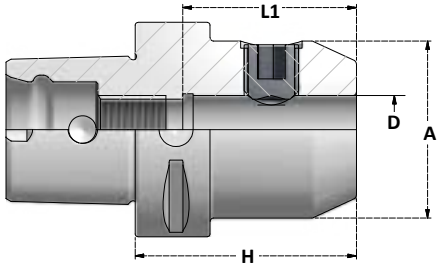

P. 224 PROLUNGHE *EXTENSIONS*

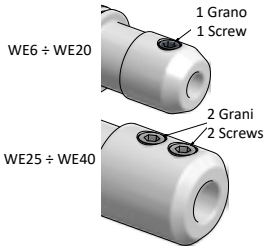

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3
15000r.p.m.





ATTACCO *SHANK* **CPT** P. 56

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

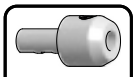
Articolo	H
CPT50.H50.WE6	50
CPT50.H50.WE8	50
CPT50.H55.WE10	55
CPT50.H60.WE12	60
CPT50.H60.WE14	60
CPT50.H60.WE16	60
CPT50.H60.WE18	60
CPT50.H60.WE20	60
CPT50.H80.WE25	80

Articolo	H
CPT63.H55.WE6	55
CPT63.H55.WE8	55
CPT63.H60.WE10	60
CPT63.H60.WE12	60
CPT63.H60.WE14	60
CPT63.H65.WE16	65
CPT63.H65.WE18	65
CPT63.H65.WE20	65
CPT63.H80.WE25	80
CPT63.H90.WE32	90
CPT63.H100.WE40	100

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

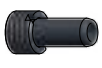
	D	L1	A		Grano Screw
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40

ACCESSORI - *ACCESSORIES*


P. 225 RIDUZIONI *ADAPTERS*


P. 303 GRANI *SCREWS*

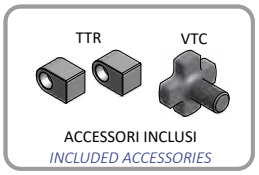

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS



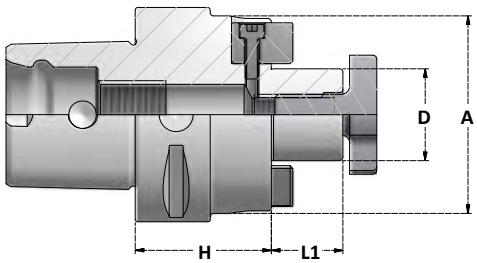

CANALI PER REFRIGERANTE
COOLANT CHANNELS



ACCESSORI INCLUSI
INCLUDED ACCESSORIES

ATTACCO *SHANK* **CPT** P. 56

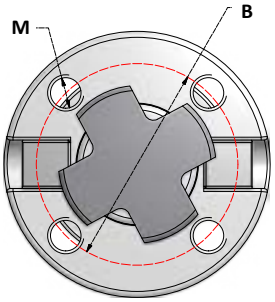
SCHEDA TECNICA *TECHNICAL DATA* D S P. 349



Articolo	H
CPT50.H35.D16S	35
CPT50.H25.D22S	25
CPT50.H25.D27S	25
CPT50.H40.D32S	40

Articolo	H
CPT63.H35.D16S	35
CPT63.H40.D22S	40
CPT63.H40.D27S	40
CPT63.H40.D32S	40
CPT63.H45.D40S	45

	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40



	B	M
...D40S	66,7	M12

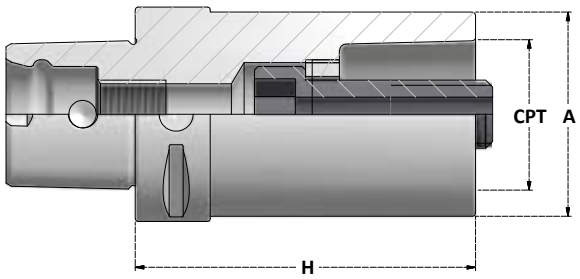
ACCESSORI - *ACCESSORIES*


P. 304-305
ACCESSORI
ACCESSORIES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 306
RACCORDI REFRIGERANTE
COOLANT TUBES

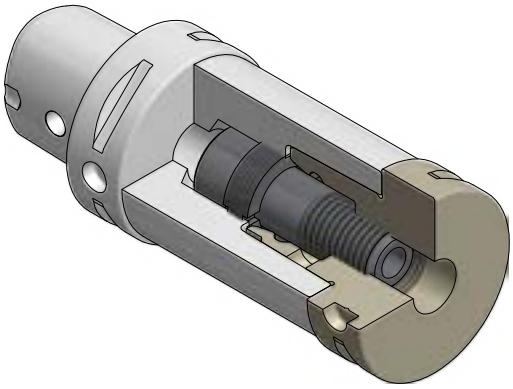
RIDUZIONI E PROLUNGHE
REDUCTIONS AND EXTENSIONS



ATTACCO
SHANK
CPT
P. 56

PROLUNGHE
EXTENSIONS

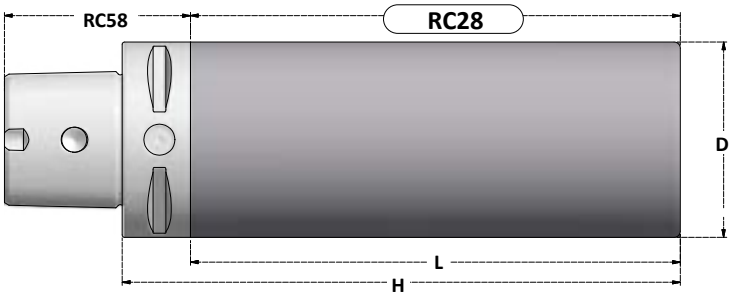
Articolo	H	A	CPT
CPT32.H60.CPT32	60	32	CPT32
CPT32.H80.CPT32	80	32	CPT32
CPT40.H60.CPT40	60	40	CPT40
CPT40.H80.CPT40	80	40	CPT40
CPT50.H80.CPT50	80	50	CPT50
CPT50.H100.CPT50	100	50	CPT50
CPT63.H100.CPT63	100	63	CPT63
CPT63.H140.CPT63	140	63	CPT63
CPT80.H100.CPT80	100	80	CPT80
CPT80.H150.CPT80	150	80	CPT80



RIDUZIONI
REDUCTIONS

Articolo	H	A	CPT
CPT40.H70.CPT32	70	32	CPT32
CPT50.H60.CPT32	60	32	CPT32
CPT50.H65.CPT40	65	40	CPT40
CPT63.H80.CPT40	80	40	CPT40
CPT63.H80.CPT50	80	50	CPT50
CPT80.H70.CPT40	70	50	CPT40
CPT80.H80.CPT50	80	63	CPT50
CPT80.H80.CPT63	80	63	CPT63

MANDRINI CON STELO LAVORABILE
BLANK ARBORS



ATTACCO
SHANK
CPT
P. 56

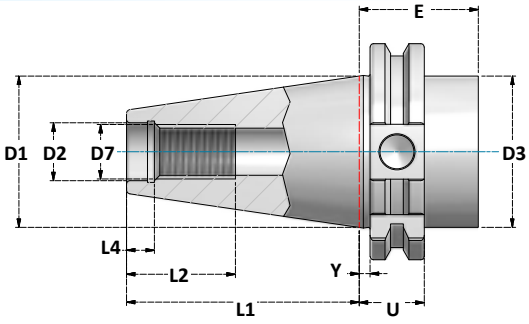
Articolo	D	H	L
CPT40.H120.D40BL	40	120	100
CPT40.H200.D75BL	75	200	180

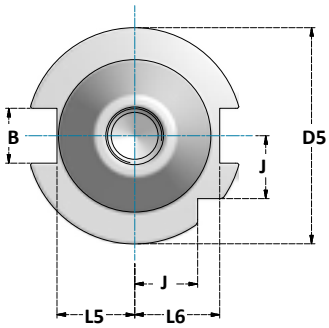
Articolo	D	H	L
CPT50.H150.D50BL	50	150	130
CPT50.H175.D75BL	75	175	155
CPT50.H150.D95BL	95	150	130

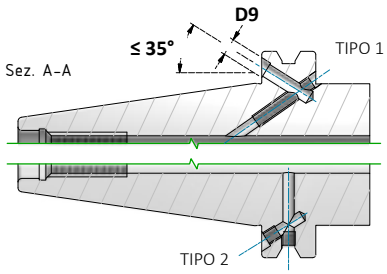
Articolo	D	H	L
CPT63.H180.D63BL	63	180	158
CPT63.H195.D75BL	75	195	173
CPT63.H300.D100BL	100	300	178
CPT63.H120.D110BL	110	120	98
CPT63.H180.D120BL	120	180	158
CPT63.H95.D130BL	130	95	73

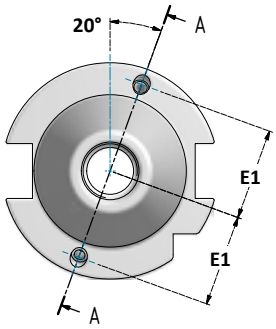
DIN ISO 7388 (DIN69871) - TC

MANDRINI TC
TC TOOLHOLDERS









* FORM AD+B

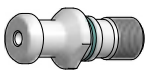
DIMENSIONI CONO
TAPER DIMENSIONS

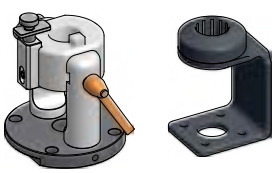
CONO / TAPER	B	D1	D2	D3	D5	D7	D9*	E	E1*	J	L1	L2	L4	L5	L6	Y	U
	+0,2 0		H7	Max	0 -0,1	6H	Max	min			0 -0,3						0 -0,1
TC30	16,1	31,75	13	45	50	M12	-	35	-	15	47,8	24	5,5	16,3	18,8	3,2	19,1
DTC30	16,1	31,75	13	45	50	M12	-	35	-	15	47,8	24	5,5	16,3	18,8	1	19,1
TC40 / TCB40	16,1	44,45	17	50	63,55	M16	4	35	27	18,5	68,4	32	8,2	22,7	25	3,2	19,1
DTC40	16,1	44,45	17	50	63,55	M16	4	35	27	18,5	68,4	32	8,2	22,7	25	1,01	19,1
TC50 / TCB50	25,7	69,85	25	80	97,5	M24	6	35	42	30	101,75	47	11,5	35,5	37,7	3,2	19,1
DTC50	25,7	69,85	25	80	97,5	M24	6	35	42	30	101,75	47	11,5	35,5	37,7	1,5	19,1

CARATTERISTICHE:
Tolleranza di precisione dei coni: AT3.
Costruiti in acciaio certificato in barre.
Eseguiti trattamenti termici da fornitori certificati.
Rettificati di precisione esternamente e internamente.
Controllati con strumenti di misura certificati.
Prebilanciati nei gradi indicati nelle pagine di catalogo.

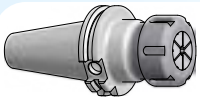
FEATURES:
The precision tolerance of tapers is AT3.
Made of certified steel.
Heat treatments performed by certified suppliers.
Precision grinding externally and internally.
Checked with certified measuring instruments.
Pre-balanced as indicated in the catalog pages.

AD/AD+B **P.359**
DOPPIO CONTATTO *DOUBLE CONTACT* **P.358**
BILANCIATURA *BALANCING* **P.360**
TIRANTI *PULL STUDS* **P.234**
SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES* **P.310**

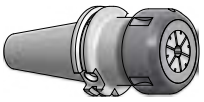




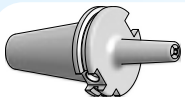
DIN ISO 7388 (DIN69871) - TC



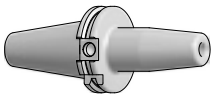
MANDRINI PORTAPINZA ER
COLLET CHUCKS ER
DIN ISO 15488 (DIN6499) *PAG. 68*



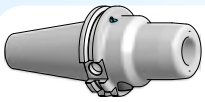
MANDRINI PORTAPINZA EOC
COLLET CHUCKS EOC
DIN ISO 10897 (DIN6388) *PAG. 75*



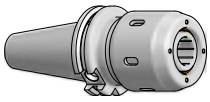
MANDRINI PORTAPINZA SLC
COLLET CHUCKS SLC
PAG. 76



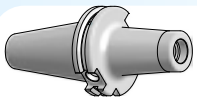
MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS
PAG. 77



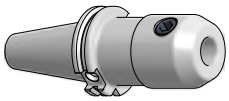
MANDRINI A SERRAGGIO IDRAULICO
HYDRAULIC CHUCKS
PAG. 81



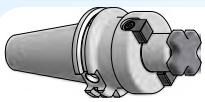
MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS
PAG. 82



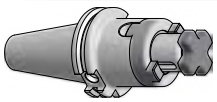
MANDRINI PORTAFRESA CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS
PAG. 84



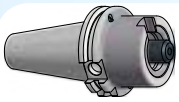
MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON
DIN 1835-2 *PAG. 85*



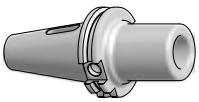
MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357 *PAG. 92*



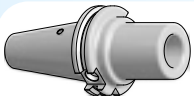
MANDRINI PORTAFRESA COMBI
COMBI SHELL MILL HOLDERS
DIN 6358 *PAG. 96*



MANDRINI MODULARI TIPO VARILOCK
MODULAR TOOLHOLDERS VARILOCK TYPE
PAG. 97



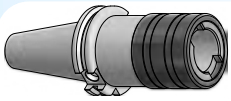
RIDUZIONI A CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS
DIN 6383 *PAG. 98*



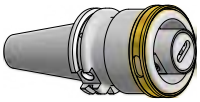
RIDUZIONI A CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS
DIN 6364 *PAG. 99*



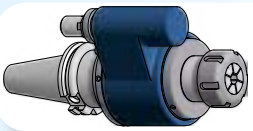
MANDRINI PORTAPUNTA
DRILL CHUCKS
PAG. 100



PORTAMASCHI
TAPPING CHUCKS
PAG. 102



RIDUZIONI
ADAPTERS
PAG. 104



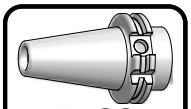
DISTRIBUTORI ROTANTI DEL REFRIGERANTE
OIL HOLE HOLDERS
PAG. 106



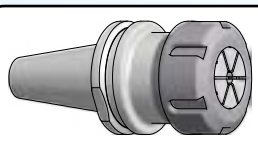
MANDRINI CON STELO LAVORABILE
BLANK ARBORS
PAG. 108



BARRE DI COLLAUDO
TEST ARBORS
PAG. 330



P. 66
ATTACCO TC
TC SHANK



MANDRINI SENZA TACCHE SULLA FLANGIA PER LA LAVORAZIONE DEL LEGNO E DELL'ALLUMINIO
TOOLHOLDERS WITHOUT SLOTS ON FLANGE FOR WOOD AND ALUWORKING MACHINES
PAG. 110

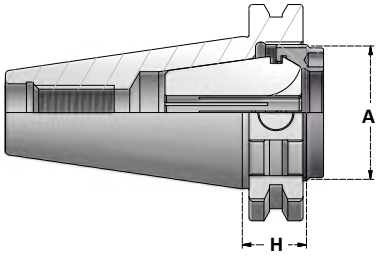
MANDRINI PORTAPINZA ER
ER COLLET CHUCKS

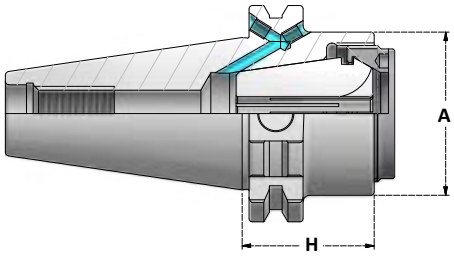
DIN ISO 15488 (DIN6499)

ERC A Pag. 68	**EXTRACORTI** *STUB LENGTH*
ERC MINI Pag. 69	**CON GHIERA MINI - ATTACCO DOPPIO CONTATTO** *WITH MINI NUT - DOUBLE CONTACT SHANK*
ERC MINI Pag. 69	**CON GHIERA MINI** *WITH MINI NUT*
ERC Pag. 70	**CON GHIERA STANDARD - ATTACCO DOPPIO CONTATTO** *WITH STANDARD NUT - DOUBLE CONTACT SHANK*
ERC Pag. 71-72	**CON GHIERA STANDARD** *WITH STANDARD NUT*
ERC NF Pag. 73	**CON GHIERA "NF" SENZA TACCHE - BILANCIATI PER ALTE VELOCITÀ** *WITH "NF" NOTCH FREE NUT - BALANCED FOR HIGH SPEEDS*
ERC RG Pag. 74	**A CENTRATURA REGOLABILE** *ADJUSTABLE RUNOUT*

MANDRINI PORTAPINZA ER - EXTRACORTI
ER COLLET CHUCKS - STUB LENGTH







ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

AD

Articolo	H	A
TC40.H21.ERC25A	21	32
TC40.H21.ERC32A	21	40

AD

Articolo	H	A
TC50.H21.ERC32A	21	40

AD + B

Articolo	H	A
TCB40.H40.ERC32A	40	50

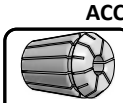
AD + B

Articolo	H	A
TCB50.H40.ERC32A	40	50

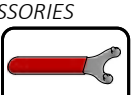


	Collets Range	Ghiera Nut
...ERC25A	1÷20	G25A
...ERC32A	2÷22	G32A

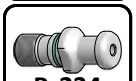
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 286 GHIERE *NUTS*

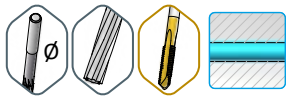

P. 292 CHIAVI *WRENCHES*

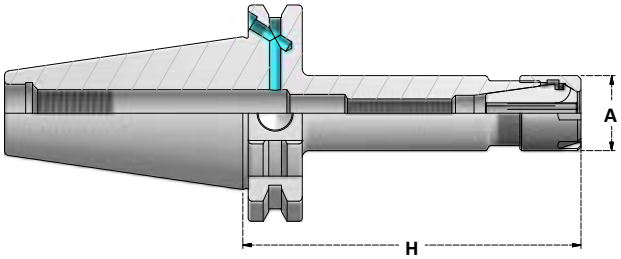

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

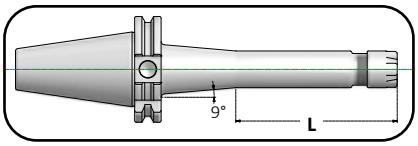

P. 234 TIRANTI *PULL STUDS*

Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS







ATTACCO *SHANK* TC P. 66
SCHEDA TECNICA *TECHNICAL DATA* ERC | P. 338

	A	Collets Range	Ghiera Nut
...ERC11M	16	1÷7	G11M
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M
...ERC25M	35	1÷20	G25M



G6,3
15000r.p.m.

ATTACCO STANDARD
STANDARD SHANK



Articolo	H
TC30.H100.ERC11M	100
TC30.H100.ERC16M	100
TC30.H100.ERC25M	100



Articolo	H	L
TCB40.H100.ERC11M	100	-
TCB40.H125.ERC11M	125	60
TCB40.H150.ERC11M	150	60
TCB40.H70.ERC16M	70	-
TCB40.H100.ERC16M	100	-
TCB40.H125.ERC16M	125	-
TCB40.H150.ERC16M	150	100
TCB40.H200.ERC16M	200	100
TCB40.H100.ERC20M	100	-
TCB40.H125.ERC20M	125	-
TCB40.H150.ERC20M	150	-
TCB40.H200.ERC20M	200	-
TCB40.H100.ERC25M	100	-
TCB40.H125.ERC25M	125	-
TCB40.H150.ERC25M	150	-
TCB40.H200.ERC25M	200	-



Articolo	H	L
TCB50.H100.ERC16M	100	-
TCB50.H130.ERC16M	130	-
TCB50.H160.ERC16M	160	100
TCB50.H200.ERC16M	200	100
TCB50.H100.ERC20M	100	-
TCB50.H130.ERC20M	130	-
TCB50.H160.ERC20M	160	-
TCB50.H200.ERC20M	200	-
TCB50.H100.ERC25M	100	-
TCB50.H130.ERC25M	130	-
TCB50.H160.ERC25M	160	-
TCB50.H200.ERC25M	200	-

G2,5
25000r.p.m.



ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

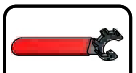


Articolo	H
DTC40.H100.ERC11M	100
DTC40.H100.ERC16M	100
DTC40.H100.ERC20M	100

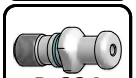
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*


P. 288 CHIAVI *WRENCHES*

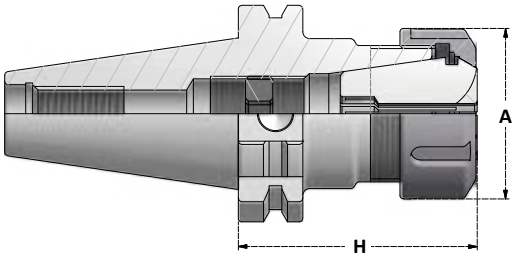

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

MANDRINI A DOPPIO CONTATTO PORTAPINZA ER
DOUBLE CONTACT ER COLLET CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DTC40.H70.ERC16	70
DTC40.H100.ERC16	100
DTC40.H160.ERC16	160
DTC40.H100.ERC20	100
DTC40.H70.ERC25	70
DTC40.H100.ERC25	100
DTC40.H160.ERC25	160
DTC40.H70.ERC32	70
DTC40.H100.ERC32	100
DTC40.H130.ERC32	130
DTC40.H160.ERC32	160
DTC40.H70.ERC40	70

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DTC50.H80.ERC16	80
DTC50.H100.ERC16	100
DTC50.H160.ERC16	160
DTC50.H80.ERC20	80
DTC50.H100.ERC20	100
DTC50.H80.ERC25	80
DTC50.H100.ERC25	100
DTC50.H160.ERC25	160
DTC50.H80.ERC32	80
DTC50.H100.ERC32	100
DTC50.H130.ERC32	130
DTC50.H160.ERC32	160
DTC50.H200.ERC32	200
DTC50.H80.ERC40	80

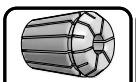
	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



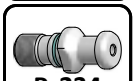
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*


P. 288 CHIAVI *WRENCHES*

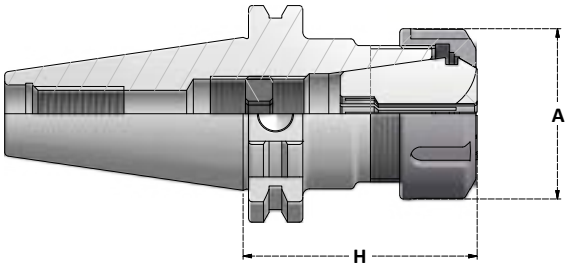

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS

G6,3 15000r.p.m.



ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

AD

Articolo	H
TC30.H63.ERC16	63
TC30.H100.ERC16	100
TC30.H63.ERC20	63
TC30.H100.ERC20	100
TC30.H63.ERC25	63
TC30.H100.ERC25	100
TC30.H63.ERC32	63
TC30.H100.ERC32	100
TC30.H75.ERC40	75
TC30.H100.ERC40	100

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



AD

Articolo	H
TC40.H70.ERC16	70
TC40.H70.ERC25	70
TC40.H70.ERC32	70
TC40.H100.ERC32	100
TC40.H70.ERC40	70
TC40.H100.ERC40	100

AD

Articolo	H
TC50.H80.ERC32	80
TC50.H100.ERC32	100
TC50.H80.ERC40	80

Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.TC30.ERC32-6	ERC32.D6-D8-D10-D12-D16-D20	TC30.H63.ERC32	CH32S
BX.TC30.ERC40-7	ERC40.D6-D8-D10-D12-D16-D20-D25	TC30.H75.ERC40	CH40S

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.TC30.ERC25	ERC25	D2÷16	TC30.H63.ERC25	CH25S
BX.TC30.ERC32	ERC32	D3÷20	TC30.H63.ERC32	CH32S
BX.TC30.ERC40	ERC40	D4÷26	TC30.H75.ERC40	CH40S



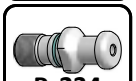
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

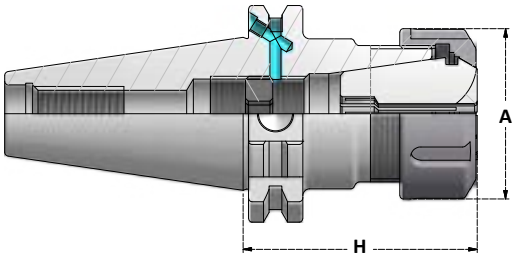

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* ERC | P. 338

AD + B

Articolo	H
TCB40.H70.ERC16	70
TCB40.H100.ERC16	100
TCB40.H130.ERC16	130
TCB40.H160.ERC16	160
TCB40.H200.ERC16	200
TCB40.H70.ERC20	70
TCB40.H100.ERC20	100
TCB40.H130.ERC20	130
TCB40.H160.ERC20	160
TCB40.H200.ERC20	200
TCB40.H70.ERC25	70
TCB40.H100.ERC25	100
TCB40.H130.ERC25	130
TCB40.H160.ERC25	160
TCB40.H200.ERC25	200
TCB40.H47.ERC32	47
TCB40.H70.ERC32	70
TCB40.H100.ERC32	100
TCB40.H130.ERC32	130
TCB40.H160.ERC32	160
TCB40.H200.ERC32	200
TCB40.H70.ERC40	70
TCB40.H100.ERC40	100
TCB40.H130.ERC40	130
TCB40.H160.ERC40	160
TCB40.H200.ERC40	200
TCB40.H85.ERC50	85

AD + B

Articolo	H
TCB50.H80.ERC16	80
TCB50.H100.ERC16	100
TCB50.H130.ERC16	130
TCB50.H160.ERC16	160
TCB50.H200.ERC16	200
TCB50.H80.ERC20	80
TCB50.H100.ERC20	100
TCB50.H130.ERC20	130
TCB50.H160.ERC20	160
TCB50.H200.ERC20	200
TCB50.H80.ERC25	80
TCB50.H100.ERC25	100
TCB50.H130.ERC25	130
TCB50.H160.ERC25	160
TCB50.H200.ERC25	200
TCB50.H80.ERC32	80
TCB50.H100.ERC32	100
TCB50.H130.ERC32	130
TCB50.H160.ERC32	160
TCB50.H200.ERC32	200
TCB50.H250.ERC32	250
TCB50.H80.ERC40	80
TCB50.H100.ERC40	100
TCB50.H130.ERC40	130
TCB50.H160.ERC40	160
TCB50.H200.ERC40	200
TCB50.H250.ERC40	250
TCB50.H100.ERC50	100
TCB50.H130.ERC50	130
TCB50.H160.ERC50	160

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S
...ERC50	78	6÷34	G50S



Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.

Available on request with different nuts and balancing.

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.TCB40.ERC32-6	ERC32.D6-D8-D10-D12-D16-D20	TCB40.H70.ERC32	CH32S
BX.TCB40.ERC40-7	ERC40.D6-D8-D10-D12-D16-D20-D25	TCB40.H70.ERC40	CH40S

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.TCB40.ERC25	ERC25	D2÷16	TCB40.H70.ERC25	CH25S
BX.TCB40.ERC32	ERC32	D3÷20	TCB40.H70.ERC32	CH32S
BX.TCB40.ERC40	ERC40	D4÷26	TCB40.H70.ERC40	CH40S
BX.TCB50.ERC25	ERC25	D2÷16	TCB50.H80.ERC25	CH25S
BX.TCB50.ERC32	ERC32	D3÷20	TCB50.H80.ERC32	CH32S
BX.TCB50.ERC40	ERC40	D4÷26	TCB50.H80.ERC40	CH40S



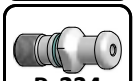
ACCESSORI - *ACCESSORIES*





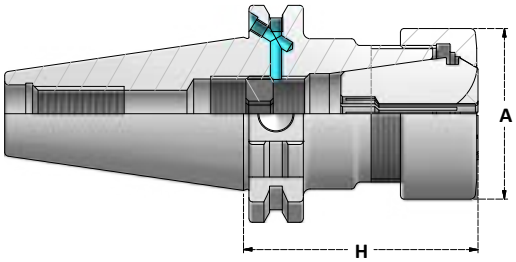






MANDRINI PORTAPINZA ER PER ALTE VELOCITA'
ER COLLET CHUCKS FOR HIGH SPEEDS





ATTACCO *SHANK* **TC** P. 66

SCHEDA TECNICA *TECHNICAL DATA* ERC | P. 338

	A	Collets Range	Ghiera Nut
...ERC11MNF	16	1÷7	G11NFM
...ERC16MNF	22	1÷10	G16NFM
...ERC20MNF	28	1÷14	G20NFM
...ERC25MNF	35	1÷20	G25NFM

	A	Collets Range	Ghiera Nut
...ERC16NF	28	1÷10	G16NF
...ERC20NF	34	1÷14	G20NF
...ERC25NF	42	1÷20	G25NF
...ERC32NF	50	2÷22	G32NF



Articolo	H
TC30.H100.ERC11MNF	100
TC30.H100.ERC16MNF	100
TC30.H100.ERC25MNF	100

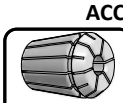
Articolo	H
TC30.H63.ERC16NF	63
TC30.H63.ERC20NF	63
TC30.H63.ERC25NF	63
TC30.H63.ERC32NF	63

Articolo	H
TCB40.H100.ERC11MNF	100
TCB40.H125.ERC11MNF	125
TCB40.H150.ERC11MNF	150
TCB40.H100.ERC16MNF	100
TCB40.H125.ERC16MNF	125
TCB40.H150.ERC16MNF	150
TCB40.H100.ERC20MNF	100
TCB40.H125.ERC20MNF	125
TCB40.H150.ERC20MNF	150
TCB40.H100.ERC25MNF	100
TCB40.H125.ERC25MNF	125
TCB40.H150.ERC25MNF	150

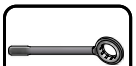
Articolo	H
TCB40.H70.ERC16NF	70
TCB40.H100.ERC16NF	100
TCB40.H130.ERC16NF	130
TCB40.H160.ERC16NF	160
TCB40.H70.ERC20NF	70
TCB40.H100.ERC20NF	100
TCB40.H130.ERC20NF	130
TCB40.H160.ERC20NF	160
TCB40.H70.ERC25NF	70
TCB40.H100.ERC25NF	100
TCB40.H130.ERC25NF	130
TCB40.H160.ERC25NF	160
TCB40.H70.ERC32NF	70
TCB40.H100.ERC32NF	100
TCB40.H130.ERC32NF	130
TCB40.H160.ERC32NF	160

Mandrini prebilanciati a G2,5 / 25000r.p.m. forniti con ghiera "NF" senza tacche.
Attacco a doppio contatto disponibile a richiesta.
Toolholders balanced G2,5 / 25000r.p.m. supplied with "NF" notch free nut.
Double contact shank available on request.

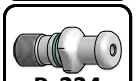
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*

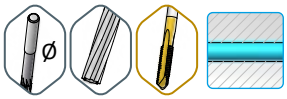

P. 280 GHIERE *NUTS*

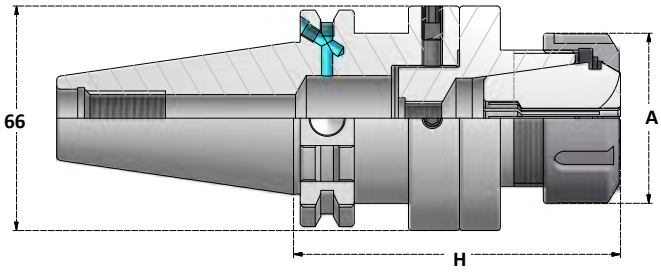

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPINZA ER A CENTRATURA REGOLABILE
RUNOUT ADJUSTABLE ER COLLET CHUCKS





±0,1mm Centratura regolabile
Adjustable runout

ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

AD + B

Articolo	H
TCB40.H93.ERC16RG	93
TCB40.H95.ERC20RG	95
TCB40.H96.ERC25RG	96
TCB40.H97.ERC32RG	97
TCB40.H131.ERC40RG	131

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE

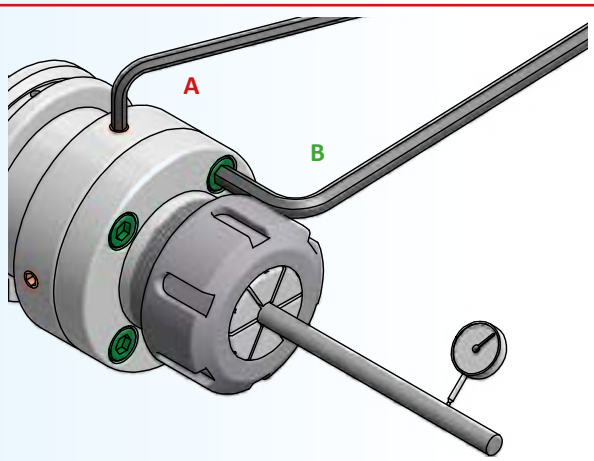


AD + B

Articolo	H
TCB50.H93.ERC16RG	93
TCB50.H95.ERC20RG	95
TCB50.H96.ERC25RG	96
TCB50.H97.ERC32RG	97
TCB50.H131.ERC40RG	131

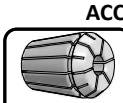
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S





Allentare le viti **B** e regolare la centratura tramite le viti **A**.
Loosen screws **B** and use screws **A** for radial adjustment.

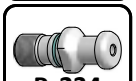
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

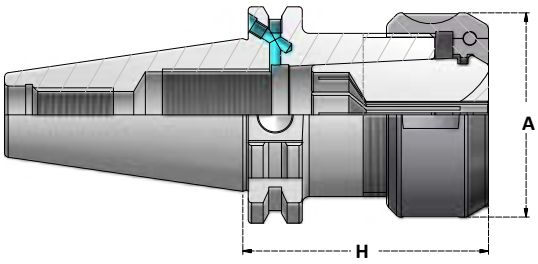

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPINZA EOC
EOC COLLET CHUCKS

Ø G6,3 15000r.p.m.



ATTACCO
SHANK
TC
P. 66

AD + B

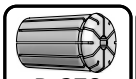
Articolo	H
TCB40.H70.EOC16	70
TCB40.H100.EOC16	100
TCB40.H70.EOC25	70
TCB40.H100.EOC25	100
TCB40.H90.EOC32	90

AD + B

Articolo	H
TCB50.H70.EOC16	70
TCB50.H70.EOC25	70
TCB50.H80.EOC32	80

	A	Collets Range	Ghiera Nut
...EOC16	43	2÷16	G16OCC
...EOC25	60	2÷25	G25OCC
...EOC32	72	3÷32	G32OCC

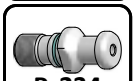
ACCESSORI - *ACCESSORIES*


P. 270
PINZE
COLLETS


P. 287
GHIERE
NUTS

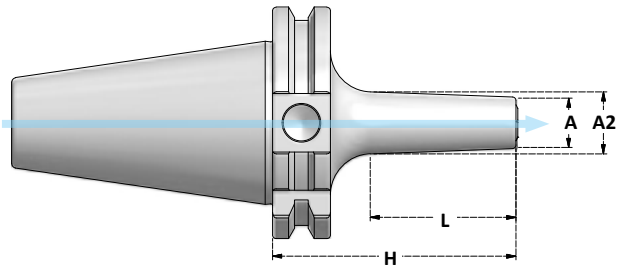

P. 289
CHIAVI
WRENCHES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

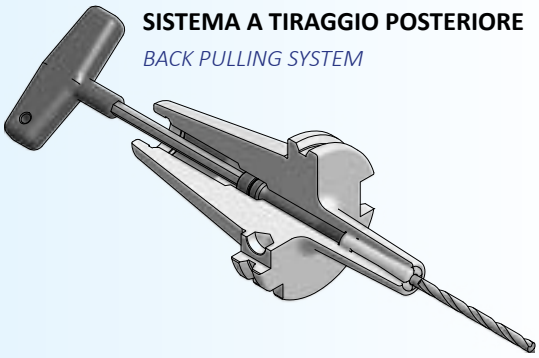
MANDRINI PORTAPINZA SLC
SLC COLLET CHUCKS

G2,5
25000r.p.m.



CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
TC
P. 66



SISTEMA A TIRAGGIO POSTERIORE
BACK PULLING SYSTEM

	A	Collets Range	MT
...SLC6	14	3÷6	12Nm
...SLC12	26	3÷12	45Nm
...SLC25	40	6÷25	90Nm

Momento di serraggio consigliato: **MT**
Recommended tightening torque:

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H	L	A2
DTC40.H70.SLC6	70	36	17
DTC40.H100.SLC6	100	58	20
DTC40.H70.SLC12	70	41	29
DTC40.H100.SLC12	100	73	32
DTC40.H80.SLC25	80	58	45
DTC40.H100.SLC25	100	79	46

AD

Articolo	H	L	A2
DTC50.H70.SLC6	70	36	17
DTC50.H100.SLC6	100	66	20
DTC50.H70.SLC12	70	41	29
DTC50.H100.SLC12	100	73	32
DTC50.H80.SLC25	80	58	45
DTC50.H100.SLC25	100	78	46

ACCESSORI - *ACCESSORIES*

P. 273
PINZE
COLLETS

P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

P. 234
TIRANTI
PULL STUDS

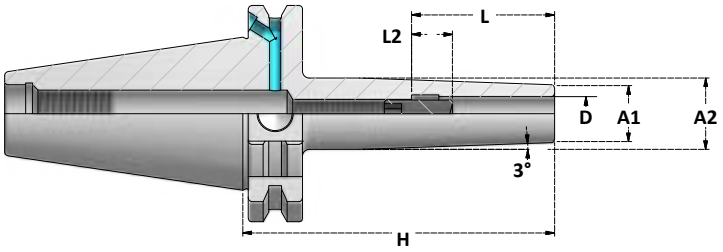
DIN ISO 7388 (DIN69871) - TC

MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

TM SL	**SLIM**
Pag. 77	*SLIM FIT*
TM	**ATTACCO DOPPIO CONTATTO**
Pag. 78	*DOUBLE CONTACT SHANK*
TM	**STANDARD**
Pag. 79	*STANDARD*
TM JET	**CON FORI DI LUBRIFICAZIONE**
Pag. 80	*WITH COOLANT HOLES*

MANDRINI A CALETTAMENTO A CALDO SLIM
SLIM SHRINK FIT CHUCKS

Ø G2,5 25000r.p.m.



ATTACCO *SHANK* **TC** P. 66

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

AD + B

Articolo	H	A2
TCB40.H80.TM3SL	80	13
TCB40.H120.TM3SL	120	16
TCB40.H80.TM4SL	80	15
TCB40.H120.TM4SL	120	20
TCB40.H80.TM5SL	80	16
TCB40.H120.TM5SL	120	20
TCB40.H80.TM6SL	80	17
TCB40.H130.TM6SL	130	19
TCB40.H160.TM6SL	160	19
TCB40.H80.TM8SL	80	19
TCB40.H130.TM8SL	130	21
TCB40.H160.TM8SL	160	21
TCB40.H80.TM10SL	80	21
TCB40.H130.TM10SL	130	23
TCB40.H160.TM10SL	160	23
TCB40.H80.TM12SL	80	23
TCB40.H130.TM12SL	130	25
TCB40.H160.TM12SL	160	25
TCB40.H80.TM14SL	80	25
TCB40.H130.TM14SL	130	27
TCB40.H160.TM14SL	160	27

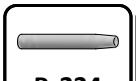
Articolo	H	A2
TCB40.H80.TM16SL	80	29
TCB40.H130.TM16SL	130	31
TCB40.H160.TM16SL	160	31
TCB40.H80.TM18SL	80	34
TCB40.H130.TM18SL	130	35
TCB40.H160.TM18SL	160	35
TCB40.H80.TM20SL	80	39
TCB40.H130.TM20SL	130	39
TCB40.H160.TM20SL	160	39

		D	L	A1
TM3SL	*	3	12	9
TM4SL	*	4	16	10
TM5SL	*	5	20	11
TM6SL		6	36	12
TM8SL		8	36	14
TM10SL		10	41	16
TM12SL		12	46	18
TM14SL		14	46	22
TM16SL		16	49	24
TM18SL		18	49	28
TM20SL		20	51	32

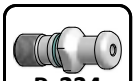
Profondità regolabile: *Adjustable depth:* **L2**= 10mm

* Senza vite di regolazione
* *Without adjusting screw*

ACCESSORI - *ACCESSORIES*

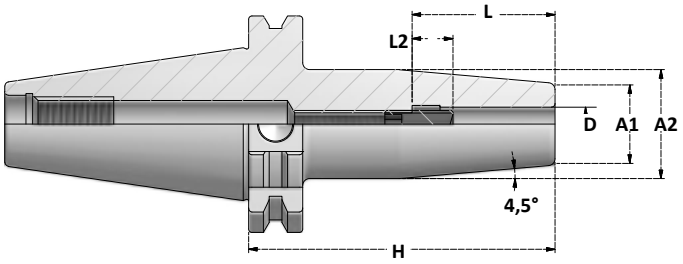

P. 224 PROLUNGHE *EXTENSIONS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI A DOPPIO CONTATTO A CALETTAMENTO A CALDO
DOUBLE CONTACT SHRINK FIT CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* TM P. 340

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

Articolo	H
DTC40.H80.TM6	80
DTC40.H130.TM6	130
DTC40.H160.TM6	160
DTC40.H80.TM8	80
DTC40.H130.TM8	130
DTC40.H160.TM8	160
DTC40.H80.TM10	80
DTC40.H130.TM10	130
DTC40.H160.TM10	160
DTC40.H80.TM12	80
DTC40.H130.TM12	130
DTC40.H160.TM12	160
DTC40.H80.TM14	80
DTC40.H130.TM14	130
DTC40.H160.TM14	160
DTC40.H80.TM16	80
DTC40.H130.TM16	130
DTC40.H160.TM16	160
DTC40.H80.TM18	80
DTC40.H130.TM18	130
DTC40.H160.TM18	160
DTC40.H80.TM20	80
DTC40.H130.TM20	130
DTC40.H160.TM20	160
DTC40.H100.TM25	100
DTC40.H100.TM32	100

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

Articolo	H
DTC50.H80.TM6	80
DTC50.H80.TM8	80
DTC50.H80.TM10	80
DTC50.H80.TM12	80
DTC50.H80.TM14	80
DTC50.H80.TM16	80
DTC50.H80.TM18	80
DTC50.H80.TM20	80
DTC50.H100.TM25	100
DTC50.H100.TM32	100

	D	L	A1	A2
...TM6	6	36	21	27
...TM8	8	36	21	27
...TM10	10	41	24	32
...TM12	12	46	24	32
...TM14	14	46	24	32
...TM16	16	49	24	32
...TM18	18	49	33	42
...TM20	20	51	33	42
...TM25	25	57	44	53
...TM32	32	61	44	53

* Senza vite di regolazione
** Without adjusting screw*

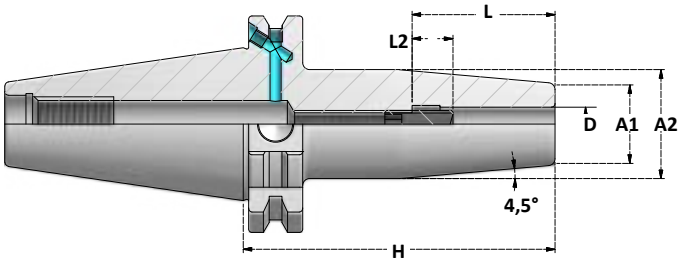
Profondità regolabile: *Adjustable depth:* **L2**= 10mm

ACCESSORI - *ACCESSORIES*

P. 224 PROLUNGHE *EXTENSIONS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS





ATTACCO *SHANK* **TC** P. 66

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

AD + B

Articolo	H
TCB40.H80.TM3	80
TCB40.H120.TM3	120
TCB40.H160.TM3	160
TCB40.H80.TM4	80
TCB40.H120.TM4	120
TCB40.H160.TM4	160
TCB40.H80.TM5	80
TCB40.H120.TM5	120
TCB40.H160.TM5	160
TCB40.H80.TM6	80
TCB40.H130.TM6	130
TCB40.H160.TM6	160
TCB40.H80.TM8	80
TCB40.H130.TM8	130
TCB40.H160.TM8	160
TCB40.H80.TM10	80
TCB40.H130.TM10	130
TCB40.H160.TM10	160
TCB40.H80.TM12	80
TCB40.H130.TM12	130
TCB40.H160.TM12	160
TCB40.H80.TM14	80
TCB40.H130.TM14	130
TCB40.H160.TM14	160
TCB40.H80.TM16	80
TCB40.H130.TM16	130
TCB40.H160.TM16	160
TCB40.H80.TM18	80
TCB40.H130.TM18	130
TCB40.H160.TM18	160
TCB40.H80.TM20	80
TCB40.H130.TM20	130
TCB40.H160.TM20	160
TCB40.H100.TM25	100
TCB40.H130.TM25	130
TCB40.H160.TM25	160
TCB40.H100.TM32	100
TCB40.H130.TM32	130
TCB40.H160.TM32	160

AD + B

Articolo	H
TCB50.H80.TM6	80
TCB50.H120.TM6	120
TCB50.H160.TM6	160
TCB50.H80.TM8	80
TCB50.H120.TM8	120
TCB50.H160.TM8	160
TCB50.H80.TM10	80
TCB50.H120.TM10	120
TCB50.H160.TM10	160
TCB50.H80.TM12	80
TCB50.H120.TM12	120
TCB50.H160.TM12	160
TCB50.H80.TM14	80
TCB50.H120.TM14	120
TCB50.H160.TM14	160
TCB50.H80.TM16	80
TCB50.H120.TM16	120
TCB50.H160.TM16	160
TCB50.H80.TM18	80
TCB50.H120.TM18	120
TCB50.H160.TM18	160
TCB50.H80.TM20	80
TCB50.H120.TM20	120
TCB50.H160.TM20	160
TCB50.H100.TM25	100
TCB50.H120.TM25	120
TCB50.H160.TM25	160
TCB50.H100.TM32	100
TCB50.H120.TM32	120
TCB50.H160.TM32	160

		D	L	A1	A2
...TM3	*	3	12	10	20
...TM4	*	4	16	15	25
...TM5	*	5	20	15	25
...TM6		6	36	21	27
...TM8		8	36	21	27
...TM10		10	41	24	32
...TM12		12	46	24	32
...TM14		14	46	24	32
...TM16		16	49	24	32
...TM18		18	49	33	42
...TM20		20	51	33	42
...TM25		25	57	44	53
...TM32		32	61	44	53

* Senza vite di regolazione
** Without adjusting screw*

Profondità regolabile: **L2**= 10mm
Adjustable depth:

ACCESSORI - *ACCESSORIES*



DIN ISO 7388 (DIN69871) | TC | TM JET

NEW

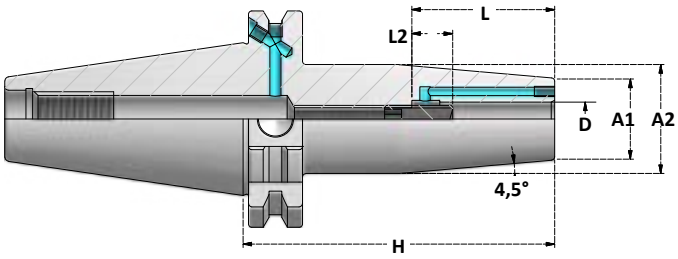
MANDRINI A CALETTAMENTO A CALDO JET

CON FORI PER IL REFRIGERANTE

*SHRINK FIT CHUCKS **JET** TYPE*

WITH HOLES FOR COOLANT





ATTACCO *SHANK* **TC** P. 66

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

AD + B

Articolo	H
TCB40.H80.TM6JET	80
TCB40.H120.TM6JET	120
TCB40.H80.TM8JET	80
TCB40.H120.TM8JET	120
TCB40.H80.TM10JET	80
TCB40.H120.TM10JET	120
TCB40.H80.TM12JET	80
TCB40.H120.TM12JET	120
TCB40.H80.TM14JET	80
TCB40.H120.TM14JET	120
TCB40.H80.TM16JET	80
TCB40.H120.TM16JET	120
TCB40.H80.TM18JET	80
TCB40.H120.TM18JET	120
TCB40.H80.TM20JET	80
TCB40.H120.TM20JET	120
TCB40.H100.TM25JET	100
TCB40.H100.TM32JET	100

AD + B

Articolo	H
TCB50.H80.TM6JET	80
TCB50.H120.TM6JET	120
TCB50.H80.TM8JET	80
TCB50.H120.TM8JET	120
TCB50.H80.TM10JET	80
TCB50.H120.TM10JET	120
TCB50.H80.TM12JET	80
TCB50.H120.TM12JET	120
TCB50.H80.TM14JET	80
TCB50.H120.TM14JET	120
TCB50.H80.TM16JET	80
TCB50.H120.TM16JET	120
TCB50.H80.TM18JET	80
TCB50.H120.TM18JET	120
TCB50.H80.TM20JET	80
TCB50.H120.TM20JET	120
TCB50.H100.TM25JET	100
TCB50.H120.TM25JET	120
TCB50.H100.TM32JET	100
TCB50.H120.TM32JET	120

Altre lunghezze fornibili a richiesta
Other lenghts available on request

Profondità regolabile: **L2**= 10mm
Adjustable depth:

	D	L	A1	A2
...TM6	6	36	21	27
...TM8	8	36	21	27
...TM10	10	41	24	32
...TM12	12	46	24	32
...TM14	14	46	24	32
...TM16	16	49	24	32
...TM18	18	49	33	42
...TM20	20	51	33	42
...TM25	25	57	44	53
...TM32	32	61	44	53







3 DIVERSE MODALITÀ DI UTILIZZO
3 DIFFERENT APPLICATIONS

Senza montare i grani in dotazione si ha la massima portata del liquido refrigerante

Not using supplied plugs you have maximum flow of coolant

Con l'utilizzo dei grani forati aumenta la pressione - ideale per lavorazioni ad alte velocità

Using plugs with hole the pressure increases - it's used for high speed works

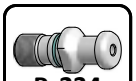
Con l'utilizzo dei grani di chiusura si può lavorare con utensili con fori per il refrigerante

Mounting sealing plugs tools with coolant through can be used

ACCESSORI - *ACCESSORIES*

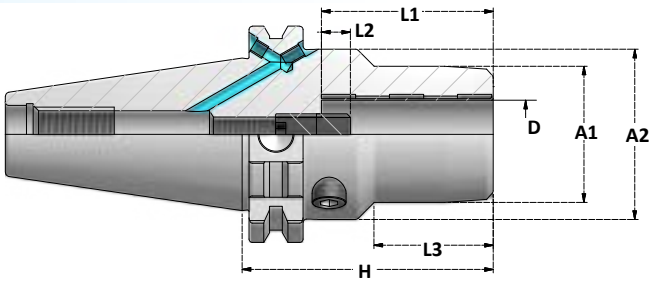

P. 224 PROLUNGHE *EXTENSIONS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI IDRAULICI
HYDRAULIC CHUCKS

G2,5 25000r.p.m.



ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* HY P. 342

	D	L1	A1	A2
...HY**6**	6	37	26	49,5
...HY**8**	8	37	28	49,5
...HY**10**	10	41	30	49,5
...HY**12**	12	46	32	49,5
...HY**14**	14	46	34	49,5

	D	L1	A1	A2
...HY**16**	16	49	38	49,5
...HY**18**	18	49	40	49,5
...HY**20**	20	51	42	49,5
...HY**25**	25	57	49,5	55
...HY**32**	32	61	56	63

Profondità regolabile: *Adjustable depth:* **L2**= 10mm

AD + B

Articolo	H	L3
TCB40.H80.HY6	80	40
TCB40.H110.HY6	110	40
TCB40.H80.HY8	80	40
TCB40.H110.HY8	110	40
TCB40.H80.HY10	80	40
TCB40.H110.HY10	110	40
TCB40.H80.HY12	80	40
TCB40.H110.HY12	110	40
TCB40.H80.HY14	80	40
TCB40.H110.HY14	110	40
TCB40.H80.HY16	80	46
TCB40.H110.HY16	110	46
TCB40.H80.HY18	80	46
TCB40.H110.HY18	110	46
TCB40.H65.HY20	65	-
TCB40.H80.HY20	80	46
TCB40.H110.HY20	110	46
TCB40.H95.HY25	95	76
TCB40.H110.HY25	110	91
TCB40.H95.HY32	95	76
TCB40.H110.HY32	110	91

AD + B

Articolo	H	L3
TCB50.H80.HY6	80	40
TCB50.H110.HY6	110	40
TCB50.H80.HY8	80	40
TCB50.H110.HY8	110	40
TCB50.H80.HY10	80	40
TCB50.H110.HY10	110	40
TCB50.H80.HY12	80	40
TCB50.H110.HY12	110	40
TCB50.H80.HY14	80	40
TCB50.H110.HY14	110	40
TCB50.H80.HY16	80	46
TCB50.H110.HY16	110	46
TCB50.H80.HY18	80	46
TCB50.H110.HY18	110	46
TCB50.H80.HY20	80	46
TCB50.H110.HY20	110	46
TCB50.H100.HY25	100	55
TCB50.H120.HY25	120	55
TCB50.H81.HY32	81	-
TCB50.H100.HY32	100	55
TCB50.H120.HY32	120	55

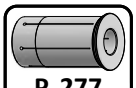
Forza di serraggio *Clamping force*	
HY**6**	**12**Nm
HY**8**	**30**Nm
HY**10**	**40**Nm
HY**12**	**70**Nm
HY**14**	**100**Nm
HY**16**	**135**Nm
HY**18**	**180**Nm
HY**20**	**220**Nm
HY**25**	**500**Nm
HY**32**	**700**Nm

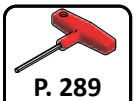
KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDERS, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.TCB40.HY12	6SR12	D4 D6 D8 D10	TCB40.H80.HY12
BX.TCB40.HY20	6SR20	D6 D8 D10 D12 D16	TCB40.H80.HY20
BX.TCB40.HY32	6SR32	D6 D8 D10 D12 D16 D20 D25	TCB40.H95.HY32
BX.TCB50.HY12	6SR12	D4 D6 D8 D10	TCB50.H80.HY12
BX.TCB50.HY20	6SR20	D6 D8 D10 D12 D16	TCB50.H80.HY20
BX.TCB50.HY32	6SR32	D6 D8 D10 D12 D16 D20 D25	TCB50.H100.HY32

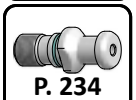


ACCESSORI - *ACCESSORIES*


P. 277 PINZE *COLLETS*


P. 289 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS

G6,3 12000r.p.m.

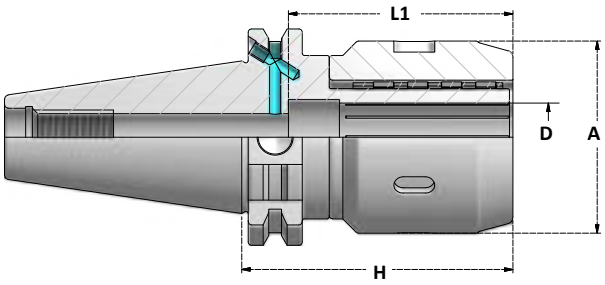
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CANALINI *CHANNELS*

CHIAVE INCLUSA *WRENCH INCLUDED*

ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* FS P. 344



	D	A	L1
...FS**20**	20	66	59,3
...FS**32**	32	69	71,7

Forza di serraggio *Clamping force*

FS**20**	**500**Nm
FS**32**	**1000**Nm

Serrare la ghiera di bloccaggio fino al finecorsa
Tighten the locking nut up to the limit

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD + B

Articolo	H
TCB40.H98.FS20	98
TCB40.H100.FS32	100

AD

Articolo	H
DTC40.H98.FS20	98
DTC40.H100.FS32	100

AD + B

Articolo	H
TCB50.H98.FS20	98
TCB50.H103.FS32	103

AD

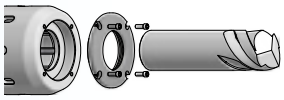
Articolo	H
DTC50.H98.FS20	98
DTC50.H103.FS32	103

DISCHI DI TENUTA PER MANDRINI A FORTE SERRAGGIO
SEALED CAPS FOR POWER MILLING CHUCKS

A TENUTA *SEALED*

DISCHI DI TENUTA PER DIAMETRO NOMINALE
SEALED CAPS FOR NOMINAL DIAMETER

Articolo	D
CFS20.D20	20
CFS32.D32	32

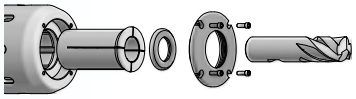






DISCHI DI TENUTA PER L'UTILIZZO DELLE PINZE DI RIDUZIONE
SEALED CAPS FOR REDUCTION COLLETSE USING

Articolo	D	RG Range
CFS20.RG	RG32	D4÷D16
CFS32.RG	RG40	D6÷D25



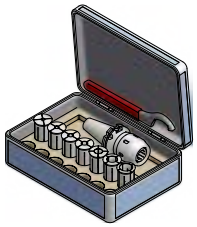


P. 284 DISCHETTI **RG** ***RG*** *SEALED DISCS*

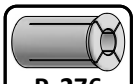
KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.TCB40.FS20	4SR20	D6 D8 D10 D12 D16	TCB40.H98.FS20
BX.TCB40.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	TCB40.H100.FS32
BX.TCB50.FS20	4SR20	D6 D8 D10 D12 D16	TCB50.H98.FS20
BX.TCB50.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	TCB50.H103.FS32

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.DTC40.FS20	4SR20	D6 D8 D10 D12 D16	DTC40.H98.FS20
BX.DTC40.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	DTC40.H100.FS32
BX.DTC50.FS20	4SR20	D6 D8 D10 D12 D16	DTC50.H98.FS20
BX.DTC50.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	DTC50.H103.FS32



ACCESSORI - *ACCESSORIES*



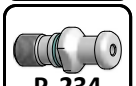
P. 276 PINZE *COLLETS*



P. 289 CHIAVI *WRENCHES*



P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*



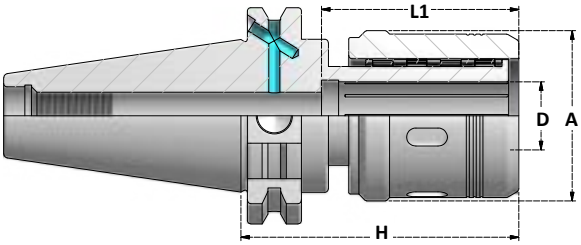
P. 234 TIRANTI *PULL STUDS*

MANDRINI A FORTE SERRAGGIO - ECO LINE
POWER MILLING CHUCKS - ECO LINE











ATTACCO
SHANK
TC
P. 66

AD + B

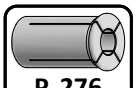
Articolo	H
TCB40.H100.MC20	100
TCB40.H115.MC32	115

Articolo	H
TCB50.H110.MC20	110
TCB50.H110.MC32	110

	D	A	L1	Momento torcente consigliato *Recommended tightening torque*
...MC**20**	20	58	65	60Nm
...MC**32**	32	73	80	70Nm

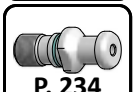
Forza di serraggio *Clamping force*	
MC**20**	**350**Nm
MC**32**	**450**Nm

ACCESSORI - *ACCESSORIES*


P. 276
PINZE
COLLETS

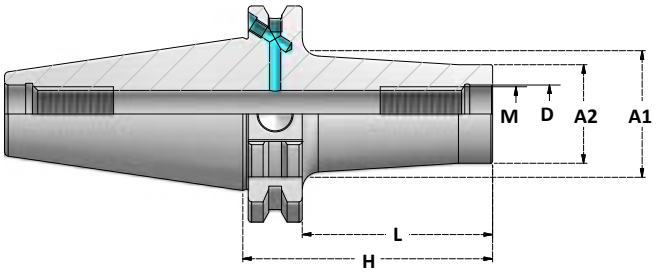

P. 289
CHIAVI
WRENCHES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

MANDRINI PER FRESE CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS





ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* CPY P. 346

	M	D	A2	Momento torcente consigliato *Recommended tightening torque*
M8CPY	M8	8,5	13	25Nm
M10CPY	M10	10,5	18	40Nm
M12CPY	M12	12,5	21	60Nm
M16CPY	M16	17	29	80Nm

ATTACCO STANDARD
STANDARD SHANK

AD + B

Articolo	H	L	A1
TCB40.H55.M8CPY	55	35	15
TCB40.H75.M8CPY	75	55	23
TCB40.H95.M8CPY	95	75	23
TCB40.H115.M8CPY	115	95	25
TCB40.H55.M10CPY	55	35	20
TCB40.H75.M10CPY	75	55	25
TCB40.H95.M10CPY	95	75	28
TCB40.H115.M10CPY	115	95	28
TCB40.H145.M10CPY	145	125	34
TCB40.H55.M12CPY	55	35	24
TCB40.H75.M12CPY	75	55	24
TCB40.H95.M12CPY	95	75	31
TCB40.H115.M12CPY	115	95	31
TCB40.H145.M12CPY	145	125	38
TCB40.H175.M12CPY	175	155	42
TCB40.H55.M16CPY	55	35	34
TCB40.H75.M16CPY	75	55	34
TCB40.H95.M16CPY	95	75	34
TCB40.H115.M16CPY	115	95	39
TCB40.H145.M16CPY	145	125	39
TCB40.H175.M16CPY	175	155	39

AD + B

Articolo	H	L	A1
TCB50.H85.M8CPY	85	65	23
TCB50.H135.M8CPY	135	115	23
TCB50.H185.M8CPY	185	165	25
TCB50.H85.M10CPY	85	65	28
TCB50.H135.M10CPY	135	115	28
TCB50.H185.M10CPY	185	165	32
TCB50.H85.M12CPY	85	65	32
TCB50.H135.M12CPY	135	115	32
TCB50.H185.M12CPY	185	165	36
TCB50.H85.M16CPY	85	65	36
TCB50.H135.M16CPY	135	115	40
TCB50.H185.M16CPY	185	165	42

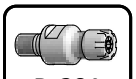


ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

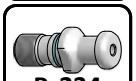
AD + B

Articolo	H	L	A1
DTCB40.H44.M12CPY	44	25	24
DTCB40.H69.M12CPY	69	50	24
DTCB40.H94.M12CPY	94	75	31
DTCB40.H44.M16CPY	44	25	29
DTCB40.H69.M16CPY	69	50	34
DTCB40.H94M16CPY	94	75	34

ACCESSORI - *ACCESSORIES*


P. 201
RIDUZIONI ER
ER ADAPTERS


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

DIN ISO 7388 (DIN69871) - TC

MANDRINI PORTAFRESA WELDON - DIN1835-2

END MILL HOLDERS WELDON - DIN1835-2

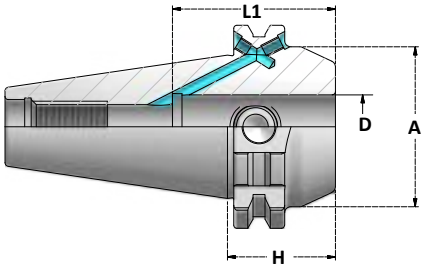
WE Pag. 85	**EXTRACORTI** *STUB LENGTH*
WE Pag. 86	**ATTACCO DOPPIO CONTATTO** *DOUBLE CONTACT SHANK*
WE Pag. 87-88	**STANDARD** *STANDARD*
WE RG Pag. 89	**A CENTRATURA REGOLABILE** *ADJUSTABLE RUNOUT*
WE C Pag. 90	**CON CANALI DI LUBRIFICAZIONE** *WITH COOLANT CHANNELS*
WHN Pag. 91	**WHISTLE NOTCH - GRANI INCLINATI A 2°** (DIN 1835-2 Form E) *WHISTLE NOTCH - 2° INCLINED SCREWS* (DIN 1835-2 Form E)

TC | WE | **DIN 1835-2 Form B**

MANDRINI PORTAFRESA WELDON - EXTRACORTI

END MILL HOLDERS WELDON - STUB LENGTH

G6,3 15000 r.p.m.



ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

Per utensili con gambo secondo normativa DIN1835-1 Form B.
For tools with shank according to norm DIN1835-1 Form B

AD

Articolo	H	A	Grano 1 Screw 1	Grano 2 Screw 2	Fig
TC30.H35.WE12	35	42	GR.WEC12-14	/	1
TC30.H35.WE16	35	44	GR.WEC16	/	1
TC30.H35.WE20	35	45	GR.WEC25-32	/	1

AD + B

Articolo	H	A	Grano 1 Screw 1	Grano 2 Screw 2	Fig
TCB40.H35.WE16	35	44,5	GR.WEC16	/	1
TCB40.H35.WE20	35	44,5	GR.WEC20	/	1
TCB40.H35.WE25	35	44,5	GR.WEC20	/	1
TCB40.H60.WE25	60	49	GR.WEC25-32	GR.WEC25	2
TCB40.H40.WE32	40	43,7	GR.WEC25-32	/	1
TCB40.H70.WE32	70	72	GR.WEC25-32	GR.WE32-40	2

AD + B

Articolo	H	A	Grano 1 Screw 1	Grano 2 Screw 2	Fig
TCB50.H35.WE16	35	48	GR.WE16-18	/	1
TCB50.H35.WE20	35	52	GR.WE20	/	1
TCB50.H35.WE25	35	72	GR.WE25	/	1
TCB50.H35.WE32	35	72	GR.WE32-40	/	1
TCB50.H35.WE40	35	80	GR.WEC32-40	/	1

	D	L1
...WE12	12	46
...WE16	16	49
...WE20	20	51
...WE25	25	59
...WE32	32	63
...WE40	40	73

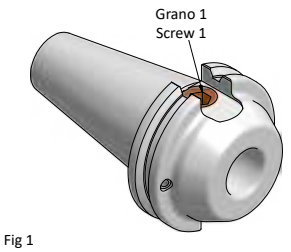


Fig 1

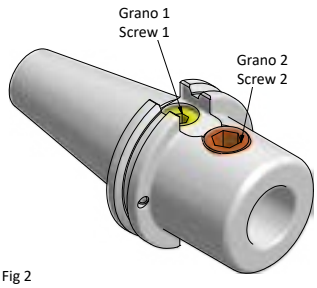


Fig 2

ACCESSORI - *ACCESSORIES*

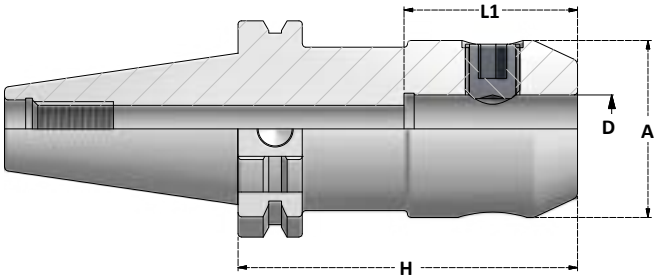
P. 303 GRANI *SCREWS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

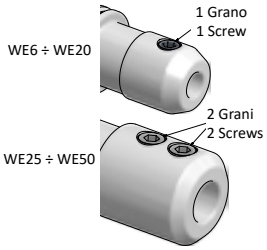
MANDRINI A DOPPIO CONTATTO PORTAFRESE WELDON
DOUBLE CONTACT END MILL HOLDERS WELDON



ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347





ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DTC40.H50.WE6	50
DTC40.H100.WE6	100
DTC40.H50.WE8	50
DTC40.H100.WE8	100
DTC40.H50.WE10	50
DTC40.H100.WE10	100
DTC40.H50.WE12	50
DTC40.H100.WE12	100
DTC40.H63.WE16	63
DTC40.H100.WE16	100
DTC40.H63.WE20	63
DTC40.H100.WE20	100
DTC40.H100.WE25	100
DTC40.H100.WE32	100
DTC40.H120.WE40	120

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DTC50.H63.WE6	63
DTC50.H63.WE8	63
DTC50.H63.WE10	63
DTC50.H63.WE12	63
DTC50.H63.WE16	63
DTC50.H63.WE20	63
DTC50.H80.WE25	80
DTC50.H100.WE32	100
DTC50.H112.WE40	112
DTC50.H130.WE50	130

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40
..WE50	50	83	100	2x	GR.WE50

ACCESSORI - *ACCESSORIES*

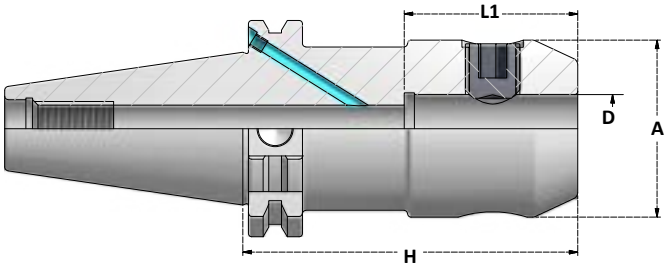

P. 303 GRANI *SCREWS*

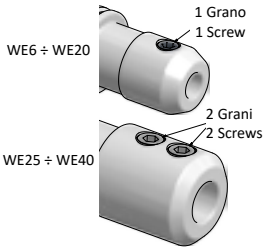

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3
15000r.p.m.





ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

AD

Articolo	H
TC30.H50.WE6	50
TC30.H100.WE6	100
TC30.H50.WE8	50
TC30.H100.WE8	100
TC30.H50.WE10	50
TC30.H100.WE10	100
TC30.H50.WE12	50
TC30.H100.WE12	100
TC30.H50.WE14	50
TC30.H63.WE16	63
TC30.H100.WE16	100
TC30.H63.WE18	63
TC30.H63.WE20	63
TC30.H100.WE20	100

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40

AD + B

Articolo	H
TCB40.H50.WE6	50
TCB40.H100.WE6	100
TCB40.H130.WE6	130
TCB40.H160.WE6	160
TCB40.H200.WE6	200
TCB40.H50.WE8	50
TCB40.H100.WE8	100
TCB40.H130.WE8	130
TCB40.H160.WE8	160
TCB40.H200.WE8	200
TCB40.H50.WE10	50
TCB40.H100.WE10	100
TCB40.H130.WE10	130
TCB40.H160.WE10	160
TCB40.H200.WE10	200
TCB40.H50.WE12	50
TCB40.H100.WE12	100
TCB40.H130.WE12	130
TCB40.H160.WE12	160
TCB40.H200.WE12	200
TCB40.H50.WE14	50
TCB40.H100.WE14	100
TCB40.H130.WE14	130
TCB40.H160.WE14	160
TCB40.H200.WE14	200

AD + B

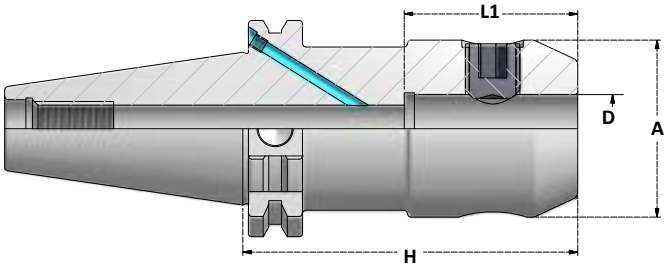
Articolo	H
TCB40.H63.WE16	63
TCB40.H100.WE16	100
TCB40.H130.WE16	130
TCB40.H160.WE16	160
TCB40.H200.WE16	200
TCB40.H63.WE18	63
TCB40.H100.WE18	100
TCB40.H130.WE18	130
TCB40.H160.WE18	160
TCB40.H200.WE18	200
TCB40.H63.WE20	63
TCB40.H100.WE20	100
TCB40.H130.WE20	130
TCB40.H160.WE20	160
TCB40.H200.WE20	200
TCB40.H100.WE25	100
TCB40.H130.WE25	130
TCB40.H160.WE25	160
TCB40.H200.WE25	200
TCB40.H100.WE32	100
TCB40.H130.WE32	130
TCB40.H160.WE32	160
TCB40.H200.WE32	200
TCB40.H120.WE40	120

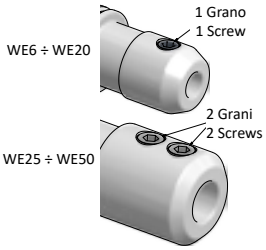
ACCESSORI - *ACCESSORIES*

P. 225 RIDUZIONI *ADAPTERS*
P. 303 GRANI *SCREWS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3
15000r.p.m.





ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

AD + B

Articolo	H
TCB50.H63.WE6	63
TCB50.H100.WE6	100
TCB50.H130.WE6	130
TCB50.H160.WE6	160
TCB50.H200.WE6	200
TCB50.H63.WE8	63
TCB50.H100.WE8	100
TCB50.H130.WE8	130
TCB50.H160.WE8	160
TCB50.H200.WE8	200
TCB50.H63.WE10	63
TCB50.H100.WE10	100
TCB50.H130.WE10	130
TCB50.H160.WE10	160
TCB50.H200.WE10	200
TCB50.H63.WE12	63
TCB50.H100.WE12	100
TCB50.H130.WE12	130
TCB50.H160.WE12	160
TCB50.H200.WE12	200
TCB50.H63.WE14	63
TCB50.H100.WE14	100
TCB50.H130.WE14	130
TCB50.H160.WE14	160
TCB50.H200.WE14	200
TCB50.H63.WE16	63
TCB50.H100.WE16	100
TCB50.H130.WE16	130
TCB50.H160.WE16	160
TCB50.H200.WE16	200
TCB50.H63.WE18	63
TCB50.H100.WE18	100
TCB50.H130.WE18	130
TCB50.H160.WE18	160
TCB50.H200.WE18	200
TCB50.H63.WE20	63
TCB50.H100.WE20	100
TCB50.H130.WE20	130
TCB50.H160.WE20	160
TCB50.H200.WE20	200
TCB50.H250.WE20	250

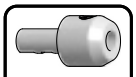
AD + B

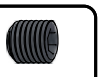
Articolo	H
TCB50.H80.WE25	80
TCB50.H100.WE25	100
TCB50.H130.WE25	130
TCB50.H160.WE25	160
TCB50.H200.WE25	200
TCB50.H250.WE25	250
TCB50.H100.WE32	100
TCB50.H130.WE32	130
TCB50.H160.WE32	160
TCB50.H200.WE32	200
TCB50.H250.WE32	250
TCB50.H112.WE40	112
TCB50.H130.WE40	130
TCB50.H160.WE40	160
TCB50.H200.WE40	200
TCB50.H130.WE50	130

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

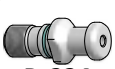
	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40
..WE50	50	83	100	2x	GR.WE50

ACCESSORI - *ACCESSORIES*


P. 225 RIDUZIONI *ADAPTERS*

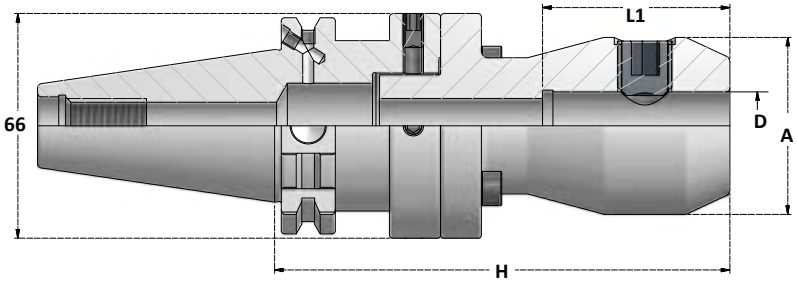

P. 303 GRANI *SCREWS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON A CENTRATURA REGOLABILE
RUNOUT ADJUSTABLE END MILL HOLDERS WELDON

G6,3 15000r.p.m.



±0,1mm Centratura regolabile *Adjustable runout*

ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

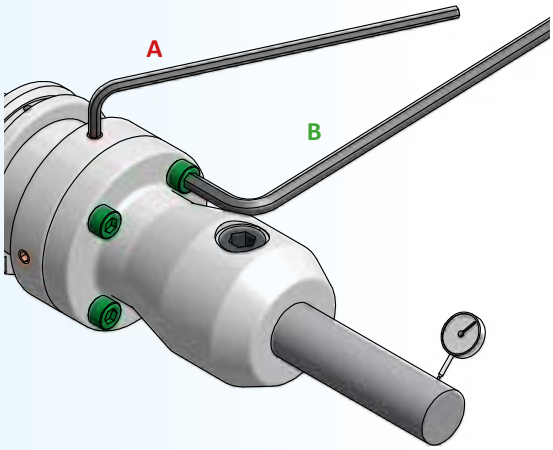
AD + B

Articolo	H
TCB40.H100.WE6RG	100
TCB40.H100.WE8RG	100
TCB40.H100.WE10RG	100
TCB40.H110.WE12RG	110
TCB40.H110.WE14RG	110
TCB40.H130.WE16RG	130
TCB40.H130.WE18RG	130
TCB40.H135.WE20RG	135

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

AD + B

Articolo	H
TCB50.H100.WE6RG	100
TCB50.H100.WE8RG	100
TCB50.H100.WE10RG	100
TCB50.H110.WE12RG	110
TCB50.H110.WE14RG	110
TCB50.H130.WE16RG	130
TCB50.H130.WE18RG	130
TCB50.H135.WE20RG	135



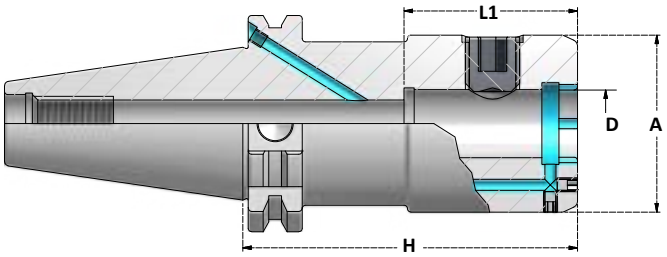
Allentare le viti **B** e regolare la centratura tramite le viti **A**.
Loosen screws **B** and use screws **A** for radial adjustment.

ACCESSORI - *ACCESSORIES*

P. 303 GRANI *SCREWS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON CON CANALI DI LUBRIFICAZIONE
END MILL HOLDERS WELDON WITH COOLANT CHANNELS

G6,3 — 15000r.p.m.





ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

AD + B

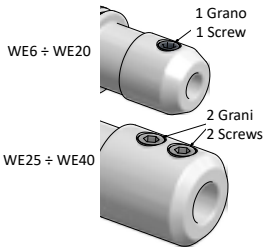
Articolo	H
TCB40.H65.WE6C	65
TCB40.H65.WE8C	65
TCB40.H65.WE10C	65
TCB40.H65.WE12C	65
TCB40.H65.WE14C	65
TCB40.H65.WE16C	65
TCB40.H65.WE18C	65
TCB40.H65.WE20C	65
TCB40.H100.WE25C	100
TCB40.H100.WE32C	100
TCB40.H120.WE40C	120

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

AD + B

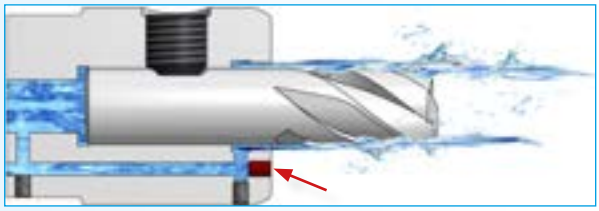
Articolo	H
TCB50.H63.WE6C	63
TCB50.H63.WE8C	63
TCB50.H63.WE10C	63
TCB50.H63.WE12C	63
TCB50.H63.WE14C	63
TCB50.H63.WE16C	63
TCB50.H63.WE18C	63
TCB50.H63.WE20C	63
TCB50.H100.WE25C	100
TCB50.H100.WE32C	100
TCB50.H100.WE40C	100

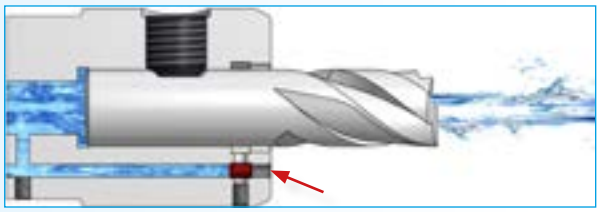
	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40



Regolando il grano si può scegliere se indirizzare il liquido refrigerante ai fori del mandrino o attraverso l'utensile.

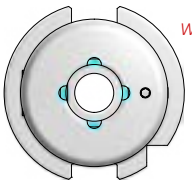
Lock screw for coolant through tool.
Unlock screw for coolant through toolholder.







WE6C ÷ WE14C



WE16C ÷ WE40C

ACCESSORI - *ACCESSORIES*



P. 303 GRANI *SCREWS*



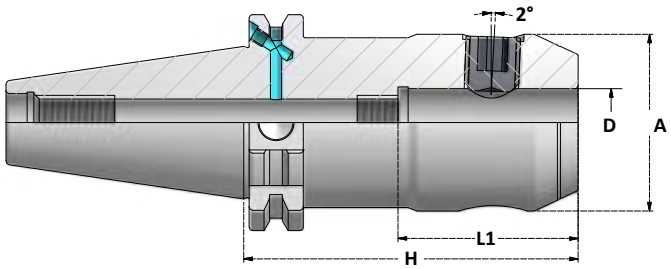
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*



P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WHISTLE NOTCH
END MILL HOLDERS WHISTLE NOTCH

G6,3
15000r.p.m.



ATTACCO *SHANK* **TC** P. 66

SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

AD + B

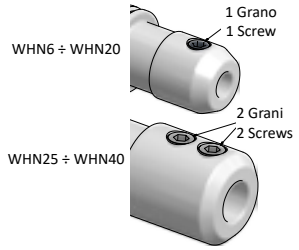
Articolo	H
TCB40.H50.WHN6	50
TCB40.H50.WHN8	50
TCB40.H50.WHN10	50
TCB40.H50.WHN12	50
TCB40.H50.WHN14	50
TCB40.H63.WHN16	63
TCB40.H63.WHN18	63
TCB40.H63.WHN20	63
TCB40.H100.WHN25	100
TCB40.H100.WHN32	100

AD + B

Articolo	H
TCB50.H63.WHN6	63
TCB50.H63.WHN8	63
TCB50.H63.WHN10	63
TCB50.H63.WHN12	63
TCB50.H63.WHN14	63
TCB50.H63.WHN16	63
TCB50.H63.WHN18	63
TCB50.H63.WHN20	63
TCB50.H80.WHN25	80
TCB50.H100.WHN32	100
TCB50.H112.WHN40	112

	D	L1	A	Grano Screw
...WHN6	6	37	25	GR.WE6
...WHN8	8	37	28	GR.WE8
...WHN10	10	41	35	GR.WE10
...WHN12	12	46	42	GR.WE12-14
...WHN14	14	46	44	GR.WE12-14
...WHN16	16	49	48	GR.WE16-18
...WHN18	18	49	50	GR.WE16-18
...WHN20	20	51	52	GR.WE20

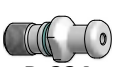
	D	L	A	Grani Screws	
..WHN25	25	59	65	2x	GR.WE25
..WHN32	32	63	72	2x	GR.WE32-40
..WHN40	40	73	80	2x	GR.WE32-40



ACCESSORI - *ACCESSORIES*


P. 303 GRANI *SCREWS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

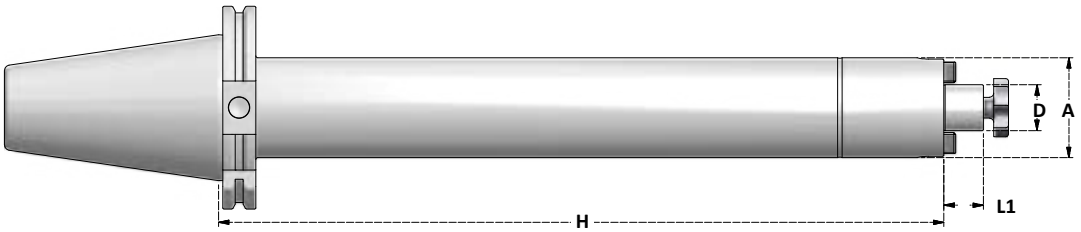

P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS

D SAV Pag. 92	**ANTIVIBRANTI** *DAMPING VIBRATIONS*
D S Pag. 93	**ATTACCO DOPPIO CONTATTO** *DOUBLE CONTACT SHANK*
D S Pag. 94-95	**STANDARD** *STANDARD*

MANDRINI PORTAFRESA FISSI ANTIVIBRANTI
DAMPING VIBRATIONS SHELL MILL HOLDERS





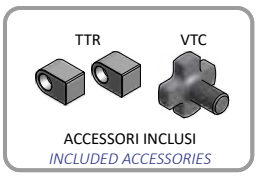
ATTACCO *SHANK* **TC** P. 66

SCHEDA TECNICA *TECHNICAL DATA* D S | P. 349

AD + B

Articolo	H
TCB50.H350.D22SAV	350
TCB50.H400.D22SAV	400
TCB50.H500.D22SAV	500
TCB50.H350.D27SAV	350
TCB50.H400.D27SAV	400
TCB50.H500.D27SAV	500

	D	A	L1	TTR	VTC
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27



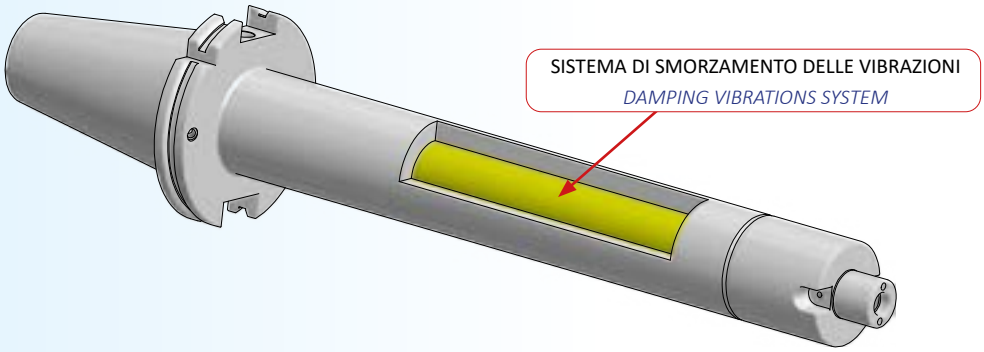
ACCESSORI INCLUSI
INCLUDED ACCESSORIES

I mandrini portafresa antivibranti sono dotati di un sistema interno che smorza le vibrazioni trasmesse dalla fresa all'attacco.
In questo modo viene prolungata la durata dell'utensile e del mandrino macchina.

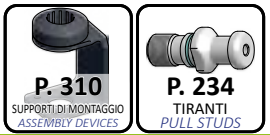
Il sistema antivibrante consente di lavorare con sporgenze molto lunghe mantenendo parametri di taglio elevati.
Le lavorazioni sono più silenziose e stabili, e permettono di ottenere una migliore finitura superficiale.

Damping vibrations shell mill holders have an internal system that dampens the vibrations transmitted from the mill to the shank.
In this way, the life of the tool and the machine spindle is extended.

Damping vibrations system allows to work with very long overhangs while maintaining high cutting parameters.
The processes are quieter and more stable, and allow to obtain a better surface finish.

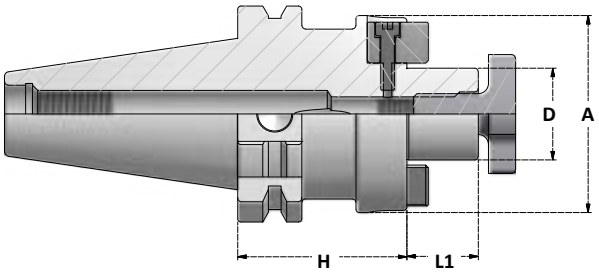


ACCESSORI - *ACCESSORIES*

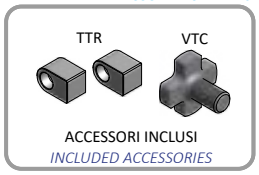


MANDRINI A DOPPIO CONTATTO PORTAFRESA FISSI
DOUBLE CONTACT SHELL MILL HOLDERS









ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* D S | P. 349

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

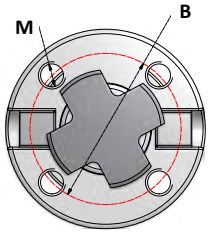
Articolo	H
DTC40.H45.D16S	45
DTC40.H100.D16S	100
DTC40.H160.D16S	160
DTC40.H45.D22S	45
DTC40.H100.D22S	100
DTC40.H160.D22S	160
DTC40.H50.D27S	50
DTC40.H100.D27S	100
DTC40.H160.D27S	160
DTC40.H50.D32S	50
DTC40.H100.D32S	100
DTC40.H160.D32S	160
DTC40.H60.D40S	60

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DTC50.H45.D16S	45
DTC50.H100.D16S	100
DTC50.H160.D16S	160
DTC50.H200.D16S	200
DTC50.H45.D22S	45
DTC50.H100.D22S	100
DTC50.H160.D22S	160
DTC50.H200.D22S	200
DTC50.H250.D22S	250
DTC50.H45.D27S	45
DTC50.H100.D27S	100
DTC50.H160.D27S	160
DTC50.H200.D27S	200
DTC50.H250.D27S	250
DTC50.H50.D32S	50
DTC50.H50.D40S	50

	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40



	B	M
...D40S	66,7	M12

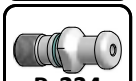
ACCESSORI - *ACCESSORIES*



P. 304
ACCESSORI
ACCESSORIES



P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

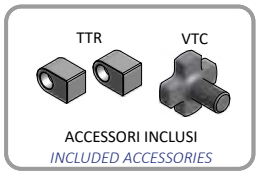


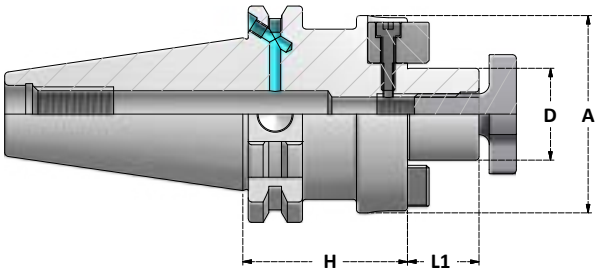
P. 234
TIRANTI
PULL STUDS

MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS









ATTACCO *SHANK* **TC** P. 66

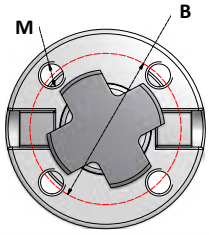
SCHEDA TECNICA *TECHNICAL DATA* D S | P. 349

AD + B

Articolo	H
TCB40.H35.D16S	35
TCB40.H45.D16S	45
TCB40.H100.D16S	100
TCB40.H130.D16S	130
TCB40.H160.D16S	160
TCB40.H200.D16S	200
TCB40.H35.D22S	35
TCB40.H45.D22S	45
TCB40.H100.D22S	100
TCB40.H130.D22S	130
TCB40.H160.D22S	160
TCB40.H200.D22S	200
TCB40.H35.D27S	35
TCB40.H50.D27S *	50
TCB40.H100.D27S	100
TCB40.H130.D27S	130
TCB40.H160.D27S	160
TCB40.H200.D27S	200
TCB40.H55.D32S	55
TCB40.H100.D32S	100
TCB40.H130.D32S	130
TCB40.H160.D32S	160
TCB40.H200.D32S	200
TCB40.H60.D40S	60
TCB40.H100.D40S	100
TCB40.H130.D40S	130
TCB40.H160.D40S	160
TCB40.H200.D40S	200

*** A = 50mm**

	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40



	B	M
...D40S	66,7	M12

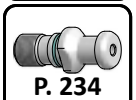
ACCESSORI - *ACCESSORIES*



P. 304
ACCESSORI
ACCESSORIES



P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

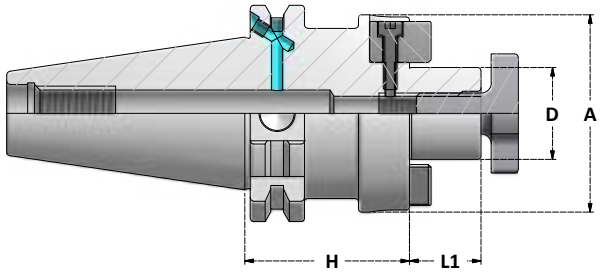


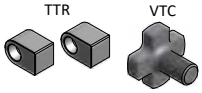
P. 234
TIRANTI
PULL STUDS

MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS




CANALI PER REFRIGERANTE
COOLANT CHANNELS

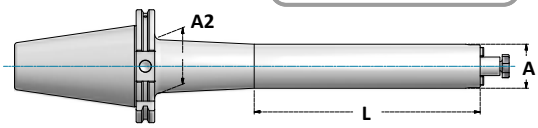




ACCESSORI INCLUSI
INCLUDED ACCESSORIES

ATTACCO *SHANK* TC P. 66

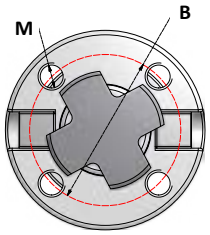
SCHEDA TECNICA *TECHNICAL DATA* D S | P. 349



AD + B

Articolo		H	L	A2
TCB50.H35.D16S		35	-	-
TCB50.H45.D16S		45	-	-
TCB50.H75.D16S		75	-	-
TCB50.H100.D16S		100	-	-
TCB50.H130.D16S		130	-	-
TCB50.H160.D16S		160	-	-
TCB50.H200.D16S		200	-	-
TCB50.H250.D16S		250	-	-
TCB50.H300.D16S	*	300	200	50
TCB50.H350.D16S	*	350	230	50
TCB50.H35.D22S		35	-	-
TCB50.H45.D22S		45	-	-
TCB50.H75.D22S		75	-	-
TCB50.H100.D22S		100	-	-
TCB50.H130.D22S		130	-	-
TCB50.H160.D22S		160	-	-
TCB50.H200.D22S		200	-	-
TCB50.H250.D22S		250	-	-
TCB50.H300.D22S		300	-	-
TCB50.H350.D22S	*	350	300	54
TCB50.H35.D27S		35	-	-
TCB50.H45.D27S		45	-	-
TCB50.H75.D27S		75	-	-
TCB50.H100.D27S		100	-	-
TCB50.H130.D27S		130	-	-
TCB50.H160.D27S		160	-	-
TCB50.H200.D27S		200	-	-
TCB50.H250.D27S		250	-	-
TCB50.H300.D27S		300	-	-
TCB50.H350.D27S		350	-	-
TCB50.H35.D32S		35	-	-
TCB50.H50.D32S		50	-	-
TCB50.H75.D32S		75	-	-
TCB50.H100.D32S		100	-	-
TCB50.H130.D32S		130	-	-
TCB50.H160.D32S		160	-	-
TCB50.H200.D32S		200	-	-
TCB50.H250.D32S		250	-	-
TCB50.H300.D32S		300	-	-
TCB50.H350.D32S		350	-	-

	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40
...D60S	60	29	40	TTR.D60	VTC.D60



	B	M
...D40S	66,7	M12
...D60S	101,6	M16

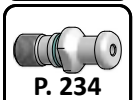
AD + B

Articolo	H
TCB50.H50.D40S	50
TCB50.H75.D40S	75
TCB50.H100.D40S	100
TCB50.H130.D40S	130
TCB50.H160.D40S	160
TCB50.H200.D40S	200
TCB50.H70.D60S	70

ACCESSORI - *ACCESSORIES*

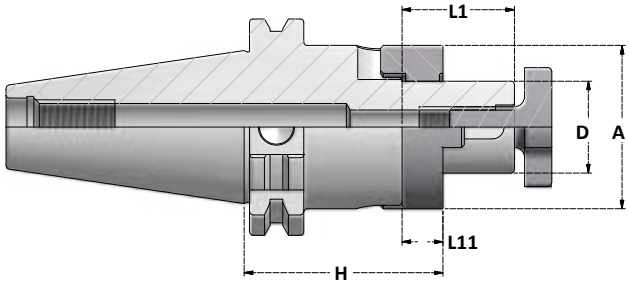

P. 304
ACCESSORI
ACCESSORIES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

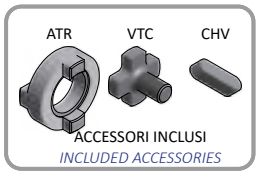
MANDRINI PORTAFRESA COMBINATI
COMBI SHELL MILL HOLDERS





ATTACCO *SHANK* TC P. 66

SCHEDA TECNICA *TECHNICAL DATA* D C | P. 348



AD

Articolo	H
TC30.H50.D16C	50
TC30.H50.D22C	50
TC30.H55.D27C	55
TC30.H60.D32C	60

	D	A	L1	L11	ATR	VTC	CHV
D16C	16	32	27	10	ATR.D16	VTC.D16	CHV.D16
D22C	22	40	31	12	ATR.D22	VTC.D22	CHV.D22
D27C	27	48	33	12	ATR.D27	VTC.D27	CHV.D27
D32C	32	58	38	14	ATR.D32	VTC.D32	CHV.D32
D40C	40	70	41	14	ATR.D40	VTC.D40	CHV.D40

AD

Articolo	H
TC40.H55.D16C	55
TC40.H100.D16C	100
TC40.H130.D16C	130
TC40.H160.D16C	160
TC40.H200.D16C	200
TC40.H55.D22C	55
TC40.H100.D22C	100
TC40.H130.D22C	130
TC40.H160.D22C	160
TC40.H200.D22C	200
TC40.H55.D27C	55
TC40.H100.D27C	100
TC40.H130.D27C	130
TC40.H160.D27C	160
TC40.H200.D27C	200
TC40.H60.D32C	60
TC40.H100.D32C	100
TC40.H130.D32C	130
TC40.H160.D32C	160
TC40.H200.D32C	200
TC40.H60.D40C	60
TC40.H100.D40C	100
TC40.H130.D40C	130
TC40.H160.D40C	160
TC40.H200.D40C	200

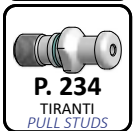
AD

Articolo	H
TC50.H55.D16C	55
TC50.H100.D16C	100
TC50.H130.D16C	130
TC50.H160.D16C	160
TC50.H55.D22C	55
TC50.H100.D22C	100
TC50.H130.D22C	130
TC50.H160.D22C	160
TC50.H55.D27C	55
TC50.H100.D27C	100
TC50.H130.D27C	130
TC50.H160.D27C	160
TC50.H55.D32C	55
TC50.H100.D32C	100
TC50.H130.D32C	130
TC50.H160.D32C	160
TC50.H55.D40C	55
TC50.H100.D40C	100
TC50.H130.D40C	130
TC50.H160.D40C	160

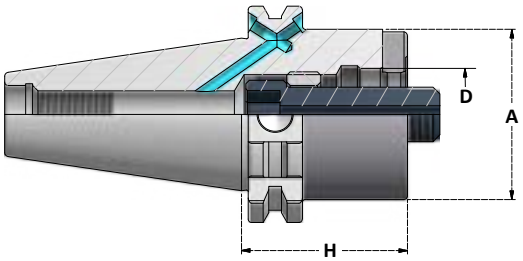
ACCESSORI - *ACCESSORIES*







MANDRINI MODULARI TIPO VARILOCK
MODULAR TOOLHOLDERS VARILOCK TYPE



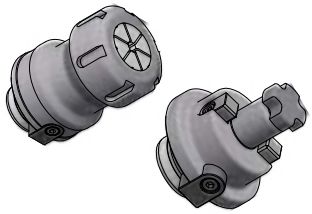
ATTACCO
SHANK
TC
P. 66

AD + B

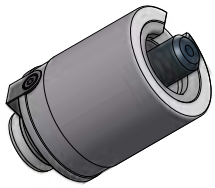
Articolo	A	H	D	Attacco
TCB40.H27.MD50	50	27	27,3 / 27	MD50
TCB40.H50.MD50	50	50	27,3 / 27	MD50
TCB40.H27.MD63	63	27	32,3 / 32	MD63
TCB40.H50.MD63	63	50	32,3 / 32	MD63

AD + B

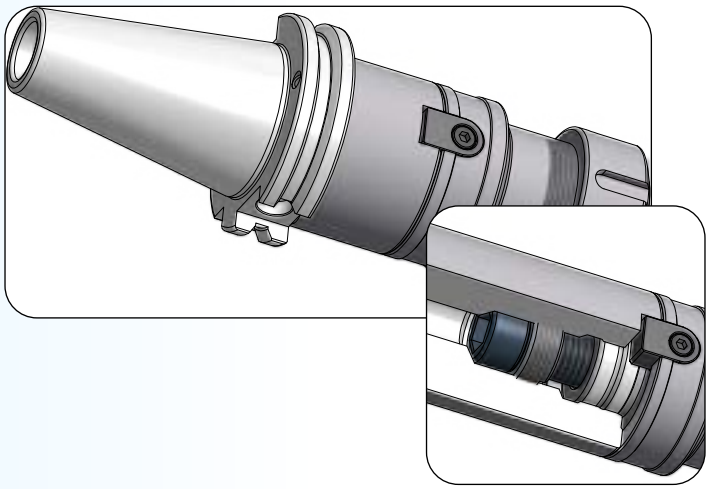
Articolo	A	H	D	Attacco
TCB50.H27.MD50	50	27	27,3 / 27	MD50
TCB50.H50.MD50	50	50	27,3 / 27	MD50
TCB50.H27.MD63	63	27	32,3 / 32	MD63
TCB50.H50.MD63	63	50	32,3 / 32	MD63
TCB50.H27.MD80	80	27	32,3 / 32	MD80
TCB50.H50.MD80	80	50	32,3 / 32	MD80



INSERZIONI PORTAUTENSILI
TOOLHOLDER ADAPTERS
PAG. 202

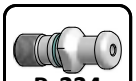


RIDUZIONI E PROLUNGHE
EXTENSIONS AND REDUCTIONS
PAG. 203



ACCESSORI - *ACCESSORIES*


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

MANDRINI DI RIDUZIONE CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS

ATTACCO *SHANK* TC P. 66

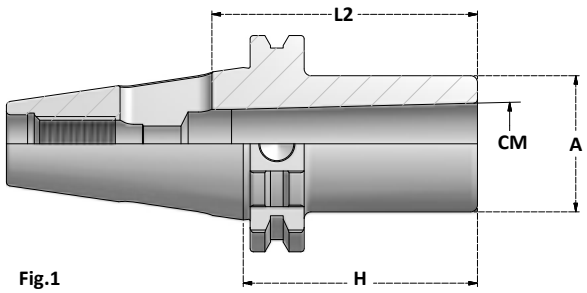


Fig.1

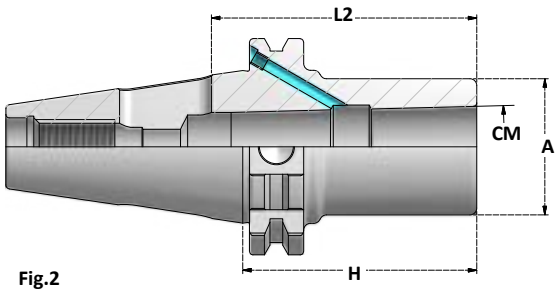


Fig.2

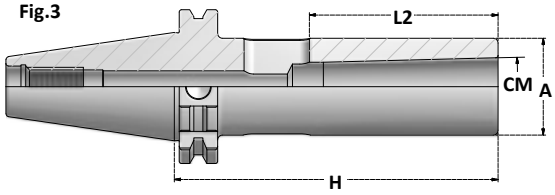
SCHEDA TECNICA *TECHNICAL DATA* CM P P. 350

	CM	A	L2
...CM1P	1	25	56
...CM2P	2	32	67
...CM3P	3	40	84
...CM4P	4	48	107
...CM5P	5	63	135

AD

Articolo	H	Fig
TC40.H50.CM1P	50	1
TC40.H120.CM1P	120	3
TC40.H50.CM2P	50	1
TC40.H120.CM2P	120	3
TC40.H70.CM3P	70	1
TC40.H135.CM3P	135	3
TC40.H95.CM4P	95	1
TC40.H165.CM4P	165	3

Fig.3



AD

Articolo	H	Fig
TC50.H45.CM1P	45	1
TC50.H120.CM1P	120	3
TC50.H60.CM2P	60	1
TC50.H135.CM2P	135	3
TC50.H65.CM3P	65	1
TC50.H155.CM3P	155	3
TC50.H95.CM4P	95	1
TC50.H180.CM4P	180	3
TC50.H105.CM5P	105	1
TC50.H215.CM5P	215	3

PER UTENSILI DIN228B CON TENONE

FOR TOOLS DIN228B WITH TANG

AD + B

Articolo	H	Fig
TCB40.H50.CM2P	50	2
TCB40.H70.CM3P	70	2
TCB40.H95.CM4P	95	2

AD + B

Articolo	H	Fig
TCB50.H60.CM2P	60	2
TCB50.H65.CM3P	65	2
TCB50.H95.CM4P	95	2
TCB50.H120.CM5P	120	2

ACCESSORI - *ACCESSORIES*

P. 308 ESTRATTORI *PULLERS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI DI RIDUZIONE CONO MORSE PER FRESE

MORSE TAPER ADAPTERS FOR THREADED MILLS

Fig. 1

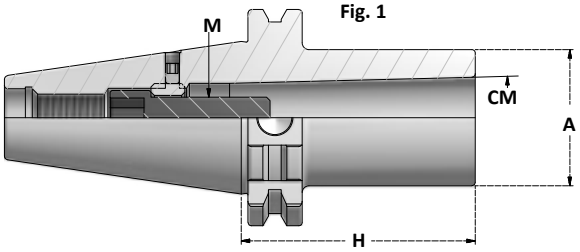
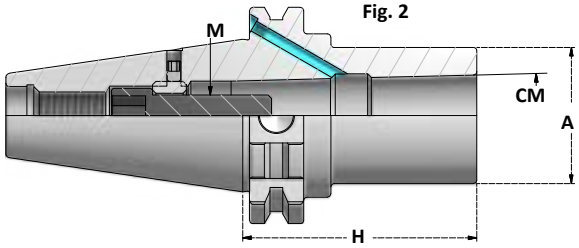


Fig. 2



ATTACCO
SHANK
TC
P. 66

AD

Articolo	H	Fig
TC40.H50.CM1FV	50	1
TC40.H50.CM2FV	50	1
TC40.H70.CM3FV	70	1
TC40.H95.CM4FV	95	1

SCHEDA TECNICA
TECHNICAL DATA
CMFV P. 351

	CM	A	M
...CM1FV	1	25	M6
...CM2FV	2	32	M10
...CM3FV	3	40	M12
...CM4FV	4	48	M16
...CM5FV	5	63	M20

AD

Articolo	H	Fig
TC50.H45.CM1FV	45	1
TC50.H60.CM2FV	60	1
TC50.H100.CM2FV	100	1
TC50.H65.CM3FV	65	1
TC50.H120.CM3FV	120	1
TC50.H95.CM4FV	95	1
TC50.H170.CM4FV	170	1
TC50.H120.CM5FV	120	1

PER UTENSILI DIN228A CON FILETTO

FOR TOOLS DIN228A WITH THREAD

FORNITI CON VITE SENZA FORO PER IL PASSAGGIO DEL REFRIGERANTE

SUPPLIED WITH SCREW WITHOUT COOLANT THROUGH

AD + B

Articolo	H	Fig
TCB40.H50.CM2FV	50	2
TCB40.H70.CM3FV	70	2
TCB40.H95.CM4FV	95	2

AD + B

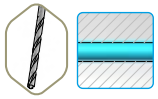
Articolo	H	Fig
TCB50.H60.CM2FV	60	2
TCB50.H65.CM3FV	65	2
TCB50.H95.CM4FV	95	2
TCB50.H120.CM5FV	120	2

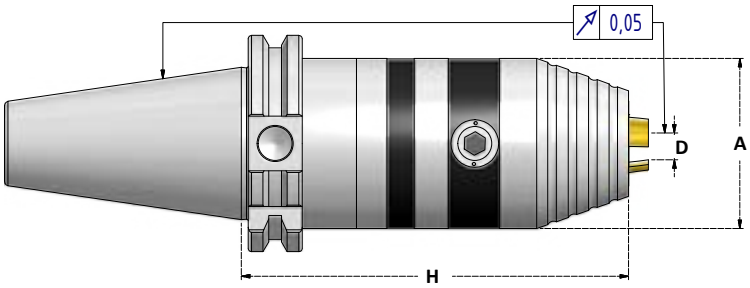
ACCESSORI - *ACCESSORIES*

P. 275 PINZE *COLLETS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPUNTA CON PASSAGGIO DEL REFRIGERANTE ROTAZIONE DESTRA E SINISTRA

*DRILL CHUCKS **WITH COOLANT THROUGH** - RIGHT AND LEFT ROTATION*






CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
TC
P. 66


AD

Articolo	H
TC40.H89.CP8S	89
TC40.H115.CP13S	115
TC40.H120.CP16S	120


AD

Articolo	H
TC50.H103.CP13S	103
TC50.H108.CP16S	108

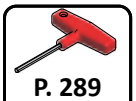
GRIFFE RIVESTITE IN TITANIO

TITANIUM COATED JAWS

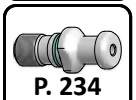
	D	A	Chiave Wrench
...CP8	0,5 - 8	37,5	CH.EX4
...CP13	1- 13	50,5	CH.EX6
...CP16	2,5- 16	57	CH.EX6

ACCESSORI - *ACCESSORIES*

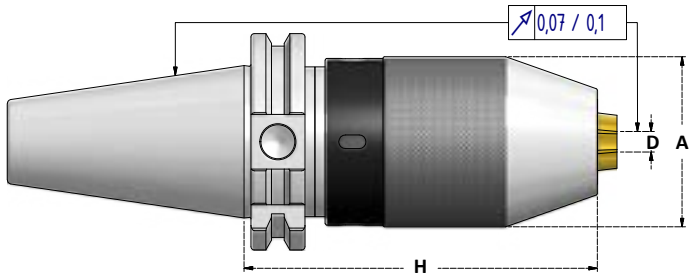

P. 205
AUTOSERRANTI
DRILL CHUCKS


P. 289
CHIAVI
WRENCHES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

MANDRINI PORTAPUNTA AUTOSERRANTI - ROTAZIONE DESTRA
DRILL CHUCKS - RIGHT ROTATION



CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
TC
P. 66

Articolo	H
TC30.H80.DCK8S	80
TC30.H100.DCK13S	100

Articolo	H
TC40.H79.DCK8S	79
TC40.H100.DCK13S	100
TC40.H115.DCK16S	115

Articolo	H
TC50.H88.DCK13S	88
TC50.H90.DCK16S	90

	D	A	Chiave Wrench
...DCK8	0,5 - 8	37,5	CH.DC8
...DCK13	1- 13	50,5	CH.DC13
...DCK16	2,5- 16	57	CH.DC16

GRIFFE RIVESTITE IN TITANIO

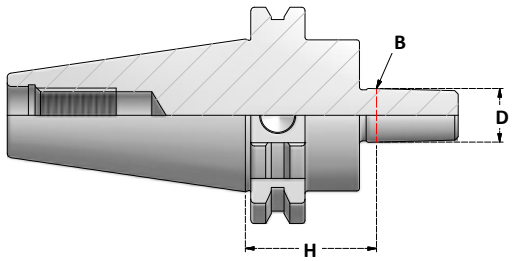
TITANIUM COATED JAWS

ACCESSORI - *ACCESSORIES*

P. 204 AUTOSERRANTI *DRILL CHUCKS*
P. 289 CHIAVI *WRENCHES*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

TC B

ATTACCHI PER MANDRINI AUTOSERRANTI
DRILL CHUCKS ARBORS



Articolo	H
TC30.H25.B12	25
TC30.H25.B16	25

Articolo	H
TC40.H40.B12	40
TC40.H40.B16	40
TC40.H40.B18	40

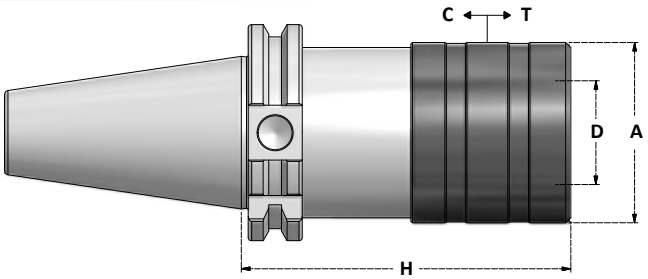
Articolo	H
TC50.H40.B16	40
TC50.H40.B18	40

B	D
...B12	12,065
...B16	15,733
...B18	17,78

ACCESSORI - *ACCESSORIES*

P. 204 AUTOSERRANTI *DRILL CHUCKS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MASCHIATORI A CAMBIO RAPIDO CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION



ATTACCO *SHANK* **TC** P. 66

SCHEDA TECNICA *TECHNICAL DATA* MCR | P. 352

Corsa di compressione: *Compression stroke:* **C**

Corsa di trazione: *Extension stroke:* **T**

Articolo	H
TC40.MCR1TC	60
TC40.MCR2TC	98
TC40.MCR3TC	150

	Bussola Adapter	D	Tapping Range	A	T	C
..MCR1TC	B1 / BF1	19	M2÷M14	36	7,5	7,5
..MCR2TC	B2 / BF2	31	M6÷M27	53	12,5	12,5
..MCR3TC	B3 / BF3	48	M14÷M45	78	20	20
..MCR4TC	BF4	60	M22÷M45	96	22,5	22,5

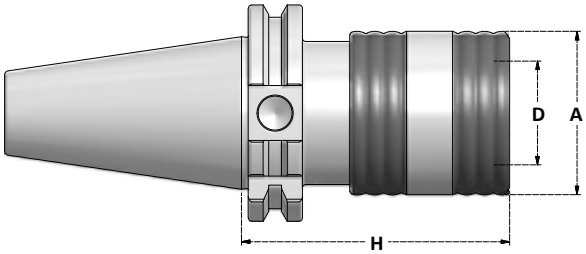
Articolo	H
TC50.MCR1TC	60
TC50.MCR2TC	84
TC50.MCR3TC	150
TC50.MCR4TC	165

ACCESSORI - *ACCESSORIES*

P. 336 MASCHI *TAPS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*
P. 298 INSERZIONI *ADAPTERS*

TC MCR

MASCHIATORI A CAMBIO RAPIDO PER MASCHIATURA RIGIDA
QUICK CHANGE TAPPING CHUCKS FOR RIGID TAPPING



SCHEDA TECNICA *TECHNICAL DATA* MCR | P. 352

Articolo	A	H
TC30.MCR1R	32	60
TC30.MCR2R	54	82

	Bussola Adapter	D	Tapping Range
...MCR1R	B1 / BF1	19	M2÷M14
...MCR2R	B2 / BF2	31	M6÷M27

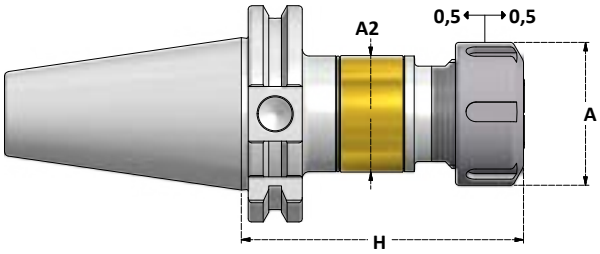
Articolo	A	H
TC40.MCR1R	32	62
TC40.MCR2R	54	90

ACCESSORI - *ACCESSORIES*

P. 336 MASCHI *TAPS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*
P. 298 INSERZIONI *ADAPTERS*

MANDRINI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING

G6,3
8000r.p.m.



ATTACCO
SHANK
TC
P. 66

SCHEDA TECNICA
TECHNICAL DATA
SY | P. 353

AD + B

Articolo	H
TCB40.ERC16MSY	79

AD + B

Articolo	H
TCB40.ERC16SY	79
TCB40.ERC20SY	80
TCB40.ERC25SY	84
TCB40.ERC32SY	95
TCB40.ERC40SY	120

	A	A2	Collets Range	Tapping Range	Ghiera Nut
...ERC16MSY	22	34	3,5 ÷ 10	M3 ÷ M12	G16M
...ERC16SY	32	34	3,5 ÷ 10	M3 ÷ M12	G16S
...ERC20SY	35	34	3,5 ÷ 12	M3 ÷ M16	G20S
...ERC25SY	42	45	3,5 ÷ 16	M3 ÷ M20	G25S
...ERC32SY	50	45	3,5 ÷ 20	M3 ÷ M27	G32S
...ERC40SY	63	62	6 ÷ 25	M5 ÷ M33	G40S

VANTAGGI RISPETTO AL SISTEMA CON BUSSOLE
ADVANTAGES COMPARED TO ADAPTERS SYSTEM

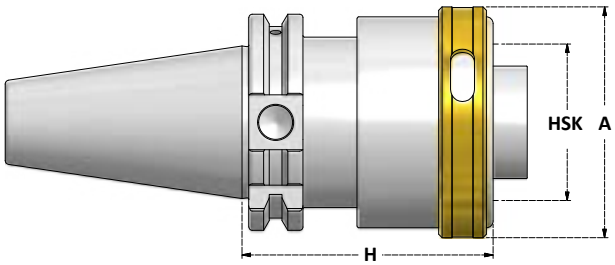
- **PASSAGGIO DEL REFRIGERANTE**
- **ADATTO PER MASCHIATURA AD ALTE VELOCITÀ**
- **SISTEMA PORTAPINZE ER**

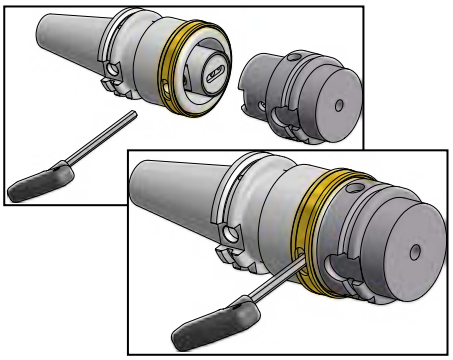
- *COOLANT THROUGH*
- *SUITABLE FOR HIGH SPEED TAPPING*
- *ER COLLET SYSTEM*

ACCESSORI - *ACCESSORIES*



ADATTATORI PER ATTACCHI HSK FORMA A/C
ADAPTERS FOR HSK SHANKS FORM A/C





ATTACCO *SHANK* **TC** P. 66

AD + B

Articolo	H	A	HSK A/C
TCB40.H65.HSK50AC	65	55	50
TCB40.H75.HSK63AC	75	70	63

AD + B

Articolo	H	A	HSK A/C
TCB50.H65.HSK50AC	65	55	50
TCB50.H75.HSK63AC	75	70	63
TCB50.H100.HSK100AC	100	110	100

ACCESSORI - *ACCESSORI*

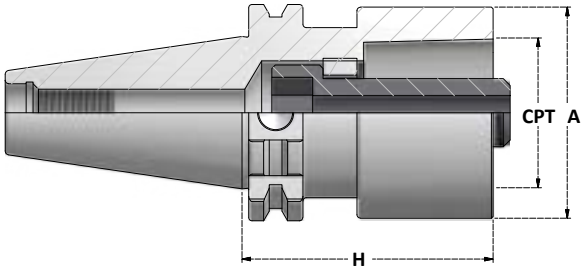

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

TC CPT **DIN ISO 26623-1**

NEW

ADATTATORI PER ATTACCHI POLIGONALI CPT
ADAPTERS FOR POLIGONAL SHANKS CPT



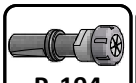
AD + B

Articolo	H	A	CPT
TCB40.H30.CPT40	30	40	CPT40
TCB40.H40.CPT50	40	50	CPT50
TCB40.H85.CPT63	85	63	CPT63

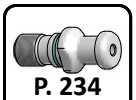
AD + B

Articolo	H	A	CPT
TCB50.H30.CPT40	30	40	CPT40
TCB50.H30.CPT50	30	50	CPT50
TCB50.H50.CPT63	50	63	CPT63
TCB50.H70.CPT80	70	80	CPT80
TCB50.H140.CPT100	140	100	CPT100

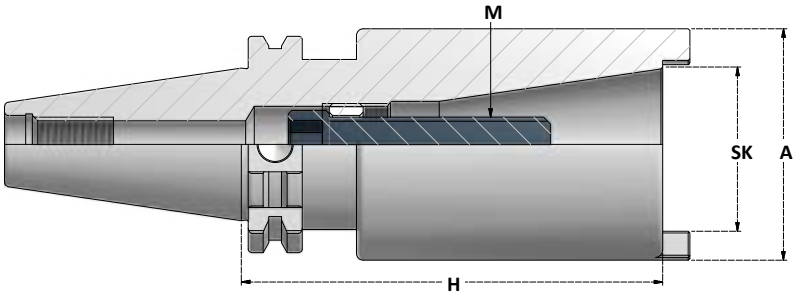
ACCESSORI - *ACCESSORI*


P. 194 PORTAUTENSILI DIN6327 *DIN6327 TOOLHOLDERS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

RIDUZIONI PER ATTACCHI CONICI TC-BT-ISO
REDUCTION SLEEVES FOR TAPERED SHANKS TC-BT-ISO



TC	DIN ISO 7388 (DIN69871)
BT	MAS 403 (JIS B 6339)
ISO	DIN 2080

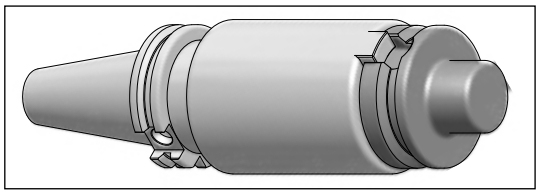
ATTACCO *SHANK* **TC** P. 66

AD

Articolo	H	A	M	SK
TC40.H60.TB30	60	50	M12	TC30 / BT30
TC40.H95.TB40	95	70	M16	TC40 / BT40

AD

Articolo	H	A	M	SK
TC50.H70.TB40	70	70	M16	TC40 /BT40
TC50.H120.TB50	120	90	M24	TC50 / BT50



FORNITI CON VITE SENZA FORO PER IL PASSAGGIO DEL REFRIGERANTE

SUPPLIED WITH SCREW WITHOUT COOLANT THROUGH

AD

Articolo	H	A	M	SK
TC40.H60.ISO30	60	50	M12	ISO30
TC40.H95.ISO40	95	70	M16	ISO40

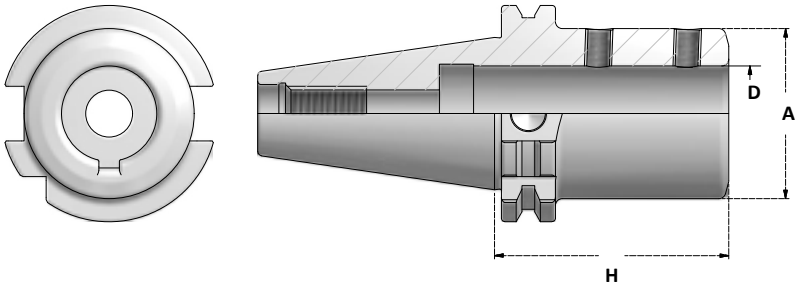
AD

Articolo	H	A	M	SK
TC50.H70.ISO40	70	70	M16	ISO40
TC50.H120.ISO50	120	90	M24	ISO50

ACCESSORI - *ACCESSORI*

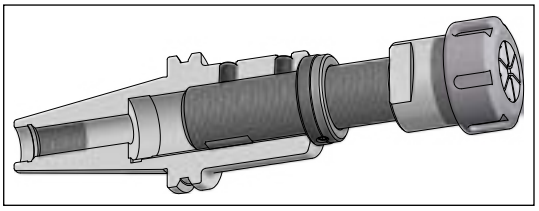
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTA INSERZIONI REGISTRABILI DIN 6327
HOLDERS FOR ADJUSTABLE ADAPTERS DIN 6327



AD

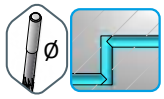
Articolo	D	H	A
TC50.H85.TR20	20	85	32
TC50.H100.TR28	28	100	40
TC50.H100.TR36	36	100	50
TC50.H105.TR48	48	105	67

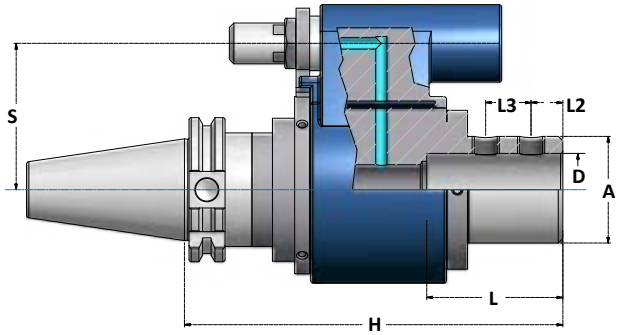


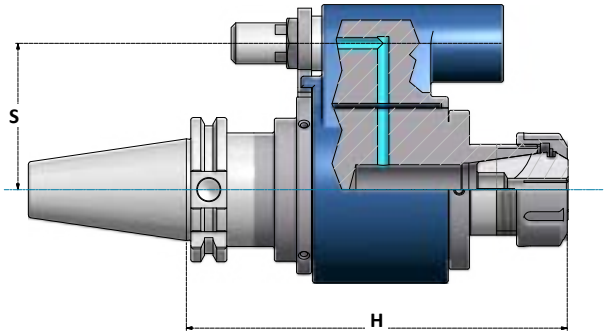
ACCESSORI - *ACCESSORI*

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

DISTRIBUTORI ROTANTI DEL REFRIGERANTE
OIL HOLE HOLDERS







ATTACCO
SHANK
TC
P. 66

Pressione d'esercizio: MAX 7 bar
Numero di giri: MAX 3000 r.p.m.

Operating pressure: MAX 7 bar
Number of revolutions: MAX 3000 r.p.m.

Per preservare dall'usura precoce le speciali guarnizioni di tenuta, il liquido refrigerante deve essere filtrato con residuo max 5µm.

To preserve the special seals from premature wear, coolant must be filtered with a maximum residue of 5µm.

Per il collegamento alla macchina utensile necessita dello "stop block" acquistabile tra gli accessori.

For the connection it needs the "stop block" that can be purchased among the accessories.

DISTRIBUTORI ROTANTI DEL REFRIGERANTE PER ATTACCHI CILINDRICI
SIDE LOCK OIL HOLE HOLDERS

Articolo	D	H	A	L	S	L2	L3
TC40.D25DR	25	165	46,5	56	65	15	20
TC40.D32DR	32	165	47	60	65	15	20

Articolo	D	H	A	L	S	L2	L3
TC50.D25DR	25	165	56	56	80	15	20
TC50.D32DR	32	170	56	60	80	15	20
TC50.D40DR	40	170	56	62	80	15	25

DISTRIBUTORI ROTANTI DEL REFRIGERANTE PORTAPINZA ER
ER OIL HOLE HOLDERS COLLET CHUCKS

Articolo	H	S
TC40.ERC16DR	160	65
TC40.ERC20DR	160	65
TC40.ERC25DR	160	65
TC40.ERC32DR	160	65

Articolo	H	S
TC50.ERC32DR	160	80
TC50.ERC40DR	160	80

	Collets Range	Ghiera Nut
...ERC16DR	1÷10	G16HTE
...ERC20DR	1÷14	G20HTE



	Collets Range	Ghiera Nut
...ERC25DR	1÷20	G25HT
...ERC32DR	2÷22	G32HT
...ERC40DR	3÷30	G40HT



La fornitura comprende un disco di tenuta RG.D10.
Supplied with RG.D10 sealing disc.

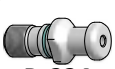
ACCESSORI - *ACCESSORIES*


P. 284
GHIERE A TENUTA
SEALED NUTS


P. 284
DISCHETTI **RG**
***RG** SEALED DISCS*

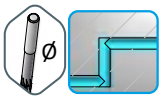

P. 306
BLOCCO D'ARRESTO
STOP BLOCK


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

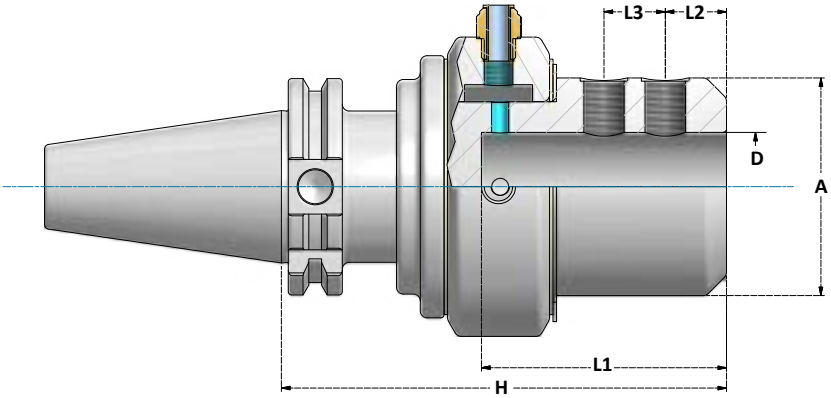

P. 234
TIRANTI
PULL STUDS

DISTRIBUTORI ROTANTI DEL REFRIGERANTE A CAMBIO MANUALE PER ATTACCHI CILINDRICI

MANUAL SIDE LOCK OIL HOLE HOLDERS

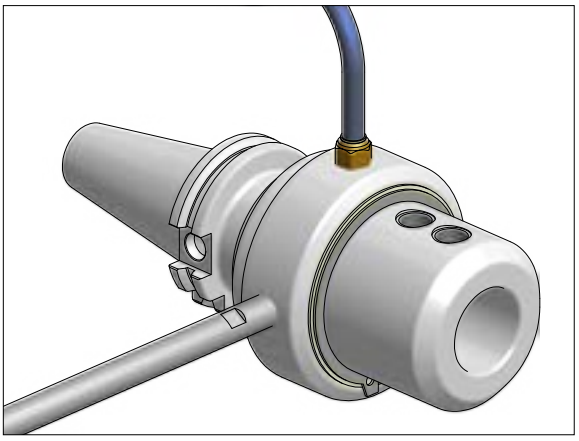


ATTACCO
SHANK
TC
P. 66



Articolo	D	H	A	L1	L2	L3	GRANI SCREWS
TC40.DRM32	32	125	64,5	72	20	20	M14x2

Articolo	D	H	A	L1	L2	L3	GRANI SCREWS
TC50.DRM40	40	135	64,5	82	20	25	M16x1,5



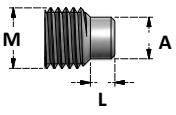
Pressione d'esercizio: MAX 20 bar
Numero di giri: MAX 1000 r.p.m.

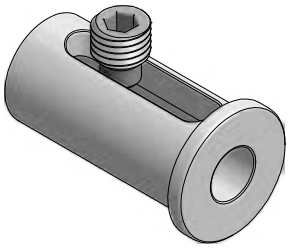
Per preservare dall'usura precoce le speciali guarnizioni di tenuta, il liquido refrigerante deve essere filtrato con residuo max 5µm. Fornito con la barra filettata da agganciare ad un fermo nella macchina utensile.

Operating pressure: MAX 20 bar
Number of revolutions: MAX 1000 r.p.m.

To preserve the special seals from premature wear, coolant must be filtered with a maximum residue of 5µm. Supplied with the threaded rod to be hooked to a stop in the machine tool.







GRANI PER UTILIZZO BUSSOLE E2-1 CON ASOLA
SCREWS FOR USING E2-1 BUSHES WITH SLOT

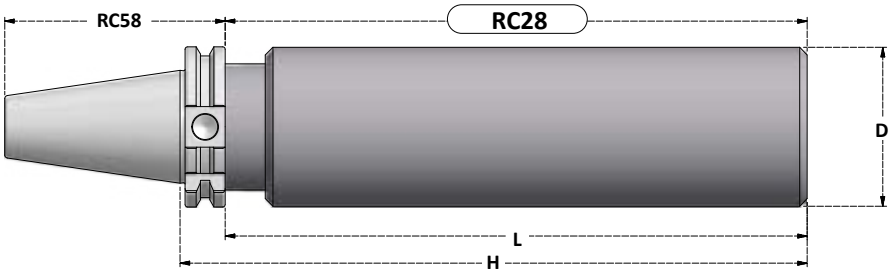
Articolo	M	A	L
GR.DRM32-25-20	M14x2	12	8

Articolo	M	A	L
GR.DRM40-32	M16x1,5	12	7

ACCESSORI - *ACCESSORIES*

P. 294 BUSSOLE *BUSHES*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI CON STELO LAVORABILE
BLANK ARBORS



ATTACCO
SHANK
TC
P. 66

Articolo	D	H	L
TC40.H250.D40BL	40	250	230
TC40.H250.D63BL	63	250	230
TC40.H270.D80BL	80	270	250

Articolo	D	H	L
TC50.H330.D50BL	50	330	310
TC50.H315.D63BL	63	315	295
TC50.H330.D80BL	80	330	310
TC50.H315.D97BL	97	315	295



ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

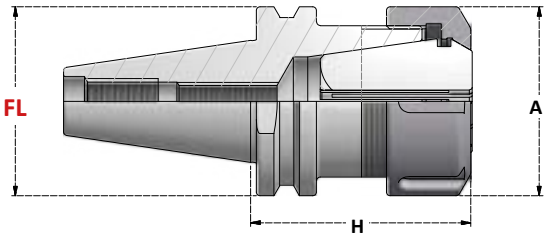
Articolo	D	H	L
DTC40.H250.D63BL	63	250	230
DTC40.H315.D80BL	80	315	295

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

Articolo	D	H	L
DTC50.H315.D97BL	97	315	295

MANDRINI PORTAPINZA ER SENZA TACCHE DI TRASCINAMENTO
ER COLLET CHUCKS WITHOUT DRIVING SLOTS

G6,3
24000r.p.m.



UTILIZZATI SULLE MACCHINE PER LA LAVORAZIONE DEL LEGNO E DELL'ALLUMINIO

SUITABLE FOR WOOD AND ALUWORKING MACHINES

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

ROTAZIONE DESTRA
RIGHT HAND ROTATION

Articolo	FL	H
WD30.H50.ERC32RH	50	50
WD30.H67.ERC32RH	50	67
WD30.H57.ERC40RH	50	57
WD30.H65.ERC40RH	50	65

ROTAZIONE SINISTRA
LEFT HAND ROTATION

Articolo	FL	H
WD30.H50.ERC32LH	50	50
WD30.H67.ERC32LH	50	67
WD30.H57.ERC40LH	50	57
WD30.H65.ERC40LH	50	65

ROTAZIONE DESTRA
RIGHT HAND ROTATION

Articolo	FL	H
WD30C.H60.ERC32RH	46	60
WD30C.H65.ERC40RH	46	65

ROTAZIONE SINISTRA
LEFT HAND ROTATION

Articolo	FL	H
WD30C.H60.ERC32LH	46	60
WD30C.H65.ERC40LH	46	65

ROTAZIONE DESTRA
RIGHT HAND ROTATION

Articolo	FL	H
WD30U.H50.ERC32RH	58	50

ROTAZIONE SINISTRA
LEFT HAND ROTATION

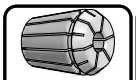
Articolo	FL	H
WD30U.H50.ERC32LH	58	50

	A	Collets Range	Ghiera Nut
...ERC32RH	50	2÷22	G32WD
...ERC40RH	63	3÷30	G40WD

	A	Collets Range	Ghiera Nut
...ERC32LH	50	2÷22	G32WDL
...ERC40LH	63	3÷30	G40WDL



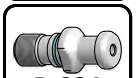
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

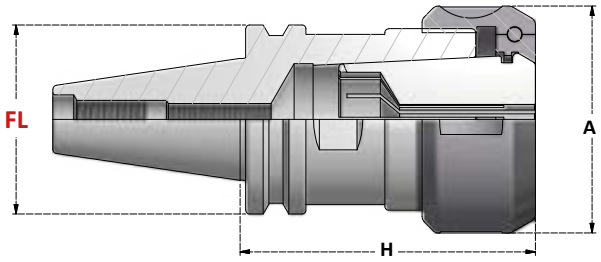

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPINZA EOC SENZA TACCHE DI TRASCINAMENTO
EOC COLLET CHUCKS WITHOUT DRIVING SLOTS

G6,3
24000r.p.m.



UTILIZZATI SULLE MACCHINE PER LA LAVORAZIONE DEL LEGNO E DELL'ALLUMINIO

SUITABLE FOR WOOD AND ALUWORKING MACHINES

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

ROTAZIONE DESTRA
RIGHT HAND ROTATION

Articolo	FL	H
WD30.H80.EOC25RH	50	80

ROTAZIONE SINISTRA
LEFT HAND ROTATION

Articolo	FL	H
WD30.H80.EOC25LH	50	80

ROTAZIONE DESTRA
RIGHT HAND ROTATION

Articolo	FL	H
WD30C.H80.EOC25RH	46	80

ROTAZIONE SINISTRA
LEFT HAND ROTATION

Articolo	FL	H
WD30C.H80.EOC25LH	46	80

	A	Collets Range	Ghiera Nut
...EOC25RH	60	2÷25	G25OCC

	A	Collets Range	Ghiera Nut
...EOC25LH	60	2÷25	G25OCCL



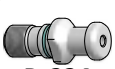
ACCESSORI - *ACCESSORIES*


P. 270 PINZE *COLLETS*

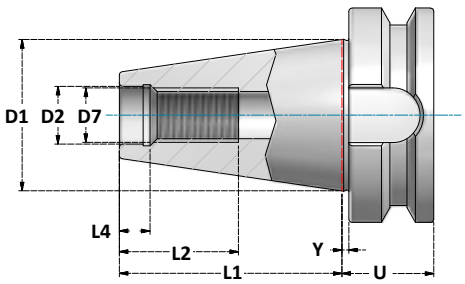

P. 287 GHIERE *NUTS*

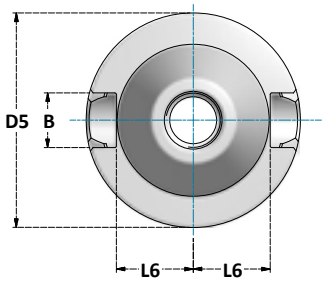

P. 289 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

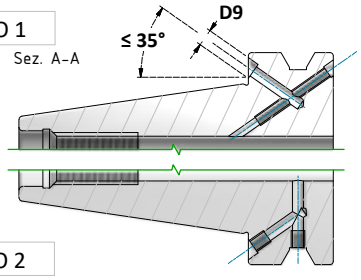

P. 234 TIRANTI *PULL STUDS*

MANDRINI BT
BT TOOLHOLDERS

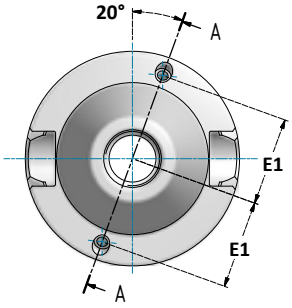




TIPO 1



TIPO 2



* FORM AD+B

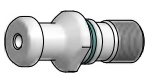
DIMENSIONI CONO
TAPER DIMENSIONS

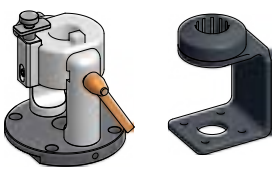
CONO / TAPER	B	D1	D2	D5	D7	D9*	E1*	L1	L2	L4	L6	Y	U
	+0,2 0		H8	h8	6H	Max		±0,3	min.	min.	0 -0,3		0 -0,1
BT30	16,1	31,75	12,5	46	M12	-	-	48,4	24	7	16,3	2	22
DBT30	16,1	31,75	12,5	46	M12	-	-	48,4	24	7	16,3	1	22
BT40 / BTB40	16,1	44,45	17	63	M16	4	27	65,4	30	9	22,6	2	27
DBT40	16,1	44,45	17	63	M16	4	27	65,4	30	9	22,6	1,01	27
BT50 / BTB50	25,7	69,85	25	100	M24	6	42	101,8	45	13	35,4	3	38
DBT50	25,7	69,85	25	100	M24	6	42	101,8	45	13	35,4	1,5	38

CARATTERISTICHE:
Tolleranza di precisione dei coni: AT3.
Costruiti in acciaio certificato in barre.
Eseguiti trattamenti termici da fornitori certificati.
Rettificati di precisione esternamente e internamente.
Controllati con strumenti di misura certificati.
Prebilanciati nei gradi indicati nelle pagine di catalogo.

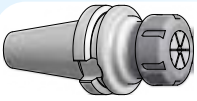
FEATURES:
The precision tolerance of tapers is AT3.
Made of certified steel.
Heat treatments performed by certified suppliers.
Precision grinding externally and internally.
Checked with certified measuring instruments.
Pre-balanced as indicated in the catalog pages.

AD/AD+B **P.359**
DOPPIO CONTATTO *DOUBLE CONTACT* **P.358**
BILANCIATURA *BALANCING* **P.360**
TIRANTI *PULL STUDS* **P.234**
SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES* **P.310**

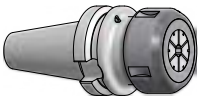




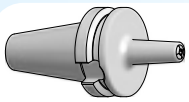
MAS 403 (JIS B 6339) - BT



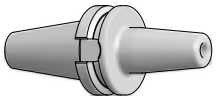
MANDRINI PORTAPINZA ER
COLLET CHUCKS ER
DIN ISO 15488 (DIN6499) PAG. 114



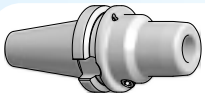
MANDRINI PORTAPINZA EOC
COLLET CHUCKS EOC
DIN ISO 10897 (DIN6388) PAG. 121



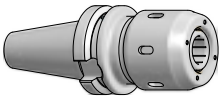
MANDRINI PORTAPINZA SLC
COLLET CHUCKS SLC
PAG. 122



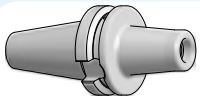
MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS
PAG. 123



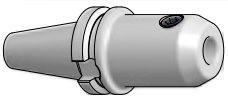
MANDRINI A SERRAGGIO IDRAULICO
HYDRAULIC CHUCKS
PAG. 127



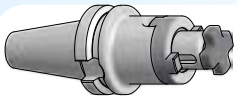
MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS
PAG. 128



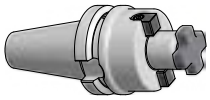
MANDRINI PORTAFRESA CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS
PAG. 130



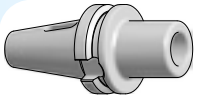
MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON
DIN 1835-2 PAG. 131



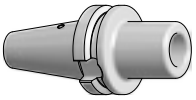
MANDRINI PORTAFRESA COMBI
COMBI SHELL MILL HOLDERS
DIN 6358 PAG. 138



MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357 PAG. 139



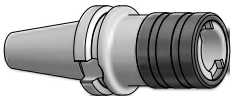
RIDUZIONI A CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS
DIN 6383 PAG. 142



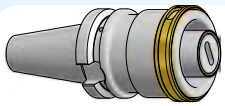
RIDUZIONI A CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS
DIN 6364 PAG. 143



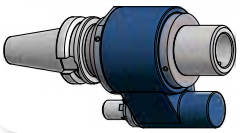
MANDRINI PORTAPUNTA
DRILL CHUCKS
PAG. 144



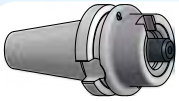
PORTAMASCHI
TAPPING CHUCKS
PAG. 146



RIDUZIONI
ADAPTERS
PAG. 148



DISTRIBUTORI ROTANTI DEL REFRIGERANTE
OIL HOLE HOLDERS
PAG. 150



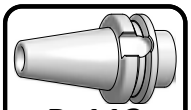
MANDRINI MODULARI TIPO VARILOCK
MODULAR TOOLHOLDERS VARILOCK TYPE
PAG. 152



MANDRINI CON STELO LAVORABILE
BLANK ARBORS
PAG. 153



BARRE DI COLLAUDO
TEST ARBORS
PAG. 330



P. 112
ATTACCO BT
BT SHANK

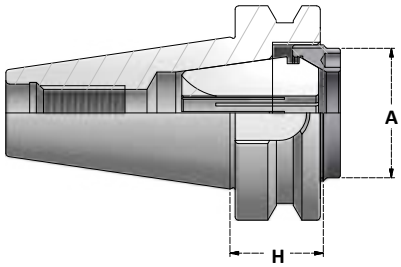
MANDRINI PORTAPINZA ER
ER COLLET CHUCKS

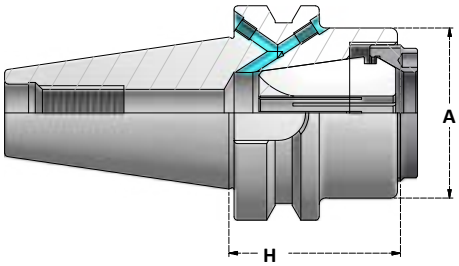
DIN ISO 15488 (DIN6499)

ERC A Pag. 114	**EXTRACORTI** *STUB LENGTH*
ERC MINI Pag. 115	**CON GHIERA MINI - ATTACCO DOPPIO CONTATTO** *WITH MINI NUT - DOUBLE CONTACT SHANK*
ERC MINI Pag. 115	**CON GHIERA MINI** *WITH MINI NUT*
ERC Pag. 116	**CON GHIERA STANDARD - ATTACCO DOPPIO CONTATTO** *WITH STANDARD NUT - DOUBLE CONTACT SHANK*
ERC Pag. 117-118	**CON GHIERA STANDARD** *WITH STANDARD NUT*
ERC NF Pag. 119	**CON GHIERA "NF" SENZA TACCHE - BILANCIATI PER ALTE VELOCITÀ** *WITH "NF" NOTCH FREE NUT - BALANCED FOR HIGH SPEEDS*
ERC RG Pag. 120	**A CENTRATURA REGOLABILE** *ADJUSTABLE RUNOUT*

MANDRINI PORTAPINZA ER - EXTRACORTI
ER COLLET CHUCKS - STUB LENGTH







ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

AD

Articolo	H	A	Collets Range	Ghiera Nut
BT40.H29.ERC25A	29	32	1÷20	G25A
BT40.H29.ERC32A	29	40	2÷22	G32A

AD + B

Articolo	H	A	Collets Range	Ghiera Nut
BTB40.H50.ERC32A	50	50	2÷22	G32A

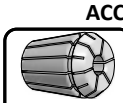
AD + B

Articolo	H	A	Collets Range	Ghiera Nut
BTB50.H40.ERC32A	40	50	2÷22	G32A

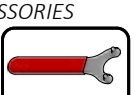


	Collets Range	Ghiera Nut
...ERC25A	1÷20	G25A
...ERC32A	2÷22	G32A

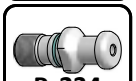
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 286 GHIERE *NUTS*

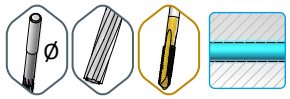

P. 292 CHIAVI *WRENCHES*

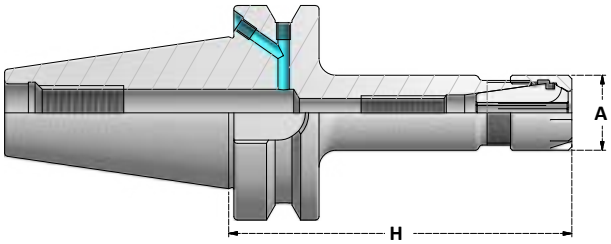

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

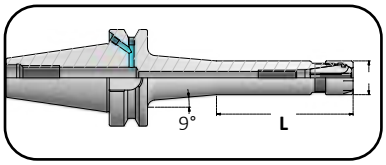

P. 234 TIRANTI *PULL STUDS*

Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS







ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* ERC | P. 338

	A	Collets Range	Ghiera Nut
...ERC8M	12	1÷5	G8M
...ERC11M	16	1÷7	G11M
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M
...ERC25M	35	1÷20	G25M



G6,3 15000r.p.m.

ATTACCO STANDARD
STANDARD SHANK

AD

Articolo	H	L
BT30.H100.ERC8M	100	45
BT30.H100.ERC11M	100	-
BT30.H100.ERC16M	100	-
BT30.H100.ERC20M	100	-
BT30.H100.ERC25M	100	-

AD + B

Articolo	H	L
BTB40.H100.ERC11M	100	-
BTB40.H125.ERC11M	125	60
BTB40.H150.ERC11M	150	60
BTB40.H100.ERC16M	100	-
BTB40.H125.ERC16M	125	-
BTB40.H150.ERC16M	150	100
BTB40.H200.ERC16M	200	100
BTB40.H100.ERC20M	100	-
BTB40.H125.ERC20M	125	-
BTB40.H150.ERC20M	150	-
BTB40.H200.ERC20M	200	-
BTB40.H100.ERC25M	100	-
BTB40.H125.ERC25M	125	-
BTB40.H150.ERC25M	150	-
BTB40.H200.ERC25M	200	-

AD + B

Articolo	H	L
BTB50.H100.ERC16M	100	-
BTB50.H130.ERC16M	130	-
BTB50.H160.ERC16M	160	100
BTB50.H200.ERC16M	200	100
BTB50.H100.ERC20M	100	-
BTB50.H130.ERC20M	130	-
BTB50.H160.ERC20M	160	-
BTB50.H200.ERC20M	200	-
BTB50.H100.ERC25M	100	-
BTB50.H130.ERC25M	130	-
BTB50.H160.ERC25M	160	-
BTB50.H200.ERC25M	200	-

G2,5 25000r.p.m.



ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DBT30.H70.ERC11M	70
DBT30.H100.ERC11M	100
DBT30.H70.ERC16M	70
DBT30.H100.ERC16M	100
DBT30.H70.ERC20M	70
DBT30.H100.ERC20M	100

AD

Articolo	H
DBT40.H70.ERC11M	70
DBT40.H100.ERC11M	100
DBT40.H70.ERC16M	70
DBT40.H100.ERC16M	100
DBT40.H70.ERC20M	70
DBT40.H100.ERC20M	100

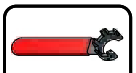
AD

Articolo	H
DBT50.H100.ERC11M	100
DBT50.H130.ERC11M	130
DBT50.H100.ERC16M	100
DBT50.H130.ERC16M	130

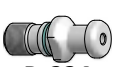
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*


P. 288 CHIAVI *WRENCHES*

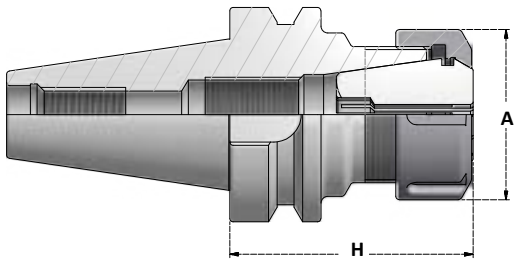

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

MANDRINI A DOPPIO CONTATTO PORTAPINZA ER
DOUBLE CONTACT ER COLLET CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* BT P. 112

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DBT30.H50.ERC16	50
DBT30.H70.ERC16	70
DBT30.H120.ERC16	120
DBT30.H50.ERC20	50
DBT30.H70.ERC20	70
DBT30.H135.ERC20	135
DBT30.H70.ERC25	70
DBT30.H100.ERC25	100
DBT30.H135.ERC25	135
DBT30.H70.ERC32	70
DBT30.H100.ERC32	100
DBT30.H120.ERC32	120
DBT30.H80.ERC40	80
DBT30.H100.ERC40	100

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DBT50.H80.ERC16	80
DBT50.H100.ERC16	100
DBT50.H160.ERC16	160
DBT50.H80.ERC20	80
DBT50.H100.ERC20	100
DBT50.H160.ERC20	160
DBT50.H80.ERC25	80
DBT50.H100.ERC25	100
DBT50.H160.ERC25	160
DBT50.H80.ERC32	80
DBT50.H100.ERC32	100
DBT50.H160.ERC32	160
DBT50.H80.ERC40	80

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



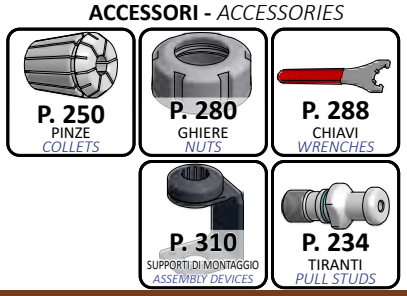
ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DBT40.H70.ERC16	70
DBT40.H100.ERC16	100
DBT40.H160.ERC16	160
DBT40.H70.ERC20	70
DBT40.H70.ERC25	70
DBT40.H100.ERC25	100
DBT40.H160.ERC25	160
DBT40.H70.ERC32	70
DBT40.H100.ERC32	100
DBT40.H130.ERC32	130
DBT40.H160.ERC32	160
DBT40.H70.ERC40	70

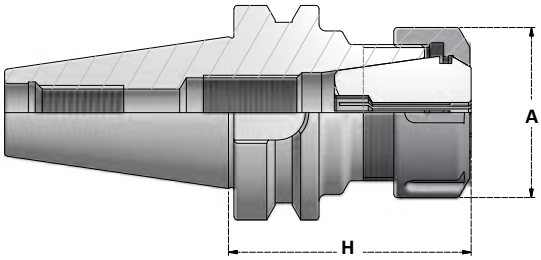
Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

ACCESSORI - *ACCESSORIES*



MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* ERC | P. 338

AD

Articolo	H
BT30.H55.ERC16	55
BT30.H70.ERC16	70
BT30.H100.ERC16	100
BT30.H70.ERC20	70
BT30.H100.ERC20	100
BT30.H70.ERC25	70
BT30.H100.ERC25	100
BT30.H70.ERC32	70
BT30.H100.ERC32	100
BT30.H80.ERC40	80
BT30.H100.ERC40	100

AD

Articolo	H
BT40.H70.ERC16	70
BT40.H70.ERC25	70
BT40.H70.ERC32	70
BT40.H100.ERC32	100
BT40.H80.ERC40	80
BT40.H100.ERC40	100

AD

Articolo	H
BT50.H80.ERC32	80
BT50.H100.ERC32	100
BT50.H80.ERC40	80

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.
Available on request with different nuts and balancing.

Articolo	Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.BT30.ERC32-6	ERC32.D6-D8-D10-D12-D16-D20	BT30.H70.ERC32	CH32S
BX.BT30.ERC40-7	ERC40.D6-D8-D10-D12-D16-D20-D25	BT30.H70.ERC40	CH40S

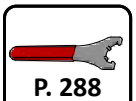
Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.BT30.ERC25	ERC25	D2÷16	BT30.H70.ERC25	CH25S
BX.BT30.ERC32	ERC32	D3÷20	BT30.H70.ERC32	CH32S
BX.BT30.ERC40	ERC40	D4÷26	BT30.H80.ERC40	CH40S



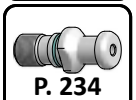
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

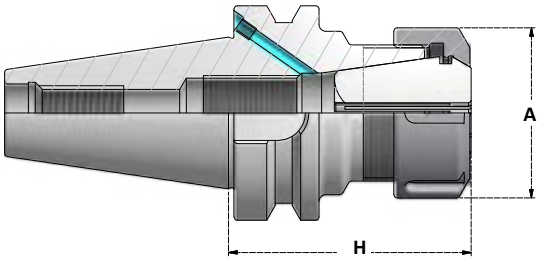

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

AD + B

Articolo	H
BTB40.H70.ERC16	70
BTB40.H100.ERC16	100
BTB40.H130.ERC16	130
BTB40.H160.ERC16	160
BTB40.H200.ERC16	200
BTB40.H70.ERC20	70
BTB40.H100.ERC20	100
BTB40.H130.ERC20	130
BTB40.H160.ERC20	160
BTB40.H200.ERC20	200
BTB40.H70.ERC25	70
BTB40.H100.ERC25	100
BTB40.H130.ERC25	130
BTB40.H160.ERC25	160
BTB40.H200.ERC25	200
BTB40.H70.ERC32	70
BTB40.H100.ERC32	100
BTB40.H130.ERC32	130
BTB40.H160.ERC32	160
BTB40.H200.ERC32	200
BTB40.H70.ERC40	70
BTB40.H100.ERC40	100
BTB40.H130.ERC40	130
BTB40.H160.ERC40	160
BTB40.H200.ERC40	200
BTB40.H85.ERC50	85

AD + B

Articolo	H
BTB50.H80.ERC16	80
BTB50.H100.ERC16	100
BTB50.H130.ERC16	130
BTB50.H160.ERC16	160
BTB50.H200.ERC16	200
BTB50.H80.ERC20	80
BTB50.H100.ERC20	100
BTB50.H130.ERC20	130
BTB50.H160.ERC20	160
BTB50.H200.ERC20	200
BTB50.H80.ERC25	80
BTB50.H100.ERC25	100
BTB50.H130.ERC25	130
BTB50.H160.ERC25	160
BTB50.H200.ERC25	200
BTB50.H80.ERC32	80
BTB50.H100.ERC32	100
BTB50.H130.ERC32	130
BTB50.H160.ERC32	160
BTB50.H200.ERC32	200
BTB50.H250.ERC32	250
BTB50.H80.ERC40	80
BTB50.H100.ERC40	100
BTB50.H130.ERC40	130
BTB50.H160.ERC40	160
BTB50.H200.ERC40	200
BTB50.H250.ERC40	250
BTB50.H100.ERC50	100
BTB50.H130.ERC50	130
BTB50.H160.ERC50	160

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S
...ERC50	78	6÷34	G50S



Fornibili a richiesta con diverse ghiere e gradi di bilanciatura.

Available on request with different nuts and balancing.

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.BTB40.ERC32-6	ERC32.D6-D8-D10-D12-D16-D20	BTB40.H70.ERC32	CH32S
BX.BTB40.ERC40-7	ERC40.D6-D8-D10-D12-D16-D20-D25	BTB40.H70.ERC40	CH40S

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.BTB40.ERC25	ERC25	D2÷16	BTB40.H70.ERC25	CH25S
BX.BTB40.ERC32	ERC32	D3÷20	BTB40.H70.ERC32	CH32S
BX.BTB40.ERC40	ERC40	D4÷26	BTB40.H70.ERC40	CH40S
BX.BTB50.ERC25	ERC25	D2÷16	BTB50.H80.ERC25	CH25S
BX.BTB50.ERC32	ERC32	D3÷20	BTB50.H80.ERC32	CH32S
BX.BTB50.ERC40	ERC40	D4÷26	BTB50.H80.ERC40	CH40S



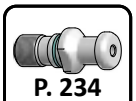
ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



P. 280 GHIERE *NUTS*



P. 234 TIRANTI *PULL STUDS*



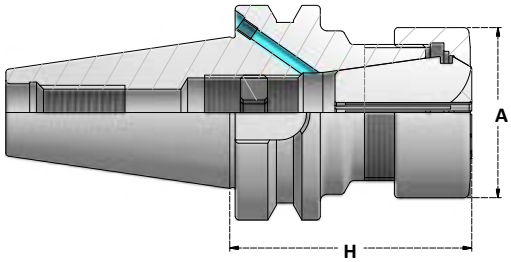
P. 288 CHIAVI *WRENCHES*



P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

MANDRINI PORTAPINZA ER PER ALTE VELOCITA'
ER COLLET CHUCKS FOR HIGH SPEEDS





ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* ERC | P. 338

	A	Collets Range	Ghiera Nut
...ERC8MNF	12	1÷5	G8NFM
...ERC11MNF	16	1÷7	G11NFM
...ERC16MNF	22	1÷10	G16NFM
...ERC20MNF	28	1÷14	G20NFM
...ERC25MNF	35	1÷20	G25NFM

	A	Collets Range	Ghiera Nut
...ERC16NF	28	1÷10	G16NF
...ERC20NF	34	1÷14	G20NF
...ERC25NF	42	1÷20	G25NF
...ERC32NF	50	2÷22	G32NF



AD

Articolo	H
BT30.H100.ERC8MNF	100
BT30.H100.ERC11MNF	100
BT30.H100.ERC16MNF	100
BT30.H100.ERC20MNF	100
BT30.H100.ERC25MNF	100

AD

Articolo	H
BT30.H70.ERC16NF	70
BT30.H70.ERC20NF	70
BT30.H70.ERC25NF	70
BT30.H70.ERC32NF	70

AD + B

Articolo	H
BTB40.H100.ERC11MNF	100
BTB40.H125.ERC11MNF	125
BTB40.H150.ERC11MNF	150
BTB40.H100.ERC16MNF	100
BTB40.H125.ERC16MNF	125
BTB40.H150.ERC16MNF	150
BTB40.H100.ERC20MNF	100
BTB40.H125.ERC20MNF	125
BTB40.H150.ERC20MNF	150
BTB40.H100.ERC25MNF	100
BTB40.H125.ERC25MNF	125
BTB40.H150.ERC25MNF	150

AD + B

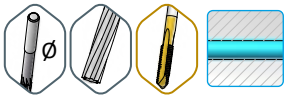
Articolo	H
BTB40.H70.ERC16NF	70
BTB40.H100.ERC16NF	100
BTB40.H130.ERC16NF	130
BTB40.H160.ERC16NF	160
BTB40.H70.ERC20NF	70
BTB40.H100.ERC20NF	100
BTB40.H130.ERC20NF	130
BTB40.H160.ERC20NF	160
BTB40.H70.ERC25NF	70
BTB40.H100.ERC25NF	100
BTB40.H130.ERC25NF	130
BTB40.H160.ERC25NF	160
BTB40.H70.ERC32NF	70
BTB40.H100.ERC32NF	100
BTB40.H130.ERC32NF	130
BTB40.H160.ERC32NF	160

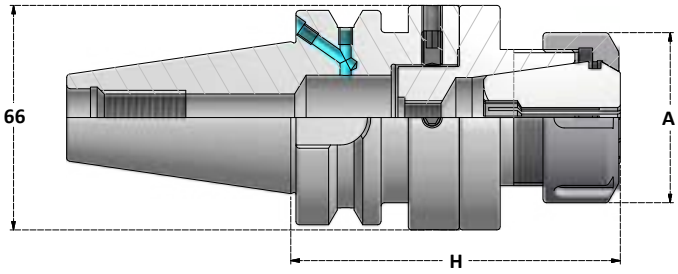
Mandrini prebilanciati a G2,5 / 25000r.p.m. forniti con ghiera "NF" senza tacche.
Attacco a doppio contatto disponibile a richiesta.
Toolholders balanced G2,5 / 25000r.p.m. supplied with "NF" notch free nut.
Double contact shank available on request.

ACCESSORI - *ACCESSORIES*



MANDRINI PORTAPINZA ER A CENTRATURA REGOLABILE
RUNOUT ADJUSTABLE ER COLLET CHUCKS





±0,1mm Centratura regolabile
Adjustable runout

ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

AD + B

Articolo	H
BTB40.H93.ERC16RG	93
BTB40.H95.ERC20RG	95
BTB40.H96.ERC25RG	96
BTB40.H97.ERC32RG	97
BTB40.H131.ERC40RG	131

AD + B

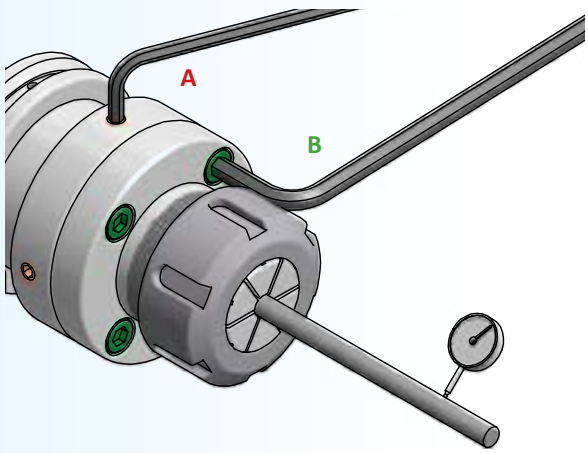
Articolo	H
BTB50.H103.ERC16RG	103
BTB50.H105.ERC20RG	105
BTB50.H106.ERC25RG	106
BTB50.H107.ERC32RG	107
BTB50.H141.ERC40RG	141

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



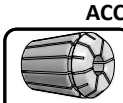
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



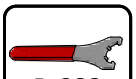


Allentare le viti **B** e regolare la centratura tramite le viti **A**.
Loosen screws **B** and use screws **A** for radial adjustment.

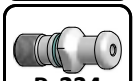
ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

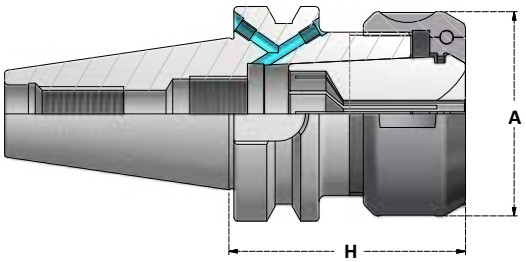

P. 288 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPINZA EOC
EOC COLLET CHUCKS

G6,3 15000r.p.m.



ATTACCO *SHANK* **BT** P. 112

AD + B

Articolo	H
BTB40.H70.EOC16	70
BTB40.H70.EOC25	70
BTB40.H100.EOC25	100
BTB40.H90.EOC32	90

	A	Collets Range	Ghiera Nut
...EOC16	43	2÷16	G16OCC
...EOC25	60	2÷25	G25OCC
...EOC32	72	3÷32	G32OCC

AD + B

Articolo	H
BTB50.H70.EOC25	70
BTB50.H80.EOC32	80

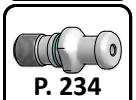
ACCESSORI - *ACCESSORIES*


P. 270 PINZE *COLLETS*


P. 287 GHIERE *NUTS*

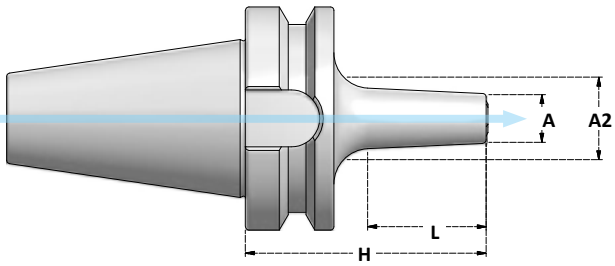

P. 289 CHIAVI *WRENCHES*

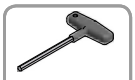

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI A DOPPIO CONTATTO PORTAPINZA SLC
DOUBLE CONTACT SLC COLLET CHUCKS






CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
BT
P. 112

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H	L	A2
DBT30.H70.SLC6	70	38	18,1
DBT30.H100.SLC6	100	68	21,2
DBT30.H70.SLC12	70	47	33,4
DBT30.H100.SLC12	100	77	38,1

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H	L	A2
DBT40.H70.SLC6	70	28	17,1
DBT40.H100.SLC6	100	58	20,1
DBT40.H130.SLC6	130	88	23,3
DBT40.H70.SLC12	70	33	31
DBT40.H100.SLC12	100	63	31,6
DBT40.H170.SLC12	170	133	37,7
DBT40.H80.SLC25	80	50	44,3
DBT40.H100.SLC25	100	70	46,1

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

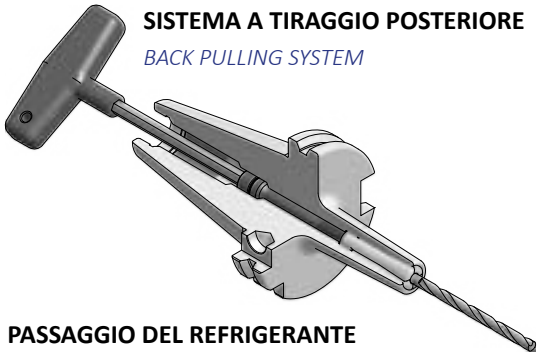
AD

Articolo	H	L	A2
DBT50.H70.SLC6	70	17	15,9
DBT50.H100.SLC6	100	47	19,1
DBT50.H70.SLC12	70	22	28,1
DBT50.H100.SLC12	100	52	30,6
DBT50.H125.SLC12	125	77	32,9
DBT50.H70.SLC25	70	22	41,9
DBT50.H100.SLC25	100	52	44,5

	A	Collets Range	MT
...SLC6	14	3÷6	12
...SLC12	26	3÷12	45
...SLC25	40	6÷25	90

Momento torcente consigliato:
Recommended tightening torque: **MT**

SISTEMA A TIRAGGIO POSTERIORE
BACK PULLING SYSTEM



PASSAGGIO DEL REFRIGERANTE
COOLANT THROUGH

ACCESSORI - *ACCESSORIES*


P. 273
PINZE
COLLETS


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

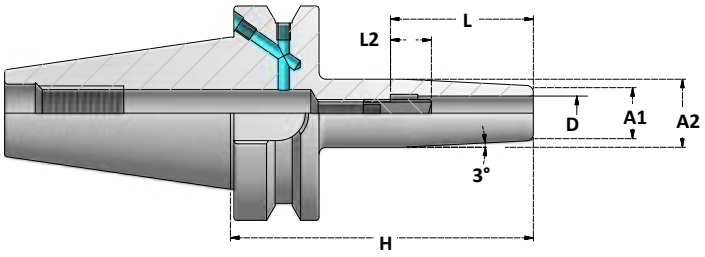
MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

TM SL Pag. 123	**SLIM** *SLIM FIT*
TM Pag. 124	**ATTACCO DOPPIO CONTATTO** *DOUBLE CONTACT SHANK*
TM Pag. 125	**STANDARD** *STANDARD*
TM C Pag. 126	**CON FORI DI LUBRIFICAZIONE** *WITH COOLANT HOLES*

BT | TM SL

MANDRINI A CALETTAMENTO A CALDO SLIM
SLIM SHRINK FIT CHUCKS

Ø G2,5 25000r.p.m.



ATTACCO *SHANK* BT P. 112

SCHEDA TECNICA *TECHNICAL DATA* TM P. 340

AD + B

Articolo	H	A2
BTB40.H90.TM3SL	90	13
BTB40.H120.TM3SL	120	16
BTB40.H90.TM4SL	90	15
BTB40.H120.TM4SL	120	20
BTB40.H90.TM5SL	90	16
BTB40.H120.TM5SL	120	20
BTB40.H90.TM6SL	90	17
BTB40.H130.TM6SL	130	19
BTB40.H160.TM6SL	160	19
BTB40.H90.TM8SL	90	19
BTB40.H130.TM8SL	130	21
BTB40.H160.TM8SL	160	21
BTB40.H90.TM10SL	90	21
BTB40.H130.TM10SL	130	23
BTB40.H160.TM10SL	160	23
BTB40.H90.TM12SL	90	23
BTB40.H130.TM12SL	130	25
BTB40.H160.TM12SL	160	25
BTB40.H90.TM14SL	90	25
BTB40.H130.TM14SL	130	27
BTB40.H160.TM14SL	160	27

Articolo	H	A2
BTB40.H90.TM16SL	90	29
BTB40.H130.TM16SL	130	31
BTB40.H160.TM16SL	160	31
BTB40.H90.TM18SL	90	34
BTB40.H130.TM18SL	130	35
BTB40.H160.TM18SL	160	35
BTB40.H90.TM20SL	90	39
BTB40.H130.TM20SL	130	39
BTB40.H160.TM20SL	160	39

		D	L	A1
TM3SL	*	3	12	9
TM4SL	*	4	16	10
TM5SL	*	5	20	11
TM6SL		6	36	12
TM8SL		8	36	14
TM10SL		10	41	16
TM12SL		12	46	18
TM14SL		14	46	22
TM16SL		16	49	24
TM18SL		18	49	28
TM20SL		20	51	32

Profondità regolabile: *Adjustable depth:* **L2**= 10mm

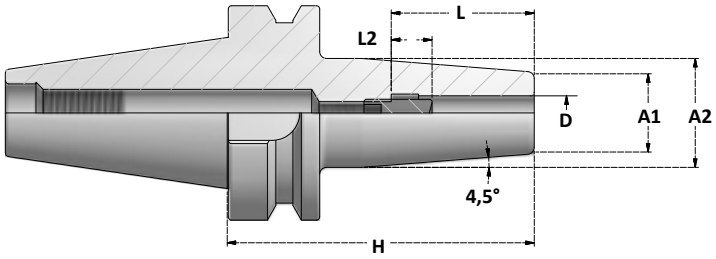
* Senza vite di regolazione
* *Without adjusting screw*

ACCESSORI - *ACCESSORIES*

P. 224 PROLUNGHE *EXTENSIONS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI A DOPPIO CONTATTO A CALETTAMENTO A CALDO
DOUBLE CONTACT SHRINK FIT CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

Articolo	H
DBT30.H80.TM4	80
DBT30.H80.TM5	80
DBT30.H80.TM6	80
DBT30.H80.TM8	80
DBT30.H80.TM10	80
DBT30.H80.TM12	80
DBT30.H80.TM16	80
DBT30.H90.TM20	90

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

Articolo	H
DBT40.H90.TM3	90
DBT40.H90.TM4	90
DBT40.H90.TM5	90
DBT40.H90.TM6	90
DBT40.H130.TM6	130
DBT40.H160.TM6	160
DBT40.H90.TM8	90
DBT40.H130.TM8	130
DBT40.H160.TM8	160
DBT40.H90.TM10	90
DBT40.H130.TM10	130
DBT40.H160.TM10	160
DBT40.H90.TM12	90
DBT40.H130.TM12	130
DBT40.H160.TM12	160
DBT40.H90.TM14	90
DBT40.H90.TM16	90
DBT40.H130.TM16	130
DBT40.H160.TM16	160
DBT40.H100.TM18	100
DBT40.H100.TM20	100
DBT40.H130.TM20	130
DBT40.H160.TM20	160
DBT40.H100.TM25	100
DBT40.H100.TM32	100

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

Articolo	H
DBT50.H100.TM6	100
DBT50.H100.TM8	100
DBT50.H100.TM10	100
DBT50.H100.TM12	100
DBT50.H100.TM14	100
DBT50.H100.TM16	100
DBT50.H100.TM18	100
DBT50.H100.TM20	100
DBT50.H110.TM25	110
DBT50.H110.TM32	110

		D	L	A1	A2
...TM3	*	3	12	10	20
...TM4	*	4	16	15	25
...TM5	*	5	20	15	25
...TM6		6	36	21	27
...TM8		8	36	21	27
...TM10		10	41	24	32
...TM12		12	46	24	32
...TM14		14	46	24	32
...TM16		16	49	24	32
...TM18		18	49	33	42
...TM20		20	51	33	42
...TM25		25	57	44	53
...TM32		32	61	44	53

* Senza vite di regolazione
** Without adjusting screw*

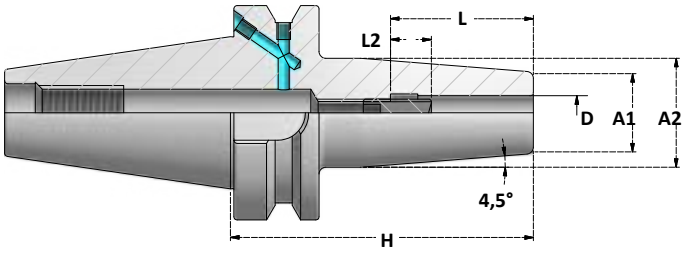
Profondità regolabile: **L2**= 10mm
Adjustable depth:

ACCESSORI - *ACCESSORIES*

P. 224 PROLUNGHE *EXTENSIONS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

AD + B

Articolo	H
BTB40.H90.TM3	90
BTB40.H120.TM3	120
BTB40.H160.TM3	160
BTB40.H90.TM4	90
BTB40.H120.TM4	120
BTB40.H160.TM4	160
BTB40.H90.TM5	90
BTB40.H120.TM5	120
BTB40.H160.TM5	160
BTB40.H90.TM6	90
BTB40.H130.TM6	130
BTB40.H160.TM6	160
BTB40.H90.TM8	90
BTB40.H130.TM8	130
BTB40.H160.TM8	160
BTB40.H90.TM10	90
BTB40.H130.TM10	130
BTB40.H160.TM10	160
BTB40.H90.TM12	90
BTB40.H130.TM12	130
BTB40.H160.TM12	160
BTB40.H90.TM14	90
BTB40.H130.TM14	130
BTB40.H160.TM14	160
BTB40.H90.TM16	90
BTB40.H130.TM16	130
BTB40.H160.TM16	160
BTB40.H90.TM18	90
BTB40.H130.TM18	130
BTB40.H160.TM18	160
BTB40.H90.TM20	90
BTB40.H130.TM20	130
BTB40.H160.TM20	160
BTB40.H100.TM25	100
BTB40.H130.TM25	130
BTB40.H160.TM25	160
BTB40.H100.TM32	100
BTB40.H130.TM32	130
BTB40.H160.TM32	160

AD + B

Articolo	H
BTB50.H100.TM6	100
BTB50.H120.TM6	120
BTB50.H160.TM6	160
BTB50.H100.TM8	100
BTB50.H120.TM8	120
BTB50.H160.TM8	160
BTB50.H100.TM10	100
BTB50.H120.TM10	120
BTB50.H160.TM10	160
BTB50.H100.TM12	100
BTB50.H120.TM12	120
BTB50.H160.TM12	160
BTB50.H100.TM14	100
BTB50.H120.TM14	120
BTB50.H160.TM14	160
BTB50.H100.TM16	100
BTB50.H120.TM16	120
BTB50.H160.TM16	160
BTB50.H100.TM18	100
BTB50.H120.TM18	120
BTB50.H160.TM18	160
BTB50.H100.TM20	100
BTB50.H120.TM20	120
BTB50.H160.TM20	160
BTB50.H110.TM25	110
BTB50.H160.TM25	160
BTB50.H110.TM32	110
BTB50.H160.TM32	160

		D	L	A1	A2
...TM3	*	3	12	10	20
...TM4	*	4	16	15	25
...TM5	*	5	20	15	25
...TM6		6	36	21	27
...TM8		8	36	21	27
...TM10		10	41	24	32
...TM12		12	46	24	32
...TM14		14	46	24	32
...TM16		16	49	24	32
...TM18		18	49	33	42
...TM20		20	51	33	42
...TM25		25	57	44	53
...TM32		32	61	44	53

* Senza vite di regolazione
** Without adjusting screw*

Profondità regolabile: **L2**= 10mm
Adjustable depth:

ACCESSORI - *ACCESSORIES*

P. 224 PROLUNGHE *EXTENSIONS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MAS 403 (JIS B 6339) | BT | TM JET

NEW

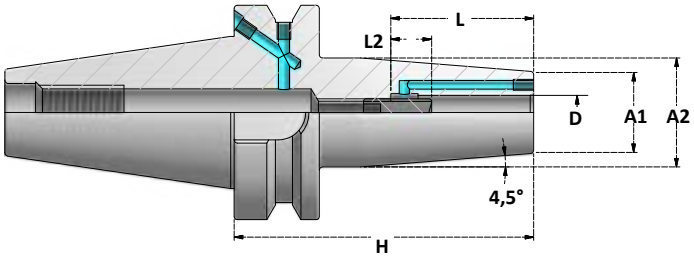
MANDRINI A DOPPIO CONTATTO A CALETTAMENTO A CALDO JET

CON FORI PER IL REFRIGERANTE

*DOUBLE CONTACT SHRINK FIT CHUCKS **JET** TYPE*

WITH HOLES FOR COOLANT





ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* TM | P. 340

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK



Articolo	H
DBT30.H90.TM6JET	90
DBT30.H120.TM6JET	120
DBT30.H90.TM8JET	90
DBT30.H120.TM8JET	120
DBT30.H90.TM10JET	90
DBT30.H120.TM10JET	120
DBT30.H90.TM12JET	90
DBT30.H120.TM12JET	120
DBT30.H90.TM14JET	90
DBT30.H120.TM14JET	120
DBT30.H90.TM16JET	90
DBT30.H120.TM16JET	120
DBT30.H80.TM18JET	80
DBT30.H120.TM18JET	120
DBT30.H90.TM20JET	90
DBT30.H120.TM20JET	120

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK



Articolo	H
DBTB40.H90.TM6JET	90
DBTB40.H120.TM6JET	120
DBTB40.H90.TM8JET	90
DBTB40.H120.TM8JET	120
DBTB40.H90.TM10JET	90
DBTB40.H120.TM10JET	120
DBTB40.H90.TM12JET	90
DBTB40.H120.TM12JET	120
DBTB40.H90.TM14JET	90
DBTB40.H120.TM14JET	120
DBTB40.H90.TM16JET	90
DBTB40.H120.TM16JET	120
DBTB40.H90.TM18JET	90
DBTB40.H120.TM18JET	120
DBTB40.H90.TM20JET	90
DBTB40.H120.TM20JET	120
DBTB40.H100.TM25JET	100
DBTB40.H100.TM32JET	100

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK



Articolo	H
DBTB50.H100.TM6JET	100
DBTB50.H130.TM6JET	130
DBTB50.H100.TM8JET	100
DBTB50.H130.TM8JET	130
DBTB50.H100.TM10JET	100
DBTB50.H130.TM10JET	130
DBTB50.H100.TM12JET	100
DBTB50.H130.TM12JET	130
DBTB50.H100.TM14JET	100
DBTB50.H130.TM14JET	130
DBTB50.H100.TM16JET	100
DBTB50.H130.TM16JET	130
DBTB50.H100.TM18JET	100
DBTB50.H130.TM18JET	130
DBTB50.H100.TM20JET	100
DBTB50.H130.TM20JET	130
DBTB50.H100.TM25JET	100
DBTB50.H130.TM25JET	130
DBTB50.H100.TM32JET	100
DBTB50.H130.TM32JET	130

Altre lunghezze fornibili a richiesta
Other lenghts available on request

	D	L	A1	A2
...TM6	6	36	21	27
...TM8	8	36	21	27
...TM10	10	41	24	32
...TM12	12	46	24	32
...TM14	14	46	24	32
...TM16	16	49	24	32
...TM18	18	49	33	42
...TM20	20	51	33	42
...TM25	25	57	44	53
...TM32	32	61	44	53







Profondità regolabile: *Adjustable depth:* **L2**= 10mm

3 DIVERSE MODALITÀ DI UTILIZZO
3 DIFFERENT APPLICATIONS

Senza montare i grani in dotazione si ha la massima portata del liquido refrigerante

Not using supplied plugs you have maximum flow of coolant

Con l'utilizzo dei grani forati aumenta la pressione - ideale per lavorazioni ad alte velocità

Using plugs with hole the pressure increases - it's used for high speed works

Con l'utilizzo dei grani di chiusura si può lavorare con utensili con fori per il refrigerante

Mounting sealing plugs tools with coolant through can be used

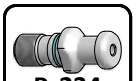
ACCESSORI - *ACCESSORIES*



P. 224 PROLUNGHE *EXTENSIONS*



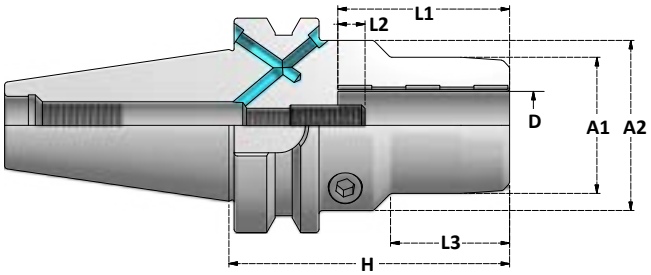
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*



P. 234 TIRANTI *PULL STUDS*

MANDRINI IDRAULICI
HYDRAULIC CHUCKS

Ø G2,5 25000r.p.m.



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* HY P. 342

	D	L1	A1	A2
...HY**6**	6	37	26	49,5
...HY**8**	8	37	28	49,5
...HY**10**	10	41	30	49,5
...HY**12**	12	46	32	49,5
...HY**14**	14	46	34	49,5

	D	L1	A1	A2
...HY**16**	16	49	38	49,5
...HY**18**	18	49	40	49,5
...HY**20**	20	51	42	49,5
...HY**25**	25	57	49,5	55
...HY**32**	32	61	56	63

Profondità regolabile: *Adjustable depth:* **L2**= 10mm

AD + B

Articolo	H	L3
BTB40.H90.HY6	90	40
BTB40.H140.HY6	140	40
BTB40.H90.HY8	90	40
BTB40.H140.HY8	140	40
BTB40.H90.HY10	90	40
BTB40.H140.HY10	140	40
BTB40.H90.HY12	90	40
BTB40.H140.HY12	140	40
BTB40.H90.HY14	90	40
BTB40.H140.HY14	140	40
BTB40.H90.HY16	90	46
BTB40.H140.HY16	140	46
BTB40.H90.HY18	90	46
BTB40.H140.HY18	140	46
BTB40.H73.HY20	73	-
BTB40.H90.HY20	90	46
BTB40.H140.HY20	140	46
BTB40.H90.HY25	90	76
BTB40.H140.HY25	140	91
BTB40.H90.HY32	90	76
BTB40.H140.HY32	140	91

AD + B

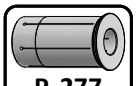
Articolo	H	l3
BTB50.H110.HY6	110	40
BTB50.H140.HY6	140	40
BTB50.H110.HY8	110	40
BTB50.H140.HY8	140	40
BTB50.H110.HY10	110	40
BTB50.H140.HY10	140	40
BTB50.H110.HY12	110	40
BTB50.H140.HY12	140	40
BTB50.H110.HY14	110	40
BTB50.H140.HY14	140	40
BTB50.H110.HY16	110	46
BTB50.H140.HY16	140	46
BTB50.H110.HY18	110	46
BTB50.H140.HY18	140	46
BTB50.H110.HY20	110	46
BTB50.H140.HY20	140	46
BTB50.H110.HY25	110	55
BTB50.H140.HY25	140	55
BTB50.H90.HY32	90	-
BTB50.H115.HY32	115	55
BTB50.H140.HY32	140	55

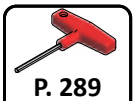
Forza di serraggio *Clamping force*	
HY**6**	**12**Nm
HY**8**	**30**Nm
HY**10**	**40**Nm
HY**12**	**70**Nm
HY**14**	**100**Nm
HY**16**	**135**Nm
HY**18**	**180**Nm
HY**20**	**220**Nm
HY**25**	**500**Nm
HY**32**	**700**Nm

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDERS, WRENCH AND COLLETS

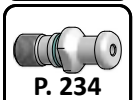
Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.BTB40.HY12	6SR12	D4 D6 D8 D10	BTB40.H90.HY12
BX.BTB40.HY20	6SR20	D6 D8 D10 D12 D16	BTB40.H90.HY20
BX.BTB40.HY32	6SR32	D6 D8 D10 D12 D16 D20 D25	BTB40.H90.HY32
BX.BTB50.HY12	6SR12	D4 D6 D8 D10	BTB50.H110.HY12
BX.BTB50.HY20	6SR20	D6 D8 D10 D12 D16	BTB50.H110.HY20
BX.BTB50.HY32	6SR32	D6 D8 D10 D12 D16 D20 D25	BTB50.H115.HY32

ACCESSORI - *ACCESSORIES*

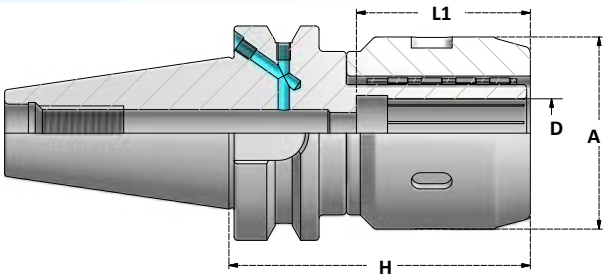

P. 277 PINZE *COLLETS*


P. 289 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS



Ø G6,3 12000r.p.m.

0,005

CANALINI *CHANNELS*

CHIAVE INCLUSA *WRENCH INCLUDED*

ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* FS P. 344

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD + B

Articolo	H
BTB40.H100.FS20	100
BTB40.H100.FS32	100

Articolo	H
BTB50.H105.FS20	105
BTB50.H105.FS32	105

AD

Articolo	H
DBT40.H100.FS20	100
DBT40.H100.FS32	100

AD

Articolo	H
DBT50.H105.FS20	105
DBT50.H105.FS32	105

	D	A	L1
...FS**20**	20	66	59,3
...FS**32**	32	69	71,7

Forza di serraggio *Clamping force*	
FS**20**	**500**Nm
FS**32**	**1000**Nm

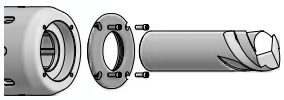
Serrare la ghiera di bloccaggio fino al finecorsa
Tighten the locking nut up to the limit

DISCHI DI TENUTA PER MANDRINI A FORTE SERRAGGIO
SEALED CAPS FOR POWER MILLING CHUCKS

A TENUTA *SEALED*

DISCHI DI TENUTA PER DIAMETRO NOMINALE
SEALED CAPS FOR NOMINAL DIAMETER

Articolo	D
CFS20.D20	20
CFS32.D32	32

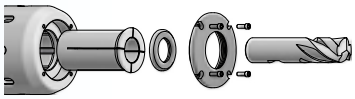


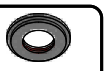




DISCHI DI TENUTA PER L'UTILIZZO DELLE PINZE DI RIDUZIONE
SEALED CAPS FOR REDUCTION COLLETSE USING

Articolo	D	RG Range
CFS20.RG	RG32	D4÷D16
CFS32.RG	RG40	D6÷D25



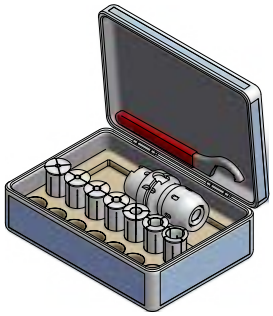


P. 284 DISCHETTI **RG** ***RG*** *SEALED DISCS*

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.BTB40.FS20	4SR20	D6 D8 D10 D12 D16	BTB40.H100.FS20
BX.BTB40.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	BTB40.H100.FS32
BX.BTB50.FS20	4SR20	D6 D8 D10 D12 D16	BTB50.H105.FS20
BX.BTB50.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	BTB50.H105.FS32

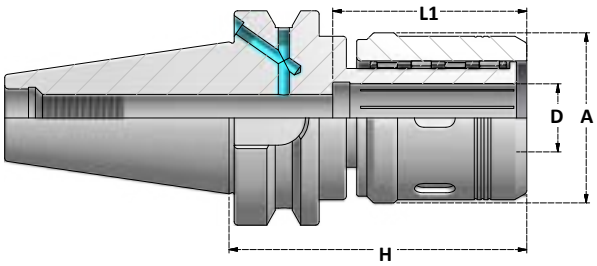
Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.DBT40.FS20	4SR20	D6 D8 D10 D12 D16	DBT40.H100.FS20
BX.DBT40.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	DBT40.H100.FS32
BX.DBT50.FS20	4SR20	D6 D8 D10 D12 D16	DBT50.H105.FS20
BX.DBT50.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	DBT50.H105.FS32



ACCESSORI - *ACCESSORIES*

P. 276 PINZE *COLLETS*
P. 289 CHIAVI *WRENCHES*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI A FORTE SERRAGGIO - ECO LINE
POWER MILLING CHUCKS - ECO LINE



G6,3
12000r.p.m.

0,010

A TENUTA
SEALED

CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
BT
P. 112

AD + B

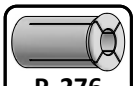
Articolo	H
BTB40.H95.MC20	95
BTB40.H105.MC32	105

Articolo	H
BTB50.H105.MC20	105
BTB50.H110.MC32	110

	D	A	L1	Momento torcente consigliato *Recommended tightening torque*
...MC**20**	20	58	65	60Nm
...MC**32**	32	73	80	70Nm

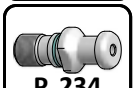
Forza di serraggio *Clamping force*	
MC**20**	**350**Nm
MC**32**	**450**Nm

ACCESSORI - *ACCESSORIES*


P. 276
PINZE
COLLETS

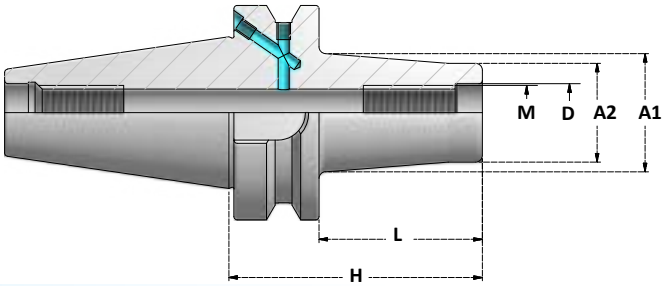

P. 289
CHIAVI
WRENCHES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

MANDRINI PER FRESE CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS

G2,5
25000r.p.m.



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* CPY P. 346

	M	D	A2	Momento torcente consigliato *Recommended tightening torque*
M8CPY	M8	8,5	13	25Nm
M10CPY	M10	10,5	18	40Nm
M12CPY	M12	12,5	21	60Nm
M16CPY	M16	17	29	80Nm

ATTACCO STANDARD
STANDARD SHANK

AD + B

Articolo	H	L	A1
BTB40.H63.M8CPY	63	36	15
BTB40.H83.M8CPY	83	56	23
BTB40.H103.M8CPY	103	76	23
BTB40.H123.M8CPY	123	96	25
BTB40.H63.M10CPY	63	36	20
BTB40.H83.M10CPY	83	56	25
BTB40.H103.M10CPY	103	76	28
BTB40.H123.M10CPY	123	96	28
BTB40.H153.M10CPY	153	126	34
BTB40.H63.M12CPY	63	36	24
BTB40.H83.M12CPY	83	56	24
BTB40.H103.M12CPY	103	76	31
BTB40.H123.M12CPY	123	96	31
BTB40.H153.M12CPY	153	126	38
BTB40.H183.M12CPY	183	156	42
BTB40.H63.M16CPY	63	36	34
BTB40.H83.M16CPY	83	56	34
BTB40.H103.M16CPY	103	76	34
BTB40.H123.M16CPY	123	96	39
BTB40.H153.M16CPY	153	126	39
BTB40.H183.M16CPY	183	156	39

AD + B

Articolo	H	L	A1
BTB50.H104.M10CPY	104	66	28
BTB50.H154.M10CPY	154	116	28
BTB50.H104.M12CPY	104	66	32
BTB50.H154.M12CPY	154	116	32
BTB50.H104.M16CPY	104	66	36
BTB50.H154.M16CPY	154	116	40

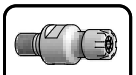


ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

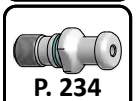
AD + B

Articolo	H	L	A1
DBTB40.H52.M12CPY	52	25	24
DBTB40.H102.M12CPY	102	75	31
DBTB40.H127.M12CPY	127	100	33
DBTB40.H52.M16CPY	52	25	29
DBTB40.H77.M16CPY	77	50	34
DBTB40.H102.M16CPY	102	75	34
DBTB40.H127.M16CPY	127	100	36

ACCESSORI - *ACCESSORIES*


P. 201
RIDUZIONI ER
ER ADAPTERS


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

MANDRINI PORTAFRESA WELDON - DIN1835-2

END MILL HOLDERS WELDON - DIN1835-2

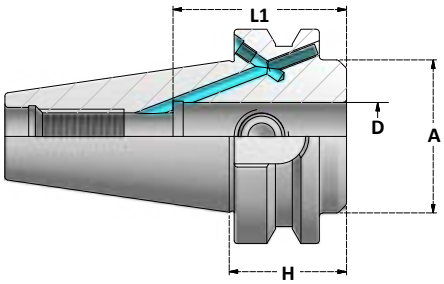
WE Pag. 131	**EXTRACORTI** *STUB LENGTH*
WE Pag. 132	**ATTACCO DOPPIO CONTATTO** *DOUBLE CONTACT SHANK*
WE Pag. 133-134	**STANDARD** *STANDARD*
WE RG Pag. 135	**A CENTRATURA REGOLABILE** *ADJUSTABLE RUNOUT*
WE C Pag. 136	**CON CANALI DI LUBRIFICAZIONE** *WITH COOLANT CHANNELS*
WHN Pag. 137	**WHISTLE NOTCH - GRANI INCLINATI A 2°** (DIN 1835-2 Form E) *WHISTLE NOTCH - 2° INCLINED SCREWS* (DIN 1835-2 Form E)

BT | WE | **DIN 1835-2 Form B**

MANDRINI PORTAFRESA WELDON - EXTRACORTI

END MILL HOLDERS WELDON - STUB LENGTH





ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

Per utensili con gambo secondo normativa DIN1835-1 Form B.
For tools with shank according to norm DIN1835-1 Form B

AD

Articolo	H	A	Grano 1 Screw 1	Grano 2 Screw 2	Fig
BT30.H32.WE6	32	25	GR.WE6	/	1
BT30.H32.WE8	32	28	GR.WE8	/	1
BT30.H32.WE10	32	35	GR.WE10	/	1
BT30.H32.WE12	32	42	GR.WEC12-14	/	1
BT30.H32.WE14	32	44	GR.WEC12-14	/	1
BT30.H35.WE16	35	40	GR.WEC16	/	1
BT30.H35.WE20	35	43	GR.WEC20	/	1

AD + B

Articolo	H	A	Grano 1 Screw 1	Grano 2 Screw 2	Fig
BTB40.H35.WE16	35	43,5	GR.WEC16	/	1
BTB40.H35.WE20	35	43,5	GR.WEC20	/	1
BTB40.H35.WE25	35	43,5	GR.WEC20	/	1
BTB40.H60.WE25	60	50	GR.WEC25-32	GR.WEC25	2
BTB40.H40.WE32	40	60	GR.WEC25-32	/	1
BTB40.H70.WE32	70	72	GR.WEC25-32	GR.WE32-40	2

AD + B

Articolo	H	A	Grano 1 Screw 1	Grano 2 Screw 2	Fig
BTB50.H44.WE16	44	48	GR.WE16-18	/	1
BTB50.H44.WE20	44	60	GR.WE20	/	1
BTB50.H44.WE25	44	70	GR.WE25	/	1
BTB50.H44.WE32	44	70	GR.WE32-40	/	1
BTB50.H44.WE40	44	70	GR.WEC32-40	/	1

	D	L1
...WE6	6	37
...WE8	8	37
...WE10	10	41
...WE12	12	46
...WE14	14	46
...WE16	16	49
...WE20	20	51
...WE25	25	59
...WE32	32	63
...WE40	40	73

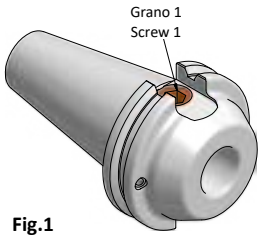


Fig.1

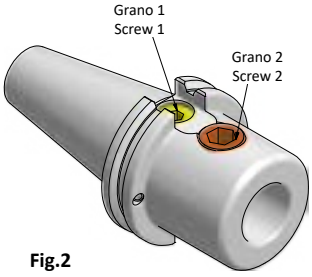


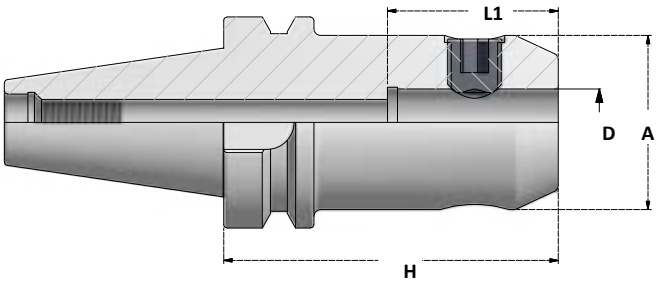
Fig.2

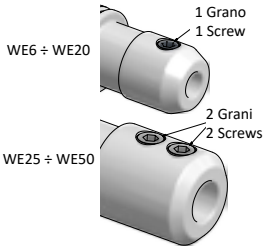
ACCESSORI - *ACCESSORIES*

P. 303 GRANI *SCREWS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI A DOPPIO CONTATTO PORTAFRESE WELDON
DOUBLE CONTACT END MILL HOLDERS WELDON

G2,5
25000r.p.m.





ATTACCO *SHANK* BT P. 112

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DBT30.H60.WE6	60
DBT30.H60.WE8	60
DBT30.H60.WE10	60
DBT30.H60.WE12	60
DBT30.H75.WE16	75
DBT30.H75.WE20	75
DBT30.H90.WE25	90

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DBT40.H50.WE6	50
DBT40.H100.WE6	100
DBT40.H50.WE8	50
DBT40.H100.WE8	100
DBT40.H63.WE10	63
DBT40.H100.WE10	100
DBT40.H63.WE12	63
DBT40.H100.WE12	100
DBT40.H63.WE16	63
DBT40.H100.WE16	100
DBT40.H63.WE20	63
DBT40.H100.WE20	100
DBT40.H100.WE25	100
DBT40.H100.WE32	100

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

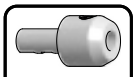
AD

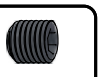
Articolo	H
DBT50.H63.WE6	63
DBT50.H63.WE8	63
DBT50.H63.WE10	63
DBT50.H80.WE12	80
DBT50.H80.WE16	80
DBT50.H80.WE20	80
DBT50.H100.WE25	100
DBT50.H105.WE32	105
DBT50.H120.WE40	120
DBT50.H125.WE50	125

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE20	20	51	52	GR.WE20

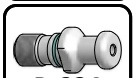
	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40
..WE50	50	83	100	2x	GR.WE50

ACCESSORI - *ACCESSORIES*


P. 225 RIDUZIONI *ADAPTERS*

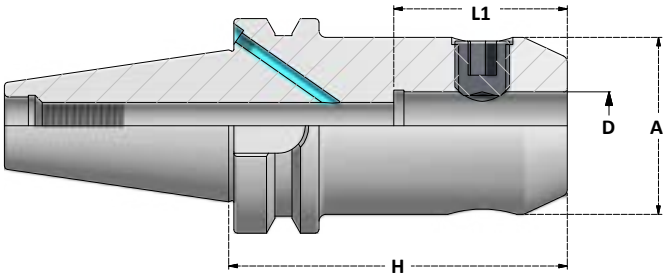

P. 303 GRANI *SCREWS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3 15000r.p.m.



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

AD

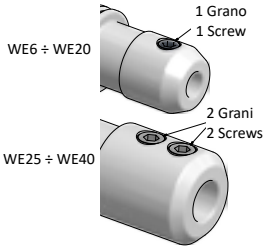
Articolo	H
BT30.H50.WE6	50
BT30.H100.WE6	100
BT30.H50.WE8	50
BT30.H100.WE8	100
BT30.H50.WE10	50
BT30.H100.WE10	100
BT30.H60.WE12	60
BT30.H100.WE12	100

AD

Articolo	H
BT30.H60.WE14	60
BT30.H100.WE14	100
BT30.H63.WE16	63
BT30.H100.WE16	100
BT30.H63.WE18	63
BT30.H100.WE18	100
BT30.H63.WE20	63
BT30.H100.WE20	100

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40
..WE50	50	83	100	2x	GR.WE50



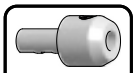
AD + B

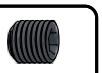
Articolo	H
BTB40.H50.WE6	50
BTB40.H100.WE6	100
BTB40.H130.WE6	130
BTB40.H160.WE6	160
BTB40.H50.WE8	50
BTB40.H100.WE8	100
BTB40.H130.WE8	130
BTB40.H160.WE8	160
BTB40.H63.WE10	63
BTB40.H100.WE10	100
BTB40.H130.WE10	130
BTB40.H160.WE10	160
BTB40.H63.WE12	63
BTB40.H100.WE12	100
BTB40.H130.WE12	130
BTB40.H160.WE12	160
BTB40.H63.WE14	63
BTB40.H100.WE14	100
BTB40.H130.WE14	130
BTB40.H160.WE14	160

AD + B

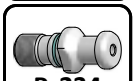
Articolo	H
BTB40.H63.WE16	63
BTB40.H100.WE16	100
BTB40.H130.WE16	130
BTB40.H160.WE16	160
BTB40.H200.WE16	200
BTB40.H63.WE18	63
BTB40.H100.WE18	100
BTB40.H130.WE18	130
BTB40.H160.WE18	160
BTB40.H63.WE20	63
BTB40.H100.WE20	100
BTB40.H130.WE20	130
BTB40.H160.WE20	160
BTB40.H200.WE20	200
BTB40.H90.WE25	90
BTB40.H130.WE25	130
BTB40.H160.WE25	160
BTB40.H200.WE25	200
BTB40.H100.WE32	100
BTB40.H130.WE32	130
BTB40.H160.WE32	160
BTB40.H200.WE32	200
BTB40.H120.WE40	120

ACCESSORI - *ACCESSORIES*


P. 225 RIDUZIONI *ADAPTERS*

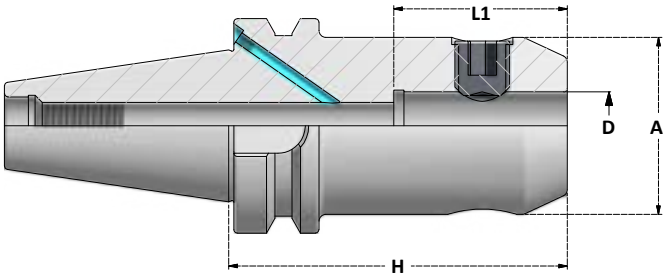

P. 303 GRANI *SCREWS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3
15000r.p.m.



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

AD + B

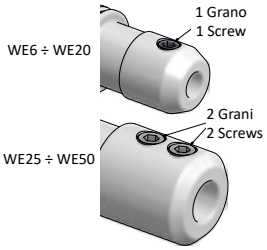
Articolo	H
BTB50.H63.WE6	63
BTB50.H100.WE6	100
BTB50.H130.WE6	130
BTB50.H160.WE6	160
BTB50.H200.WE6	200
BTB50.H63.WE8	63
BTB50.H100.WE8	100
BTB50.H130.WE8	130
BTB50.H160.WE8	160
BTB50.H200.WE8	200
BTB50.H80.WE10	80
BTB50.H100.WE10	100
BTB50.H130.WE10	130
BTB50.H160.WE10	160
BTB50.H200.WE10	200
BTB50.H80.WE12	80
BTB50.H100.WE12	100
BTB50.H130.WE12	130
BTB50.H160.WE12	160
BTB50.H200.WE12	200
BTB50.H80.WE14	80
BTB50.H100.WE14	100
BTB50.H130.WE14	130
BTB50.H160.WE14	160
BTB50.H200.WE14	200

AD + B

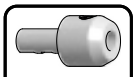
Articolo	H
BTB50.H80.WE16	80
BTB50.H100.WE16	100
BTB50.H130.WE16	130
BTB50.H160.WE16	160
BTB50.H200.WE16	200
BTB50.H80.WE18	80
BTB50.H100.WE18	100
BTB50.H130.WE18	130
BTB50.H160.WE18	160
BTB50.H200.WE18	200
BTB50.H80.WE20	80
BTB50.H100.WE20	100
BTB50.H130.WE20	130
BTB50.H160.WE20	160
BTB50.H200.WE20	200
BTB50.H250.WE20	250
BTB50.H100.WE25	100
BTB50.H130.WE25	130
BTB50.H160.WE25	160
BTB50.H200.WE25	200
BTB50.H250.WE25	250
BTB50.H105.WE32	105
BTB50.H130.WE32	130
BTB50.H160.WE32	160
BTB50.H200.WE32	200
BTB50.H250.WE32	250
BTB50.H120.WE40	120
BTB50.H160.WE40	160
BTB50.H200.WE40	200
BTB50.H125.WE50	125

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40
..WE50	50	83	100	2x	GR.WE50

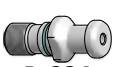


ACCESSORI - *ACCESSORIES*

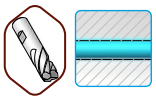

P. 225 RIDUZIONI *ADAPTERS*

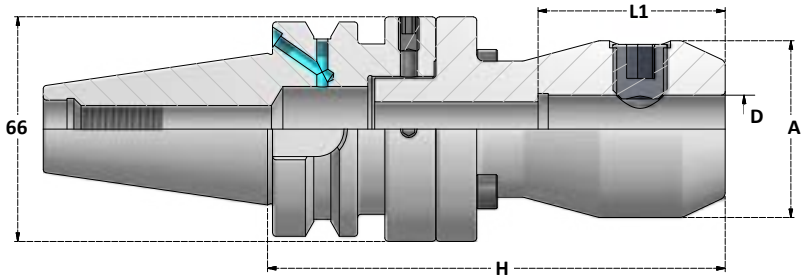

P. 303 GRANI *SCREWS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON A CENTRATURA REGOLABILE
RUNOUT ADJUSTABLE END MILL HOLDERS WELDON





±0,1mm Centratura regolabile *Adjustable runout*

ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

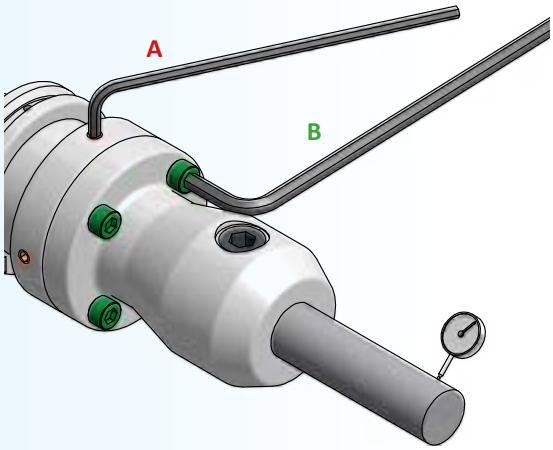
AD + B

Articolo	H
BTB40.H100.WE6RG	100
BTB40.H100.WE8RG	100
BTB40.H100.WE10RG	100
BTB40.H110.WE12RG	110
BTB40.H110.WE14RG	110
BTB40.H130.WE16RG	130
BTB40.H130.WE18RG	130
BTB40.H135.WE20RG	135

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

AD + B

Articolo	H
BTB50.H110.WE6RG	110
BTB50.H110.WE8RG	110
BTB50.H110.WE10RG	110
BTB50.H120.WE12RG	120
BTB50.H120.WE14RG	120
BTB50.H140.WE16RG	140
BTB50.H140.WE18RG	140
BTB50.H145.WE20RG	145



Allentare le viti **B** e regolare la centratura tramite le viti **A**.
Loosen screws **B** and use screws **A** for radial adjustment.

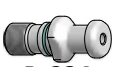
ACCESSORI - *ACCESSORIES*



P. 303 GRANI *SCREWS*



P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

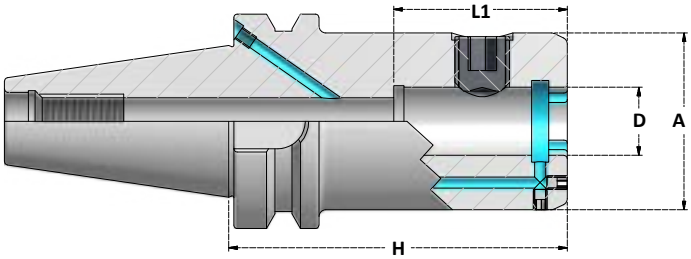


P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WELDON CON CANALI DI LUBRIFICAZIONE
END MILL HOLDERS WELDON WITH COOLANT CHANNELS

G6,3
15000r.p.m.







ATTACCO *SHANK* **BT** P. 112

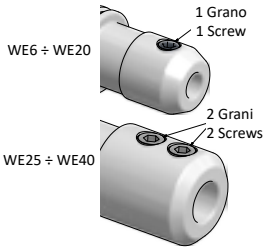
SCHEDA TECNICA *TECHNICAL DATA* WE | P. 347

AD + B

Articolo	H
BTB40.H65.WE6C	65
BTB40.H65.WE8C	65
BTB40.H65.WE10C	65
BTB40.H65.WE12C	65
BTB40.H65.WE14C	65
BTB40.H65.WE16C	65
BTB40.H65.WE18C	65
BTB40.H65.WE20C	65
BTB40.H100.WE25C	100
BTB40.H100.WE32C	100
BTB40.H120.WE40C	120

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40

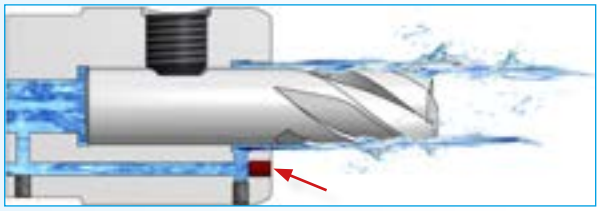


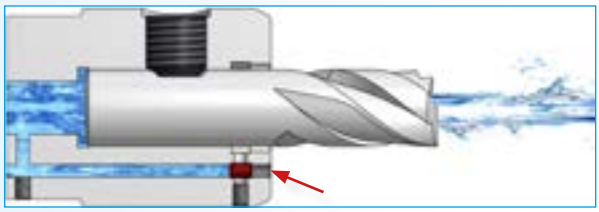
AD + B

Articolo	H
BTB50.H80.WE6C	80
BTB50.H80.WE8C	80
BTB50.H80.WE10C	80
BTB50.H80.WE12C	80
BTB50.H80.WE14C	80
BTB50.H80.WE16C	80
BTB50.H80.WE18C	80
BTB50.H80.WE20C	80
BTB50.H100.WE25C	100
BTB50.H105.WE32C	105
BTB50.H110.WE40C	110

Regolando il grano si può scegliere se indirizzare il liquido refrigerante ai fori del mandrino o attraverso l'utensile.

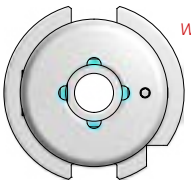
Lock screw for coolant through tool.
Unlock screw for coolant through toolholder.







WE6C ÷ WE14C



WE16C ÷ WE40C

ACCESSORI - *ACCESSORIES*

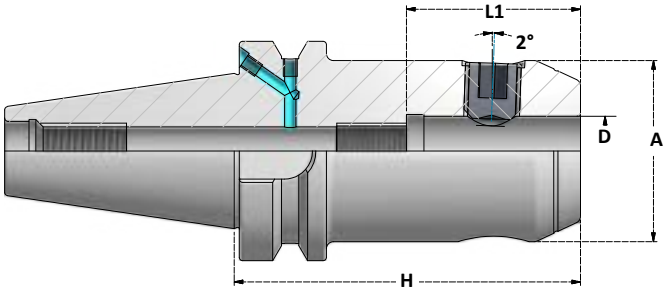
P. 303 GRANI *SCREWS*

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAFRESA WHISTLE NOTCH
END MILL HOLDERS WHISTLE NOTCH

G6,3 15000r.p.m.



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

AD + B

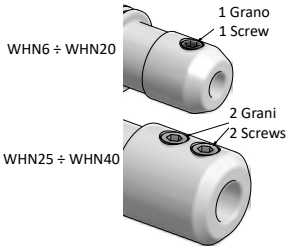
Articolo	H
BTB40.H50.WHN6	50
BTB40.H50.WHN8	50
BTB40.H63.WHN10	63
BTB40.H63.WHN12	63
BTB40.H63.WHN14	63
BTB40.H63.WHN16	63
BTB40.H63.WHN18	63
BTB40.H63.WHN20	63
BTB40.H90.WHN25	90
BTB40.H100.WHN32	100

AD + B

Articolo	H
BTB50.H63.WHN6	63
BTB50.H63.WHN8	63
BTB50.H63.WHN10	63
BTB50.H80.WHN12	80
BTB50.H80.WHN14	80
BTB50.H80.WHN16	80
BTB50.H80.WHN18	80
BTB50.H80.WHN20	80
BTB50.H100.WHN25	100
BTB50.H105.WHN32	105
BTB50.H120.WHN40	120

	D	L1	A	Grano Screw
...WHN6	6	37	25	GR.WE6
...WHN8	8	37	28	GR.WE8
...WHN10	10	41	35	GR.WE10
...WHN12	12	46	42	GR.WE12-14
...WHN14	14	46	44	GR.WE12-14
...WHN16	16	49	48	GR.WE16-18
...WHN18	18	49	50	GR.WE16-18
...WHN20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WHN25	25	59	65	2x	GR.WE25
..WHN32	32	63	72	2x	GR.WE32-40
..WHN40	40	73	80	2x	GR.WE32-40

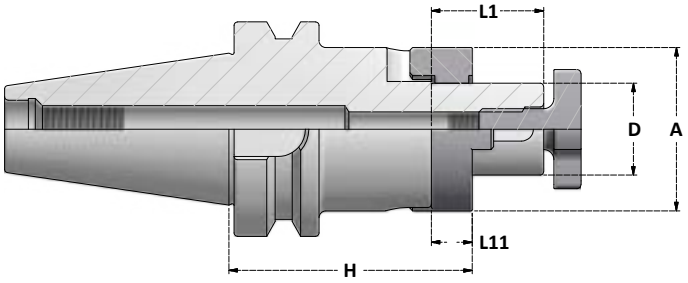


ACCESSORI - *ACCESSORIES*

P. 303 GRANI *SCREWS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

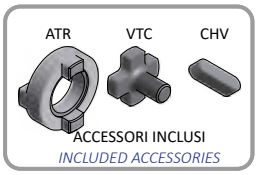
MANDRINI PORTAFRESA COMBINATI
COMBI SHELL MILL HOLDERS





ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* D C | P. 348



AD

Articolo	H
BT30.H43.D16C	43
BT30.H50.D22C	50
BT30.H50.D27C	50
BT30.H60.D32C	60

	D	A	L1	L11	ATR	VTC	CHV
D16C	16	32	27	10	ATR.D16	VTC.D16	CHV.D16
D22C	22	40	31	12	ATR.D22	VTC.D22	CHV.D22
D27C	27	48	33	12	ATR.D27	VTC.D27	CHV.D27
D32C	32	58	38	14	ATR.D32	VTC.D32	CHV.D32
D40C	40	70	41	14	ATR.D40	VTC.D40	CHV.D40

AD

Articolo	H
BT40.H55.D16C	55
BT40.H100.D16C	100
BT40.H130.D16C	130
BT40.H160.D16C	160
BT40.H200.D16C	200
BT40.H55.D22C	55
BT40.H100.D22C	100
BT40.H130.D22C	130
BT40.H160.D22C	160
BT40.H200.D22C	200
BT40.H55.D27C	55
BT40.H100.D27C	100
BT40.H130.D27C	130
BT40.H160.D27C	160
BT40.H200.D27C	200
BT40.H60.D32C	60
BT40.H100.D32C	100
BT40.H130.D32C	130
BT40.H160.D32C	160
BT40.H200.D32C	200
BT40.H60.D40C	60
BT40.H100.D40C	100
BT40.H130.D40C	130
BT40.H160.D40C	160
BT40.H200.D40C	200

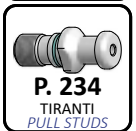
AD

Articolo	H
BT50.H70.D16C	70
BT50.H100.D16C	100
BT50.H130.D16C	130
BT50.H160.D16C	160
BT50.H70.D22C	70
BT50.H100.D22C	100
BT50.H130.D22C	130
BT50.H160.D22C	160
BT50.H70.D27C	70
BT50.H100.D27C	100
BT50.H130.D27C	130
BT50.H160.D27C	160
BT50.H70.D32C	70
BT50.H100.D32C	100
BT50.H130.D32C	130
BT50.H160.D32C	160
BT50.H70.D40C	70
BT50.H100.D40C	100
BT50.H130.D40C	130
BT50.H160.D40C	160

ACCESSORI - *ACCESSORIES*





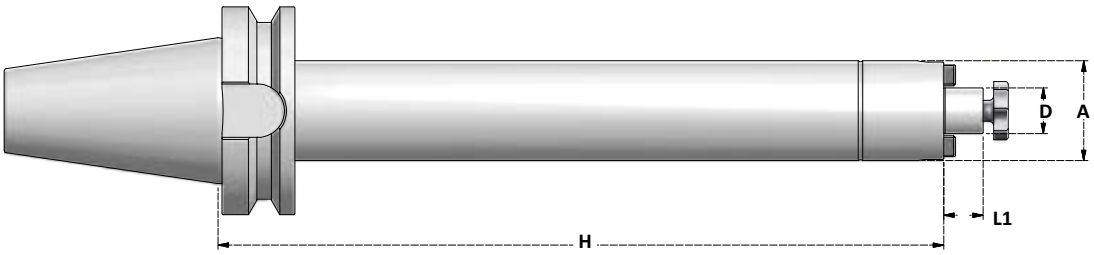


MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS

D SAV	**ANTIVIBRANTI**
Pag. 139	*DAMPING VIBRATIONS*
D S	**ATTACCO DOPPIO CONTATTO**
Pag. 140	*DOUBLE CONTACT SHANK*
D S	**STANDARD**
Pag. 141	*STANDARD*

MANDRINI PORTAFRESA FISSI ANTIVIBRANTI
DAMPING VIBRATIONS SHELL MILL HOLDERS





ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* D S P. 349

AD + B

Articolo	H
BTB50.H350.D22SAV	350
BTB50.H400.D22SAV	400
BTB50.H500.D22SAV	500
BTB50.H350.D27SAV	350
BTB50.H400.D27SAV	400
BTB50.H500.D27SAV	500

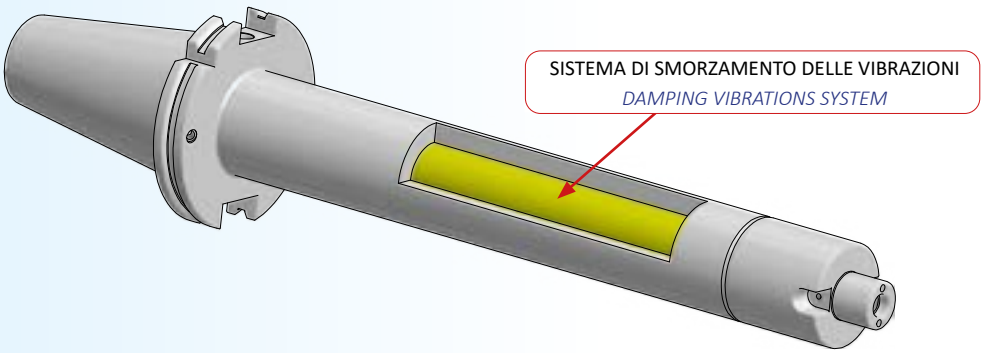
	D	A	L1	TTR	VTC
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27

I mandrini portafresa antivibranti sono dotati di un sistema interno che smorza le vibrazioni trasmesse dalla fresa all'attacco.
In questo modo viene prolungata la durata dell'utensile e del mandrino macchina.

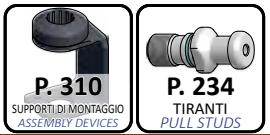
Il sistema antivibrante consente di lavorare con sporgenze molto lunghe mantenendo parametri di taglio elevati.
Le lavorazioni sono più silenziose e stabili, e permettono di ottenere una migliore finitura superficiale.

Damping vibrations shell mill holders have an internal system that dampens the vibrations transmitted from the mill to the shank.
In this way, the life of the tool and the machine spindle is extended.

Damping vibrations system allows to work with very long overhangs while maintaining high cutting parameters.
The processes are quieter and more stable, and allow to obtain a better surface finish.

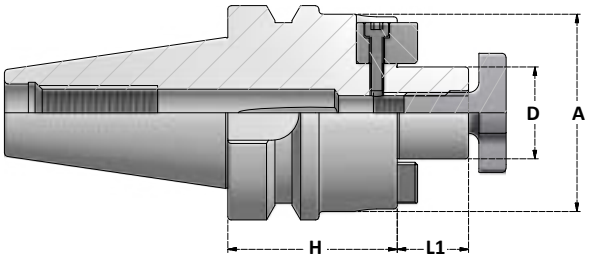


ACCESSORI - *ACCESSORIES*

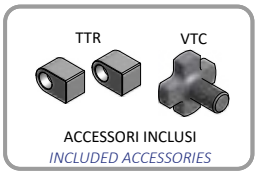


MANDRINI A DOPPIO CONTATTO PORTAFRESA FISSI
DOUBLE CONTACT SHELL MILL HOLDERS






CANALI PER REFRIGERANTE
COOLANT CHANNELS



ACCESSORI INCLUSI
INCLUDED ACCESSORIES

ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* D S | P. 349

	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

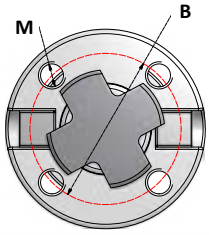
Articolo		H
DBT30.H45.D16S	*	45
DBT30.H45.D22S	*	45
DBT30.H45.D27S	*	45
DBT30.H45.D32S	*	45

* Senza canali per il refrigerante
Without coolant channels

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

AD

Articolo	H
DBT40.H45.D16S	45
DBT40.H100.D16S	100
DBT40.H160.D16S	160
DBT40.H45.D22S	45
DBT40.H100.D22S	100
DBT40.H160.D22S	160
DBT40.H45.D27S	45
DBT40.H100.D27S	100
DBT40.H160.D27S	160
DBT40.H50.D32S	50
DBT40.H60.D40S	60



	B	M
...D40S	66,7	M12

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

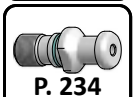
AD

Articolo	H
DBT50.H50.D16S	50
DBT50.H100.D16S	100
DBT50.H160.D16S	160
DBT50.H200.D16S	200
DBT50.H55.D22S	55
DBT50.H100.D22S	100
DBT50.H160.D22S	160
DBT50.H200.D22S	200
DBT50.H250.D22S	250
DBT50.H55.D27S	55
DBT50.H100.D27S	100
DBT50.H160.D27S	160
DBT50.H200.D27S	200
DBT50.H250.D27S	250
DBT50.H55.D32S	55
DBT50.H100.D32S	100
DBT50.H160.D32S	160
DBT50.H55.D40S	55

ACCESSORI - *ACCESSORIES*


P. 304
ACCESSORI
ACCESSORIES

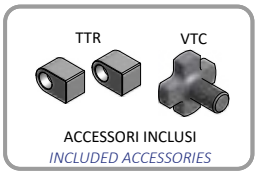

P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

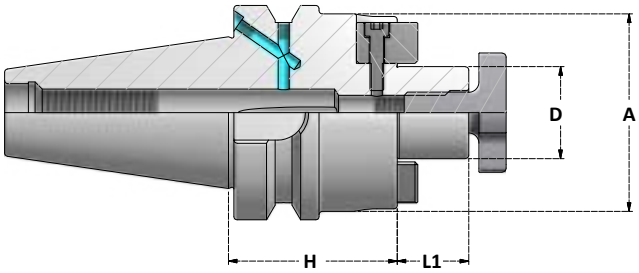
MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS




CANALI PER REFRIGERANTE
COOLANT CHANNELS



ACCESSORI INCLUSI
INCLUDED ACCESSORIES



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* D S P. 349

AD

Articolo		H
BT30.H43.D16S	*	43
BT30.H43.D22S	*	43
BT30.H50.D27S	*	50
BT30.H50.D32S	*	50

* Senza canali per il refrigerante
Without coolant channels

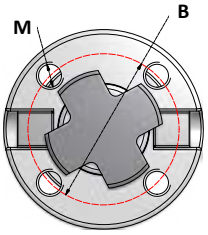
AD + B

Articolo	H
BTB40.H45.D16S	45
BTB40.H100.D16S	100
BTB40.H130.D16S	130
BTB40.H160.D16S	160
BTB40.H200.D16S	200
BTB40.H45.D22S	45
BTB40.H100.D22S	100
BTB40.H130.D22S	130
BTB40.H160.D22S	160
BTB40.H200.D22S	200
BTB40.H45.D27S	45
BTB40.H100.D27S	100
BTB40.H130.D27S	130
BTB40.H160.D27S	160
BTB40.H200.D27S	200
BTB40.H56.D32S	56
BTB40.H100.D32S	100
BTB40.H130.D32S	130
BTB40.H160.D32S	160
BTB40.H200.D32S	200
BTB40.H60.D40S	60
BTB40.H100.D40S	100
BTB40.H130.D40S	130
BTB40.H160.D40S	160
BTB40.H200.D40S	200

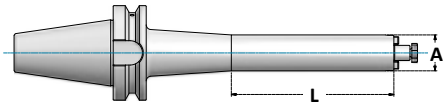
AD + B

Articolo	H	L
BTB50.H50.D16S	50	-
BTB50.H75.D16S	75	-
BTB50.H100.D16S	100	-
BTB50.H130.D16S	130	-
BTB50.H160.D16S	160	-
BTB50.H200.D16S	200	-
BTB50.H250.D16S	250	-
BTB50.H300.D16S	300	200
BTB50.H350.D16S	350	230
BTB50.H55.D22S	55	-
BTB50.H75.D22S	75	-
BTB50.H100.D22S	100	-
BTB50.H130.D22S	130	-
BTB50.H160.D22S	160	-
BTB50.H200.D22S	200	-
BTB50.H250.D22S	250	-
BTB50.H300.D22S	300	-
BTB50.H350.D22S	350	300
BTB50.H55.D27S	55	-
BTB50.H75.D27S	75	-
BTB50.H100.D27S	100	-
BTB50.H130.D27S	130	-
BTB50.H160.D27S	160	-
BTB50.H200.D27S	200	-
BTB50.H250.D27S	250	-
BTB50.H300.D27S	300	-
BTB50.H350.D27S	350	-
BTB50.H55.D32S	55	-
BTB50.H75.D32S	75	-
BTB50.H100.D32S	100	-
BTB50.H130.D32S	130	-
BTB50.H160.D32S	160	-
BTB50.H200.D32S	200	-
BTB50.H250.D32S	250	-
BTB50.H300.D32S	300	-
BTB50.H350.D32S	350	-
BTB50.H55.D40S	55	-
BTB50.H75.D40S	75	-
BTB50.H100.D40S	100	-
BTB50.H130.D40S	130	-
BTB50.H160.D40S	160	-
BTB50.H200.D40S	200	-
BTB50.H80.D60S	80	-

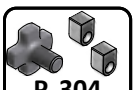
	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40
...D60S	60	29	40	TTR.D60	VTC.D60



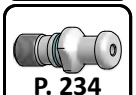
	B	M
...D40S	66,7	M12
...D60S	101,6	M16



ACCESSORI - *ACCESSORIES*


P. 304
ACCESSORI
ACCESSORIES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

MANDRINI DI RIDUZIONE CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS

G6,3
15000r.p.m.

Fig.1

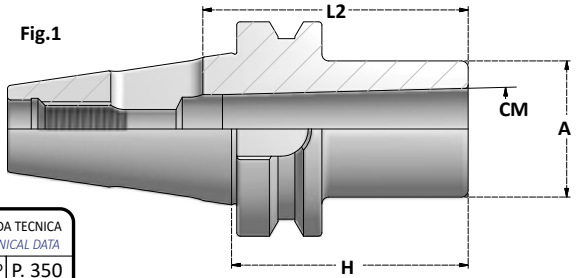
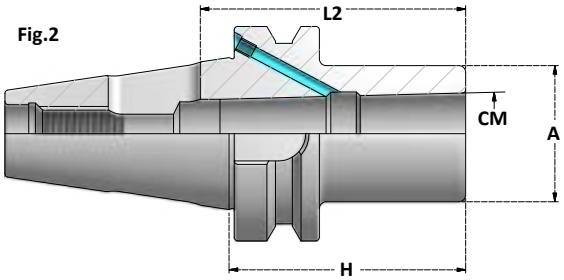


Fig.2



ATTACCO *SHANK* BT P. 112

SCHEDA TECNICA *TECHNICAL DATA* CM P | P. 350

AD

Articolo	H	Fig
BT30.H50.CM1P	50	1
BT30.H60.CM2P	60	1
BT30.H79.CM3P	79	1

AD

Articolo	H	Fig
BT40.H50.CM1P	50	1
BT40.H120.CM1P	120	3
BT40.H50.CM2P	50	1
BT40.H120.CM2P	120	3
BT40.H70.CM3P	70	1
BT40.H135.CM3P	135	3
BT40.H95.CM4P	95	1

AD

Articolo	H	Fig
BT50.H45.CM1P	45	1
BT50.H120.CM1P	120	3
BT50.H60.CM2P	60	1
BT50.H135.CM2P	135	3
BT50.H65.CM3P	65	1
BT50.H155.CM3P	155	3
BT50.H95.CM4P	95	1
BT50.H180.CM4P	180	3
BT50.H105.CM5P	105	1
BT50.H215.CM5P	215	3

AD + B

Articolo	H	Fig
BTB40.H50.CM2P	50	2
BTB40.H70.CM3P	70	2
BTB40.H95.CM4P	95	2

AD + B

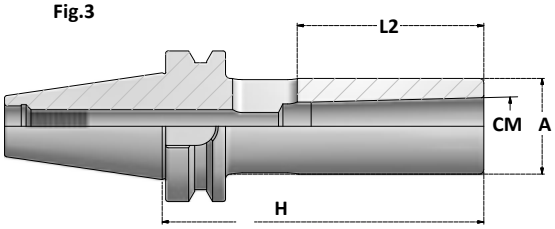
Articolo	H	Fig
BTB50.H60.CM2P	60	2
BTB50.H65.CM3P	65	2
BTB50.H95.CM4P	95	2
BTB50.H105.CM5P	105	2

	CM	A	L2
...CM1P	1	25	56
...CM2P	2	32	67
...CM3P	3	40	84
...CM4P	4	48	107
...CM5P	5	63	135

PER UTENSILI DIN228B CON TENONE

FOR TOOLS DIN228B WITH TANG

Fig.3



ACCESSORI - *ACCESSORIES*



P. 308 ESTRATTORI *PULLERS*



P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*



P. 234 TIRANTI *PULL STUDS*

MANDRINI DI RIDUZIONE CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS

G6,3
15000r.p.m.

Fig. 1

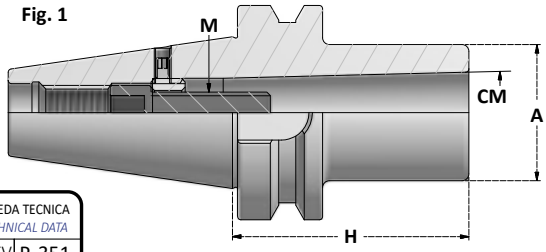
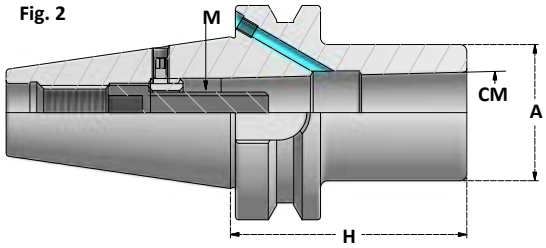


Fig. 2



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* CMFV P. 351

AD

Articolo	H	Fig
BT30.H50.CM1FV	50	1
BT30.H60.CM2FV *	60	1
BT30.H80.CM3FV *	80	1

AD

Articolo	H	Fig
BT40.H50.CM1FV	50	1
BT40.H50.CM2FV	50	1
BT40.H70.CM3FV	70	1
BT40.H95.CM4FV	95	1

AD

Articolo	H	Fig
BT50.H45.CM1FV	45	1
BT50.H60.CM2FV	60	1
BT50.H65.CM3FV	65	1
BT50.H120.CM3FV	120	1
BT50.H90.CM4FV	90	1
BT50.H120.CM5FV	120	1

AD + B

Articolo	H	Fig
BTB40.H50.CM2FV	50	2
BTB40.H70.CM3FV	70	2
BTB40.H95.CM4FV	95	2

AD + B

Articolo	H	Fig
BTB50.H60.CM2FV	60	2
BTB50.H65.CM3FV	65	2
BTB50.H95.CM4FV	95	2
BTB50.H120.CM5FV	120	2

	CM	A	M
...CM1FV	1	25	M6
...CM2FV	2	32	M10
...CM3FV	3	40	M12
...CM4FV	4	48	M16
...CM5FV	5	63	M20

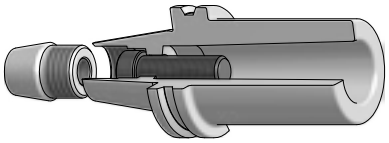
PER UTENSILI DIN228A CON FILETTO

FOR TOOLS DIN228A WITH THREAD

FORNITI CON VITE SENZA FORO PER IL PASSAGGIO DEL REFRIGERANTE

SUPPLIED WITH SCREW WITHOUT COOLANT THROUGH

* **CONO RIDOTTO**
REDUCED TAPER

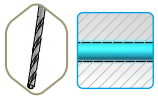


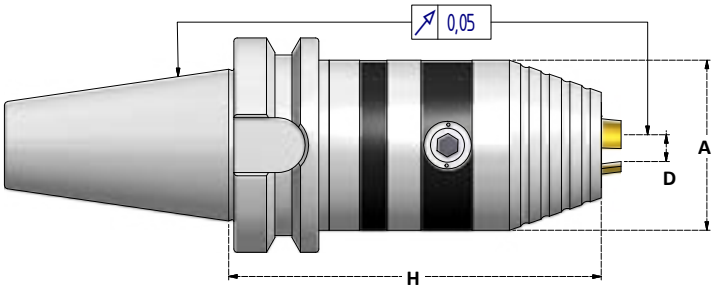
ACCESSORI - *ACCESSORIES*

P. 275 PINZE *COLLETS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI PORTAPUNTA CON PASSAGGIO DEL REFRIGERANTE ROTAZIONE DESTRA E SINISTRA

*DRILL CHUCKS **WITH COOLANT THROUGH** - RIGHT AND LEFT ROTATION*







ATTACCO
SHANK
BT
P. 112



Articolo	H
BT40.H89.CP8S	89
BT40.H115.CP13S	115
BT40.H120.CP16S	120

	D	A	Chiave Wrench
...CP8	0,5 - 8	37,5	CH.EX4
...CP13	1- 13	50,5	CH.EX6
...CP16	2,5- 16	57	CH.EX6



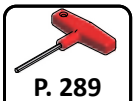
Articolo	H
BT50.H120.CP13S	120
BT50.H125.CP16S	125

GRIFFE RIVESTITE IN TITANIO

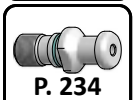
TITANIUM COATED JAWS

ACCESSORI - *ACCESSORIES*

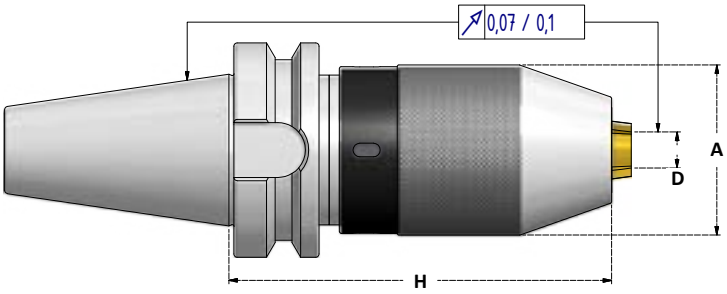

P. 205
AUTOSERRANTI
DRILL CHUCKS


P. 289
CHIAVI
WRENCHES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

MANDRINI PORTAPUNTA AUTOSERRANTI - ROTAZIONE DESTRA
DRILL CHUCKS - RIGHT ROTATION




CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
BT
P. 112

Articolo	H
BT30.H75.DCK8S	75
BT30.H90.DCK13S	90

Articolo	H
BT40.H84.DCK8S	84
BT40.H98.DCK13S	98
BT40.H105.DCK16S	105

Articolo	H
BT50.H105.DCK13S	105
BT50.H110.DCK16S	110

GRIFFE RIVESTITE IN TITANIO

TITANIUM COATED JAWS

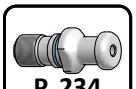
	D	A	Chiave Wrench
...DCK8	0,5 - 8	37,5	CH.DC8
...DCK13	1- 13	50,5	CH.DC13
...DCK16	2,5- 16	57	CH.DC16

ACCESSORI - *ACCESSORIES*


P. 204 AUTOSERRANTI *DRILL CHUCKS*

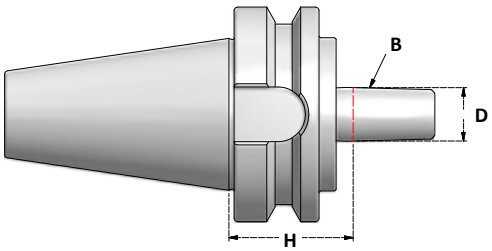

P. 289 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

BT | B | **DIN 238**

ATTACCHI PER MANDRINI AUTOSERRANTI
DRILL CHUCKS ARBORS



Articolo	H
BT30.H30.B12	30
BT30.H30.B16	30

Articolo	H
BT40.H42.B12	42
BT40.H42.B16	42
BT40.H42.B18	42

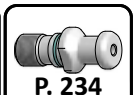
Articolo	H
BT50.H45.B16	45
BT50.H45.B18	45

B	D
...B12	12,065
...B16	15,733
...B18	17,78

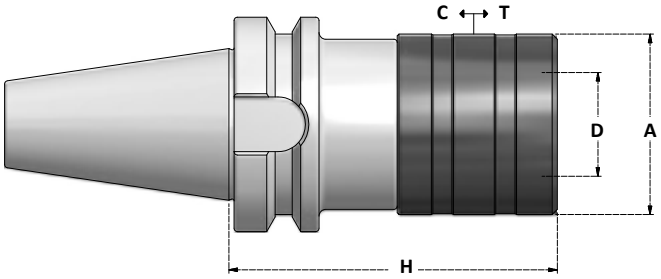
ACCESSORI - *ACCESSORIES*


P. 204 AUTOSERRANTI *DRILL CHUCKS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MASCHIATORI A CAMBIO RAPIDO CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* MCR P. 352

Corsa di compressione: *Compression stroke:* **C**

Corsa di trazione: *Extension stroke:* **T**

Articolo	H
BT40.MCR1TC	67,5
BT40.MCR2TC	94,5
BT40.MCR3TC	164,5

	Bussola Adapter	D	Tapping Range	A	T	C
MCR1TC	B1 / BF1	19	M2÷M14	36	7,5	7,5
MCR2TC	B2 / BF2	31	M6÷M27	53	12,5	12,5
MCR3TC	B3 / BF3	48	M14÷M45	78	20	20
MCR4TC	BF4	60	M22÷M45	96	22,5	22,5

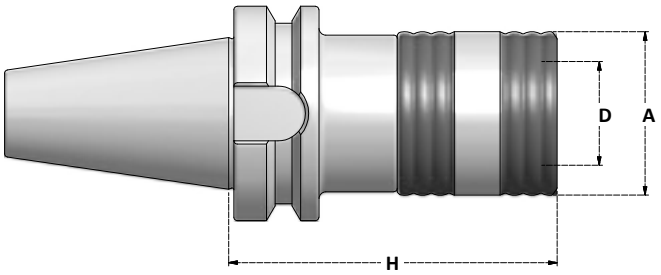
Articolo	H
BT50.MCR1TC	77
BT50.MCR2TC	102,5
BT50.MCR3TC	142,5
BT50.MCR4TC	164,5

ACCESSORI - *ACCESSORIES*

P. 336 MASCHI *TAPS*
P. 298 INSERZIONI *ADAPTERS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

BT MCR

MASCHIATORI A CAMBIO RAPIDO PER MASCHIATURA RIGIDA
QUICK CHANGE TAPPING CHUCKS FOR RIGID TAPPING



SCHEDA TECNICA *TECHNICAL DATA* MCR P. 352

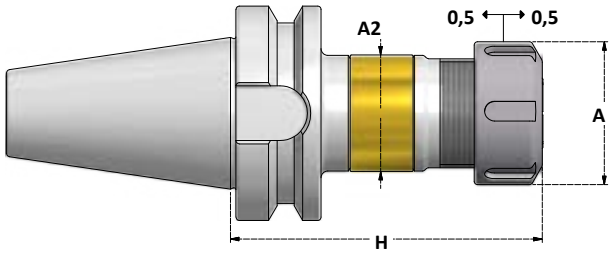
Articolo	A	H
BT40.MCR1R	32	65
BT40.MCR2R	54	93

	Bussola Adapter	D	Tapping Range
MCR1	B1 / BF1	19	M2÷M14
MCR2	B2 / BF2	31	M6÷M27

ACCESSORI - *ACCESSORIES*

P. 336 MASCHI *TAPS*
P. 298 INSERZIONI *ADAPTERS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING



ATTACCO *SHANK* **BT** P. 112

SCHEDA TECNICA *TECHNICAL DATA* SY P. 353

AD + B

Articolo	H
BTB40.ERC16MSY	79

AD + B

Articolo	H
BTB40.ERC16SY	79
BTB40.ERC25SY	89
BTB40.ERC32SY	110
BTB40.ERC40SY	115

	A	A2	Collets Range	Tapping Range	Ghiera Nut
...ERC16MSY	22	34	3,5 ÷ 10	M3 ÷ M12	G16M
...ERC16SY	32	34	3,5 ÷ 10	M3 ÷ M12	G16S
...ERC20SY	35	34	3,5 ÷ 12	M3 ÷ M16	G20S
...ERC25SY	42	45	3,5 ÷ 16	M3 ÷ M20	G25S
...ERC32SY	50	45	3,5 ÷ 20	M3 ÷ M27	G32S
...ERC40SY	63	62	6 ÷ 25	M5 ÷ M33	G40S

VANTAGGI RISPETTO AL SISTEMA CON BUSSOLE
ADVANTAGES COMPARED TO ADAPTERS SYSTEM

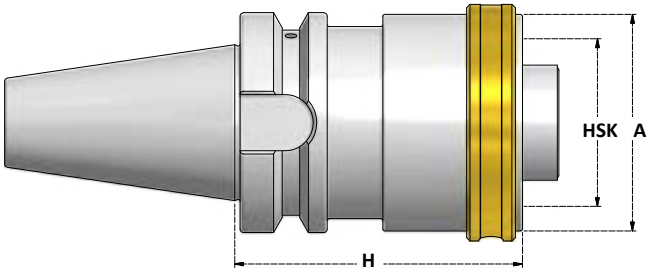
- **PASSAGGIO DEL REFRIGERANTE**
- **ADATTO PER MASCHIATURA AD ALTE VELOCITÀ**
- **SISTEMA PORTAPINZE ER**

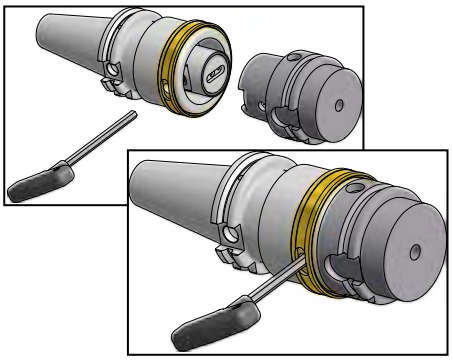
- *COOLANT THROUGH*
- *SUITABLE FOR HIGH SPEED TAPPING*
- *ER COLLET SYSTEM*

ACCESSORI - *ACCESSORIES*



ADATTATORI HSK FORMA A/C
ADAPTERS HSK FORM A/C





ATTACCO *SHANK* **BT** P. 112

AD + B

Articolo	H	A	HSK A/C
BTB40.H70.HSK50AC	70	55	50
BTB40.H75.HSK63AC	75	70	63

AD + B

Articolo	H	A	HSK A/C
BTB50.H65.HSK50AC	65	55	50
BTB50.H75.HSK63AC	75	70	63
BTB50.H100.HSK100AC	100	110	100

ACCESSORI - *ACCESSORI*

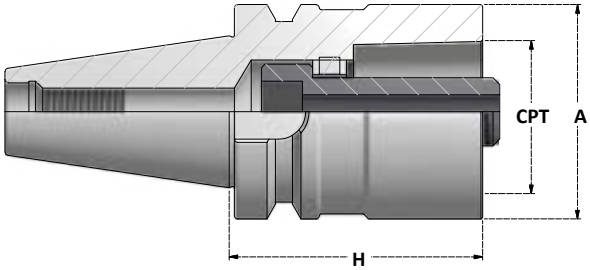

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

BT | CPT | **DIN ISO 26623-1**

NEW

ADATTATORI CPT
ADAPTERS CPT



AD + B

Articolo	H	A	CPT
BTB40.H30.CPT40	30	40	CPT40
BTB40.H50.CPT50	50	50	CPT50
BTB40.H75.CPT63	75	63	CPT63

AD + B

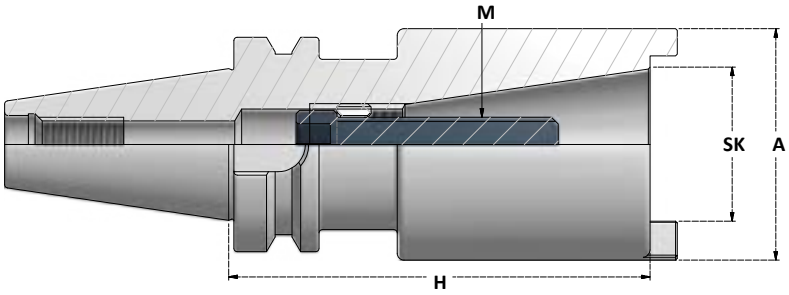
Articolo	H	A	CPT
BTB50.H40.CPT40	40	40	CPT40
BTB50.H40.CPT50	40	50	CPT50
BTB50.H50.CPT63	50	63	CPT63
BTB50.H70.CPT80	70	80	CPT80
BTB50.H140.CPT100	140	100	CPT100

ACCESSORI - *ACCESSORI*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

MANDRINI DI RIDUZIONE TC-BT-ISO
TC-BT-ISO REDUCTION SLEEVES



TC	DIN ISO 7388 (DIN69871)
BT	MAS 403 (JIS B 6339)
ISO	DIN 2080

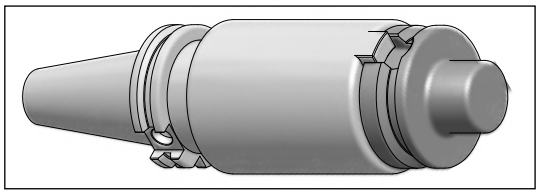
ATTACCO *SHANK* **BT** P. 112

Articolo	H	A	M	SK
BT40.H60.TB30	60	50	M12	TC30 / BT30
BT40.H95.TB40	95	70	M16	TC40 / BT40

Articolo	H	A	M	SK
BT40.H60.ISO30	60	50	M12	ISO30
BT40.H95.ISO40	95	70	M16	ISO40

Articolo	H	A	M	SK
BT50.H70.TB40	70	70	M16	TC40 /BT40
BT50.H130.TB50	130	90	M24	TC50 / BT50

Articolo	H	A	M	SK
BT50.H70.ISO40	70	70	M16	ISO40
BT50.H130.ISO50	130	90	M24	ISO50

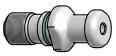


FORNITI CON VITE SENZA FORO PER IL PASSAGGIO DEL REFRIGERANTE

SUPPLIED WITH SCREW WITHOUT COOLANT THROUGH

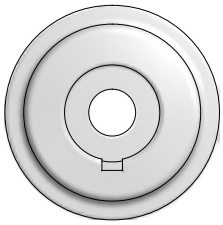
ACCESSORI - *ACCESSORIES*

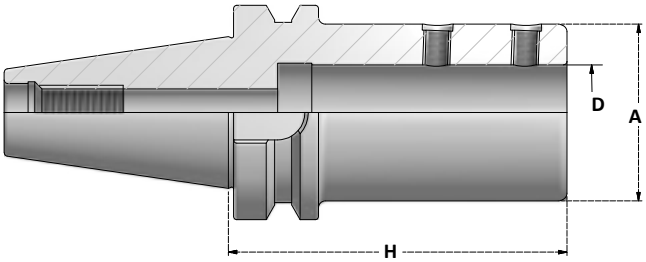

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 234 TIRANTI *PULL STUDS*

BT TR

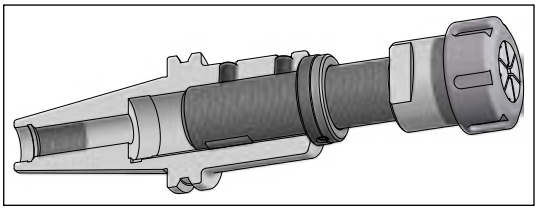
MANDRINI PORTA INSERZIONI REGISTRABILI DIN 6327
HOLDERS FOR ADJUSTABLE ADAPTERS DIN 6327



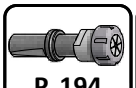


Articolo	D	H	A
BT40.H100.TR28	28	100	40
BT40.H115.TR36	36	115	50

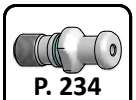
Articolo	D	H	A
BT50.H85.TR16	16	85	25
BT50.H85.TR20	20	85	32
BT50.H100.TR28	28	100	40
BT50.H100.TR36	36	100	50
BT50.H105.TR48	48	105	67



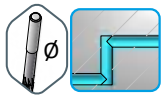
ACCESSORI - *ACCESSORIES*


P. 194 PORTAUTENSILI DIN6327 *DIN6327 TOOLHOLDERS*

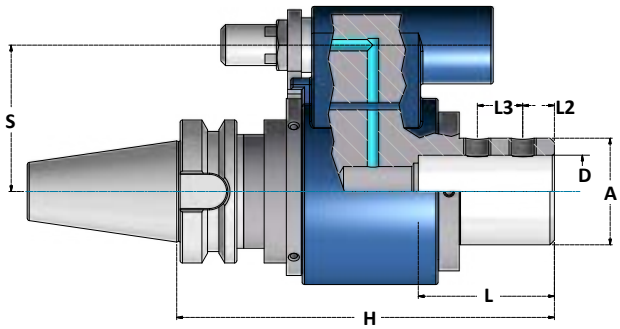

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

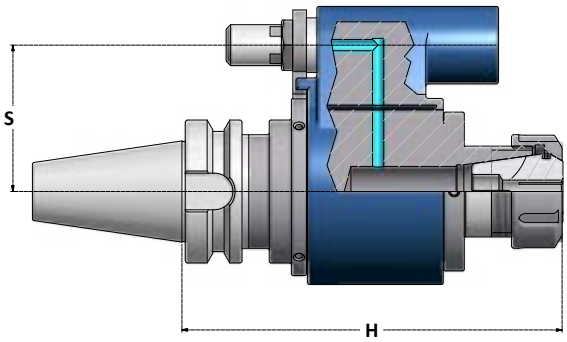

P. 234 TIRANTI *PULL STUDS*

DISTRIBUTORI ROTANTI DEL REFRIGERANTE
OIL HOLE HOLDERS



ATTACCO
SHANK
BT
P. 112





Pressione d'esercizio: MAX 7 bar
Numero di giri: MAX 3000 r.p.m.

Operating pressure: MAX 7 bar
Number of revolutions: MAX 3000 r.p.m.

Per preservare dall'usura precoce le speciali guarnizioni di tenuta, il liquido refrigerante deve essere filtrato con residuo max 5µm.

To preserve the special seals from premature wear, coolant must be filtered with a maximum residue of 5µm.

Per il collegamento necessita dello "stop block" acquistabile tra gli accessori.

For the connection it needs the "stop block" that can be purchased among the accessories.

DISTRIBUTORI ROTANTI DEL REFRIGERANTE PER ATTACCHI CILINDRICI
SIDE LOCK OIL HOLE HOLDERS

Articolo	D	H	A	L	S	L2	L3
BT40.D16DR	16	165	46,5	58	65	25	/
BT40.D20DR	20	165	46,5	60	65	25	/
BT40.D25DR	25	165	46,5	66	65	15	20
BT40.D32DR	32	165	47	70	65	15	20

Articolo	D	H	A	L	S	L2	L3
BT50.D32DR	32	165	56	70	80	15	20
BT50.D40DR	40	170	56	70	80	15	25

DISTRIBUTORI ROTANTI DEL REFRIGERANTE PORTAPINZA ER
ER OIL HOLE HOLDERS COLLET CHUCKS

Articolo	H	S
BT40.ERC16DR	160	65
BT40.ERC20DR	160	65
BT40.ERC25DR	160	65
BT40.ERC32DR	160	65

Articolo	H	S
BT50.ERC32DR	160	80
BT50.ERC40DR	160	80

	Collets Range	Ghiera Nut
...ERC16DR	1÷10	G16HTE
...ERC20DR	1÷14	G20HTE



	Collets Range	Ghiera Nut
...ERC25DR	1÷20	G25HT
...ERC32DR	2÷22	G32HT
...ERC40DR	3÷30	G40HT



La fornItura comprende un disco di tenuta RG.D10.
Supplied with RG.D10 sealing disc.

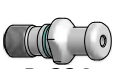
ACCESSORI - *ACCESSORIES*


P. 284
GHIERE A TENUTA
SEALED NUTS


P. 284
DISCHETTI **RG**
***RG** SEALED DISCS*

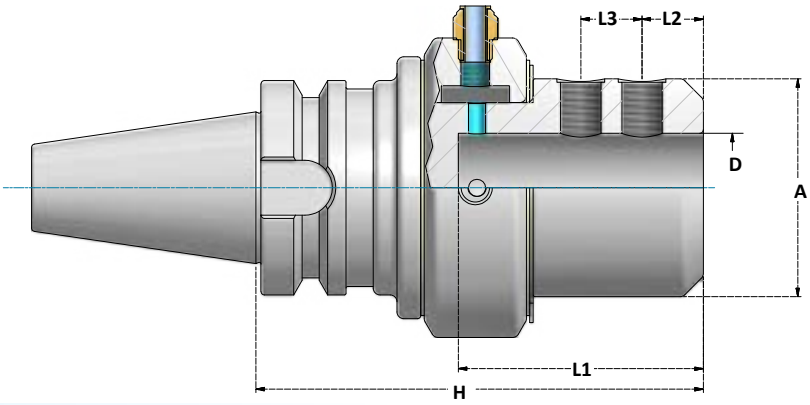

P. 306
BLOCCO D'ARRESTO
STOP BLOCK


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

DISTRIBUTORI ROTANTI DEL REFRIGERANTE A CAMBIO MANUALE PER ATTACCHI CILINDRICI

MANUAL SIDE LOCK OIL HOLE HOLDERS



ATTACCO *SHANK* **BT** P. 112

Articolo	D	H	A	L1	L2	L3	GRANI SCREWS
BT40.DRM32	32	125	64,5	72	20	20	M14

Articolo	D	H	A	L1	L2	L3	GRANI SCREWS
BT50.DRM40	40	145	64,5	82	20	25	M16

Pressione d'esercizio: MAX 20 bar
Numero di giri: MAX 1000 r.p.m.

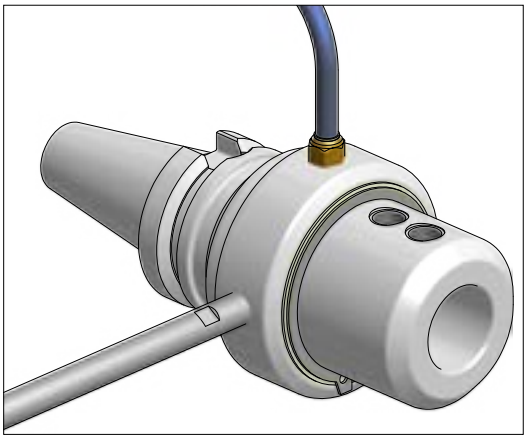
Per preservare dall'usura precoce le speciali guarnizioni di tenuta, il liquido refrigerante deve essere filtrato con residuo max 5µm.

Fornito con la barra filettata da agganciare ad un fermo nella macchina utensile.

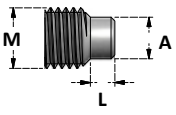
Operating pressure: MAX 20 bar
Number of revolutions: MAX 1000 r.p.m.

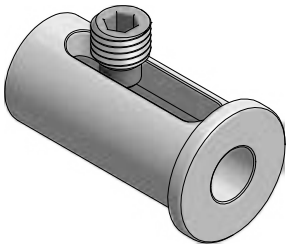
To preserve the special seals from premature wear, coolant must be filtered with a maximum residue of 5µm.

Supplied with the threaded rod to be hooked to a stop in the machine tool.









GRANI PER UTILIZZO BUSSOLE E2-1 CON ASOLA

SCREWS FOR USING E2-1 BUSHES WITH SLOT

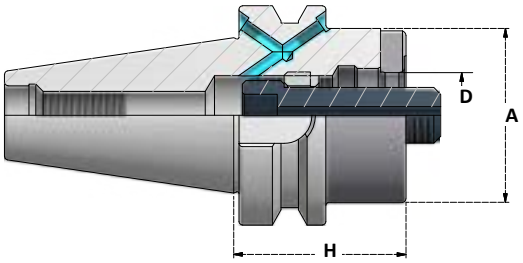
Articolo	M	A	L
GR.DRM32-25-20	M14x2	12	8

Articolo	M	A	L
GR.DRM40-32	M16x1,5	12	7

ACCESSORI - *ACCESSORIES*

P. 294 BUSSOLE *BUSHES*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 234 TIRANTI *PULL STUDS*

MANDRINI MODULARI TIPO VARILOCK
MODULAR TOOLHOLDERS VARILOCK TYPE



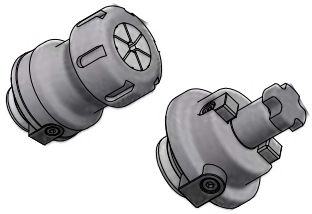
ATTACCO
SHANK
BT
P. 112

AD + B

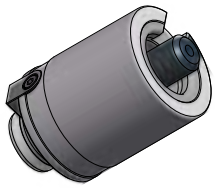
Articolo	A	H	D	Attacco
BTB40.H27.MD50	50	27	27,3 / 27	MD50
BTB40.H50.MD50	50	50	27,3 / 27	MD50
BTB40.H27.MD63	63	27	32,3 / 32	MD63
BTB40.H50.MD63	63	50	32,3 / 32	MD63

AD + B

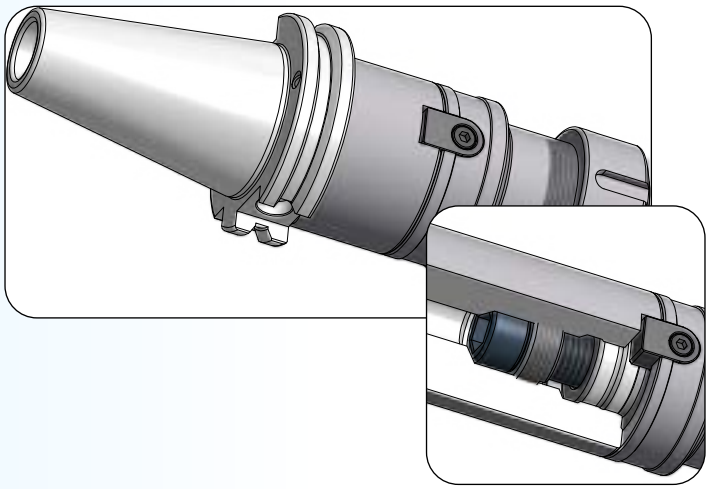
Articolo	A	H	D	Attacco
BTB50.H38.MD50	50	38	27,3 / 27	MD50
BTB50.H50.MD50	50	50	27,3 / 27	MD50
BTB50.H50.MD63	63	50	32,3 / 32	MD63
BTB50.H50.MD80	80	50	32,3 / 32	MD80



INSERZIONI PORTAUTENSILI
TOOLHOLDER ADAPTERS
PAG. 202



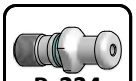
RIDUZIONI E PROLUNGHE
EXTENSIONS AND REDUCTIONS
PAG. 203



ACCESSORI - *ACCESSORIES*

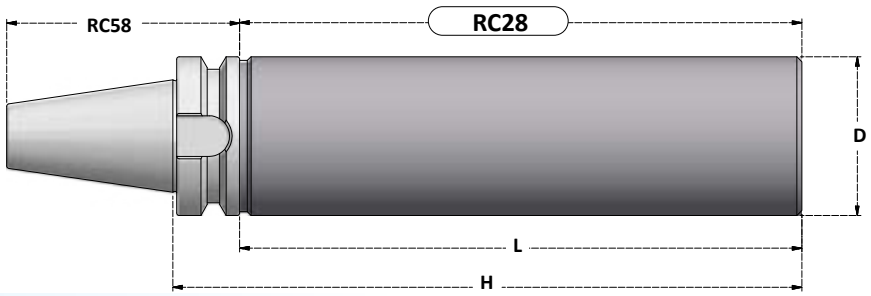


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES



P. 234
TIRANTI
PULL STUDS

MANDRINI CON STELO LAVORABILE
BLANK ARBORS



ATTACCO
SHANK
BT
P. 112

Articolo	D	H	L
BT40.H250.D40BL	40	250	223
BT40.H160.D63BL	63	160	133
BT40.H250.D63BL	63	250	223
BT40.H270.D80BL	80	270	243

Articolo	D	H	L
BT50.H330.D50BL	50	330	292
BT50.H330.D80BL	80	330	292
BT50.H315.D97BL	97	315	277



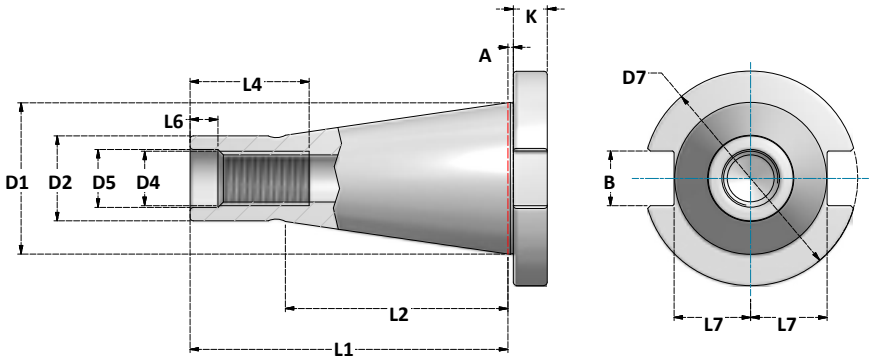
ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

Articolo	D	H	L
DBT40.H250.D63BL	63	250	223
DBT40.H315.D80BL	80	315	288

ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

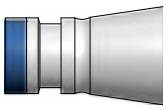
Articolo	D	H	L
DBT50.H315.D97BL	97	315	277

MANDRINI ISO
ISO TOOLHOLDERS



DIMENSIONI CONO
TAPER DIMENSIONS

CONO / TAPER	A	B	D1	D2	D4	D5	D7	L1	L2	L4	L6	L7	K	
	±0,2	H12					0 -0,4				+0,5 0	max	±0,15	
30	1,6	16,1	31,75	17,4	M12	13	50	68,4	48,4	24	5,5	16,2	8	
40	1,6	16,1	44,45	25,3	M16	17	63	93,4	65,4	32	8,2	22,5	10	OTT (Fig.1)
50	3,2	25,7	69,85	39,6	M24	26	97,5	126,8	101,8	47	11,5	35,3	12	

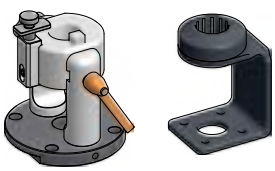


(Fig.1) **GOLA MAHO - OTT**
(Fig.1) MAHO - OTT GROOVE

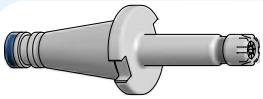
CARATTERISTICHE:
Tolleranza di precisione dei coni: AT3.
Costruiti in acciaio certificato in barre.
Eseguiti trattamenti termici da fornitori certificati.
Rettificati di precisione esternamente e internamente.
Controllati con strumenti di misura certificati.
Prebilanciati nei gradi indicati nelle pagine di catalogo.

FEATURES:
The precision tolerance of tapers is AT3.
Made of certified steel.
Heat treatments performed by certified suppliers.
Precision grinding externally and internally.
Checked with certified measuring instruments.
Pre-balanced as indicated in the catalog pages.

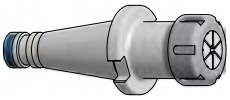
SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES* **P.310**



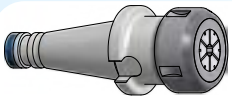
DIN 2080 - ISO



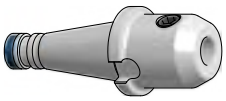
MANDRINI PORTAPINZA ER GHIERE MINI
COLLET CHUCKS ER MINI NUTS
DIN ISO 15488 (DIN6499) *PAG. 156*



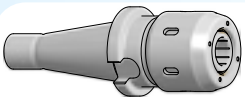
MANDRINI PORTAPINZA ER GHIERE STANDARD
COLLET CHUCKS ER STANDARD NUTS
DIN ISO 15488 (DIN6499) *PAG. 157*



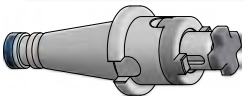
MANDRINI PORTAPINZA EOC
COLLET CHUCKS EOC
DIN ISO 10897 (DIN6388) *PAG. 158*



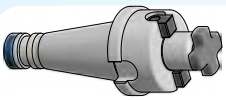
MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON
DIN 1835-2 *PAG. 159*



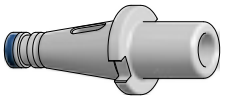
MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS
PAG. 160



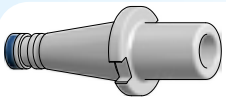
MANDRINI PORTAFRESA COMBI
COMBI SHELL MILL HOLDERS
DIN 6358 *PAG. 162*



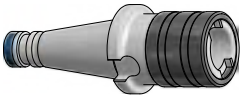
MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357 *PAG. 163*



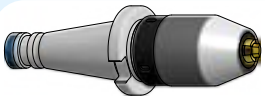
RIDUZIONI A CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS
DIN 6383 *PAG. 164*



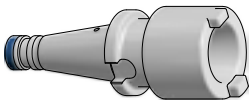
RIDUZIONI A CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS
DIN 6364 *PAG. 164*



PORTAMASCHI
TAPPING CHUCKS
PAG. 165



MANDRINI PORTAPUNTA
DRILL CHUCKS
PAG. 166



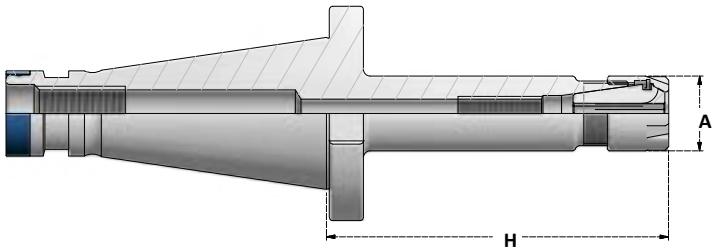
RIDUZIONI
ADAPTERS
PAG. 168



MANDRINI CON STELO LAVORABILE
BLANK ARBORS
PAG. 169

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS

G6,3
8000r.p.m.



ATTACCO *SHANK* **ISO** P. 154

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

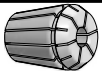
Articolo	H
ISO30.H100.ERC16M	100
ISO30.H100.ERC20M	100
ISO30.H100.ERC25M	100

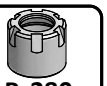
Articolo	H
ISO40.H100.ERC11M	100
ISO40.H100.ERC16M	100
ISO40.H100.ERC20M	100
ISO40.H100.ERC25M	100

	A	Collets Range	Ghiera Nut
...ERC11M	16	1÷7	G11M
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M
...ERC25M	35	1÷20	G25M



ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*

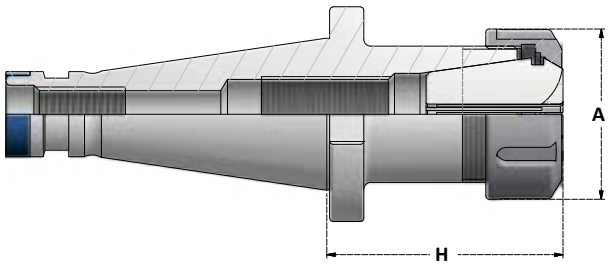

P. 280 GHIERE *NUTS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 288 CHIAVI *WRENCHES*

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS

G6,3 8000r.p.m.



ATTACCO *SHANK* ISO P. 154

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



	A	Collets Range	Ghiera Nut
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S
...ERC50	78	6÷34	G50S
...ERC60	83	10÷40	G60C



Articolo	H
ISO30.H50.ERC16	50
ISO30.H70.ERC16	70
ISO30.H100.ERC16	100
ISO30.H50.ERC20	50
ISO30.H70.ERC20	70
ISO30.H100.ERC20	100
ISO30.H50.ERC25	50
ISO30.H70.ERC25	70
ISO30.H100.ERC25	100
ISO30.H50.ERC32	50
ISO30.H70.ERC32	70
ISO30.H100.ERC32	100
ISO30.H70.ERC40	70
ISO30.H84.ERC40	84
ISO30.H100.ERC40	100

Articolo	H
ISO40.H50.ERC16	50
ISO40.H70.ERC16	70
ISO40.H100.ERC16	100
ISO40.H50.ERC20	50
ISO40.H70.ERC20	70
ISO40.H100.ERC20	100
ISO40.H50.ERC25	50
ISO40.H70.ERC25	70
ISO40.H100.ERC25	100
ISO40.H130.ERC25	130
ISO40.H50.ERC32	50
ISO40.H70.ERC32	70
ISO40.H100.ERC32	100
ISO40.H130.ERC32	130
ISO40.H160.ERC32	160
ISO40.H56.ERC40	56
ISO40.H70.ERC40	70
ISO40.H100.ERC40	100
ISO40.H130.ERC40	130
ISO40.H160.ERC40	160
ISO40.H200.ERC40	200
ISO40.H100.ERC50	100

Articolo	H
ISO50.H70.ERC16	70
ISO50.H130.ERC16	130
ISO50.H100.ERC20	100
ISO50.H130.ERC20	130
ISO50.H70.ERC25	70
ISO50.H100.ERC25	100
ISO50.H130.ERC25	130
ISO50.H160.ERC25	160
ISO50.H70.ERC32	70
ISO50.H100.ERC32	100
ISO50.H130.ERC32	130
ISO50.H160.ERC32	160
ISO50.H200.ERC32	200
ISO50.H70.ERC40	70
ISO50.H100.ERC40	100
ISO50.H130.ERC40	130
ISO50.H160.ERC40	160
ISO50.H200.ERC40	200
ISO50.H67.ERC50	67
ISO50.H83.ERC60	83

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino Toolholder	Chiave Wrench
BX.ISO40.ERC32-6	ERC32.D6-D8-D10-D12-D16-D20	ISO40.H70.ERC32	CH32S
BX.ISO40.ERC40-7	ERC40.D6-D8-D10-D12-D16-D20-D25	ISO40.H70.ERC40	CH40S

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.ISO30.ERC25	ERC25	D2÷16	ISO30.H70.ERC25	CH25S
BX.ISO30.ERC32	ERC32	D3÷20	ISO30.H70.ERC32	CH32S
BX.ISO30.ERC40	ERC40	D4÷26	ISO30.H70.ERC40	CH40S
BX.ISO40.ERC25	ERC25	D2÷16	ISO40.H70.ERC25	CH25S
BX.ISO40.ERC32	ERC32	D3÷20	ISO40.H70.ERC32	CH32S
BX.ISO40.ERC40	ERC40	D4÷26	ISO40.H70.ERC40	CH40S
BX.ISO50.ERC25	ERC25	D2÷16	ISO50.H70.ERC25	CH25S
BX.ISO50.ERC32	ERC32	D3÷20	ISO50.H70.ERC32	CH32S
BX.ISO50.ERC40	ERC40	D4÷26	ISO50.H70.ERC40	CH40S



ACCESSORI - *ACCESSORIES*



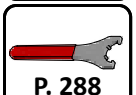
P. 250 PINZE *COLLETS*



P. 280 GHIERE *NUTS*



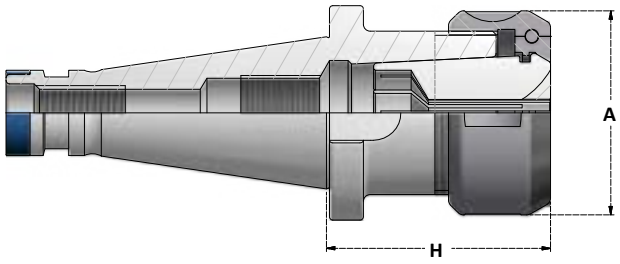
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*



P. 288 CHIAVI *WRENCHES*

MANDRINI PORTAPINZA EOC
EOC COLLET CHUCKS

G6,3
8000r.p.m.



ATTACCO
SHANK
ISO
P. 154

Articolo	H
ISO40.H55.EOC16	55
ISO40.H66.EOC25	66
ISO40.H95.EOC32	95

	A	Collets Range	Ghiera Nut
...EOC16	43	2÷16	G16OCC
...EOC25	60	2÷25	G25OCC
...EOC32	72	3÷32	G32OCC

Articolo	H
ISO50.H57.EOC25	57
ISO50.H73.EOC32	73

ACCESSORI - *ACCESSORIES*


P. 270
PINZE
COLLETS


P. 287
GHIERE
NUTS


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 289
CHIAVI
WRENCHES

MANDRINI PORTAFRESA WELDON
END MILL HOLDERS WELDON

G6,3
8000r.p.m.

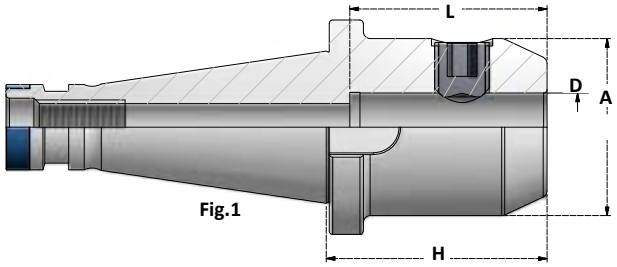
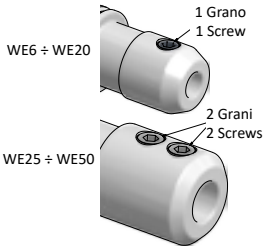


Fig.1



ATTACCO *SHANK* **ISO** P. 154

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

Articolo	H	Fig
ISO30.H40.WE6	40	1
ISO30.H40.WE8	40	1
ISO30.H40.WE10	40	1
ISO30.H40.WE12	40	1
ISO30.H40.WE14	40	1
ISO30.H50.WE16	50	1
ISO30.H50.WE18	50	1
ISO30.H63.WE20	63	1
ISO30.H85.WE25	85	1

Articolo	H	Fig
ISO40.H50.WE6	50	1
ISO40.H50.WE8	50	1
ISO40.H50.WE10	50	1
ISO40.H50.WE12	50	1
ISO40.H50.WE14	50	1
ISO40.H60.WE16	60	1
ISO40.H65.WE18	65	1
ISO40.H65.WE20	65	1
ISO40.H80.WE25	80	1
ISO40.H80.WE32	80	1
ISO40.H90.WE40	90	1

Articolo	H	Fig
ISO50.H63.WE6	63	1
ISO50.H63.WE8	63	1
ISO50.H63.WE10	63	1
ISO50.H63.WE12	63	1
ISO50.H63.WE14	63	1
ISO50.H63.WE16	63	1
ISO50.H63.WE18	63	1
ISO50.H63.WE20	63	1
ISO50.H80.WE25	80	1
ISO50.H80.WE32	80	1
ISO50.H90.WE40	90	1
ISO50.H110.WE50	110	1

	D	L1	A	Grano Screw
...WE6	6	37	25	GR.WE6
...WE8	8	37	28	GR.WE8
...WE10	10	41	35	GR.WE10
...WE12	12	46	42	GR.WE12-14
...WE14	14	46	44	GR.WE12-14
...WE16	16	49	48	GR.WE16-18
...WE18	18	49	50	GR.WE16-18
...WE20	20	51	52	GR.WE20

	D	L1	A	Grani Screws	
..WE25	25	59	65	2x	GR.WE25
..WE32	32	63	72	2x	GR.WE32-40
..WE40	40	73	80	2x	GR.WE32-40
..WE50	50	83	100	2x	GR.WE50

MANDRINI PORTAFRESA WELDON - EXTRACORTI
END MILL HOLDERS WELDON - STUB LENGTH

Articolo	H	Grano Screw	Fig
ISO40.H22.WE16	22	GR.WEC16	2
ISO40.H22.WE20	22	GR.WEC20	2
ISO40.H22.WE25	22	GR.WEC20	2

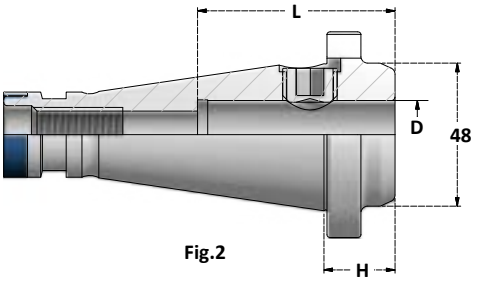
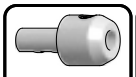


Fig.2

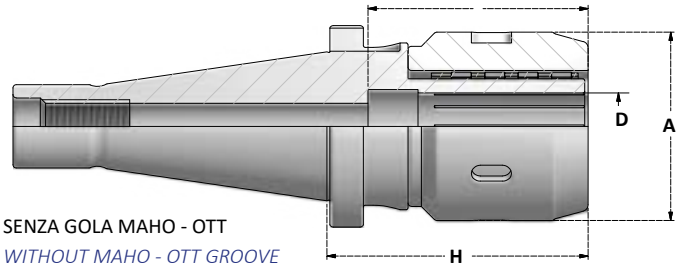
ACCESSORI - *ACCESSORIES*


P. 225 RIDUZIONI *ADAPTERS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 303 GRANI *SCREWS*

MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS



SENZA GOLA MAHO - OTT
WITHOUT MAHO - OTT GROOVE

ATTACCO *SHANK* ISO P. 154

SCHEDA TECNICA *TECHNICAL DATA* FS P. 344

Ø G6,3 12000r.p.m.

0,005

CANALINI *CHANNELS*

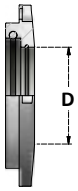
CHIAVE INCLUSA *WRENCH INCLUDED*

Articolo	D	H	A
ISO40.H100.FS32	32	100	69
ISO50.H100.FS32	32	100	69

	D	A	L1
...FS**32**	32	69	71,7

Forza di serraggio *Clamping force*	
FS**32**	**1000**Nm

DISCHI DI TENUTA PER MANDRINI A FORTE SERRAGGIO
SEALED CAPS FOR POWER MILLING CHUCKS

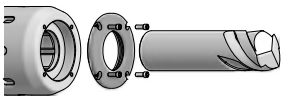




A TENUTA *SEALED*

DISCHI DI TENUTA PER DIAMETRO NOMINALE
SEALED CAPS FOR NOMINAL DIAMETER

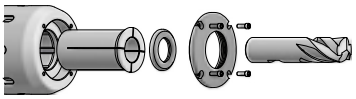
Articolo	D
CFS32.D32	32



P. 284 DISCHETTI **RG** *RG SEALED DISCS*

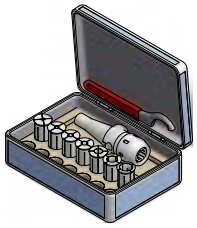
DISCHI DI TENUTA PER L'UTILIZZO DELLE PINZE DI RIDUZIONE
SEALED CAPS FOR REDUCTION COLLETSE USING

Articolo	D	RG Range
CFS32.RG	RG40	D6÷D25



KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino con chiave Toolholder with wrench
BX.ISO40.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	ISO40.H100.FS32
BX.ISO50.FS32	4SR32	D6 D8 D10 D12 D16 D20 D25	ISO50.H100.FS32



ACCESSORI - *ACCESSORIES*

P. 276 PINZE *COLLETS*

P. 289 CHIAVI *WRENCHES*

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

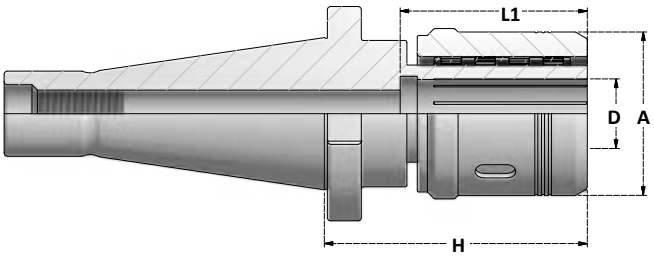
P. 234 TIRANTI *PULL STUDS*

MANDRINI A FORTE SERRAGGIO - ECO LINE
POWER MILLING CHUCKS - ECO LINE











ATTACCO
SHANK
ISO
P. 154

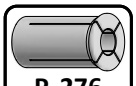
Articolo	H
ISO40.H105.MC20	105
ISO40.H105.MC32	105

Articolo	H
ISO50.H110.MC20	110
ISO50.H110.MC32	110

	D	A	L1	Momento torcente consigliato *Recommended tightening torque*
...MC**20**	20	58	65	60Nm
...MC**32**	32	73	80	70Nm

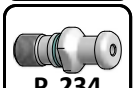
Forza di serraggio *Clamping force*	
MC**20**	**350**Nm
MC**32**	**450**Nm

ACCESSORI - *ACCESSORIES*


P. 276
PINZE
COLLETS

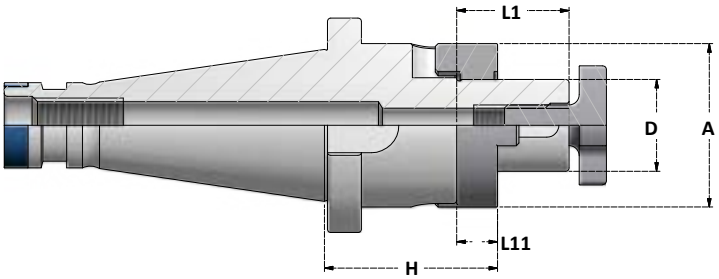

P. 289
CHIAVI
WRENCHES


P. 310
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 234
TIRANTI
PULL STUDS

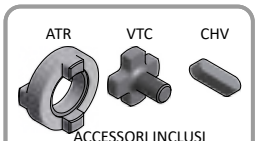
MANDRINI PORTAFRESA COMBINATI
COMBI SHELL MILL HOLDERS





ATTACCO *SHANK* ISO P. 154

SCHEDA TECNICA *TECHNICAL DATA* D C P. 348



ACCESSORI INCLUSI *INCLUDED ACCESSORIES*

Articolo	H
ISO30.H50.D16C	50
ISO30.H50.D22C	50
ISO30.H50.D27C	50
ISO30.H50.D32C	50

Articolo	H
ISO40.H52.D16C	52
ISO40.H100.D16C	100
ISO40.H52.D22C	52
ISO40.H100.D22C	100
ISO40.H52.D27C	52
ISO40.H100.D27C	100
ISO40.H52.D32C	52
ISO40.H100.D32C	100
ISO40.H52.D40C	52
ISO40.H100.D40C	100

Articolo	H
ISO50.H55.D16C	55
ISO50.H100.D16C	100
ISO50.H125.D16C	125
ISO50.H55.D22C	55
ISO50.H100.D22C	100
ISO50.H125.D22C	125
ISO50.H55.D27C	55
ISO50.H100.D27C	100
ISO50.H125.D27C	125
ISO50.H55.D32C	55
ISO50.H100.D32C	100
ISO50.H125.D32C	125
ISO50.H55.D40C	55
ISO50.H100.D40C	100
ISO50.H125.D40C	125

	D	A	L1	L11	ATR	VTC	CHV
D16C	16	32	27	10	ATR.D16	VTC.D16	CHV.D16
D22C	22	40	31	12	ATR.D22	VTC.D22	CHV.D22
D27C	27	48	33	12	ATR.D27	VTC.D27	CHV.D27
D32C	32	58	38	14	ATR.D32	VTC.D32	CHV.D32
D40C	40	70	41	14	ATR.D40	VTC.D40	CHV.D40

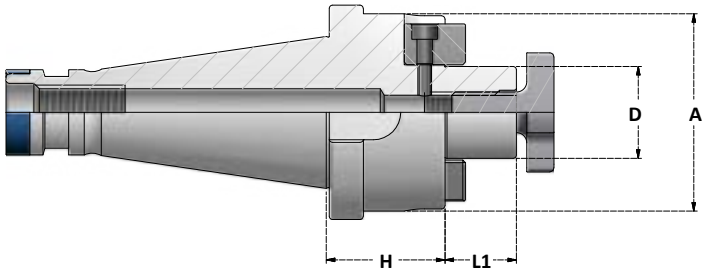
ACCESSORI - *ACCESSORIES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 304-305 ACCESSORI *ACCESSORIES*

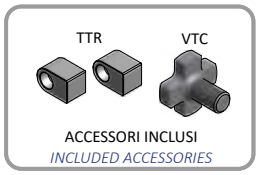
MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS





ATTACCO *SHANK* ISO P. 154

SCHEDA TECNICA *TECHNICAL DATA* D S P. 349

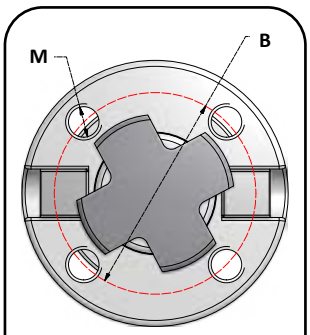


Articolo	H
ISO30.H35.D16S	35
ISO30.H35.D22S	35
ISO30.H35.D27S	35
ISO30.H35.D32S	35

Articolo	H
ISO40.H30.D16S	30
ISO40.H52.D16S	52
ISO40.H100.D16S	100
ISO40.H35.D22S	35
ISO40.H52.D22S	52
ISO40.H100.D22S	100
ISO40.H35.D27S	35
ISO40.H52.D27S	52
ISO40.H100.D27S	100
ISO40.H35.D32S	35
ISO40.H52.D32S	52
ISO40.H100.D32S	100
ISO40.H35.D40S	35
ISO40.H52.D40S	52
ISO40.H100.D40S	100

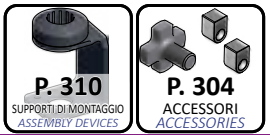
Articolo	H
ISO50.H45.D16S	45
ISO50.H100.D16S	100
ISO50.H125.D16S	125
ISO50.H45.D22S	45
ISO50.H100.D22S	100
ISO50.H125.D22S	125
ISO50.H45.D27S	45
ISO50.H100.D27S	100
ISO50.H125.D27S	125
ISO50.H45.D32S	45
ISO50.H100.D32S	100
ISO50.H125.D32S	125
ISO50.H45.D40S	45
ISO50.H100.D40S	100
ISO50.H125.D40S	125
ISO50.H55.D60S	55

	D	A	L1	TTR	VTC
...D16S	16	38	17	TTR.D16	VTC.D16
...D22S	22	48	19	TTR.D22	VTC.D22
...D27S	27	58	21	TTR.D27	VTC.D27
...D32S	32	78	24	TTR.D32	VTC.D32
...D40S	40	88	27	TTR.D40	VTC.D40
...D60S	60	29	40	TTR.D60	VTC.D60



	B	M
...D40S	66,7	M12
...D60S	101,6	M16

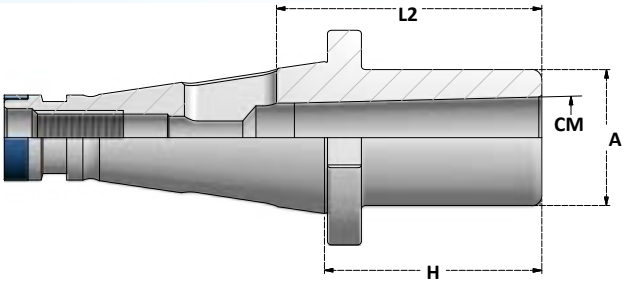
ACCESSORI - *ACCESSORIES*



DIN 2080 | ISO | CM P | **DIN 6383**

MANDRINI DI RIDUZIONE CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS

G6,3 — 8000r.p.m.



ATTACCO *SHANK* **ISO** P. 154

SCHEDA TECNICA *TECHNICAL DATA* CM P | P. 350

PER UTENSILI DIN228B CON TENONE

FOR TOOLS DIN228B WITH TANG

Articolo	H
ISO30.H50.CM1P	50
ISO30.H50.CM2P	50
ISO30.H72.CM3P	72

Articolo	H
ISO40.H50.CM1P	50
ISO40.H50.CM2P	50
ISO40.H65.CM3P	65
ISO40.H129.CM3P	129
ISO40.H95.CM4P	95
ISO40.H152.CM4P	152

Articolo	H
ISO50.H45.CM1P	45
ISO50.H100.CM1P	100
ISO50.H60.CM2P	60
ISO50.H113.CM2P	113
ISO50.H65.CM3P	65
ISO50.H133.CM3P	133
ISO50.H70.CM4P	70
ISO50.H163.CM4P	163
ISO50.H105.CM5P	105
ISO50.H193.CM5P	193

	CM	A	L2
...CM1P	1	25	56
...CM2P	2	32	67
...CM3P	3	40	84
...CM4P	4	48	107
...CM5P	5	63	135

ACCESSORI - *ACCESSORIES*

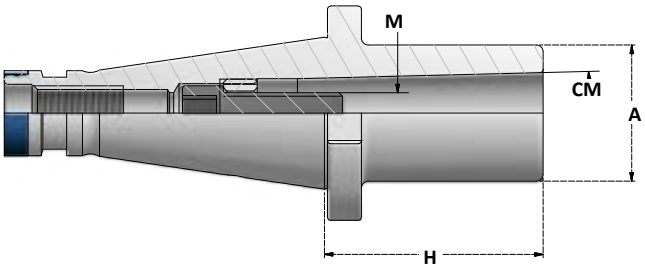

P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 308 ESTRATTORI *PULLERS*

ISO | CM FV | **DIN 6364**

MANDRINI DI RIDUZIONE CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS

G6,3 — 8000r.p.m.



SCHEDA TECNICA *TECHNICAL DATA* CMFV | P. 351

PER UTENSILI DIN228A CON FILETTO

FOR TOOLS DIN228A WITH THREAD

Articolo	H
ISO30.H50.CM1FV	50
ISO30.H50.CM2FV	50
ISO30.H78.CM3FV	78

Articolo	H
ISO40.H50.CM1FV	50
ISO40.H50.CM2FV	50
ISO40.H65.CM3FV	65
ISO40.H95.CM4FV	95

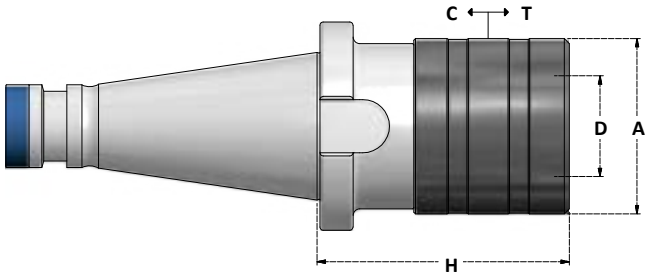
Articolo	H
ISO50.H60.CM1FV	60
ISO50.H60.CM2FV	60
ISO50.H115.CM2FV	115
ISO50.H165.CM2FV	165
ISO50.H65.CM3FV	65
ISO50.H165.CM3FV	165
ISO50.H65.CM4FV	65
ISO50.H165.CM4FV	165
ISO50.H120.CM5FV	120

	CM	A	M
...CM1FV	1	25	M6
...CM2FV	2	32	M10
...CM3FV	3	40	M12
...CM4FV	4	48	M16
...CM5FV	5	63	M20

ACCESSORI - *ACCESSORIES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

MASCHIATORI A CAMBIO RAPIDO CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION



ATTACCO *SHANK* **ISO** P. 154

SCHEDA TECNICA *TECHNICAL DATA* MCR P. 352

Corsa di compressione: *Compression stroke:* **C**

Corsa di trazione: *Extension stroke:* **T**

Articolo	H
ISO40.MCR1TC	50
ISO40.MCR2TC	78
ISO40.MCR3TC	143

Articolo	H
ISO50.MCR2TC	80
ISO50.MCR3TC	130

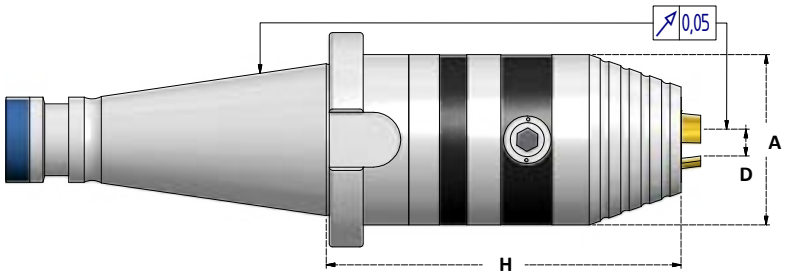
	Bussola Adapter	D	Tapping Range	A	T	C
..MCR1TC	B1 / BF1	19	M2÷M14	36	7,5	7,5
..MCR2TC	B2 / BF2	31	M6÷M27	53	12,5	12,5
..MCR3TC	B3 / BF3	48	M14÷M45	78	20	20
..MCR4TC	BF4	60	M22÷M45	96	22,5	22,5

ACCESSORI - *ACCESSORIES*

P. 336 MASCHI *TAPS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 298 INSERZIONI *ADAPTERS*

MANDRINI PORTAPUNTA CON PASSAGGIO DEL REFRIGERANTE ROTAZIONE DESTRA E SINISTRA

*DRILL CHUCKS **WITH COOLANT THROUGH** - RIGHT AND LEFT ROTATION*



CHIAVE INCLUSA
WRENCH INCLUDED

ATTACCO
SHANK
ISO
P. 154

Articolo	H
ISO40.H71.CP8S	71
ISO40.H105.CP13S	105
ISO40.H110.CP16S	110

Articolo	H
ISO50.H98.CP13S	98
ISO50.H103.CP16S	103

GRIFFE RIVESTITE IN TITANIO

TITANIUM COATED JAWS

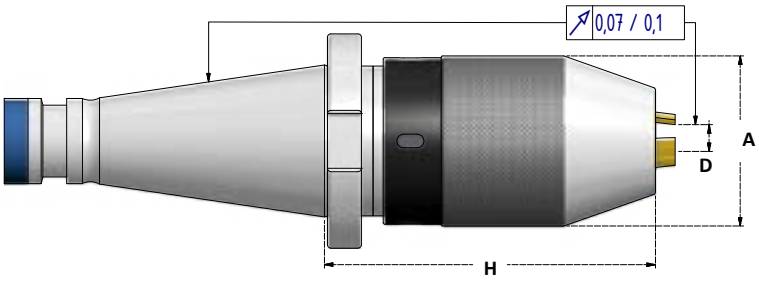
	D	A	Chiave Wrench
...CP8	0,5 - 8	37,5	CH.EX4
...CP13	1- 13	50,5	CH.EX6
...CP16	2,5- 16	57	CH.EX6

ACCESSORI - *ACCESSORIES*

P. 205 AUTOSERRANTI *DRILL CHUCKS*
P. 289 CHIAVI *WRENCHES*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

DIN 2080 | ISO | DCK

MANDRINI PORTAPUNTA AUTOSERRANTI - ROTAZIONE DESTRA
DRILL CHUCKS - RIGHT ROTATION





ATTACCO *SHANK* **ISO** P. 154

Articolo	H
ISO40.H70.DCK8S	70
ISO40.H88.DCK13S	88
ISO40.H100.DCK16S	100

Articolo	H
ISO50.H80.DCK13S	80
ISO50.H90.DCK16S	90

	D	A	Chiave Wrench
...DCK8	0,5 - 8	37,5	CH.DC8
...DCK13	1- 13	50,5	CH.DC13
...DCK16	2,5- 16	57	CH.DC16

GRIFFE RIVESTITE IN TITANIO

TITANIUM COATED JAWS

ACCESSORI - *ACCESSORIES*

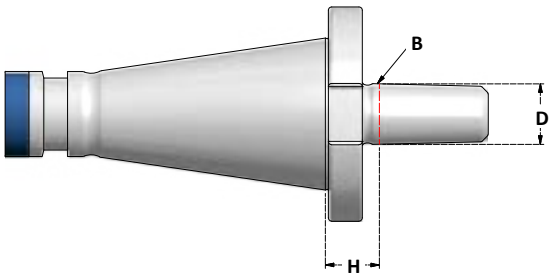

P. 204 AUTOSERRANTI *DRILL CHUCKS*


P. 289 CHIAVI *WRENCHES*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

ISO | B | **DIN 238**

ATTACCHI PER MANDRINI AUTOSERRANTI
DRILL CHUCKS ARBORS



Articolo	H
ISO30.H15.B12	15
ISO30.H15.B16	15

Articolo	H
ISO40.H17.B12	17
ISO40.H17.B16	17
ISO40.H17.B18	17

Articolo	H
ISO50.H20.B16	20
ISO50.H20.B18	20

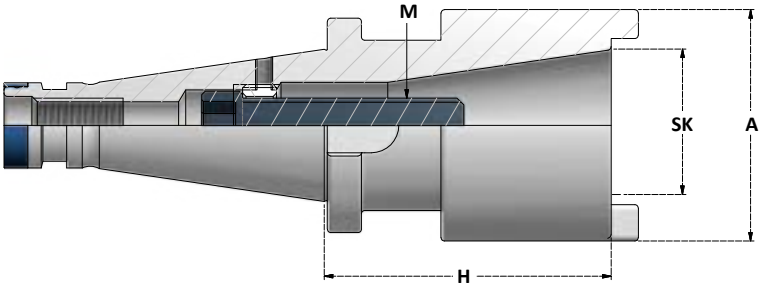
B	D
...B12	12,065
...B16	15,733
...B18	17,78

ACCESSORI - *ACCESSORIES*


P. 204 AUTOSERRANTI *DRILL CHUCKS*


P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*

MANDRINI DI RIDUZIONE TC-BT-ISO
TC-BT-ISO REDUCTION SLEEVES



TC	DIN ISO 7388 (DIN69871)
BT	MAS 403 (JIS B 6339)
ISO	DIN 2080

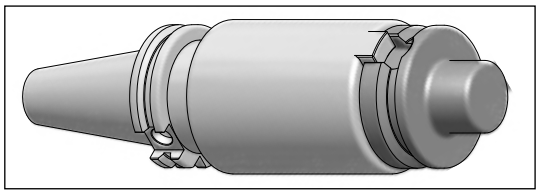
ATTACCO *SHANK* **ISO** P. 154

Articolo	H	A	M	SK
ISO40.H50.TB30	50	50	12	TC30 / BT30
ISO40.H85.TB40	85	70	16	TC40 / BT40

Articolo	H	A	M	SK
ISO40.H50.ISO30	50	50	12	ISO30
ISO40.H85.ISO40	85	70	16	ISO40

Articolo	H	A	M	SK
ISO50.H60.TB40	60	70	16	TC40 / BT40
ISO50.H115.TB50	115	90	24	TC50 / BT50

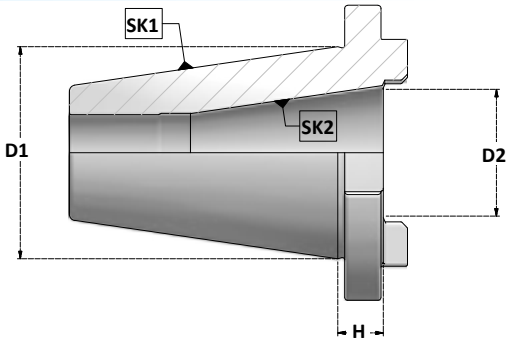
Articolo	H	A	M	SK
ISO50.H60.ISO40	60	70	16	ISO40
ISO50.H115.ISO50	115	90	24	ISO50

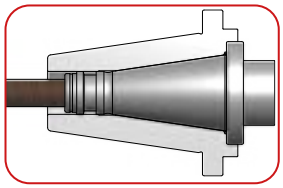


FORNITI CON VITE SENZA FORO PER IL PASSAGGIO DEL REFRIGERANTE

SUPPLIED WITH SCREW WITHOUT COOLANT THROUGH

BUSSOLE DI RIDUZIONE PER ATTACCHI CONICI 7/24 (8°17'50")
REDUCTION SLEEVES FOR TAPERED SHANKS 7/24 (8°17'50")



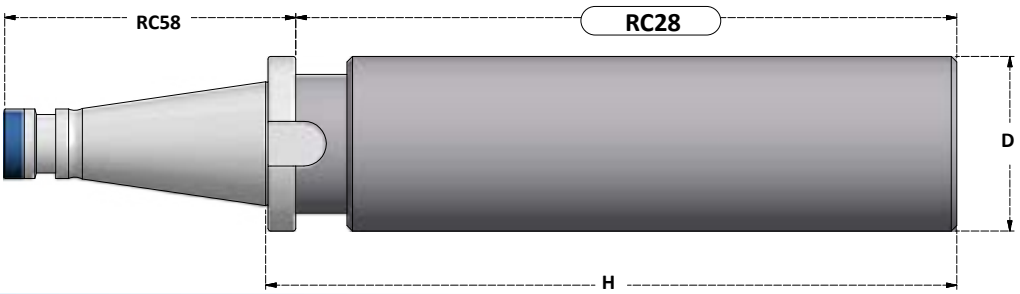


Articolo	H	SK1	D1	SK2	D2
ISO40.H13.SK30	13	ISO40	44,45	ISO30	31,75
ISO50.H16.SK30	16	ISO50	69,85	ISO30	31,75
ISO50.H16.SK40	16	ISO50	69,85	ISO40	44,45

ACCESSORI - *ACCESSORIES*



MANDRINI CON STELO LAVORABILE
BLANK ARBORS

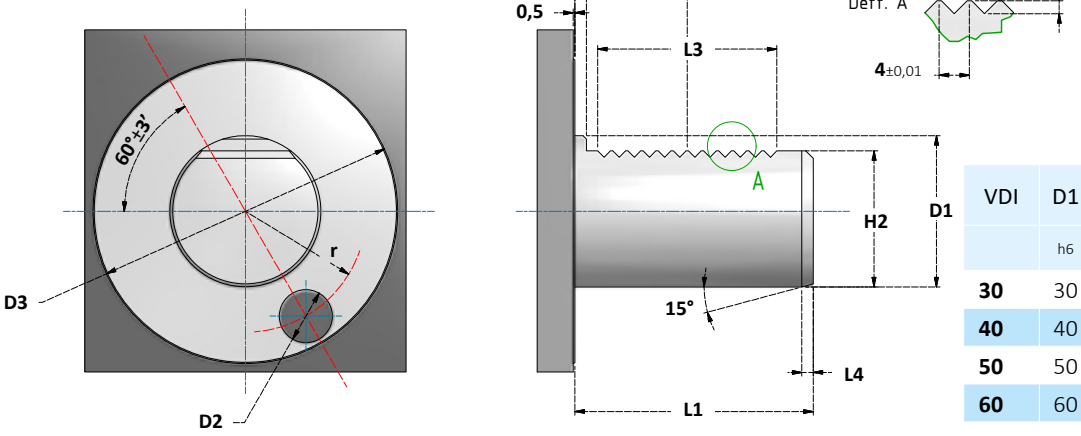


ATTACCO
SHANK
ISO
P. 154

Articolo	D	H
ISO40.H250.D40BL	40	250
ISO40.H160.D63BL	63	160
ISO40.H250.D63BL	63	250
ISO40.H270.D80BL	80	270

Articolo	D	H
ISO50.H330.D50BL	50	330
ISO50.H250.D63BL	63	250
ISO50.H330.D80BL	80	330
ISO50.H315.D97BL	97	315

MANDRINI VDI
VDI TOOLHOLDERS

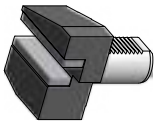


DIMENSIONI
DIMENSIONS

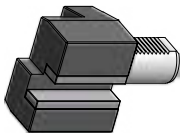
VDI	D1	D2	D3	L1	L2	L3	L4	L7	H2	r
	h6	H8		±0,3	±0,05	min	+1 0		±0,1	±0,02
30	30	14	68	55	29,7	40	2	7	27	25
40	40	14	83	63	29,7	40	3	7	36	32
50	50	16	98	78	35,7	48	3	8	45	37
60	60	16	123	94	43,7	56	4	10	55	48



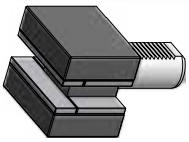
PORTAUTENSILI VDI FORMA A
VDI TOOLHOLDERS FORM A
PAG. 171



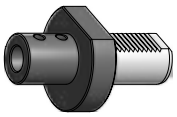
PORTAUTENSILI VDI FORMA B
VDI TOOLHOLDERS FORM B
PAG. 172



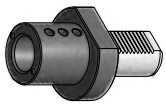
PORTAUTENSILI VDI FORMA C
VDI TOOLHOLDERS FORM C
PAG. 174



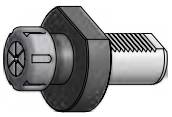
PORTAUTENSILI VDI FORMA D
VDI TOOLHOLDERS FORM D
PAG. 175



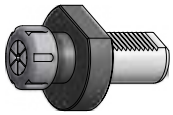
PORTAUTENSILI VDI FORMA E1
VDI TOOLHOLDERS FORM E1
PAG. 176



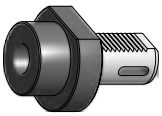
PORTAUTENSILI VDI FORMA E2
VDI TOOLHOLDERS FORM E2
PAG. 177



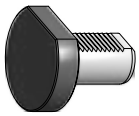
PORTAUTENSILI VDI FORMA E3
VDI TOOLHOLDERS FORM E3
PAG. 178



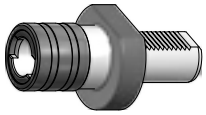
PORTAUTENSILI VDI FORMA E4
VDI TOOLHOLDERS FORM E4
PAG. 179



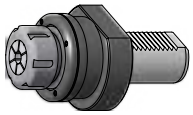
PORTAUTENSILI VDI FORMA F
VDI TOOLHOLDERS FORM F
PAG. 180



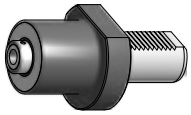
PORTAUTENSILI VDI FORMA Z
VDI TOOLHOLDERS FORM Z
PAG. 180



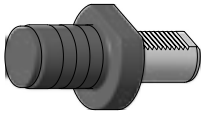
MASCHIATORI
TAPPING CHUCKS
PAG. 181



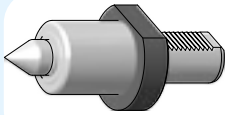
PORTA ALESATORI OSCILLANTI
FLOATING REAMER HOLDERS
PAG. 182



BROCCIATORI
BROACHING TOOLHOLDERS
PAG. 182

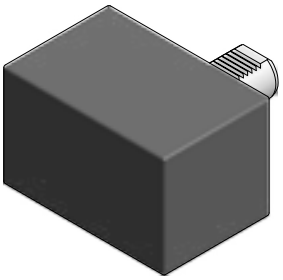


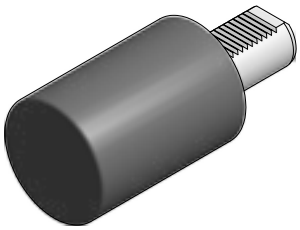
FERMI BARRA
STOP SHOCK ABSORBERS
PAG. 183



CONTROPUNTE ROTANTI
LIVE CENTRES
PAG. 183

PORTAUTENSILI VDI LAVORABILI
MACHINABLE VDI TOOLHOLDERS

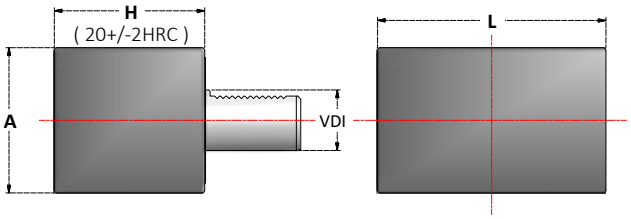




ATTACCO
SHANK
VDI
P. 170

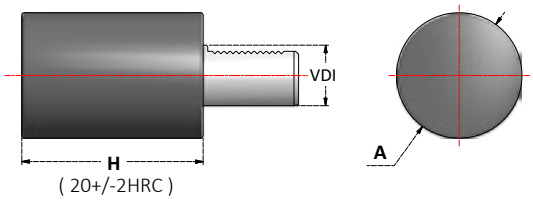
PORTAUTENSILI LAVORABILI RETTANGOLARI
RECTANGULAR BLANK TOOLHOLDERS

Articolo	VDI	H	A	L
VDI30.A1	30	85	76	130
VDI40.A1	40	100	96	151
VDI50.A1	50	125	120	160
VDI60.A1	60	160	125	165

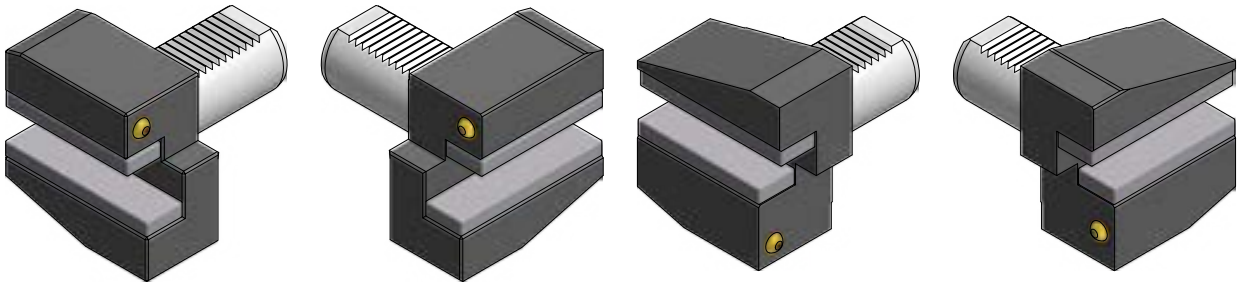


PORTAUTENSILI LAVORABILI ROTONDI
ROUND BLANK TOOLHOLDERS

Articolo	VDI	H	A
VDI30.A2	30	100	68
VDI40.A2	40	120	83
VDI50.A2	50	135	98
VDI60.A2	60	150	123



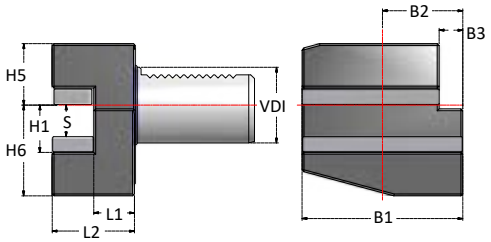
PORTAUTENSILI VDI CON SEDE TRASVERSALE
RADIAL VDI TOOLHOLDERS



ATTACCO
SHANK
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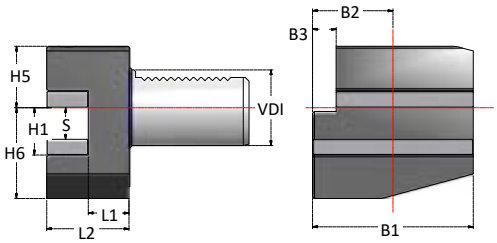
PORTAUTENSILI VDI FORMA B1 - DESTRI - CORTI
VDI TOOLHOLDERS FORM B1 - RIGHT - SHORT

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B1	30	20	16	28	38	22	40	70	35	10
VDI40.B1	40	25	20	32,5	48	22	44	85	42,5	12,5
VDI50.B1	50	32	25	35	60	30	55	100	50	16
VDI60.B1	60	32	25	42,5	62,5	30	60	125	62,5	16



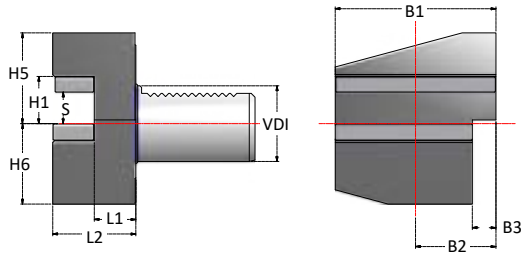
PORTAUTENSILI VDI FORMA B2 - SINISTRI - CORTI
VDI TOOLHOLDERS FORM B2 - LEFT - SHORT

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B2	30	20	16	28	38	22	40	70	35	10
VDI40.B2	40	25	20	32,5	48	22	44	85	42,5	12,5
VDI50.B2	50	32	25	35	60	30	55	100	50	16
VDI60.B2	60	32	25	42,5	62,5	40	60	125	62,5	16



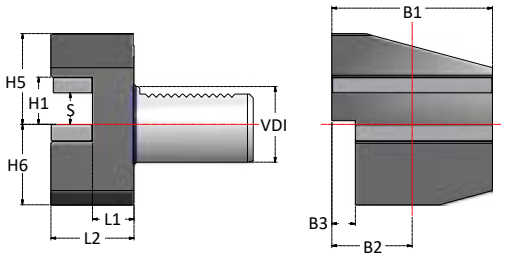
PORTAUTENSILI VDI FORMA B3 - ROVESCIATI DESTRI - CORTI
VDI TOOLHOLDERS FORM B3 - OVERHEAD RIGHT - SHORT

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B3	30	20	16	28	38	22	40	70	35	10
VDI40.B3	40	25	20	32,5	48	22	44	85	42,5	12,5
VDI50.B3	50	32	25	35	60	30	55	100	50	16
VDI60.B3	60	32	25	42,5	62,5	40	60	125	62,5	16

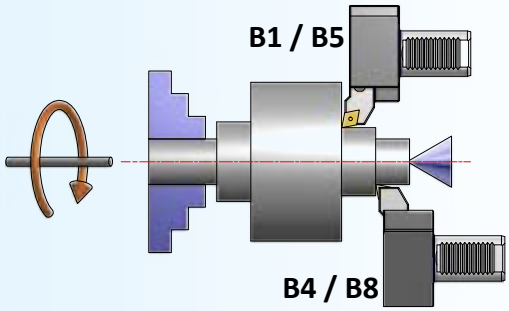


PORTAUTENSILI VDI FORMA B4 - ROVESCIATI SINISTRI - CORTI
VDI TOOLHOLDERS FORM B4 - OVERHEAD LEFT - SHORT

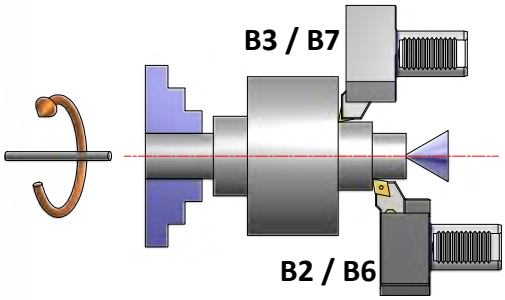
Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B4	30	20	16	28	38	22	40	70	35	10
VDI40.B4	40	25	20	32,5	48	22	44	85	42,5	12,5
VDI50.B4	50	32	25	35	60	30	55	100	50	16
VDI60.B4	60	32	25	42,5	62,5	40	60	125	62,5	16



ROTAZIONE ORARIA DEL MANDRINO
CLOCKWISE SPINDEL ROTATION

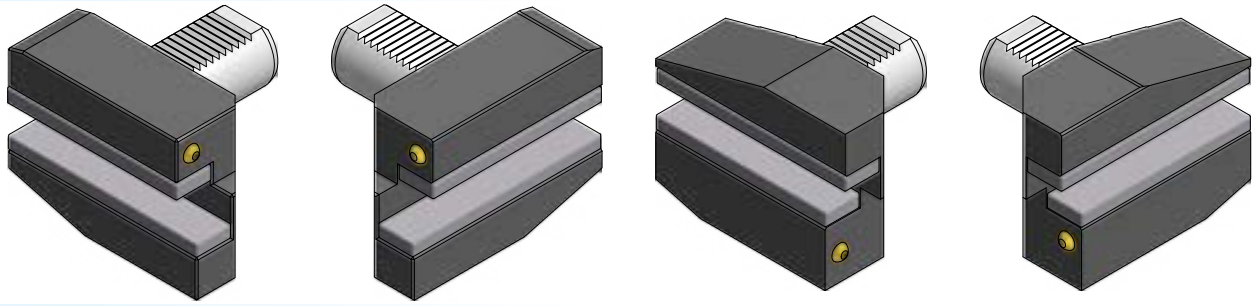


ROTAZIONE ANTIORARIA DEL MANDRINO
COUNTERCLOCKWISE SPINDEL ROTATION



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SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

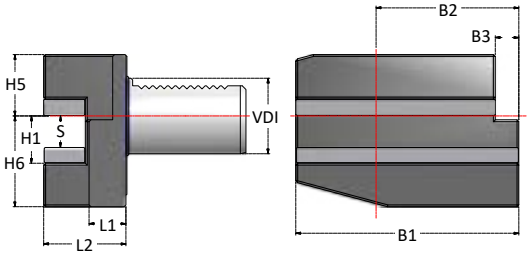
PORTAUTENSILI VDI CON SEDE TRASVERSALE
RADIAL VDI TOOLHOLDERS



ATTACCO
SHANK
VDI
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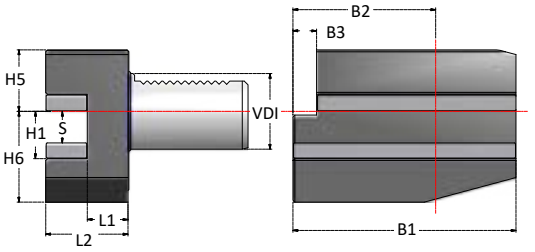
PORTAUTENSILI VDI FORMA B5 - DESTRI - LUNGHI
VDI TOOLHOLDERS FORM B5 - RIGHT - LONG

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B5	30	20	16	28	38	22	40	100	65	10
VDI40.B5	40	25	20	32,5	48	22	44	118	75,5	12,5
VDI50.B5	50	32	25	35	60	30	55	130	80	16
VDI60.B5	60	32	25	42,5	62,5	40	60	145	82,5	16



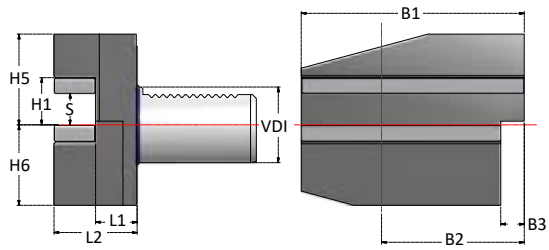
PORTAUTENSILI VDI FORMA B6 - SINISTRI - LUNGHI
VDI TOOLHOLDERS FORM B6 - LEFT - LONG

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B6	30	20	16	28	38	22	40	100	65	10
VDI40.B6	40	25	20	32,5	48	22	44	118	75,5	12,5
VDI50.B6	50	32	25	35	60	30	55	130	80	16
VDI60.B6	60	32	25	42,5	62,5	40	60	145	82,5	16



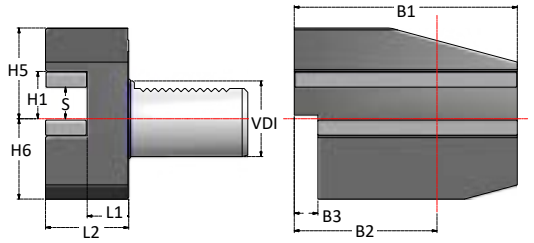
PORTAUTENSILI VDI FORMA B7 - ROVESCIATI DESTRI - LUNGHI
VDI TOOLHOLDERS FORM B7 - OVERHEAD RIGHT - LONG

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B7	30	20	16	28	38	22	40	100	65	10
VDI40.B7	40	25	20	32,5	48	22	44	118	75,5	12,5
VDI50.B7	50	32	25	35	60	30	55	130	80	16
VDI60.B7	60	32	25	42,5	62,5	40	60	145	82,5	16

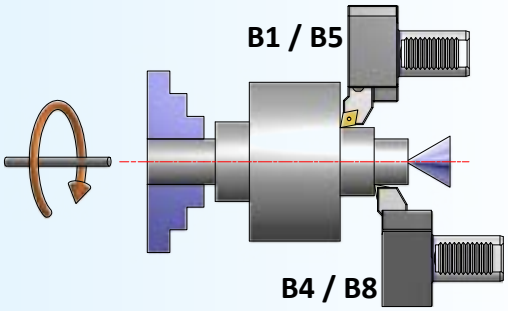


PORTAUTENSILI VDI FORMA B8 - ROVESCIATI SINISTRI - LUNGHI
VDI TOOLHOLDERS FORM B8 - OVERHEAD LEFT - LONG

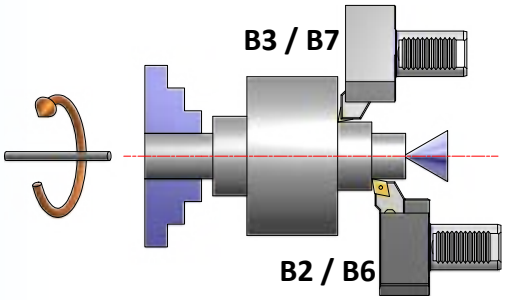
Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.B8	30	20	16	28	38	22	40	100	65	10
VDI40.B8	40	25	20	32,5	48	22	44	118	75,5	12,5
VDI50.B8	50	32	25	35	60	30	55	130	80	16
VDI60.B8	60	32	25	42,5	62,5	40	60	145	82,5	16



ROTAZIONE ORARIA DEL MANDRINO
CLOCKWISE SPINDEL ROTATION

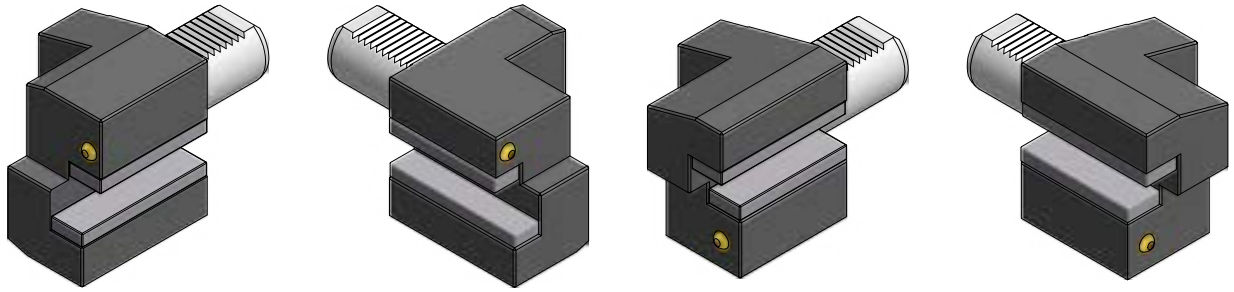


ROTAZIONE ANTIORARIA DEL MANDRINO
COUNTERCLOCKWISE SPINDEL ROTATION



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SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

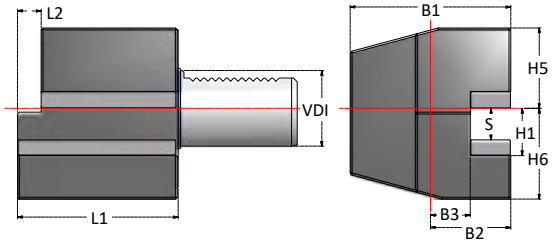
PORTAUTENSILI VDI CON SEDE LONGITUDINALE
AXIAL VDI TOOLHOLDERS



ATTACCO
SHANK
VDI
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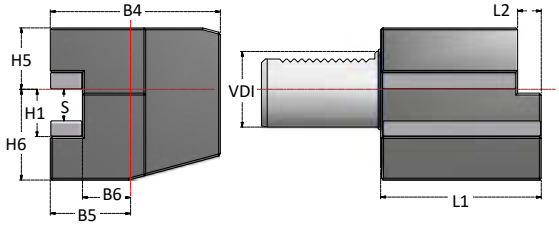
PORTAUTENSILI VDI FORMA C1 - DESTRI
VDI TOOLHOLDERS FORM C1 - RIGHT

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.C1	30	20	16	28	38	70	10	70	35	17
VDI40.C1	40	25	20	32,5	48	85	12,5	85	42,5	21
VDI50.C1	50	32	25	35	60	100	16	100	50	26
VDI60.C1	60	32	25	42,5	62,5	125	16	125	62,5	33



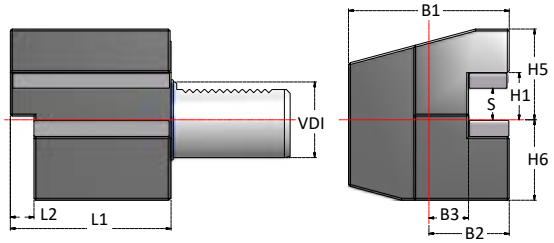
PORTAUTENSILI VDI FORMA C2 - SINISTRI
VDI TOOLHOLDERS FORM C2 - LEFT

Articolo	VDI	H1	S	H5	H6	L1	L2	B4	B5	B6
VDI30.C2	30	20	16	28	38	70	10	76	41	23
VDI40.C2	40	25	20	32,5	48	85	12,5	90	47,5	25,5
VDI50.C2	50	32	25	35	60	100	16	105	55	30,5
VDI60.C2	60	32	25	42,5	62,5	125	16	125	62,5	33



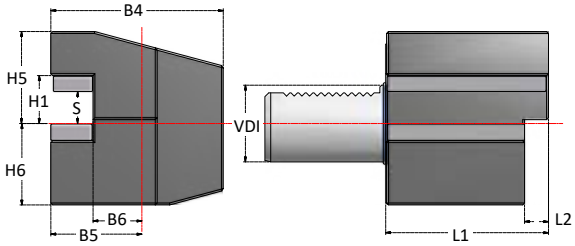
PORTAUTENSILI VDI FORMA C3 - ROVESCIATI DESTRI
VDI TOOLHOLDERS FORM C3 - OVERHEAD RIGHT

Articolo	VDI	H1	S	H5	H6	L1	L2	B1	B2	B3
VDI30.C3	30	20	16	28	38	70	10	70	35	17
VDI40.C3	40	25	20	32,5	48	85	12,5	85	42,5	21
VDI50.C3	50	32	25	35	60	100	16	100	50	26
VDI60.C3	60	32	25	42,5	62,5	125	16	125	62,5	33

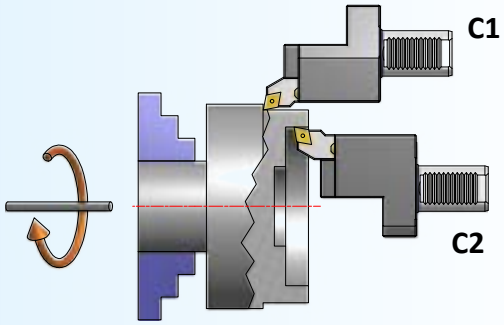


PORTAUTENSILI VDI FORMA C4 - ROVESCIATI SINISTRI
VDI TOOLHOLDERS FORM C4 - OVERHEAD LEFT

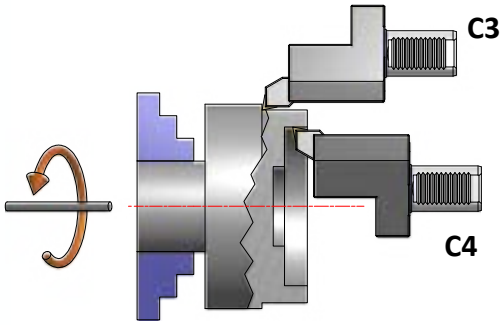
Articolo	VDI	H1	S	H5	H6	L1	L2	B4	B5	B6
VDI30.C4	30	20	16	28	38	70	10	76	41	23
VDI40.C4	40	25	20	32,5	48	85	12,5	90	47,5	25,5
VDI50.C4	50	32	25	35	60	100	16	105	55	30,5
VDI60.C4	60	32	25	42,5	62,5	125	16	125	62,5	33



ROTAZIONE ORARIA DEL MANDRINO
CLOCKWISE SPINDEL ROTATION

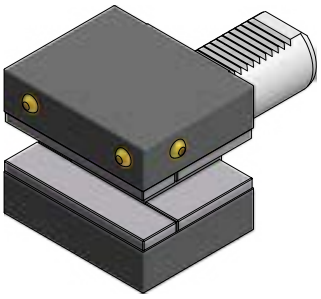


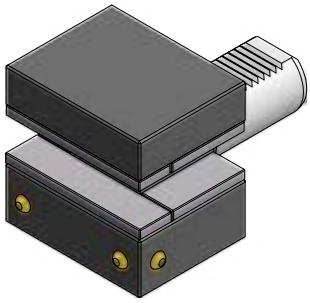
ROTAZIONE ANTIORARIA DEL MANDRINO
COUNTERCLOCKWISE SPINDEL ROTATION



P. 315
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

PORTAUTENSILI VDI A PIU' SEDI
VDI TOOLHOLDERS WITH MULTIPLE SEATS

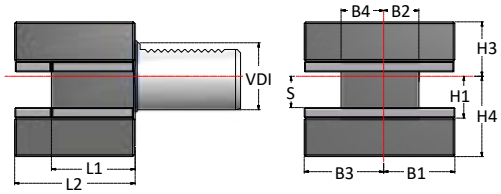




ATTACCO
SHANK
VDI
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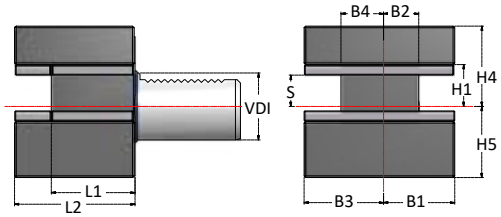
PORTAUTENSILI VDI FORMA D1
VDI TOOLHOLDERS FORM D1

Articolo	VDI	H1	S	H3	H4	L1	L2	B1	B2	B3	B4
VDI30.D1	30	20	16	28	38	42	60	35	17	41	23
VDI40.D1	40	25	20	32,5	48	50	72	42,5	21	47,5	25,5
VDI50.D1	50	32	25	35	60	60	85	50	26	55	30,5
VDI60.D1	60	32	25	42,5	62,5	85	110	57,5	33	57,5	33



PORTAUTENSILI VDI FORMA D2
VDI TOOLHOLDERS FORM D2

Articolo	VDI	H1	S	H4	H5	L1	L2	B1	B2	B3	B4
VDI30.D2	30	20	16	38	35	42	60	35	17	41	23
VDI40.D2	40	25	20	48	42,5	50	72	42,5	21	47,5	25,5
VDI50.D2	50	32	25	60	50	60	85	50	26	55	30,5
VDI60.D2	60	32	25	62,5	62,5	85	110	57,5	33	57,5	33



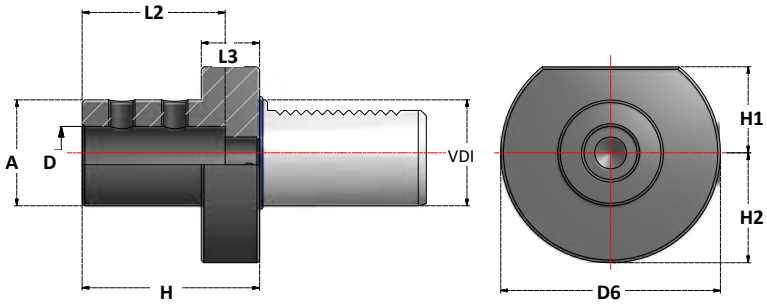
ACCESSORI - *ACCESSORIES*



P. 315
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

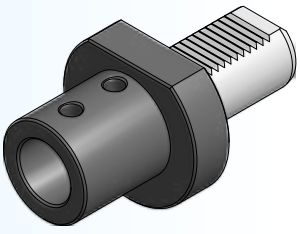
PORTAUTENSILI VDI PER PUNTE A INSERTI

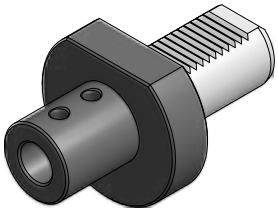
VDI TOOLHOLDERS FOR INDEXABLE INSERT DRILLS



ATTACCO
SHANK
VDI
P. 170

Articolo	VDI	D	A	H	L2	L3	D6	H1	H2
VDI30.E1-16	30	16	36	67	54	22	68	28	30
VDI30.E1-20	30	20	40	67	54	22	68	28	30
VDI30.E1-25	30	25	45	71	59	22	68	28	30
VDI30.E1-32	30	32	52	75	63	22	68	28	30
VDI30.E1-40	30	40	65	90	72	22	68	28	30
VDI40.E1-16	40	16	36	67	54	22	83	32,5	/
VDI40.E1-20	40	20	40	67	54	22	83	32,5	/
VDI40.E1-25	40	25	45	75	59	22	83	32,5	/
VDI40.E1-32	40	32	52	75	63	22	83	32,5	/
VDI40.E1-40	40	40	65	90	73	22	83	32,5	/
VDI40.E1-50	40	50	70	100	83	22	83	32,5	/
VDI50.E1-16	50	16	36	80	54	30	98	35	/
VDI50.E1-20	50	20	40	80	54	30	98	35	/
VDI50.E1-25	50	25	45	80	59	30	98	35	/
VDI50.E1-32	50	32	52	80	63	30	98	35	/
VDI50.E1-40	50	40	65	90	73	30	98	35	/
VDI50.E1-50	50	50	75	100	83	30	98	35	/
VDI60.E1-16	60	16	36	80	54	30	123	42,5	/
VDI60.E1-20	60	20	40	80	54	30	123	42,5	/
VDI60.E1-25	60	25	45	80	59	30	123	42,5	/
VDI60.E1-32	60	32	52	80	63	30	123	42,5	/
VDI60.E1-40	60	40	65	90	73	30	123	42,5	/
VDI60.E1-50	60	50	75	100	83	30	123	42,5	/



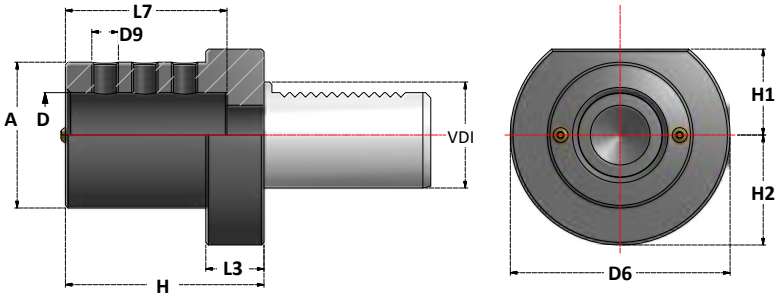


ACCESSORI - *ACCESSORIES*



P. 315
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

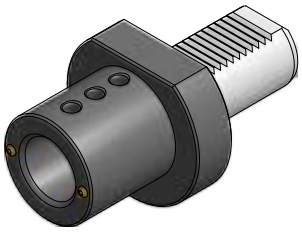
PORTAUTENSILI VDI PER BARENI
VDI BORING BAR TOOLHOLDERS



ATTACCO
SHANK
VDI
P. 170

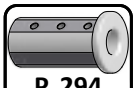
Articolo		VDI	D	A	H	L3	L7	D6	D9	H1	H2
VDI30.E2-6	*	30	6	55	60	22	51	68	M6	28	30
VDI30.E2-8	*	30	8	55	60	22	51	68	M6	28	30
VDI30.E2-10	*	30	10	55	60	22	51	68	M8	28	30
VDI30.E2-12	*	30	12	55	60	22	51	68	M8	28	30
VDI30.E2-16	*	30	16	55	60	22	51	68	M8	28	30
VDI30.E2-20		30	20	55	60	22	51	68	M8	28	30
VDI30.E2-25		30	25	55	60	22	51	68	M8	28	30
VDI30.E2-32		30	32	68	75	22	61	68	M8	28	30
VDI30.E2-40		30	40	68	75	22	61	68	M8	28	30
VDI40.E2-6	*	40	6	55	75	22	43	83	M6	32,5	/
VDI40.E2-8	*	40	8	55	75	22	43	83	M6	32,5	/
VDI40.E2-10	*	40	10	55	75	22	43	83	M8	32,5	/
VDI40.E2-12	*	40	12	55	75	22	58	83	M8	32,5	/
VDI40.E2-16	*	40	16	55	75	22	61	83	M10	32,5	/
VDI40.E2-20	*	40	20	55	75	22	61	83	M10	32,5	/
VDI40.E2-25		40	25	55	75	22	61	83	M10	32,5	/
VDI40.E2-32		40	32	83	75	22	61	83	M10	32,5	/
VDI40.E2-40		40	40	83	90	22	76	83	M10	32,5	/
VDI40.E2-50		40	50	83	90	22	76	83	M10	32,5	/
VDI50.E2-8	*	50	8	68	90	30	71	98	M6	35	/
VDI50.E2-10	*	50	10	68	90	30	71	98	M8	35	/
VDI50.E2-12	*	50	12	68	90	30	71	98	M8	35	/
VDI50.E2-16	*	50	16	68	90	30	76	98	M10	35	/
VDI50.E2-20	*	50	20	68	90	30	76	98	M12	35	/
VDI50.E2-25	*	50	25	68	90	30	76	98	M12	35	/
VDI50.E2-32		50	32	68	90	30	76	98	M12	35	/
VDI50.E2-40		50	40	98	90	30	76	98	M12	35	/
VDI50.E2-50		50	50	98	90	30	76	98	M12	35	/
VDI60.E2-16	*	60	16	68	90	30	76	123	M10	42,5	/
VDI60.E2-20	*	60	20	68	90	30	76	123	M12	42,5	/
VDI60.E2-25	*	60	25	68	90	30	76	123	M12	42,5	/
VDI60.E2-32	*	60	32	68	90	30	76	123	M12	42,5	/
VDI60.E2-40		60	40	98	90	30	76	123	M12	42,5	/
VDI60.E2-50		60	50	98	90	30	86	123	M12	42,5	/

* Foro passante con tappo filettato e seeger
Through hole with threaded cap and seeger



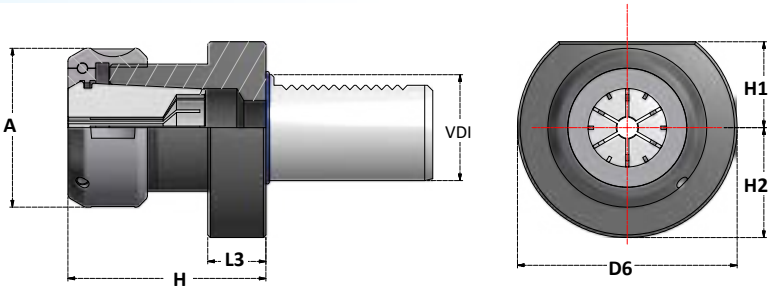


ACCESSORI - *ACCESSORIES*


P. 294
BUSSOLE
BUSHES


P. 315
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES

PORTAUTENSILI VDI - FORMA E3
VDI TOOLHOLDERS - FORM E3



ATTACCO
SHANK
VDI
P. 170

PORTAPINZE DIN6388
DIN6388 COLLETS CHUCKS

Articolo	VDI	A	H	L3	D6	H1	H2	Collets Range	Ghiera Nut
VDI30.E3.EOC25	30	60	75	22	68	28	30	2÷25	G25OCC
VDI30.E3.EOC32	30	72	90	22	68	28	30	3÷32	G32OCC
VDI40.E3.EOC25	40	60	75	22	83	32,5	/	2÷25	G25OCC
VDI40.E3.EOC32	40	72	90	22	83	32,5	/	3÷32	G32OCC
VDI50.E3.EOC25	50	60	75	30	98	35	/	2÷25	G25OCC
VDI50.E3.EOC32	50	72	90	30	98	35	/	3÷32	G32OCC
VDI60.E3.EOC25	60	60	75	30	123	42,5	/	2÷25	G25OCC
VDI60.E3.EOC32	60	72	90	30	123	42,5	/	3÷32	G32OCC

ACCESSORI - *ACCESSORIES*


P. 270
PINZE
COLLETS

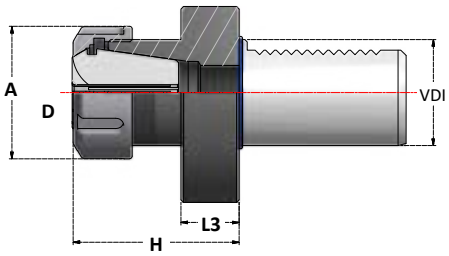

P. 287
GHIERE
NUTS

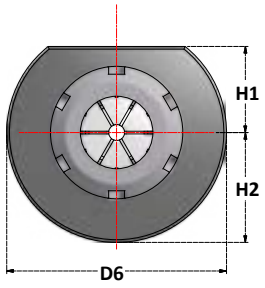

P. 315
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 289
CHIAVI
WRENCHES

PORTAUTENSILI VDI - FORMA E4

VDI TOOLHOLDERS - FORM E4





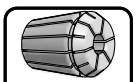
ATTACCO
SHANK
VDI
P. 170

PORTAPINZE DIN6499

DIN6499 COLLETS CHUCKS

Articolo	VDI	A	H	H1	H2	D6	L3	Collets Range	Ghiera Nut
VDI30.E4.ERC16	30	28	44	28	30	68	22	1÷10	G16SE
VDI30.E4.ERC25	30	42	57	28	30	68	22	1÷20	G25S
VDI30.E4.ERC32	30	50	62	28	30	68	22	2÷22	G32S
VDI30.E4.ERC40	30	63	72	28	30	68	22	3÷30	G40S
VDI40.E4.ERC25	40	42	62	32,5	/	83	22	1÷20	G25S
VDI40.E4.ERC32	40	50	62	32,5	/	83	22	2÷22	G32S
VDI40.E4.ERC40	40	63	75	32,5	/	83	22	3÷30	G40S
VDI50.E4.ERC25	50	42	57	35	/	98	30	1÷20	G25S
VDI50.E4.ERC32	50	50	75	35	/	98	30	2÷22	G32S
VDI50.E4.ERC40	50	63	75	35	/	98	30	3÷30	G40S
VDI60.E4.ERC32	60	50	75	42,5	/	123	30	2÷22	G32S
VDI60.E4.ERC40	60	63	75	42,5	/	123	30	3÷30	G40S

ACCESSORI - *ACCESSORIES*


P. 250
PINZE
COLLETS

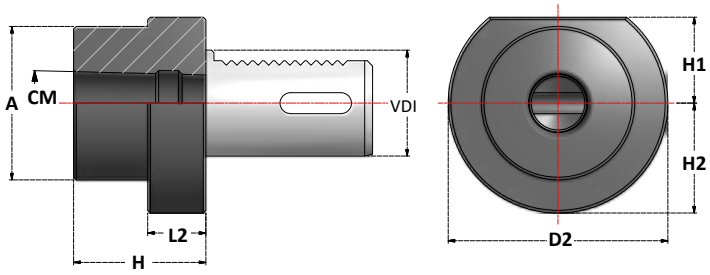

P. 280
GHIERE
NUTS


P. 315
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 288
CHIAVI
WRENCHES

DIN ISO 10889-7 | VDI | F | FORM **F**

PORTAUTENSILI VDI - FORMA F
VDI TOOLHOLDERS - FORM F



ATTACCO *SHANK* **VDI** P. 170

PORTAUTENSILI CON SEDE CONO MORSE
MORSE TAPER TOOLHOLDERS

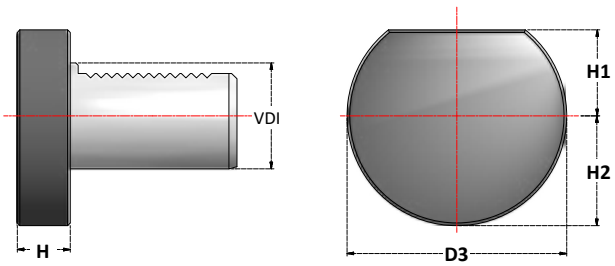
Articolo	VDI	CM	A	H	L2	D2	H1	H2
VDI30.F.CM1P	30	1	/	27	-	68	28	30
VDI30.F.CM2P	30	2	55	36	27	68	28	30
VDI30.F.CM3P	30	3	55	66	41	68	28	30
VDI40.F.CM1P	40	1	55	23	22	83	32,5	/
VDI40.F.CM2P	40	2	55	36	22	83	32,5	/
VDI40.F.CM3P	40	3	58	36	22	83	32,5	/
VDI40.F.CM4P	40	4	68	80	22	83	32,5	/
VDI50.F.CM2P	50	2	55	36	30	98	35	/
VDI50.F.CM3P	50	3	58	45	30	98	35	/
VDI50.F.CM4P	50	4	68	55	30	98	35	/
VDI50.F.CM5P	50	5	75	72	30	98	35	/
VDI60.F.CM2P	60	2	55	35	30	123	42,5	/
VDI60.F.CM3P	60	3	58	45	30	123	42,5	/
VDI60.F.CM4P	60	4	68	55	30	123	42,5	/
VDI60.F.CM5P	60	5	98	64	30	123	42,5	/

ACCESSORI - *ACCESSORIES*



DIN ISO 10889 | VDI | Z | FORM **Z**

TAPPI DI PROTEZIONE VDI - FORMA Z
VDI PROTECTION PLUGS - FORM Z



TAPPI DI PROTEZIONE VDI IN ACCIAIO
STEEL VDI PROTECTION PLUGS

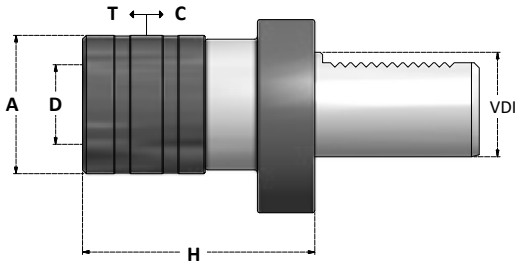
Articolo	VDI	H	D3	H1	H2
VDI30.Z2.A	30	16	68	28	30
VDI40.Z2.A	40	20	83	32,5	/
VDI50.Z2.A	50	20	98	35	/
VDI60.Z2.A	60	20	123	42,5	/

TAPPI DI PROTEZIONE VDI IN PLASTICA
PLASTIC VDI PROTECTION PLUGS

VDI30.Z2.P	30	16	68	28	30
VDI40.Z2.P	40	20	83	32,5	/
VDI50.Z2.P	50	20	98	35	/
VDI60.Z2.P	60	20	123	42,5	/

DIN ISO 10889 | VDI | MCR TC

MASCHIATORI A CAMBIO RAPIDO CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION



ATTACCO *SHANK* **VDI** P. 170

SCHEDA TECNICA *TECHNICAL DATA* MCR P. 352

Corsa di compressione: *Compression stroke:* **C**

Corsa di trazione: *Extension stroke:* **T**

Articolo	VDI	H
VDI30.MCR1TC	30	61
VDI30.MCR2TC	30	84
VDI40.MCR1TC	40	55
VDI40.MCR2TC	40	77
VDI40.MCR3TC	40	123
VDI50.MCR1TC	50	55
VDI50.MCR2TC	50	79
VDI50.MCR3TC	50	110

	Bussola Adapter	D	Tapping Range	A	T	C
..MCR1TC	B1 / BF1	19	M2÷M14	36	7,5	7,5
..MCR2TC	B2 / BF2	31	M6÷M27	53	12,5	12,5
..MCR3TC	B3 / BF3	48	M14÷M45	78	20	20



Fornito con accessorio per refrigerazione esterna
Supplied with pipe for external coolant

ACCESSORI - *ACCESSORIES*

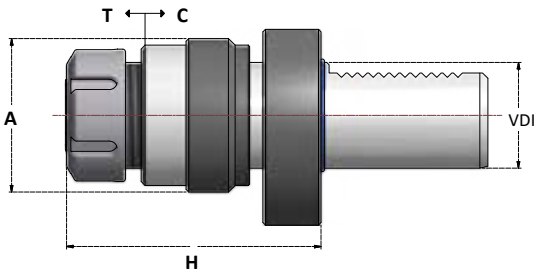

P. 336 MASCHI *TAPS*


P. 315 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 298 INSERZIONI *ADAPTERS*

DIN ISO 10889 | VDI | ERC TC

PORTAMASCHI CON COMPENSAZIONE ASSIALE - PORTAPINZA ER
TAPPING CHUCKS WITH AXIAL COMPENSATION - ER COLLET CHUCKS



Corsa di compressione: *Compression stroke:* **C**

Corsa di trazione: *Extension stroke:* **T**

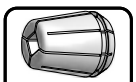
Articolo	VDI	H
VDI30.ERC25TC	30	84
VDI30.ERC32TC	30	94
VDI40.ERC25TC	40	86
VDI40.ERC32TC	40	94

Articolo	A	T	C	Tapping Range	Collets Range	Ghiera Nut
ERC25TC	58	12	4	M3 ÷ M20	3,5 ÷ 16	G25S
ERC32TC	58	12	4	M3 ÷ M27	3,5 ÷ 20	G32S



Fornito con accessorio per refrigerazione esterna
Supplied with pipe for external coolant

ACCESSORI - *ACCESSORIES*


P. 265 PINZE CON QUADRO *COLLETS WITH SQUARE*


P. 280 GHIERE *NUTS*

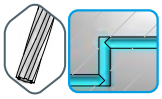

P. 336 MASCHI *TAPS*

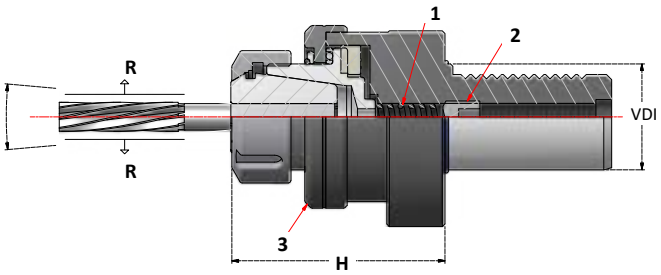

P. 315 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*


P. 288 CHIAVI *WRENCHES*

DIN ISO 10889 | VDI | RM

PORTA ALESATORI FLOTTANTI CON PASSAGGIO DEL REFRIGERANTE
FLOATING REAMER HOLDERS WITH COOLANT FLOW





ATTACCO *SHANK* **VDI** P. 170

SCHEDA TECNICA *TECHNICAL DATA* RM P. 354

Movimento radiale: **R** *Radial stroke:*

Articolo	VDI	H
VDI30.RM25	30	64
VDI30.RM32	30	68
VDI40.RM32	40	74
VDI40.RM40	40	74

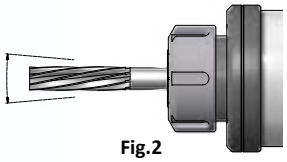


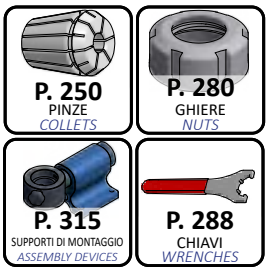
Fig.2

Articolo	R	Collets Range	Ghiera Nut
...RM25	± 1 mm	1÷20	G25S
...RM32	± 1,5 mm	2÷22	G32S
...RM40	± 1,5 mm	3÷30	G40S

-La spinta della molla **1** mantiene l'utensile centrato anche in posizione orizzontale.
- La vite **2** regola la pressione della molla per regolare il movimento radiale.
- Allentando di 0,1/0,2mm la ghiera **3** si permette all'alesatore di avere un movimento pendolare. (Fig2)

*- Pressure of spring **1** keeps reamer centered, even in the horizontal position.*
*- Screw **2** allows adjustment of floating level.*
*- Unscrewing nut **3** for 0,1/0,2mm reamer has a pendulum float. (Fig 2)*

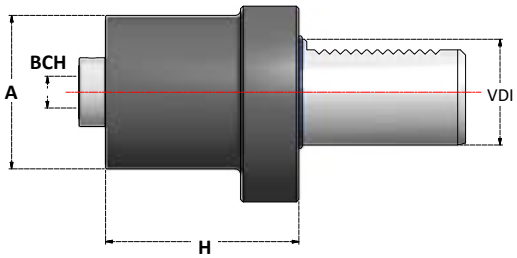
ACCESSORI - *ACCESSORIES*



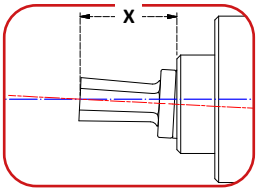
DIN ISO 10889 | VDI | BCH

BROCCIATORI
BROACHING TOOLHOLDERS





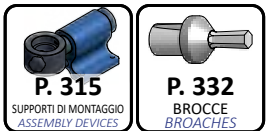
SCHEDA TECNICA *TECHNICAL DATA* BCH P. 355



Articolo	VDI	BCH	X	H	A
VDI30.BCH12	30	12	25	66	58
VDI30.BCH16	30	16	40	66	58
VDI40.BCH12	40	12	25	67	58
VDI40.BCH16	40	16	40	83	58

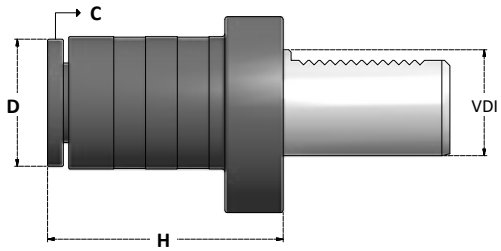
Utilizzare solo con brocce con lunghezza X
Use only broaches with lenghts X

ACCESSORI - *ACCESSORIES*



DIN ISO 10889 VDI SAS

FERMI BARRA ROTANTI
ROTATING STOP SHOCK ABSORBERS



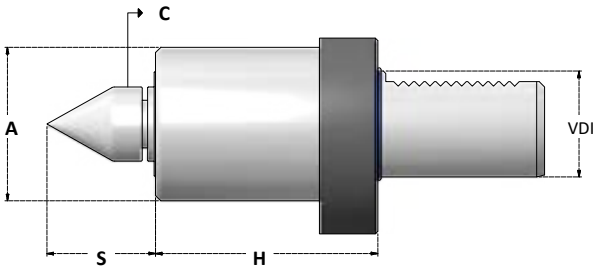
ATTACCO
SHANK
VDI
P. 170

Articolo	VDI	D	H	C*
VDI30.SAS35	30	35	70	3
VDI30.SAS56	30	56	70	3
VDI40.SAS40	40	40	78	3
VDI40.SAS60	40	60	78	3

*** CORSA DI COMPRESSIONE**
** ABSORBER STROKE*

DIN ISO 10889 VDI CNP

CONTROPUNTE ROTANTI CON COMPRESSIONE
LIVE CENTRES WITH COMPRESSION



Articolo	VDI	A	H	S	C*
VDI30.CNP58	30	58	78	34	2,5
VDI40.CNP58	40	58	80	34	2,5

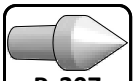
FORNITI CON CUSPIDE CNP.CS1
SUPPLIED WITH TIP CNP.CS1

CUSPIDI INTERCAMBIABILI
INTERCHANGEABLE TIPS

*** CORSA DI COMPRESSIONE**
** ABSORBER STROKE*

ACCESSORI - *ACCESSORIES*

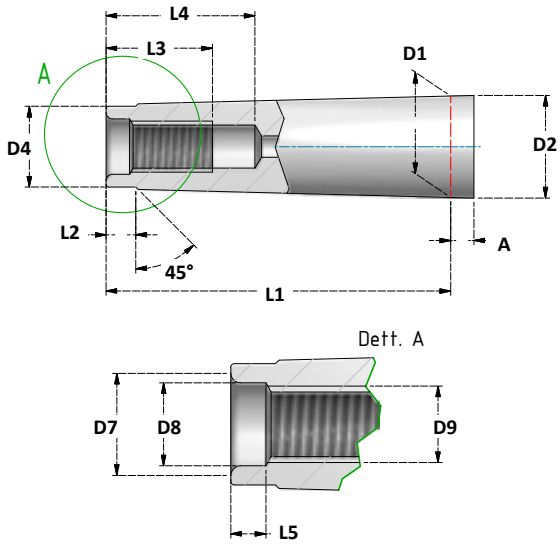

P. 315
SUPPORTI DI MONTAGGIO
ASSEMBLY DEVICES


P. 307
CUSPIDI
TIPS

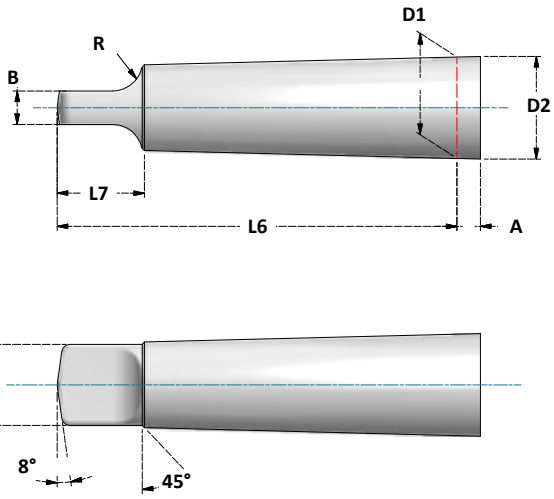
MANDRINI CONO MORSE **- CM**

MORSE TAPER TOOLHOLDERS - CM

Form **A**



Form **B**

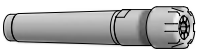


DIMENSIONI CONO

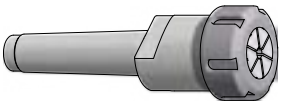
TAPER DIMENSIONS

CONO TAPER	A	B	D1	D2	D4	D6	D7	D8	D9	L1	L2	L3	L4	L5	L6	L7	R	α/2
		h13			MAX					MAX		MAX	min	+0,5 0	0 -1	MAX		
1	3,5	5,2	12,065	12,2	9	8,7	8,5	6,4	M6	53,5	5	16	22	4	62	13,5	5	1° 25’ 43”
2	5	6,3	17,78	18	14	13,5	13,2	10,5	M10	64	5	24	31,5	5	75	16	6	1° 25’ 50”
3	5	7,9	23,825	24,1	19	18,5	16	13	M12	81	7	24	33,5	5,5	94	20	7	1° 26’ 16”
4	6,5	11,9	31,267	31,6	25	24,5	21,5	17	M16	102,5	9	32	42,5	8,2	117,5	24	8	1° 29’ 15”
5	6,5	15,9	44,399	44,7	35,7	35,7	26	21	M20	129,5	10	40	52,5	10	149,5	29	10	1° 30’ 26”
6	8	19	63,348	63,8	51	51	32	25	M24	182	16	47	61,5	11,5	210	40	13	1° 29’ 36”

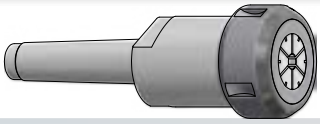
DIN 228 - CM



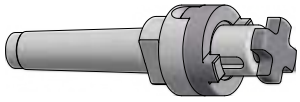
MANDRINI PORTAPINZA ER - GHIERE MINI
COLLET CHUCKS ER - MINI NUTS
DIN ISO 15488 (DIN6499) PAG. 186



MANDRINI PORTAPINZA ER - GHIERE STANDARD
COLLET CHUCKS ER - STANDARD NUTS
DIN ISO 15488 (DIN6499) PAG. 186



MANDRINI PORTAPINZA EOC
COLLET CHUCKS EOC
DIN ISO 10897(DIN6388) PAG. 187



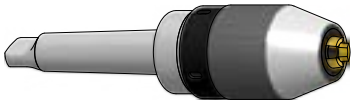
MANDRINI PORTAFRESA COMBI
COMBI SHELL MILL HOLDERS
DIN 6358 PAG. 187



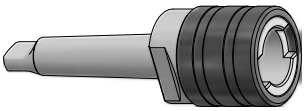
RIDUZIONI CONO MORSE
MORSE TAPER SLEEVES
DIN 2185 PAG. 188



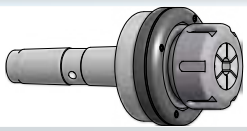
PROLUNGHE CONO MORSE
MORSE TAPER EXTENSIONS
DIN 2187 PAG. 188



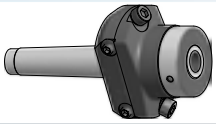
MANDRINI PORTAPUNTA
DRILL CHUCKS
PAG. 189



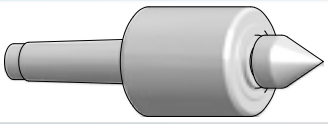
PORTAMASCHI
TAPPING CHUCKS
PAG. 190



PORTA ALESATORI
REAMER HOLDERS
PAG. 191



BROCCIATORI
BROACH TOOLHOLDERS
PAG. 192

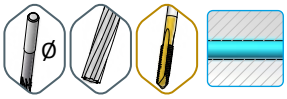


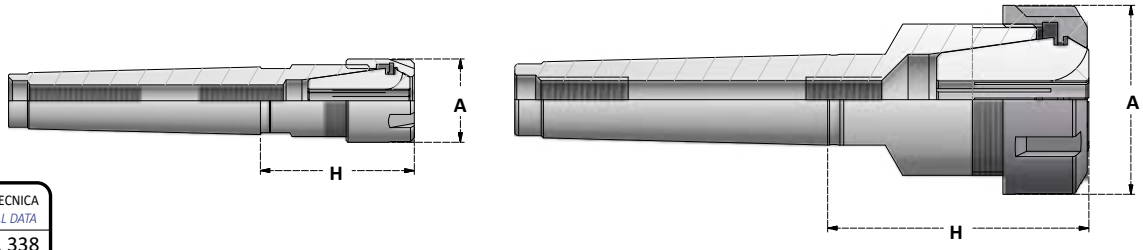
CONTROPUNTE ROTANTI
LIVE CENTRES
PAG. 193



MANDRINI DI COLLAUDO
TEST ARBORS
ISO-R230 PAG. 330

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





ATTACCO *SHANK* CM P. 184
SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

CON GHIERA MINI
WITH MINI NUT

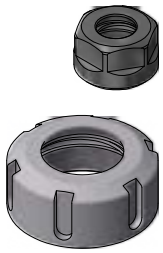
Articolo	H
CM1.H25.ERC11M	25
CM1.H40.ERC16M	40
CM2.H42.ERC16M	42
CM2.H50.ERC20M	50
CM2.H54.ERC25M	54
CM3.H43.ERC16M	43
CM3.H47.ERC20M	47
CM3.H58.ERC25M	58



	A	Collets Range	Ghiera Nut
...ERC11M	16	1÷7	G11M
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M
...ERC25M	35	1÷20	G25M

CON GHIERA STANDARD
WITH STANDARD NUT

Articolo	H
CM1.H25.ERC11	25
CM1.H40.ERC16	40
CM2.H42.ERC16	42
CM2.H50.ERC20	50
CM2.H54.ERC25	54
CM3.H53.ERC25	53
CM3.H70.ERC32	70
CM3.H80.ERC40	80
CM4.H56.ERC25	56
CM4.H60.ERC32	60
CM4.H81.ERC40	81
CM4.H96.ERC50	96
CM5.H50.ERC32	50
CM5.H82.ERC40	82
CM5.H91.ERC50	91



	A	Collets Range	Ghiera Nut
...ERC11	19	1÷7	G11SE
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S
...ERC50	78	6÷34	G50S

MANDRINI CON FILETTI A POLLICI
TOOLHOLDERS WITH INCH THREAD

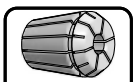
Articolo	H	A	Filetto Thread
MT3-H3.00-ERC40	76	63	1/2- 13
MT4-H3.18-ERC40	80	63	5/8- 11
MT5-H3.22-ERC40	82	63	3/4- 10

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Ø Pinze Ø Collets	Mandrino Toolholder	Chiave Wrench
BX.CM1.ERC16	ERC16	D1÷10	CM1.H40.ERC16	CH.E25
BX.CM2.ERC16	ERC16	D1÷10	CM2.H42.ERC16	CH.E25
BX.CM3.ERC25	ERC25	D2÷16	CM3.H53.ERC25	CH25S
BX.CM3.ERC32	ERC32	D3÷20	CM3.H70.ERC32	CH32S
BX.CM4.ERC32	ERC32	D3÷20	CM4.H60.ERC32	CH32S
BX.CM4.ERC40	ERC40	D4÷26	CM4.H81.ERC40	CH40S



ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*

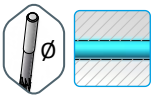

P. 280 GHIERE *NUTS*

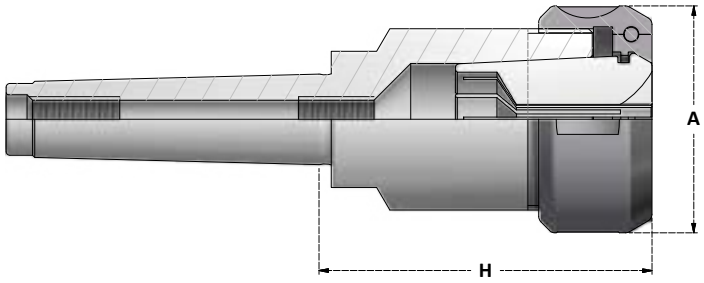

P. 308 TENONI *TANGS*


P. 288 CHIAVI *WRENCHES*

DIN 228 - A | CM | EOC | DIN ISO 10897(DIN6388)

MANDRINI PORTAPINZA EOC
EOC COLLET CHUCKS





ATTACCO
SHANK
CM
P. 184

Articolo	H
CM2.H57.EOC16	57
CM2.H76.EOC25	76
CM3.H61.EOC16	61
CM3.H90.EOC25	90
CM4.H84.EOC25	84
CM4.H84.EOC32	84
CM5.H84.EOC25	84
CM5.H84.EOC32	84

	A	Collets Range	Ghiera Nut
...EOC16	43	2÷16	G16OCC
...EOC25	60	2÷25	G25OCC
...EOC32	72	3÷32	G32OCC

ACCESSORI - *ACCESSORIES*


P. 270
PINZE
COLLETS


P. 287
GHIERE
NUTS

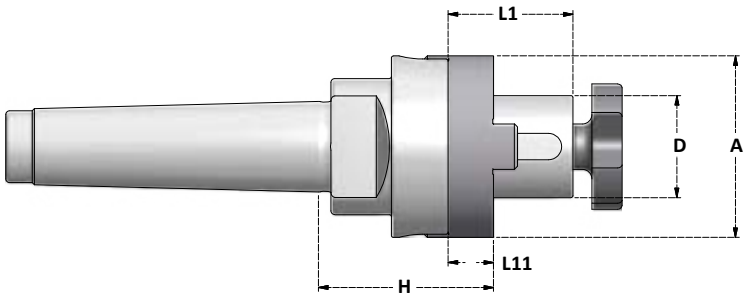

P. 308
TENONI
TANGS


P. 289
CHIAVI
WRENCHES

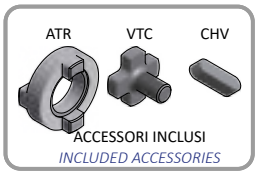
DIN 228-B | CM | D_C | DIN 6358

MANDRINI PORTAFRESA COMBINATI
COMBI SHELL MILL HOLDERS





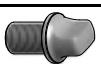
SCHEDA TECNICA
TECHNICAL DATA
D C | P. 348

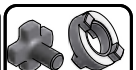


Articolo	D	H
CM3.H48.D16C	16	48
CM3.H48.D22C	22	48
CM3.H48.D27C	27	48
CM3.H63.D32C	32	63
CM4.H55.D16C	16	55
CM4.H55.D22C	22	55
CM4.H55.D27C	27	55
CM4.H55.D32C	32	55
CM5.H75.D22C	22	75
CM5.H75.D27C	27	75
CM5.H75.D32C	32	75
CM5.H75.D40C	40	75

	A	L1	L11	ATR	VTC	CHV
D16C	32	27	10	ATR.D16	VTC.D16	CHV.D16
D22C	40	31	12	ATR.D22	VTC.D22	CHV.D22
D27C	48	33	12	ATR.D27	VTC.D27	CHV.D27
D32C	58	38	14	ATR.D32	VTC.D32	CHV.D32
D40C	70	41	14	ATR.D40	VTC.D40	CHV.D40

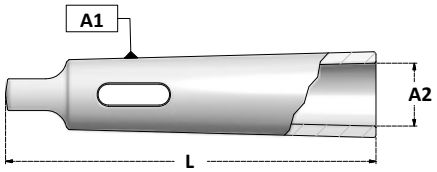
ACCESSORI - *ACCESSORIES*


P. 308
TENONI
TANGS


P. 304-305
ACCESSORI
ACCESSORIES

RIDUZIONI CONO MORSE
MORSE TAPER SLEEVES

DIN 2185

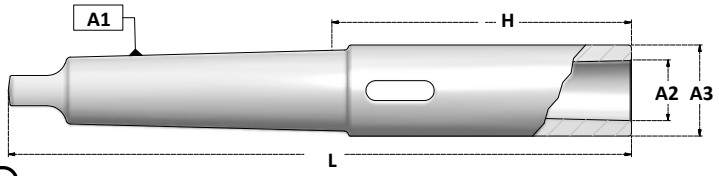


ATTACCO
SHANK
CM
P. 184

Articolo	A1	A2	L
CMB2-1	CM2	CM1	92
CMB3-1	CM3	CM1	99
CMB3-2	CM3	CM2	112
CMB4-1	CM4	CM1	124
CMB4-2	CM4	CM2	124
CMB4-3	CM4	CM3	140
CMB5-1	CM5	CM1	156
CMB5-2	CM5	CM2	156
CMB5-3	CM5	CM3	156
CMB5-4	CM5	CM4	171
CMB6-3	CM6	CM3	218
CMB6-4	CM6	CM4	218
CMB6-5	CM6	CM5	218

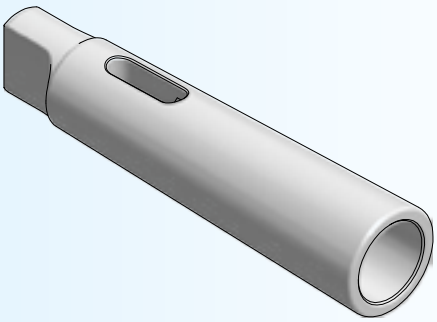
PROLUNGHE CONO MORSE
MORSE TAPER EXTENSIONS

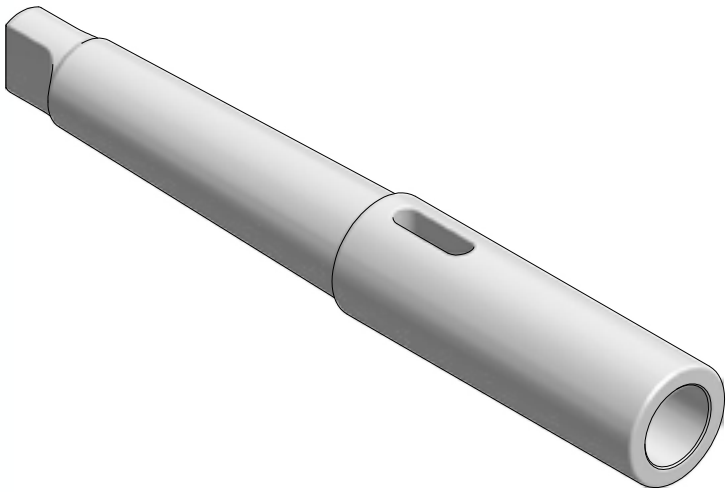
DIN 2187



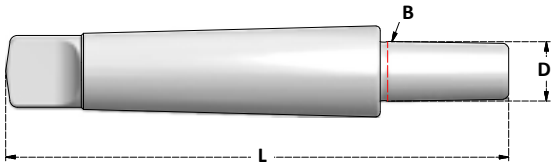
SCHEDA TECNICA
TECHNICAL DATA
CM P | P. 350

Articolo	A1	A2	A3	L	H
CMBL1-1	CM1	CM1	20	145	83
CMBL1-2	CM1	CM2	30	160	98
CMBL2-1	CM2	CM1	20	160	85
CMBL2-2	CM2	CM2	30	175	100
CMBL2-3	CM2	CM3	36	196	121
CMBL3-1	CM3	CM1	30	175	81
CMBL3-2	CM3	CM2	30	194	100
CMBL3-3	CM3	CM3	36	215	121
CMBL3-4	CM3	CM4	48	240	146
CMBL4-2	CM4	CM2	30	215	97,5
CMBL4-3	CM4	CM3	36	240	122,5
CMBL4-4	CM4	CM4	48	265	147,5
CMBL4-5	CM4	CM5	63	300	182,5
CMBL5-2	CM5	CM2	30	247	97,5
CMBL5-3	CM5	CM3	36	268	118,5
CMBL5-4	CM5	CM4	48	300	150,5
CMBL5-5	CM5	CM5	63	335	185,5
CMBL5-6	CM5	CM6	80	396	247
CMBL6-4	CM6	CM4	48	355	145
CMBL6-5	CM6	CM5	63	399	180
CMBL6-6	CM6	CM6	80	451	241





ATTACCHI PER MANDRINI AUTOSERRANTI
DRILL CHUCKS ARBORS



ATTACCO *SHANK* **CM** P. 184

Articolo	L
CM1.B10	86
CM2.B10	105
CM3.B10	121

Articolo	L
CM1.B12	89
CM2.B12	106
CM3.B12	125
CM4.B12	152,5

Articolo	L
CM1.B16	99
CM2.B16	112
CM3.B16	134
CM4.B16	159
CM5.B16	196

Articolo	L
CM2.B18	119
CM3.B18	140
CM4.B18	168
CM5.B18	205

B	D
...B10	10,094
...B12	12,065
...B16	15,733
...B18	17,78

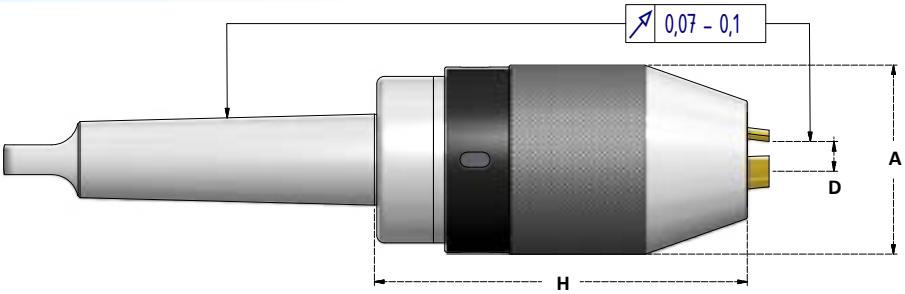
ACCESSORI - *ACCESSORIES*



P. 204
AUTOSERRANTI
DRILL CHUCKS

DIN 228-B | CM | DCK

MANDRINI PORTAPUNTA AUTOSERRANTI - ROTAZIONE DESTRA
DRILL CHUCKS - RIGHT ROTATION





CHIAVE INCLUSA
WRENCH INCLUDED

Articolo	D	H	A	Chiave Wrench
CM2B.H61.DCK8S	0,5 - 8	61	37,5	CH.DC8
CM2B.H70.DCK10S	0,5 - 10	70	43	CH.DC10
CM2B.H81.DCK13S	1- 13	81	50,5	CH.DC13
CM3B.H81.DCK13S	1 - 13	81	50,5	CH.DC13
CM4B.H81.DCK13S	1 - 13	81	50,5	CH.DC13
CM3B.H85.DCK16S	3 - 16	85	57	CH.DC16
CM4B.H85.DCK16S	3 - 16	85	57	CH.DC16

GRIFFE RIVESTITE IN TITANIO

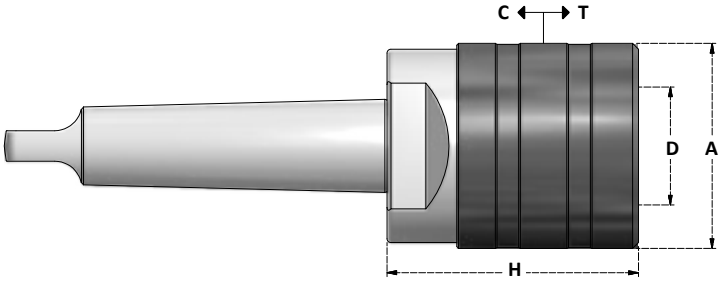
TITANIUM COATED JAWS

ACCESSORI - *ACCESSORIES*



P. 289
CHIAVI
WRENCHES

MASCHIATORI CON COMPENSAZIONE ASSIALE
TAPPING CHUCKS WITH AXIAL COMPENSATION



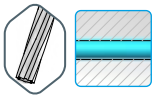
ATTACCO *SHANK* **CM** P. 184

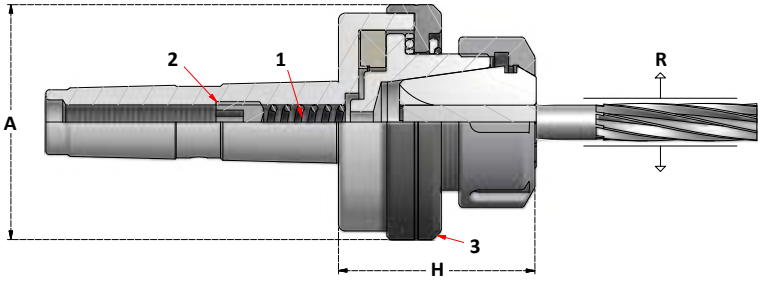
SCHEDA TECNICA *TECHNICAL DATA* MCR P. 352

Articolo	Bussola Adapter	D	Tapping Range	H	A	T	C
CM2B.MCR1TC	B1 / BF1	19	M2÷M14	47	36	7,5	7,5
CM3B.MCR1TC	B1 / BF1	19	M2÷M14	47	36	7,5	7,5
CM3B.MCR2TC	B2 / BF2	31	M6÷M27	71	53	12,5	12,5
CM4B.MCR2TC	B2 / BF2	31	M6÷M27	72	53	12,5	12,5
CM4B.MCR3TC	B3 / BF3	48	M14÷M45	105	78	20	20
CM5B.MCR3TC	B3 / BF3	48	M14÷M45	105	78	20	20
CM5B.MCR4TC	BF4	60	M22÷M45	117	96	22,5	22,5

ACCESSORI - *ACCESSORIES*
P. 336 MASCHI *TAPS*
P. 298 INSERZIONI *ADAPTERS*

PORTA ALESATORI FLOTTANTI CON REFRIGERAZIONE INTERNA
FLOATING REAMER HOLDERS WITH COOLANT FLOW





ATTACCO *SHANK* CM P. 184

SCHEDA TECNICA *TECHNICAL DATA* RM P. 354

Articolo	H
CM2.RM11	40
CM3.RM11	40
CM2.RM16	44
CM3.RM16	44
CM2.RM20	50
CM3.RM20	50
CM2.RM25	53
CM3.RM25	53
CM3.RM32	58
CM4.RM32	58
CM3.RM40	64
CM4.RM40	64

Articolo	A	R	Collets Range	Ghiera Nut
...RM11	42	± 1 mm	1÷7	G11A.EX
...RM16	42	± 1 mm	1÷10	G16SE
...RM20	50	± 1 mm	1÷14	G20SE
...RM25	57	± 1 mm	1÷20	G25S
...RM32	69	± 1,5 mm	2÷22	G32S
...RM40	79	± 1,5 mm	3÷30	G40S

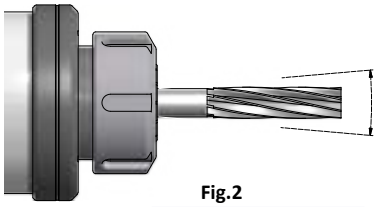


Fig.2

Movimento radiale: **R**
Radial stroke:

L'alesatore oscilla su un cuscinetto a sfere per compensare gli errori di allineamento tra il mandrino della macchina e il pezzo in lavorazione.

- La spinta della molla **1** mantiene l'utensile centrato anche in posizione orizzontale.
- La vite **2** regola la pressione della molla per regolare il movimento radiale.
- Allentando di 0,1/0,2mm la ghiera **3** si permette all'alesatore di avere un movimento pendolare. (Fig2)

Free mooving ball bearing drive permits to the reamer to follow the drilled hole of the workpiece.

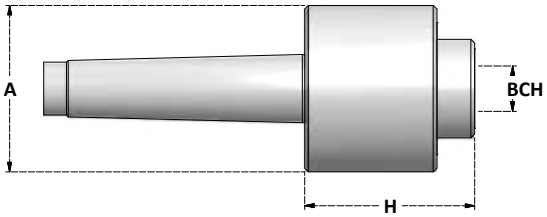
*- Pressure of spring **1** keeps reamer centered, even in horizontal position.*
*- Screw **2** allows adjustment of floating level.*
*- Unscrewing nut **3** for 0,1/0,2mm reamer has a pendulum float. (Fig 2)*

ACCESSORI - *ACCESSORIES*



DIN 228 - A | CM | BCH

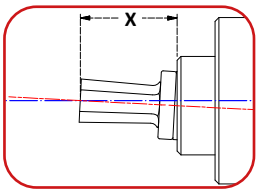
BROCCIATORI FISSI
BROACH TOOLHOLDERS



ATTACCO *SHANK* **CM** P. 184

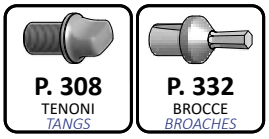
SCHEDA TECNICA *TECHNICAL DATA* BCH | P. 355

Articolo	BCH	H	A	X
CM2.BCH8	8	38	32	18
CM2.BCH12	12	46	44	25
CM3.BCH16	16	76	58	40
CM4.BCH16	16	76	58	40



Utilizzare solo con brocce con lunghezza X
Use only broaches with lenghts X

ACCESSORI - *ACCESSORIES*



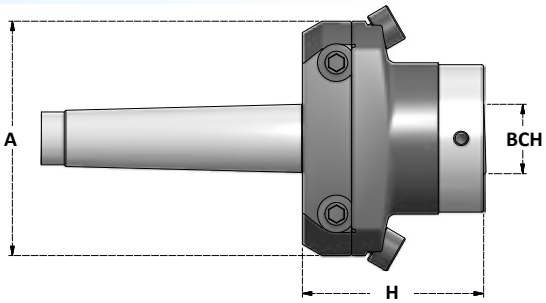
P. 308 TENONI *TANGS*

P. 332 BROCCE *BROACHES*

DIN 228-A | CM | BCH R

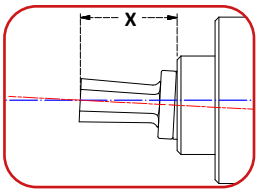
BROCCIATORI REGISTRABILI
ADJUSTABLE BROACH TOOLHOLDERS

ISTRUZIONI *INSTRUCTIONS* **BCH R** P. 362



SCHEDA TECNICA *TECHNICAL DATA* BCH | P. 355

Articolo	BCH	H	A
CM2.BCH8R	8	34	50
CM2.BCH12R	12	52	62



Si possono usare brocce di diversa lunghezza X,
consentendo di eseguire brocciature all'interno di incamerature profonde.

You can use different broaching lenghts X,
so that you can even broach inside deep chambers.

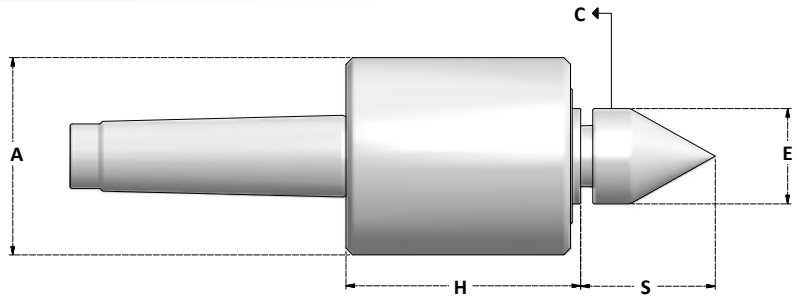
ACCESSORI - *ACCESSORIES*



P. 308 TENONI *TANGS*

P. 332 BROCCE *BROACHES*

CONTROPUNTE ROTANTI CON COMPRESSIONE
LIVE CENTRES WITH COMPRESSION



CORSA DI COMPRESSIONE **C**
ABSORBER STROKE

ATTACCO
SHANK
CM
P. 184

Articolo	H	A	E	S	C
CM2.CNP43	43	43	18	21	3
CM3.CNP43	43	43	18	21	3

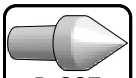
Articolo	H	A	E	S	C
CM3.CNP58	71	58	28	34	2,5
CM4.CNP58	71	58	28	34	2,5

FORNITI CON CUSPIDE CNP.CS1
SUPPLIED WITH TIP CNP.CS1

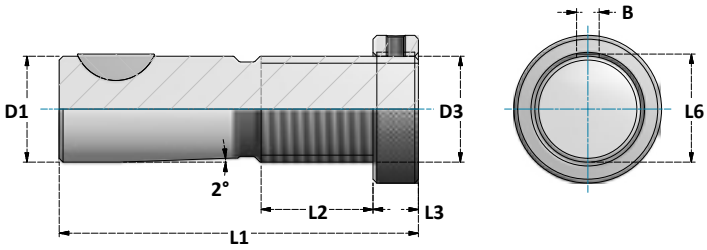
CUSPIDI INTERCAMBIABILI
INTERCHANGEABLE TIPS

ACCESSORI - *ACCESSORIES*


P. 308
TENONI
TANGS

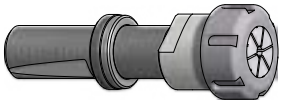

P. 307
CUSPIDI
TIPS

INSERZIONI REGISTRABILI “TR”
“TR” ADJUSTABLE ADAPTERS



DIMENSIONI
DIMENSIONS

ATTACCO	D1	D3	L1	L2	L3	L6	B
	g5						
TR16	16	TR16 x 1,5	85	28	12	17,1	5
TR20	20	TR20 x 1,5	88	28	12	21,1	5
TR28	28	TR28 x 2	95	30	12	29,5	6
TR36	36	TR36 x 2	118	36	14	37,5	8
TR48	48	TR48 x 2	144	47	18	49,9	10



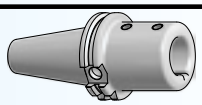
MANDRINI PORTAPINZA ER
ER COLLET CHUCKS
PAG. 195



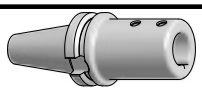
RIDUZIONI A CONO MORSE - CORTE
MORSE TAPER ADAPTERS - SHORT
PAG. 196



RIDUZIONI A CONO MORSE - LUNGHE
MORSE TAPER ADAPTERS - LONG
PAG. 196



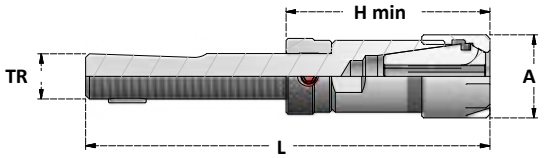
TC
P. 105
PORTA INSERZIONI REGISTRABILI
HOLDERS FOR ADJUSTABLE ADAPTERS



BT
P. 149
PORTA INSERZIONI REGISTRABILI
HOLDERS FOR ADJUSTABLE ADAPTERS

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





SCHEDA TECNICA
TECHNICAL DATA
ERC P. 338

Articolo	TR	H min	L
TR16.H59.ERC16M	16	59	132
TR16.H63.ERC20M	16	63	136
TR20.H59.ERC16M	20	59	135
TR20.H63.ERC20M	20	63	139
TR20.H64.ERC25M	20	64	140

	A	Collets Range	Ghiera Nut
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M
...ERC25M	35	1÷20	G25M

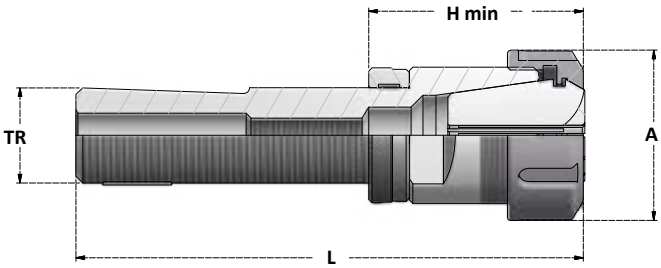


SENZA PASSAGGIO DEL REFRIGERANTE
WITHOUT COOLANT BORE

DIN 6327 TR ERC DIN ISO 15488 (DIN6499)

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





SCHEDA TECNICA
TECHNICAL DATA
ERC P. 338

Articolo		TR	H min	L
TR16.H45.ERC11	*	16	45	118
TR16.H56.ERC16	*	16	56	129
TR20.H56.ERC16	*	20	56	132
TR20.H61.ERC20	*	20	61	137
TR28.H56.ERC16		28	56	139
TR28.H61.ERC20		28	61	144
TR28.H60.ERC25		28	60	143
TR28.H70.ERC32		28	70	151,5
TR28.H76.ERC40		28	76	159
TR36.H65.ERC32		36	65	169,5
TR36.H78.ERC40		36	78	182
TR48.H69.ERC32		48	69	196
TR48.H82.ERC40		48	82	209

	A	Collets Range	Ghiera Nut
...ERC11	19	1÷7	G11SE
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE



...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



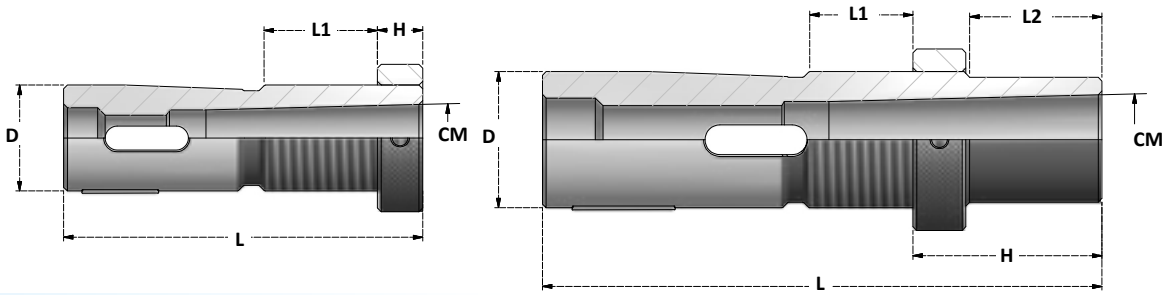
ACCESSORI - *ACCESSORI*

P. 250 PINZE *COLLETS*
P. 280 GHIERE *NUTS*
P. 288 CHIAVI *WRENCHES*

* = **SENZA PASSAGGIO DEL REFRIGERANTE**
* = *WITHOUT COOLANT BORE*

INSERZIONI REGISTRABILI CONO MORSE

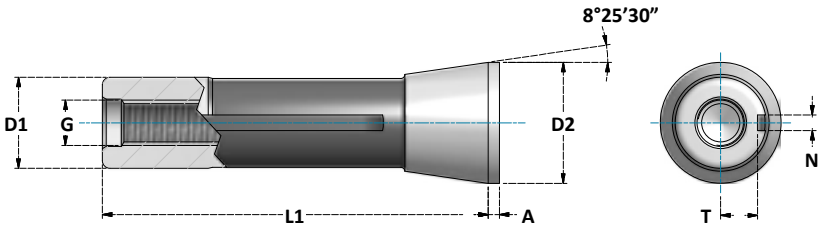
ADJUSTABLE MORSE TAPER ADAPTERS



Articolo	D	CM	L	H	L1
E16.CM1	16	CM1	85	12	28
E20.CM1	20	CM1	88	12	28
E28.CM1	28	CM1	95	12	30
E28.CM2	28	CM2	95	12	30
E36.CM1	36	CM1	118	14	36
E36.CM2	36	CM2	118	14	36
E36.CM3	36	CM3	118	14	36
E48.CM1	48	CM1	144	18	47
E48.CM2	48	CM2	144	18	47
E48.CM3	48	CM3	144	18	47
E48.CM4	48	CM4	144	18	47

Articolo	D	CM	L	H	L1	L2
G16.CM1.25	16	CM1	110	37	28	25
G16.CM1.50	16	CM1	135	62	28	50
G16.CM1.75	16	CM1	160	87	28	75
G16.CM1.100	16	CM1	185	112	28	100
G20.CM1.25	20	CM1	113	37	28	25
G20.CM1.50	20	CM1	138	62	28	50
G20.CM1.75	20	CM1	163	87	28	75
G20.CM1.100	20	CM1	188	112	28	100
G28.CM1.25	28	CM1	120	37	30	25
G28.CM1.50	28	CM1	145	62	30	50
G28.CM1.75	28	CM1	170	87	30	75
G28.CM1.100	28	CM1	195	112	30	100
G28.CM2.25	28	CM2	120	37	30	25
G28.CM2.50	28	CM2	145	62	30	50
G28.CM2.75	28	CM2	170	87	30	75
G28.CM2.100	28	CM2	195	112	30	100
G36.CM2.30	36	CM2	148	44	36	30
G36.CM2.60	36	CM2	178	74	36	60
G36.CM2.90	36	CM2	208	104	36	90
G36.CM2.120	36	CM2	238	134	36	120
G36.CM3.30	36	CM3	148	44	36	30
G36.CM3.60	36	CM3	178	74	36	60
G36.CM3.90	36	CM3	208	104	36	90
G36.CM3.120	36	CM3	238	134	36	120
G48.CM3.40	48	CM3	184	58	47	40
G48.CM3.80	48	CM3	224	98	47	80
G48.CM3.120	48	CM3	264	138	47	120
G48.CM3.160	48	CM3	304	178	47	160
G48.CM4.40	48	CM4	184	58	47	40
G48.CM4.80	48	CM4	224	98	47	80
G48.CM4.120	48	CM4	264	138	47	120
G48.CM4.160	48	CM4	304	178	47	160

MANDRINI R8
R8 TOOLHOLDERS

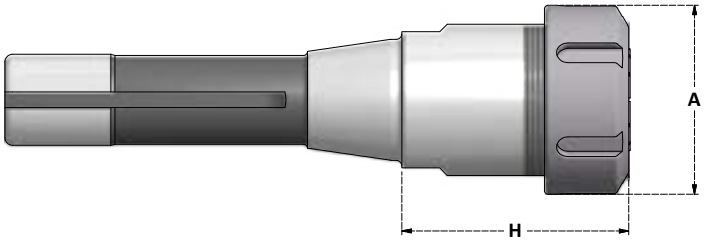


DIMENSIONI
DIMENSIONS

D1	D2	L1	G	A	N	T
		MAX	MAX			
24,12	32	101,6	7/16- 20 NF-2B	3,17	4	2,5

MANDRINI PORTAPINZA ER
ER COLLET CHUCKS





SCHEDA TECNICA
TECHNICAL DATA
ERC P. 338

Articolo	H
R8.H44.ERC16	44
R8.H50.ERC25	50
R8.H63.ERC32	63
R8.H72.ERC40	72





	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino Chuck	Chiave Wrench
BX.R8.ERC16	ERC16.D1÷D10 x 1,0mm	R8.H44.ERC16	CH.E25
BX.R8.ERC25	ERC25.D2÷D16 x 1,0mm	R8.H50.ERC25	CH25S
BX.R8.ERC32	ERC32.D3÷D20 x 1,0mm	R8.H63.ERC32	CH32S
BX.R8.ERC40	ERC40.D4÷D26 x 1,0mm	R8.H72.ERC40	CH40S



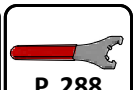
ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



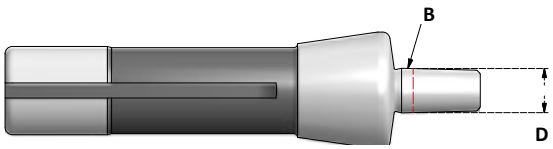
P. 280 GHIERE *NUTS*



P. 288 CHIAVI *WRENCHES*

R8 | R8 | B | **DIN 238**

ATTACCHI PER MANDRINI AUTOSERRANTI
DRILL CHUCKS ARBORS



Articolo	B	D
R8.B10	B10	10,094
R8.B12	B12	12,065
R8.B16	B16	15,733

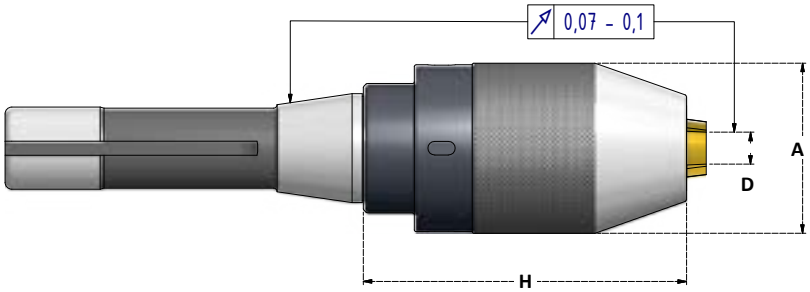
ACCESSORI - *ACCESSORIES*

P. 204
AUTOSERRANTI
DRILL CHUCKS

R8 | R8 | DCK

MANDRINI PORTAPUNTA AUTOSERRANTI - ROTAZIONE DESTRA
DRILL CHUCKS - RIGHT ROTATION





GRIFFE RIVESTITE IN TITANIO

TITANIUM COATED JAWS

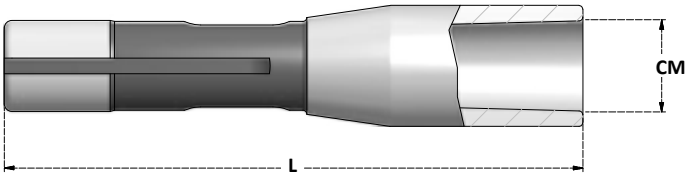
Articolo	Range D	H	A	Chiave Wrench
R8.H83.DCK13S	1÷13	83	50,5	CH.DC13
R8.H83.DCK16S	2,5÷16	83	57	CH.DC16

ACCESSORI - *ACCESSORIES*

P. 289
CHIAVI
WRENCHES

R8 | R8 | CM | **DIN 6383**

MANDRINI DI RIDUZIONE CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS



Articolo	CM	L
R8.L114.CM1	CM1	114
R8.L127.CM2	CM2	127
R8.L153.CM3	CM3	153
R8.L240.CM4	CM4	240

PER UTENSILI DIN228B CON TENONE

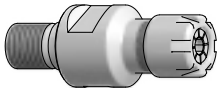
FOR TOOLS DIN228B WITH TANG

ALTRI PORTAUTENSILI
OTHER TOOLHOLDERS



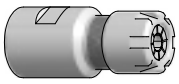
MANDRINI PORTAPINZE ER A FLANGIA
FLANGE ER COLLET CHUCKS

PAG. 201



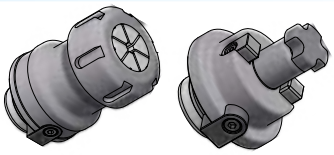
ADATTATORI PORTAPINZE ER CON ATTACCO FILETTATO
ER COLLET CHUCKS ADAPTERS WITH SCREW

PAG. 201



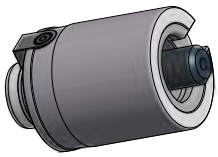
MANDRINI PORTAPINZA ER MINI CON ATTACCO DIN238
DIN238 SHANK MINI ER COLLET CHUCKS

PAG. 201



INSERZIONI PORTAUTENSILI
PER SISTEMA MODULARE TIPO VARILOCK
TOOLHOLDER ADAPTERS
FOR VARILOCK TYPE MODULAR SYSTEM

PAG. 202



RIDUZIONI E PROLUNGHE
PER SISTEMA MODULARE TIPO VARILOCK
EXTENSIONS AND REDUCTIONS
FOR VARILOCK TYPE MODULAR SYSTEM

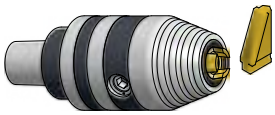
PAG. 203



MANDRINI PORTAPUNTA E RICAMBI
DRILL CHUCKS AND SPARE PARTS

DCK

PAG. 204

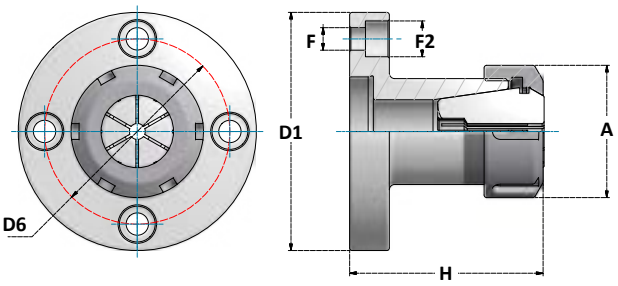


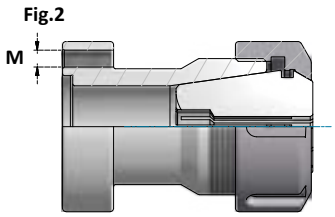
MANDRINI PORTAPUNTA E RICAMBI
DRILL CHUCKS AND SPARE PARTS

CP

PAG. 205

MANDRINI PORTAPINZA ER A FLANGIA
FLANGE ER COLLET CHUCKS





Articolo	D1	D6	M	H	Fig.
FLB50.ERC32	50	40	M6	72	2

Articolo	D1	D6	F	F2	H	Fig.
FLB90.ERC32	90	70	8,5	13,5	72	1
FLB110.ERC40	110	86	8,5	13,5	87	1
FLB110.ERC50	110	86	8,5	13,5	106	1

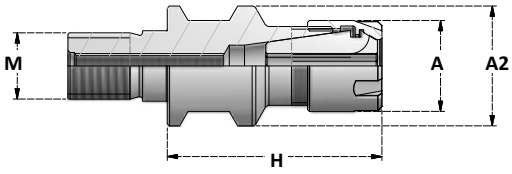
	A	Collets Range	Ghiera Nut
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S
...ERC50	78	6÷34	G50S

ACCESSORI - *ACCESSORIES*



M ERC MINI **DIN ISO 15488** (DIN6499)

ADATTATORI PORTAPINZE ER CON ATTACCO FILETTATO
ER COLLET CHUCKS ADAPTERS WITH SCREW



Articolo	M	A2	H
M12.H50.ERC16M	M12	21	50
M16.H50.ERC16M	M16	29	50

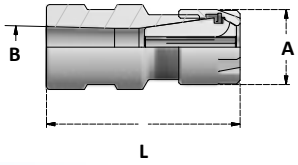
	A	Collets Range	Ghiera Nut
...ERC16M	22	1÷10	G16M

ACCESSORI - *ACCESSORIES*



DIN238 B ERC MINI **DIN ISO 15488** (DIN6499)

MANDRINI PORTAPINZA ER MINI CON ATTACCO DIN238
DIN238 SHANK MINI ER COLLET CHUCKS



Articolo	B	L
B12.L62.ERC11M	B12	62
B12.L55.ERC16M	B12	55
B12.L67.ERC20M	B12	67
B16.L85.ERC16M	B16	85
B16.L80.ERC20M	B16	80

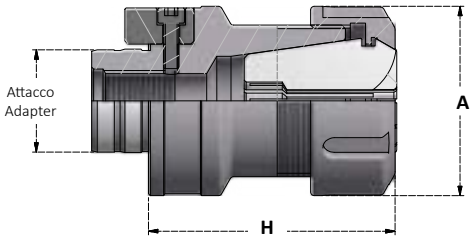
	A	Collets Range	Ghiera Nut
...ERC11M	16	1÷7	G11M
...ERC16M	22	1÷10	G16M
...ERC20M	28	1÷14	G20M

ACCESSORI - *ACCESSORIES*



PORTAPINZE ER PER SISTEMA MODULARE VARILOCK

ER COLLET CHUCKS FOR VARILOCK MODULAR SYSTEM



Articolo	Attacco Adapter		H	A	Range Collet	Ghiera Nut
MD50.H63.ERC20	MD50	27,3 / 27	63	34	1÷14	G20SE
MD50.H63.ERC25	MD50	27,3 / 27	63	42	1÷20	G25S
MD50.H65.ERC32	MD50	27,3 / 27	65	50	2÷22	G32S
MD63.H77.ERC32	MD63	32,3 / 32	77	50	2÷22	G32S
MD63.H86.ERC40	MD63	32,3 / 32	86	63	3÷30	G40S
MD80.H90.ERC40	MD80	32,3 / 32	90	63	3÷30	G40S

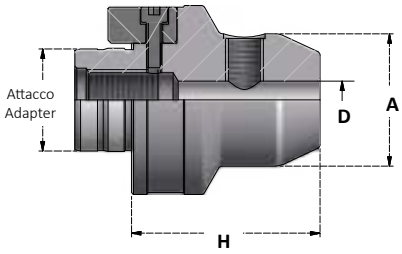
ACCESSORI - *ACCESSORIES*

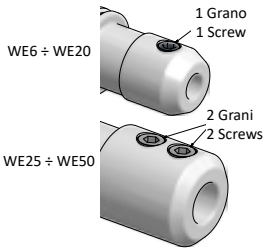
P. 250 PINZE *COLLETS*
P. 280 GHIERE *NUTS*
P. 288 CHIAVI *WRENCHES*

MD WE **DIN 1835-2 Form B**

PORTAFRESE WELDON PER SISTEMA MODULARE VARILOCK

END MILL HOLDERS WELDON FOR VARILOCK MODULAR SYSTEM





Articolo	Attacco Adapter		D	H	A
MD50.H50.WE6	MD50	27,3 / 27	6	50	25
MD50.H50.WE8	MD50	27,3 / 27	8	50	28
MD50.H50.WE10	MD50	27,3 / 27	10	50	35
MD50.H60.WE12	MD50	27,3 / 27	12	50	42
MD50.H60.WE14	MD50	27,3 / 27	14	60	44
MD50.H60.WE16	MD50	27,3 / 27	16	60	48
MD50.H60.WE18	MD50	27,3 / 27	18	60	50
MD50.H62.WE20	MD50	27,3 / 27	20	62	52
MD50.H80.WE25	MD50	27,3 / 27	25	80	65
MD63.H70.WE10	MD63	32,3 / 32	10	70	35
MD63.H70.WE12	MD63	32,3 / 32	12	70	42
MD63.H70.WE14	MD63	32,3 / 32	14	70	44
MD63.H70.WE16	MD63	32,3 / 32	16	70	48
MD63.H70.WE18	MD63	32,3 / 32	18	70	50
MD63.H70.WE20	MD63	32,3 / 32	20	70	52
MD63.H80.WE25	MD63	32,3 / 32	25	80	62
MD63.H80.WE32	MD63	32,3 / 32	32	80	63
MD63.H90.WE40	MD63	32,3 / 32	40	90	80
MD80.H70.WE16	MD80	32,3 / 32	16	70	48
MD80.H70.WE20	MD80	32,3 / 32	20	70	52
MD80.H80.WE25	MD80	32,3 / 32	25	80	65
MD80.H80.WE32	MD80	32,3 / 32	32	80	72
MD80.H90.WE40	MD80	32,3 / 32	40	90	79

P. 303 GRANI *SCREWS*

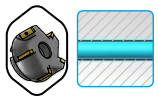
HSK **P. 46** MODULARI TIPO VARILOCK *VARILOCK TYPE TOOLHOLDERS*

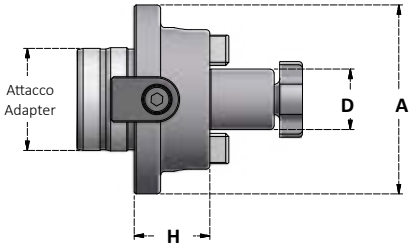
TC **P. 97** MODULARI TIPO VARILOCK *VARILOCK TYPE TOOLHOLDERS*

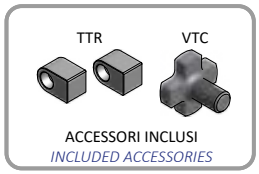
BT **P. 152** MODULARI TIPO VARILOCK *VARILOCK TYPE TOOLHOLDERS*

PORTAFRESE FISSI PER SISTEMA MODULARE VARILOCK

SHELL MILL HOLDERS FOR VARILOCK MODULAR SYSTEM







Articolo	Attacco Adapter		D	H	A
MD50.H30.D16S	MD50	27,3 / 27	16	30	50
MD50.H20.D22S	MD50	27,3 / 27	22	20	50
MD50.H20.D27S	MD50	27,3 / 27	27	20	50
MD50.H25.D32S	MD50	27,3 / 27	32	25	50
MD63.H30.D22S	MD63	32,3 / 32	22	30	63
MD63.H30.D27S	MD63	32,3 / 32	27	30	63
MD63.H30.D32S	MD63	32,3 / 32	32	30	63
MD63.H30.D40S	MD63	32,3 / 32	40	30	63
MD80.H30.D27S	MD80	32,3 / 32	27	30	80
MD80.H30.D32S	MD80	32,3 / 32	32	30	80
MD80.H30.D40S	MD80	32,3 / 32	40	30	80

ACCESSORI - *ACCESSORIES*



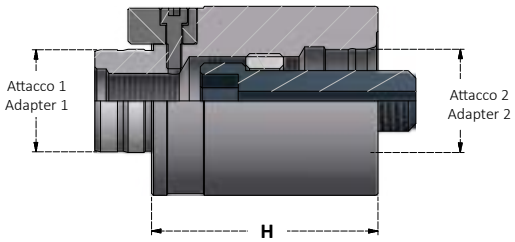
P. 304-305
ACCESSORI
ACCESSORIES

MD MD

ADATTATORI PER SISTEMA MODULARE VARILOCK

ADAPTERS FOR VARILOCK MODULAR SYSTEM





PROLUNGHE

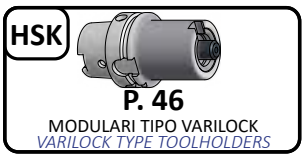
EXTENSIONS

Articolo	Attacco 1 Adapter 1		Attacco 2 Adapter 2		H
MD50.H60.MD50	MD50	27,3 / 27	MD50	27,3 / 27	60
MD50.H80.MD50	MD50	27,3 / 27	MD50	27,3 / 27	80
MD50.H100.MD50	MD50	27,3 / 27	MD50	27,3 / 27	100
MD63.H80.MD63	MD63	32,3 / 32	MD63	32,3 / 32	80
MD63.H120.MD63	MD63	32,3 / 32	MD63	32,3 / 32	120
MD80.H80.MD80	MD80	32,3 / 32	MD80	32,3 / 32	80
MD80.H100.MD80	MD80	32,3 / 32	MD80	32,3 / 32	100
MD80.H120.MD80	MD80	32,3 / 32	MD80	32,3 / 32	120
MD80.H140.MD80	MD80	32,3 / 32	MD80	32,3 / 32	140
MD80.H160.MD80	MD80	32,3 / 32	MD80	32,3 / 32	160

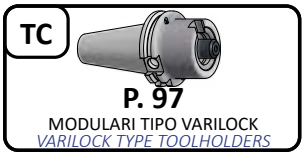
RIDUZIONI

REDUCTIONS

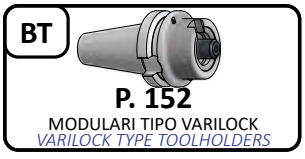
Articolo	Attacco 1 Adapter 1		Attacco 2 Adapter 2		H
MD63.H60.MD50	MD63	32,3 / 32	MD50	27,3 / 27	60
MD80.H80.MD63	MD80	32,3 / 32	MD63	32,3 / 32	80



P. 46
MODULARI TIPO VARILOCK
VARILOCK TYPE TOOLHOLDERS



P. 97
MODULARI TIPO VARILOCK
VARILOCK TYPE TOOLHOLDERS



P. 152
MODULARI TIPO VARILOCK
VARILOCK TYPE TOOLHOLDERS

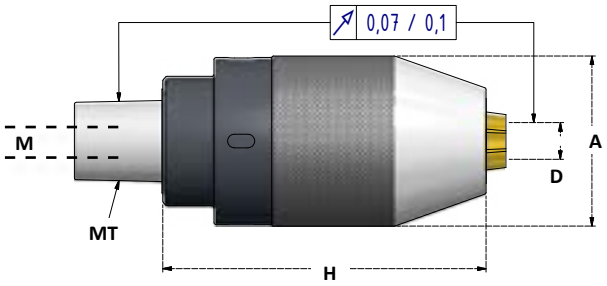
MANDRINI DA TRAPANO CON GRIFFE RIVESTITE IN TITANIO - ROTAZIONE DESTRA - ATTACCO MT

DRILL CHUCK HEADS WITH TITANIUM COATED JAWS - RIGHT ROTATION - TAPER MT

Articolo	D	A	H	MT	M
DC8S.MT2	0,5- 8	37,5	60,5	MT2	M6
DC13S.MT3	1- 13	50,5	80,5	MT3	M8
DC16S.MT3	2,5- 16	57	85	MT3	M8

FORNITI SENZA CHIAVE

SUPPLIED WITHOUT WRENCH



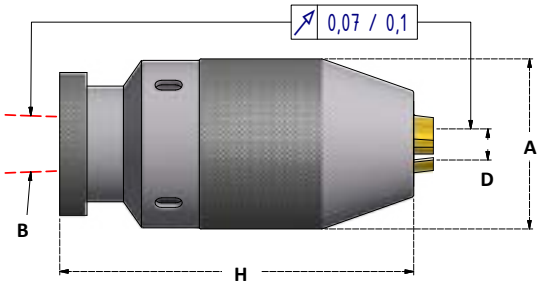
MANDRINI DA TRAPANO CON GRIFFE RIVESTITE IN TITANIO - ROTAZIONE DESTRA - ATTACCO DIN238

DRILL CHUCK HEADS WITH TITANIUM COATED JAWS - TAPER DIN238

Articolo	D	A	H	B
DC8S.B12	0,5- 8	37,5	68	B12
DC10S.B12	0,5- 10	43	80	B12
DC10S.B16	0,5- 10	43	80	B16
DC13S.B12	1- 13	50,5	90	B12
DC13S.B16	1- 13	50,5	90	B16
DC16S.B16	2,5- 16	57	100	B16
DC16S.B18	2,5- 16	57	100	B18

FORNITI SENZA CHIAVE

SUPPLIED WITHOUT WRENCH



SET DI 3 GRIFFE DI RICAMBIO RIVESTITE IN TITANIO

SET OF 3 TITANIUM COATED JAWS

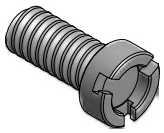
Articolo
GF.DC8S
GF.DC10S
GF.DC13S
GF.DC16S



VITI PER GRIFFE

JAWS SCREW

Articolo
VT.DC8S
VT.DC10S
VT.DC13S
VT.DC16S



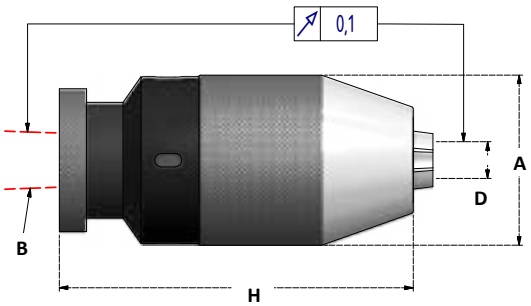
MANDRINI DA TRAPANO CON GRIFFE IN ACCIAIO - ROTAZIONE DESTRA - ATTACCO DIN238

DRILL CHUCK HEADS WITH STAINLESS JAWS - TAPER DIN238

Articolo	D	A	H	B
DC8.B12	0,5- 8	37,5	68	B12
DC10.B12	0,5- 10	43	80	B12
DC13.B16	1- 13	50,5	90	B16
DC16.B16	2,5- 16	57	100	B16
DC16.B18	2,5- 16	57	100	B18

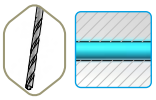
FORNITI SENZA CHIAVE

SUPPLIED WITHOUT WRENCH



ACCESSORI - *ACCESSORIES*


P. 289
CHIAVI
WRENCHES



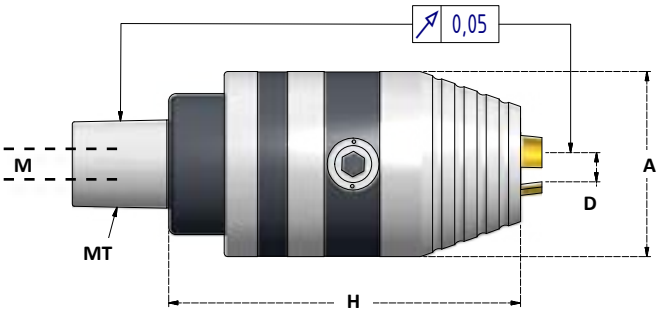
MANDRINI DA TRAPANO CON GRIFFE RIVESTITE IN TITANIO - ROTAZIONE DESTRA E SINISTRA - ATTACCO MT

DRILL CHUCK HEADS WITH TITANIUM COATED JAWS - RIGHT AND LEFT ROTATION - TAPER MT

Articolo	D	A	H	MT	M
CP8S.MT3	0,5- 8	37,5	73	MT3	M8
CP13S.MT3	1- 13	50,5	91	MT3	M8
CP16S.MT3	2,5- 16	57	96	MT3	M8

FORNITI SENZA CHIAVE

SUPPLIED WITHOUT WRENCH



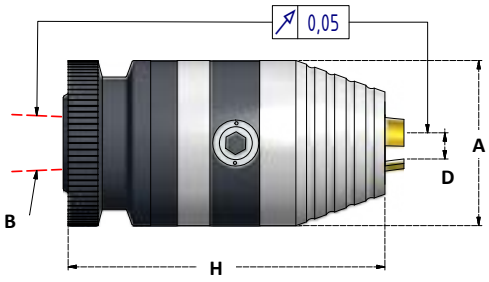
MANDRINI DA TRAPANO CON GRIFFE RIVESTITE IN TITANIO - ROTAZIONE DESTRA E SINISTRA - ATTACCO DIN238

DRILL CHUCK HEADS WITH TITANIUM COATED JAWS - RIGHT AND LEFT ROTATION - TAPER DIN238

Articolo	D	A	H	B
CP13S.B16	1- 13	50,5	90	B16
CP16S.B16	2,5- 16	57	100	B16

FORNITI SENZA CHIAVE

SUPPLIED WITHOUT WRENCH



SET DI 3 GIRFFE DI RICAMBIO RIVESTITE IN TITANIO

SET OF 3 TITANIUM COATED JAWS

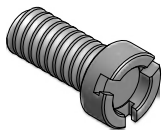
Articolo
GF.CP8S
GF.CP13S-16S



VITI PER GRIFFE

JAWS SCREWS

Articolo
VT.CP8S
VT.CP13S-16S



PIGNONE DI RICAMBIO

BEVEL GEAR

Articolo
PG.CP13-16

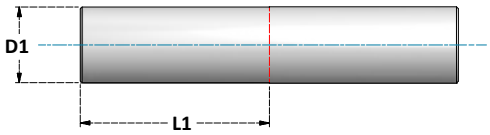
ACCESSORI - *ACCESSORIES*



P. 289
CHIAVI
WRENCHES

PORTAUTENSILI CON ATTACCO CILINDRICO
CYLINDRICAL SHANK TOOLHOLDERS

DIN 1835-1 FORM A

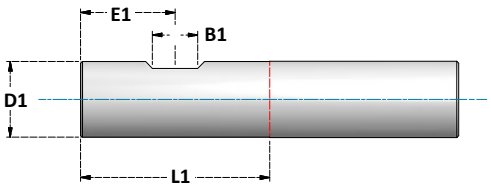


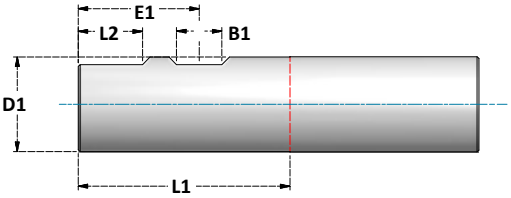
ATTACCO / SHANK	D1	L1
	h6	min.
D6	6	36
D8	8	36
D10	10	40
D12	12	45
D16	16	48
D20	20	50

ATTACCO / SHANK	D1	L1
	h6	min.
D25	25	56
D32	32	60
D40	40	70
D50	50	80

PORTAUTENSILI CON ATTACCO WELDON
WELDON SHANK TOOLHOLDERS

DIN 1835-1 FORM B



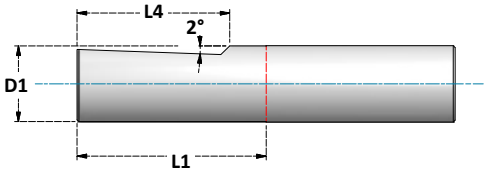


ATTACCO / SHANK	D1	L1	B1	E1
	h6	+ 2 - 0	+ 0,05 - 0	+ 0 - 1
WE6	6	36	4,2	18
WE8	8	36	5,5	18
WE10	10	40	7	20
WE12	12	45	8	22,5
WE16	16	48	10	24
WE20	20	50	11	25

ATTACCO / SHANK	D1	L1	B1	E1	L2
	h6	+ 2 - 0	+ 0,05 - 0	+ 0 - 1	+ 1 - 0
WE25	25	56	12	32	17
WE32	32	60	14	36	19
WE40	40	70	14	40	19
WE50	50	80	18	45	23

PORTAUTENSILI CON ATTACCO WHISTLE NOTCH
WHISTLE NOTCH SHANK TOOLHOLDERS

DIN 1835-1 FORM E

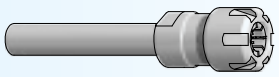


ATTACCO / SHANK	D1	L1	L4
	h6	+ 2 - 0	+ 0 - 1
WHN6	6	36	25
WHN8	8	36	25
WHN10	10	40	28
WHN12	12	45	33

ATTACCO / SHANK	D1	L1	L4
	h6	+ 2 - 0	+ 0 - 1
WHN16	16	48	36
WHN20	20	50	38
WHN25	25	56	44
WHN32	32	60	48

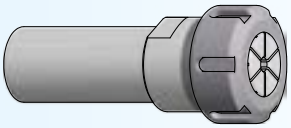
MANDRINI A GAMBO CILINDRICO *CYLINDRICAL SHANK TOOLHOLDERS*

MANDRINI CILINDRICI PORTAPINZA ER CON GHIERA MINI
CYLINDRICAL ER COLLET CHUCKS WITH MINI NUT

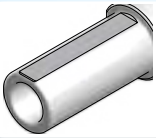


ERC8M *PAG. 208*
ERC11M *PAG. 209*
ERC16M *PAG. 210*
ERC20M *PAG. 211*
ERC25M *PAG. 212*

MANDRINI CILINDRICI PORTAPINZA ER CON GHIERA STANDARD
CYLINDRICAL ER COLLET CHUCKS WITH STANDARD NUT



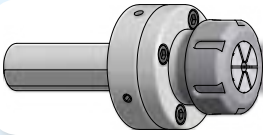
ERC16 *PAG. 213*
ERC20 *PAG. 213*
ERC25 *PAG. 214*
ERC32 *PAG. 215*
ERC40 *PAG. 216*
ERC50 *PAG. 216*



MANDRINI CILINDRICI PORTAPINZA ER - CON PIANO
CYLINDRICAL ER COLLET CHUCKS - WITH FLAT *PAG. 218*



MANDRINI CILINDRICI PORTAPINZA ER - CON PIANI WELDON
CYLINDRICAL ER COLLET CHUCKS - WITH DIN1835 FLATS *PAG. 218*



MANDRINI CILINDRICI PORTAPINZA ER - REGISTRABILI
CYLINDRICAL ER COLLET CHUCKS - ADJUSTABLE *PAG. 219*



MANDRINI CILINDRICI PORTAPINZA ER - BILATERALI
CYLINDRICAL ER COLLET CHUCKS - DOUBLE *PAG. 220*



PROLUNGHE PORTAPINZA SLC
SLC COLLET CHUCK EXTENSIONS *PAG. 221*



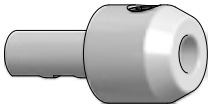
ADATTATORI PER PORTAFRESE FILETTATE
SCREW IN MILL EXTENSIONS *PAG. 222*



PROLUNGHE HM PER FRESE FILETTATE
HSS SCREW IN MILL EXTENSIONS *PAG. 223*



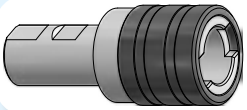
PROLUNGHE A CALETTAMENTO
SHRINK EXTENSIONS *PAG. 224*



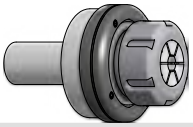
RIDUZIONI WELDON
END MILL WELDON SHANK ADAPTERS *PAG. 225*



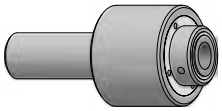
MANDRINI PORTAPUNTA
DRILL CHUCKS *PAG. 226*



PORTAMASCHI
TAPPING CHUCKS *PAG. 227*



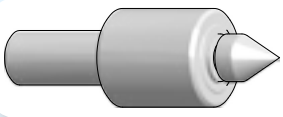
PORTA ALESATORI
REAMER HOLDERS *PAG. 230*



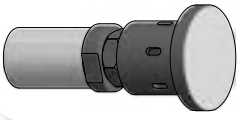
BROCCIATORI
BROACH TOOLHOLDERS *PAG. 231*



PORTASEGHE CIRCOLARI
ADAPTERS FOR SAW BLADES *PAG. 232*



CONTROPUNTE ROTANTI
LIVE CENTRES *PAG. 233*



FERMI BARRA
SHOCK ABSORBERS *PAG. 233*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA MINI

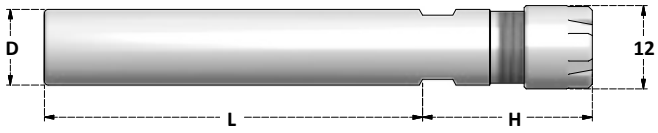
CYLINDRICAL SHANK ER COLLET CHUCKS WITH MINI NUT

D Toll. **h6**

Fig.1



Fig.2



ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* **1÷5**

GHIERA MONTATA *MOUNTED NUT* **G8M**

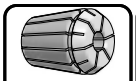
Articolo		D	L	H	FIG
D6.L45.ERC8M	*	6	45	22,5	1
D6.L60.ERC8M	*	6	60	22,5	1
D6.L80.ERC8M	*	6	80	22,5	1
D6.L100.ERC8M	*	6	100	22,5	1
D8.L45.ERC8M	*	8	45	22,5	1
D8.L60.ERC8M	*	8	60	22,5	1
D8.L80.ERC8M	*	8	80	22,5	1
D8.L100.ERC8M	*	8	100	22,5	1
D8.L130.ERC8M	*	8	130	22,5	1
D10.L45.ERC8M	*	10	45	25,5	2
D10.L60.ERC8M	*	10	60	25,5	2
D10.L80.ERC8M	*	10	80	25,5	2
D10.L100.ERC8M	*	10	100	25,5	2
D10.L130.ERC8M	*	10	130	25,5	2
D10.L160.ERC8M	*	10	160	25,5	2
D12.L45.ERC8M	*	12	45	25,5	2
D12.L60.ERC8M	*	12	60	25,5	2
D12.L80.ERC8M	*	12	80	25,5	2
D12.L100.ERC8M	*	12	100	25,5	2
D12.L130.ERC8M	*	12	130	25,5	2
D12.L160.ERC8M	*	12	160	25,5	2
D12.L200.ERC8M	*	12	200	25,5	2

* SENZA PASSAGGIO DEL REFRIGERANTE *WITHOUT COOLANT BORE*

P. 217 KIT



ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



P. 280 GHIERE *NUTS*



P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA MINI

CYLINDRICAL SHANK ER COLLET CHUCKS WITH MINI NUT



Fig.1

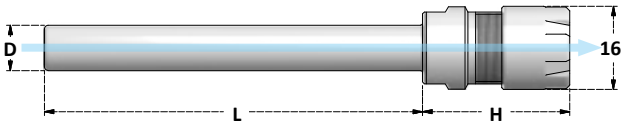
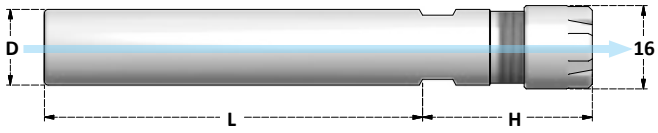


Fig.2



ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* **1÷7**

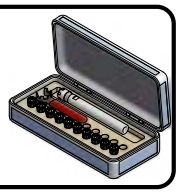
GHIERA MONTATA *MOUNTED NUT* **G11M**

Articolo		D	L	H	FIG
D6.L45.ERC11M	*	6	45	27	1
D6.L60.ERC11M	*	6	60	27	1
D6.L80.ERC11M	*	6	80	27	1
D6.L100.ERC11M	*	6	100	27	1
D8.L45.ERC11M	*	8	45	30	1
D8.L60.ERC11M	*	8	60	30	1
D8.L80.ERC11M	*	8	80	26	1
D8.L100.ERC11M	*	8	100	26	1
D8.L130.ERC11M	*	8	130	26	1
D10.L45.ERC11M	*	10	45	26	1
D10.L60.ERC11M	*	10	60	26	1
D10.L80.ERC11M	*	10	80	26	1
D10.L100.ERC11M	*	10	100	26	1
D10.L130.ERC11M	*	10	130	26	1
D10.L160.ERC11M	*	10	160	26	1
D12.L45.ERC11M		12	45	26	1
D12.L60.ERC11M		12	60	26	1
D12.L80.ERC11M		12	80	26	1
D12.L100.ERC11M	*	12	100	26	1
D12.L130.ERC11M	*	12	130	26	1
D12.L160.ERC11M	*	12	160	26	1
D12.L200.ERC11M	*	12	200	26	1
D16.L45.ERC11M		16	45	33	2
D16.L60.ERC11M		16	60	33	2
D16.L80.ERC11M		16	80	33	2
D16.L100.ERC11M		16	100	33	2
D16.L130.ERC11M		16	130	33	2
D16.L160.ERC11M		16	160	33	2
D16.L200.ERC11M	*	16	200	33	2
D16.L250.ERC11M	*	16	250	33	2
D16.L300.ERC11M	*	16	300	33	2
D20.L60.ERC11M		20	60	35	2
D20.L80.ERC11M		20	80	35	2
D20.L100.ERC11M		20	100	35	2
D20.L130.ERC11M		20	130	35	2
D20.L160.ERC11M		20	160	35	2
D20.L200.ERC11M		20	200	35	2
D20.L250.ERC11M		20	250	35	2
D20.L300.ERC11M	*	20	300	35	2
D25.L60.ERC11M		25	60	35	2
D25.L80.ERC11M		25	80	35	2
D25.L100.ERC11M		25	100	35	2
D25.L130.ERC11M		25	130	35	2

* SENZA PASSAGGIO DEL REFRIGERANTE *WITHOUT COOLANT BORE*

Articolo	D	L	H	FIG
D1/2-L2.36-ERC11M	12,7	59,9	26	1
D5/8-L5.11-ERC11M	15,875	129,8	33	2
D5/8-L6.29-ERC11M	15,875	159,9	33	2
D3/4-L2.36-ERC11M	19,05	59,9	35	2
D3/4-L3.93-ERC11M	19,05	99,8	35	2

P. 217 KIT



ACCESSORI - *ACCESSORIES*

P. 250 PINZE *COLLETS*
P. 280 GHIERE *NUTS*
P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA MINI

CYLINDRICAL SHANK ER COLLET CHUCKS WITH MINI NUT



Fig.1

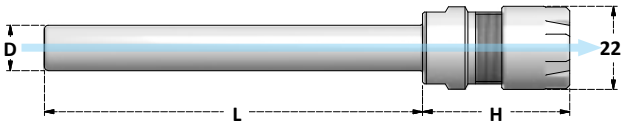
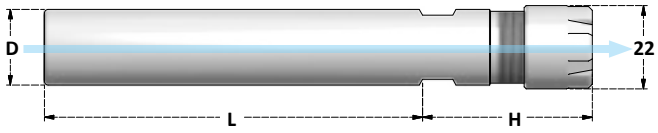


Fig.2



ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC | P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* **1÷10**

GHIERA MONTATA *MOUNTED NUT* **G16M**

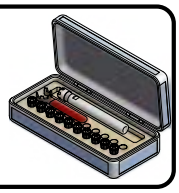
Articolo		D	L	H	FIG
D10.L60.ERC16M		10	60	38	1
D10.L80.ERC16M		10	80	38	1
D10.L100.ERC16M	*	10	100	38	1
D10.L130.ERC16M	*	10	130	38	1
D10.L160.ERC16M	*	10	160	38	1
D12.L60.ERC16M		12	60	38	1
D12.L80.ERC16M		12	80	38	1
D12.L100.ERC16M		12	100	38	1
D12.L130.ERC16M	*	12	130	38	1
D12.L160.ERC16M	*	12	160	38	1
D12.L200.ERC16M	*	12	200	38	1
D16.L60.ERC16M		16	60	38	1
D16.L80.ERC16M		16	80	38	1
D16.L100.ERC16M		16	100	38	1
D16.L130.ERC16M		16	130	38	1
D16.L160.ERC16M		16	160	38	1
D16.L200.ERC16M	*	16	200	38	1
D16.L250.ERC16M	*	16	250	38	1
D16.L300.ERC16M	*	16	300	38	1
D20.L60.ERC16M		20	60	40	2
D20.L80.ERC16M		20	80	40	2
D20.L100.ERC16M		20	100	40	2
D20.L130.ERC16M		20	130	40	2
D20.L160.ERC16M		20	160	40	2
D20.L200.ERC16M		20	200	40	2
D20.L250.ERC16M		20	250	40	2
D20.L300.ERC16M	*	20	300	40	2
D25.L60.ERC16M		25	60	40	2
D25.L80.ERC16M		25	80	40	2
D25.L100.ERC16M		25	100	40	2
D25.L130.ERC16M		25	130	40	2
D25.L160.ERC16M		25	160	40	2
D25.L200.ERC16M		25	200	40	2
D25.L250.ERC16M		25	250	40	2
D25.L300.ERC16M		25	300	40	2

* SENZA PASSAGGIO DEL REFRIGERANTE *WITHOUT COOLANT BORE*

Articolo		D	L	H	FIG
D1/2-L2.36-ERC16M		12,7	59,9	38	1
D1/2-L6.29-ERC16M	*	12,7	159,8	38	1
D5/8-L5.11-ERC16M		15,875	129,8	38	1
D5/8-L6.29-ERC16M		15,875	159,8	38	1
D3/4-L2.36-ERC16M		19,05	59,9	40	2
D3/4-L3.93-ERC16M		19,05	99,8	40	2
D3/4-L5.11-ERC16M		19,05	129,8	40	2
D3/4-L6.29-ERC16M		19,05	159,8	40	2
D1"-L2.36-ERC16M		25,4	59,9	40	2
D1"-L3.93-ERC16M		25,4	99,8	40	2
D1"-L5.11-ERC16M		25,4	129,8	40	2
D1"-L6.29-ERC16M		25,4	159,8	40	2

* SENZA PASSAGGIO DEL REFRIGERANTE *WITHOUT COOLANT BORE*

P. 217 KIT



ACCESSORI - *ACCESSORIES*

P. 250 PINZE *COLLETS*
P. 280 GHIERE *NUTS*
P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA MINI

CYLINDRICAL SHANK ER COLLET CHUCKS WITH MINI NUT



Fig.1

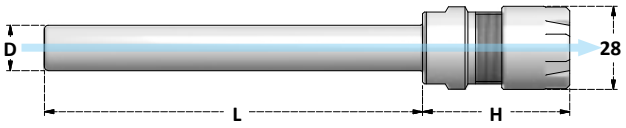
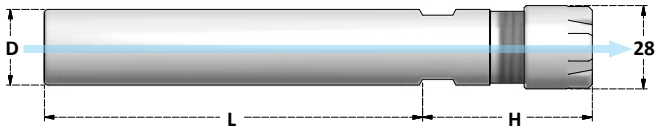


Fig.2



ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* **1÷14**

GHIERA MONTATA *MOUNTED NUT* **G20M**

Articolo		D	L	H	FIG
D16.L60.ERC20M		16	60	41,5	1
D16.L80.ERC20M		16	80	41,5	1
D16.L100.ERC20M		16	100	41,5	1
D16.L130.ERC20M		16	130	41,5	1
D16.L160.ERC20M		16	160	41,5	1
D16.L200.ERC20M	*	16	200	41,5	3
D16.L250.ERC20M	*	16	250	41,5	3
D16.L300.ERC20M	*	16	300	41,5	3
D20.L60.ERC20M		20	60	36,5	1
D20.L80.ERC20M		20	80	36,5	1
D20.L100.ERC20M		20	100	36,5	1
D20.L130.ERC20M		20	130	36,5	1
D20.L160.ERC20M		20	160	36,5	1
D20.L200.ERC20M		20	200	36,5	1
D20.L250.ERC20M		20	250	36,5	1
D20.L300.ERC20M	*	20	300	36,5	3
D25.L60.ERC20M		25	60	44,5	2
D25.L80.ERC20M		25	80	44,5	2
D25.L100.ERC20M		25	100	44,5	2
D25.L130.ERC20M		25	130	44,5	2
D25.L160.ERC20M		25	160	44,5	2
D25.L200.ERC20M		25	200	44,5	2
D25.L250.ERC20M		25	250	44,5	2
D25.L300.ERC20M		25	300	44,5	2

* SENZA PASSAGGIO DEL REFRIGERANTE *WITHOUT COOLANT BORE*

Articolo	D	L	H	FIG
D1/2-L2.36-ERC20M	12,7	59,9	41,5	1
D1/2-L3.93-ERC20M	12,7	99,8	41,5	1
D1/2-L5.11-ERC20M	12,7	129,8	41,5	1
D3/4-L2.36-ERC20M	19,05	59,9	36,5	1
D3/4-L3.93-ERC20M	19,05	99,8	36,5	1
D1"-L2.36-ERC20M	25,4	59,9	44,5	2
D1"-L3.93-ERC20M	25,4	99,8	44,5	2
D1"-L5.11-ERC20M	25,4	129,8	44,5	2

P. 217 KIT



ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*


P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA MINI

CYLINDRICAL SHANK ER COLLET CHUCKS WITH MINI NUT



Fig.1

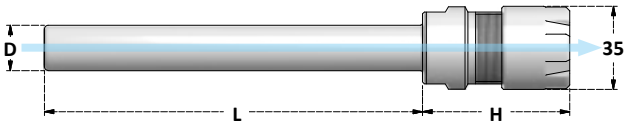
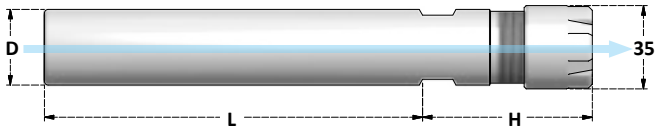


Fig.2



ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* **1÷20**

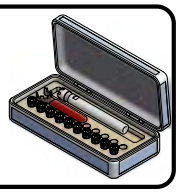
GHIERA MONTATA *MOUNTED NUT* **G25M**

Articolo		D	L	H	FIG
D20.L60.ERC25M		20	60	46	1
D20.L80.ERC25M		20	80	46	1
D20.L100.ERC25M		20	100	46	1
D20.L130.ERC25M		20	130	46	1
D20.L160.ERC25M		20	160	46	1
D20.L200.ERC25M		20	200	46	1
D20.L250.ERC25M		20	250	46	2
D20.L300.ERC25M	*	20	300	46	2
D25.L60.ERC25M		25	60	40	1
D25.L80.ERC25M		25	80	40	1
D25.L100.ERC25M		25	100	40	1
D25.L130.ERC25M		25	130	40	1
D25.L160.ERC25M		25	160	40	1
D25.L200.ERC25M		25	200	40	1
D25.L250.ERC25M		25	250	40	1
D25.L300.ERC25M		25	300	40	1

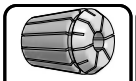
* SENZA PASSAGGIO DEL REFRIGERANTE *WITHOUT COOLANT BORE*

Articolo	D	L	H
D3/4-L2.36-ERC25M	19,05	59,9	46
D1"-L2.36-ERC25M	25,4	59,9	40
D1"-L3.93-ERC25M	25,4	99,8	40
D1"-L5.11-ERC25M	25,4	129,8	40
D1"-L6.29-ERC25M	25,4	159,8	40

P. 217 KIT



ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



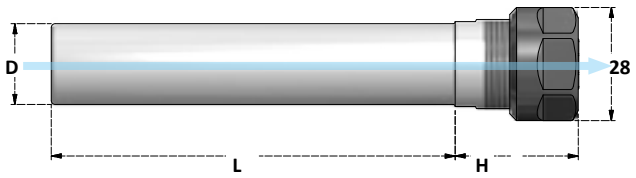
P. 280 GHIERE *NUTS*



P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA ESAGONALE
CYLINDRICAL SHANK ER COLLET CHUCKS WITH HEXAGONAL NUT

D Toll. h6



ATTACCO *SHANK* CYL P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* 1÷10

GHIERA MONTATA *MOUNTED NUT* G16SE

Articolo	D	L	H
D16.L60.ERC16	16	60	31
D16.L80.ERC16	16	80	31
D16.L100.ERC16	16	100	31
D16.L130.ERC16	16	130	31
D16.L160.ERC16	16	160	31
D20.L60.ERC16	20	60	31
D20.L80.ERC16	20	80	31
D20.L100.ERC16	20	100	31
D20.L130.ERC16	20	130	31
D20.L160.ERC16	20	160	31

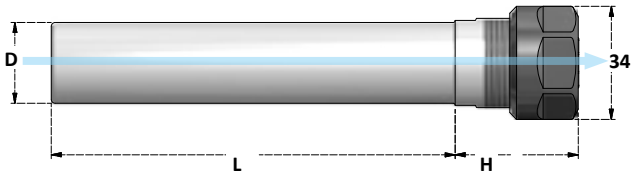
ACCESSORI - *ACCESSORIES*



D ERC20 DIN ISO 15488 (DIN6499)

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA ESAGONALE
CYLINDRICAL SHANK ER COLLET CHUCKS WITH HEXAGONAL NUT

D Toll. h6



SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* 1÷14

GHIERA MONTATA *MOUNTED NUT* G20SE

Articolo	D	L	H
D20.L60.ERC20	20	60	36,5
D20.L80.ERC20	20	80	36,5
D20.L100.ERC20	20	100	36,5
D20.L130.ERC20	20	130	36,5
D20.L160.ERC20	20	160	36,5
D25.L60.ERC20	25	60	44,5
D25.L80.ERC20	25	80	44,5
D25.L100.ERC20	25	100	44,5
D25.L130.ERC20	25	130	44,5
D25.L160.ERC20	25	160	44,5

ACCESSORI - *ACCESSORIES*



PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA STANDARD

CYLINDRICAL SHANK ER COLLET CHUCKS WITH STANDARD NUT

Toll. **h6**

Fig.1

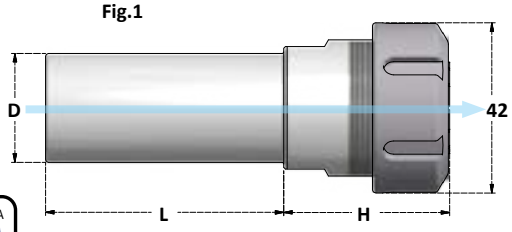
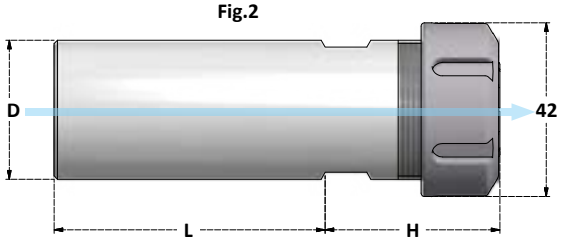


Fig.2



ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* **1÷20**

GHIERA MONTATA *MOUNTED NUT* **G25S**

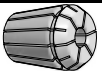
Articolo	D	L	H	FIG
D20.L60.ERC25	20	60	46	1
D20.L80.ERC25	20	80	46	1
D20.L100.ERC25	20	100	46	1
D20.L130.ERC25	20	130	46	1
D20.L160.ERC25	20	160	46	1
D25.L60.ERC25	25	60	40	1
D25.L80.ERC25	25	80	40	1
D25.L100.ERC25	25	100	40	1
D25.L130.ERC25	25	130	40	1
D25.L160.ERC25	25	160	40	1
D32.L60.ERC25	32	60	44	2
D32.L80.ERC25	32	80	44	2
D32.L100.ERC25	32	100	44	2
D32.L130.ERC25	32	130	44	2
D32.L160.ERC25	32	160	44	2
D40.L60.ERC25	40	60	49	2
D40.L80.ERC25	40	80	49	2
D40.L100.ERC25	40	100	49	2
D40.L130.ERC25	40	130	49	2
D40.L160.ERC25	40	160	49	2

Articolo	D	L	H	FIG
D1"-L2.36-ERC25	25,4	59,9	40	1
D1"-L3.93-ERC25	25,4	99,8	40	1
D1"-L5.11-ERC25	25,4	129,8	40	1

P. 217 KIT



ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



P. 280 GHIERE *NUTS*



P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA STANDARD

CYLINDRICAL SHANK ER COLLET CHUCKS WITH STANDARD NUT

Toll. h6

Fig.1

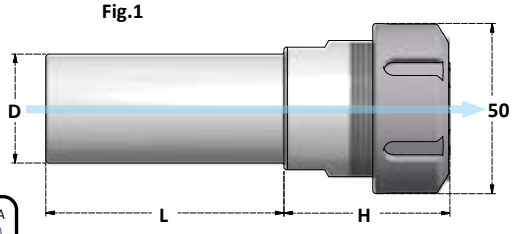
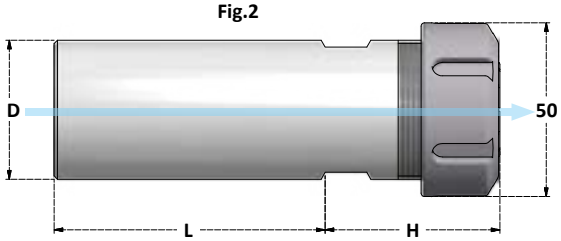


Fig.2



ATTACCO *SHANK* CYL P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* 2÷22

GHIERA MONTATA *MOUNTED NUT* G32S

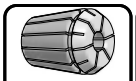
Articolo	D	L	H	FIG
D20.L60.ERC32	20	60	53	1
D20.L80.ERC32	20	80	53	1
D20.L100.ERC32	20	100	53	1
D20.L130.ERC32	20	130	53	1
D20.L160.ERC32	20	160	53	1
D25.L60.ERC32	25	60	53	1
D25.L80.ERC32	25	80	53	1
D25.L100.ERC32	25	100	53	1
D25.L130.ERC32	25	130	53	1
D25.L160.ERC32	25	160	53	1
D32.L60.ERC32	32	60	48	1
D32.L80.ERC32	32	80	48	1
D32.L100.ERC32	32	100	48	1
D32.L130.ERC32	32	130	48	1
D32.L160.ERC32	32	160	48	1
D40.L60.ERC32	40	60	50	2
D40.L80.ERC32	40	80	50	2
D40.L100.ERC32	40	100	50	2
D40.L130.ERC32	40	130	50	2
D40.L160.ERC32	40	160	50	2
D50.L130.ERC32	50	130	47	2
D50.L160.ERC32	50	160	47	2

Articolo	D	L	H	FIG
D3/4-L2.36-ERC32	19,05	59,9	53	1
D1"-L2.36-ERC32	25,4	59,9	53	1
D1"-L3.93-ERC32	25,4	99,8	53	1
D1"-L5.11-ERC32	25,4	129,8	53	1
D1-1/4-L2.36-ERC32	31,75	59,9	48	1
D1-1/4-L3.93-ERC32	31,75	99,8	48	1
D1-3/4-L5.11-ERC32	44,45	129,8	50	2

P. 217 KIT



ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



P. 280 GHIERE *NUTS*



P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA STANDARD
CYLINDRICAL SHANK ER COLLET CHUCKS WITH STANDARD NUT

D Toll. **h6**

Fig.1

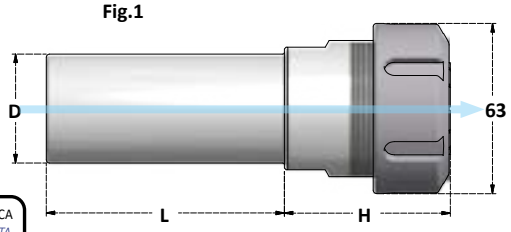
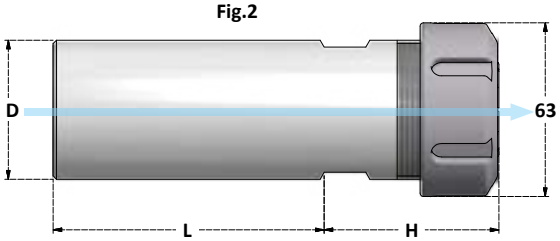


Fig.2



ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

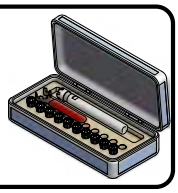
DIAMETRI DELLE PINZE *COLLETS RANGE* **3÷30**

GHIERA MONTATA *MOUNTED NUT* **G40S**

Articolo	D	L	H	FIG
D25.L60.ERC40	25	60	61	1
D25.L80.ERC40	25	80	61	1
D25.L100.ERC40	25	100	61	1
D25.L130.ERC40	25	130	61	1
D25.L160.ERC40	25	160	61	1
D32.L60.ERC40	32	60	61	1
D32.L80.ERC40	32	80	61	1
D32.L100.ERC40	32	100	61	1
D32.L130.ERC40	32	130	61	1
D32.L160.ERC40	32	160	61	1
D40.L80.ERC40	40	80	65	1
D40.L100.ERC40	40	100	65	1
D40.L130.ERC40	40	130	65	1
D40.L160.ERC40	40	160	65	1
D50.L120.ERC40	50	120	59	2
D50.L160.ERC40	50	160	59	2
D60.L160.ERC40	60	160	59	2

Articolo	D	L	H	FIG
D1"-L2.36-ERC40	25,4	59,9	61	1
D1"-L3.93-ERC40	25,4	99,8	61	1
D1-1/4-L2.36-ERC40	31,75	59,9	61	1
D2"-L6.29-ERC40	50,8	159,8	65	2

P. 217 KIT



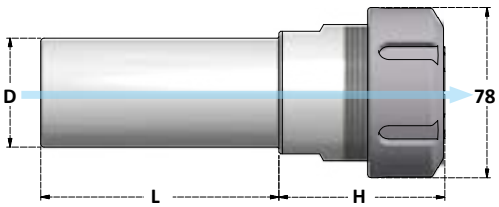
ACCESSORI - *ACCESSORIES*

P. 250 PINZE *COLLETS*
P. 280 GHIERE *NUTS*
P. 288 CHIAVI *WRENCHES*

D ERC50 **DIN ISO 15488** (DIN6499)

PROLUNGHE CILINDRICHE PORTAPINZA ER CON GHIERA STANDARD
CYLINDRICAL SHANK ER COLLET CHUCKS WITH STANDARD NUT

D Toll. **h6**



SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

DIAMETRI DELLE PINZE *COLLETS RANGE* **6÷34**

GHIERA MONTATA *MOUNTED NUT* **G50S**

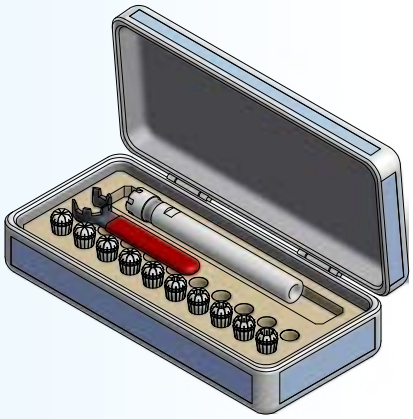
Articolo	D	L	H
D40.L160.ERC50	40	160	65
D50.L170.ERC50	50	170	65
D60.L170.ERC50	60	170	65

ACCESSORI - *ACCESSORIES*

P. 250 PINZE *COLLETS*
P. 280 GHIERE *NUTS*
P. 288 CHIAVI *WRENCHES*

KIT - MANDRINO, CHIAVE E PINZE

KIT - TOOLHOLDER, WRENCH AND COLLETS



SCHEDA TECNICA
TECHNICAL DATA
ERC | P. 338

KIT	Pinze Collets	Ø Pinze Ø Collets	Chiave Wrench
...8M	ERC8	1÷5 x 0,5mm	CH8M
...11M	ERC11	1÷7 x 0,5mm	CH11M
...16M	ERC16	1÷10 x 1mm	CH16M
...20M	ERC20	1÷13 x 1mm	CH20M
...25M	ERC25	2÷16 x 1mm	CH25M
...25	ERC25	2÷16 x 1mm	CH25S
...32	ERC32	3÷20 x 1mm	CH32S
...40	ERC40	4÷26 x 1mm	CH40S

KIT	Pinze Collets	Ø Pinze Ø Collets	Chiave Wrench
...32-6	ERC25	D6-D8-D10-D12-D16-D20	CH32S
...40-7	ERC32	D6-D8-D10-D12-D16-D20-D25	CH40S

Articolo	Mandrino Chuck
BX.D10.L100.8M	D10.L100.ERC8M
BX.D10.L130.8M	D10.L130.ERC8M
BX.D10.L160.8M	D10.L160.ERC8M
BX.D12.L100.8M	D12.L100.ERC8M
BX.D12.L130.8M	D12.L130.ERC8M
BX.D12.L160.8M	D12.L160.ERC8M

Articolo	Mandrino Chuck
BX.D12.L100.11M	D12.L100.ERC11M
BX.D12.L130.11M	D12.L130.ERC11M
BX.D12.L160.11M	D12.L160.ERC11M
BX.D16.L100.11M	D16.L100.ERC11M
BX.D16.L130.11M	D16.L130.ERC11M
BX.D16.L160.11M	D16.L160.ERC11M

Articolo	Mandrino Chuck
BX.D16.L100.16M	D16.L100.ERC16M
BX.D16.L130.16M	D16.L130.ERC16M
BX.D16.L160.16M	D16.L160.ERC16M
BX.D16.L200.16M	D16.L200.ERC16M
BX.D20.L100.16M	D20.L100.ERC16M
BX.D20.L130.16M	D20.L130.ERC16M
BX.D20.L160.16M	D20.L160.ERC16M
BX.D20.L200.16M	D20.L200.ERC16M

Articolo	Mandrino Chuck
BX.D16.L100.20M	D16.L100.ERC20M
BX.D16.L130.20M	D16.L130.ERC20M
BX.D16.L160.20M	D16.L160.ERC20M
BX.D16.L200.20M	D16.L200.ERC20M
BX.D20.L100.20M	D20.L100.ERC20M
BX.D20.L130.20M	D20.L130.ERC20M
BX.D20.L160.20M	D20.L160.ERC20M
BX.D20.L200.20M	D20.L200.ERC20M

Articolo	Mandrino Chuck
BX.D20.L100.25M	D20.L100.ERC25M
BX.D20.L130.25M	D20.L130.ERC25M
BX.D20.L160.25M	D20.L160.ERC25M
BX.D20.L200.25M	D20.L200.ERC25M
BX.D25.L100.25M	D25.L100.ERC25M
BX.D25.L130.25M	D25.L130.ERC25M
BX.D25.L160.25M	D25.L160.ERC25M
BX.D25.L200.25M	D25.L200.ERC25M

Articolo	Mandrino Chuck
BX.D20.L80.25	D20.L80.ERC25
BX.D20.L100.25	D20.L100.ERC25
BX.D25.L80.25	D25.L80.ERC25
BX.D25.L100.25	D25.L100.ERC25
BX.D32.L80.25	D32.L80.ERC25
BX.D32.L100.25	D32.L100.ERC25
BX.D40.L80.25	D40.L80.ERC25
BX.D40.L100.25	D40.L100.ERC25

Articolo	Mandrino Chuck
BX.D20.L80.32-6	D20.L80.ERC32
BX.D20.L100.32-6	D20.L100.ERC32
BX.D25.L80.32-6	D25.L80.ERC32
BX.D25.L100.32-6	D25.L100.ERC32
BX.D32.L80.32-6	D32.L80.ERC32
BX.D32.L100.32-6	D32.L100.ERC32
BX.D40.L80.32-6	D40.L80.ERC32
BX.D40.L100.32-6	D40.L100.ERC32

Articolo	Mandrino Chuck
BX.D20.L80.32	D20.L80.ERC32
BX.D20.L100.32	D20.L100.ERC32
BX.D25.L80.32	D25.L80.ERC32
BX.D25.L100.32	D25.L100.ERC32
BX.D32.L80.32	D32.L80.ERC32
BX.D32.L100.32	D32.L100.ERC32
BX.D40.L80.32	D40.L80.ERC32
BX.D40.L100.32	D40.L100.ERC32

Articolo	Mandrino Chuck
BX.D25.L80.40-7	D25.L80.ERC40
BX.D25.L100.40-7	D25.L100.ERC40
BX.D32.L80.40-7	D32.L80.ERC40
BX.D32.L100.40-7	D32.L100.ERC40
BX.D40.L80.40-7	D40.L80.ERC40
BX.D40.L100.40-7	D40.L100.ERC40

Articolo	Mandrino Chuck
BX.D25.L80.40	D25.L80.ERC40
BX.D25.L100.40	D25.L100.ERC40
BX.D32.L80.40	D32.L80.ERC40
BX.D32.L100.40	D32.L100.ERC40
BX.D40.L80.40	D40.L80.ERC40
BX.D40.L100.40	D40.L100.ERC40

PROLUNGHE CILINDRICHE PORTAPINZA ER CON PIANO
CYLINDRICAL SHANK ER COLLET CHUCKS WITH FLAT



Fig.1

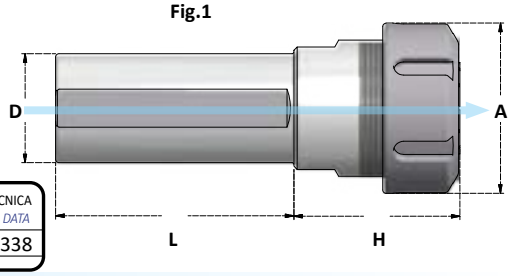
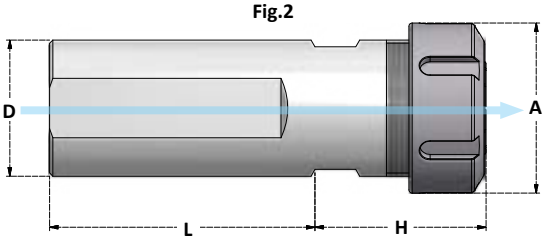


Fig.2



ATTACCO SHANK CYL P. 206
SCHEDA TECNICA TECHNICAL DATA ERC P. 338

Articolo	D	L	H	FIG
D20P.L80.ERC25	20	80	46	1
D25P.L80.ERC25	25	80	40	1
D32P.L80.ERC25	32	80	44	2
D40P.L80.ERC25	40	80	49	2
D20P.L80.ERC32	20	80	53	1
D25P.L80.ERC32	25	80	53	1
D32P.L80.ERC32	32	80	48	1
D40P.L80.ERC32	40	80	50	2
D25P.L80.ERC40	25	80	61	1
D32P.L80.ERC40	32	80	61	1
D40P.L80.ERC40	40	80	61	1

	A	Collets Range	Ghiera Nut
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S



PROLUNGHE CILINDRICHE PORTAPINZA CON PIANI WELDON
CYLINDRICAL SHANK ER COLLET CHUCKS WITH DIN1835 FLATS



Fig.1

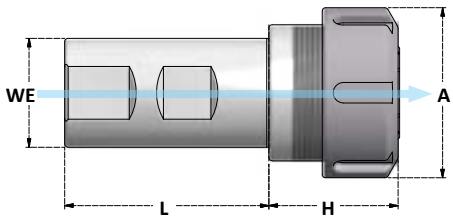
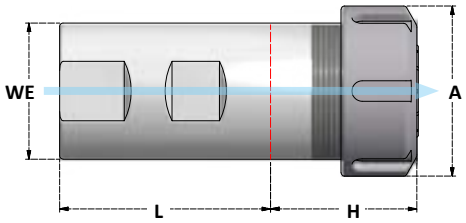
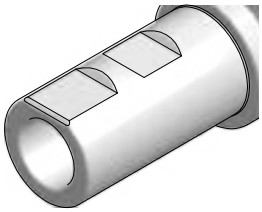


Fig.2



SCHEDA TECNICA TECHNICAL DATA ERC P. 338

Articolo	WE	L	H	FIG
WE20.L50.ERC16	20	50	31	2
WE20.L50.ERC25	20	50	46	2
WE25.L56.ERC25	25	56	40	2
WE32.L60.ERC25	32	60	44	1
WE25.L56.ERC32	25	56	53	2
WE32.L60.ERC32	32	60	38	2
WE40.L74.ERC32	40	74	31	1
WE32.L60.ERC40	32	60	61	2
WE50.L80.ERC40	50	80	37	1



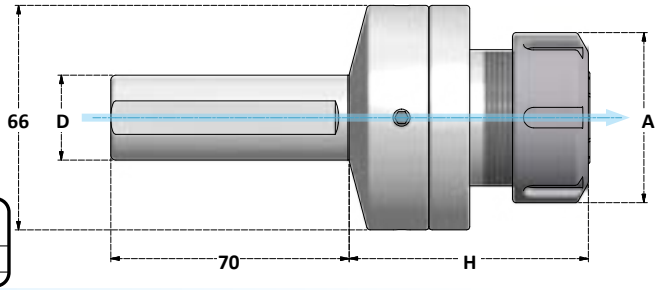
	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S

ACCESSORI - *ACCESSORIES*



MANDRINI PORTAPINZA ER A CENTRATURA REGOLABILE
RUNOUT ADJUSTABLE ER COLLET CHUCKS

Toll. h6



±0,1mm Centratura regolabile *Adjustable runout*

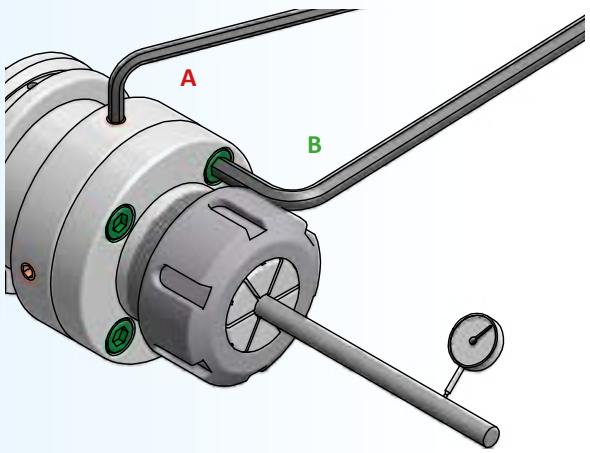
ATTACCO *SHANK* CYL P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

Articolo	D	H
D25P.L70.ERC16RG	25	66
D25P.L70.ERC20RG	25	68
D25P.L70.ERC25RG	25	69
D25P.L70.ERC32RG	25	70
D25P.L70.ERC40RG	25	104
D32P.L70.ERC16RG	32	66
D32P.L70.ERC20RG	32	68
D32P.L70.ERC25RG	32	69
D32P.L70.ERC32RG	32	70
D32P.L70.ERC40RG	32	104
D40P.L70.ERC16RG	40	64
D40P.L70.ERC20RG	40	66
D40P.L70.ERC25RG	40	67
D40P.L70.ERC32RG	40	68
D40P.L70.ERC40RG	40	102

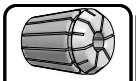
	A	Collets Range	Ghiera Nut
...ERC16	28	1÷10	G16SE
...ERC20	34	1÷14	G20SE
...ERC25	42	1÷20	G25S
...ERC32	50	2÷22	G32S
...ERC40	63	3÷30	G40S





Allentare le viti **B** e regolare la centratura tramite le viti **A**.
Loosen screws **B** and use screws **A** for radial adjustment.

ACCESSORI - *ACCESSORIES*


P. 250 PINZE *COLLETS*


P. 280 GHIERE *NUTS*

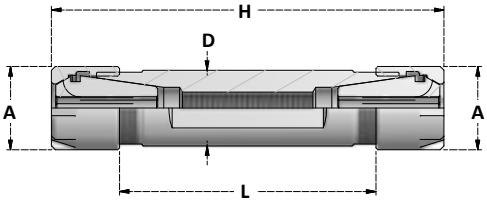

P. 288 CHIAVI *WRENCHES*

MANDRINI PORTAPINZA ER CON GHIERA MINI DOPPI
DOUBLE ER COLLET CHUCKS WITH MINI NUT

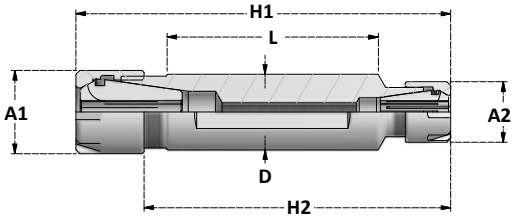
Toll. h6

ATTACCO *SHANK* CYL P. 206

SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338



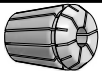
Articolo	D	A	L	H	Collets Range	Ghiera Nut
D16P.L40.ERC11M-11M	16	16	40	71	1÷7	G11M
D20P.L42.ERC11M-11M	20	16	42	70	1÷7	G11M
D20P.L52.ERC11M-11M	20	16	52	80	1÷7	G11M
D20P.L62.ERC11M-11M	20	16	62	90	1÷7	G11M
D20P.L37.ERC16M-16M	20	22	37	80	1÷10	G16M
D20P.L57.ERC16M-16M	20	22	57	100	1÷10	G16M
D20P.L67.ERC16M-16M	20	22	67	110	1÷10	G16M
D20P.L122.ERC16M-16M	20	22	122	165	1÷10	G16M
D22P.L27.ERC16M-16M	22	22	27	70	1÷10	G16M
D22P.L47.ERC16M-16M	22	22	47	90	1÷10	G16M
D22P.L67.ERC16M-16M	22	22	67	110	1÷10	G16M
D22P.L102.ERC16M-16M	22	22	102	145	1÷10	G16M
D22P.L122.ERC16M-16M	22	22	122	165	1÷10	G16M
D25P.L27.ERC16M-16M	25	22	27	70	1÷10	G16M
D25P.L47.ERC16M-16M	25	22	47	90	1÷10	G16M
D25P.L67.ERC16M-16M	25	22	67	110	1÷10	G16M
D25P.L82.ERC20M-20M	25	28	82	130	1÷14	G20M
D32P.L57.ERC20M-20M	32	28	57	105	1÷14	G20M
D32P.L82.ERC20M-20M	32	28	82	130	1÷14	G20M



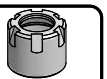
SCHEDA TECNICA *TECHNICAL DATA* ERC P. 338

Articolo	D	A1	A2	L	H1	H2	Collets Range	Ghiera Nut	Collets Range	Ghiera Nut
D20P.L50.ERC16M-11M	20	22	16	50	85	68	1÷10	G16M	1÷7	G11M
D20P.L50.ERC20M-11M	20	28	16	50	91	72	1÷14	G20M	1÷7	G11M
D22P.L45.ERC20M-16M	22	28	22	45	90	71	1÷14	G20M	1÷10	G16M
D22P.L60.ERC20M-16M	22	28	22	60	105	86	1÷14	G20M	1÷10	G16M
D25P.L45.ERC20M-16M	25	28	22	45	90	71	1÷14	G20M	1÷10	G16M
D25P.L60.ERC20M-16M	25	28	22	60	105	86	1÷14	G20M	1÷10	G16M
D25P.L45.ERC25M-16M	25	35	22	45	91	71	1÷20	G25M	1÷10	G16M
D32P.L60.ERC25M-20M	32	35	28	60	108	88	1÷20	G25M	1÷14	G20M

ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



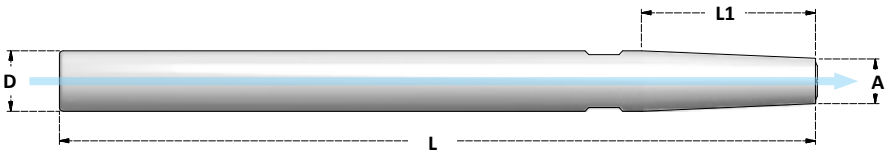
P. 280 GHIERE *NUTS*



P. 288 CHIAVI *WRENCHES*

PROLUNGHE CILINDRICHE PORTAPINZA SLC
CYLINDRICAL EXTENSIONS SLC COLLET CHUCKS



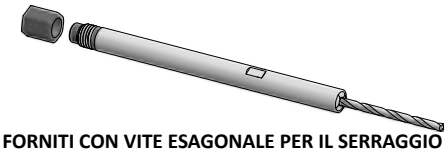




ATTACCO *SHANK* **CYL** P. 206

Articolo		D	A	L	L1
D12.L120.SLC6	*	12	12	120	-
D12.L150.SLC6	*	12	12	150	-
D16.L120.SLC6		16	12	120	48
D16.L150.SLC6		16	12	150	48
D16.L200.SLC6		16	12	200	48
D20.L120.SLC6		20	12	120	76,5
D20.L150.SLC6		20	12	150	86
D20.L200.SLC6		20	12	200	76,5



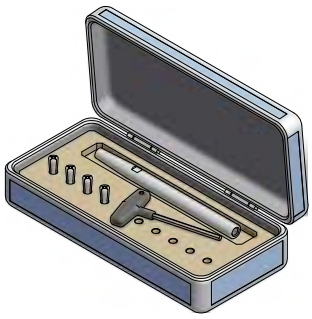


*** FORNITI CON VITE ESAGONALE PER IL SERRAGGIO E L'ESTRAZIONE DELLA PINZA.**
VA RIMOSSA UNA VOLTA SERRATO L'UTENSILE.
** SUPPLIED WITH HEXAGONAL SCREW FOR COLLET'S TIGHTENING AND EXTRACTION.*
IT MUST BE REMOVED ONCE THE TOOL IS TIGHTENED.

Articolo	D	A	L	L1
D25.L120.SLC12	25	22	120	50
D25.L150.SLC12	25	22	150	50
D25.L200.SLC12	25	22	200	50

KIT - MANDRINO, CHIAVE E PINZE
KIT - TOOLHOLDER, WRENCH AND COLLETS

Articolo	Pinze Collets	Mandrino con chiave Toolholder with wrench
BX.D12.L120.SLC6	SLC6.D3- D4- D5- D6	D12.L120.SLC6
BX.D12.L150.SLC6	SLC6.D3- D4- D5- D6	D12.L150.SLC6
BX.D16.L120.SLC6	SLC6.D3- D4- D5- D6	D16.L120.SLC6
BX.D16.L150.SLC6	SLC6.D3- D4- D5- D6	D16.L150.SLC6
BX.D16.L200.SLC6	SLC6.D3- D4- D5- D6	D16.L200.SLC6
BX.D20.L120.SLC6	SLC6.D3- D4- D5- D6	D20.L120.SLC6
BX.D20.L150.SLC6	SLC6.D3- D4- D5- D6	D20.L150.SLC6
BX.D20.L200.SLC6	SLC6.D3- D4- D5- D6	D20.L200.SLC6



Articolo	Pinze Collets	Mandrino con chiave Toolholder with wrench
BX.D25.L120.SLC12	SLC12.D4- D6- D8- D10- D12	D25.L120.SLC12
BX.D25.L150.SLC12	SLC12.D4- D6- D8- D10- D12	D25.L150.SLC12
BX.D25.L200.SLC12	SLC12.D4- D6- D8- D10- D12	D25.L200.SLC12

ACCESSORI - *ACCESSORIES*

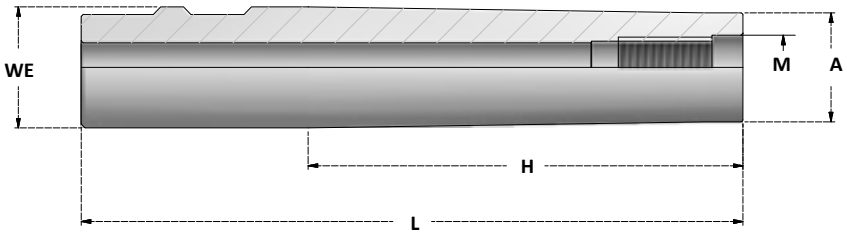


P. 273
PINZE
COLLETS

PROLUNGHE CON PIANI WELDON PER FRESE CON ATTACCO FILETTATO

SCREW IN MILL EXTENSIONS WITH DIN1835 FLATS



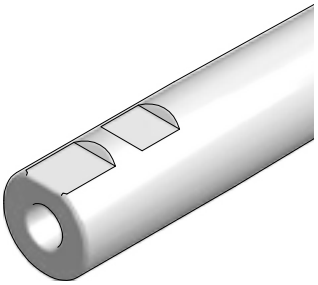


ATTACCO
SHANK
CYL
P. 206

Articolo	WE	L	H
WE20.L75.M8CPY	20	75	25
WE20.L100.M8CPY	20	100	50
WE20.L125.M8CPY	20	125	75
WE20.L150.M8CPY	20	150	100
WE20.L175.M8CPY	20	175	125
WE20.L200.M8CPY	20	200	150
WE20.L75.M10CPY	20	75	25
WE20.L100.M10CPY	20	100	50
WE20.L125.M10CPY	20	125	75
WE20.L150.M10CPY	20	150	100
WE20.L175.M10CPY	20	175	125
WE20.L200.M10CPY	20	200	150
WE25.L75.M12CPY	25	75	19
WE25.L100.M12CPY	25	100	44
WE25.L125.M12CPY	25	125	69
WE25.L150.M12CPY	25	150	94
WE25.L175.M12CPY	25	175	119
WE25.L200.M12CPY	25	200	104
WE32.L75.M16CPY	32	75	15
WE32.L100.M16CPY	32	100	40
WE32.L125.M16CPY	32	125	65
WE32.L150.M16CPY	32	150	90
WE32.L175.M16CPY	32	175	115
WE32.L200.M16CPY	32	200	140

	M	A	MT
M8CPY	M8	12,8	25Nm
M10CPY	M10	17,8	40Nm
M12CPY	M12	20,8	60Nm
M16CPY	M16	28,8	80Nm

Momento torcente consigliato:
Recommended tightening torque: **MT**

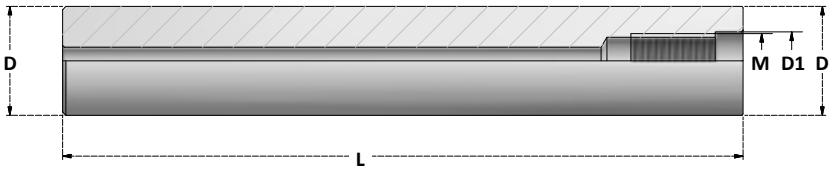


PROLUNGHE HM PER FRESE CON ATTACCO FILETTATO

HM SCREW IN MILL EXTENSIONS







ATTACCO
SHANK
CYL
P. 206

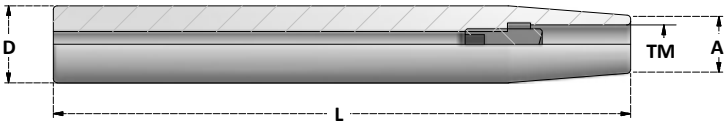
Articolo	D	L	D1	M
D10.L100.M6	10	100	6,5	M6
D10.L125.M6	10	125	6,5	M6
D10.L150.M6	10	150	6,5	M6
D12.L100.M6	12	100	6,5	M6
D12.L125.M6	12	125	6,5	M6
D12.L150.M6	12	150	6,5	M6
D16.L100.M8	16	100	8,5	M8
D16.L150.M8	16	150	8,5	M8
D16.L200.M8	16	200	8,5	M8
D20.L100.M10	20	100	10,5	M10
D20.L150.M10	20	150	10,5	M10
D20.L200.M10	20	200	10,5	M10
D20.L250.M10	20	250	10,5	M10
D20.L300.M10	20	300	10,5	M10
D25.L100.M12	25	100	12,5	M12
D25.L150.M12	25	150	12,5	M12
D25.L200.M12	25	200	12,5	M12
D25.L250.M12	25	250	12,5	M12
D25.L300.M12	25	300	12,5	M12
D32.L150.M16	32	150	17	M16
D32.L200.M16	32	200	17	M16
D32.L250.M16	32	250	17	M16
D32.L300.M16	32	300	17	M16

IL MATERIALE DI COSTRUZIONE SMORZA LE VIBRAZIONI

CONSTRUCTION MATERIAL DAMPENS VIBRATIONS

PROLUNGHE CILINDRICHE PER CALETTAMENTO A CALDO
CYLINDRICAL SHRINK FIT EXTENSIONS

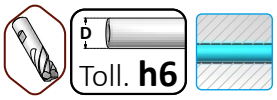


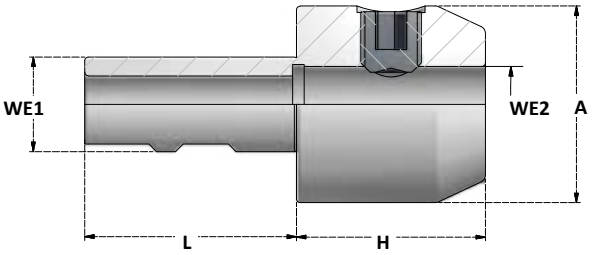


ATTACCO
SHANK
CYL
P. 206

Articolo	D	TM	A	L
D12.L80.TM3	12	3	9	80
D12.L120.TM3	12	3	9	120
D12.L160.TM3	12	3	9	160
D12.L80.TM4	12	4	10	80
D12.L120.TM4	12	4	10	120
D12.L160.TM4	12	4	10	160
D16.L80.TM3	16	3	9	80
D16.L120.TM3	16	3	9	120
D16.L160.TM3	16	3	9	160
D16.L80.TM4	16	4	10	80
D16.L120.TM4	16	4	10	120
D16.L160.TM4	16	4	10	160
D16.L80.TM5	16	5	11	80
D16.L120.TM5	16	5	11	120
D16.L160.TM5	16	5	11	160
D16.L80.TM6	16	6	12	80
D16.L120.TM6	16	6	12	120
D16.L160.TM6	16	6	12	160
D20.L120.TM6	20	6	12	120
D20.L160.TM6	20	6	12	160
D20.L200.TM6	20	6	12	200
D20.L120.TM8	20	8	16	120
D20.L160.TM8	20	8	16	160
D20.L200.TM8	20	8	16	200
D20.L120.TM10	20	10	16	120
D20.L160.TM10	20	10	16	160
D20.L200.TM10	20	10	16	200
D20.L120.TM12	20	12	18	120
D20.L160.TM12	20	12	18	160
D20.L200.TM12	20	12	18	200
D25.L120.TM12	25	12	18	120
D25.L160.TM12	25	12	18	160
D25.L200.TM12	25	12	18	200
D25.L120.TM14	25	14	20	120
D25.L160.TM14	25	14	20	160
D25.L200.TM14	25	14	20	200
D25.L120.TM16	25	16	25	120
D25.L160.TM16	25	16	25	160
D25.L200.TM16	25	16	25	200

RIDUZIONI WELDON
END MILL SHANK ADAPTERS

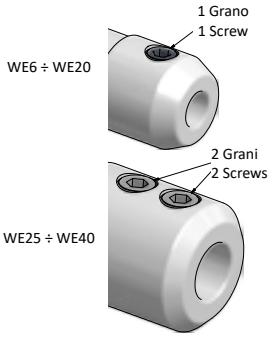




ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* WE P. 347

Articolo	WE1	WE2	A	L	H
WE20.H30.WE6	20	6	25	50	30
WE20.H30.WE8	20	8	28	50	30
WE20.H30.WE10	20	10	35	50	30
WE20.H35.WE12	20	12	42	50	35
WE20.H59.WE14	20	14	44	50	59
WE20.H59.WE16	20	16	48	50	59
WE25.H25.WE6	25	6	25	56	25
WE25.H27.WE8	25	8	28	56	27
WE25.H35.WE14	25	14	44	56	35
WE25.H38.WE16	25	16	48	56	38
WE32.H25.WE6	32	6	25	60	25
WE32.H25.WE8	32	8	28	60	25
WE32.H30.WE10	32	10	35	60	30
WE32.H35.WE12	32	12	42	60	35
WE32.H35.WE14	32	14	44	60	35
WE32.H40.WE16	32	16	48	60	40
WE32.H40.WE18	32	18	50	60	40
WE32.H40.WE20	32	20	52	60	40
WE32.H65.WE25	32	25	65	60	65



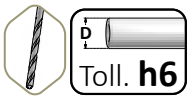
ACCESSORI - *ACCESSORIES*

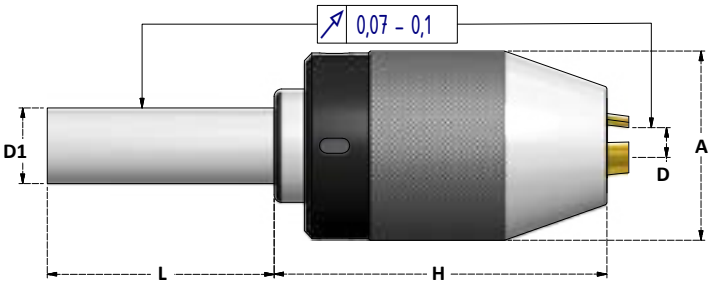


P. 303 GRANI *SCREWS*

MANDRINI PORTAPUNTA AUTOSERRANTI - ROTAZIONE DESTRA

DRILL CHUCKS - RIGHT ROTATION







ATTACCO *SHANK* **CYL** P. 206

Articolo	Range D	D1	H	L	A	Chiave Wrench
D20.L60.DCK8S	0,5 - 8	20	61	60	37,5	CH.DC8
D20.L60.DCK13S	1- 13	20	81	60	50,5	CH.DC13
D20.L60.DCK16S	2,5- 16	20	85	60	57	CH.DC16
D25.L79.DCK13S	1- 13	25	81	79	50,5	CH.DC13
D25.L80.DCK16S	2,5- 16	25	85	80	57	CH.DC16
D32.L81.DCK13S	1- 13	32	81	81	50,5	CH.DC13
D32.L82.DCK16S	2,5- 16	32	85	82	57	CH.DC16

GRIFFE RIVESTITE IN TITANIO

TITANIUM COATED JAWS

ACCESSORI - *ACCESSORIES*



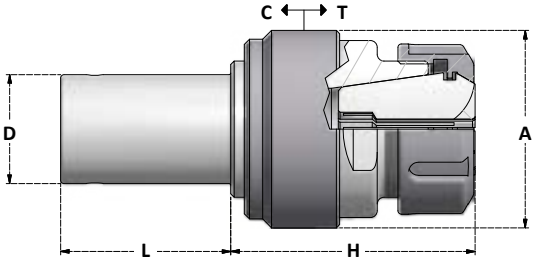
P. 289
CHIAVI
WRENCHES

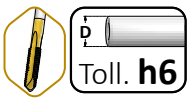
MANDRINI PORTAMASCHI
TAPPING CHUCKS

PM-ERC	**PORTAPINZA ER PER MASCHIATURA CON COMPENSAZIONE A TRAZIONE E COMPRESSIONE**	Pag. 231
	TENSION AND COMPRESSION ER COLLET TAP HOLDERS	
PMT-ERC	**PORTAMASCHI CON COMPENSAZIONE ASSIALE SOLO A TRAZIONE**	Pag. 232
	TENSION ONLY ER COLLETS TAP HOLDERS	
SY	**MANDRINI PER MASCHIATURA SINCRONIZZATA**	Pag. 233
	TAPPING CHUCKS FOR SYNCHRONIZED TAPPING	
MCR-TC	**MASCHIATORI A CAMBIO RAPIDO CON COMPENSAZIONE ASSIALE**	Pag. 233
	QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION	

D PM ERC **DIN ISO 15488** (DIN6499)

PORTAPINZA ER PER MASCHIATURA CON COMPENSAZIONE A TRAZIONE E COMPRESSIONE
TENSION AND COMPRESSION ER COLLET TAP HOLDERS





Corsa di compressione: **C**
Compression stroke:

Corsa di trazione: **T**
Extension stroke:

ATTACCO *SHANK* **CYL** P. 206

Articolo	D	L	H
D16PM.L32.ERC11	16	32	36
D20PM.L32.ERC11	20	32	36

Articolo	D	L	H
D16PM.L32.ERC16	16	32	48
D20PM.L32.ERC16	20	32	48

Articolo	D	L	H
D20PM.L46.ERC20	20	46	59
D25PM.L46.ERC20	25	46	59

Articolo	D	L	H
D20PM.L46.ERC25	20	46	73
D25PM.L50.ERC25	25	50	68
D25PM.L80.ERC25	25	80	68
D32PM.L50.ERC25	32	50	68
D40PM.L85.ERC25	40	85	68

Articolo	D	L	H
D25PM.L50.ERC32	25	50	70
D25PM.L80.ERC32	25	80	70
D32PM.L50.ERC32	32	50	70
D40PM.L85.ERC32	40	85	70

Articolo	A	C	T	Tapping Range	Collets Range	Ghiera Nut
...PM...ERC11	29	2,5	5,5	M3 ÷ M10	1÷7	G11SE
...PM...ERC16	29	2,5	5,5	M3 ÷ M12	3,5 ÷ 10	G16SE
...PM...ERC20	44	3	9	M3 ÷ M16	3,5 ÷ 12	G20SE
D20PM.L46.ERC25	44	3	9	M3 ÷ M20	3,5 ÷ 16	G25S
...PM...ERC25	58	4	12	M3 ÷ M20	3,5 ÷ 16	G25S
...PM...ERC32	58	4	12	M3 ÷ M27	3,5 ÷ 20	G32S

ACCESSORI - *ACCESSORIES*


P. 265
PINZE CON QUADRO
COLLETS WITH SQUARE


P. 280
GHIERE
NUTS


P. 336
MASCHI
TAPS


P. 288
CHIAVI
WRENCHES

PORTAPINZA ER PER MASCHIATURA CON COMPENSAZIONE SOLO A TRAZIONE

TENSION ONLY ER COLLETS TAP HOLDERS

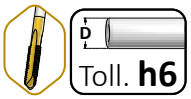


Fig.1

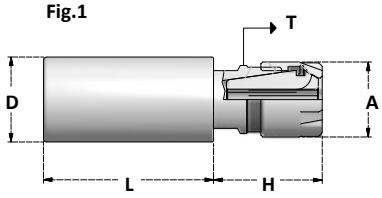
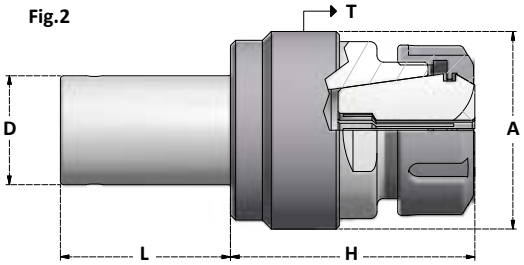


Fig.2



ATTACCO *SHANK* **CYL** P. 206

Articolo	D	L	H	Fig
D16PMT.L40.ERC11M	16	40	21	1
D20PMT.L40.ERC11M	20	40	21	1
D25PMT.L40.ERC11M	25	40	21	1
D16PMT.L40.ERC16M	16	40	36	1
D20PMT.L50.ERC16M	20	50	30	1
D20PMT.L70.ERC16M	20	70	30	1
D20PMT.L120.ERC16M	20	120	30	1
D25PMT.L50.ERC16M	25	50	30	1
D25PMT.L70.ERC16M	25	70	30	1
D25PMT.L120.ERC16M	25	120	30	1
D20PMT.L50.ERC20M	20	50	40	1
D20PMT.L70.ERC20M	20	70	40	1
D20PMT.L120.ERC20M	20	120	40	1
D25PMT.L50.ERC20M	25	50	40	1
D25PMT.L70.ERC20M	25	70	40	1
D25PMT.L120.ERC20M	25	120	40	1
D20PMT.L50.ERC25M	20	50	42	1
D20PMT.L70.ERC25M	20	70	42	1
D20PMT.L120.ERC25M	20	120	42	1
D25PMT.L50.ERC25M	25	50	42	1
D25PMT.L70.ERC25M	25	70	42	1
D25PMT.L120.ERC25M	25	120	42	1

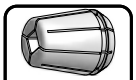
Articolo	A	T	Tapping Range	Collets Range	Ghiera Nut
...PMT...ERC11M	16	10	M3 ÷ M10	1÷7	G11M
...PMT...ERC16M	22	14	M3 ÷ M12	3,5 ÷ 10	G16M
...PMT...ERC20M	28	14	M3 ÷ M16	3,5 ÷ 12	G20M
...PMT...ERC25M	35	14	M3 ÷ M20	3,5 ÷ 16	G25M

Corsa di trazione: **T**
Extension stroke:

Articolo	D	L	H	Fig
D16PMT.L32.ERC11	16	32	36	2
D20PMT.L32.ERC11	20	32	36	2
D16PMT.L32.ERC16	16	32	48	2
D20PMT.L32.ERC16	20	32	48	2
D20PMT.L46.ERC20	20	46	56	2
D25PMT.L46.ERC20	25	46	56	2
D20PMT.L46.ERC25	20	46	70	2
D25PMT.L50.ERC25	25	50	64	2
D25PMT.L80.ERC25	25	80	64	2
D32PMT.L50.ERC25	32	50	64	2
D40PMT.L85.ERC25	40	85	64	2
D25PMT.L50.ERC32	25	50	66	2
D25PMT.L80.ERC32	25	80	66	2
D32PMT.L50.ERC32	32	50	64	2
D40PMT.L85.ERC32	40	85	64	2

Articolo	A	T	Tapping Range	Collets Range	Ghiera Nut
...PMT...ERC11	29	8	M3 ÷ M10	1÷7	G11SE
...PMT...ERC16	29	8	M3 ÷ M12	3,5 ÷ 10	G16MSE
...PMT...ERC20	44	12	M3 ÷ M16	3,5 ÷ 12	G20SE
...PMT...ERC25	58	16	M3 ÷ M20	3,5 ÷ 16	G25S
...PMT...ERC32	58	16	M3 ÷ M27	3,5 ÷ 20	G32S

ACCESSORI - *ACCESSORIES*


P. 265
PINZE CON QUADRO
COLLETS WITH SQUARE


P. 280
GHIERE
NUTS

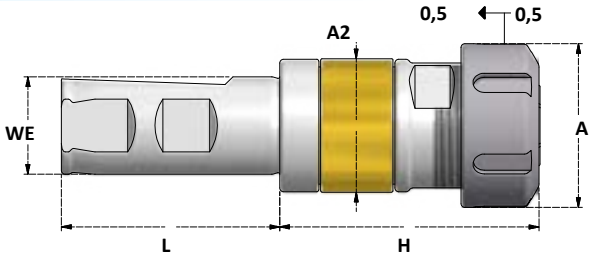

P. 336
MASCHI
TAPS


P. 288
CHIAVI
WRENCHES

DIN 1835-1 Form B | WE | ERC SY | **DIN ISO 15488** (DIN6499)

MANDRINI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING





ATTACCO *SHANK* **CYL** P. 206

Articolo	WE	L	H
WE20.ERC16MSY	20	51	58

Articolo	WE	L	H
WE25.ERC20SY	25	56	61
WE25.ERC25SY	25	56	65
WE25.ERC32SY	25	56	87
WE32.ERC40SY	32	61	108

	A	A2	Collets Range	Tapping Range	Ghiera Nut
...ERC16MSY	22	34	3,5 ÷ 10	M3 ÷ M12	G16M
...ERC20SY	35	34	3,5 ÷ 12	M3 ÷ M16	G20S
...ERC25SY	42	45	3,5 ÷ 16	M3 ÷ M20	G25S
...ERC32SY	50	45	3,5 ÷ 20	M3 ÷ M27	G32S
...ERC40SY	63	62	6 ÷ 25	M5 ÷ M33	G40S

VANTAGGI
ADVANTAGES

- **PASSAGGIO DEL REFRIGERANTE**
- **ADATTO PER MASCHIATURA AD ALTE VELOCITÀ**
- **SISTEMA PORTAPINZE ER**

- *COOLANT THROUGH*
- *SUITABLE FOR HIGH SPEED TAPPING*
- *ER COLLET SYSTEM*

ACCESSORI - *ACCESSORIES*


P. 265 PINZE CON QUADRO *COLLETS WITH SQUARE*


P. 280 GHIERE *NUTS*

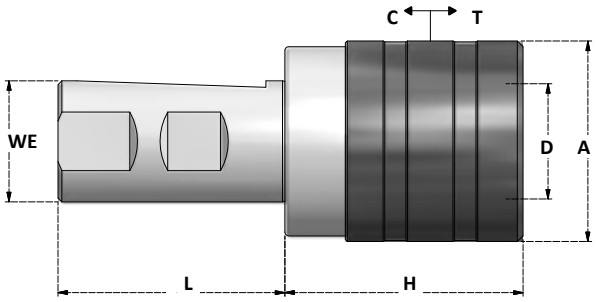

P. 336 MASCHI *TAPS*


P. 288 CHIAVI *WRENCHES*

DIN 1835-1 Form B | WE | MCR TC

MASCHIATORI A CAMBIO RAPIDO CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION





SCHEDA TECNICA *TECHNICAL DATA* MCR | P. 352

Corsa di compressione: *Compression stroke:* **C**

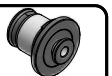
Corsa di trazione: *Extension stroke:* **T**

Articolo	WE	H	L
WE20.MCR1TC	20	40	50
WE25.MCR1TC	25	40	56
WE25.MCR2TC	25	63	56
WE32.MCR1TC	32	40	56
WE32.MCR2TC	32	63	60
WE32.MCR3TC	32	125	60
WE40.MCR1TC	40	40	70
WE40.MCR2TC	40	63	70
WE40.MCR3TC	40	125	70
WE40.MCR4TC	40	126	70

	Bussola Adapter	D	Tapping Range	A	T	C
..MCR1TC	B1 / BF1	19	M2÷M14	36	7,5	7,5
..MCR2TC	B2 / BF2	31	M6÷M27	53	12,5	12,5
..MCR3TC	B3 / BF3	48	M14÷M45	78	20	20
..MCR4TC	BF4	60	M22÷M45	96	22,5	22,5

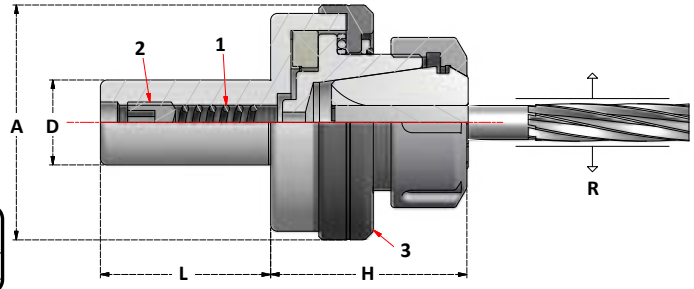
ACCESSORI - *ACCESSORIES*


P. 336 MASCHI *TAPS*


P. 298 INSERZIONI *ADAPTERS*

PORTA ALESATORI FLOTTANTI CON REFRIGERAZIONE INTERNA
FLOATING REAMER HOLDERS WITH COOLANT THROUGH





ATTACCO *SHANK* CYL P. 206

SCHEDA TECNICA *TECHNICAL DATA* RM P. 354

Articolo	D	L	H
D16.L46.RM11	16	46	40
D20.L46.RM11	20	46	40
D16.L46.RM16	16	46	44
D20.L46.RM16	20	46	44
D25.L46.RM16	25	46	44
D16.L46.RM20	16	46	50
D20.L46.RM20	20	46	50
D25.L46.RM20	25	46	50
D16.L46.RM25	16	46	53
D20.L46.RM25	20	46	53
D25.L46.RM25	25	46	53
D32.L46.RM25	32	46	53
D25.L50.RM32	25	50	53
D32.L50.RM32	32	50	53
D25.L50.RM40	25	50	64
D32.L50.RM40	32	50	64

Articolo	D	L	H
D5/8.L46.RM11	15,875	46	40
D3/4.L46.RM11	19,05	46	40
D1".L46.RM11	25,4	46	40
D5/8.L46.RM16	15,875	46	44
D3/4.L46.RM16	19,05	46	44
D1".L46.RM16	25,4	46	44
D3/4.L46.RM20	19,5	46	50
D1".L46.RM20	25,4	46	50
D3/4.L46.RM25	19,5	46	53
D1".L46.RM25	25,4	46	53
D1".L50.RM32	25,4	50	58
D1-1/4.L50.RM32	31,75	50	58
D1".L50.RM40	25,4	50	64
D1-1/4.L50.RM40	31,75	50	64

Articolo	A	R	Collets Range	Ghiera Nut
...RM11	42	± 1 mm	1÷7	G11A.EX
...RM16	42	± 1 mm	1÷10	G16SE
...RM20	50	± 1 mm	1÷14	G20SE
...RM25	57	± 1 mm	1÷20	G25S
...RM32	69	± 1,5 mm	2÷22	G32S
...RM40	79	± 1,5 mm	3÷30	G40S

Movimento radiale: **R**
Radial stroke:

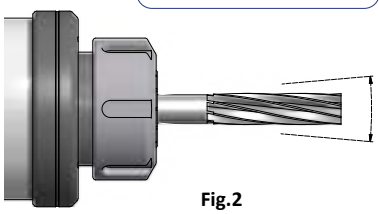


Fig.2

ACCESSORI - *ACCESSORIES*



P. 250 PINZE *COLLETS*



P. 280 GHIERE *NUTS*



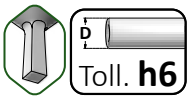
P. 288 CHIAVI *WRENCHES*

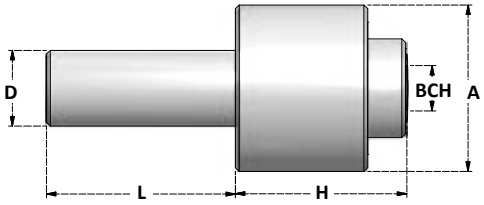
L'alesatore oscilla su un cuscinetto a sfere per compensare gli errori di allineamento tra il mandrino della macchina e il pezzo in lavorazione.

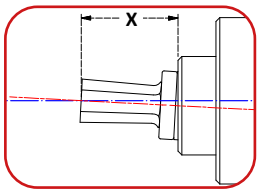
-La spinta della molla **1** mantiene l'utensile centrato anche in posizione orizzontale.
- La vite **2** regola la pressione della molla per regolare il movimento radiale.
- Allentando di 0,1/0,2mm la ghiera **3** si permette all'alesatore di avere un movimento pendolare. (Fig2)

Free mooving ball bearing drive permits to reamer to follow drilled hole of workpiece.
*- Pressure of spring **1** keeps reamer centered, even in horizontal position.*
*- Screw **2** allows adjustment of floating level.*
*- Unscrewing nut **3** for 0,1/0,2mm the reamer has a pendulum float. (Fig 2)*

BROCCIATORI FISSI
BROACH HOLDERS







ATTACCO *SHANK* **CYL** P. 206

SCHEDA TECNICA *TECHNICAL DATA* BCH P. 355

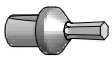
Articolo	D	BCH	A	L	H	X
D8.L35.BCH5	8	5	22	35	34	10
D10.L35.BCH5	10	5	22	35	34	10
D12.L35.BCH5	12	5	22	35	34	10
D16.L35.BCH5	16	5	22	35	34	10
D20.L46.BCH5	20	5	22	46	34	10

Articolo	D	BCH	A	L	H	X
D10.L35.BCH8	10	8	32	35	38	18
D12.L35.BCH8	12	8	32	35	38	18
D16.L35.BCH8	16	8	32	35	38	18
D20.L50.BCH8	20	8	32	50	38	18
D25.L50.BCH8	25	8	32	50	38	18

Articolo	D	BCH	A	L	H	X
D16.L50.BCH12	16	12	44	50	46	25
D20.L50.BCH12	20	12	44	50	46	25
D25.L50.BCH12	25	12	44	50	46	25
D32.L50.BCH12	32	12	44	50	46	25

Articolo	D	BCH	A	L	H	X
D20.L50.BCH16	20	16	58	50	76	40
D25.L50.BCH16	25	16	58	50	76	40
D32.L50.BCH16	32	16	58	50	76	40
D40.L80.BCH16	40	16	58	80	76	40

ACCESSORI - *ACCESSORIES*

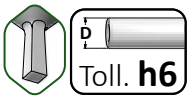


P. 332 BROCCE *BROACHES*

Utilizzare solo con brocce con lunghezza X
Use only broaches with lenghts X

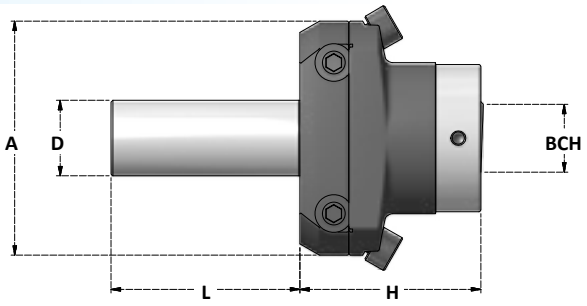
D BCH R

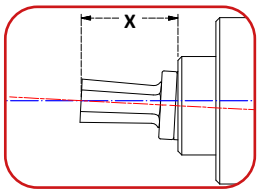
BROCCIATORI REGISTRABILI
ADJUSTABLE BROACH HOLDERS



ISTRUZIONI *INSTRUCTIONS* **BCH R** P. 362

SCHEDA TECNICA *TECHNICAL DATA* BCH P. 355





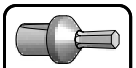
Articolo	D	BCH	A	L	H
D10.L35.BCH8R	10	8	50	35	34
D12.L35.BCH8R	12	8	50	35	34
D16.L35.BCH8R	16	8	50	35	34
D20.L46.BCH8R	20	8	50	46	34
D25.L46.BCH8R	25	8	50	46	34

Articolo	D	BCH	A	L	H
D20.L50.BCH12R	20	12	62	50	52
D25.L50.BCH12R	25	12	62	50	52
D32.L50.BCH12R	32	12	62	50	52

Si possono usare brocce di diversa lunghezza X,
consentendo di eseguire brocciature all'interno di incamerature profonde.

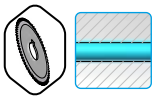
You can use different broaching lenghts X,
so that you can even broach inside deep chambers.

ACCESSORI - *ACCESSORIES*



P. 332 BROCCE *BROACHES*

MANDRINI PER FRESE A DISCO E SEGHE CIRCOLARI
END MILL SHANK ADAPTERS FOR SAW BLADES



D Toll. **h6**

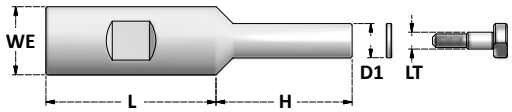


Fig.1

ATTACCO *SHANK* **CYL** P. 206

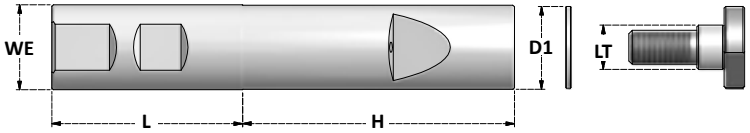
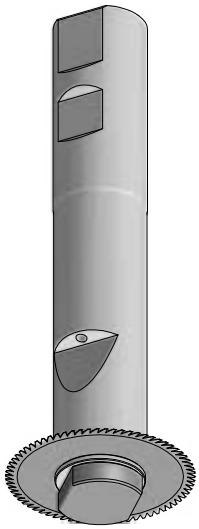


Fig.2

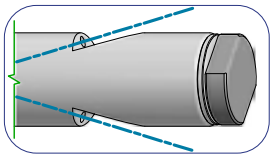


SENZA PASSAGGIO DEL REFRIGERANTE
WITHOUT COOLANT CHANNELS

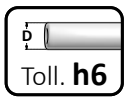
Articolo	WE	D1	LT	L	H	Fig	*Per sega For saw blade*
WE20-5LT	20	10,1	5	90	40	1	*Ø20*
WE20-8LT	20	13,1	8	100	49	1	*Ø25*

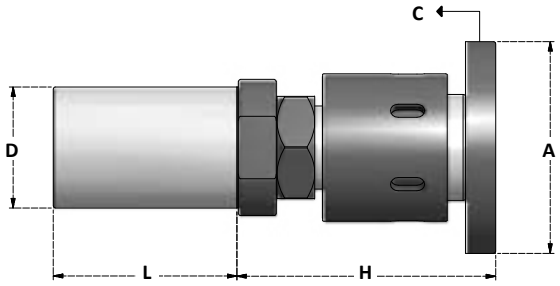
CON PASSAGGIO DEL REFRIGERANTE
WITH COOLANT CHANNELS

Articolo	WE	D1	LT	L	H	Fig	*Per sega For saw blade*
WE20-10LT	20	19,6	10	110	59	1	*Ø40*
WE25-13LT	25	24,7	13	136	79	2	*Ø50*
WE25-16LT	25	24,7	16	136	79	2	*Ø63*



FERMO BARRA ROTANTI COMPENSATI
ADJUSTABLE STOP - SHOCK ABSORBERS FOR LATHES



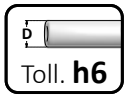


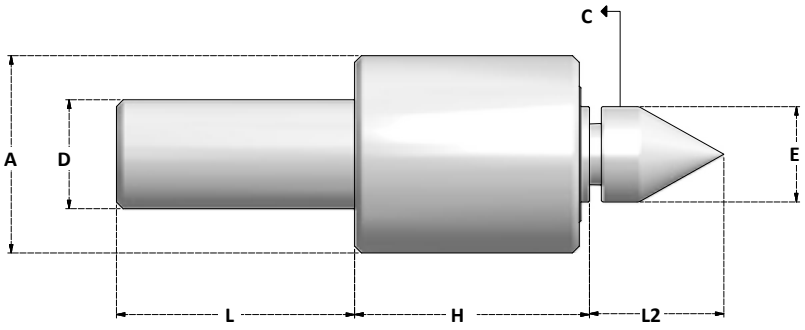
CORSA DI COMPRESSIONE C
ABSORBER STROKE

ATTACCO
SHANK
CYL
P. 206

Articolo	D	A	L	H min	H max	C
D20.SAS35	20	35	46	62	100	3
D25.SAS35	25	35	50	62	100	3
D32.SAS35	32	35	50	62	100	3
D40.SAS35	40	35	85	62	100	3
D25.SAS56	25	56	56	62	100	3
D32.SAS56	32	56	56	62	100	3
D40.SAS56	40	56	85	62	100	3

CONTROPUNTE ROTANTI CON COMPRESSIONE
LIVE CENTRES WITH COMPRESSION





CORSA DI COMPRESSIONE C
ABSORBER STROKE

Articolo	D	E	A	L	H	L2	C
D16.CNP32	16	14	32	35	44	16	2
D20.CNP32	20	14	32	46	44	16	2

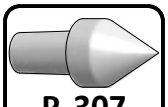
Articolo	D	E	A	L	H	L2	C
D20.CNP43	20	18	43	46	43	21	3
D25.CNP43	25	18	43	46	43	21	3
D32.CNP43	32	18	43	46	43	21	3

Articolo	D	E	A	L	H	L2	C
D25.CNP58	25	28	58	50	71	34	2,5
D32.CNP58	32	28	58	70	71	34	2,5
D40.CNP58	40	28	58	85	71	34	2,5

FORNITI CON CUSPIDE CNP.CS1
SUPPLIED WITH TIP CNP.CS1

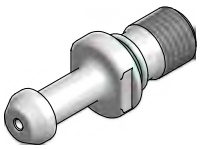
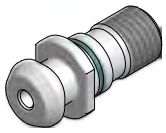
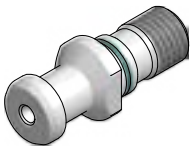
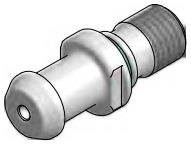
CUSPIDI INTERCAMBIABILI
INTERCHANGEABLE TIPS

ACCESSORI - *ACCESSORIES*

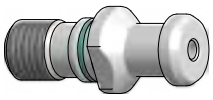


P. 307
CUSPIDI
TIPS

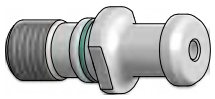
TIRANTI
PULL STUDS

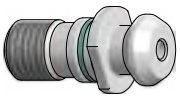
FILETTO THREAD	Sforzo di chiusura Torque
M12	2÷2,4 Kgm
M16	6÷7,8 Kgm
M24	20÷24 Kgm



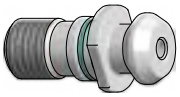
DIN69872
PS.DIN
PAG. 235



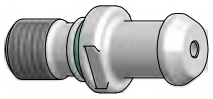
ISO7388/2A
PS.TC
PAG. 236



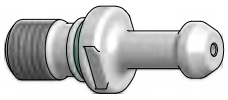
ISO7388/2B
PS.CAT
PAG. 237



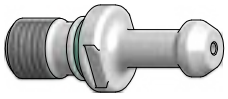
MAZAK
PS.MZ
PAG. 238



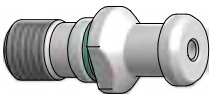
JIS-B 6339
PS.JS
PAG. 239



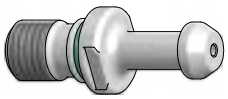
MAS403BT
PS.BT
PAG. 240



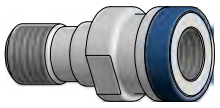
HURCO
PS.BT HC
PAG. 242



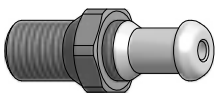
KITAMURA
PS.KIT
PAG. 243



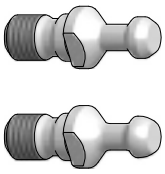
MITSUI SEIKI
PS.MIT
PAG. 244



OTT
PS.OTT
PAG. 245



C.B. FERRARI
PS.CBF
PAG. 246

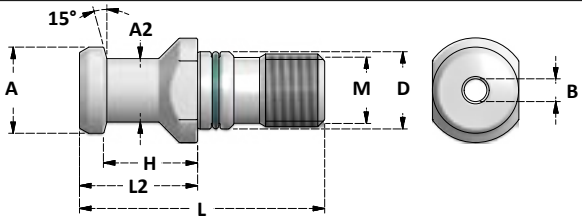


ALBERTI / COLOMBO
BIESSE
CMS
CSM
PS.WD
PAG. 247

SEDE CHIP A RICHIESTA SU TUTTI I TIRANTI SENZA FORO
CHIP HOLE ON REQUEST ON PULL STUDS WITHOUT HLE

TIRANTI A DISEGNO O CON FILETTO A POLLICI FORNIBILI A RICHIESTA
SPECIAL PULL STUDS OR WITH INCH THREAD CAN BE SUPPLIED ON REQUEST

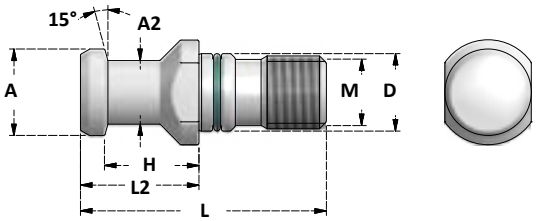
TIRANTI DIN69872
PULL STUDS DIN69872



TIRANTI DIN69872A FORATI
PULL STUDS DIN69872A WITH COOLANT BORE

Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.DIN30F	*	M12	13	19	13	44	2,5	9	24	30
PS.DIN40F		M16	19	20	17	54	7	14	26	40
PS.DIN50F		M24	28	25	25	74	11,5	21	34	50

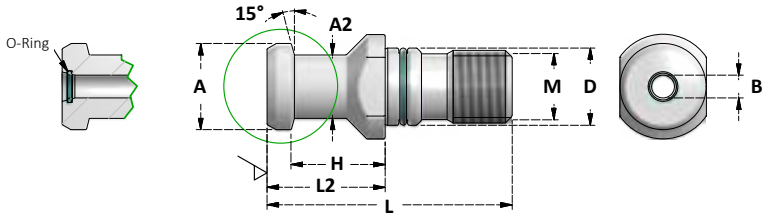
* Senza O-Ring *Without O-Ring*



TIRANTI DIN69872A SENZA FORO
PULL STUDS DIN69872A WITHOUT COOLANT BORE

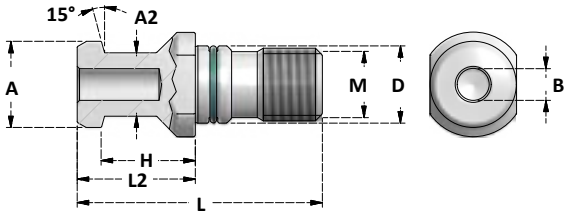
Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.DIN30SF	*	M12	13	19	13	44	/	9	24	30
PS.DIN40SF		M16	19	20	17	54	/	14	26	40
PS.DIN50SF		M24	28	25	25	74	/	21	34	50

* Senza O-Ring *Without O-Ring*



TIRANTI CON DOPPIO O-RING PER REFRIGERANTE AD ALTA PRESSIONE
PULL STUDS WITH DOUBLE O-RING FOR HIGH PRESSION COOLANT

Articolo	M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.DIN40.2OR	M16	19	20	17	54	7	9	26	40
PS.DIN40.2OR-BT	M16	19	23	17	54	7	14	29	40
PS.DIN50.2OR	M24	28	25	25	74	11,5	21	34	50

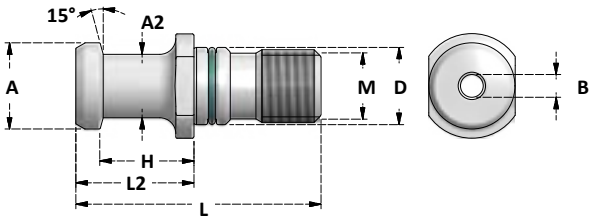


TIRANTI 69872B SEMIFORATI
PULL STUDS 69872B WITH HALF BORE

Articolo	M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.DIN40B	M16	19	20	17	54	7	14	26	40
PS.DIN50B	M24	28	25	25	74	11,5	21	34	50

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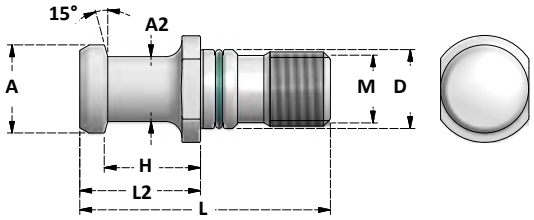
TIRANTI ISO 7388/2A
PULL STUDS ISO 7388/2A



TIRANTI ISO7388/2A FORATI
PULL STUDS ISO7388/2A WITH COOLANT BORE

Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.TC30F	*	M12	12	19	13	44	4	8	24	30
PS.TC40F		M16	19	20	17	54	7	14	26	40
PS.TC50F		M24	28	25	25	74	11,5	21	34	50

* Senza O-Ring *Without O-Ring*

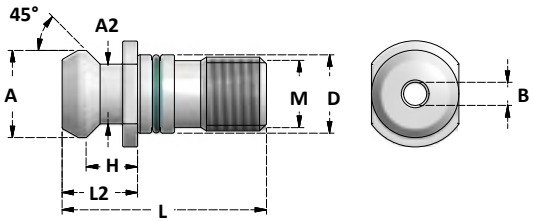


TIRANTI ISO7388/2A SENZA FORO
PULL STUDS ISO7388/2A WITHOUT COOLANT BORE

Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.TC30SF	*	M12	12	19	13	44	/	8	24	30
PS.TC40SF		M16	19	20	17	54	/	14	26	40
PS.TC50SF		M24	28	25	25	74	/	21	34	50

* Senza O-Ring *Without O-Ring*

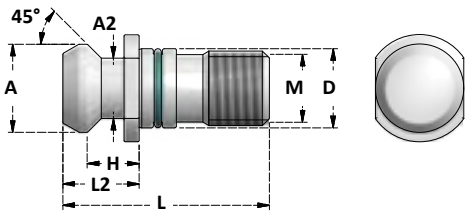
TIRANTI ISO 7388/2B
PULL STUDS ISO7388/2B



TIRANTI ISO7388/2B FORATI
PULL STUDS ISO7388/2B WITH COOLANT BORE

Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.CAT30F	*	M12	13,35	8,15	12,5	34	4	9,3	11,8	30
PS.CAT40F		M16	18,95	11,15	17	44,5	7	12,95	16,4	40
PS.CAT50F		M24	29,1	17,95	25	65,5	11,5	19,6	25,55	50

* Senza O-Ring *Without O-Ring*



TIRANTI ISO7388/2B SENZA FORO
PULL STUDS ISO7388/2B WITHOUT COOLANT BORE

Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.CAT30SF	*	M12	13,35	8,15	12,5	34	/	9,3	11,8	30
PS.CAT40SF		M16	18,95	11,15	17	44,5	/	12,95	16,4	40
PS.CAT50SF		M24	29,1	17,95	25	65,5	/	19,6	25,55	50

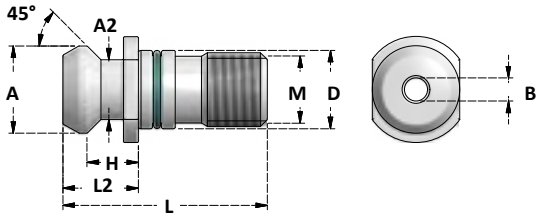
* Senza O-Ring *Without O-Ring*

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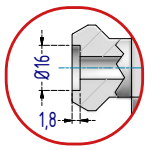
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TIRANTI MAZAK
MAZAK PULL STUDS

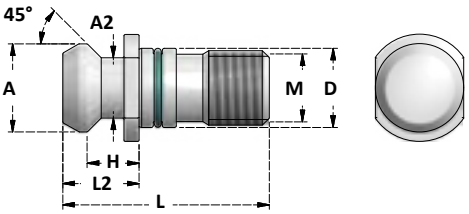


TIRANTI MAZAK FORATI
PULL STUDS MAZAK WITH COOLANT BORE

Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.CAT40.MZ1F		M16	18,8	11,17	17	41,25	7	12,45	16,25	40
PS.CAT40.MZ2F		M16	18,8	14,02	17	44,1	7	12,45	19,1	40
PS.CAT50.MZ3F	*	M24	28,95	17,58	25	65,2	10	20,83	25,2	50
PS.CAT50.MZ4F	*	M24	28,95	17,78	25	65,4	10	20,83	25,4	50



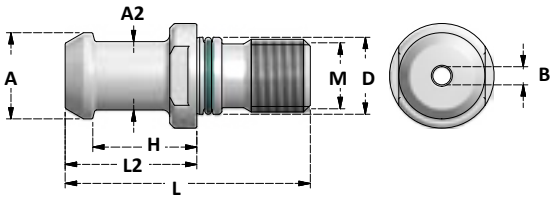
* Con sede chip
With chip slot



TIRANTI MAZAK SENZA FORO
PULL STUDS MAZAK WITHOUT COOLANT BORE

Articolo	M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.CAT40.MZ1SF	M16	18,8	11,17	17	41,25	/	12,45	16,25	40
PS.CAT40.MZ2SF	M16	18,8	14,02	17	44,1	/	12,45	19,1	40

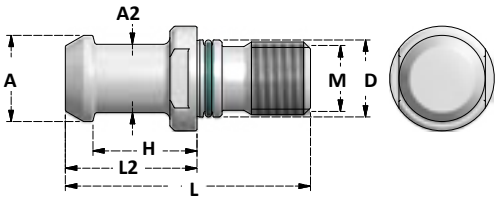
TIRANTI JIS-B 6339
PULL STUDS JIS-B 6339



TIRANTI JIS-B 6339 FORATI
PULL STUDS JIS-B 6339 WITH COOLANT BORE

Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.JS30.F3	*	M12	12	18,4	12,5	43	3	8	23,4	30
PS.JS40.F3		M16	19	23	17	54	3	14	29	40
PS.JS40.F4		M16	19	23	17	54	4	14	29	40
PS.JS40.F5		M16	19	23	17	54	5	14	29	40
PS.JS40.F554		M16	19	23	17	54	5,5-4	14	29	40
PS.JS40.F6		M16	19	23	17	54	6	14	29	40
PS.JS40.F7		M16	19	23	17	54	7	14	29	40
PS.JS50.F10		M24	28	25	25	74	10	21	34	50

* Senza O-Ring *Without O-Ring*



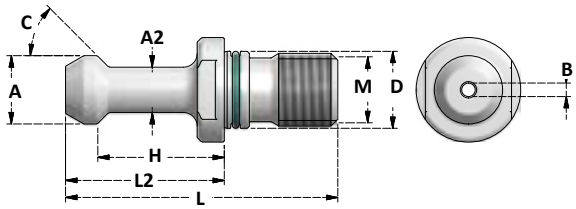
TIRANTI JIS-B 6339 SENZA FORO
PULL STUDS JIS-B 6339 WITHOUT COOLANT BORE

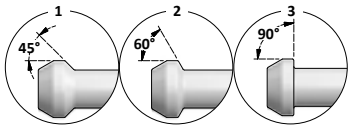
Articolo		M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.JS30SF	*	M12	12	18,4	12,5	43	/	8	23,4	30
PS.JS40SF		M16	19	23	17	54	/	14	29	40
PS.JS50SF		M24	28	25	25	74	/	21	34	50

* Senza O-Ring *Without O-Ring*

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TIRANTI MAS403BT
PULL STUDS MA403BT





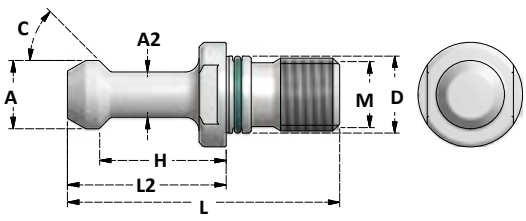
TIRANTI MAS403BT FORATI
PULL STUDS MAS403BT WITH COOLANT BORE

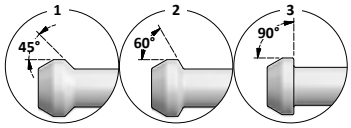
Articolo		M	C	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.BT30.1F	*	M12	45°	11	18	12,5	43	2,5	7	23	30
PS.BT30.2F	*	M12	60°	11	18	12,5	43	2,5	7	23	30
PS.BT30.3F	*	M12	90°	11	18	12,5	43	2,5	7	23	30
PS.BT40.1F		M16	45°	15	28	17	60	3	10	35	40
PS.BT40.2F		M16	60°	15	28	17	60	3	10	35	40
PS.BT40.3F		M16	90°	15	28	17	60	3	10	35	40
PS.BT50.1F		M24	45°	23	35	25	85	6	17	45	50
PS.BT50.2F		M24	60°	23	35	25	85	6	17	45	50
PS.BT50.3F		M24	90°	23	35	25	85	6	17	45	50

* Senza O-Ring *Without O-Ring*

TIRANTI MAS403BT FORATI CON TESTA RETTIFICATA
PULL STUDS MAS403BT WITH COOLANT BORE WITH GRINDED HEAD

Articolo		M	C	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.BT50.2F.OKU		M24	60°	23	35	25	85	6	17	45	50





TIRANTI MAS403BT SENZA FORO
PULL STUDS MAS403BT WITHOUT COOLANT BORE

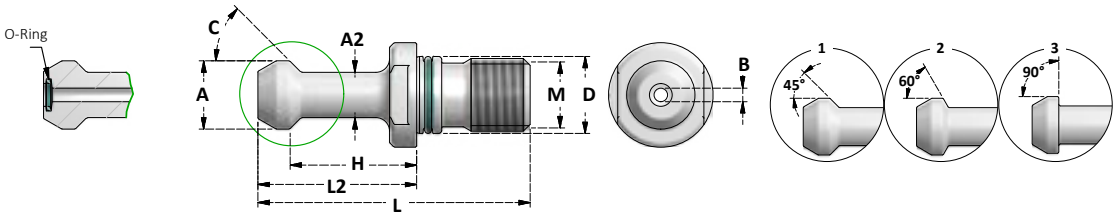
Articolo		M	C	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.BT30.1SF	*	M12	45°	11	18	12,5	43	/	7	23	30
PS.BT30.2SF	*	M12	60°	11	18	12,5	43	/	7	23	30
PS.BT30.3SF	*	M12	90°	11	18	12,5	43	/	7	23	30
PS.BT40.1SF		M16	45°	15	28	17	60	/	10	35	40
PS.BT40.2SF		M16	60°	15	28	17	60	/	10	35	40
PS.BT40.3SF		M16	90°	15	28	17	60	/	10	35	40
PS.BT50.1SF		M24	45°	23	35	25	85	/	17	45	50
PS.BT50.2SF		M24	60°	23	35	25	85	/	17	45	50
PS.BT50.3SF		M24	90°	23	35	25	85	/	17	45	50

* Senza O-Ring *Without O-Ring*

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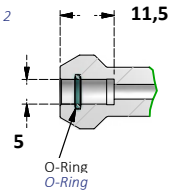
TIRANTI MAS403BT
PULL STUDS MAS403BT



TIRANTI CON DOPPIO O-RING PER REFRIGERANTE AD ALTA PRESSIONE
PULL STUDS WITH DOUBLE O-RING FOR HIGH PRESSION COOLANT

Articolo	M	C	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*	
PS.BT40.1.2OR	M16	45°	15	28	17	60	3	10	35	40	
PS.BT40.1.2OR-5	M16	45°	15	28	17	60	3	10	35	40	*Fig 2*
PS.BT40.2.2OR	M16	60°	15	28	17	60	3	10	35	40	
PS.BT50.1.2OR	M24	45°	23	35	25	85	6	17	45	50	
PS.BT50.2.2OR	M24	60°	23	35	25	85	6	17	45	50	
PS.BT50.3.2OR	M24	90°	23	35	25	85	6	17	45	50	

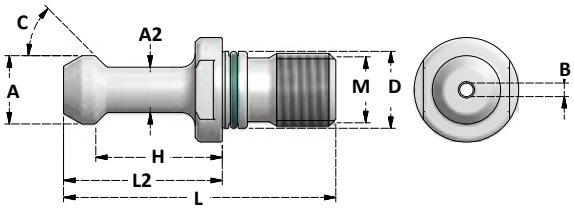
Fig 2

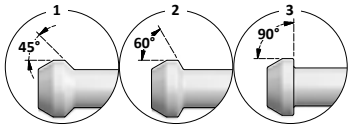


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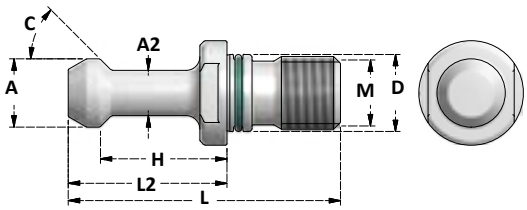
TIRANTI HURCO
PULL STUDS HURCO

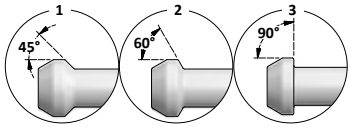




TIRANTI HURCO FORATI
PULL STUDS HURCO WITH COOLANT BORE

Articolo	M	C	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.BT40.HC1F	M16	45°	15	25,15	17	57,15	3	10	32,15	40
PS.BT40.HC2F	M16	60°	15	25,15	17	57,15	3	10	32,15	40
PS.BT40.HC3F	M16	90°	15	25,15	17	57,15	3	10	32,15	40

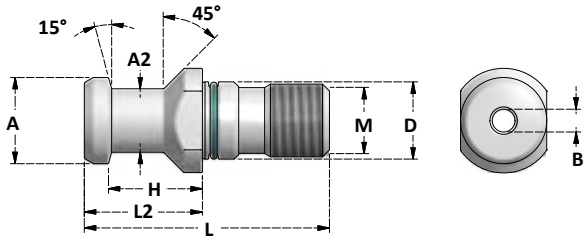




TIRANTI HURCO SENZA FORO
PULL STUDS HURCO WITHOUT COOLANT BORE

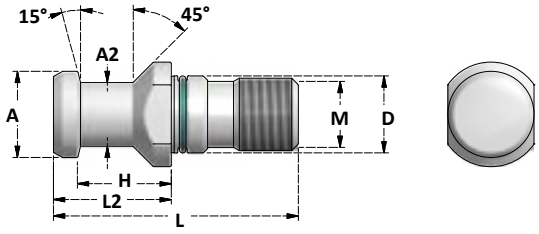
Articolo	M	C	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.BT40.HC1SF	M16	45°	15	25,15	17	57,15	/	10	32,15	40
PS.BT40.HC2SF	M16	60°	15	25,15	17	57,15	/	10	32,15	40
PS.BT40.HC3SF	M16	90°	15	25,15	17	57,15	/	10	32,15	40

TIRANTI KITAMURA
PULL STUDS KITAMURA



TIRANTI KITAMURA FORATI
PULL STUDS KITAMURA WITH COOLANT BORE

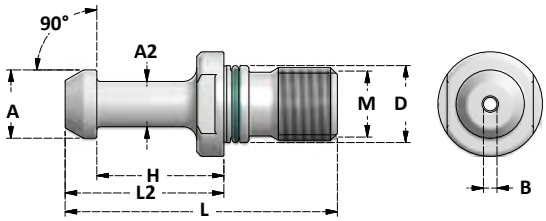
Articolo	M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.KIT40F	M16	19	23	17	54	7	14	29	40



TIRANTI KITAMURA SENZA FORO
PULL STUDS KITAMURA WITHOUT COOLANT BORE

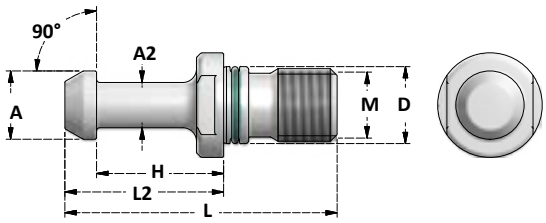
Articolo	M	C	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.KIT40SF	M16	15°	19	23,2	17	57,2	/	14	32,2	40

TIRANTI MITSUI SEIKI
PULL STUDS MITSUI SEIKI



TIRANTI MITSUI SEIKI FORATI
PULL STUDS MITSUI SEIKI WITH COOLANT BORE

Articolo	M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.MIT40F	M16	15	18	17	50	3	10	25	40
PS.MIT50F	M24	24	23	25	71	8	18	31	50



TIRANTI MITSUI SEIKI SENZA FORO
PULL STUDS MITSUI SEIKI WITHOUT COOLANT BORE

Articolo	M	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.MIT40SF	M16	15	18	17	50	/	10	25	40
PS.MIT50SF	M24	24	23	25	71	/	18	31	50

TIRANTI OTT
OTT PULL STUDS

Fig.1

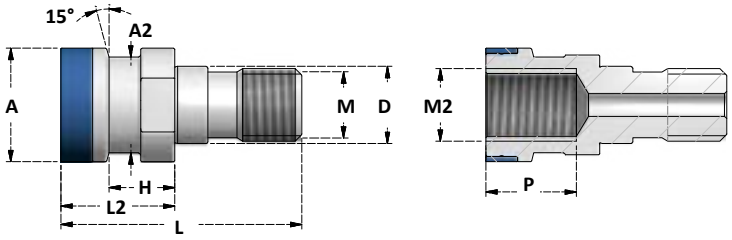
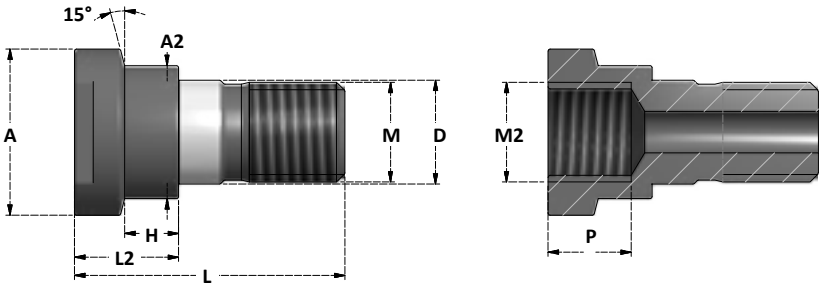


Fig.2



TIRANTI OTT FORATI
OTT PULL STUDS WITH COOLANT BORE

Articolo	M	A	H±0,05	D	L	M2	A2	L2	CONO *TAPER*	P	Fig
PS.OTT40.TCF	M16	25	14,52	17	53,1	M16	21,1	25,1	TC40	20	Fig.1
PS.OTT40.BTF	M16	25	17,54	17	56	M16	21,1	28	BT40	20	Fig.1
PS.OTT50.TBF	M24	39,6	14	25	65	M24	32	25	TC/BT50	20	Fig.2

Fig.1

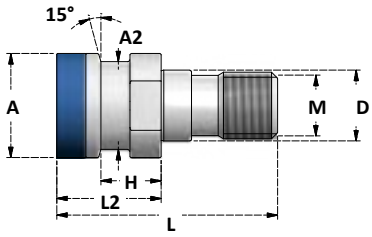
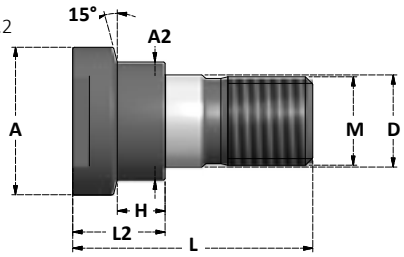


Fig.2



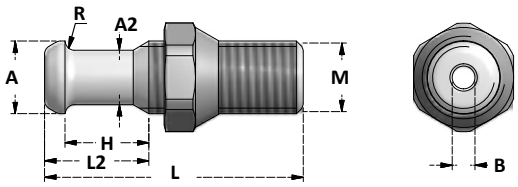
TIRANTI OTT NON FORATI
OTT PULL STUDS WITHOUT COOLANT BORE

Articolo	M	A	H±0,05	D	L	M2	A2	L2	CONO *TAPER*	Fig
PS.OTT40.TCSF	M16	25	14,52	17	53,1	/	21,1	25,1	TC40	Fig.1
PS.OTT40.BTSF	M16	25	17,54	17	56	/	21,1	28	BT40	Fig.1
PS.OTT50.TBSF	M24	39,6	14	25	65	/	32	25	TC/BT50	Fig.2

I CODOLI OTT SERVONO PER MONTARE I MANDRINI TC(DIN69871) **E BT**(MAS403) **SU MACCHINE CON SEDE ISO**(DIN2080)

OTT PULL STUDS ALLOW TO MOUNT TC(DIN69871) AND BT(MAS403) TOOLHOLDERS ON ISO(DIN2080) MACHINES

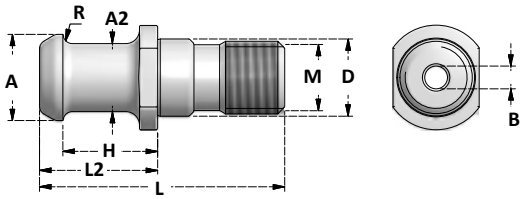
TIRANTI C.B. FERRARI
PULL STUDS C.B. FERRARI



TIRANTI C.B. FERRARI FORATI
PULL STUDS C.B. FERRARI WITH COOLANT BORE

Articolo	M	R	A	H±0,05	L	B	A2	L2	CONO *TAPER*
PS.CBF40.050	M16	3,7	16	18,1	57	5	12	23	40

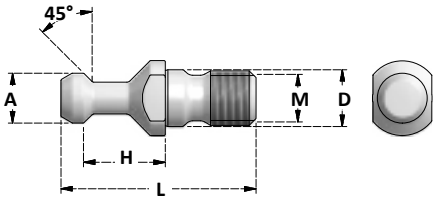
Dado incluso
Nut included



TIRANTI C.B. FERRARI FORATI
PULL STUDS C.B. FERRARI WITH COOLANT BORE

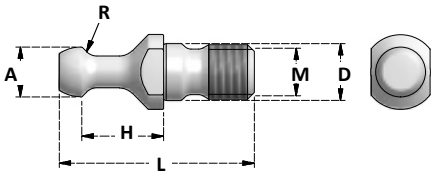
Articolo	M	R	A	H±0,05	D	L	B	A2	L2	CONO *TAPER*
PS.CBF30.051	M12	3,4	12	19,5	13	44	3	8	24	30
PS.CBF40.051	M16	3,7	19	20,31	17	54	5	15	26	40
PS.CBF50.051	M24	4,3	28	25,5	25	74	6	22,2	34	50

TIRANTI PER MANDRINI PER LAVORAZIONE DEL LEGNO
PULL STUDS FOR WOODWORKING TOOL HOLDERS



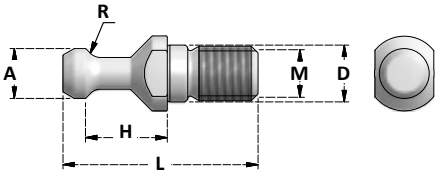
ALBERTI - COLOMBO

Articolo	M	A	H±0,05	D	L	CONO TAPER
PS.WD30.ALB	M12	12,8	19	13	44	30



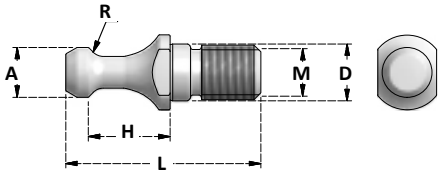
BIESSE

Articolo	M	R	A	H±0,05	D	L	CONO TAPER
PS.WD30.BS	M12	3,2	12	19	13	44	30



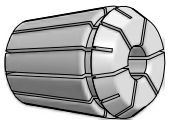
CMS

Articolo	M	R	A	H±0,05	D	L	CONO TAPER
PS.WD30.CMS	M12	2,4	12,8	19	11	44	30

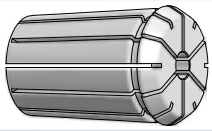


SCM

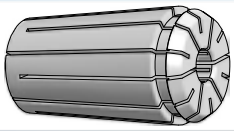
Articolo	M	R	A	H±0,05	D	L	CONO TAPER
PS.WD30.SCM	M10	2,3	8,5	18,3	11	42,5	30



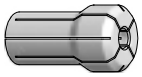
PINZE DI SERRAGGIO ER
ER CLAMPING COLLETS
DIN ISO 15488 (DIN6499)
PAG. 250



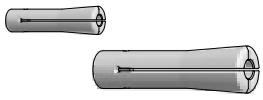
PINZE DI SERRAGGIO EOC
EOC CLAMPING COLLETS
DIN ISO 10897(DIN6388)
PAG. 270



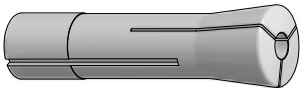
PINZE DI SERRAGGIO ETG
ETG CLAMPING COLLETS
PAG. 271



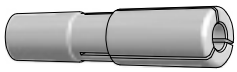
PINZE DI SERRAGGIO EDA
EDA CLAMPING COLLETS
PAG. 272



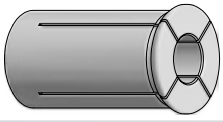
PINZE DI SERRAGGIO SLC
SLC CLAMPING COLLETS
PAG. 273



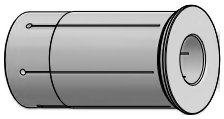
PINZE DI SERRAGGIO R8 - 369E
R8 CLAMPING COLLETS - 369E
PAG. 274



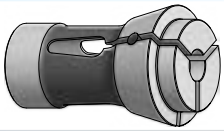
PINZE DI SERRAGGIO A CONO MORSE
MORSE TAPER CLAMPING COLLETS
PAG. 275



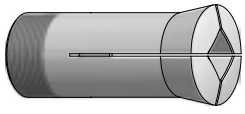
PINZE DI SERRAGGIO CILINDRICHE A 4 TAGLI
CYLINDRICAL CLAMPING COLLETS WITH 4 SLOTS
PAG. 276



PINZE DI SERRAGGIO CILINDRICHE A 6 TAGLI
CYLINDRICAL CLAMPING COLLETS WITH 6 SLOTS
PAG. 277



PINZE DI SERRAGGIO BARRA
WORKHOLDING COLLETS
DIN 6343
PAG. 278

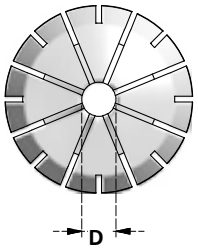


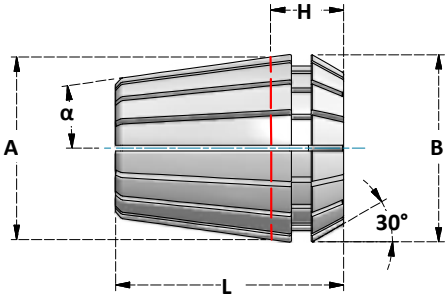
PINZE 5C / CON FILETTO INTERNO ED ESTERNO
5C COLLETS / WITH INTERNAL AND EXTERNAL THREAD
PAG. 279

DIN ISO 15488 (DIN6499)

PINZE DI SERRAGGIO ER
ER CLAMPING COLLETS

Grandezza Size	A	B	α	L	H	D
8	8	8,5	8°	13,5	4,5	1-5
11	11	11,5	8°	18	6,6	1-7
16	16	17	8°	27,5	10,6	1-10
20	20	21	8°	31,5	11,5	1-14
25	25	26	8°	34	12	1-20
32	32	33	8°	40	13	2-22
40	40	41	8°	46	15	3-30
50	50	52	8°	60	21	6-34
60	60	61	10°	60	19,6	10-40

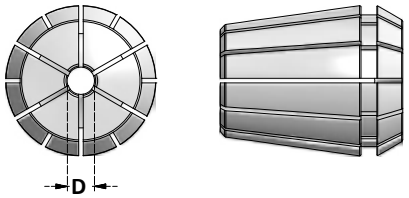


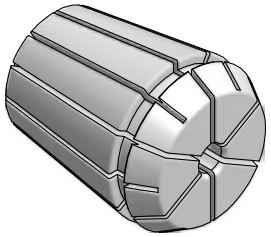


	SIGLA	PAG	TIPO	RUNOUT	TENUTA SEALED	GRANDEZZE SIZES
	ERC HP	*251*	PINZE AD ALTA PRECISIONE *HIGH PRECISION COLLETS*	↗0,005		8- 11- 16- 20- 25 - 32- 40
	ERC	*252*	PINZE STANDARD- CLASSE 1 *STANDARD COLLETS - CLASS 1*	↗0,008		8- 11- 12- 16- 20- 25 32- 40- 50- 60
	ER	*254*	PINZE STANDARD- CLASSE 2 *STANDARD COLLETS - CLASS 2*	↗0,015		16- 20- 25 - 32- 40
	ERC P	*255*	PINZE STANDARD- CLASSE 1- ALESAGGI IN POLLICI *STANDARD COLLETS - CLASS 1 - INCH SIZES*	↗0,0004"		11- 16- 20- 25 - 32- 40
	ERC SSC	*256*	PINZE A TENUTA MECCANICA *SOLID SEALED COLLETS*	↗0,008	MECCANICA SOLID STEEL	16- 20- 25 - 32- 40
	ERC RF	*258*	PINZE A TENUTA CON INSERTI IN NEOPRENE *RUBBER SEALED COLLETS*	↗0,008	NEOPRENE RUBBER	11 - 16- 20- 25 - 32- 40- 50
NEW	**ERC SJ**	*260*	PINZE CON CANALINI DI LUBRIFICAZIONE *COLLETS WITH COOLING CHANNELS*	↗0,008	MECCANICA SOLID STEEL	16- 20- 25 - 32- 40
	ERC JET	*262*	PINZE CON FORI DI LUBRIFICAZIONE *EXTERNALLY COOLING COLLETS*	↗0,008	NEOPRENE RUBBER	16- 20- 25 - 32- 40- 50
	ERC FT	*264*	PINZE PORTAMASCHI CON COMPENSAZIONE ASSIALE *TAPPING COLLETS WITH AXIAL COMPENSATION*	↗0,008		16- 20- 25 - 32- 40
	ERC M	*266*	PINZE PORTAMASCHI CON QUADRO *TAP COLLETS WITH SQUARE*	↗0,008		16- 20- 25 - 32- 40- 50
	ERC MRF	*267*	PINZE PORTAMASCHI CON QUADRO A TENUTA *SEALED TAPPING COLLETS WITH SQUARE*	↗0,008	NEOPRENE RUBBER	16- 20- 25 - 32- 40
	ERC PA	*268*	PINZE CON OSCILLAZIONE RADIALE PER ALESATORI *FLOATING COLLETS FOR REAMERS*			16- 20- 25 - 32- 40
NEW	**ERC TM**	*269*	PINZE A CALETTAMENTO A CALDO *SHRINK FIT COLLETS*			16- 20- 25 - 32

PINZE DI ALTA PRECISIONE
HIGH PRECISION COLLETS

0,005





Articolo	Ø Pinze /progressione Ø Collets /progression
ERC8HP.D	**D1 ÷ D5** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC11HP.D	**D1 ÷ D7** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC16HP.D	**D1 ÷ D10** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC20HP.D	**D1 ÷ D13** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC25HP.D	**D1 ÷ D16** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC32HP.D	**D2 ÷ D20** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC40HP.D	**D3 ÷ D26** x1mm

Codice per ordine: **ERC11HP.D6,5 - ERC32HP.D12 - ERC16HP.D7 - ecc....**
Code for order:

Caratteristiche:
- Tagliate in 12 settori per garantire un'ottima ripetibilita' di concentricita'.
- La precisione HP è garantita solo serrando l'utensile di diametro nominale.
- Superficie finita con rugosità Rz 1,6.
Features:
- 12 slots design for the highest precision and repeatability.
- HP precision is guaranteed only using tools with nominal size.
- Surface finished Rz 1,6.

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.ERC11HP-7	ERC11HP.D1 ÷ D7 x 1mm
TY.ERC16HP-5	ERC16HP.D2- D4- D6- D8- D10
TY.ERC20HP-6	ERC20HP.D2- D4- D6- D8- D10- D12
TY.ERC25HP-6	ERC25HP.D4-6-8-10-12-16
TY.ERC32HP-6	ERC32HP.D6-8-10-12-16-20
TY.ERC40HP-7	ERC40HP.D6-8-10-12-16-20-25



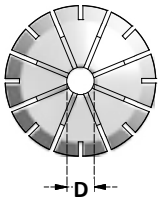
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

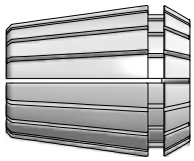
Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC8HP-9	ERC8HP.D1 ÷ D5 x 0,5mm
BX.ERC11HP-13	ERC11HP.D1 ÷ D7 x 0,5mm
BX.ERC16HP-10	ERC16HP.D1 ÷ D10 x 1mm
BX.ERC20HP-12	ERC20HP.D2 ÷ D13 x 1mm
BX.ERC25HP-15	ERC25HP.D2 ÷ D16 x 1mm
BX.ERC32HP-18	ERC32HP.D3 ÷ D20 x 1mm
BX.ERC40HP-23	ERC40HP.D4 ÷ D26 x 1mm

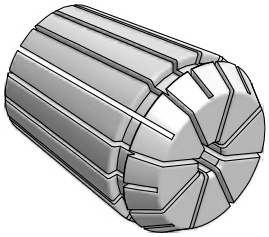


PINZE STANDARD - CLASSE 1 - ALESAGGI METRICI
STANDARD COLLETS - CLASS 1 - METRIC SIZES

0,008







Codice per ordine: *Code for order:* **ERC11.D6,5 - ERC32.D12 - ERC16.D7 - ecc....**

C Capacità di serraggio *Clamping range*

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC8.D	**D1** ÷ **D5** x0,5mm	-0,5

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC11.D	**D1** ÷ **D7** x0,5mm	-0,5

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC16.D	**D1** ÷ **D2** x1mm	-0,5
ERC16.D	**D3** ÷ **D10** x1mm	-1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC20.D	**D1** ÷ **D2** x1mm	-0,5
ERC20.D	**D3** ÷ **D13** x1mm	-1
ERC20.D14*		-0,1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC25.D	**D1** ÷ **D2** x1mm	-0,5
ERC25.D	**D3** ÷ **D16** x1mm	-1
ERC25.D*	**D17** ÷ **D20** x1mm	-0,1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC32.D2	**D2**	-0,5
ERC32.D	**D3** ÷ **D20** x1mm	-1
ERC32.D	**D21*** ; **D22***	-0,1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC40.D	**D3** ÷ **D30** x1mm	-1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC50.D	**D6** ÷ **D34** x1mm	-1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC60.D	**D10** ÷ **D40** x2mm	-2

CARATTERISTICHE:
- Tagliate in 16 settori.
- Superficie finita con rugosita' Rz 1,6.

FEATURES:
- 16 slots design.
- Surface is finished Rz 1,6.

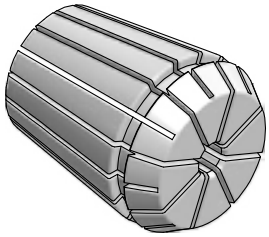
* Diametri speciali *Special diameters*

LUNGHEZZA RIDOTTA
REDUCED LENGTH

Articolo	Length
ERC20.D14	28
ERC25.D19	31
ERC25.D20	28,5

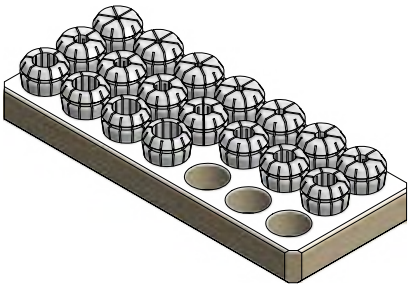
0,008

PINZE STANDARD - CLASSE 1 - ALESAGGI METRICI
STANDARD COLLETS - CLASS 1 - METRIC SIZES



SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.ERC8-9	ERC8.D1 ÷ D5 x 0,5mm
TY.ERC11-7	ERC11.D1 ÷ D7 x 1mm
TY.ERC11-13	ERC11.D1 ÷ D7 x 0,5mm
TY.ERC16-10	ERC16.D1 ÷ D10 x 1mm
TY.ERC20-12	ERC20.D2 ÷ D13 x 1mm
TY.ERC25-6	ERC25.D4-6-8-10-12-16
TY.ERC25-15	ERC25.D2 ÷ D16 x 1mm
TY.ERC32-6	ERC32.D6-8-10-12-16-20
TY.ERC32-18	ERC32.D3 ÷ D20 x 1mm
TY.ERC40-7	ERC40.D6-8-10-12-16-20-25
TY.ERC40-23	ERC40.D4 ÷ D26 x 1mm
TY.ERC40-28	ERC40.D3 ÷ D30 x 1mm
TY.ERC50-12	ERC50.D12 ÷ D34 x 2mm



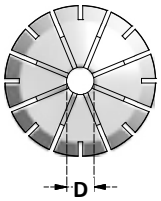
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

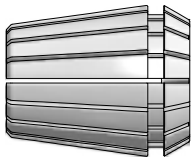
Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC8-9	ERC8.D1 ÷ D5 x 0,5mm
BX.ERC11-7	ERC11.D1 ÷ D7 x 1mm
BX.ERC11-13	ERC11.D1 ÷ D7 x 0,5mm
BX.ERC16-10	ERC16.D1 ÷ D10 x 1mm
BX.ERC20-12	ERC20.D2 ÷ D13 x 1mm
BX.ERC25-15	ERC25.D2 ÷ D16 x 1mm
BX.ERC32-18	ERC32.D3 ÷ D20 x 1mm
BX.ERC40-23	ERC40.D4 ÷ D26 x 1mm
BX.ERC40-28	ERC40.D3 ÷ D30 x 1mm
BX.ERC50-12	ERC50.D12 ÷ D34 x 2mm

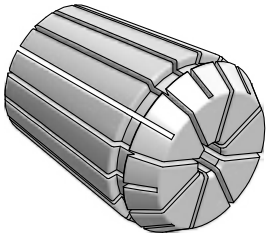


PINZE STANDARD - CLASSE 2 - ALESAGGI METRICI
STANDARD COLLETS - CLASS 2 - METRIC SIZES

0,015







Codice per ordine: **16ER.D6,5 - 32ER.D12 -**
Code for order: **25ER.D7 - ecc....**

C Capacità di serraggio
Clamping range

Articolo	Ø Pinze /progressione Ø Collets /progression	C
16ER.D	**D1** ; **D1,5**	-0,5
16ER.D	**D2** ÷ **D10** x0,5mm	-1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
20ER.D	**D1** ; **D1,5**	-0,5
20ER.D	**D2** ÷ **D13** x0,5mm	-1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
25ER.D	**D1** ; **D1,5**	-0,5
25ER.D	**D2** ÷ **D16** x0,5mm	-1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
32ER.D	**D2** ÷ **D20** x0,5mm	-1

Articolo	Ø Pinze /progressione Ø Collets /progression	C
40ER.D	**D3** ÷ **D26** x0,5mm	-1

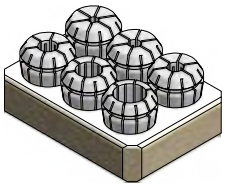
CARATTERISTICHE:
- Tagliate in 16 settori.
- Superficie finita con rugosita' Rz 1,6.
- Disponibili con diametri ogni 0,5mm

FEATURES:
- 16 slots design.
- Surface is finished Rz 1,6.
- Available with diameters every 0.5mm

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.16ER-5	16ER.D2-4-6-8-10
TY.20ER-6	20ER.D2-4-6-8-10-12
TY.25ER-6	25ER.D4-6-8-10-12-16
TY.32ER-6	32ER.D6-8-10-12-16-20
TY.40ER-7	40ER.D6-8-10-12-16-20-25

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.16ER-10	16ER.D1 ÷ D10 x 1mm
TY.20ER-12	20ER.D2 ÷ D13 x 1mm
TY.25ER-15	25ER.D2 ÷ D16 x 1mm
TY.32ER-18	32ER.D3 ÷ D20 x 1mm
TY.40ER-23	40ER.D4 ÷ D26 x 1mm



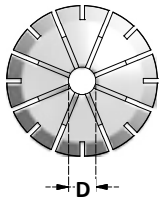
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

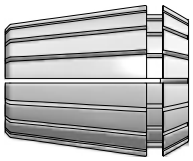
Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.16ER-10	16ER.D1 ÷ D10 x 1mm
BX.20ER-12	20ER.D2 ÷ D13 x 1mm
BX.25ER-15	25ER.D2 ÷ D16 x 1mm
BX.32ER-18	32ER.D3 ÷ D20 x 1mm
BX.40ER-23	40ER.D4 ÷ D26 x 1mm

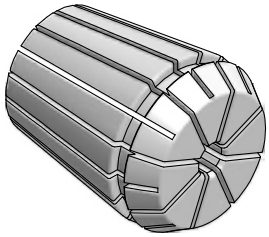


PINZE STANDARD - CLASSE 2 - ALESAGGI IN POLLICI
STANDARD COLLETS - CLASS 2 - INCH SIZES

0,0004"







Codice per ordine: *Code for order:* **ERC11.D1/16 - ERC32.D1/2 ecc....**

C Capacità di serraggio *Clamping range*

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC11.D	**D1/32** ; **D1/16**	-1/64"
ERC11.D	**D3/32** ; **D1/4** x32nds	-1/32"

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC16.D	**D1/16**	-1/64"
ERC16.D	**D3/32** ; **D13/32** x32nds	-1/32"

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC20.D	**D1/16**	-1/64"
ERC20.D	**D3/32** ; **D1/2** x32nds	-1/32"

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC25.D	**D1/16**	-1/64"
ERC25.D	**D3/32** ÷ **D5/8** x32nds	-1/32"

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC32.D	**D3/32** ÷ **D25/32** x32nds	-1/32"

Articolo	Ø Pinze /progressione Ø Collets /progression	C
ERC40.D	**D1/8** ÷ **D1"** x32nds	-1/32"

CARATTERISTICHE:
- Tagliate in 16 settori.
- Superficie finita con rugosita' Rz 1,6.
- Disponibili con diametri ogni 1/32"

FEATURES:
- 16 slots design.
- Surface is finished Rz 1,6.
- Available with diameters every 1/32"

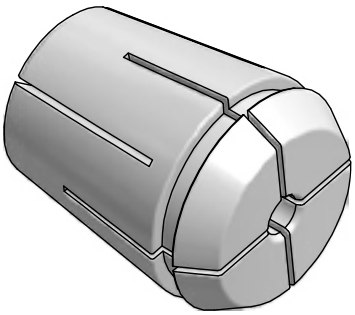
conversione pollici /mm
inch /mm conversion
P. 361

SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC11P-7	D1/16 - D3/32 - D1/8 - D5/32 - D3/16 - D7/32 - D1/4
BX.ERC16P-7	1/8 - 3/16 - 7/32 - 1/4 - 5/16 - 11/32 - 3/8
BX.ERC20P-10	D1/8 - D3/16 - D7/32 - D1/4 - D5/16 - D11/32 - D3/8 - D13/32 - D7/16 - D1/2
BX.ERC25P-12	1/8 - 3/16 - 7/32 - 1/4 - 5/16 - 11/32 - 3/8 - 13/32 - 7/16 - 1/2 - 17/32 - 9/16
BX.ERC32P-11	D1/8 - D3/16 - D1/4 - D5/16 - D3/8 - D7/16 - D1/2 - D9/16 - D5/8 - D11/16 - D3/4
BX.ERC40P-15	D1/8 - D3/16 - D1/4 - D5/16 - D3/8 - D7/16 - D1/2 - D9/16 - D5/8 - D11/16 - D3/4 - D13/16 - D7/8 - D15/16 - D1"



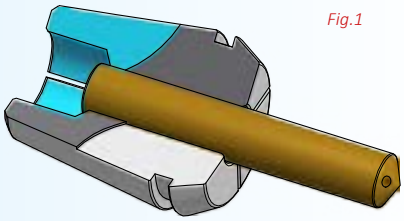
PINZE A TENUTA MECCANICA
SOLID SEALED COLLETS

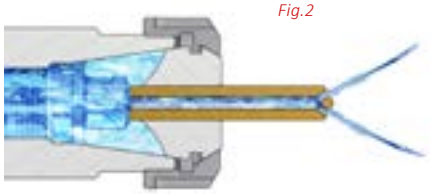


Articolo	D (mm)	Capacità di serraggio Collapse
ERC16SSC	2-12	-0,1mm
ERC20SSC	3-14	-0,1mm
ERC25SSC	3-16	-0,1mm
ERC32SSC	3-22	-0,1mm
ERC40SSC	3-30	-0,1mm

ERRORE MEDIO DI CONCENTRICITA'
AVERAGE OF RUNOUT ACCURACY
0,008

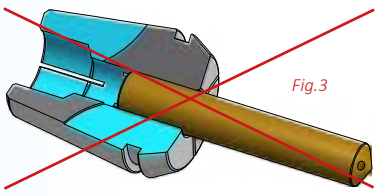
PRESSIONE MASSIMA AMMESSA
MAX PRESSURE
MAX **120**bar


Fig.1


Fig.2

- La tenuta del liquido refrigerante è garantita dai tagli corti (Fig.1).
- Il refrigerante passa attraverso i fori di lubrificazione dell'utensile (Fig.2). Uscendo dai taglienti raffredda ed evacua i trucioli di lavorazione.
- La pressione massima ammessa è di 120 bar.
Si raccomanda di impostare una pressione di esercizio proporzionale alle dimensioni dell'utensile utilizzato.
- Sono tagliate in 4+4 settori che garantiscono un'ottima rigidità e una elevata precisione di concentricità.
- Si possono montare solo in ghiere con estrazione eccentrica.
- La tenuta è garantita solo per utensili con gambo uguale al diametro nominale della pinza e inseriti per tutta la sua lunghezza di presa. (Fig.1 - Fig.3).

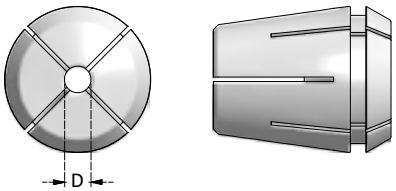
- Collets ERC-SSC are mechanical sealed by short rear slots (Fig.1).
- Coolant flows through cutting tool and removes chips (Fig.2).
- Coolant pressure up to 120 bar. It's recommended to use a pressure proportional to tool dimensions.
- 4+4 slots design allows a better runout accuracy and repeatability.
- Can be mounted only on nuts with eccentric extractor.
- Sealing is guaranteed only for tools with shank equal to nominal diameter of collet inserted for total length of bore. (Fig.1 - Fig.3).

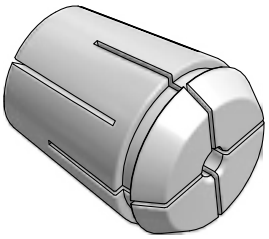

Fig.3

PINZE A TENUTA MECCANICA
SOLID SEALED COLLETS

MAX 120bar

0,008





Codice per ordine: **ERC16SSC.D5 - ERC32SSC.D9 -**
Code for order: **ERC25SSC.D16 - ecc....**

Capacità di serraggio *Clamping range* 0,1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC16SSC.D	**D3 ÷ D10** x1mm
ERC16SSC.D12	

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC20SSC.D	**D3 ÷ D13** x1mm
ERC20SSC.D14	

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC25SSC.D	**D3 ÷ D16** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC32SSC.D	**D3 ÷ D22** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC40SSC.D	**D3 ÷ D26** x1mm
ERC40SSC.D30	

LUNGHEZZA RIDOTTA
REDUCED LENGTH

Articolo	Length
ERC16SSC.D12	21,8
ERC20SSC.D14	28

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.ERC25SSC-6	ERC25SSC.D4-6-8-10-12-16
TY.ERC32SSC-6	ERC32SSC.D6-8-10-12-16-20
TY.ERC40SSC-7	ERC40SSC.D6-8-10-12-16-20-25



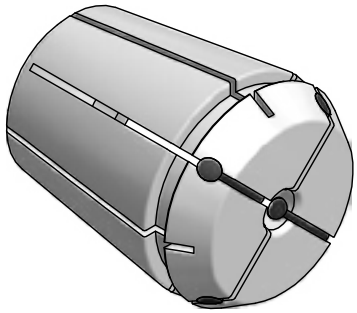
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC16SSC-8	ERC16SSC.D3÷10 x 1mm
BX.ERC20SSC-11	ERC20SSC.D3÷13 x 1mm
BX.ERC25SSC-14	ERC25SSC.D3÷16 x 1mm
BX.ERC32SSC-18	ERC32SSC.D3÷20 x 1mm
BX.ERC40SSC-23	ERC40SSC.D4÷26 x 1mm



PINZE A TENUTA CON INSERTI IN NEOPRENE

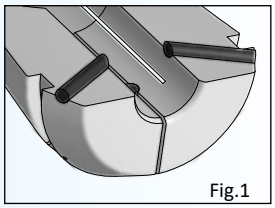
RUBBER SEALED COLLETS

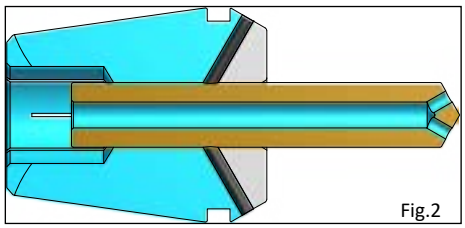


Articolo	D (mm)	Capacità di serraggio Collapse
ERC11RF	3 ÷ 7	-0,1mm
ERC16RF	3 ÷ 10	-0,1mm
ERC20RF	3 ÷ 13	-0,1mm
ERC25RF	3 ÷ 16	-0,1mm
ERC32RF	3 ÷ 20	-0,1mm
ERC40RF	4 ÷ 26	-0,1mm
ERC50RF	10 ÷ 34	-0,1mm

ERRORE MEDIO DI CONCENTRICITA'
AVERAGE OF RUNOUT ACCURACY
0,008

PRESSIONE MASSIMA AMMESSA
MAX PRESSURE
MAX **25** bar

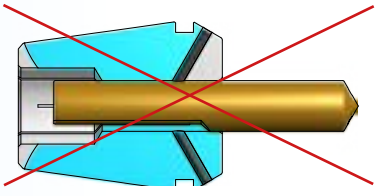

Fig.1


Fig.2

- La tenuta del liquido refrigerante è garantita dalle guarnizioni in neoprene inserite nel cono a 30° (Fig.1).
- Il refrigerante passa attraverso i fori di lubrificazione dell'utensile (Fig.2).
Uscendo dai taglienti raffredda ed evacua i trucioli di lavorazione.
- La pressione massima ammessa è di 25 bar.
Si raccomanda di impostare una pressione di esercizio proporzionale alle dimensioni dell'utensile utilizzato.
- Sono tagliate in 4+4 settori che garantiscono un'ottima rigidità e una elevata precisione di concentricità.
- Si possono montare solo in ghiere con estrazione eccentrica.
- La tenuta è garantita solo per utensili con gambo uguale al diametro nominale della pinza e inseriti per tutta la sua lunghezza di presa.
- Le frese con piano tipo weldon possono essere utilizzate solo se posizionate in modo che il piano resti al di sotto dei gommini per non favorire l'uscita del liquido (Fig.3).

- Collets ERC-RF are sealed by neoprene inserts in 30° taper (Fig.1)
- Coolant flows through cutting tool and removes chips (Fig.2).
- Coolant pressure up to 25 bar
- 4+4 slots design allows a better runout accuracy and repeatability.
- Can be mounted only on nuts with eccentric extractor.
- Sealing is guaranteed only for tools with shank equal to nominal diameter of collet inserted for total length of bore.
- If tool has a flat it must be located under neoprene seals (Fig.3).

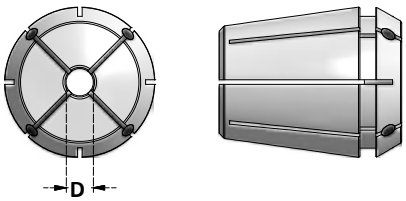
Fig.3

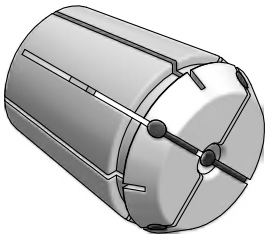


PINZE A TENUTA CON INSERTI IN NEOPRENE
RUBBER SEALED COLLETS

MAX **25** bar

0,008





Articolo	Ø Pinze /progressione Ø Collets /progression
ERC11RF.D	**D3** ÷ **D7** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC16RF.D	**D3** ÷ **D10** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC20RF.D	**D3** ÷ **D13** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC25RF.D	**D3** ÷ **D16** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC32RF.D	**D3** ÷ **D20** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC40RF.D	**D4** ÷ **D26** x0,5mm

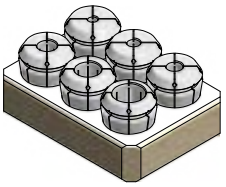
Articolo	Ø Pinze /progressione Ø Collets /progression
ERC50RF.D	**D10** ÷ **D34** x2mm

Codice per ordine: **ERC16RF.D5 - ERC32RF.D9 -**
Code for order: **ERC20RF.D8 - ecc....**

Capacità di serraggio *Clamping range* 0,1mm

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.ERC25RF-6	ERC25RF.D4-6-8-10-12-16
TY.ERC32RF-6	ERC32RF.D6-8-10-12-16-20
TY.ERC40RF-7	ERC40RF.D6-8-10-12-16-20-25



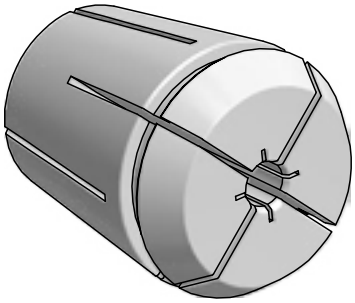
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC11RF-9	ERC11RF.D3÷7 x 0,5mm
BX.ERC16RF-8	ERC16RF.D3÷10 x 1mm
BX.ERC20RF-11	ERC20RF.D3÷13 x 1mm
BX.ERC25RF-14	ERC25RF.D3÷16 x 1mm
BX.ERC32RF-18	ERC32RF.D3÷20 x 1mm
BX.ERC40RF-23	ERC40RF.D4÷26 x 1mm
BX.ERC50RF-12	ERC50RF.D12÷34 x 2mm



PINZE A TENUTA MECCANICA CON CANALINI PER REFRIGERAZIONE LUNGO IL FORO

STEEL SEALED COLLETS WITH CHANNELS ALONG HOLE



Articolo	D (mm)	Capacità di serraggio Collapse
ERC16SJ	3 ÷ 10	-0,1mm
ERC20SJ	3 ÷ 13	-0,1mm
ERC25SJ	3 ÷ 16	-0,1mm
ERC32SJ	3 ÷ 20	-0,1mm
ERC40SJ	3 ÷ 26	-0,1mm

ERRORE MEDIO DI CONCENTRICITA' *AVERAGE OF RUNOUT ACCURACY* **0,008**

PRESSIONE MASSIMA AMMESSA *MAX PRESSURE* MAX **120**bar

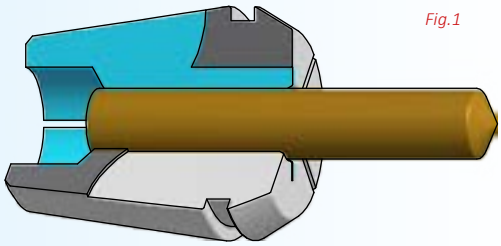


Fig.1

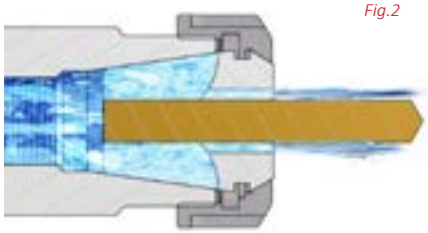


Fig.2

- La tenuta del liquido refrigerante è garantita dai tagli corti (Fig.1).
- Il refrigerante passa attraverso i canalini di lubrificazione lungo il foro della pinza (Fig.2).
- La pressione massima ammessa è di 120 bar.
Si raccomanda di impostare una pressione di esercizio proporzionale alle dimensioni dell'utensile utilizzato.
- Sono tagliate in 4+4 settori che garantiscono un'ottima rigidità e una elevata precisione di concentricità.
- Si possono montare solo in ghiere con estrazione eccentrica.
- La tenuta è garantita solo per utensili con gambo uguale al diametro nominale della pinza e inseriti per tutta la sua lunghezza di presa. (Fig.1 - Fig.3).

- Collets ERC-SJ are mechanical sealed by short rear slots (Fig.1).
- Coolant flows through channels along collet's bore(Fig.2).
- Coolant pressure up to 120 bar.
- 4+4 slots design allows a better runout accuracy and repeatability.
- Can be mounted only on nuts with eccentric extractor.
- Sealing is guaranteed only for tools with shank equal to nominal diameter of collet inserted for total length of bore. (Fig.1 - Fig.3).

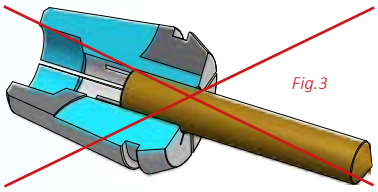
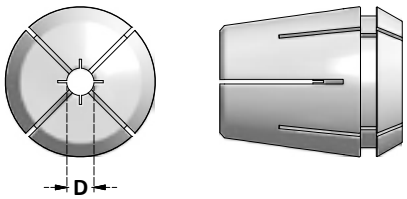


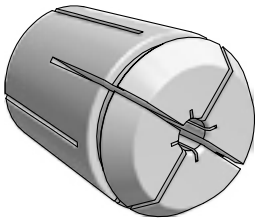
Fig.3

MAX **25** bar

0,008

PINZE CON CANALINI
COLLETS WITH CHANNELS





Codice per ordine: **ERC16SJ.D5 - ERC32SJ.D9 -**
Code for order: **ERC20SJ.D8 - ecc....**

Capacità di serraggio *Clamping range* 0,1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC16SJ.D	**D3 ÷ D10** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC20SJ.D	**D3 ÷ D13** x1mm

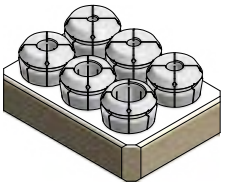
Articolo	Ø Pinze /progressione Ø Collets /progression
ERC25SJ.D	**D3 ÷ D16** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC32SJ.D	**D3 ÷ D20** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC40SJ.D	**D4 ÷ D26** x1mm

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.ERC25SJ-6	ERC25SJ.D4-6-8-10-12-16
TY.ERC32SJ-6	ERC32SJ.D6-8-10-12-16-20
TY.ERC40SJ-7	ERC40SJ.D6-8-10-12-16-20-25



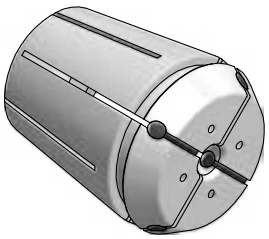
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC16SJ-8	ERC16SJ.D3÷10 x 1mm
BX.ERC20SJ-11	ERC20SJ.D3÷13 x 1mm
BX.ERC25SJ-14	ERC25SJ.D3÷16 x 1mm
BX.ERC32SJ-18	ERC32SJ.D3÷20 x 1mm
BX.ERC40SJ-23	ERC40SJ.D4÷26 x 1mm



PINZE A TENUTA CON INSERTI IN NEOPRENE E FORI PER REFRIGERAZIONE ESTERNA

RUBBER SEALED COLLETS WITH HOLES FOR EXTERNAL COOLING



Articolo	D (mm)	Capacità di serraggio Collapse
ERC16JET	3 ÷ 7	-0,1mm
ERC20JET	3 ÷ 10	-0,1mm
ERC25JET	3 ÷ 14	-0,1mm
ERC32JET	3 ÷ 20	-0,1mm
ERC40JET	4 ÷ 26	-0,1mm
ERC50JET	6 ÷ 34	-0,1mm

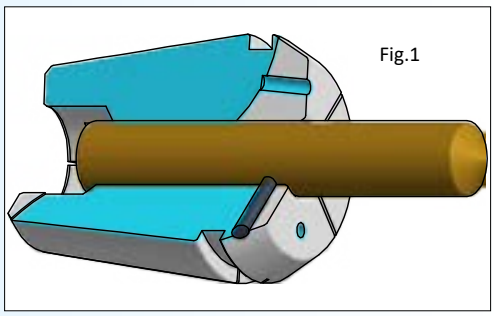
ERRORE MEDIO DI CONCENTRICITA'
AVERAGE OF RUNOUT ACCURACY
0,008

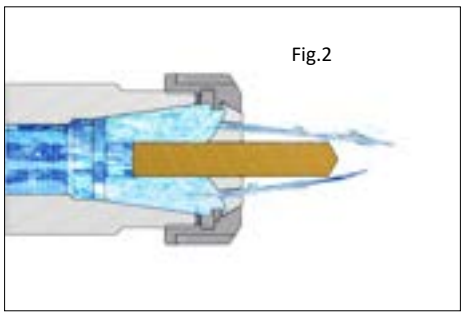
PRESSIONE MASSIMA AMMESSA
MAX PRESSURE
MAX **25** bar



- La tenuta del liquido refrigerante è garantita dalle guarnizioni in neoprene inserite nel cono a 30° (Fig.1).
- Il refrigerante passa attraverso i 4 fori frontali della pinza (Fig.2).
Il getto è indirizzato sui taglienti, raffredda ed evacua i trucioli di lavorazione.
- La pressione massima ammessa è di 25 bar.
- Si raccomanda di impostare una pressione di esercizio proporzionale alle dimensioni dell'utensile utilizzato.
- Sono tagliate in 4+4 settori che garantiscono un'ottima rigidità e una elevata precisione di concentricità.
- Si possono montare solo in ghiere con estrazione eccentrica.
- La tenuta è garantita solo per gli utensili il cui gambo corrisponde al diametro nominale della pinza e che vengono inseriti per tutta la sua lunghezza di presa.

- Collets are sealed by neoprene inserts in the 30° taper (Fig.1).
- 4 holes of ERC JET collets direct coolant flow to centre of cutting edges. Chips are easy removed (Fig.2).
- Coolant pressure up to 25 bar.
- 4+4 slots design allows a better runout accuracy and repeatability.
- Can be mounted only on nuts with eccentric extractor.
- Sealing is guaranteed only for tools with shank equal to nominal diameter of collet inserted for total length of bore.

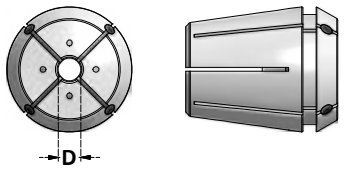

Fig.1

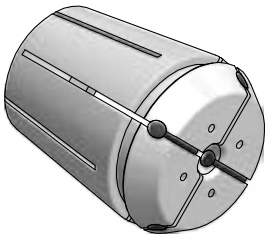

Fig.2

MAX 25 bar

0,008

PINZE A TENUTA CON FORI
COLLETS WITH HOLES





Codice per ordine: **ERC16JET.D5 - ERC32JET.D9 -**
Code for order: **ERC20JET.D5 - ecc....**

Capacità di serraggio *Clamping range* 0,1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC16JET.D	**D3** ÷ **D7** x1mm

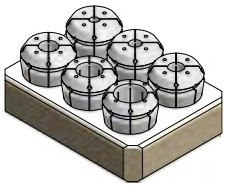
Articolo	Ø Pinze /progressione Ø Collets /progression
ERC20JET.D	**D3** ÷ **D10** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC25JET.D	**D3** ÷ **D14** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC32JET.D	**D3** ÷ **D20** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC40JET.D	**D4** ÷ **D26** x1mm

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY



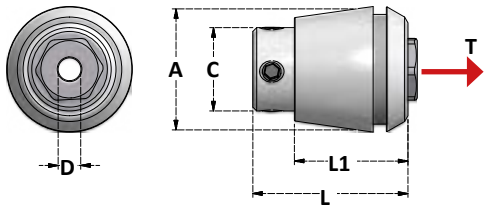
Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.ERC25JET-5	ERC25JET.D4-6-8-10-12
TY.ERC32JET-6	ERC32JET.D6-8-10-12-16-20
TY.ERC40JET-7	ERC40JET.D6-8-10-12-16-20-25

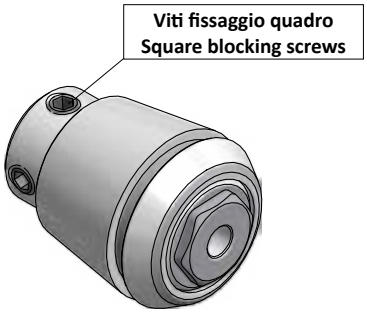
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX



Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC16JET-5	ERC16JET.D3 ÷ D7 x 1mm
BX.ERC20JET-8	ERC20JET.D3 ÷ D10 x 1mm
BX.ERC25JET-12	ERC25JET.D3 ÷ D14 x 1mm
BX.ERC32JET-18	ERC32ET.D3 ÷ D20 x 1mm
BX.ERC40JET-23	ERC40JET.D4 ÷ D26 x 1mm

PINZE PORTAMASCHI CON COMPENSAZIONE ASSIALE
TAPPING COLLETS WITH AXIAL COMPENSATION

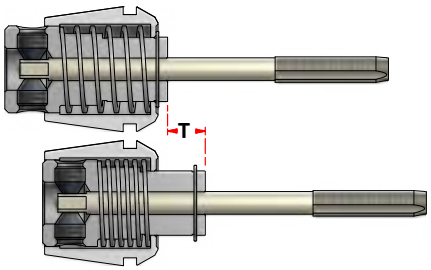




Articolo		T	A	C	L1	L	D (mm)	MASCHI TAPS
ERC16FT	4033E	7	16	11	22	27	1,4 ÷ 6	M1 ÷ M6
ERC20FT	4284E	7	20	14	24	31	2,2 ÷ 8	M1 ÷ M8
ERC25FT	4285E	8	25	19	24,5	34	2,5 ÷ 10	M3,5 ÷ M10 (M12)
ERC32FT	4538E	10	32	23	31	43	4,5 ÷ 12,5	M4 ÷ M12 (M16)
ERC40FT	4717E	13	40	28	42	54	6 ÷ 16	M6 ÷ M16 (M20)

- Si montano su tutti i tipi di portapinze ER
- L'utilizzo del refrigerante attraverso la pinza è sconsigliato.
- Si possono montare solo in ghiere con estrazione eccentrica.

- Can be mounted on every ER collet chuck.
- Coolant throught collet not recommended.
- Can be mounted only on nuts with eccentric extractor.



GAMBI MASCHI
TAP SHANK
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Articolo
ERC16FT.D1,4
ERC16FT.D1,6
ERC16FT.D1,8
ERC16FT.D2
ERC16FT.D2,2
ERC16FT.D2,24
ERC16FT.D2,5
ERC16FT.D2,8
ERC16FT.D3
ERC16FT.D3,15
ERC16FT.D3,5
ERC16FT.D4
ERC16FT.D4,5
ERC16FT.D5
ERC16FT.D5,5
ERC16FT.D6

Articolo
ERC20FT.D2,5
ERC20FT.D2,8
ERC20FT.D3
ERC20FT.D3,5
ERC20FT.D4
ERC20FT.D4,5
ERC20FT.D5
ERC20FT.D5,5
ERC20FT.D6
ERC20FT.D7

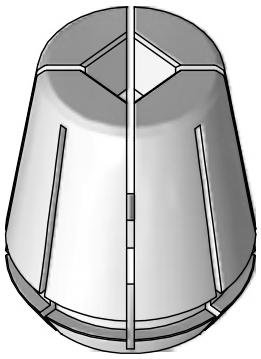
Articolo
ERC25FT.D2,5
ERC25FT.D2,8
ERC25FT.D3
ERC25FT.D3,5
ERC25FT.D4
ERC25FT.D4,5
ERC25FT.D5
ERC25FT.D5,5
ERC25FT.D6
ERC25FT.D7
ERC25FT.D8
ERC25FT.D9
ERC25FT.D10

Articolo
ERC32FT.D4
ERC32FT.D4,5
ERC32FT.D5
ERC32FT.D5,5
ERC32FT.D6
ERC32FT.D7
ERC32FT.D8
ERC32FT.D9
ERC32FT.D10
ERC32FT.D11
ERC32FT.D12
ERC32FT.D12,5

Articolo
ERC40FT.D6
ERC40FT.D7
ERC40FT.D8
ERC40FT.D9
ERC40FT.D10
ERC40FT.D11
ERC40FT.D12
ERC40FT.D12,5
ERC40FT.D14
ERC40FT.D16

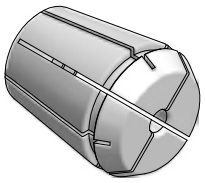
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MASCHI
TAPS

PINZE PORTAMASCHI CON QUADRO
TAP COLLETS WITH SQUARE



STANDARD

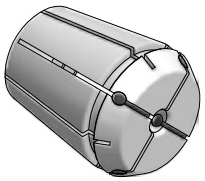
Articolo	D (mm)	MASCHI TAPS
ERC16M	3,5 ÷ 10	M3 ÷ M12
ERC20M	3,5 ÷ 12	M3 ÷ M16
ERC25M	3,5 ÷ 16	M3 ÷ M20
ERC32M	3,5 ÷ 20	M3 ÷ M27
ERC40M	6 ÷ 25	M5 ÷ M33
ERC50M	8 ÷ 32	M8 ÷ M42



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TENUTA CON INSERTI IN NEOPRENE
RUBBER SEALED

Articolo	D (mm)	MASCHI TAPS
ERC16MRF	4 ÷ 8	M4 ÷ M10
ERC20MRF	4 ÷ 10	M4 ÷ M12
ERC25MRF	4 ÷ 12	M4 ÷ M16
ERC32MRF	4,5 ÷ 16	M4 ÷ M22
ERC40MRF	6 ÷ 20	M5 ÷ M27



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- Utilizzate per la maschiatura sincronizzata con i maschi DIN371 - 374 - 376
- Con il quadro interno per il trascinamento del maschio.
- Senza compensazione assiale.
- Si possono montare solo in ghiere con estrazione eccentrica.
- Bloccano solo il diametro nominale del gambo dei maschi con tolleranza h8.
- Le caratteristiche di tenuta delle pinze MRF sono le stesse delle pinze RF illustrate a pagina 262

- Suitable for syncro tapping with DIN371 - 374 - 376 taps.
- With internal square drive for eliminate tap slippage.
- Without axial compensation.
- Can be mounted only on nuts with eccentric extractor.
- Can clamp only the nominal size of tap shank with tollerance h8.
- See page 262 for sealing features.

P. 336 MASCHI TAPS

PINZE PORTAMASCHI CON QUADRO
TAP COLLETS WITH SQUARE



Articolo	Q
ERC16M.D3,5	2,7
ERC16M.D4	3
ERC16M.D4,5	3,4
ERC16M.D5	4
ERC16M.D5,5	4,3
ERC16M.D6	4,9
ERC16M.D6,3	5
ERC16M.D7	5,5
ERC16M.D8	6,2
ERC16M.D9	7
ERC16M.D10	8

Articolo	Q
ERC20M.D3,5	2,7
ERC20M.D4	3
ERC20M.D4,5	3,4
ERC20M.D5	4
ERC20M.D5,5	4,3
ERC20M.D6	4,9
ERC20M.D6,3	5
ERC20M.D7	5,5
ERC20M.D8	6,2
ERC20M.D9	7
ERC20M.D10	8
ERC20M.D11	9
ERC20M.D12	9

Articolo	Q
ERC25M.D3,5	2,7
ERC25M.D4	3
ERC25M.D4,5	3,4
ERC25M.D5	4
ERC25M.D5,5	4,3
ERC25M.D6	4,9
ERC25M.D6,3	5
ERC25M.D7	5,5
ERC25M.D8	6,2
ERC25M.D9	7
ERC25M.D10	8
ERC25M.D11	9
ERC25M.D11,2	9
ERC25M.D12	9
ERC25M.D14	11
ERC25M.D16	12

Articolo	Q
ERC32M.D3,5	2,7
ERC32M.D4	3
ERC32M.D4,5	3,4
ERC32M.D5	4
ERC32M.D5,5	4,3
ERC32M.D6	4,9
ERC32M.D6,3	5
ERC32M.D7	5,5
ERC32M.D8	6,2
ERC32M.D9	7
ERC32M.D10	8
ERC32M.D11	9
ERC32M.D11,2	9
ERC32M.D12	9
ERC32M.D12,5	10
ERC32M.D14	11
ERC32M.D16	12
ERC32M.D18	14,5
ERC32M.D20	16

Articolo	Q
ERC40M.D6	4,9
ERC40M.D7	5,5
ERC40M.D8	6,2
ERC40M.D9	7
ERC40M.D10	8
ERC40M.D11	9
ERC40M.D12	9
ERC40M.D14	11
ERC40M.D16	12
ERC40M.D18	14,5
ERC40M.D20	16
ERC40M.D22	18
ERC40M.D25	20

Articolo	Q
ERC50M.D8	6,2
ERC50M.D9	7
ERC50M.D10	8
ERC50M.D11	9
ERC50M.D12	9
ERC50M.D14	11
ERC50M.D16	12
ERC50M.D18	14,5
ERC50M.D20	16
ERC50M.D22	18
ERC50M.D25	20
ERC50M.D28	22
ERC50M.D32	24

GAMBI MASCHI
TAP SHANK
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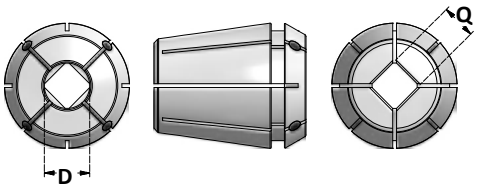
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

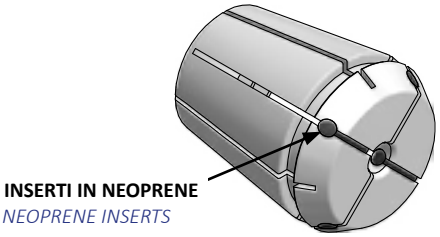
Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ERC16M-11	ERC16M.D3,5-4- 4,5- 5- 5,5- 6- 6,3 - 7- 8- 9- 10
BX.ERC20M-13	ERC20M.D3,5-4- 4,5- 5- 5,5- 6- 6,3 - 7- 8- 9- 10- 11- 12
BX.ERC25M-16	ERC25M.D3,5-4- 4,5- 5- 5,5- 6- 6,3 - 7- 8- 9- 10- 11- 11,2 - 12- 14- 16
BX.ERC32M-19	ERC32M.D3,5-4- 4,5- 5- 5,5- 6- 6,3 - 7- 8- 9- 10- 11- 11,2- 12- 12,5 - 14- 16- 18- 20
BX.ERC40M-13	ERC40M.D6- 7- 8- 9- 10- 11- 12- 14- 16- 18- 20- 22- 25



PINZE PORTAMASCHI A TENUTA CON QUADRO
SEALED TAP COLLETS WITH SQUARE

MAX **25** bar





Articolo	Q
ERC16MRF.D4	3
ERC16MRF.D4,5	3,4
ERC16MRF.D5	4
ERC16MRF.D5,5	4,3
ERC16MRF.D6	4,9
ERC16MRF.D7	5,5
ERC16MRF.D8	6,2

Articolo	Q
ERC20MRF.D4	3
ERC20MRF.D4,5	3,4
ERC20MRF.D5	4
ERC20MRF.D5,5	4,3
ERC20MRF.D6	4,9
ERC20MRF.D7	5,5
ERC20MRF.D8	6,2
ERC20MRF.D9	7
ERC20MRF.D10	8

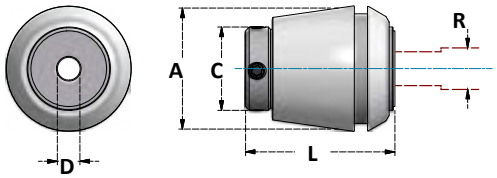
Articolo	Q
ERC25MRF.D4	3
ERC25MRF.D4,5	3,4
ERC25MRF.D5	4
ERC25MRF.D5,5	4,3
ERC25MRF.D6	4,9
ERC25MRF.D7	5,5
ERC25MRF.D8	6,2
ERC25MRF.D9	7
ERC25MRF.D10	8
ERC25MRF.D11	9
ERC25MRF.D12	9

Articolo	Q
ERC32MRF.D4,5	3,4
ERC32MRF.D5	4
ERC32MRF.D5,5	4,3
ERC32MRF.D6	4,9
ERC32MRF.D7	5,5
ERC32MRF.D8	6,2
ERC32MRF.D9	7
ERC32MRF.D10	8
ERC32MRF.D11	9
ERC32MRF.D12	9
ERC32MRF.D14	11
ERC32MRF.D16	12

Articolo	Q
ERC40MRF.D6	4,9
ERC40MRF.D7	5,5
ERC40MRF.D8	6,2
ERC40MRF.D9	7
ERC40MRF.D10	8
ERC40MRF.D11	9
ERC40MRF.D12	9
ERC40MRF.D14	11
ERC40MRF.D16	12
ERC40MRF.D18	14,5
ERC40MRF.D20	16

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TAP SHANK
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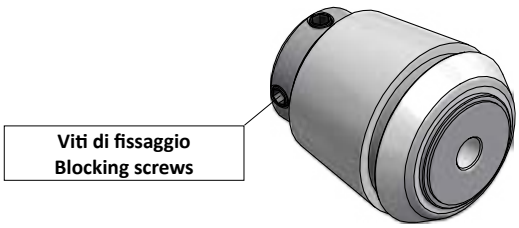
PINZE CON OSCILLAZIONE RADIALE PER ALESATORI
FLOATING COLLETS FOR REAMERS



Articolo	R	C	A	L	D (mm)
ERC16PA	0,5	11	16	29	2 ÷ 7
ERC20PA	0,5	14	20	32	3 ÷ 8
ERC25PA	0,5	18,5	25	35	3 ÷ 10
ERC32PA	0,5	24	32	44	4 ÷ 14
ERC40PA	0,5	30	40	56	5 ÷ 16

- Si montano su tutti i tipi di mandrini portapinze ER.
- Sono adatte anche alla maschiatura rigida.
- Non utilizzare il refrigerante attraverso la pinza.
- Si possono montare solo in ghiere con estrazione eccentrica.

- Used with all types of ER collet chucks.
- Suitable also for tapping operations.
- Coolant throught collet not recommended.
- Can be mounted only on nuts with eccentric extractor.



Codice per ordine: **ERC16PA.D5 - ERC32PA.D12 -**
Code for order: **EC40PA.D7 - ecc....**

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC16PA.D	**D2** ÷ **D7** x1mm

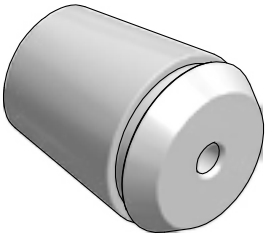
Articolo	Ø Pinze /progressione Ø Collets /progression
ERC20PA.D	**D3** ÷ **D8** x1mm

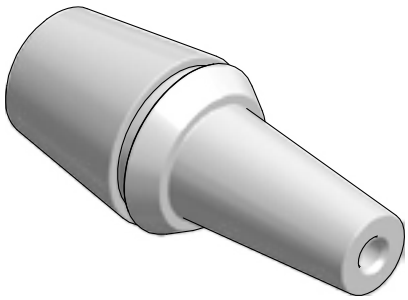
Articolo	Ø Pinze /progressione Ø Collets /progression
ERC25PA.D	**D3** ÷ **D10** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC32PA.D	**D4** ÷ **D14** x1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
ERC40PA.D	**D5** ÷ **D16** x1mm

PINZE CON FORO A CALETTAMENTO TERMICO
SHRINK FIT COLLETS





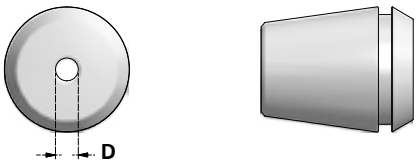
Codice per ordine: **ERC16TM.D6 - ERC32TM-L40.D12 -**
Code for order: **ERC20TM-L60.D8 - ERC32TM.D4 ecc....**

Articolo	Ø Pinze Ø Collets
ERC16TM.D	**D4 ; D6 ; D8 ; D10**

Articolo	Ø Pinze Ø Collets
ERC20TM.D	**D4 ; D6 ; D8 ; D10 ; D12**

Articolo	Ø Pinze Ø Collets
ERC25TM.D	**D4 ; D6 ; D8 ; D10 ; D12**

Articolo	Ø Pinze Ø Collets
ERC32TM.D	**D4 ; D6 ; D8 ; D10 ; D12**



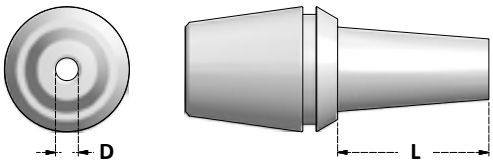
Prolungate - L = 40mm
Extended - L = 40mm

Articolo	Ø Pinze Ø Collets
ERC16TM-L40.D	**D4 ; D6 ; D8 ; D10**

Articolo	Ø Pinze Ø Collets
ERC20TM-L40.D	**D4 ; D6 ; D8 ; D10 ; D12**

Articolo	Ø Pinze Ø Collets
ERC25TM-L40.D	**D4 ; D6 ; D8 ; D10 ; D12**

Articolo	Ø Pinze Ø Collets
ERC32TM-L40.D	**D4 ; D6 ; D8 ; D10 ; D12**

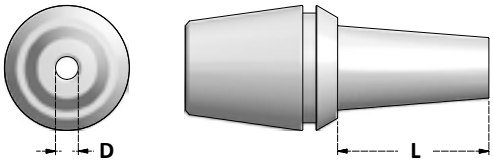


Prolungate - L = 60mm
Extended - L = 60mm

Articolo	Ø Pinze Ø Collets
ERC20TM-L60.D	**D4 ; D6 ; D8 ; D10 ; D12**

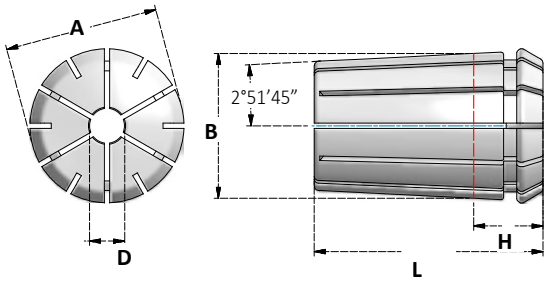
Articolo	Ø Pinze Ø Collets
ERC25TM-L60.D	**D4 ; D6 ; D8 ; D10 ; D12**

Articolo	Ø Pinze Ø Collets
ERC32TM-L60.D	**D4 ; D6 ; D8 ; D10 ; D12**



PINZE DI SERRAGGIO EOC
EOC CLAMPING COLLETS

0,008



Tipo		D	L	B	A	H
EOC16	415E	2÷16	40	22,65	25,5	15
EOC25	462E	2÷25	52	32,9	35,05	16
EOC32	467E	4÷32	60	41,3	43,7	17

Capacità di serraggio *Clamping range* 0,5mm

- Il basso valore di conicità e la lunga presa dell'utensile conferiscono alle pinze EOC una forza di serraggio superiore, rendendole particolarmente adatte per le operazioni di fresatura gravose e dove sia richiesta la massima rigidità.
- Sono tagliate in 6+6 settori bilaterali per una capacità di serraggio fino a 0,5mm al di sotto del diametro nominale.
- Superficie finita con rugosità Rz 1,6.

- Higher clamping force due to collet taper and longer supported lenght of tool shank assure strong grip and big rigidity in heavy duty milling operations.
- Double side slots 6+6 allow a wide clamping range up to 0,5mm reduced from nominal size.
- Surface finished Rz 1,6.

Codice per ordine: *Code for order:* **EOC16.D6 - EOC32.D12 - EOC16.D7 - ecc....**

Articolo	Ø Pinze /progressione Ø Collets /progression
EOC16.D	**D2** ÷ **D16** x0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
EOC25.D	**D2** ÷ **D25** x0,5mm

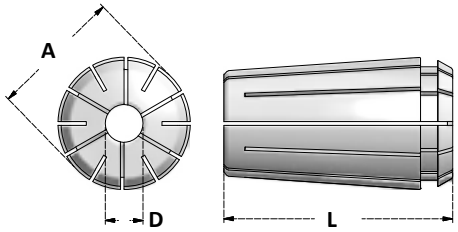
Articolo	Ø Pinze /progressione Ø Collets /progression
EOC32.D	**D3** ÷ **D32** x0,5mm

SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.EOC16-15	EOC16.D2 ÷ D16 x 1mm
BX.EOC25-24	EOC25.D2 ÷ D25 x 1mm
BX.EOC32-30	EOC32.D3 ÷ D32 x 1mm



PINZE DI SERRAGGIO ETG - ALESAGGI METRICI
ETG CLAMPING COLLETS - METRIC SIZES



Tipo		D	L	A
ETG100	464E	3÷25	60,32	35,02

Tipo		D	L	A
ETG75	420E	3/32÷3/4	1.844	1.062
ETG100	464E	3/32÷1"	2.375	1.379

Codice per ordine: **ETG75.D7/16 - ETG100.D12 -**
Code for order: **ETG150.D1/2 - ecc....**

Capacità di serraggio *Clamping range* 0,4mm

Capacità di serraggio *Clamping range* 1/64"

ALESAGGI METRICI
METRIC SIZES

Articolo	Ø Pinze /progressione Ø Collets /progression
ETG100.D	**D3 ÷ D25** x 1mm

ALESAGGI IN POLLICI
INCH SIZES

Articolo	Ø Pinze /progressione Ø Collets /progression
ETG75.D	**D3/32 ÷ D3/4** x 32nds

Articolo	Ø Pinze /progressione Ø Collets /progression
ETG100.D	**D3/32 ÷ D1"** x 32nds

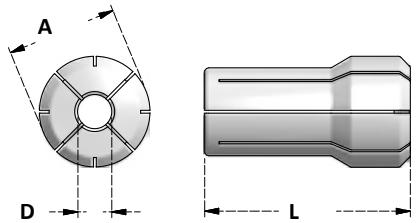
conversione pollici /mm
inch /mm conversion
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SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.ETG100P-15	ETG100.D1/8 ÷ D1" x16ths
BX.ETG100P-30	ETG100.D3/32 ÷ D1" x32nds



PINZE DI SERRAGGIO EDA - ALESAGGI METRICI
EDA CLAMPING COLLETS - METRIC SIZES



Tipo		D	L	A
EDA300	416E	1,5mm÷6 mm 1/16" ÷ 1/4"	25,4mm 1.00"	9,52mm .375"
EDA200	417E	1,5mm÷10mm 1/16" ÷ 3/8"	30mm 1.19"	13,69mm .539"
EDA100	418E	2mm÷14,5mm 1/16" ÷ 9/16"	36,3mm 1.44"	19,53mm .769"
EDA180	419E	2mm÷20mm 1/16" ÷ 49/64"	41,4mm 1.63"	26,3mm 1.035"

Codice per ordine: **EDA300.D5 - EDA180.D12 -**
Code for order: **EDA200.D3/8 - EDA300.D1/4 - ecc....**

Capacità di serraggio 0,4mm
Clamping range

Capacità di serraggio 1/64"
Clamping range

PINZE DI SERRAGGIO EDA - ALESAGGI METRICI
EDA CLAMPING COLLETS - METRIC SIZES

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA300.D	**D1 ÷ D6** x 0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA200.D	**D1 ÷ D10** x 0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA100.D	**D2 ÷ D14,5** x 0,5mm

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA180.D	**D2 ÷ D20** x 0,5mm

PINZE DI SERRAGGIO EDA - ALESAGGI IN POLLICI
EDA CLAMPING COLLETS - FRACTIONAL INCH SIZES

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA300.D	**D1/32 ÷ D1/4** x 32nds

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA200.D	**D1/16 ÷ D3/8** x 32nds

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA100.D	**D1/16 ÷ D9/16** x 32nds

Articolo	Ø Pinze /progressione Ø Collets /progression
EDA180.D	**D1/16 ÷ D3/4** x 32nds

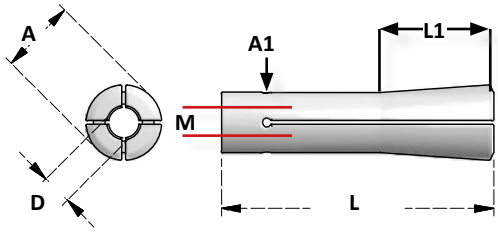
conversione pollici /mm
inch /mm conversion
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SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.EDA300P-5	EDA300P.D1/8 ÷ D1/4 x32nds
BX.EDA200P-9	EDA200P.D1/8 ÷ D3/8 x32nds
BX.EDA100P-11	EDA100.D1/4 ÷ D9/16 x32nds
BX.EDA180P-17	EDA180P.D1/4 ÷ D3/4 x32nds

PINZE DI SERRAGGIO SLC
SLC CLAMPING COLLETS

0,005



Tipo	D	L	A	A1	M	L1
SLC6	3÷6	36	10	8	M6	24
SLC12	3÷12	57	18	14,5	M10	25,45
SLC25	6÷25	80	32,4	25	M16	43,5

Codice per ordine: *Code for order:* **SLC6.D5 - SLC12RF.D11 - SLC25.D6 - ecc....**

Capacità di serraggio *Clamping range* 0,1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
SLC6.D	**D3 ÷ D6** x 1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
SLC12.D	**D3 ÷ D12** x 1mm

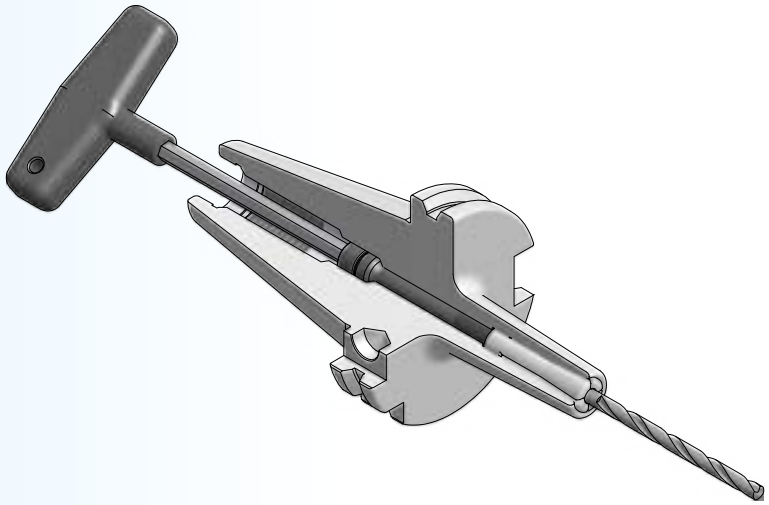
Articolo
SLC25.D6
SLC25.D8
SLC25.D10
SLC25.D12
SLC25.D16
SLC25.D20
SLC25.D25

A TENUTA
SEALED

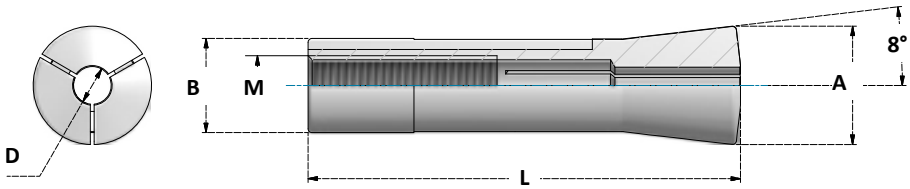
Articolo	Ø Pinze /progressione Ø Collets /progression
SLC6RF.D	**D3 ÷ D6** x 1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
SLC12RF.D	**D3 ÷ D12** x 1mm

Articolo
SLC25RF.D6
SLC25RF.D8
SLC25RF.D10
SLC25RF.D12
SLC25RF.D16
SLC25RF.D20
SLC25RF.D25



PINZE DI SERRAGGIO R8
R8 CLAMPING COLLETS



	D	L	A	B	M
inch	1 ÷ 20	4.00"	1.25"	.9488"	7/16"- 20UNF-2B
mm	1/16 ÷ 7/8	101,6	31,75	24,10	

DIMENSIONI METRICHE
METRIC SIZES

Articolo	Ø Pinze /progressione Ø Collets /progression
R8.D	**D1 ÷ D20** x 1mm

TIPO BRIDGEPORT
BRIDGEPORT TYPE

DIMENSIONI IN POLLICI
FRACTIONAL SIZES

Articolo	Ø Pinze /progressione Ø Collets /progression
R8.D	**D1/16 ÷ D7/8** x 32ths

conversione pollici /mm
inch /mm conversion
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Codice per ordine:
Code for order: **R8.D6 - R8.D5/16 - R8.D7 - ecc....**

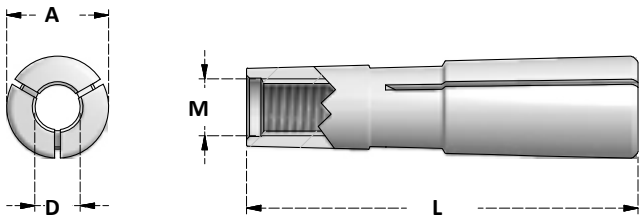
SERIE DI PINZE IN BOX
COLLETS SETS IN BOX

Articolo	PINZE NELLA SERIE COLLETS IN SET
BX.R8M-19	R8.D2 ÷ D20 x 1,0mm
BX.R8P-13	R8.D1/8-3/16-1/4-5/16-3/8-7/16-1/2-9/16-5/8-11/16-3/4-13/16-7/8
BX.R8P-27	R8.D1/16- 3/32- 1/8- 5/32- 3/16- 7/32- 1/4- 9/32- 5/16- 11/32- 3/8- 13/32- 7/16- 15/32- 1/2- 17/32- 9/16- 19/32- 5/8- 21/32- 11/16- 23/32- 3/4- 25/32 - 13/16- 27/32- 7/8

PINZE PORTAUTENSILI A CONO MORSE

MORSE TAPER TOOL CLAMPING COLLETS

0,04



Tipo		D	A	L	M
CP-CM2	503E	3 ÷ 13	18	69	M10
CP-CM3	536E	3 ÷ 18	24,1	86	M12
CP-CM4	539E	4 ÷ 25	31,6	109	M16

DIMENSIONI METRICHE

METRIC SIZES

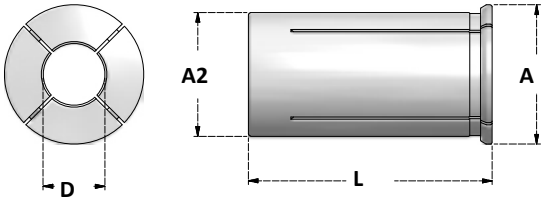
Articolo	Ø Pinze /progressione Ø Collets /progression
CM2.D	**D3 ÷ D13** x 1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
CM3.D	**D3 ÷ D18** x 1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
CM4.D	**D4 ÷ D25** x 1mm

Codice per ordine: **CM2.D6 - CM4.D12 - CM3.D7 - ecc....**
Code for order:

PINZE DI SERRAGGIO CILINDRICHE A 4 TAGLI - PER MANDRINI A FORTE SERRAGGIO
CYLINDRICAL COLLETS WITH 4 SLOTS - FOR POWER MILLING CHUCKS



Tipo	D	L	A	A2
4SR20	4 ÷ 18	54	25	20
4SR32	6 ÷ 25	63	36	32

A TENUTA MECCANICA
SOLID SEALED

MAX **120**bar

ERRORE MEDIO DI CONCENTRICITA'
AVERAGE OF RUNOUT ACCURACY

0,005

- La pinza deve essere inserita nel mandrino a forte serraggio fino al contatto della flangia sul piano del mandrino.
- I tagli corti della pinza bloccano il flusso del refrigerante per farlo defluire solo dal foro dell'utensile.
- L'utensile, di diametro in tolleranza h6, deve essere bloccato per tutta la lunghezza della pinza.

- Collet must be inserted in milling chuck until contact with shoulder.
- Collets are mechanical sealed by slots.
- Coolant flow is direct only throught hole of cutting tool.
- Cutting tool shank (tollerance h6) must be completely clamped for the full lenght of collet.

Articolo	Ø Pinze /progressione Ø Collets /progression
4SR20.D	**D4 ÷ D18** x 1mm

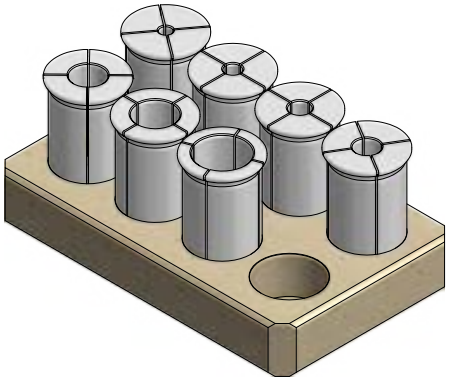
Capacità di serraggio *Clamping range* 0,1mm

Articolo	Ø Pinze /progressione Ø Collets /progression
4SR32.D	**D6 ÷ D25** x 1mm

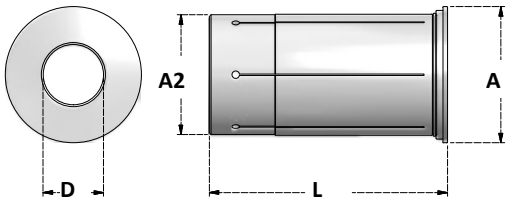
Codice per ordine: *Code for order:* **4SR20.D6 - 4SR32.D12 - 4SR20.D7 - ecc....**

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.4SR20-5	4SR20.D6- 8- 10- 12- 16
TY.4SR32-7	4SR32.D6- 8- 10- 12- 16- 20- 25



PINZE DI SERRAGGIO CILINDRICHE A 6 TAGLI - PER MANDRINI IDRAULICI
CYLINDRICAL COLLETS WITH 6 SLOTS - FOR HYDRAULIC CHUCKS



Tipo	D	L	A	A*	A2
6SR12	3 ÷ 10	47	20	16,5	12
6SR20	4 ÷ 18	52,5	30	24	20
6SR32	6 ÷ 25	63	36	35,5	32

A*: Nuovo modello. Vecchio modello fino a esaurimento scorte
A*: *New model. Old model while stock last*

A TENUTA MECCANICA
SOLID SEALED
MAX **120**bar

ERRORE MEDIO DI CONCENTRICITA'
AVERAGE OF RUNOUT ACCURACY
0,005

- Inserire la pinza nel mandrino idraulico fino al contatto della flangia sul piano del mandrino.
- I tagli della pinza impediscono la fuoriuscita del refrigerante che passa solo attraverso al foro dell'utensile.
- Il gambo dell'utensile, in tolleranza h6, deve essere serrato per tutta la lunghezza della pinza.

- Collet must be inserted in hydraulic chuck until contact with shoulder
- Slots contain and direct the coolant throught the hole of the cutting tool.
- Shank of tool (tollerance h6) must be clamped for all collet lenght.

Articolo	Ø Pinze /progressione Ø Collets /progression
6SR12.D	**D3 ÷ D10** x 1mm

Capacità di serraggio *Clamping range* 0,1mm

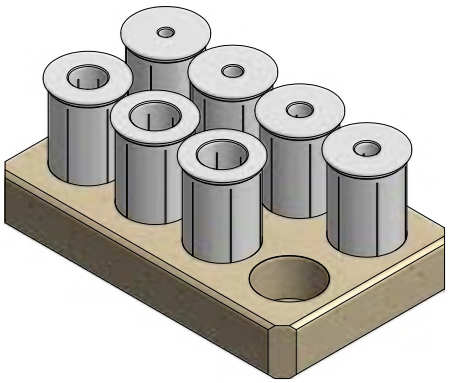
Articolo	Ø Pinze /progressione Ø Collets /progression
6SR20.D	**D4 ÷ D18** x 1mm

Articolo
6SR32.D6
6SR32.D8
6SR32.D10
6SR32.D12
6SR32.D16
6SR32.D20
6SR32.D25

Codice per ordine: *Code for order:* **6SR12.D6 - 6SR32.D12 - 6SR20.D7 - ecc....**

SERIE DI PINZE SU BASE DI LEGNO
COLLETS SETS IN WOODEN TRAY

Articolo	PINZE NELLA SERIE COLLETS IN SET
TY.6SR20-5	6SR20.D6- 8- 10- 12- 16
TY.6SR32-7	6SR32.D6- 8- 10- 12- 16- 20- 25

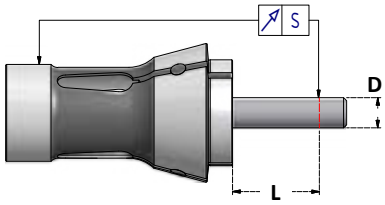


PINZE DI SERRAGGIO BARRA
WORKHOLDING COLLETS

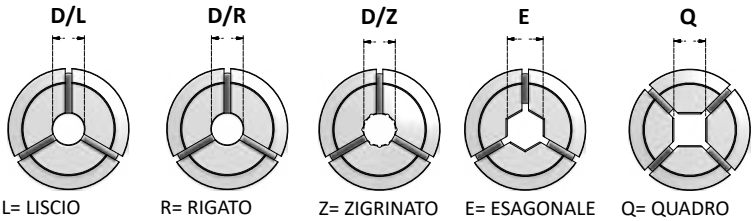
- **Utilizzate per il serraggio della barra sui torni automatici convenzionali e a controllo numerico**
- **Costruite in acciaio per molle**
- **Temperate, rinvenute: HRC58-60 per la testa HRC42-45 per la parte elastica**
- **Rettificate di precisione internamente ed esternamente.**
- **Profilo spogliato sul cono per incrementare la forza di bloccaggio ed evitare il danneggiamento della sede pinza.**

- *Used on bar automatics and CNC lathes*
- *Made of spring steel*
- *Quenched and tempered: RC58-60 for clamping head RC42-45 for spring body*
- *Precision grinded on bore and back bearing*
- *Cam grinded on taper for max clamping power*

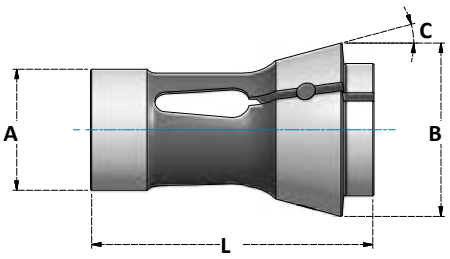
Codice per ordine: **140E.D9L - 145E-L.D9R - 185E.Q12 - ecc....**
Code for order:



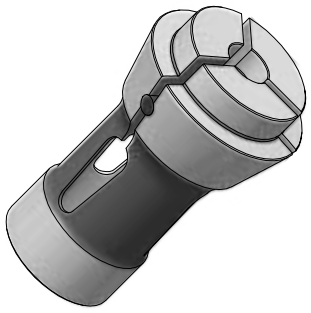
D - h5	L	S
3mm ÷ 6mm	16	0,02
6mm ÷ 10mm	25	
10mm ÷18mm	40	0,03
18mm ÷24mm	50	
24mm ÷30mm	60	
30mm ÷ 50mm	80	0,04
50mm ÷ 60mm	100	



Tipi di foro: L= LISCIO R= RIGATO Z= ZIGRINATO E= ESAGONALE Q= QUADRO
Hole types: L=SMOOTH R= GROOVED Z= SERRATED E= HEXAGONAL Q= SQUARE



	Articolo	A	B	L	C	○ D/L	○ D/R	○ D/Z	⬡ E	□ Q
NEW	**120E**	15	21	64	16°	1÷12	8÷12	8÷12	4÷10	4÷9
NEW	**136E**	20	26	54	15°	2÷16	8÷16	8÷16	4÷13	4÷10
NEW	**138E**	20	28	67	16°	2÷16	8÷16	8÷16	4÷15	4÷11
	140E	22	30	55	15°	1÷18	8÷18	8÷18	4÷15	4÷12
NEW	**145E**	25	35	77	16°	2÷20	8÷20	8÷20	4÷19	4÷14
NEW	**148E**	28	38	70	15°	2÷23	8÷23	8÷23	4÷20	4÷16
NEW	**1446E**	30	38	65	15°	4÷25	8÷25	8÷25	4÷22	-
NEW	**157E**	30	42	80	16°	4÷25	8÷25	8÷25	4÷21	4÷18
	161E	32	45	75	15°	1÷26	8÷26	8÷26	4÷23	4÷18
NEW	**163E**	35	48	80	15°	3÷30	8÷30	8÷30	4÷26	4÷22
NEW	**1536E**	37	47	92	16°	3÷32	8÷32	8÷32	6÷25	10÷14
NEW	**171E**	42	55	94	15°	4÷36	8÷36	8÷36	4÷32	4÷25
	173E	48	60	94	15°	3÷42	8÷42	8÷42	4÷36	4÷30
	177E	58	70	94	15°	5÷52	8÷52	8÷52	-	-
	185E	66	84	110	15°	6÷60	8÷60	8÷60	10÷52	12÷42



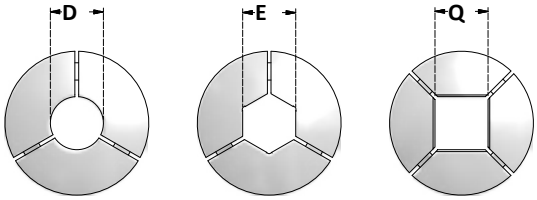
ALTRI A RICHIESTA
OTHERS ON REQUEST

PINZE DI SERRAGGIO BARRA A MUSO LUNGO
EXTENDED-NOSE WORKHOLDING COLLETS

	Articolo	A	B	L	C	D/R	E	Q
NEW	**145E-L**	25	35	85	16°	8÷20	8÷17	8÷14
NEW	**1446E-L**	30	38	79	15°	8÷25	8÷22	8÷18
NEW	**1536E-L**	37	47	107	16°	8÷32	8÷27	8÷22
NEW	**173E-L**	48	60	113	15°	8÷42	8÷36	8÷30
NEW	**177E-L**	58	70	114	15°	8÷52	8÷45	8÷36
NEW	**185E-L**	66	84	132	15°	8÷60	8÷52	8÷42



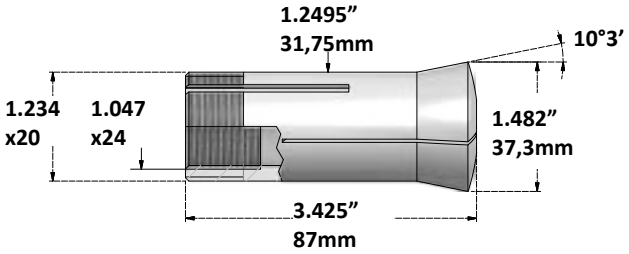
PINZE 5C - 385E
5C COLLETS - 385E



D= ROTONDE
D= ROUND

E= ESAGONALI
E= HEXAGONAL

Q= QUADRE
Q= SQUARE



Articolo	Ø Pinze /progressione Ø Collets /progression
5C.D	**D1/32 ÷ D1-1/8** x64ths

Articolo	Ø Pinze /progressione Ø Collets /progression
5C.D	**D1 ÷ D28** x0,5mm

Articolo	E Pinze /progressione E Collets /progression
5C.E	**E1/8 ÷ E7/8** x16ths

Articolo	Q Pinze /progressione Q Collets /progression
5C.Q	**Q1/8 ÷ Q3/4** x16ths

Articolo	E Pinze /progressione E Collets /progression
5C.E	**E3 ÷ E22** x1mm

Articolo	Q Pinze /progressione Q Collets /progression
5C.Q	**Q3÷ Q19** x1mm

Codice per ordine:
Code for order: **5C.Q5** ; **5C.D13/16** ; ecc..

conversione pollici /mm
inch /mm conversion
P. 361

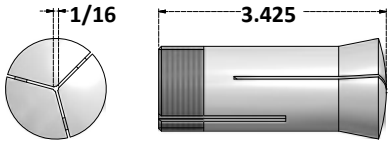
SERIE DI PINZE 5C IN BOX
5C COLLETS IN BOX

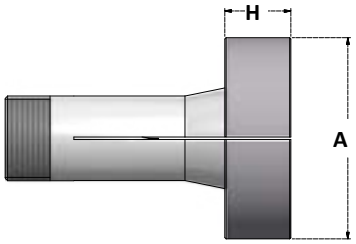
Articolo	PINZE NEL BOX COLLETS IN BOX
BX.5CP-18	5C.D1/16 - 1/8 - 3/16 - 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 9/16 - 5/8 - 11/16 - 3/4 - 13/16 - 7/8 - 15/16 - 1"- 1-1/16 - 1-1/8

Articolo	PINZE NEL BOX COLLETS IN BOX
BX.5CM-24	5C.D3 ÷ D26 x 1,0mm



PINZE 5C LAVORABILI
MACHINABLE 5C COLLETS





PINZA 5C DI EMERGENZA
5C EMERGENCY COLLET

Articolo
5C-EMY

PINZE 5C CON TESTA LAVORABILE
5C MACHINABLE STEP COLLETS

Articolo	A	H
5C.STP2	2" - 51mm	1 1/8 - 28,5mm
5C.STP3	3" - 76mm	1 1/8 - 28,5mm
5C.STP4	4" - 102mm	1 1/8 - 28,5mm
5C.STP5	5" - 127mm	1 1/8 - 28,5mm
5C.STP6	6" - 153mm	1 1/8 - 28,5mm

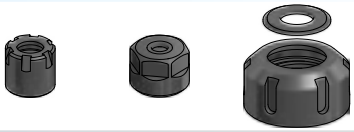
ISO DIN 15488 / DIN6499



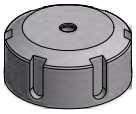
GHIERE ER CON FILETTATURA MINI
ER NUTS WITH MINI THREAD
PAG. 281



GHIERE ER CON FILETTATURA STANDARD
ER NUTS WITH STANDARD THREAD
PAG. 282



GHIERE ER A TENUTA CON DISCHETTI
ER NUTS SEALED WITH DISKS
PAG. 284



GHIERE ER A TENUTA INTEGRALI
SEALED ER NUTS
PAG. 285



GHIERE ER A TENUTA CON CANALI
SEALED ER NUTS WITH CHANNELS
PAG. 285



GHIERE ER CON FILETTATURA ESTERNA
EXTERNALLY THREADED ER NUTS
PAG. 286

ISO DIN 10897 / DIN6388



GHIERE PER PINZE EOC
EOC NUTS
PAG. 287

GHIERE CHIUDIPINZA ER CON FILETTATURA MINI

ER CLAMPING NUTS WITH MINI THREAD

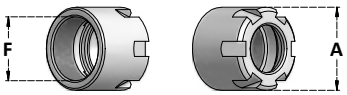
GHIERE ER MINI - ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO

MINI ER NUTS - ECCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

Articolo	A	F	Nm	CH1	CH2
G8M	12	M10x0,75	5÷6	CH8M	CD8M
G11M	16	M13x0,75	7÷17	CH11M	CD11M
G16M	22	M19x1	12÷24	CH16M	CD16M
G20M	28	M24x1	16÷28	CH20M	CD20M
G25M	35	M30x1	22÷32	CH25M	CD25M

Quando le scorte verranno esaurite, i nuovi modelli saranno forniti con il rivestimento Tenifer per una maggiore resistenza e proprietà antigrippaggio.

When stocks run out, the new models will be supplied with the Tenifer treatment for added resistance and anti-seize properties.

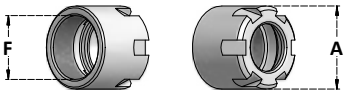


GHIERE ER MINI CONCENTRICHE - ESTRAZIONE CONCENTRICA - TACCHE PER IL SERRAGGIO

MINI CONCENTRIC ER NUTS - CONCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

Articolo	A	F	Nm	CH1	CH2
G16WDM	22	M19x1	12÷24	CH16M	CD16M
G20WDM	28	M24x1	16÷28	CH20M	CD20M
G25WDM	35	M30x1	22÷32	CH25M	CD25M

Solo per pinze STANDARD e HP - Only for STANDARD and HP collets

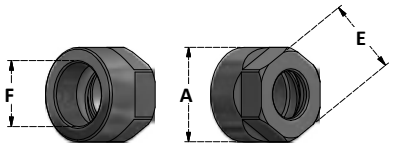


Maggiore equilibratura.
Chiusura con chiave per ghiere mini.
Better balancing.
Closing with wrench for mini nuts.

GHIERE ER MINI ESAGONALI - ESTRAZIONE ECCENTRICA - PIANI PER IL SERRAGGIO

MINI HEXAGONAL ER NUTS - ECCENTRIC EXTRACTOR - FLATS FOR CLAMPING

Articolo	A	E	F	Nm	CH1	CH2
G11MSE	16	14	M13x0,75	7÷17	CH.E14	CD.E14
G16MSE	25	22	M19x1	12÷24	CH.E22	CD.E22
G20MSE	30	27	M24x1	16÷28	CH.E27	CD.E27
G25MSE	37	34	M30x1	22÷32	CH.E34	CD.E34



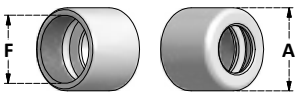
Chiusura con chiave a forchetta.
Closing with open-end wrench.

GHIERE ER MINI SENZA TACCHE - ESTRAZIONE ECCENTRICA - SERRAGGIO SENZA TACCHE

MINI NOTCH-FREE ER NUTS - ECCENTRIC EXTRACTOR - NOTCH-FREE CLAMPING

Articolo	A	F	Nm	CH1	CH2
G8NFM	12	M10x0,75	5÷6	CR8M	CD8NFM
G11NFM	16	M13x0,75	7÷17	CR11M	CD11NFM
G16NFM	22	M19x1	12÷24	CR16M	CD16NFM
G20NFM	28	M24x1	16÷28	CR20M	CD20NFM
G25NFM	35	M30x1	22÷32	CR25M	CD25NFM

Per alte velocità - *For high speeds*



Rumorosità ridotta alle alte velocità.
Chiusura con chiave a rulli.
Reduced noise at high speeds.
Closing with roller wrench.

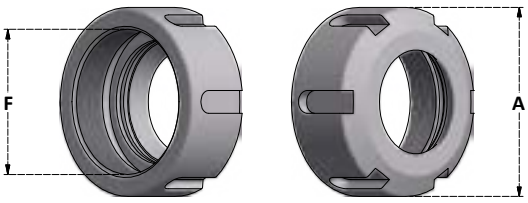
Nm: Forza di serraggio consigliata - Recommended tightening torque
CH1: Chiave standard consigliata - Recommended standard wrench
CH2: Chiave dinamometrica consigliata - Recommended torque wrench

P. 288
CHIAVI
WRENCHES

GHIERE CHIUDIPINZA ER CON FILETTATURA STANDARD
ER CLAMPING NUTS WITH STANDARD THREAD

GHIERE ER STANDARD - ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO
STANDARD ER NUTS - ECCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

Articolo	A	F	Nm	CH1	CH2
G16S	32	M22x1,5	15÷50	CH16S	CD16S
G20S	35	M25x1,5	16÷75	CH20S	CD20S
G25S	42	M32x1,5	25÷100	CH25S	CD25S
G32S	50	M40x1,5	25÷140	CH32S	CD32S
G40S	63	M50x1,5	60÷170	CH40S	CD40S
G50S	78	M64x2	120÷250	CH50S	/

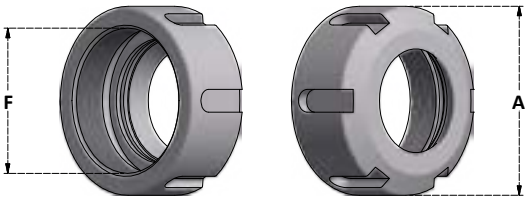


Chiusura con chiave per ghiere standard.
Closing with wrench for standard nuts.

GHIERE ER CONCENTRICHE - ESTRAZIONE CONCENTRICA - TACCHE PER IL SERRAGGIO
CONCENTRIC ER NUTS - CONCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

Articolo	A	F	Nm	CH1	CH2
G16WD	32	M22x1,5	15÷50	CH16S	CD16S
G20WD	35	M25x1,5	16÷75	CH20S	CD20S
G25WD	42	M32x1,5	25÷100	CH25S	CD25S
G32WD	50	M40x1,5	25÷140	CH32S	CD32S
G40WD	63	M50x1,5	60÷170	CH40S	CD40S

Solo per pinze STANDARD e HP - Only for STANDARD and HP collets

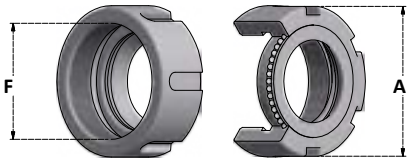


Maggiore equilibratura.
Chiusura con chiave per ghiere standard.
Better balancing.
Closing with wrench for standard nuts.

GHIERE ER A SFERE - ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO
FRICTION BEARING ER NUTS - ECCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

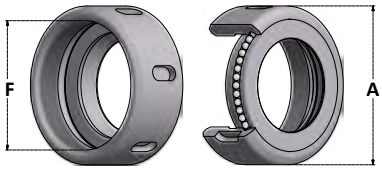
Articolo	A	F	Nm	CH1	CH2	Fig
G16C	32	M22x1,5	16÷55	CH16S	CD16S	1
G20C	35	M25x1,5	16÷80	CH20S	CD20S	1
G25C	42	M32x1,5	20÷110	CH25S	CD25S	1
G32C	50	M40x1,5	20÷140	CH32S	CD32S	1
G40C	63	M50x1,5	40÷180	CH40S	CD40S	1
G50C	78	M64x2	50÷200	CH50S	/	1
G60C	83	M70x1,5	60÷240	CHO40	/	2

Fig.1



Serraggio con attrito ridotto per una maggiore precisione.
Chiusura con chiave per ghiere standard.
Reduced grip increases precision.
Closing with wrench for standard nuts.

Fig.2



Chiusura
con chiave a settore.
Closing
with hook wrench.

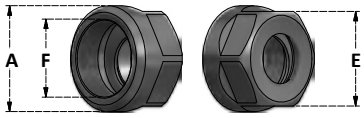
Nm: Forza di serraggio consigliata - Recommended tightening torque
CH1: Chiave standard consigliata - Recommended standard wrench
CH2: Chiave dinamometrica consigliata - Recommended torque wrench

P. 288
CHIAVI
WRENCHES

GHIERE CHIUDIPINZA ER CON FILETTATURA STANDARD
ER CLAMPING NUTS WITH STANDARD THREAD

GHIERE ER ESAGONALI - ESTRAZIONE ECCENTRICA - PIANI PER IL SERRAGGIO
HEXAGONAL ER NUTS - ECCENTRIC EXTRACTOR - FLATS FOR CLAMPING

Articolo	A	E	F	Nm	CH1	CH2
G11SE	19	17	M14x0,75	8÷24	CH.E17	CD.E17
G16SE	28	25	M22x1,5	15÷50	CH.E25	CD.E25
G20SE	34	30	M25x1,5	16÷75	CH.E30	CD.E30
G25SE	42	38	M32x1,5	25÷100	CH.E38	/

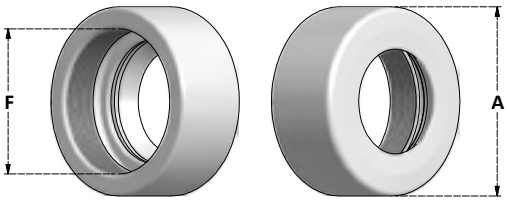


Chiusura con chiave a forchetta.
Closing with open-end wrench.

GHIERE ER SENZA TACCHE - ESTRAZIONE ECCENTRICA - SERRAGGIO SENZA TACCHE
NOTCH-FREE ER NUTS - ECCENTRIC EXTRACTOR - NOTCH-FREE CLAMPING

Articolo	A	F	Nm	CH1	CH2
G16NF	32	M22x1,5	15÷50	CR16	CD16NF
G20NF	35	M25x1,5	16÷75	CR20	CD20NF
G25NF	42	M32x1,5	25÷100	CR25	CD25NF
G32NF	50	M40x1,5	25÷140	CR32	CD32NF
G40NF	63	M50x1,5	60÷170	CR40	CD40NF

Per alte velocità - *For high speeds*



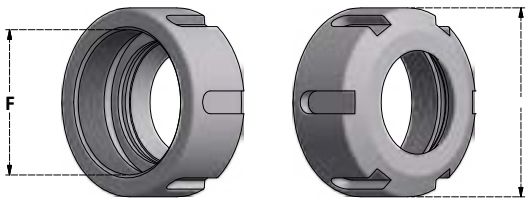
Rumorosità ridotta alle alte velocità.
Chiusura con chiave a rulli.
Reduced noise at high speeds.
Closing with roller wrench.

GHIERE CHIUDIPINZA ER CON FILETTATURA SINISTRA
ER CLAMPING NUTS WITH LEFT THREAD

GHIERE ER SINISTRE CONCENTRICHE - ESTRAZIONE CONCENTRICA - TACCHE PER IL SERRAGGIO
LEFT ER CONCENTRIC NUTS - CONCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

Articolo	A	F	Nm	CH1	CH2
G32WDL	50	M40x1,5 sin	25÷140	CH32S	CD32S
G40WDL	63	M50x1,5 sin	60÷170	CH40S	CD40S

Solo per pinze STANDARD e HP - Only for STANDARD and HP collets



Maggiore equilibratura.
Chiusura con chiave per ghiere standard.
Better balancing.
Closing with wrench for standard nuts.

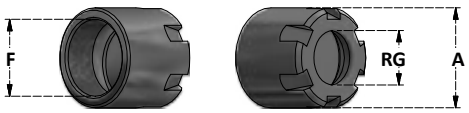
Nm: Forza di serraggio consigliata - Recommended tightening torque
CH1: Chiave standard consigliata - Recommended standard wrench
CH2: Chiave dinamometrica consigliata - Recommended torque wrench

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CHIAVI
WRENCHES

GHIERE CHIUDIPINZA ER PER DISCHETTI A TENUTA DEL REFRIGERANTE
ER CLAMPING NUTS FOR SEALING DISCS

GHIERE MINI ER PER DISCHETTI - ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO
MINI ER NUTS FOR SEALING DISCS - ECCENTRIC EXTRACTOR - SLOTS FOR CLAMPING

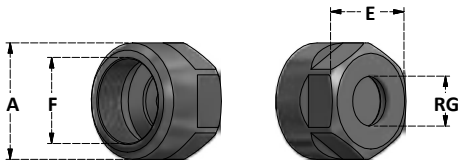
Articolo	A	F	Nm	CH1	CH2	DISCHETTI SEALING DISCS
G16HTM	22	M19x1	12÷24	CH16M	CD16M	RG16.D
G20HTM	28	M24x1	16÷28	CH20M	CD20M	RG20.D
G25HTM	35	M30x1	22÷32	CH25M	CD25M	RG25.D



Chiusura con chiave per ghiere mini.
Closing with wrench for mini nuts.

GHIERE ER ESAGONALI PER DISCHETTI - ESTRAZIONE ECCENTRICA - PIANI PER IL SERRAGGIO
HEXAGONAL ER NUTS FOR SEALING DISCS - ECCENTRIC EXTRACTOR - FLATS FOR CLAMPING

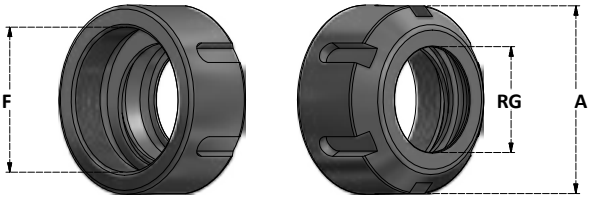
Articolo	A	E	F	Nm	CH1	CH2	DISCHETTI SEALING DISCS
G16HTE	28	25	M22x1,5	15÷50	CH.E25	CD.E25	RG16.D
G20HTE	34	30	M25x1,5	16÷75	CH.E30	CD.E30	RG20.D



Chiusura con chiave a forchetta.
Closing with open-end wrench.

GHIERE ER STANDARD PER DISCHETTI - ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO
STANDARD ER NUTS FOR SEALING DISCS - ECCENTRIC EXTRACTOR - SLOTS FOR CLAMPING

Articolo	A	F	Nm	CH1	CH2	DISCHETTI SEALING DISCS
G25HT	42	M32x1,5	25÷100	CH25S	CD25S	RG25.D
G32HT	50	M40x1,5	25÷140	CH32S	CD32S	RG32.D
G40HT	63	M50x1,5	60÷170	CH40S	CD40S	RG40.D



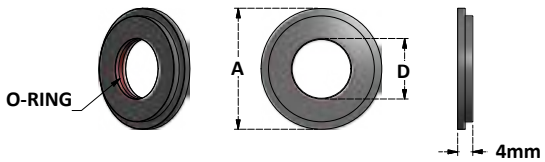
Chiusura con chiave per ghiere standard.
Closing with wrench for standard nuts.

Nm: Forza di serraggio consigliata - Recommended tightening torque
CH1: Chiave standard consigliata - Recommended standard wrench
CH2: Chiave dinamometrica consigliata - Recommended torque wrench

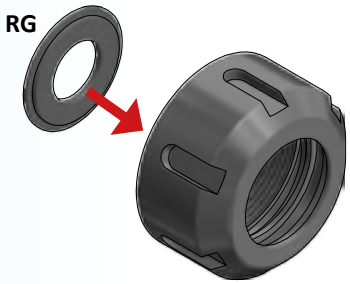
P. 288
CHIAVI
WRENCHES

DISCHETTI RG PER LA TENUTA DEL REFRIGERANTE
RG SEALING DISCS

Articolo	D	Per / for	A
RG16.D	**D3,5 ÷ D10** x0,5mm	G16HTM / G16HTE	12,9
RG20.D	**D3,5 ÷ D13** x0,5mm	G20HTM / G20HTE	15,9
RG25.D	**D3,5 ÷ D16** x0,5mm	G25HT	21
RG32.D	**D3,5 ÷ D20** x0,5mm	G32HT / CFS20.RG	26,95
RG40.D	**D4 ÷ D26** x0,5mm	G40HT / CFS32.RG	33,3



Codice per ordine: **RG40.D5** ; **RG25.D14** ecc..
Code for order:



GHIERE CHIUDIPINZA ER CON CANALINI PER IL PASSAGGIO DEL REFRIGERANTE

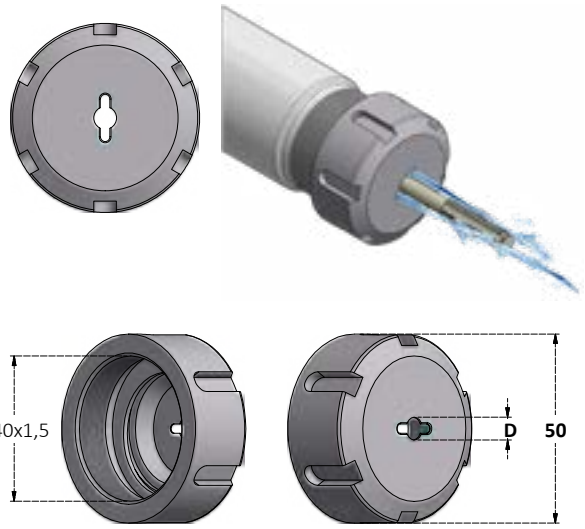
ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO

ER CLAMPING NUTS WITH CHANNELS FOR COOLANT

ECCENTRIC EXTRACTOR - SLOTS FOR CLAMPING

Articolo	D	Nm	CH1	CH2
G32CLS.D	**D4** ÷ **D20** x1mm	25÷140	CH32S	CD32S

Codice per ordine: **G32CLS.D5** ; **G32CLS.D14** ecc..
Code for order:



Chiusura con chiave per ghiere standard.
Closing with wrench for standard nuts.

G THS

GHIERE CHIUDIPINZA ER A TENUTA DEL REFRIGERANTE

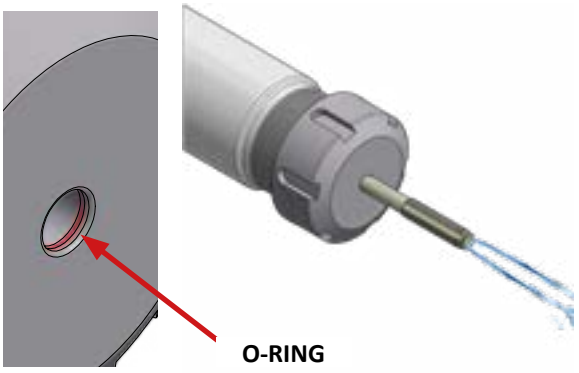
ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO

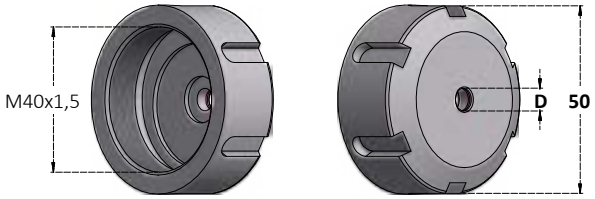
SEALED ER CLAMPING NUTS

ECCENTRIC EXTRACTOR - SLOTS FOR CLAMPING

Articolo	D	Nm	CH1	CH2
G32THS.D	**D4** ÷ **D20** x1mm	25÷140	CH32S	CD32S

Codice per ordine: **G32THS.D5** ; **G32THS.D14** ecc..
Code for order:





Chiusura con chiave per ghiere standard.
Closing with wrench for standard nuts.

Nm: Forza di serraggio consigliata - Recommended tightening torque
CH1: Chiave standard consigliata - Recommended standard wrench
CH2: Chiave dinamometrica consigliata - Recommended torque wrench

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CHIAVI
WRENCHES

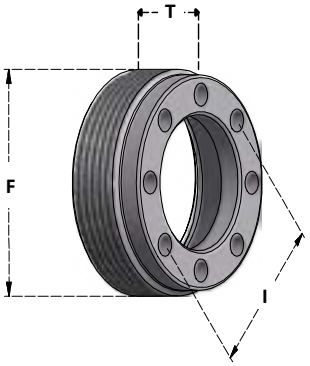
GHIERE ER CON FILETTATURA ESTERNA

EXTERNALLY THREADED ER NUTS

GHIERE ER "TIPO A" - ESTRAZIONE ECCENTRICA - TACCHE PER IL SERRAGGIO

"A TYPE" ER NUTS - ECCENTRIC EXTRACTOR - SLOTS FOR CLAMPING

Articolo	I	F	Chiave Wrench	T
G11A	13,35	M18x1	CH11A	6
G16A	17,5	M24x1	CH16A	8
G20A	20,6	M28x1,5	CH20A	11
G25A	23,75	M32x1,5	CH25A	12
G32A	31	M40x1,5	CH32A	14



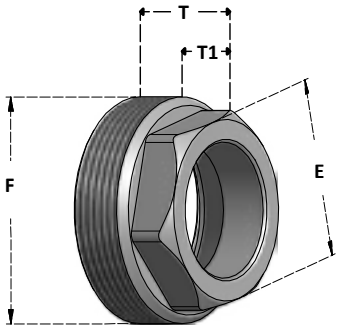
Chiusura con chiave con perni.

Closing pin-wrench.

GHIERE ER "TIPO A" ESAGONALI - ESTRAZIONE ECCENTRICA - PIANI PER IL SERRAGGIO

HEXAGONAL "A TYPE" ER NUTS - ECCENTRIC EXTRACTOR - FLATS FOR CLAMPING

Articolo	E	F	Chiave Wrench	T	T1
G11A.EX	15	M18x1	CH.E15	9	3
G16A.EX	19	M24x1	CH.E19	12	5
G20A.EX	22	M28x1,5	CH.E22	13	5
G25A.EX	27	M32x1,5	CH.E27	15	7
G32A.EX	32	M40x1,5	CH.E32	16	8
G40A.EX	42	M50x1,5	CH.E42	19	8



Chiusura con chiave a forchetta.

Closing with open-end wrench.

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CHIAVI
WRENCHES

GHIERE CHIUDIPINZA EOC
EOC CLAMPING NUTS

GHIERE EOC STANDARD - A SFERE - ESTRAZIONE CONCENTRICA - TACCHE PER IL SERRAGGIO

EOC STANDARD NUTS - FRICTION BEARING - CONCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

Articolo	A	F	Nm	Chiave Wrench
G16OCC	43	M33x1,5	85	CHO16/20
G20OCC	50	M42x2	95	CHO16/20
G25OCC	60	M48x2	140	CHO25
G32OCC	72	M60x2,5	170	CHO32
G40OCC	85	M68x2,5	200	CHO40

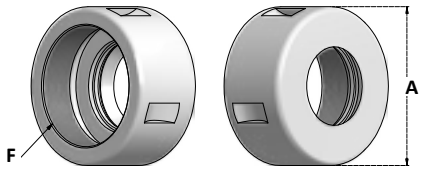


Chiusura con chiave a settore.
Closing with hook wrench.

GHIERE EOC SENZA SFERE - ESTRAZIONE CONCENTRICA - TACCHE PER IL SERRAGGIO

EOC NUTS WITHOUT FRICTION BEARING - CONCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

Articolo	A	F	Nm	Chiave Wrench
G16OCS	43	M33x1,5	130	CHO16/20
G25OCS	60	M48x2	200	CHO25
G32OCS	72	M60x2,5	220	CHO32
G40OCS	85	M68x2,5	250	CHO40



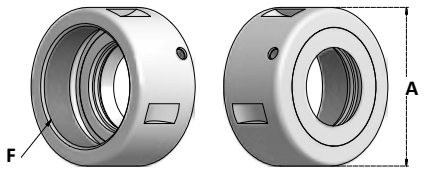
Chiusura con chiave a settore.
Closing with hook wrench.

GHIERE CHIUDIPINZA EOC CON FILETTATURA SINISTRA
EOC CLAMPING NUTS WITH LEFT THREAD

GHIERE EOC SINISTRE - A SFERE - ESTRAZIONE CONCENTRICA - TACCHE PER IL SERRAGGIO

EOC LEFT NUTS - FRICTION BEARING - CONCENTRIC EXTRACTOR - CLAMPING WITH SLOTS

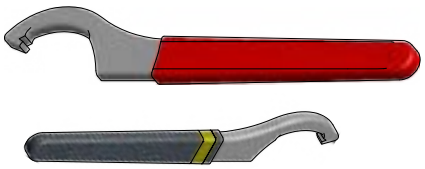
Articolo	A	F	Nm	Chiave Wrench
G25OCCL	60	M48x2 sin	140	CHO25



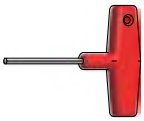
Chiusura con chiave a settore.
Closing with hook wrench.

Nm: Forza di serraggio consigliata - Recommended tightening torque

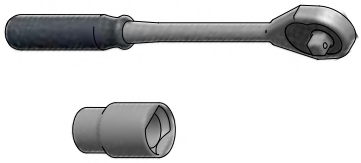
P. 289
CHIAVI
WRENCHES



CHIAVI A SETTORE
HOOK WRENCHES
PAG. 289



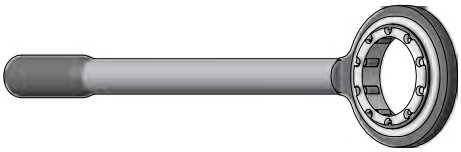
CHIAVI ESAGONALI
HEXAGONAL WRENCHES
PAG. 289



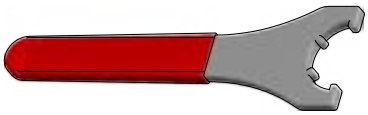
CRICCHETTO E BUSSOLE DI SERRAGGIO DEI TIRANTI
QUICK RATCHET AND SOCKETS FOR PULL STUDS
PAG. 289



CHIAVI DINAMOMETRICHE PER GHIERE CHIUDIPINZA ER
TORQUE WRENCHES FOR ER CLAMPING NUTS
PAG. 290



CHIAVI DINAMOMETRICHE A RULLI
TORQUE WRENCHES WITH ROLLERS
PAG. 291



CHIAVI PER GHIERE CHIUDIPINZA ER
WRENCHES FOR ER CLAMPING NUTS
PAG. 292

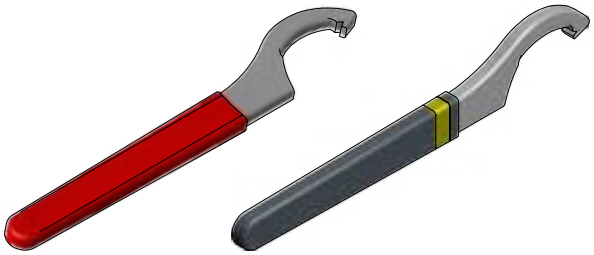


CHIAVI A RULLI
WRENCHES WITH ROLLERS
PAG. 293

CHIAVI A SETTORE PER MANDRINI PORTAPUNTA AUTOSERRANTI

HOOK WRENCHES FOR DRILL CHUCKS

Articolo	PER MANDRINI FOR CHUCKS
CH.DC8	DC8 DCK8
CH.DC10	DC10 DCK10
CH.DC13	DC13 DCK13
CH.DC16	DC16 DCK16

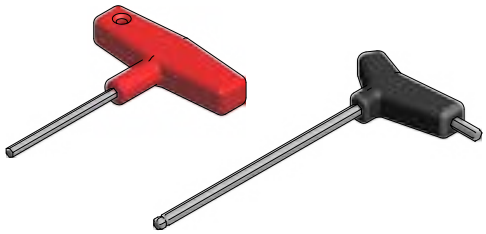


Articolo	A	Ghiere del catalogo / Catalogue nuts	PER MANDRINI A FORTE SERRAGGIO *FOR POWER MILLING CHUCKS*
CHO16/20	45-50	G16OCC- G20OCC- G16OCS	FS20
CHO25	58-62-65	G25OCC- G25OCS- G25OCCL	-
CHO32	68-70-75	G32OCC- G32OCS	FS32
CHO40	80-85-90	G60C	-

CHIAVI ESAGONALI PER MANDRINI PORTAPUNTA AUTOSERRANTI E PER MANDRINI IDRAULICI

HEXAGONAL WRENCHES FOR DRILL CHUCKS AND FOR HYDRAULIC CHUCKS

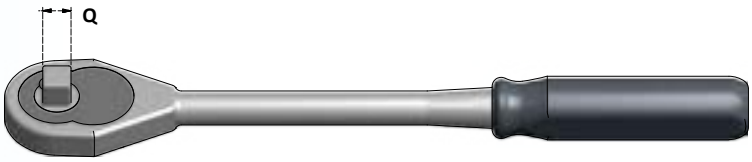
Articolo	EX	PER MANDRINI FOR CHUCKS	PER MANDRINI FOR CHUCKS
CH.EX4	4	CP8	-
CH.EX5	5	-	HY6 ÷ HY20
CH.EX6	6	CP13- CP16	HY25- HY32



CRICCHETTO E BUSSOLE PER IL SERRAGGIO DEI TIRANTI

QUICK RATCHET AND SOCKETS FOR PULL STUD CLAMPING

Articolo	Q
CH.SKT	1/2"

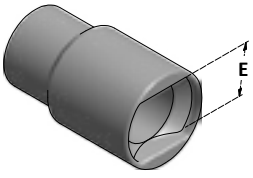


Articolo	PER I TIRANTI FOR PULL STUDS	E
SKT.DIN40	DIN40	19
SKT.DIN50	DIN50	30

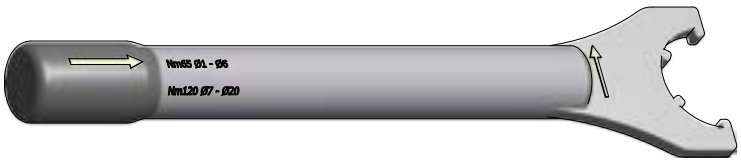
Articolo	PER I TIRANTI FOR PULL STUDS	E
SKT.CAT40	CAT40	18
SKT.CAT50	CAT50	30

Articolo	PER I TIRANTI FOR PULL STUDS	E
SKT.BT40	BT40	19
SKT.BT50	BT50	30

Articolo	PER I TIRANTI FOR PULL STUDS	E
SKT.JS40	JS40	19
SKT.JS50	JS50	30

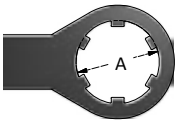


CHIAVI DINAMOMETRICHE PER GHIERE CHIUDIPINZA
TORQUE WRENCHES FOR CLAMPING NUTS



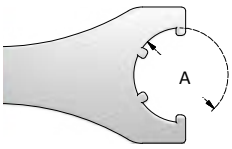
CHIAVI PER GHIERE MINI CON TACCHE
WRENCHES FOR MINI NUTS WITH SLOTS

Articolo	Nm		A	Ghiere del catalogo / Catalogue nuts
CD8M	8	-	12	G8M
CD11M	18	-	16	G11M
CD16M	28	-	22	G16M- G16WDM- G16HTM
CD20M	35	-	28	G20M- G20WDM- G20HTM
CD25M	30	-	35	G25M- G25WDM- G25HTM



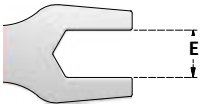
CHIAVI PER GHIERE STANDARD CON TACCHE
WRENCHES FOR STANDARD NUTS WITH SLOTS

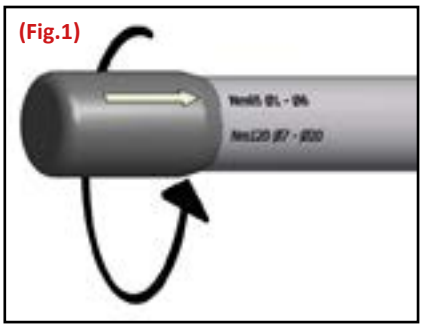
Articolo	Nm		A	Ghiere del catalogo / Catalogue nuts
CD16S	30	50	32	G16S- G16WD- G16C
CD20S	40	75	35	G20S- G20WD- G20C
CD25S	55	90	42	G25S- G25WD- G25C- G25HT
CD32S	70	130	50	G32S- G32WD- G32C- G32HT- G32CLS- G32THS
CD40S	120	200	63	G40S- G40WD- G40C- G40HT

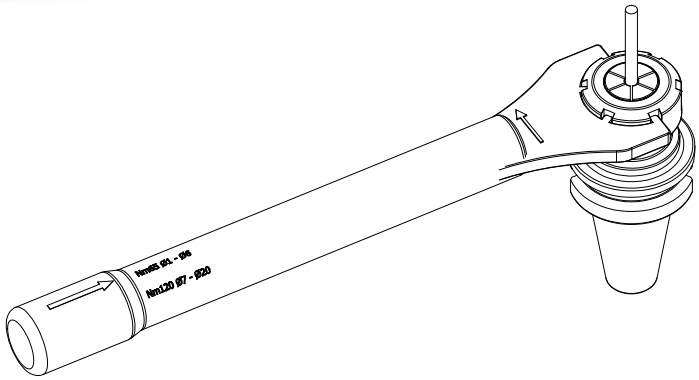


CHIAVI A FORCHETTA PER GHIERE STANDARD ESAGONALI (CON PIANI)
WRENCHES WITH OPEN-END FOR HEXAGON NUTS (WITH FLATS)

Articolo	Nm		E	Ghiere del catalogo / Catalogue nuts
CD.E14	18	-	14	G11MSE
CD.E17	20	-	17	G11SE
CD.E22	28	-	22	G16MSE- G20A.EX
CD.E25	30	50	25	G16SE- G16WDE- G16HTE
CD.E30	40	75	30	G20SE- G20WDE- G20HTE



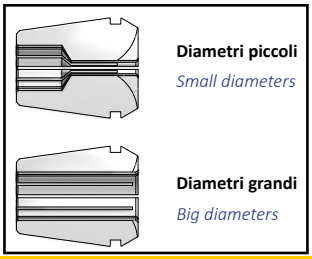




Le chiavi dinamometriche sono tarate per segnalare tramite uno scatto meccanico il momento torcente indicato.
Torque wrenches are calibrated to signal the indicated torque by a mechanical click.

Nelle chiavi con due momenti dello scatto, scegliere il momento torcente in base al diametro della pinza da stringere. Per impostarlo ruotare il pomello sul manico. (Fig.1)
When using wrenches with 2 torques, choose the correct one in relation to collet's diameter. **(Fig.1)**

Serrare nella direzione indicata dalla freccia, con utensile montato, fino a sentire lo scatto meccanico.
Close in strokes direction, with mounted tool, till you hear the click.



CHIAVI DINAMOMETRICHE PER GHIERE CHIUDIPINZA SENZA TACCHE

TORQUE WRENCHES FOR CLAMPING NUTS WITHOUT SLOTS

PER GHIERE MINI SENZA TACCHE

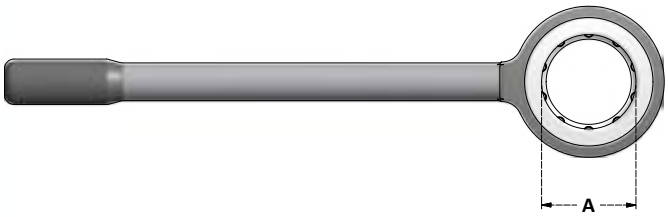
FOR NOTCH-FREE MINI NUTS

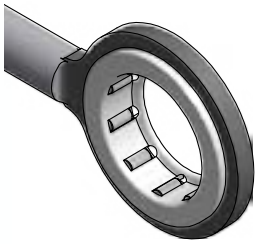
Articolo	Nm		A	Ghiere del catalogo / Catalogue nuts
CD8NFM	8	-	12	G8NFM
CD11NFM	18	-	16	G1NFM
CD16NFM	30	-	22	G16NFM
CD20NFM	35	-	28	G20NFM
CD25NFM	40	-	35	G25NFM

PER GHIERE STANDARD SENZA TACCHE

FOR NOTCH-FREE STANDARD NUTS

Articolo	Nm		A	Ghiere del catalogo / Catalogue nuts
CD16NF	30	50	32	G16NF
CD20NF	40	70	35	G20NF
CD25NF	55	90	42	G25NF
CD32NF	70	130	50	G32NF
CD40NF	120	200	63	G40NF





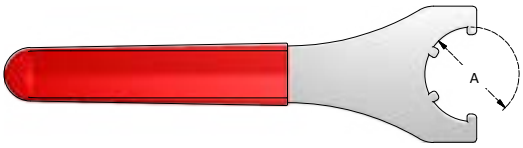
CHIAVI PER GHIERE CHIUDIPINZA
WRENCHES FOR CLAMPING NUTS

CHIAVI PER GHIERE CON TACCHE
WRENCHES FOR NUTS WITH SLOTS

Articolo	A	Ghiere del catalogo / Catalogue nuts
CH8M	12	G8M
CH11M	16	G11M
CH16M	22	G16M- G16WDM- G16HTM
CH20M	28	G20M- G20WDM- G20HTM
CH25M	35	G25M- G25WDM- G25HTM

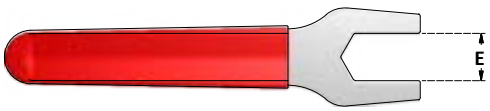


Articolo	A	Ghiere del catalogo / Catalogue nuts
CH16S	32	G16S- G16WD- G16C
CH20S	35	G20S- G20WD- G20C
CH25S	42	G25S- G25WD- G25C- G25HT
CH32S	50	G32S- G32WD- G32C- G32HT- G32CLS- G32THS
CH40S	63	G40S- G40WD- G40C- G40HT
CH50S	78	G50S



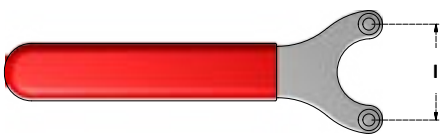
CHIAVI A FORCHETTA PER GHIERE ESAGONALI (CON PIANI)
WRENCHES WITH OPEN-END FOR HEXAGON NUTS (WITH FLATS)

Articolo	E	Ghiere del catalogo / Catalogue nuts
CH.E14	14	G11MSE
CH.E15	15	G11A.EX
CH.E17	17	G11E
CH.E19	19	G16A.EX
CH.E22	22	G16MSE- G20A.EX
CH.E25	25	G16SE - G16HTE
CH.E27	27	G20MSE- G25A.EX
CH.E28	28	
CH.E30	30	G20SE- G20HTE
CH.E32	32	G32A.EX
CH.E34	34	G25MSE
CH.E36	36	
CH.E38	38	G25SE
CH.E42	42	G42A.EX
CH.E50	50	

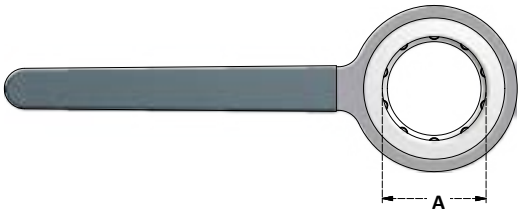


CHIAVI CON PERNI PER GHIERE “A” CON FORI
PIN-WRENCHES FOR “A” NUTS WITH HOLES

Articolo	I	Ghiere del catalogo / Catalogue nuts
CH11A	13,35	G11A
CH16A	17,5	G16A
CH20A	20,6	G20A
CH25A	23,75	G25A
CH32A	31	G32A

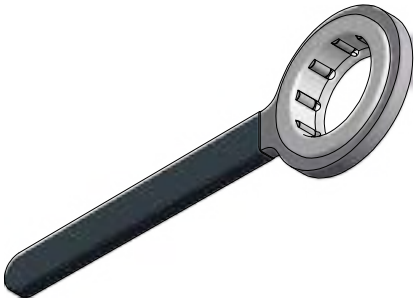


CHIAVI A RULLI PER GHIERE CHIUDIPINZA SENZA TACCHE
WRENCHES WITH ROLLERS FOR NOTCH FREE CLAMPING NUTS



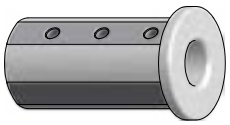
PER GHIERE ER MINI SENZA TACCHE
FOR ER NOTCH-FREE MINI NUTS

Articolo	A	Ghiere del catalogo / Catalogue nuts
CR8M	12	G8NFM
CR11M	16	G1NFM
CR16M	22	G16NFM
CR20M	28	G20NFM
CR25M-20	35	G25NFM / G20NF

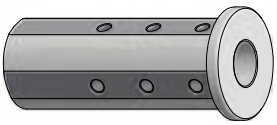


PER GHIERE ER STANDARD SENZA TACCHE
FOR ER NOTCH-FREE STANDARD NUTS

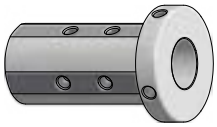
Articolo	A	Ghiere del catalogo / Catalogue nuts
CR16	32	G16NF
CR25M-20	35	G25NFM / G20NF
CR25	42	G25NF
CR32	50	G32NF
CR40	63	G40NF



BUSSOLE DI RIDUZIONE CON BATTUTA
HEADED REDUCTION BUSHES
PAG. 295



BUSSOLE DI RIDUZIONE CON BATTUTA - PROLUNGATE
HEADED REDUCTION BUSHES - EXTENDED
PAG. 296



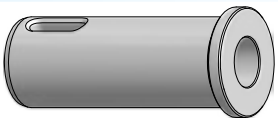
BUSSOLE DI RIDUZIONE TIPO MAZAK
HEADED REDUCTION BUSHES MAZAK TYPE
PAG. 296



BUSSOLE DI RIDUZIONE SENZA BATTUTA
UNIVERSAL REDUCTION BUSHES
PAG. 296



BUSSOLE PORTABARENI PROLUNGATE
BORING BAR SLEEVES
PAG. 297



RIDUZIONI CILINDRICHE A CONO MORSE
MORSE TAPER REDUCTION BUSHES
PAG. 297

- RETTIFICATI SUL GAMBO CON TOLLERANZA g7
- IL FORO È RETTIFICATO CON TOLLERANZA H7

- SHANK GRINDED WITH TOLLERANCE g7
- BORE IS GRINDED WITH TOLLERANCE H7

BUSSOLE DI RIDUZIONE CON BATTUTA

HEADED REDUCTION BUSHES

Articolo	D1	D2	L	L1	M	A	Fig
E2-1.20-6	20	6	55	30	M5	-	1
E2-1.20-8	20	8	55	30	M5	-	1
E2-1.20-10	20	10	55	35	M5	-	1
E2-1.20-12	20	12	55	40	M6	-	1
E2-1.20-14	20	14	55	55	-	8	3
E2-1.20-16	20	16	55	55	-	8	3

Articolo	D1	D2	L	L1	M	A	Fig
E2-1.25-6	25	6	65	30	M5	-	1
E2-1.25-8	25	8	65	30	M5	-	1
E2-1.25-10	25	10	65	35	M5	-	1
E2-1.25-12	25	12	65	40	M8	-	1
E2-1.25-14	25	14	65	65	-	10	3
E2-1.25-16	25	16	65	65	-	10	3
E2-1.25-18	25	18	65	65	-	10	3
E2-1.25-20	25	20	65	65	-	10	3

Articolo	D1	D2	L	L1	M	A	Fig
E2-1.32-6	32	6	70	30	M5	-	1
E2-1.32-8	32	8	70	30	M5	-	1
E2-1.32-10	32	10	70	35	M5	-	1
E2-1.32-12	32	12	70	40	M8	-	1
E2-1.32-14	32	14	70	40	M8	-	2
E2-1.32-16	32	16	70	60	M8	-	2
E2-1.32-18	32	18	70	60	M8	-	2
E2-1.32-20	32	20	70	60	-	12	3
E2-1.32-25	32	25	70	70	-	12	3

Articolo	D1	D2	L	L1	M	A	Fig
E2-1.40-6	40	6	80	30	M5	-	1
E2-1.40-8	40	8	80	30	M5	-	1
E2-1.40-10	40	10	80	35	M5	-	1
E2-1.40-12	40	12	80	40	M8	-	1
E2-1.40-14	40	14	80	40	M8	-	2
E2-1.40-16	40	16	80	60	M8	-	2
E2-1.40-18	40	18	80	60	M8	-	2
E2-1.40-20	40	20	80	60	M8	-	2
E2-1.40-25	40	25	80	70	M8	-	2
E2-1.40-32	40	32	80	80	-	12	3

Articolo	D1	D2	L	L1	M	A	Fig
E2-1.50-16	50	16	90	60	M8	-	2
E2-1.50-20	50	20	90	60	M8	-	2
E2-1.50-25	50	25	90	70	M8	-	2
E2-1.50-32	50	32	90	80	M8	-	2
E2-1.50-40	50	40	90	90	-	13	3

Fig. 1

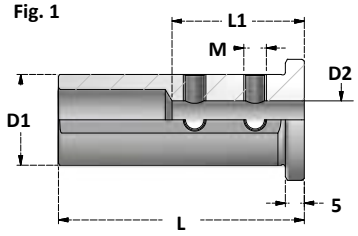


Fig. 2

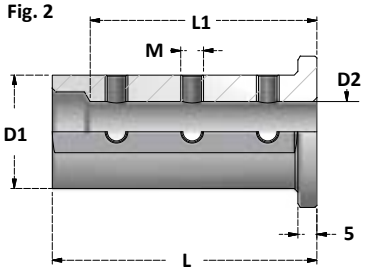
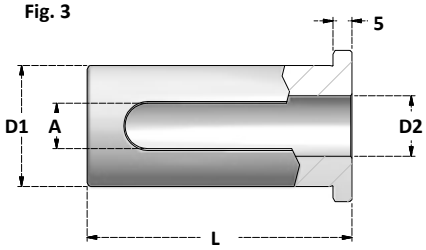


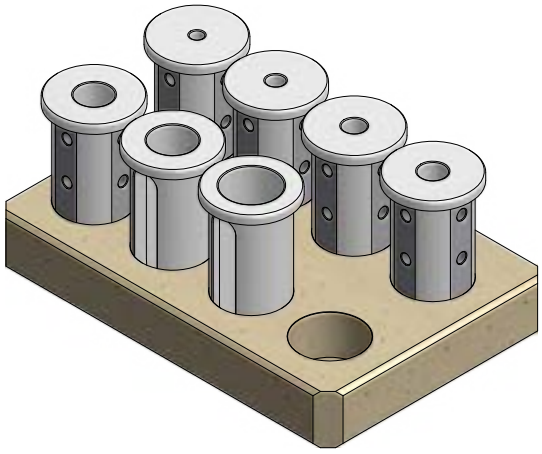
Fig. 3



SERIE DI BUSSOLE SU BASE DI LEGNO

REDUCTION BUSHES SETS IN WOODEN TRAY

Articolo	D
TY.E2-1.20-5	6- 8- 10- 12- 16
TY.E2-1.25-6	6- 8- 10- 12- 16- 20
TY.E2-1.32-7	6- 8- 10- 12- 16- 20- 25
TY.E2-1.40-8	6- 8- 10- 12- 16- 20- 25- 32



BUSSOLE DI RIDUZIONE CON BATTUTA - PROLUNGATE

HEADED REDUCTION BUSHES - EXTENDED

Articolo	D1	D2	L	L1	M	A	Fig
BSH32-6	32	6	90	30	M5	-	1
BSH32-8	32	8	90	30	M5	-	1
BSH32-10	32	10	90	35	M5	-	1
BSH32-12	32	12	90	40	M8	-	1
BSH32-16	32	16	90	60	M8	-	1
BSH32-20	32	20	90	60	-	10	2
BSH32-25	32	25	90	70	-	10	2

Articolo	D1	D2	L	L1	M	A	Fig
BSH40-6	40	6	110	30	M5	-	1
BSH40-8	40	8	110	30	M5	-	1
BSH40-10	40	10	110	35	M5	-	1
BSH40-12	40	12	110	40	M8	-	1
BSH40-16	40	16	110	60	M8	-	1
BSH40-20	40	20	110	60	M8	-	1
BSH40-25	40	25	110	70	M8	-	1
BSH40-32	40	32	110	110	-	10	2

Articolo	D1	D2	L	L1	M	A	Fig
BSH50-16	50	16	130	60	M8	-	1
BSH50-20	50	20	130	60	M8	-	1
BSH50-25	50	25	130	70	M8	-	1
BSH50-32	50	32	130	80	M8	-	1
BSH50-40	50	40	130	90	-	12	2

Fig. 1

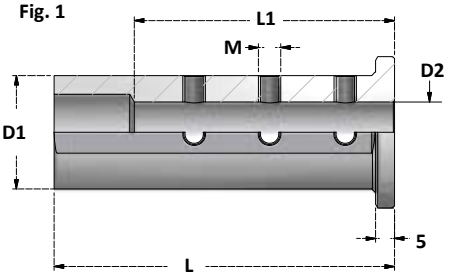
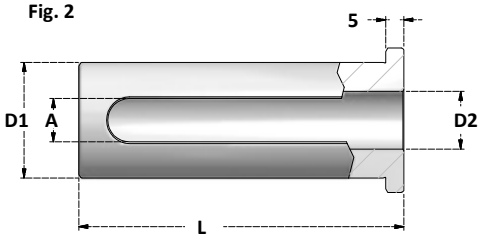


Fig. 2



BUSSOLE DI RIDUZIONE CON BATTUTA - TIPO MAZAK

HEADED REDUCTION BUSHES - MAZAK TYPE

Articolo	D1	D2	L	L1	M	A	Fig
BSH40MZ-6	40	6	80	40	M5	-	1
BSH40MZ-8	40	8	80	45	M5	-	1
BSH40MZ-10	40	10	80	50	M5	-	1
BSH40MZ-12	40	12	80	56	M8	-	1
BSH40MZ-14	40	14	80	56	M8	-	1
BSH40MZ-16	40	16	80	60	M8	-	1
BSH40MZ-18	40	18	80	60	M8	-	1
BSH40MZ-20	40	20	80	60	M8	-	1
BSH40MZ-25	40	25	80	60	M8	-	1
BSH40MZ-32	40	32	89	89	M8	12	2

Fig. 1

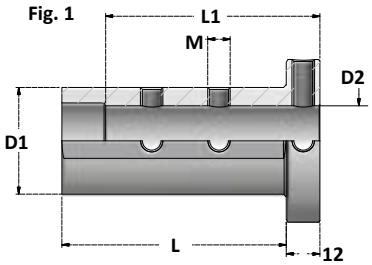
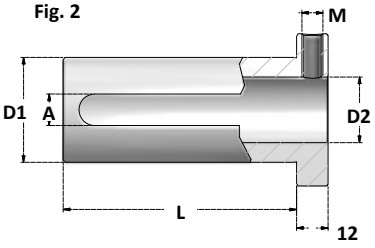


Fig. 2

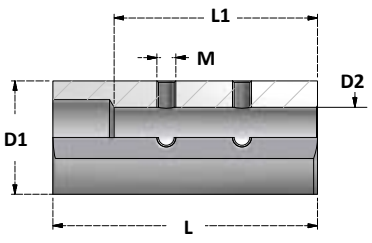


BUSSOLE DI RIDUZIONE SENZA BATTUTA

UNIVERSAL REDUCTION BUSHES

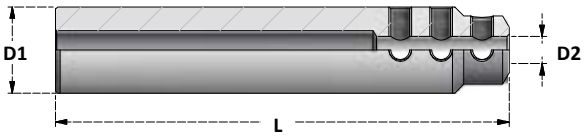
Articolo	D1	D2	L	L1	M
E2SB32-8	32	8	70	30	M5
E2SB32-10	32	10	70	35	M5
E2SB32-12	32	12	70	40	M8
E2SB32-16	32	16	70	60	M8
E2SB32-20	32	20	70	60	M8

Articolo	D1	D2	L	L1	M
E2SB40-8	40	8	80	30	M5
E2SB40-10	40	10	80	35	M5
E2SB40-12	40	12	80	40	M8
E2SB40-16	40	16	80	60	M8
E2SB40-20	40	20	80	60	M8
E2SB40-25	40	25	80	70	M8



BUSSOLE PORTABARENI PROLUNGATE

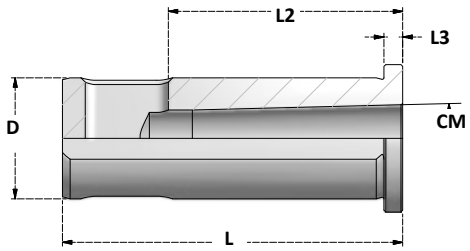
BORING BAR SLEEVES



Articolo	D1	D2	L
BSCL16-4	16	4	100
BSCL16-5	16	5	100
BSCL16-6	16	6	100
BSCL16-7	16	7	100
BSCL20-4	20	4	100
BSCL20-5	20	5	100
BSCL20-6	20	6	100
BSCL20-7	20	7	100
BSCL20-8	20	8	100

BUSSOLE DI RIDUZIONE A CONO MORSE CON BATTUTA

MORSE TAPER REDUCTION BUSHES - DRILL SOCKETS



Articolo	D	L	L2	CM	L3	Fig
D20.L65.CM1	20	65	52	CM1	5	1
D20.L80.CM2	20	80	62	CM2	29	2
D25.L65.CM1	25	65	52	CM1	5	1
D25.L75.CM2	25	75	62	CM2	5	1
D25.L100.CM3	25	100	78	CM3	55	2
D32.L90.CM1	32	90	52	CM1	5	1
D32.L90.CM2	32	90	62	CM2	5	1
D32.L100.CM3	32	100	78	CM3	5	1
D40.L90.CM1	40	90	52	CM1	5	1
D40.L110.CM2	40	110	62	CM2	5	1
D40.L110.CM3	40	110	78	CM3	5	1
D40.L135.CM4	40	135	98	CM4	5	1

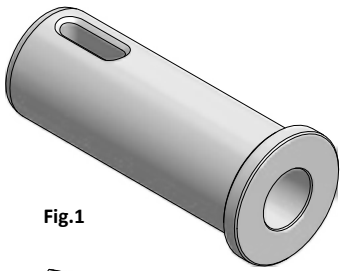


Fig.1

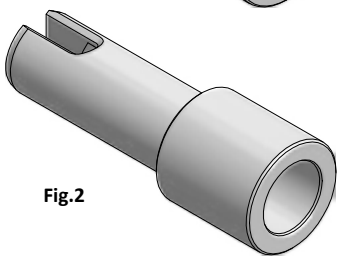
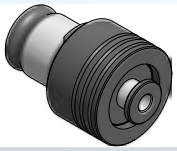


Fig.2

INSERZIONI PORTAMASCHI
TAPPING ADAPTERS



INSERZIONI PORTAMASCHI CON FRIZIONE REGISTRABILE
TAPPING ADAPTERS WITH SAFETY CLUTCH
PAG. 299



RIDUZIONI PER INSERZIONI PORTAMASCHI
REDUCTIONS FOR TAPPING ADAPTERS
PAG. 300



INSERZIONI PORTAMASCHI SENZA FRIZIONE
TAPPING ADAPTERS WITHOUT CLUTCH
PAG. 300

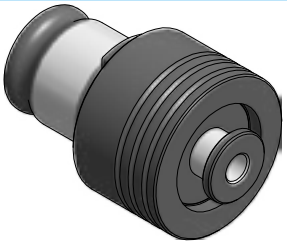
PORTAUTENSILI A CAMBIO RAPIDO PER MASCHIATURA
MASCHIATURA RIGIDA - MASCHIATURA CON COMPENSAZIONE
QUICK CHANGE TAPPING TOOLHOLDERS
RIGID TAPPING - TAPPING WITH COMPENSATION

ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**43**
TC	DIN ISO 7988-1 (DIN 69871)	**102**
BT	MAS 403	**146**
ISO	DIN2080	**165**
VDI	DIN 10889 (DIN 69880)	**181**
CM	DIN 228	**190**
WE	DIN 1835-1 Form B	**229**

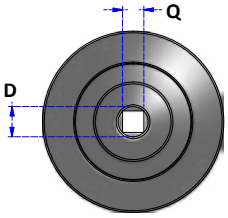

P. 336
MASCHI
TAPS

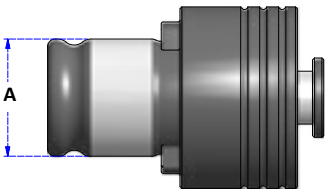
INSERZIONI PORTAMASCHI CON FRIZIONE REGISTRABILE

TAPPING ADAPTERS WITH ADJUSTABLE SAFETY CLUTCH



SCHEDA TECNICA *TECHNICAL DATA* MCR P. 352





GRANDEZZA/SIZE= 0 A= 13

Articolo		D	Q	Nm	DIN371	DIN376
BF0.25		2,5	2,1	0,5	M1	-
BF0.28		2,8	2,1	0,6	M2	-
BF0.35		3,5	2,7	1	M3	-
BF0.40		4	3,15	1,5-2	M3,5	-
BF0.45		4,5	3,4	2-3	M4	-
BF0.60-M5		6	4,9	5-6	M5	-
BF0.60		6	4,9	7-9	M6	-
BF0.70		7	5,5	27-30	-	M10
BF0.80		8	6,2	16-19	M8	-

GRANDEZZA/SIZE= 1 A= 19

Articolo		D	Q	Nm	DIN371	DIN376
BF1.28		2,8	2,1	0,6	M2	-
BF1.35		3,5	2,7	1	M3	-
BF1.40		4	3,15	1,5-2	M3,5	-
BF1.45		4,5	3,4	2-3	M4	-
BF1.60-M5		6	4,9	5-6	M5	-
BF1.60		6	4,9	7-9	M6	-
BF1.60-M8		6	4,9	16-19	-	M8
BF1.70		7	5,5	27-30	-	M10
BF1.80		8	6,2	16-19	M8	-
BF1.90		9	7	37-40	-	M12
BF1.100		10	8	27-30	M10	-
BF1.110		11	9	37-40	-	M14

GRANDEZZA/SIZE= 2 A= 31

Articolo		D	Q	Nm	DIN371	DIN376
BF2.60-M5		6	4,9	5-6	M5	-
BF2.60		6	4,9	7-9	M6	-
BF2.60-M8		6	4,9	16-19	-	M8
BF2.70		7	5,5	27-30	-	M10
BF2.80		8	6,2	16-19	M8	-
BF2.90		9	7	37-40	-	M12
BF2.100		10	8	27-30	M10	-
BF2.110		11	9	37-40	-	M14
BF2.120		12	9	55-58	-	M16
BF2.140		14	11	85-90	-	M18
BF2.160		16	12	100-106	-	M20
BF2.180	*	18	14,5	100-106	-	M22
BF2.180-M24	*	18	14,5	100-106	-	M24
BF2.200	*	20	16	100-106	-	M27

GRANDEZZA/SIZE= 3 A= 48

Articolo		D	Q	Nm	DIN371	DIN376
BF3.110		11	9	50-53	-	M14
BF3.120		12	9	55-58	-	M16
BF3.140		14	11	85-90	-	M18
BF3.160		16	12	100-106	-	M20
BF3.180		18	14,5	110-115	-	M22
BF3.180-M24		18	14,5	140-150	-	M24
BF3.200		20	16	150-160	-	M27
BF3.220		22	18	240-250	-	M30
BF3.250		25	20	260-270	-	M33
BF3.280	*	28	22	260-270	-	M36
BF3.320	*	32	24	260-270	-	M39
BF3.360	*	36	29	260-270	-	M45

GRANDEZZA/SIZE= 4 A= 60

Articolo	D	Q	Nm	DIN371	DIN376
BF4.180	18	14,5	110-115		M22
BF4.180-M24	18	14,5	140-150		M24
BF4.200	20	16	150-160		M27
BF4.220	22	18	240-250		M30
BF4.250	25	20	260-270		M33
BF4.280	28	22	350-400		M36
BF4.320-M39	32	24	380-480		M39
BF4.320	32	24	500-550		M42
BF4.360	36	29	550-600		M45
BF4.360-M48	36	29	630-680		M48

ALTRE TARATURE A RICHIESTA

OTHER TORQUE SETS ON REQUEST

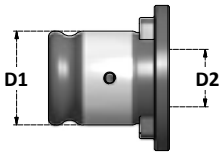
La frizione delle bussole BF ha lo scopo di evitare la rottura del maschio, della bussola e del mandrino.
La taratura delle bussole è scelta sia in base al maschio che alla grandezza del portautensile.
Per questo le bussole contrasegnate con (*) sono consigliate per maschiature a passo fine o per materiali facilmente lavorabili.
La taratura della bussola può essere modificata autonomamente dall'operatore che dovesse voler adeguare il portautensile alle proprie esigenze specifiche.

The safety clutch of BF adapters has the purpose of avoiding breakage of the tap, the adapter and the chuck.
The calibration of adapters is chosen based on the size of the tap and the size of the tool holder.
For this reason, adapters marked with (*) are recommended for fine thread or easily workable materials.
The calibration of the adapters can be modified independently by the operator who wishes to adapt the toolholder to his specific needs.

P. 336 MASCHI *TAPS*

RIDUZIONI PER INSERZIONI
ADAPTERS

Articolo	D1	D2
B1-B0	19	13
B2-B1	31	19
B3-B2	48	31

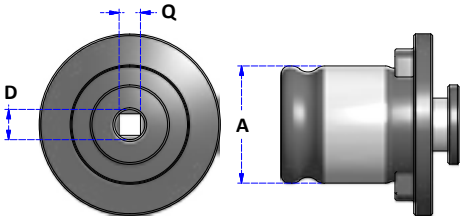


B

INSERZIONI PORTAMASCHI SENZA FRIZIONE
TAPPING ADAPTERS WITHOUT CLUTCH



SCHEDA TECNICA *TECHNICAL DATA* MCR P. 352



GRANDEZZA/SIZE= 0

A= 13

Articolo	D	Q
B0.25	2,5	2,1
B0.28	2,8	2,1
B0.35	3,5	2,7
B0.40	4	3,15
B0.45	4,5	3,4
B0.60	6	4,9
B0.70	7	5,5
B0.80	8	6,2

GRANDEZZA/SIZE= 1

A= 19

Articolo	D	Q
B1.28	2,8	2,1
B1.35	3,5	2,7
B1.40	4	3,15
B1.45	4,5	3,4
B1.60	6	4,9
B1.70	7	5,5
B1.80	8	6,2
B1.90	9	7
B1.100	10	8
B1.110	11	9

GRANDEZZA/SIZE= 2

A= 31

Articolo	D	Q
B2.60	6	4,9
B2.70	7	5,5
B2.80	8	6,2
B2.90	9	7
B2.100	10	8
B2.110	11	9
B2.120	12	9
B2.140	14	11
B2.160	16	12
B2.180	18	14,5
B2.200	20	16

GRANDEZZA/SIZE= 3

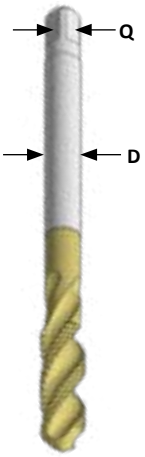
A= 48

Articolo	D	Q
B3.110	11	9
B3.120	12	9
B3.140	14	11
B3.160	16	12
B3.180	18	14,5
B3.200	20	16
B3.220	22	18
B3.250	25	20
B3.280	28	22
B3.320	32	24
B3.360	36	29

P. 336 MASCHI *TAPS*

DIMENSIONI DEI GAMBI DEI MASCHI
TAP SHANKS DIMENSIONS

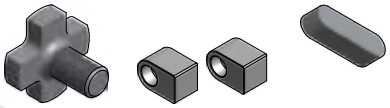
ø D	Q Quadro *Square*	DIN-352	DIN-371 CODOLO RINFORZATO *REINFORCED SHANK*	DIN-376 CODOLO PASSANTE *REDUCED SHANK*	ISO-529	ISO-529
2,5	**2,1**	M1	M1	M3,5		
		M1,4	M1,4			
		M1,6	M1,6			
		M1,8	M1,8			
2,8	**2,1**	M2	M2	M4		
		M2,2	M2,2			
		M2,5	M2,5			
3,15	**2,5**				M4	M3
3,5	**2,7**	M3	M3	M5		
3,55	**2,8**				M4,5	M3,5
4	**3,15**	M3,5	M3,5		M5	M4
4,5	**3,4**	M4	M4	M6		
5	**4**					M5
6	**4,9**	M5	M5			
		M6	M6			
		M8		M8		
6,3	**5**				M8	M6
7	**5,5**	M10		M10		
8	**6,2**		M8		M10	M8
9	**7,1**	M12		M12	M12	
10	**8**		M10			M10
11	**9**	M14		M14		
11,2	**9**				M14	
12	**9**	M16		M16		
12,5	**10**				M16	
14	**11**	M18		M18		
14	**11,2**				M18	
					M20	
16	**12**	M20		M20		
16	**12,5**				M22	
18	**14**				M24	
18	**14,5**	M22		M22		
		M24		M24		
20	**16**	M27		M27	M27	
					M30	
22	**18**	M30		M30		
25	**20**	M33		M33	M36	
28	**22**	M36		M36		
32	**24**	M39		M39		
		M42		M42		
36	**29**	M45		M45		
		M48		M48		



P. 336
MASCHI
TAPS



GRANI PER PORTAFRESE WELDON
SCREWS FOR END MILL HOLDERS
PAG. 303



ACCESSORI PER PORTAFRESE FISSI E COMBINATI
SPARE PARTS FOR SHELL AND COMBI MILL HOLDERS
PAG. 304



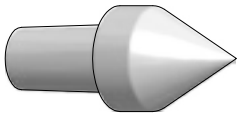
RACCORDI PER REFRIGERANTE - HSK - CPT
HSK AND CPT COOLING TUBES
DIN 69893 | DIN ISO 26623-1
PAG. 306



BLOCCO D'ARRESTO PER DISTRIBUTORI ROTANTI
STOP BLOCK FOR OIL HOLDERS
PAG. 306



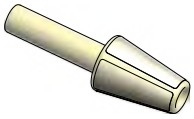
DISCHI DI TENUTA PER MANDRINI A FORTE SERRAGGIO
SEALED CAPS FOR POWER MILLING CHUCKS
PAG. 307



CUSPIDI
TIPS
PAG. 307



ACCESSORI PER CONO MORSE
MORSE TAPER ACCESSORIES
PAG. 308



TAMPONI PULITORI
SPINDLE TAPER WIPERS
PAG. 308



BASI DI LEGNO PER PINZE ER
EMPTY RACKS FOR ER COLLETS
PAG. 309

GRANI PER PORTAFRESE WELDON

SCREWS FOR END MILL HOLDERS WELDON

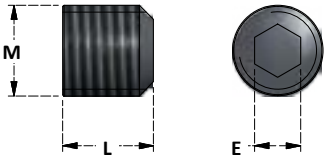


SCHEDA TECNICA
TECHNICAL DATA
WE P. 347

GRANI PER PORTAFRESE WELDON STANDARD

SCREWS FOR STANDARD END MILL HOLDERS WELDON

Articolo	M	L	E
GR.WE6	M6x1	9	3
GR.WE8	M8x1,25	9	4
GR.WE10	M10x1,5	12	5
GR.WE12-14	M12x1,75	14	6
GR.WE16-18	M14x2	16	6
GR.WE20	M16x2	16	8
GR.WE25	M18x2	20	10
GR.WE32-40	M20x2	20	10
GR.WE50	M24x2	25	12

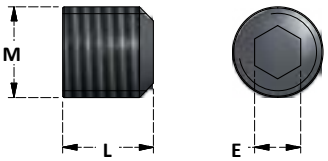


GR WEC

GRANI PER PORTAFRESE WELDON EXTRACORTI

SCREWS FOR END MILL HOLDERS WELDON WITH STUB LENGHT

Articolo	M	L	E
GR.WEC12-14	M12x1,75	10	6
GR.WEC16	M14x2	10	6
GR.WEC20	M16x2	10	8
GR.WEC25-32	M16x1	8	10
GR.WEC25	M18x2	12	10
GR.WEC32-40	M20x2	14	10

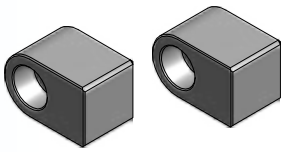


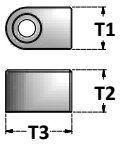
TTR

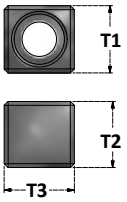
SCHEDA TECNICA TECHNICAL DATA D C P. 348
SCHEDA TECNICA TECHNICAL DATA D S P. 349

TASSELLI DI TRASCINAMENTO PER PORTAFRESE FISSI
DRIVE KEYS FOR SHELL MILL HOLDERS

Articolo	T1	T2	T3	fig
TTR.D16	8	8	14	1
TTR.D22	10	10	18	1
TTR.D27	12	12	18	1
TTR.D32	14	14	22	1
TTR.D40	16	16	25	1
TTR.D60	25,4	25	26,5	2





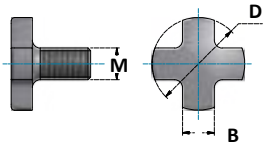


DIN6367 — VTC

VITI A CROCE PER PORTAFRESE FISSI E COMBI
CROSS SCREWS FOR SHELL AND COMBI MILL HOLDERS

Articolo	M	D	B
VTC.D16	M8	20	8
VTC.D22	M10	28	10
VTC.D27	M12	35	12
VTC.D32	M16	42	16
VTC.D40	M20	52	20
VTC.D60	M30	75	28



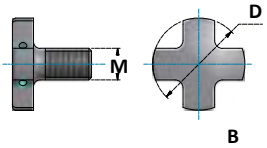


DIN6367 — VTCS

VITI A CROCE CON PASSAGGIO DEL REFRIGERANTE
CROSS SCREWS WITH COOLANT THROUGHT

Articolo	M	D	B
VTCS.D16	M8	20	8
VTCS.D22	M10	28	10
VTCS.D27	M12	35	12
VTCS.D32	M16	42	16
VTCS.D40	M20	52	20
VTCS.D60	M30	75	28

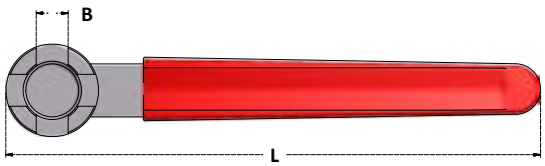




DIN6368 — SP

CHIAVI PER VITI A CROCE
SPANNERS FOR CROSS SCREWS

Articolo	B	L
SP16C	8	180
SP22C	10	200
SP27C	12	225
SP32C	16	250
SP40C	20	280
SP60C	28	355

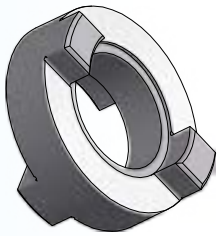


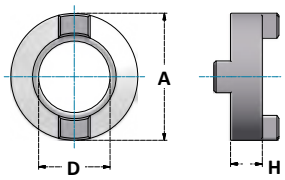
DIN6366 ATR

ANELLI DI TRASCINAMENTO PER MANDRINI COMBI
DRIVE RINGS FOR COMBI SHELL MILL HOLDERS

SCHEDA TECNICA TECHNICAL DATA D C P. 348

Articolo	D	A	H
ATR.D16	16	32	10
ATR.D22	22	40	12
ATR.D27	27	48	12
ATR.D32	32	58	14
ATR.D40	40	70	14



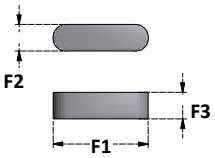


DIN6885 CHV

CHIAVETTE DI TRASCINAMENTO PER PORTAFRESE COMBI
DRIVE KEYS FOR COMBI SHELL MILL HOLDERS

Articolo	F1	F2	F3
CHV.D16C	20	4	4
CHV.D22C	25	6	6
CHV.D27C	25	7	7
CHV.D32C	28	8	7
CHV.D40C	32	10	8





DIN2084 SC H

ANELLI DISTANZIALI
SPACING COLLARS

Articolo	A	H
SC16.H1	26	1
SC16.H2	27	2
SC16.H3	27	3
SC16.H4	27	4
SC16.H5	27	5
SC16.H6	27	6
SC16.H10	27	10
SC16.H20	27	20
SC16.H30	27	30

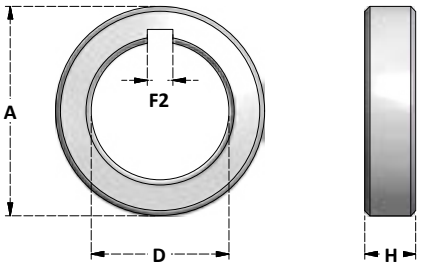
Articolo	A	H
SC22.H1	33	1
SC22.H2	34	2
SC22.H3	34	3
SC22.H4	34	4
SC22.H5	34	5
SC22.H6	34	6
SC22.H10	34	10
SC22.H20	34	20
SC22.H30	34	30
SC22.H60	34	60

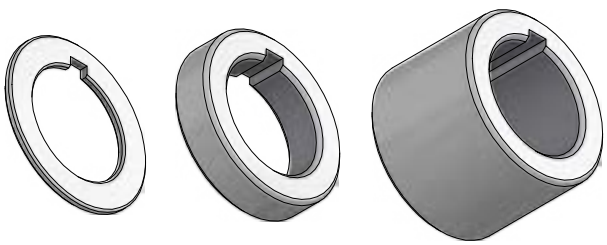
Articolo	A	H
SC27.H1	40	1
SC27.H2	41	2
SC27.H3	41	3
SC27.H4	41	4
SC27.H5	41	5
SC27.H6	41	6
SC27.H10	41	10
SC27.H20	41	20
SC27.H30	41	30
SC27.H60	41	60
SC27.H100	41	100

Articolo	A	H
SC32.H1	46	1
SC32.H2	47	2
SC32.H3	47	3
SC32.H4	47	4
SC32.H5	47	5
SC32.H6	47	6
SC32.H10	47	10
SC32.H20	47	20
SC32.H30	47	30
SC32.H60	47	60
SC32.H100	47	100

Articolo	A	H
SC40.H1	54	1
SC40.H2	55	2
SC40.H3	55	3
SC40.H4	55	4
SC40.H5	55	5
SC40.H6	55	6
SC40.H10	55	10
SC40.H20	55	20
SC40.H30	55	30
SC40.H60	55	60
SC40.H100	55	100

Articolo	D	F2
SC16	16	4
SC22	22	6
SC27	27	7
SC32	32	8
SC40	40	10





RACCORDI E CHIAVI PER L'ADDUZIONE DEL REFRIGERANTE

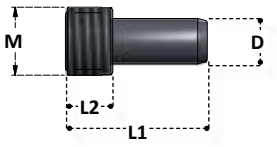
COOLANT TUBES AND WRENCHES

RACCORDI PER HSK

TUBES FOR HSK

Articolo	M	L1	L2	D	ATTACCO SHANK
HSK40.CFM12	M12	29,5	7,5	8	HSK40
HSK50.CFM16	M16	33	9,5	10	HSK50
HSK63.CFM18	M18	36,5	11,5	12	HSK63
HSK80.CFM20	M20	40	13,5	14	HSK80
HSK100.CFM24	M24	44	15,5	16	HSK100

DIN 69893



RACCORDI PER CPT

NEW

TUBES FOR CPT

Articolo	M	L1	L2	D	ATTACCO SHANK
CPT40.CFM14	M14x1,5	25	12	6	CPT40
CPT50.CFM16	M16x1,5	28,3	14	7	CPT50
CPT63.CFM20	M20x20	31	15	8	CPT63
CPT80.CFM20	M20x2	31,3	15	10	CPT80

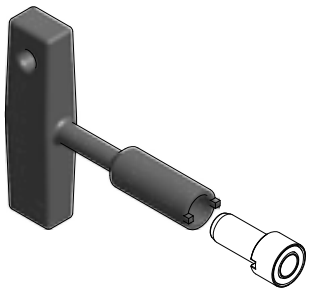
DIN ISO 26623-1

SP

CHIAVI PER RACCORDI PER L'ADDUZIONE DEL REFRIGERANTE

WRENCHES FOR COOLANT TUBES

Articolo	RACCORDO TUBE
HSK40.SP11	HSK40.CFM12
HSK50.SP15	HSK50.CFM16
HSK63.SP17	HSK63.CFM18
HSK80.SP19	HSK80.CFM20
HSK100.SP22	HSK100.CFM24
NEW **CPT40.SP**	CPT40.CFM14
CPT50.SP	CPT50.CFM16
CPT63.SP	CPT63.CFM20
CPT80.SP	CPT80.CFM20

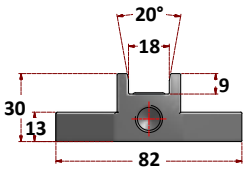


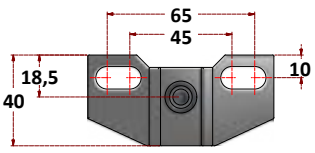
BL DR

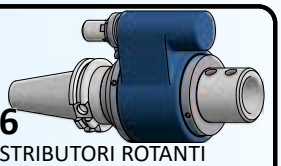
BLOCCO D'ARRESTO PER DISTRIBUTORE ROTANTE DEL REFRIGERANTE

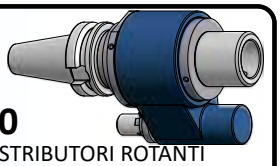
STOP BLOCK FOR OIL HOLE HOLDERS

Articolo
BL.DR

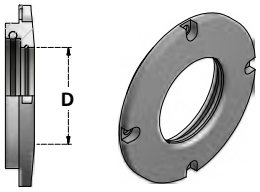




TC

P. 106
DISTRIBUTORI ROTANTI
OIL HOLE HOLDERS

BT

P. 150
DISTRIBUTORI ROTANTI
OIL HOLE HOLDERS

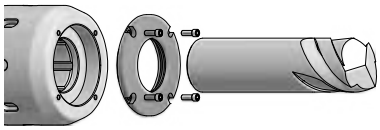
DISCHI DI TENUTA PER MANDRINI A FORTE SERRAGGIO
SEALED CAPS FOR POWER MILLING CHUCKS



DISCHI DI TENUTA PER DIAMETRO NOMINALE
SEALED CAPS FOR NOMINAL DIAMETER



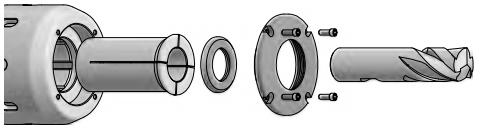
Articolo	D
CFS20.D20	20
CFS32.D32	32



DISCHI DI TENUTA PER L'UTILIZZO DELLE PINZE DI RIDUZIONE
SEALED CAPS FOR REDUCTION COLLETS USING



Articolo	D	RG Range
CFS20.RG	RG32	D4-D16
CFS32.RG	RG40	D6-D25



SCHEDA TECNICA
TECHNICAL DATA
FS | P. 344

P. 284
DISCHETTI **RG**
***RG** SEALED DISCS*

CUSPIDI INTERCAMBIABILI PER CONTROPUNTE ROTANTI
INTERCHANGEABLE TIPS FOR LIVE CENTRES

Articolo	E	S	G	PUNTA CENTER	Fig
CNP32.CS1	14	16	-	60°	1
CNP32.CS1B	14	22	-	90°	1
CNP32.CS2	14	22	7	60°	2
CNP32.CS2B	14	26	8	60°	2

Articolo	E	S	G	PUNTA CENTER	Fig
CNP43.CS1	18	21	-	60°	1
CNP43.CS1B	18	28	-	90°	1
CNP43.CS2	18	27	7	60°	2
CNP43.CS2B	18	38	9	60°	2
CNP43.CS2C	22	41	12	60°	2
CNP43.CS3	30	21	14	60°	3
CNP43.CS4	26	20	20	-	4

Articolo	E	S	G	PUNTA CENTER	Fig
CNP58.CS1	28	34	-	60°	1
CNP58.CS2	28	40	7	60°	2
CNP58.CS2B	28	40	12	60°	2
CNP58.CS3	58	36	25	60°	3
CNP58.CS4	28	32	24	-	4

Fig.1

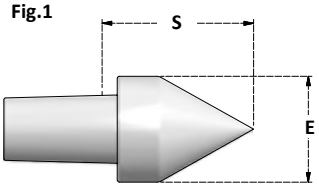


Fig.2

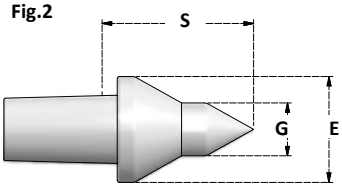


Fig.3

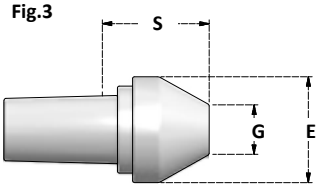
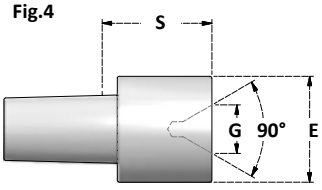


Fig.4



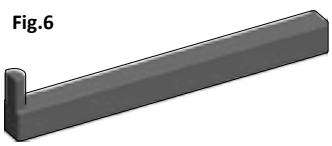
CHIAVE PER ESTRAZIONE CUSPIDI
PULLER FOR TIPS EXTRACTION

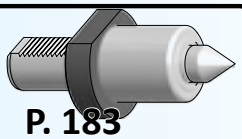
Articolo	PER FOR	Fig
CH.CNP1	CNP32	5
CH.CNP2	CNP43- CNP58	6

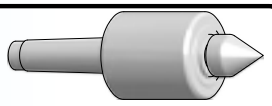
Fig.5

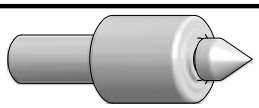


Fig.6



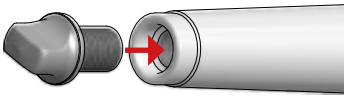
VDI

P. 183
CONTROPUNTE ROTANTI
LIVE CENTRES

CM

P. 193
CONTROPUNTE ROTANTI
LIVE CENTRES

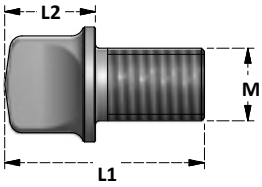
CYL

P. 233
CONTROPUNTE ROTANTI
LIVE CENTRES

TAG M

TENONI PER CONO MORSE
TANGS FOR MORSE TAPER



Articolo	CONO MORSE MORSE TAPER	M	L1	L2
TAG1.M6	CM1	M6	18	8
TAG2.M10	CM2	M10	29	13
TAG3.M12	CM3	M12	33	15
TAG4.M16	CM4	M16	40	17
TAG5.M20	CM5	M20	50	22

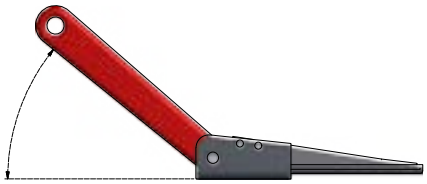


EST WE

ESTRATTORI SEMIAUTOMATICI PER MANDRINI CONO MORSE DIN6383
HALF AUTOMATIC MORSE SHANK PULLERS



Articolo	PER CONO MORSE FOR MORSE TAPER	L
EST1-3	CM1- CM2- CM3	317
EST4-6	CM4- CM5- CM6	380

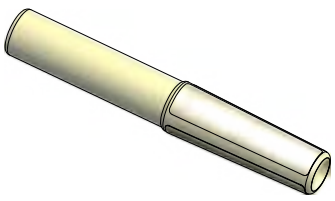


TCL

TAMPONI PULITORI DELLE SEDI PORTAUTENSILI
SPINDLE TAPER WIPERS

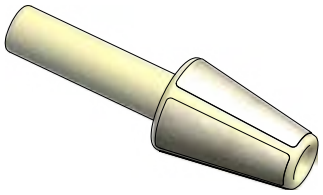
CONO MORSE
MORSE TAPERS

Articolo	Cono Taper
TCL.CM1	CM1
TCL.CM2	CM2
TCL.CM3	CM3
TCL.CM4	CM4
TCL.CM5	CM5



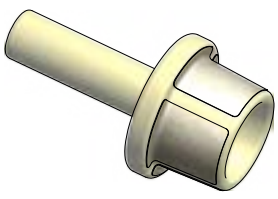
CONI TC - BT - ISO
TC - BT - ISO TAPERS

Articolo	Cono Taper
TCL.SK30	30
TCL.SK40	40
TCL.SK50	50



HSK
HSK

Articolo	Cono Taper
TCL.HSK40	40
TCL.HSK50	50
TCL.HSK63	63
TCL.HSK100	100



BASI DI LEGNO PER PINZE SERIE E KIT
EMPTY RACKS FOR SETS AND KITS

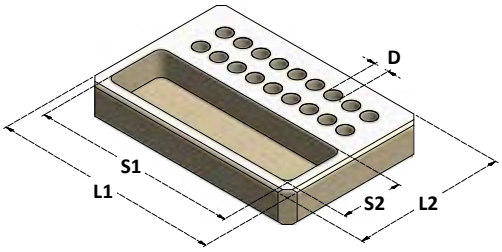


Fig.1

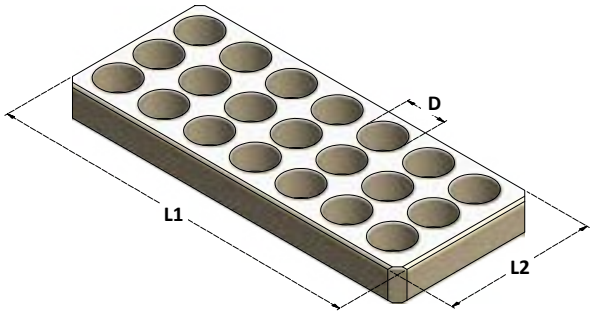
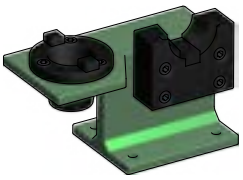


Fig.2

Articolo	PER PINZE FOR COLLETS	FORI SEATS	D	L1	L2	S1	S2	Fig.
TYE.8.18	ER8	18	8	167	112	150	50	1
TYE.11.18	ER11	18	11	167	112	150	50	1
TYE.16.15	ER16	15	16	167	112	-	-	2
TYE.20.15	ER20	15	18	167	112	-	-	2
TYE.25.6	ER25	6	25	140	80	-	-	2
TYE.25.21	ER25	21	25	274	114	-	-	2
TYE.32.6	ER32	6	30	140	80	-	-	2
TYE.32.21	ER32	21	30	274	114	-	-	2
TYE.40.10	ER40	10	38	274	114	-	-	2
TYE.40.30	ER40	30	38	273	218	-	-	2
TYE.50.12	ER50	12	47	273	218	-	-	2

Articolo	FORI SEATS	D	L1	L2	S1	S2	Fig.
TYE.D8.18	18	8	166	112	-	-	2
TYE.D12.18	18	12	166	112	-	-	2
TYE.D17.21	21	17	274	114	-	-	2
TYE.D21.24	24	21	274	114	-	-	2
TYE.D33.10	10	33	274	114	-	-	2



SUPPORTI DI MONTAGGIO CON DOPPIA SEDE
TOOL ASSEMBLY DEVICES WITH TWO SEATS
PAG. 311



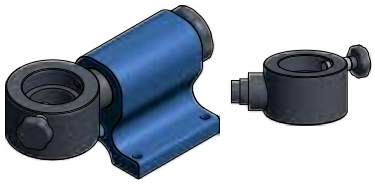
SUPPORTI DI MONTAGGIO ORIENTABILI - TBK
TOOL ASSEMBLY DEVICES INDEXABLE - TBK
PAG. 312



SUPPORTI DI MONTAGGIO ORIENTABILI - TLD
TOOL ASSEMBLY DEVICES INDEXABLE - TLD
PAG. 313



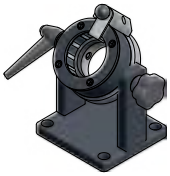
SUPPORTI DI MONTAGGIO PER MORSE
TOOL ASSEMBLY DEVICES FOR VISES
PAG. 314



SUPPORTO DI MONTAGGIO ORIENTABILE E MODULARE
MODULAR AND ROTABLE ASSEMBLY DEVICE
PAG. 315



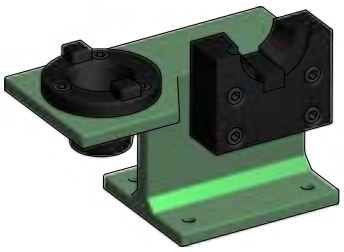
SUPPORTI DI MONTAGGIO A RULLI
ROLLER CLAMPING ASSEMBLY DEVICE
PAG. 316

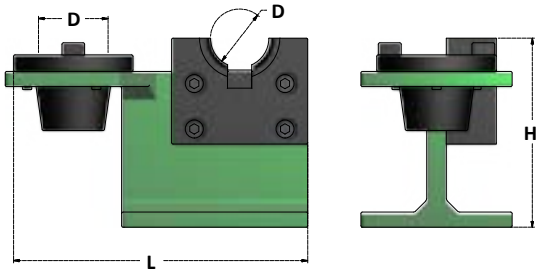


SUPPORTI DI MONTAGGIO A RULLI ORIENTABILI
ROLLER CLAMPING ASSEMBLY DEVICE INDEXABLE
PAG. 317

SUPPORTI DI MONTAGGIO CON DOPPIA SEDE

TOOL ASSEMBLY DEVICES WITH TWO SEATS





Articolo	MANDRINI / TOOLHOLDERS	D	L	H
TB3.SK30	TC30	31,75	205	110
TB3.SK40	TC40	44,45	205	110
TB3.SK50	TC50	69,85	280	150

Articolo	MANDRINI / TOOLHOLDERS	D	L	H
TB3.BT30	BT30	31,75	205	110
TB3.BT40	BT40	44,45	205	110
TB3.BT50	BT50	69,85	280	150

I mandrini si possono montare in orizzontale e in verticale.

Toolholders can be mounted in vertical and horizontal position.

Sono da fissare al banco di lavoro con 4 viti (non fornite).

Must be fixed to a bench with 4 bolts (not included).

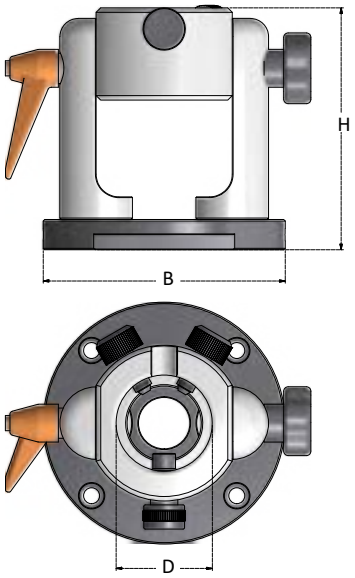
Non adatti per attacchi a doppio contatto.

Not suitable for double contact shank.

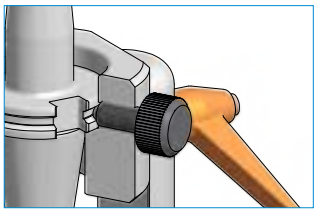
SUPPORTI DI MONTAGGIO ORIENTABILI - BLOCCAGGIO SULLA FLANGIA

INDEXABLE ASSEMBLY DEVICES - FLANGE CLAMPING





Articolo	MANDRINI / TOOLHOLDERS	D	B	H
TBK30	TC30 / CAT30 / BT30 HSK50A-B-D-T	50	150	160
TBK40	TC40 / CAT40 / BT40 HSK63A-B-D-T	63	150	160
TBK50	TC50 / CAT50 / BT50 HSK100A-B-D-T	100	180	200



I mandrini sono orientabili in orizzontale e in verticale.

Toolholders are indexable in vertical and horizontal position.

Sono da fissare al banco di lavoro con 4 viti (non fornite).

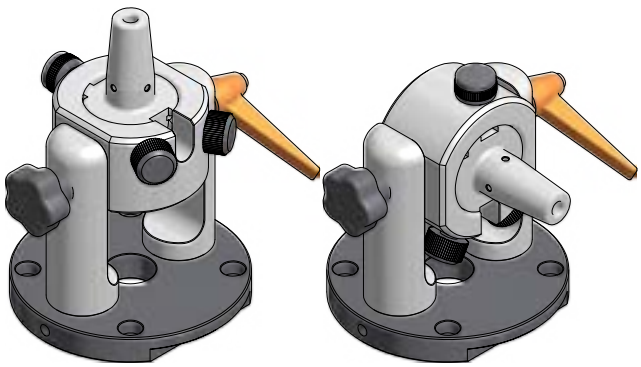
Must be fixed to a bench with 4 bolts (not included).

Nessun contatto con l'attacco conico del mandrino.

No contact with tool taper shank.

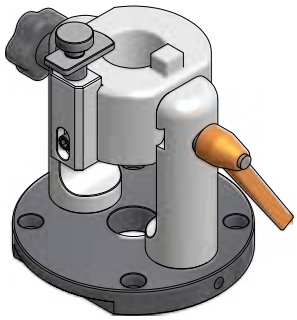
Non adatti per attacchi a doppio contatto.

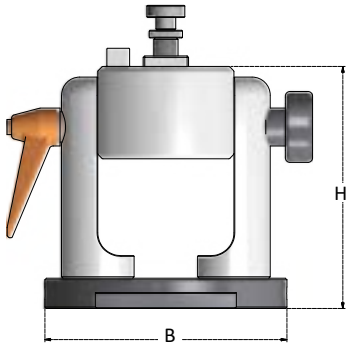
Not suitable for double contact shank.

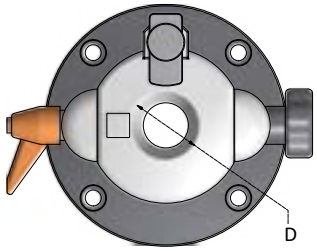


SUPPORTI DI MONTAGGIO ORIENTABILI - CON SEDE CONICA

INDEXABLE ASSEMBLY DEVICES - FOR TAPERED SHANK



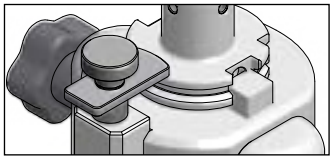




Articolo	MANDRINI / TOOLHOLDERS	D	B	H
TLD30SK	TC30 / CAT30 / BT30 / ISO30	50	150	160
TLD40SK	TC40 / CAT40 / BT40 / ISO40	63	150	160
TLD50SK	TC50 / CAT50 / BT50 / ISO50	100	180	200

FUORI PRODUZIONE - POSSIBILE ALTERNATIVA: TBK Pag.312

OUT OF PRODUCTION - ALTERNATIVE: TBK Pag.312



I mandrini sono orientabili in orizzontale e in verticale.

Toolholders are indexable in vertical and horizontal position.

Sono da fissare al banco di lavoro con 4 viti (non fornite).

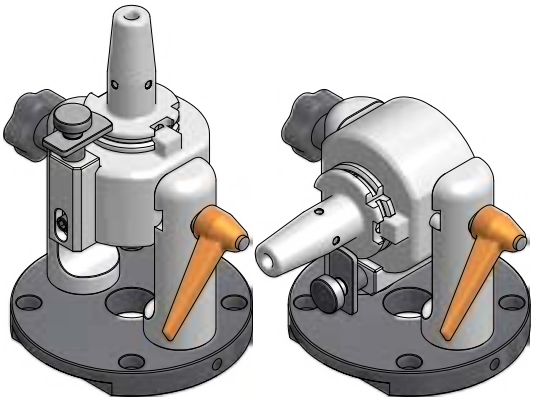
Must be fixed to a bench with 4 bolts (not included).

Nessun contatto con la cava “V” della flangia.

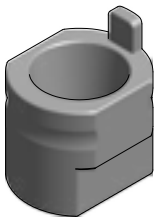
No contact with “V” of the flange.

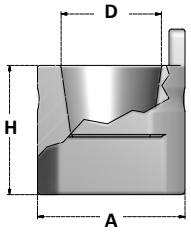
Adatti per attacchi a doppio contatto.

Suitable for double contact shank.



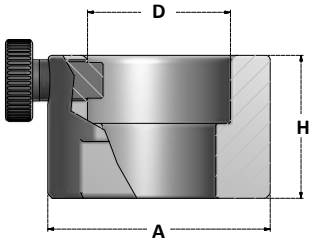
SUPPORTI DI MONTAGGIO PER MORSE
TOOL ASSEMBLY DEVICES FOR VISES





Articolo	MANDRINI / TOOLHOLDERS	D	A	H
THF30	ISO30 / NMTB30 / TC30 / CAT30 / BT30	31,75	50	43
THF40	ISO40 / NMTB40 / TC40 / CAT40 / BT40	44,45	65	57
THF50	ISO50 / NMTB50 / TC50 / CAT50 / BT50	69,85	99	80

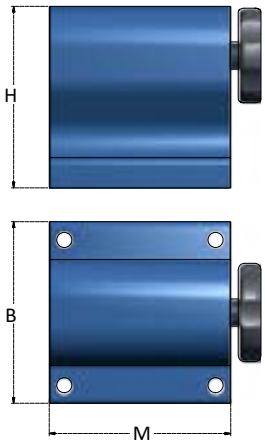




Articolo	MANDRINI / TOOLHOLDERS	D	A	H
THF63	HSK63-A- B- D- T	63	98	63
THF100	HSK100-A- B- D- T	100	128	75

SUPPORTO DI MONTAGGIO MODULARI
MODULAR ASSEMBLY DEVICES





BASE
BASE

Articolo	H	B	M
TBT.MD	120	120	120

SEDI MANDRINO
CHUCK HOLDERS

Articolo	MANDRINI TOOLHOLDERS
MD.SK30	TC30 / BT30
MD.SK40	TC40 / BT40
MD.SK50	TC50 / BT50
MD.HSK40A	HSK40A-B-D-T
MD.HSK50A	HSK50A-B-D-T
MD.HSK63A	HSK63A-B-D-T
MD.HSK80A	HSK80A-B-D-T
MD.HSK100A	HSK100A-B-D-T
MD.VDI20	VDI20
MD.VDI30	VDI30
MD.VDI40	VDI40
MD.VDI50	VDI50
MD.PSC32	CPT32
MD.PSC40	CPT40
MD.PSC50	CPT50
MD.PSC63	CPT63
MD.PSC80	CPT80



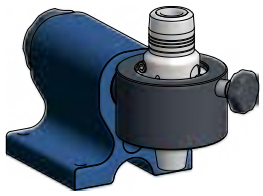
I mandrini sono orientabili in 4 posizioni a 90°.
Toolholders are indexable in 4x90° positions.

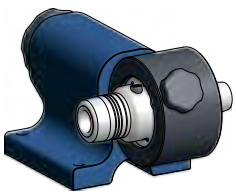
I mandrini sono bloccati sulla flangia.
Toolholders are clamped on the flange.

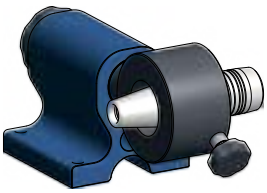
Nessun contatto con l'attacco conico del mandrino.
No contact with tool taper shank.

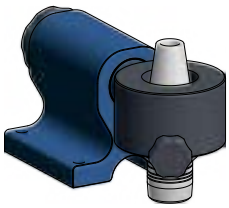
Sono da fissare al banco di lavoro con 4 viti (non fornite).
Must be fixed to a bench with 4 bolts (not included).

Non adatti per attacchi a doppio contatto.
Not suitable for double contact shank.

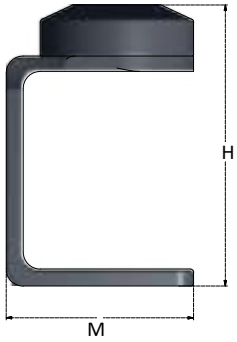


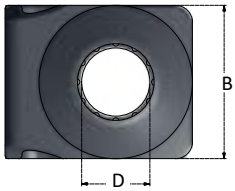






SUPPORTI DI MONTAGGIO A RULLI
ROLLER CLAMPING ASSEMBLY DEVICES





Articolo	MANDRINI / TOOLHOLDERS	D	H	B	M
TBRL25	HSK25	25	132	90	100
TBRL30		30	132	90	100
TBRL32	HSK32 / CPT32	32	162	99	113
TBRL40	HSK40 / CPT40	40	162	99	113
TBRL46	BT30 / WD30C	46	162	99	113
TBRL50	HSK50 / TC30 / ISO30 / WD30 / CPT50	50	162	99	113
TBRL58	WD30U	58	162	99	113
TBRL63	HSK63 / KM63 / CPT63 / BT40 / TC40 / CAT40	63	162	99	113
TBRL80	HSK80 / CPT80	80	240	148	170
TBRL97,5	TC50 / ISO50	97,5	240	148	170
TBRL100	HSK100 / BT50	100	240	148	170





I mandrini sono bloccati sulla flangia dai rulli bidirezionali.

Toolholders are clamped on the flange by two-way needle rollers.

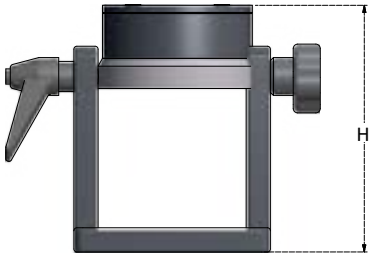
Nessun contatto con l'attacco conico del mandrino.

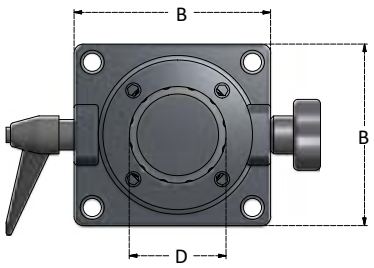
No contact with the tool taper shank.

Sono da fissare al banco di lavoro con 4 viti (non fornite).

Must be fixed to a bench with 4 bolts (not included).

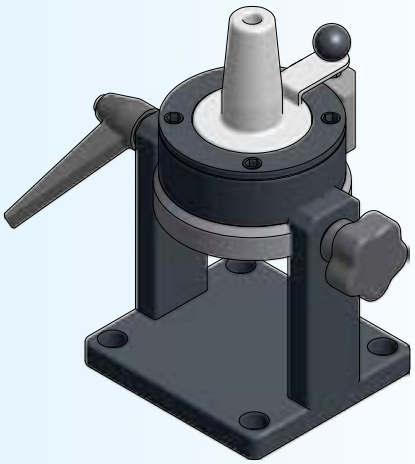
SUPPORTI DI MONTAGGIO A RULLI ORIENTABILI
INDEXABLE ROLLER CLAMPING ASSEMBLY DEVICES

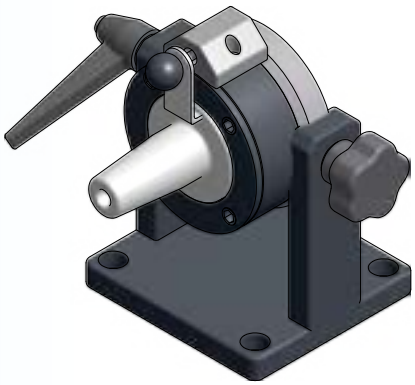




Articolo	MANDRINI / TOOLHOLDERS	D	H	B
TBRL40OR	HSK40 / CPT40	40	162	150
TBRL46OR	BT30 / WD30C	46	162	150
TBRL50OR	HSK50 / TC30 / ISO30 / WD30 / CPT50	50	162	150
TBRL63OR	HSK63 / KM63 / CPT63 / BT40 / TC40 / CAT40	63	162	150
TBRL97,5OR	TC50 / ISO50	97,5	240	150
TBRL100OR	HSK100 / BT50	100	240	150







I mandrini sono orientabili in orizzontale e in verticale.

Toolholders are indexable in vertical and horizontal position.

I mandrini sono bloccati sulla flangia dai rulli bidirezionali.

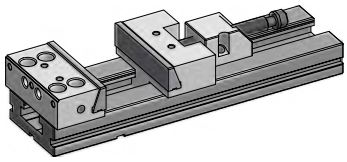
Toolholders are clamped on the flange by two-way needle rollers.

Nessun contatto con l'attacco conico del mandrino.

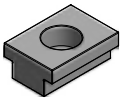
No contact with the tool taper shank.

Sono da fissare al banco di lavoro con 4 viti (non fornite).

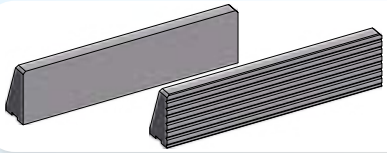
Must be fixed to a bench with 4 bolts (not included).



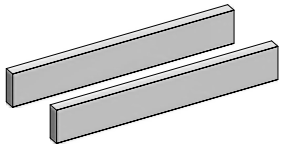
MORSE IN ACCIAIO
STEEL VISES
PAG. 318



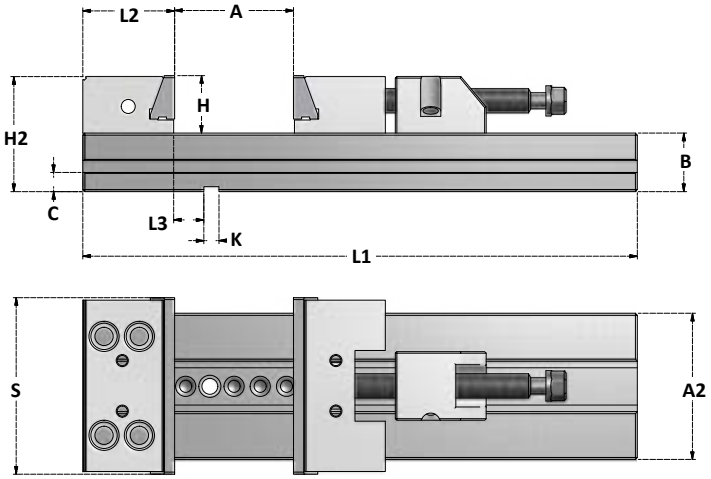
CHIAVETTE DI POSIZIONAMENTO
POSITIONING KEYS
PAG. 320



PIASTRE PER GANASCE
PLATES FOR JAWS
PAG. 320



SERIE DI PARALLELE
SETS OF PARALLELS
PAG. 321



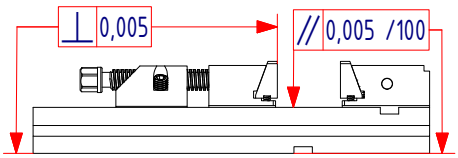
MORSE IN ACCIAIO
STEEL VISES

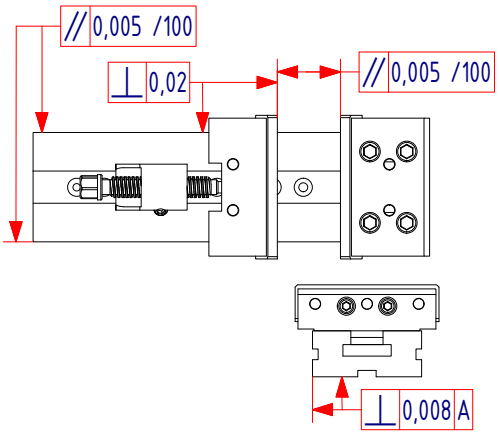
Articolo	S	A	A2	H	L1	L2	L3	H2	C	B	K
VS100-100	100	100	75	30	270	78	25,61	63	15	35	16
VS125-150	125	150	95	40	345	78	25,61	78	15	40	16
VS150-200	150	200	125	50	420	89.5	25,61	98	20	50	16
VS150-300	150	300	125	50	520	89.5	25,61	98	20	50	16
VS150-400	150	400	125	50	620	89.5	25,61	98	20	50	16
VS175-200	175	200	145	60	455	97	25,61	116	20	58	16
VS175-300	175	300	145	60	555	97	25,61	116	20	58	16
VS175-400	175	400	145	60	655	97	25,61	116	20	58	16
VS200-200	200	200	170	65	495	113.5	25,61	133	26	70	16
VS200-300	200	300	170	65	595	113.5	25,61	133	26	70	16
VS200-400	200	400	170	65	695	113.5	25,61	133	26	70	16
VS200-500	200	500	170	65	795	113.5	25,61	133	26	70	16
VS200-600	200	600	170	65	895	113.5	25,61	133	26	70	16

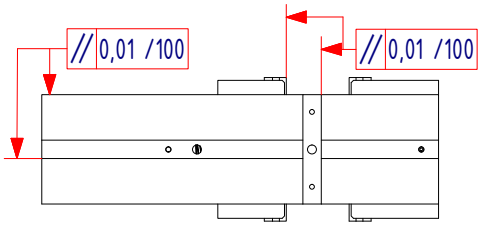
CARATTERISTICHE:
- La morsa è costruita in acciaio 20MnCr5, cementata (RC58 min) e completamente rettificata.
- La costruzione delle ganasce spinge il pezzo serrato contro la base della morsa

FEATURES:
- Vise is manufactured with high grade alloy steel, case hardened (min RC58) and grinded.
- The jaws push the clamped workpiece against the base of the vise

⊥	***0,005***	Perpendicolarità tra base inferiore e piastre *Squareness of two jaw plates to base surface*
//	***0,005*** /100mm	Parallelismo tra base inferiore e superiore *Parallelism of upper surface to base surface*
//	***0,005*** /100mm	Parallelismo tra i lati della base *Parallelism of two sides*
⊥	***0,02***	Perpendicolarità tra la piastra della ganascia fissa e lati della base *Squareness of fixed jaw plates to sides*
//	***0,005*** /100mm	Parallelismo tra le piastre *Parallelism of jaw plates*
⊥	***0,008***	Perpendicolarità tra base inferiore e lati *Squareness of two sides to base surface*
//	***0,01*** /100mm	Parallelismo tra lato della base e scanalatura longitudinale *Parallelism of leght wise slot to sides*
//	***0,01*** /100mm	Parallelismo tra piastra e scanalatura trasversale *Parallelism of transvers slot to fixed jaw plate*

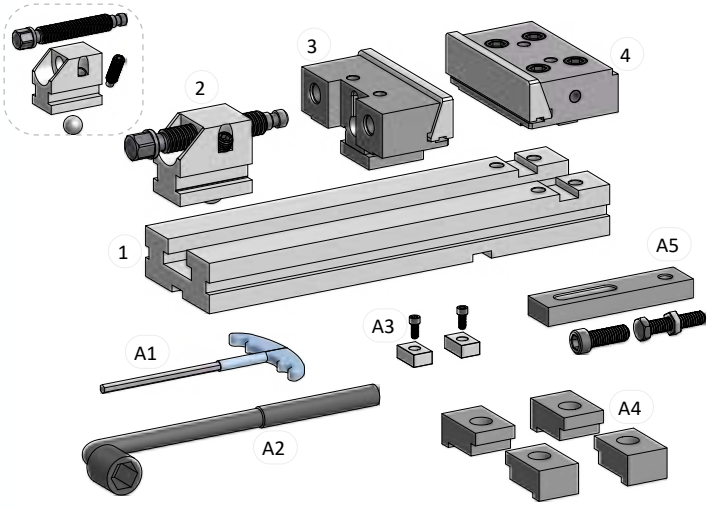






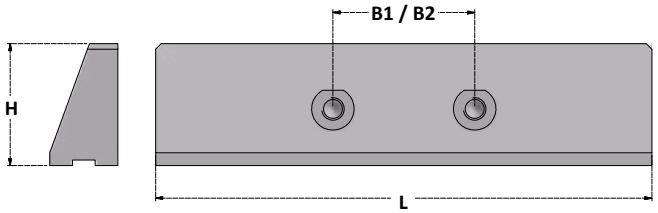
COMPONENTI E ACCESSORI INCLUSI
PARTS AND INCLUDED ACCESSORIES

1	Base *Body*
2	Blocco della vite di serraggio *Lead screw with block*
3	Ganascia mobile con piastra liscia *Live jaw with smooth plate*
4	Ganascia fissa con piastra liscia *Fixed jaw with smooth plate*
A1	Chiave esagonale *Hexagonal key*
A2	Chiave a pipa *Angled socket wrench*
A3	2x Chiavette di posizionamento 16x16 *2x Step guide keys 16x16*
A4	4x Staffe di bloccaggio *4x Locking blocks*
A5	Fermo laterale *Side workstop*



PIASTRE PER MORSE IN ACCIAIO

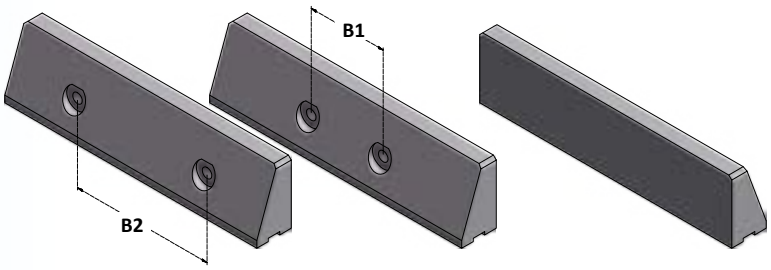
JAW PLATES FOR STEEL VISES



COPPIE DI PIASTRE LISCE PER GANASCE - TEMPRATE E RETTIFICATE

PAIR OF SMOOTH PLATES FOR JAWS - HARDENED AND GRINDED

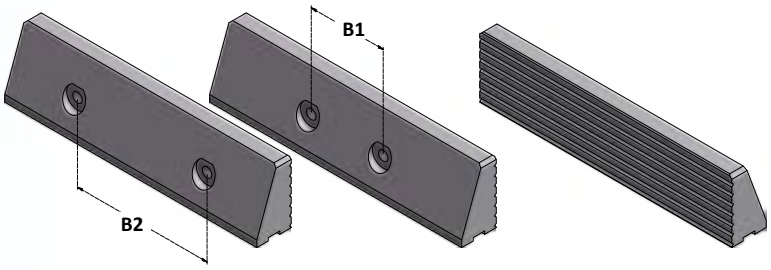
Articolo	H	B1	B2	L
GNL.VS100	24,5	62	20	100
GNL.VS125	32	80	32	125
GNL.VS150	40	90	50	150
GNL.VS175	43	115	50	175
GNL.VS200	53	138	76	200



COPPIE DI PIASTRE RIGATE PER GANASCE - TEMPRATE E RETTIFICATE

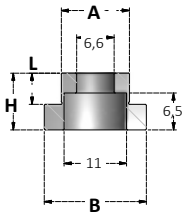
PAIR OF GROOVED PLATES FOR JAWS - HARDENED AND GRINDED

Articolo	H	B1	B2	L
GNR.VS100	24,5	62	20	100
GNR.VS125	32	80	32	125
GNR.VS150	40	90	50	150
GNR.VS175	43	115	50	175
GNR.VS200	53	138	76	200

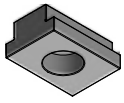


CHIAVETTA DI POSIZIONAMENTO

STEP GUIDE KEY

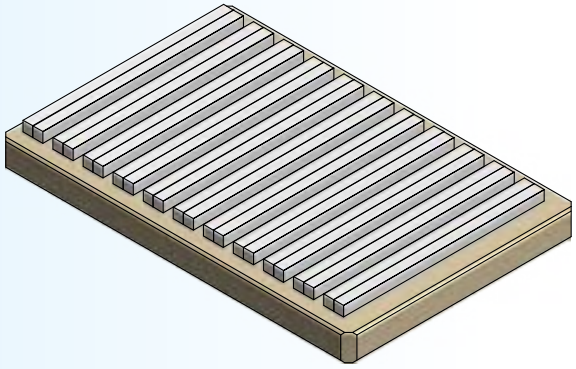


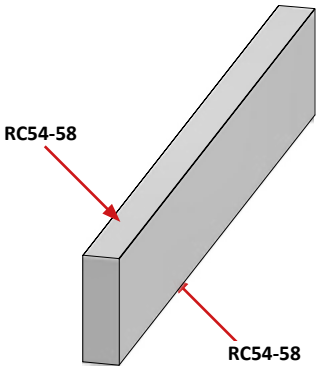
Articolo	A	B	H	L
KA16x18.B	16	18	10	5,2



SERIE DI PARALLELE TEMPRATE E RETTIFICATE
SETS OF HARDENED AND GRINDED PARALLELS







Articolo	NR COPPIE MATCHED PAIRS	A	L	B
PRL150-8/28	14	8	150	14- 16- 18- 20- 22- 24- 26- 28- 30- 32- 35- 40- 45- 50
PRL150-10/28	14	10	150	14- 16- 18- 20- 22- 24- 26- 28- 30- 32- 35- 40- 45- 50
PRL160-8/16	8	8	160	12- 17- 22- 25- 28- 32- 36- 38
PRL200-8/16	8	8	200	17- 22- 26- 28- 32- 36- 38- 42
PRL200-10/28	14	10	200	14- 16- 18- 20- 22- 24- 26- 28- 30- 32- 35- 40- 45- 50

CARATTERISTICHE:
- Costruite in acciaio legato
- Durezza sui piani AxL: RC54÷58
- Rettificate in coppia con tolleranza di parallelismo di 0,005mm
- Fornite in cassette di alluminio

FEATURES:
- Manufactured with alloyed steel
- Hardness on AxL flats: RC54÷58
- Precision grinded by pair with tollerance 0,005mm
- Supplied in alluminium cases



AZZERATORI ASSE Z
Z AXIAL ZERO SETTERS
PAG. 323



CENTRATORI LUMINOSI E SONORI
OPTICAL AND ACOUSTIC EDGE FINDERS
PAG. 324-325

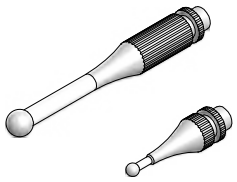


TASTATORI TRIDIMENSIONALI - TIPO 3D-TSCH
3D SENSORS - 3D-TSCH TYPE
PAG. 326

NEW



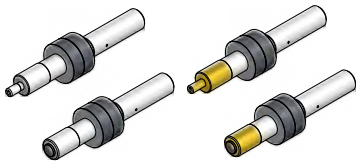
TASTATORE TRIDIMENSIONALE DIGITALE
DIGITAL 3D SENSOR
PAG. 327



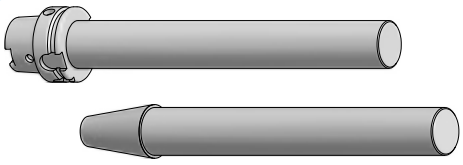
INSERZIONI TASTATRICI
PROBE TIPS
PAG. 327



TASTATORI TRIDIMENSIONALI - TIPO 3D-PD
3D SENSORS - 3D-PD TYPE
PAG. 328



TASTATORI MECCANICI FLOTTANTI
FLOATING POSITION DETECTORS
PAG. 329



MANDRINI DI COLLAUDO
TEST ARBORS
PAG. 330

AZZERATORE ASSE Z - MAGNETICO - H50

Z AXIAL ZERO SETTER - MAGNETIC - H50



Articolo
AZSI50

Fornito con numero di serie e certificato.
Supplied with serial number and certificate.

Per ragioni di sicurezza il misuratore è fornito bloccato. Per rimuovere la vite di bloccaggio utilizzare la chiave inclusa.
To protect zero setter it's supplied blocked. Safety screw has to be removed by using supplied screw driver.

AZZERATORE ASSE Z - MAGNETICO - H100

Z AXIAL ZERO SETTER - MAGNETIC - H100



Articolo
AZ100

Fornito con numero di serie e certificato.
Supplied with serial number and certificate.

Per ragioni di sicurezza il misuratore è fornito bloccato.
Per rimuovere la vite di bloccaggio utilizzare la chiave inclusa.
To protect zero setter it's supplied blocked.
Safety screw has to be removed by using supplied screw driver.

COMPARATORE DI RICAMBIO
DIAL FOR AZSI

Articolo
DI-AZSI



AZZERATORE LUMINOSO COMPATTO ASSE Z - MAGNETICO - H60

OPTICAL COMPACT Z AXIAL ZERO SETTER - MAGNETIC - H60



Articolo
AZL60

CENTRATORE LUMINOSO 3D HP

3D HP OPTICAL EDGE FINDER



3 ASSI: X, Y e Z

3 AXIS: X, Y and Z

Articolo
D20.3D-LHP

Accuratezza: ≤0,005mm
Accuracy

Fornito con numero di serie e certificato.

Supplied with serial number and certificate.

CENTRATORI LUMINOSI 2D E 3D

2D AND 3D OPTICAL EDGE FINDER



Accuratezza: ≤0,010mm
Accuracy

2 ASSI: X e Y

2 AXIS: X and Y

Articolo	D1	L
D12.2D-L	12	99
D16.2D-L	16	99
D20.2D-L	20	94
D25.2D-L	25	104

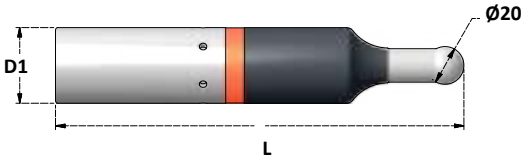
3 ASSI: X, Y e Z

3 AXIS: X, Y and Z

Articolo	D1	L
D12.3D-L	12	111
D16.3D-L	16	111
D20.3D-L	20	106
D25.3D-L	25	116

CENTRATORI LUMINOSI E SONORI

OPTICAL AND ACOUSTIC EDGE FINDERS



PILE INCLUSE
BATTERIES INCLUDED

Accuratezza: ≤0,010mm
Accuracy



2 ASSI: X e Y

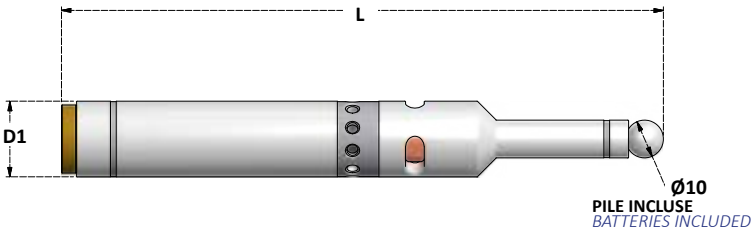
2 AXIS: X and Y

Articolo	D1	L
D20.2D-LS	20	119

3 ASSI: X, Y e Z

3 AXIS: X, Y and Z

Articolo	D1	L
D20.3D-LS	20	131



PILE INCLUSE
BATTERIES INCLUDED

2 ASSI: X e Y - VERSIONE ECONOMICA

2 AXIS: X and Y - ECO TYPE

Articolo	D1	L
EF-D20LS	20	158

TASTATORE TRIDIMENSIONALE CON GAMBO Ø12

3D SENSOR - SHANK Ø12

0,01mm

Con i tester 3D-TSCH è possibile determinare rapidamente e facilmente il punto zero e le misure del pezzo da lavorare, o regolare il pezzo o la morsa parallelamente all'asse della macchina.
3D sta per tastatura tridimensionale in tutte le direzioni assiali (X/Y/Z).
Una guarnizione protegge il tester 3D da olio e refrigerante.

With 3D-TSCH Testers you quickly and easily determine workpiece zero points and lenght measurements or adjust your workpiece or vice parallel to your machine axis.
3D stands for three-dimensional probing in all axial directions (X/Y/Z).
A seal protects the 3D Tester from oil and coolant (IP67).



Fig.1



Fig.2



Fig.3

TASTATORE TRIDIMENSIONALE SLIMPLUS

3D-TESTER SLIMPLUS

Articolo	Fig
3D-TSCH.SL	1

Tastatore universale con ingombri ridotti.
Utilizzando l'inserzione 3D-LSC56 permette di raggiungere punti in profondità.
Universal device with smallest dimensions. Probing extremely depth with 3D-LSC56.

Fornito con numero di serie, certificato e inserzione 3D-LSC3.
Supplied with serial number, certificate and tip 3D-LSC3.

TASTATORE TRIDIMENSIONALE VIPLUS

3D-TESTER VIPLUS

Articolo	Fig
3D-TSCH.VP	2

Tastatore standard con quadrante più grande, utile per leggere dalla distanza.
Especially on big machines easier.

Fornito con numero di serie, certificato e inserzione 3D-LSC3.
Supplied with serial number, certificate and tip 3D-LSC3.

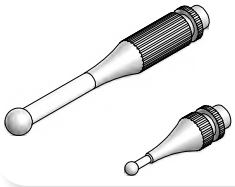
TASTATORE TRIDIMENSIONALE SAVEPLUS

3D-TESTER SAVEPLUS

Articolo	Fig
3D-TSCH.SP	3

Versione economica con quadrante semplificato.
Cost-effective variant among our 3D Tester models.

Fornito con inserzione 3D-LSC3.
Supplied with s tip 3D-LSC3.



INSERZIONI TASTATRICI
PROBE TIPS

PAG. 327

NEW

TASTATORE TRIDIMENSIONALE DIGITALE CON GAMBO Ø12

DIGITAL 3D SENSOR - SHANK Ø12

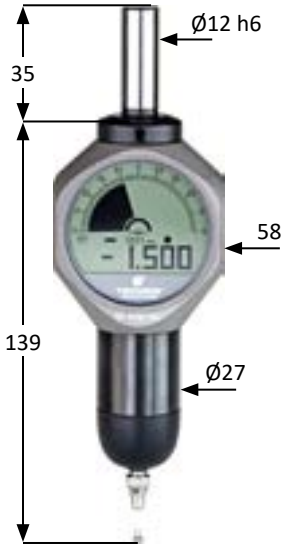
0,005mm

Articolo
3D-TSCH.DIG

Versione con display.
Misurazione indicata in analogico e digitale (0,005mm)
Led a 3 colori.

Devicce with display.
Measures showed in analogue and digital (0,005mm)
3 colours led.





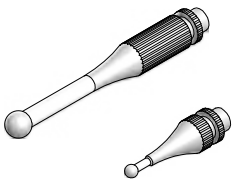
Fornito con numero di serie, certificato, batterie e inserzione 3D-LSC3.
Supplied with serial number, certificate, batteries and tip 3D-LSC3.



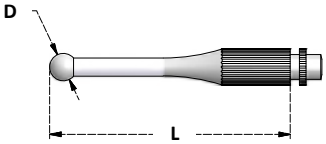


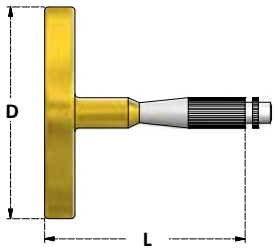
INSERZIONI TASTATRICI

PROBE TIPS









INSERZIONI TASTATRICI IN CERAMICA
CERAMIC PROBE TIPS

Articolo	D	L
3D-LSC3	3	24
3D-LSC6	6	54

NEW

INSERZIONE TASTATRICE Ø56 PER SLIMPLUS
PROBE TIP Ø56 FOR SLIMPLUS

Articolo	D	L
3D-LSC56	56	62

TASTATORE TRIDIMENSIONALE CON GAMBO Ø20

3D SENSOR - SHANK Ø20

0,01mm

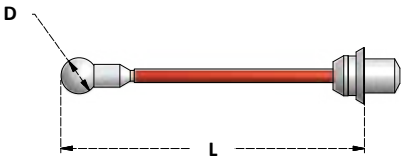


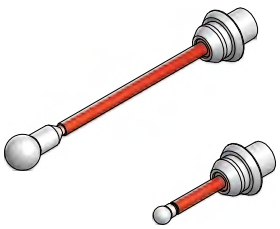
Articolo
3D-PD

INSERZIONE 3D-LCD4 INCLUSA
TIP 3D-LCD4 INCLUDED

INSERZIONI TASTATRICI

TIPS

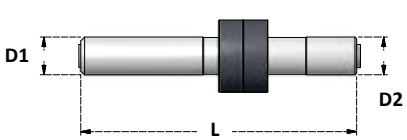


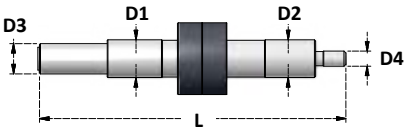


Articolo	D	L
3D-LCD4	4	27
3D-LCD8	8	67

TASTATORI MECCANICI FLOTTANTI

FLOATING EDGE FINDERS

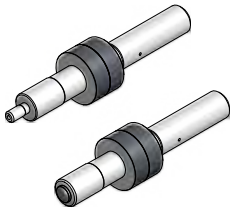




STANDARD

STANDARD

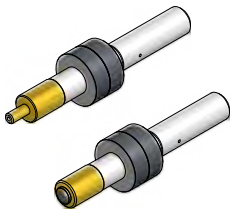
Articolo	D1	D2	D3	D4	L
PEF.D6.D6	6	6	/	/	84
PEF.D10.D10	10	10	/	/	84
PEF.D10.D10B	10	10	/	4	90
PEF.D10B.D10	10	10	8	/	84
PEF.D10B.D10B	10	10	8	4	90



RIVESTITI AL TIN - ANTIMAGNETICI

TIN COATED - ANTIMAGNETIC

Articolo	D1	D2	D4	L
PEF.D10.D10-TIN	10	10	/	84
PEF.D10.D10B-TIN	10	10	4	90



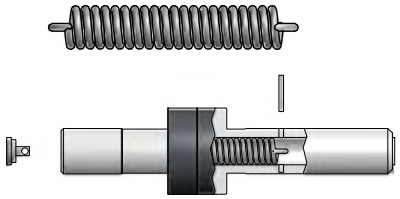
I tastatori meccanici flottanti servono per avvicinarsi a superfici o spigoli di riferimento con una ripetibilità precisa.
I tastatori con rivestimento antiusura TIN sono realizzati in acciaio inossidabile antimagnetico.

Floating edge finders are used to approach reference surfaces or edges with a highly precise repeatability.
TIN edge finders are made out of antimagnetical stainless steel and are coated with a wear-resistant TIN layer.

MOLLA DI RICAMBIO PER TASTATORI MECCANICI FLOTTANTI

REPLACEMENT SPRING FOR FLOATING EDGE FINDERS

Articolo
PEF01/02



MANDRINI DI COLLAUDO

TEST ARBORS

I mandrini di collaudo o barre di controllo si utilizzano principalmente per verificare la precisione e per regolare gli assi delle macchine utensili.

Test arbors or control gauges are mainly used to check accuracy and to adjust the axes of machine tools.

CARATTERISTICHE:

Vegono collaudati con strumenti certificati.

Vengono forniti in un box verticale di legno per la conservazione in sicurezza.

Vengono forniti con un certificato che riporta i valori delle dimensioni verificate.

FEATURES:

Tested with certified tools.

Supplied in a vertical wooden box for safe storage.

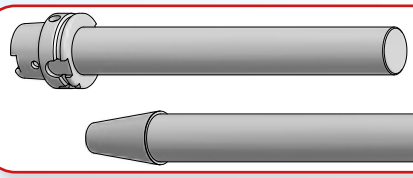
Supplied with a certificate showing the values of the verified dimensions.



PRECISIONE DEL CONO *TAPER SHANK PRECISION*	**AT2**
ROTONDITÀ *ROUNDNESS*	**0,001mm**
RUGOSITÀ *SURFACE ROUGHNES*	**Ra <0,4**
CONCENTRICITÀ *CONCENTRICITY*	**0,003mm**

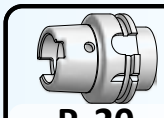
Il certificato di collaudo riporta la concentricità della barra rispetto all'attacco conico del mandrino di collaudo.
La misurazione della concentricità viene effettuata in 3 punti sulla barra, ad altezze differenti.
Nei mandrini con flangia è certificata anche la perpendicolarità dalla flangia rispetto alla barra.

The test certificate shows the concentricity of the arbor to the shank taper.
The measurement of the concentricity of the arbor is taken out in 3 points of different lengths.
For chucks with flange also perpendicularity between flange and arbor is certified.

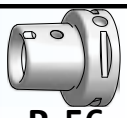


ELENCO
LIST

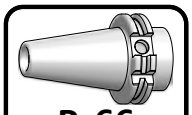
PAG. 331



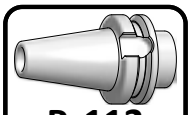
P. 20
ATTACCO HSK
HSK SHANK



P. 56
ATTACCO CPT
CPT SHANK

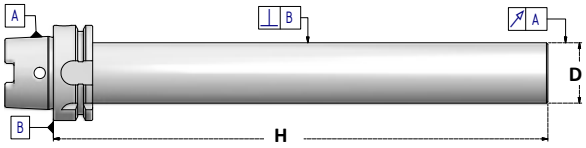


P. 66
ATTACCO TC
TC SHANK



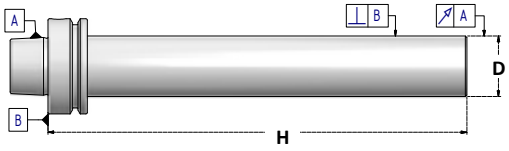
P. 112
ATTACCO BT
BT SHANK

MANDRINI DI COLLAUDO
TEST ARBORS



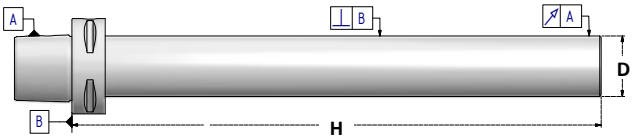
HSK-A - DIN 69893-1

Articolo	D	H	PESO WEIGHT
HSK63A.H335.CK40	40	335	2,5 Kg
HSK100A.H335.CK50	50	335	5,1 Kg



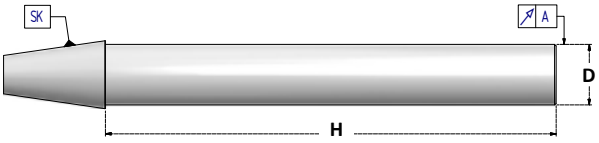
HSK-F - DIN 69893-6

Articolo	D	H	PESO WEIGHT
HSK63F.H335.CK40	40	335	2,6 Kg



CPT - DIN ISO 26623-1

	Articolo	D	H	PESO WEIGHT
NEW	**CPT32.H180.CK20**	20	180	0,41 Kg
NEW	**CPT40.H180.CK32**	32	180	1,1 Kg
NEW	**CPT50.H280.CK40**	40	280	2,15 Kg
NEW	**CPT63.H352.CK40**	40	352	2,93 Kg
NEW	**CPT80.H320.CK40**	40	320	3,74 Kg

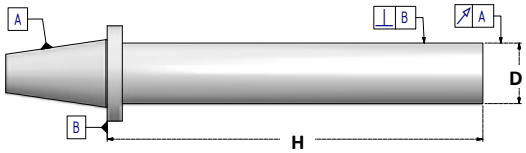


TC - DIN ISO 7388-1 (DIN69871)

Articolo	D	H	PESO WEIGHT
TC30.H235.CK32	32	235	1,5 Kg
TC40.H335.CK40	40	335	2,5 Kg
TC50.H340.CK50	50	340	5,6 Kg

BT - MAS 403

Articolo	D	H	PESO WEIGHT
BT30.H237.CK32	32	235	1,5 Kg
BT40.H335.CK40	40	335	2,5 Kg
BT50.H340.CK50	50	340	5,6 Kg



DOPPIO CONTATTO
DOUBLE CONTACT

	Articolo	D	H	PESO WEIGHT
NEW	**DTC40.H337.CK40**	40	337	2,45 Kg
NEW	**DTC50.H340.CK50**	50	340	6,43 Kg

DOPPIO CONTATTO
DOUBLE CONTACT

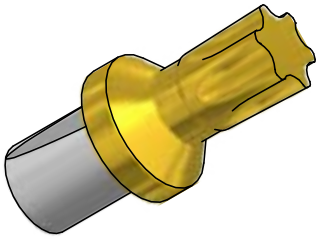
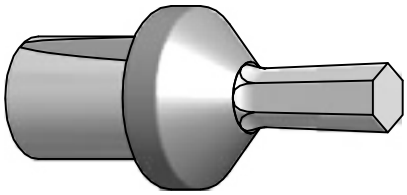
	Articolo	D	H	PESO WEIGHT
NEW	**DBT30.H237.CK32**	32	237	1,5 Kg
NEW	**DBT40.H340.CK40**	40	340	2,45 Kg
NEW	**DBT50.H340.CK50**	50	340	6,5 Kg

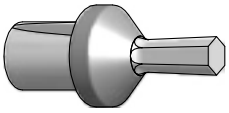


CM - DIN 228

Articolo	D	H	PESO WEIGHT
CM4.H300.CK40	40	300	2,7 Kg
CM5.H300.CK50	50	300	4,9 Kg

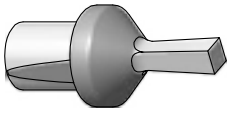
BROCCE
BROACHES

BROCCE ESAGONALI
HEXAGONAL BROACHES

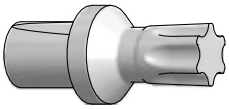
PAG. 333



BROCCE QUADRATE
SQUARE BROACHES

PAG. 334

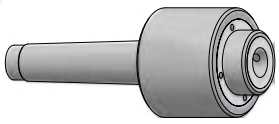
NEW



BROCCE PER CHIAVI TORX* E CHIAVI TORX PLUS IP*
BROACHES FOR TORX KEYS AND TORX PLUS IP* KEYS*

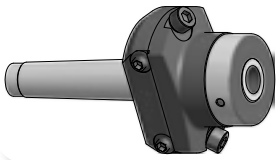
* Torx: marchio registrato dalla Textron inc. Providence (Usa)
** Torx: trade mark registered by Textron inc. Providence (Usa)*

PAG. 335



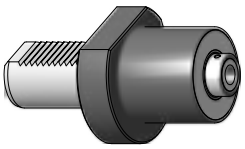
BROCCIATORI FISSI
CON ATTACCO CONO MORSE - DIN228
DIN228 MORSE TAPER SHANK
BROACH TOOLHOLDERS

PAG. 192



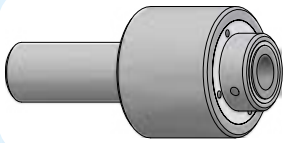
BROCCIATORI REGISTRABILI
CON ATTACCO CONO MORSE - DIN228
DIN228 MORSE TAPER SHANK
ADJUSTABLE BROACH TOOLHOLDERS

PAG. 192



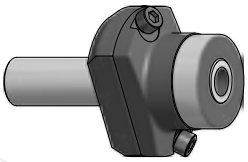
BROCCIATORI FISSI CON ATTACCO VDI
VDI SHANK BROACHING TOOLHOLDERS

PAG. 182



BROCCIATORI FISSI
CON ATTACCO CILINDRICO
CYLINDRICAL SHANK
BROACH TOOLHOLDERS

PAG. 231



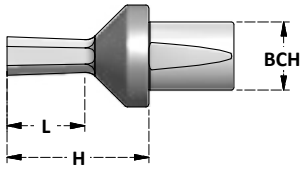
BROCCIATORI REGISTRABILI
CON ATTACCO CILINDRICO
CYLINDRICAL SHANK
ADJUSTABLE BROACH TOOLHOLDERS

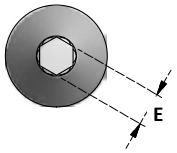
PAG. 231

BROCCE ESAGONALI

HEXAGONAL BROACHES

SCHEDA TECNICA TECHNICAL DATA
BCH P. 355





BCH= 5 **H= 10**

Articolo	L	E	*Toll.*
BCH5.E1,5	3	1,5	*+0,04 / +0,05*
BCH5.E2	3,5	2	*+0,05 / +0,06*
BCH5.E2,5	4	2,5	*+0,06 / +0,08*
BCH5.E3	5	3	*+0,07 / +0,09*
BCH5.E3,5	6	3,5	*+0,08 / +0,10*
BCH5.E4	6	4	*+0,09 / +0,11*
BCH5.E5	6	5	*+0,11 / +0,14*
BCH5.E5,5	6	5,5	*+0,11 / +0,14*
BCH5.E6	6	6	*+0,12 / +0,15*

BCH= 8 **H= 18**

Articolo	L	E	*Toll.*
BCH8.E1,5	3	1,5	*+0,04 / +0,05*
BCH8.E2	3,5	2	*+0,05 / +0,06*
BCH8.E2,5	4	2,5	*+0,06 / +0,08*
BCH8.E3	5	3	*+0,07 / +0,09*
BCH8.E3,5	6	3,5	*+0,08 / +0,10*
BCH8.E4	6,5	4	*+0,09 / +0,11*
BCH8.E5	8,5	5	*+0,11 / +0,14*
BCH8.E5,5	9,5	5,5	*+0,11 / +0,14*
BCH8.E6	10,5	6	*+0,12 / +0,15*
BCH8.E7	12	7	*+0,12 / +0,15*
BCH8.E8	12,5	8	*+0,13 / +0,16*

BCH= 12 **H= 25**

Articolo	L	E	*Toll.*
BCH12.E1,5	3	1,5	*+0,04 / +0,05*
BCH12.E2	3,5	2	*+0,05 / +0,06*
BCH12.E2,5	4	2,5	*+0,06 / +0,08*
BCH12.E3	5	3	*+0,07 / +0,09*
BCH12.E3,5	6	3,5	*+0,08 / +0,10*
BCH12.E4	6,5	4	*+0,09 / +0,11*
BCH12.E5	8,5	5	*+0,11 / +0,14*
BCH12.E5,5	9,5	5,5	*+0,11 / +0,14*
BCH12.E6	10,5	6	*+0,12 / +0,15*
BCH12.E7	13	7	*+0,12 / +0,15*
BCH12.E8	15,5	8	*+0,13 / +0,16*
BCH12.E9	21	9	*+0,13 / +0,16*
BCH12.E10	21	10	*+0,14 / +0,17*
BCH12.E11	21	11	*+0,14 / +0,17*
BCH12.E12	21	12	*+0,15 / +0,18*
BCH12.E13	21	13	*+0,15 / +0,18*
BCH12.E14	21	14	*+0,15 / +0,18*

BCH= 16 **H= 40**

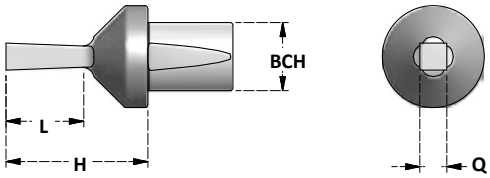
Articolo	L	E	*Toll.*
BCH16.E3	5	3	*+0,07 / +0,09*
BCH16.E3,5	6	3,5	*+0,08 / +0,10*
BCH16.E4	6,5	4	*+0,09 / +0,11*
BCH16.E5	8,5	5	*+0,11 / +0,14*
BCH16.E6	10,5	6	*+0,12 / +0,15*
BCH16.E7	13	7	*+0,12 / +0,15*
BCH16.E8	15,5	8	*+0,13 / +0,16*
BCH16.E9	17,5	9	*+0,13 / +0,16*
BCH16.E10	18,5	10	*+0,14 / +0,17*
BCH16.E11	20	11	*+0,14 / +0,17*
BCH16.E12	20	12	*+0,15 / +0,18*
BCH16.E13	28	13	*+0,15 / +0,18*
BCH16.E14	32	14	*+0,15 / +0,18*
BCH16.E15	32	15	*+0,16 / +0,19*
BCH16.E16	32	16	*+0,16 / +0,19*
BCH16.E17	32	17	*+0,16 / +0,19*
BCH16.E18	32	18	*+0,17 / +0,20*
BCH16.E19	32	19	*+0,17 / +0,20*
BCH16.E20	32	20	*+0,17 / +0,20*
BCH16.E21	32	21	*+0,22 / +0,25*
BCH16.E22	32	22	*+0,22 / +0,25*
BCH16.E23	32	23	*+0,22 / +0,25*
BCH16.E24	32	24	*+0,24 / +0,27*
BCH16.E25	32	25	*+0,24 / +0,27*

Le brocce possono essere fornite su richiesta con rivestimento “TiN”

Broaches “TiN” coated can be supplied on request

BROCCE QUADRATE
SQUARE BROACHES

SCHEDA TECNICA *TECHNICAL DATA*
BCH | P. 355



BCH= 5 **H= 10**

Articolo	L	Q	*Toll.*
BCH5.Q3	5	3	*+0,07 / +0,09*
BCH5.Q4	6	4	*+0,09 / +0,11*
BCH5.Q5	6	5	*+0,11 / +0,14*
BCH5.Q6	6	6	*+0,12 / +0,15*

BCH= 8 **H= 18**

Articolo	L	Q	*Toll.*
BCH8.Q2	3,5	2	*+0,05 / +0,06*
BCH8.Q3	5	3	*+0,07 / +0,09*
BCH8.Q4	6,5	4	*+0,09 / +0,11*
BCH8.Q5	8,5	5	*+0,11 / +0,14*
BCH8.Q5,5	9,5	5,5	*+0,11 / +0,14*
BCH8.Q6	10,5	6	*+0,12 / +0,15*
BCH8.Q7	12	7	*+0,12 / +0,15*

BCH= 12 **H= 25**

Articolo	L	Q	*Toll.*
BCH12.Q3	5	3	*+0,07 / +0,09*
BCH12.Q4	6,5	4	*+0,09 / +0,11*
BCH12.Q5	8,5	5	*+0,11 / +0,14*
BCH12.Q5,5	9,5	5,5	*+0,11 / +0,14*
BCH12.Q6	10,5	6	*+0,12 / +0,15*
BCH12.Q7	13	7	*+0,12 / +0,15*
BCH12.Q8	15,5	8	*+0,13 / +0,16*
BCH12.Q9	21	9	*+0,13 / +0,16*
BCH12.Q10	21	10	*+0,14 / +0,17*
BCH12.Q11	21	11	*+0,14 / +0,17*
BCH12.Q12	21	12	*+0,15 / +0,18*

BCH= 16 **H= 40**

Articolo	L	Q	*Toll.*
BCH16.Q4	6,5	4	*+0,09 / +0,11*
BCH16.Q5	8,5	5	*+0,11 / +0,14*
BCH16.Q6	10,5	6	*+0,12 / +0,15*
BCH16.Q7	13	7	*+0,12 / +0,15*
BCH16.Q8	15,5	8	*+0,13 / +0,16*
BCH16.Q9	17,5	9	*+0,13 / +0,16*
BCH16.Q10	18,5	10	*+0,14 / +0,17*
BCH16.Q11	20	11	*+0,14 / +0,17*
BCH16.Q12	20	12	*+0,15 / +0,18*
BCH16.Q13	28	13	*+0,15 / +0,18*
BCH16.Q14	32	14	*+0,15 / +0,18*
BCH16.Q15	32	15	*+0,16 / +0,19*
BCH16.Q16	32	16	*+0,16 / +0,19*
BCH16.Q17	32	17	*+0,16 / +0,19*
BCH16.Q18	32	18	*+0,17 / +0,20*
BCH16.Q20	32	20	*+0,17 / +0,20*

Le brocce possono essere fornite su richiesta con rivestimento “TiN”

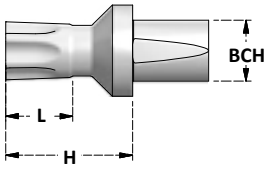
Broaches “TiN” coated can be supplied on request

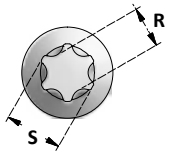
NEW

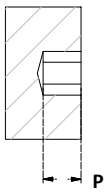
BROCCE PER CHIAVI TORX*

BROACHES FOR TORX KEYS*

SCHEDA TECNICA TECHNICAL DATA
BCH P. 355







*** Torx: marchio registrato dalla Textron inc. Providence (Usa)**

** Torx: trade mark registered by Textron inc. Providence (Usa)*

BCH= 5 **H= 10**

Articolo	P	S	R	L	Torx*	*Toll.*
BCH5.T5	0,40-0,60	1,48	1,06	1,5	5	*-0,00 / +0,01*
BCH5.T6	0,50-0,70	1,8	1,29	1,7	6	*-0,00 / +0,01*
BCH5.T7	0,60-0,90	2,08	1,49	1,7	7	*-0,00 / +0,01*
BCH5.T8	0,70-0,90	2,42	1,76	2	8	*-0,005 / +0,010*
BCH5.T10	1,00-1,30	2,85	2,07	2	10	*-0,005 / +0,010*
BCH5.T15	1,30-1,50	3,38	2,44	3	15	*-0,005 / +0,010*
BCH5.T20	1,50-1,60	3,96	2,86	3,5	20	*-0,005 / +0,010*
BCH5.T25	1,60-2,00	4,56	3,28	4	25	*-0,005 / +0,010*
BCH5.T27	2,00-2,40	5,12	3,65	4	27	*-0,005 / +0,010*

BCH= 8 **H= 18**

Articolo	P	S	R	L	Torx*	*Toll.*
BCH8.T5	0,40-0,60	1,48	1,06	1,5	5	*-0,00 / +0,01*
BCH8.T6	0,50-0,70	1,8	1,29	1,7	6	*-0,00 / +0,01*
BCH8.T7	0,60-0,90	2,08	1,49	1,7	7	*-0,00 / +0,01*
BCH8.T8	0,70-0,90	2,42	1,76	2	8	*-0,005 / +0,010*
BCH8.T10	1,00-1,30	2,85	2,07	2	10	*-0,005 / +0,010*
BCH8.T15	1,30-1,50	3,38	2,44	3	15	*-0,005 / +0,010*
BCH8.T20	1,50-1,60	3,96	2,86	3,5	20	*-0,005 / +0,010*
BCH8.T25	1,60-2,00	4,56	3,28	4	25	*-0,005 / +0,010*
BCH8.T27	2,00-2,40	5,12	3,65	4	27	*-0,005 / +0,010*
BCH8.T30	2,60-3,00	5,65	4,07	4,5	30	*-0,005 / +0,010*
BCH8.T40	3,00-3,30	6,8	4,88	5	40	*-0,010 / +0,010*
BCH8.T45	3,50-4,00	7,98	5,68	5,5	45	*-0,010 / +0,010*

BCH= 12 **H= 25**

Articolo	P	S	R	L	Torx*	*Toll.*
BCH12.T5	0,40-0,60	1,48	1,06	1,5	5	*-0,00 / +0,01*
BCH12.T6	0,50-0,70	1,8	1,29	1,7	6	*-0,00 / +0,01*
BCH12.T7	0,60-0,90	2,08	1,49	1,7	7	*-0,00 / +0,01*
BCH12.T8	0,70-0,90	2,42	1,76	2	8	*-0,005 / +0,010*
BCH12.T10	1,00-1,30	2,85	2,07	2	10	*-0,005 / +0,010*
BCH12.T15	1,30-1,50	3,38	2,44	3	15	*-0,005 / +0,010*
BCH12.T20	1,50-1,60	3,96	2,86	3,5	20	*-0,005 / +0,010*
BCH12.T25	1,60-2,00	4,56	3,28	4	25	*-0,005 / +0,010*
BCH12.T27	2,00-2,40	5,12	3,65	4	27	*-0,005 / +0,010*
BCH12.T30	2,60-3,00	5,65	4,07	4,5	30	*-0,005 / +0,010*
BCH12.T40	3,00-3,30	6,8	4,88	5	40	*-0,010 / +0,010*
BCH12.T45	3,50-4,00	7,98	5,68	5,5	45	*-0,010 / +0,010*
BCH12.T50	4,00-4,50	8,99	6,5	6	50	*-0,010 / +0,010*
BCH12.T55	4,30-5,20	11,41	8,1	7	55	*-0,015 / +0,015*
BCH12.T60	5,10-6,00	13,49	9,66	7,5	60	*-0,015 / +0,015*

BCH= 16 **H= 40**

Articolo	P	S	R	L	Torx*	*Toll.*
BCH16.T8	0,70-0,90	2,42	1,76	2	8	*-0,005 / +0,010*
BCH16.T10	1,00-1,30	2,85	2,07	2	10	*-0,005 / +0,010*
BCH16.T15	1,30-1,50	3,38	2,44	3	15	*-0,005 / +0,010*
BCH16.T20	1,50-1,60	3,96	2,86	3,5	20	*-0,005 / +0,010*
BCH16.T25	1,60-2,00	4,55	3,28	4	25	*-0,005 / +0,010*
BCH16.T27	2,00-2,40	5,1	3,65	4	27	*-0,005 / +0,010*
BCH16.T30	2,60-3,00	5,65	4,07	4,5	30	*-0,005 / +0,010*
BCH16.T40	3,00-3,30	6,8	4,88	5	40	*-0,010 / +0,010*
BCH16.T45	3,50-4,00	7,97	5,68	5,5	45	*-0,010 / +0,010*
BCH16.T50	4,00-4,50	8,99	6,5	6	50	*-0,010 / +0,010*
BCH16.T55	4,30-5,20	11,41	8,1	7	55	*-0,015 / +0,015*
BCH16.T60	5,10-6,00	13,49	9,66	7,5	60	*-0,015 / +0,015*

BROCCE PER CHIAVI TORX PLUS IP*

BROACHES FOR TORX PLUS IP KEYS*

BCH= 8 **H= 18**

Articolo	S	R	L	Torx*	*Toll.*	*PREFORO (-0,00 +0,10)*
BCH8.T6P	1,78	1,38	1,7	6	*-0,00 / +0,01*	1,5
BCH8.T8P	2,42	1,86	2	8	*-0,005 / +0,010*	2
BCH8.T10P	2,85	2,18	2	10	*-0,005 / +0,010*	2,3
BCH8.T15P	3,38	2,61	3	15	*-0,005 / +0,010*	2,7
BCH8.T20P	3,96	3,09	3,5	20	*-0,005 / +0,010*	3,2
BCH8.T25P	4,56	3,49	4	25	*-0,005 / +0,010*	3,6
BCH8.T30P	5,65	4,39	4,5	30	*-0,005 / +0,010*	4,5

BCH= 12 **H= 25**

Articolo	S	R	L	Torx*	*Toll.*	*PREFORO (-0,00 +0,10)*
BCH12.T6P	1,78	1,38	1,7	6	*-0,00 / +0,01*	1,5
BCH12.T8P	2,42	1,86	2	8	*-0,005 / +0,010*	2
BCH12.T10P	2,85	2,18	2	10	*-0,005 / +0,010*	2,3
BCH12.T15P	3,38	2,61	3	15	*-0,005 / +0,010*	2,7
BCH12.T20P	3,96	3,09	3,5	20	*-0,005 / +0,010*	3,2
BCH12.T25P	4,56	3,49	4	25	*-0,005 / +0,010*	3,6
BCH12.T30P	5,65	4,39	4,5	30	*-0,005 / +0,010*	4,5
BCH12.T40P	6,8	5,28	5	40	*-0,010 / +0,010*	5,4

Le brocce possono essere fornite su richiesta con rivestimento "TiN"

Broaches "TiN" coated can be supplied on request

MASCHI A MACCHINA AD ALTO RENDIMENTO

HIGH PERFORMANCE MACHINE TAPS

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Complete list on www.caporali.net

TOP TAP DIN371- DIN376 M3 - M20

Gruppo di maschi a macchina destinati alla filettatura ad alte prestazioni in una vasta gamma di materiali come acciaio, acciaio inossidabile, ghisa, metalli non ferrosi, leghe resistenti al calore e leghe di titanio.

Group of machine taps intended for high performance thread cutting in a wide range of material such as steel, stainless steel, cast iron, non-ferrous metals, heat-resistant alloys, and titanium alloys.

HSSE-PM	acciaio da polveri- sinterizzato high speed powder steel	*H1*	*TiAlN+WC/C*



FAN DIN371- DIN376 M4 - M20

Per acciai difficili da lavorare, legati ad alta resistenza, temprati e rinvenuti fino a 38 HRC, 800 MPa ≤Rm≤1200 Mpa

For tool and difficult to process steels with tensile strenght of RM≤1200 Mpa and for heat treated steels up to 38 HRC

HSSE-PM	acciaio da polveri- sinterizzato high speed powder steel	*S1*	*TiAlSiN*



800X DIN371- DIN376- DIN374 M3 - M20

I maschi 800x sono la soluzione per una vasta gamma di materiali da lavorazione inclusi gli acciai inossidabili.
L'innovativa tecnologia di costruzione garantisce una alta precisione ed efficacia di lavorazione con un aumento della vita dell'utensile.

Taps 800X are the best choice for large range of application also for processing of stainless steel
Innovative production technologies guaranties high precision and machining efficiency plus increased tool life

HSSE	acciaio superrapido al cobalto high speed cobalt steel	*T2*	*TiAlN+TiN*



800 DIN371- DIN376 M3 - M20

Per acciai da costruzione, da cementazione, basso-legato, 600 MPa ≤ Rm ≤ 800 Mpa

For structural, free machining and low alloy steels with tensile strenght 600 MPa ≤ Rm ≤ 800 Mpa

HSSE	acciaio superrapido al cobalto high speed cobalt steel



INOX DIN371- DIN376 M3 - M20

Per acciai legati, inossidabili e resistenti agli acidi, Rm≤1000 MPa

For high alloy steels, stainless and acid resistant steels with tensile strenght of Rm ≤ 1000 MPa

HSSE	acciaio superrapido al cobalto high speed cobalt steel



MASCHI A RULLARE

FORMING TAPS

WGN DIN371- DIN376 M3 - M10

I maschi a rullare WGN sono progettati per la formatura plastica di filettature in materiali come acciaio e acciaio inossidabile con una resistenza alla trazione fino a 1000 MPa e metalli non ferrosi.
La lavorazione senza trucioli garantisce un'elevata sicurezza di processo.
L'utensile è realizzato in acciaio HSSE-PM ottenuto mediante tecnologia di metallurgia delle polveri, che garantisce una struttura uniforme e un'elevata resistenza all'usura.

The WGN forming taps are designed for plastic forming of threads in materials such as steel and stainless steel with a tensile strength up to 1000 MPa, and non-ferrous metals. The chip-free machining ensures high process safety.
The tool is made of HSSE-PM steel obtained by powder metallurgy technology, which guarantees a uniform structure and high wear resistance.

HSSE-PM	acciaio da polveri- sinterizzato high speed powder steel	*T2*	*TiAlN+TiN*	*C1*	*TiN+TiCN*



SCHEDE

ERC SISTEMA DI SERRAGGIO CON PINZE ER
ER CLAMPING COLLETS SYSTEM
DIN 6499 / ISO 15488 — P. 338

HY MANDRINI A SERRAGGIO IDRAULICO
HYDRAULIC CLAMPING CHUCKS
DIN 69882-7 — P. 342

CPY MANDRINI PER FRESE CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS
P. 346

D C MANDRINI PORTAFRESA COMBINATI
COMBI SHELL MILL HOLDERS
DIN 6358 — P. 348

CM P RIDUZIONI CONO MORSE PER PUNTE
MORSE TAPER ADAPTERS FOR DRILLS
DIN 6383 — P. 350

MCR ACCESSORI PER MASCHIATURA
ACCESORIES FOR TAPPING
P. 352

RM ALESATURA
REAMING
P. 354

D SISTEMA A DOPPIO CONTATTO
DOUBLE CONTACT SYSTEM
P. 358

BIL BILANCIATURA
BALANCING
P. 360

MASCHI - INFORMAZIONI TECNICHE
TAPS - TECHNICAL INFORMATION
P. M2

TM MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS
DIN 69882-8 — P. 340

FS MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS
P. 344

WE MANDRINI PORTAFRESE WELDON
END MILL HOLDERS - WELDON
DIN 1835-2 — P. 347

D S MANDRINI PORTAFRESA FISSI
SHELL MILL HOLDERS
DIN 6357 — P. 349

CM FV RIDUZIONI CONO MORSE PER FRESE
MORSE TAPER ADAPTERS FOR THREADED MILLS
DIN 6364 — P. 351

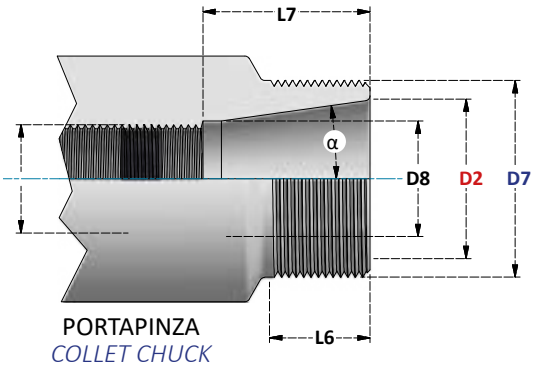
SY MASCHIATURA SINCRONIZZATA
SYNCHRO TAPPING
P. 353

BCH BROCCE E BROCCIATURA
BROACHES AND BROACHING
P. 355

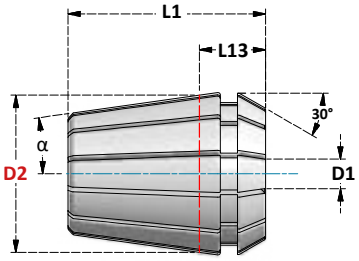
ADB ADDUZIONE DEL REFRIGERANTE
COOLANT THROUGH
P. 359

cm/inch MISURE IN MILLIMETRI E IN POLLICI
METRIC SIZES AND INCH SIZES
P. 361

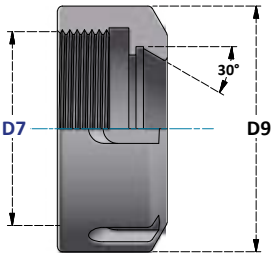
QUOTE PRINCIPALI
MAIN DIMENSIONS



PORTAPINZA
COLLET CHUCK



PINZA
COLLET



GHIERA DI SERRAGGIO
CLAMPING NUT

PORTAPINZA COLLET CHUCK	PINZA *COLLET*	D1	D2	GHIERA MONTATA MOUNTED NUT**	D7	D8	D9	L1	L6	L7	L13	α
			±0,05		6g	+0,5 0	max.	max.	min.	min.	max.	
ERC8M*	ERC8*	1÷5	8	G8M	M10x0,75		12	13,5	8	13	4,5	8°
ERC11	ERC11	1÷7	11	G11SE	M14x0,75	7,5		18	10	17	6,6	8°
ERC11M*				***G11M***	***M13x0,75***		***16***					
ERC16	ERC16	1÷10	16	G16SE	M22x1,5	10,5	28	27,5	13	22	10,6	8°
ERC16M*				***G16M***	***M19x1***		***22***					
ERC20	ERC20	1÷13(14*)	20	G20SE	M25x1,5	13,5	34	31,5	13,5	26,5	11,5	8°
ERC20M*				***G20M***	***M24x1***		***28***					
ERC25	ERC25	1÷16(20*)	25	G25S	M32x1,5	18	42	34	14	29	12	8°
ERC25M*				***G25M***	***M30x1***		***35***					
ERC32	ERC32	2÷20(22*)	32	G32S	M40x1,5	23,5	50	40	16	34	13	8°
ERC40	ERC40	3÷26(30*)	40	G40S	M50x1,5	30,5	63	46	17	38	15	8°
ERC50*	ERC50*	6÷34	50	G50S	M64x2	38	78	60	24	58	21	8°
ERC60*	ERC60*	10÷40	60	G60C	M70x1,5			60				10°

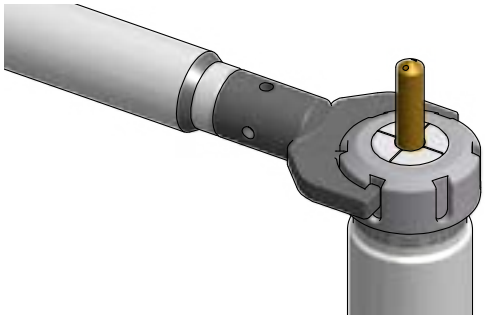
* Tipi e dimensioni non regolate dalla normativa DIN
* *Types and sizes not regulated by DIN norm*

** I mandrini per il legno montano le ghiere WD
** *WD nut on woodworking toolholders*

ISTRUZIONI *INSTRUCTIONS* Pag. 339

COPPIE DI SERRAGGIO CONSIGLIATE IN BASE ALL'ALESAGGIO DELLA PINZA
RECOMMENDED TIGHTENING TORQUE RELATED TO BORE SIZE OF COLLETS

		FORZA SERRAGGIO / TORQUE			
PINZA COLLET	ALESAGGIO BORE SIZE	FILETTATURE STANDARD STANDARD THREADS		FILETTATURE MINI MINI THREADS	
ER8	1 ÷ 5	-	-	M10x0,75	< 8 Nm
ER11	1 ÷ 7	M14x0,75	< 18 Nm	M13x0,75	< 18 Nm
ER16	1 ÷ 3	M22x1,5	< 30Nm	M19x1	< 28 Nm
	3,5 ÷ 10		< 50 Nm		
ER20	1 ÷ 5	M25x1,5	< 40 Nm	M24x1	< 35 Nm
	5,5 ÷ 14		< 70 Nm		
ER25	1 ÷ 6	M32x1,5	< 55 Nm	M30x1	< 40 Nm
	6,5 ÷ 20		< 90 Nm		
ER32	2 ÷ 7	M40x1,5	< 70 Nm	-	-
	7,5 ÷ 20		< 130 Nm	-	-
ER40	3 ÷ 8	M50x1,5	< 130 Nm	-	-
	8,5 ÷ 30	M50x1,5	< 200 Nm		
ER50	6 ÷ 34	M64x2	< 240 Nm	-	-



Si consiglia l'utilizzo delle chiavi dinamometriche per ottenere le migliori prestazioni della pinza.
Use of torque wrench is recommended to obtain the best performance of the collet.

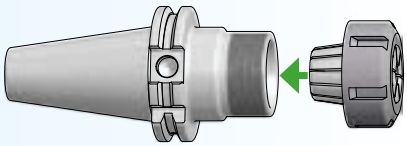
CD

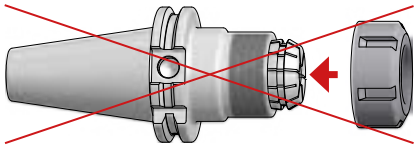
P. 290
CHIAVI DINAMOMETRICHE
TORQUE WRENCHES

SERRAGGIO DELL'UTENSILE
TOOL CLAMPING

Le pinze devono essere montate sulla ghiera prima di venire serrate sul mandrino.

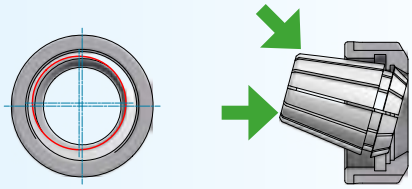
Collets must be connected into nut before inserting tool or assembling onto chuck.





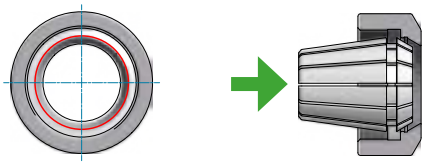
Montaggio di una pinza in una ghiera eccentrica.

Mounting of a collet in eccentric nut.



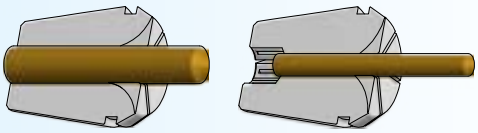
Montaggio di una pinza in una ghiera concentrica.

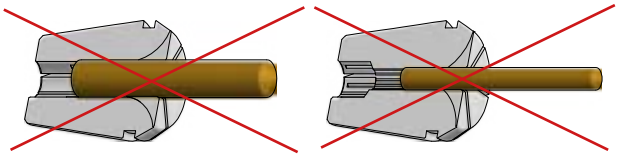
Mounting of a collet in concentric nut.



L'utensile deve essere inserito nella pinza per tutta la lunghezza di presa.
L'errato posizionamento dell'utensile riduce la precisione e la rigidità e può deformare la sede della pinza.

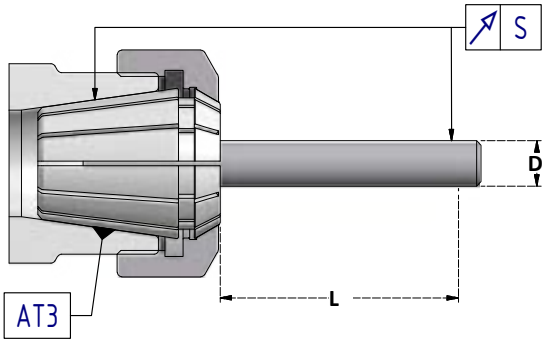
Tool must be inserted for total length of collet's bore.
Wrong positioning reduces precision and may damage collet's bore.





ERRORE MEDIO DI CONCENTRICITA'
AVERAGE OF RUNOUT ACCURACY

D - h6	L MAX
1mm ÷ 1,6mm	6mm
1,6mm ÷ 3mm	10mm
3mm ÷ 7mm	16mm
7mm ÷ 10mm	25mm
10mm ÷ 18mm	40mm
18mm ÷ 26mm	50mm
26mm ÷ 40mm	60mm



I valori di precisione indicati a catalogo sono la media di 3 misurazioni a 120° eseguite con una spina di collaudo in tolleranza h6 del diametro nominale della pinza.
La precisione va misurata ad una distanza L dalla pinza montata correttamente come da istruzioni.

Avarage of concentricity is checked each 120° using a h6 pin with diameter equal to nominal size of collet.
Precision must be measured at a distance L from the collet face. Collet must be mounted properly as per instructions.

DIMENSIONI Pag. 338
DIMENSIONS

ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**22**
HSK - E	DIN 69893-5 Form E	**49**
HSK - F	DIN 69893-6 Form F	**53**
CPT	DIN ISO 26623-1	**58**

ATTACCO SHANK	NORMATIVA NORM	PAG.
TC	DIN ISO 7988-1 (DIN 69871)	**68**
BT	MAS 403	**114**
ISO	DIN2080	**156**
VDI	DIN 10889 (DIN 69880)	**179**
CM	DIN 228	**186**

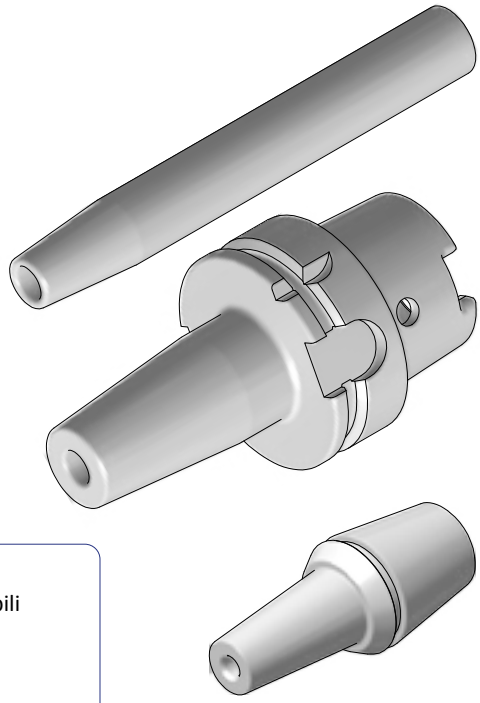
ATTACCO SHANK	NORMATIVA NORM	PAG.
TR	DIN 6327	**195**
R8		**198**
D CILINDRICO	DIN 1835-1 Form A	**207**
WE	DIN 1835-1 Form B	**218**

MANDRINI A CALETTAMENTO A CALDO
SHRINK FIT CHUCKS

G2,5 25000r.p.m.

CARATTERISTICHE:
Realizzati in acciaio termoresistente di alta qualità
Vite assiale forata per il passaggio del refrigerante
Prebilanciati in grado G2,5 25000 giri/min
Errore medio di concentricità < 3µm

FEATURES:
Made of high quality heat resistant steel
Axial screw with coolant hole
Pre-balanced in G2.5 grade 25000 rpm
Average concentricity error <3µm



VANTAGGI:
Ideali per la lavorazione ad alta velocità, grazie all'assenza di parti meccaniche mobili
Trasferimento di coppia elevata per lavorazioni ad alte prestazioni
Tenuta del refrigerante meccanica, senza bisogno di accessori
Alta precisione e ripetibilità
Design sottile, disponibile in diverse lunghezze

BENEFITS:
Ideal for high-speed machining, thanks to the absence of moving mechanical parts
High torque transfer for high performance machining
Mechanical coolant seal, without need for accessories
High precision and repeatability
Slim design, available in different lengths

ISTRUZIONI *INSTRUCTIONS* Pag. 341

GAMMA:
Diametri disponibili: Ø3 ÷ Ø32
Disponibili per tutti i principali attacchi macchina nella forme:
STANDARD, basata sulla normativa DIN 69882-8
SLIM con ingombri ridotti
JET con fori per lubrficazione esterna
Prolunghe con gambo cilindrico

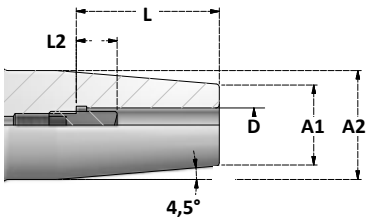
RANGE:
Available diameters: Ø3 ÷ Ø32
Available for all main machine couplings in the shapes:
STANDARD, based on DIN 69882-8
SLIM with reduced dimensions
JET with coolant holes
Extensions with cylindrical shank

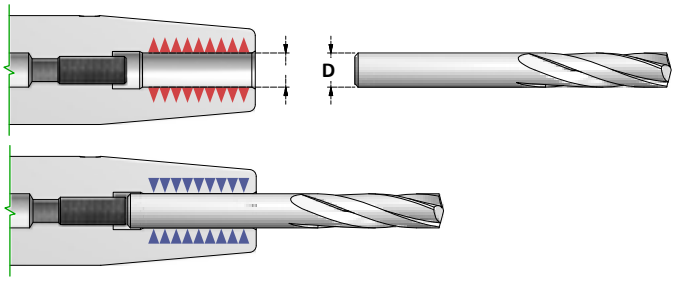
ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**28**
HSK - E	DIN 69893-5 Form E	**50**
HSK - F	DIN 69893-6 Form F	**54**
CPT	DIN ISO 26623-1	**59**
TC	DIN ISO 7988-1 (DIN 69871)	**77**
BT	MAS 403	**123**

ATTACCO SHANK	NORMATIVA NORM	PAG.
D CILINDRICO	DIN 1835-1 Form A	**224**
ERC /TM	DIN ISO 15488 (DIN6499)	**269**

QUOTE PRINCIPALI
MAIN DIMENSIONS

G2,5
25000r.p.m.





TIPO STANDARD
STANDARD TYPE

		D	L	A1	A2
TM3	*	3	12	10	20
TM4	*	4	16	15	25
TM5	*	5	20	15	25
TM6		6	36	21	27
TM8		8	36	21	27
TM10		10	41	24	32
TM12		12	46	24	32
TM14		14	46	24	32
TM16		16	49	24	32
TM18		18	49	33	42
TM20		20	51	33	42
TM25		25	57	44	53
TM32		32	61	44	53

TIPO SLIM
SLIM TYPE

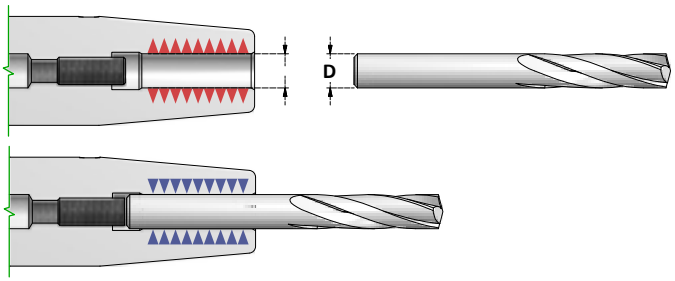
		D	A1	A2 MAX
TM3SL	*	3	9	15
TM4SL	*	4	10	15
TM5SL	*	5	11	15
TM6SL		6	12	19
TM8SL		8	14	21
TM10SL		10	16	23
TM12SL		12	18	25
TM14SL		14	22	27
TM16SL		16	24	31
TM18SL		18	28	35
TM20SL		20	32	39

Profondità regolabile: **L2**= 10mm
Adjustable depth:

* Senza vite di regolazione
** Without adjusting screw*

CARATTERISTICHE Pag. 340
FEATURES

SERRAGGIO DELL'UTENSILE
TOOL CLAMPING



SERRAGGIO DELL'UTENSILE:
Il serraggio avviene sfruttando la dilatazione e la contrazione termica del foro
Il riscaldamento deve essere eseguito con macchinario apposito. MAX 380 °C
La tolleranza del gambo utensile deve essere h6
Il serraggio di utensili con piano sul gambo cilindrico è possibile ma sconsigliato

TOOL TIGHTENING:
Tightening takes place by exploiting the thermal expansion and contraction of the hole
Heating must be carried out with special machinery. MAX 380 ° C
The tolerance of the tool shank must be h6
Clamping of tools with flat on cylindrical shank is possible but not recommended

GAMBO UTENSILE
TOOL SHANK

D		Tolleranza Tollerance
3mm	**h4**	0,000/-0,003
4mm	**h5**	0,000/-0,004
5mm		0,000/-0,005
6mm		0,000/-0,008
8mm		0,000/-0,009
10mm		0,000/-0,009
12mm		0,000/-0,011
14mm	**h6**	0,000/-0,011
16mm		0,000/-0,011
18mm		0,000/-0,011
20mm		0,000/-0,013
25mm		0,000/-0,013
32mm		0,000/-0,016

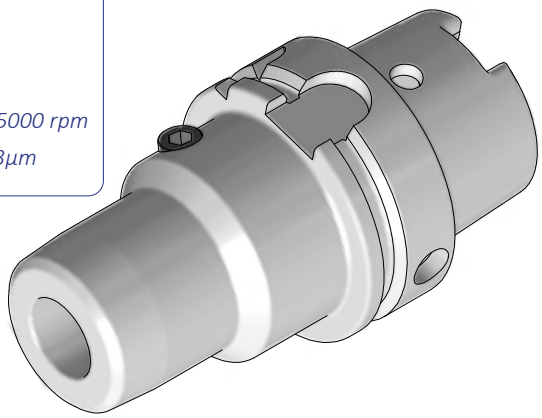
MANDRINI A SERRAGGIO IDRAULICO
HYDRAULIC CLAMPING CHUCKS

G2,5 25000r.p.m.



CARATTERISTICHE:
Progettati in base alla normativa DIN 69882-7
Vite assiale forata per il passaggio del refrigerante
Prebilanciati in grado G2,5 25000 giri/min
Errore medio di concentricità < 3µm

FEATURES:
Based on norm DIN 69882-7
Axial screw with coolant hole
Pre-balanced in G2.5 grade 25000 rpm
Average concentricity error <3µm



VANTAGGI:
Facilità di serraggio tramite vite laterale
Scanalatura elicoidale per garantire una superficie di serraggio utensile pulita
Il serbatoio dell'olio funge da agente di smorzamento delle vibrazioni
Tenuta del refrigerante meccanica, senza bisogno di accessori
Disponibile in diverse lunghezze
Possibilità di utilizzare le pinze cilindriche di riduzione 6SR

BENEFITS:
Easy tightening with lateral screw
Helical groove to ensure a clean tool clamping surface
The oil tank acts as a vibration damping agent
Mechanical coolant seal, without need for accessories
Available in different lengths
Possibility of using 6SR cylindrical reduction collets

Forza di serraggio *Clamping force*	
HY**6**	**12**Nm
HY**8**	**30**Nm
HY**10**	**40**Nm
HY**12**	**70**Nm
HY**14**	**100**Nm
HY**16**	**135**Nm
HY**18**	**180**Nm
HY**20**	**220**Nm
HY**25**	**500**Nm
HY**32**	**700**Nm

ISTRUZIONI *INSTRUCTIONS* Pag. 343

GAMMA:
Diametri disponibili: Ø6 ÷ Ø32
Disponibili per tutti i principali attacchi macchina in forma standard
Progettati in base alla normativa DIN 69882-7 e sue varianti prolungate
Pinze cilindriche di riduzione 6SR disponibili con diametri esterni Ø12, Ø20, Ø32.
Disponibili in kit composti da mandrino, pinze 6SR e chiave in box di alluminio

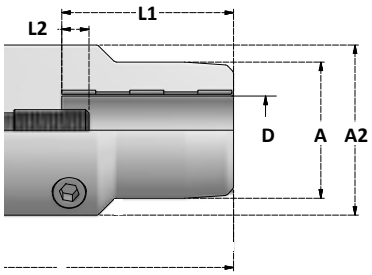
RANGE:
Available diameters: Ø6 ÷ Ø32
Available for all major machine couplings in standard form
Designed according to DIN 69882-7 and its extended variants
6SR cylindrical reduction collets available with external diameters Ø12, Ø20, Ø32.
Available in kits consisting of chuck, 6SR collets and key in aluminum box



ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**31**
TC	DIN ISO 7988-1 (DIN 69871)	**81**
BT	MAS 403	**127**

QUOTE PRINCIPALI
MAIN DIMENSIONS

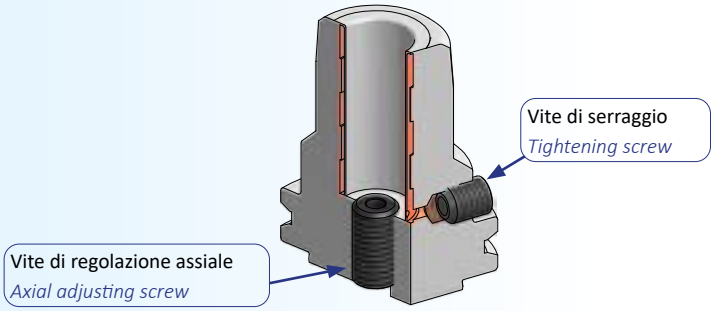
G2,5
25000r.p.m.



Profondità regolabile: **L2**= 10mm
Adjustable depth:

	D	L1	A	A2
...HY**6**	6	37	26	49,5
...HY**8**	8	37	28	49,5
...HY**10**	10	41	30	49,5
...HY**12**	12	46	32	49,5
...HY**14**	14	46	34	49,5
...HY**16**	16	49	38	49,5
...HY**18**	18	49	40	49,5
...HY**20**	20	51	42	49,5
...HY**25**	25	57	49,5	55
...HY**32**	32	61	56	63

ISTRUZIONI
INSTRUCTIONS



Serrare la vite di bloccaggio fino al finecorsa chiudendo a mano con la chiave
Tighten the locking screw up to the limit switch, screwing it by hand with key

SERRAGGIO DELL'UTENSILE:

Il serraggio avviene mediante la compressione del liquido interno

L'azionamento avviene chiudendo la vite laterale con la chiave esagonale

La tolleranza del gambo utensile deve essere h6

Non adatti al serraggio di utensili con piano inclinato e con piani weldon Ø25 e Ø32

Gli utensili con piano sul gambo cillindrico possono essere serrati utilizzando le pinze di riduzione 6SR

TOOL TIGHTENING:

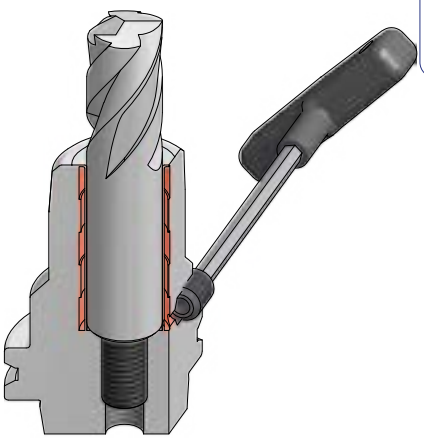
Tightening takes place by compressing the internal liquid

It is operated by closing the side screw with hexagonal key

The tolerance of the tool shank must be h6

Not suitable for clamping tools with inclined plane and with weldon surfaces Ø25 and Ø32

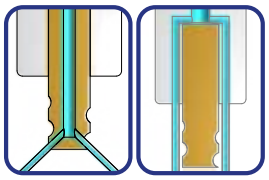
All tools with flat on cylindrical shank can be tightened using 6SR reduction collets



CARATTERISTICHE *FEATURES* Pag. 342

MANDRINI A FORTE SERRAGGIO
POWER MILLING CHUCKS





CARATTERISTICHE:
Prebilanciati in grado G6.3 8000 giri/min
Errore medio di concentricità < 5µm
Forniti con la chiave per il serraggio
Lavorano con il refrigerante lungo l'utensile o attraverso l'utensile

FEATURES:
Pre-balanced in G6.3 grade 8000 rpm
Average concentricity error <5µm
Clamping key included
Can work with coolant along tool or through tool



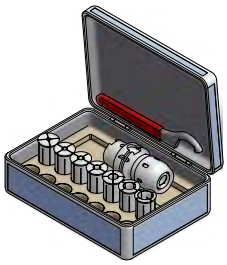
VANTAGGI:
Facilità di serraggio
La gabbia a rulli interna permette di ottenere una forza di serraggio elevata
Possibilità di utilizzare le pinze cilindriche di riduzione 4SR
Disponibilità di accessori per la tenuta del refrigerante

BENEFITS:
Easy tightening
Internal bearing cage allows high clamping force
Possibility of using 4SR cylindrical reduction collets
Accessories for coolant sealing are available

GAMMA:
Diametri disponibili: Ø20 e Ø32
Disponibili per tutti i principali attacchi macchina in forma standard
Dischi di tenuta CFS disponibili come accessori
Pinze cilindriche di riduzione 4SR disponibili con diametri esterni Ø20, Ø32.
Disponibili in kit composti da mandrino, pinze 4SR e chiave in box di alluminio

RANGE:
Available diameters: Ø20 and Ø32
Available for all major machine couplings in standard form
CFS sealing discs available as accessories
4SR cylindrical reduction collets available with external diameters Ø20, Ø32.
Available in kits consisting of chuck, 4SR collets and key in aluminum box

Forza di serraggio *Clamping force*	
FS**20**	**500**Nm
FS**32**	**1000**Nm



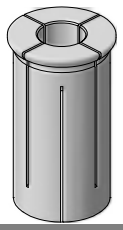
ISTRUZIONI *INSTRUCTIONS* Pag. 345

DISPONIBILI PER GLI ATTACCHI
AVAILABLE FOR SHANKS

ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**32**
CPT	DIN ISO 26623-1	**59**

ATTACCO SHANK	NORMATIVA NORM	PAG.
TC	DIN ISO 7988-1 (DIN 69871)	**82**
BT	MAS 403	**128**
ISO	DIN2080	**160**

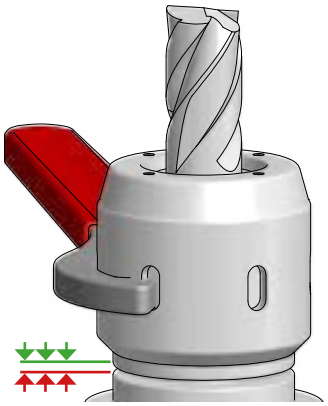
PINZE DI SERRAGGIO CILINDRICHE A 4 TAGLI
CYLINDRICAL COLLETS WITH 4 SLOTS



I mandrini a forte serraggio sono disponibili con diametro nominale 20mm e 32mm
Per serrare utensili con un gambo di diametro diverso usare le **pinze 4SR**
Power milling chucks are available for diameters 20mm and 32mm
*To clamp tools with different shank diameters, **4SR collets** can be used*

P. 276
PINZE
COLLETS

ISTRUZIONI
INSTRUCTIONS

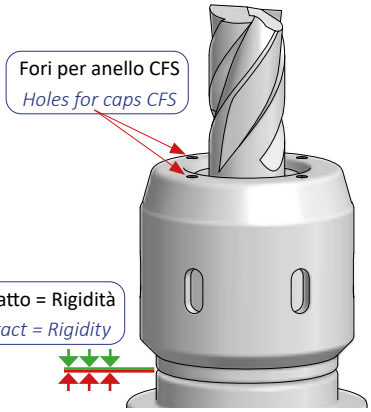


SERRAGGIO DELL'UTENSILE:

Il serraggio avviene mediante la chiusura della ghiera con la chiave in dotazione
Chiudere la ghiera fino al contatto con il corpo del mandrino
La tolleranza del gambo utensile deve essere h6
Il serraggio di utensili con piano sul gambo cilindrico è possibile ma sconsigliato
Gli utensili con piano sul gambo possono essere serrati utilizzando le pinze di riduzione 4SR

TOOL TIGHTENING:

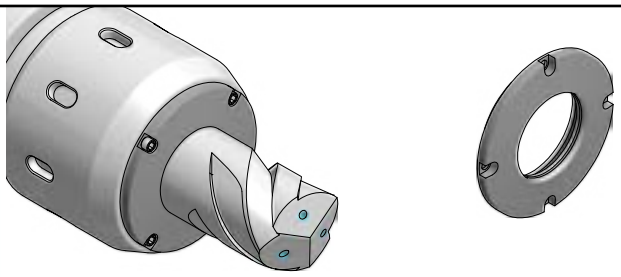
The tightening takes place by closing the ring nut with the supplied key
Close the ring nut until it touches the body of the spindle
The tolerance of the tool shank must be h6
Clamping of tools with flat on shank is possible but not recommended
All tools with flat on shank can be tightened using 4SR reduction collets



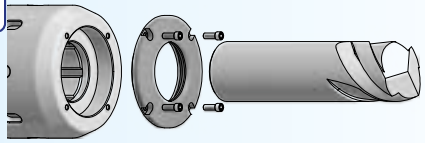
CARATTERISTICHE Pag. 344
FEATURES

DISCHI DI TENUTA
PER MANDRINI A FORTE SERRAGGIO

SEALED CAPS
FOR POWER MILLING CHUCKS



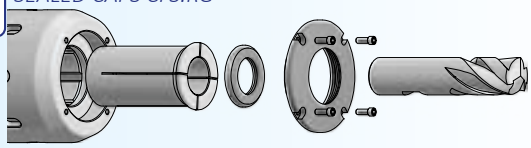
DISCHI DI TENUTA CFS
SEALED CAPS CFS



Vanno utilizzati sui mandrini FS20 e FS32 che montano utensili con lo stesso diametro del foro.

They must be used on FS20 and FS32 chucks which mount tools with the same diameter.

DISCHI DI TENUTA CFS.RG
SEALED CAPS CFS.RG



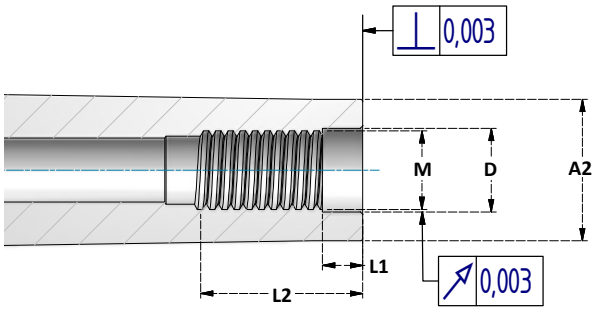
Vanno utilizzati sui mandrini FS20 e FS32 insieme ai dischetti RG per utensili serrati utilizzando le pinze 4SR.

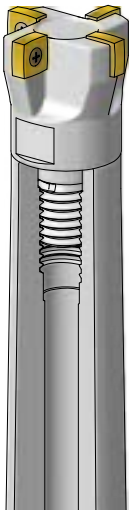
To be used on FS20 and FS32 chucks together with RG sealed discs for tools clamped using 4SR collets.

P. 284
DISCHETTI RG
RG SEALED DISCS

MANDRINI PER FRESE CON ATTACCO FILETTATO
SCREW IN MILL CHUCKS

G2,5 25000r.p.m.





	M	D	A2	L1	L2
		H5		+0,2 -0	+1
M8CPY	M8	8,5	13	8,2	25
M10CPY	M10	10,5	18	8,2	25
M12CPY	M12	12,5	21	8,2	32
M16CPY	M16	17	29	8,2	35

Momento di serraggio consigliato *Recommended tightening torque*	
M8	25Nm
M10	40Nm
M12	60Nm
M16	80Nm

CARATTERISTICHE:
Piano e guida rettificati per alte prestazioni di precisione e rigidità
Passaggio centrale del refrigerante su tutti i portautensili
Prebilanciati in grado G2,5 25000 giri/min
Errore medio di concentricità < 3µm

FEATURES:
Grinded pilot and face for high rigidity and accuracy
Coolant through on all toolholders
Pre-balanced in G2.5 grade 25000 rpm
Average concentricity error <3µm

GAMMA:
Disponibili per frese con attacco filettato: M8 - M10 - M12 - M16
Disponibili per tutti i principali attacchi macchina
Disponibili prolunghe con attacco cilindrico
Disponibili prolunghe HM

RANGE:
Available for screw in mills with thread: M8 - M10 - M12 - M16
Available for all main machine shanks
Extensions with cylindrical connection available
HM extensions available

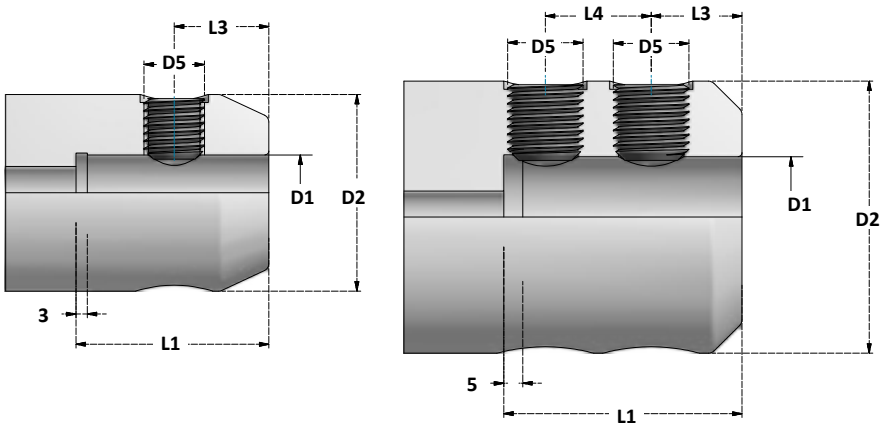
ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**33**
TC	DIN ISO 7988-1 (DIN 69871)	**84**
BT	MAS 403	**130**
D CILINDRICO	DIN 1835-1 Form A	**223**
WE	DIN 1835-1 Form B	**222**

ACCESSORI - *ACCESSORIES*

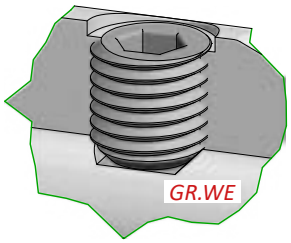
P. 201 RIDUZIONI ER *ER ADAPTERS*
P. 310 SUPPORTI DI MONTAGGIO *ASSEMBLY DEVICES*
P. 306 RACCORDI REFRIGERANTE *COOLANT TUBES*

MANDRINI PORTAFRESE WELDON

END MILL HOLDERS WELDON



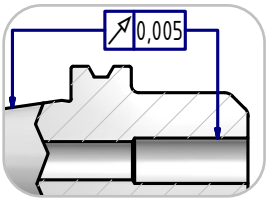
ACCESSORIO COMPRESO
INCLUDED ACCESSORY





P. 303
GRANI
SCREWS

Articolo	D1	D2	D5	L1	L3	L4	GRANO *SCREW*
TOLL.	H5						
WE6	6	25	M6	37	18	-	GR.WE6
WE8	8	28	M8	37	18	-	GR.WE8
WE10	10	35	M10	41	20	-	GR.WE10
WE12	12	42	M12	46	20,5	-	GR.WE12-14
WE14	14	44	M12	46	20,5	-	GR.WE12-14
WE16	16	48	M14	49	24	-	GR.WE16-18
WE18	18	50	M14	49	24	-	GR.WE16-18
WE20	20	52	M16	51	25	-	GR.WE20
WE25	25	65	M18x2	59	24	25	2x GR.WE25
WE32	32	72	M20x2	63	24	28	2x GR.WE32-40
WE40	40	80	M20x2	73	30	32	2x GR.WE32-40
WE50	50	100	M24x2	83	35	35	2x GR.WE50



I mandrini weldon extracorti differiscono dalla normativa per dimensioni e tipo di grani, ma sono progettati per serrare gli utensili con gambo DIN1835 come i mandrini standard.

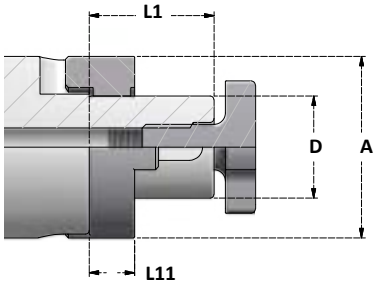
End mill holders with stub lenght have different screws and external dimensions, but they are build for tighten tools with DIN1835 shank as standard toolholders.

ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**34**
HSK - E	DIN 69893-5 Form E	**51**
HSK - F	DIN 69893-6 Form F	**55**
CPT	DIN ISO 26623-1	**62**

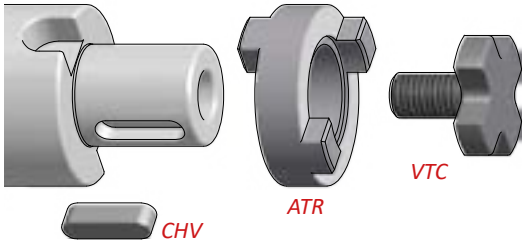
ATTACCO SHANK	NORMATIVA NORM	PAG.
TC	DIN ISO 7988-1 (DIN 69871)	**85**
BT	MAS 403	**131**
ISO	DIN2080	**159**
WE	DIN 1835-1 Form B	**225**

MANDRINI PORTAFRESE COMBINATI

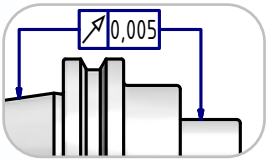
COMBI SHELL MILL HOLDERS



ACCESSORI COMPRESI
INCLUDED ACCESSORIES



Articolo	D	A	L1	L11	ATR	VTC	CHV
D16C	16	32	27	10	ATR.D16	VTC.M8	CHV.D16
D22C	22	40	31	12	ATR.D22	VTC.M10	CHV.D22
D27C	27	48	33	12	ATR.D27	VTC.M12	CHV.D27
D32C	32	58	38	14	ATR.D32	VTC.M16	CHV.D32
D40C	40	70	41	14	ATR.D40	VTC.M20	CHV.D40




P. 304
VITI A CROCE
CROSS SCREWS


P. 305
ANELLI DI TRASCINAMENTO
DRIVE RINGS


P. 305
CHIAVETTE DI TRASCINAMENTO
DRIVE KEYS


P. 305
ANELLI DISTANZIALI
SPACING COLLARS

CARATTERISTICHE:

Utilizzando l'anello ATR si possono montare frese con due tacche di trascinamento (fig.1)

Utilizzando la chiavetta di trascinamento CHV si possono montare frese con una tacca di trascinamento (fig. 2)

Utilizzando gli anelli distanziali SC (accessorio acquistabile separatamente) si possono montare frese di ogni spessore.

FEATURES:

Mills with two slots can be mounted using ATR drive ring (fig. 1)

Mills with one slot can be mounted using CHV drive key (fig. 2)

Using SC spacing collars (accessory not included) mills of any thickness can be mounted.

ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**39**
TC	DIN ISO 7988-1 (DIN 69871)	**96**
BT	MAS 403	**138**
ISO	DIN2080	**162**
CM	DIN 228	**187**

Fig. 1

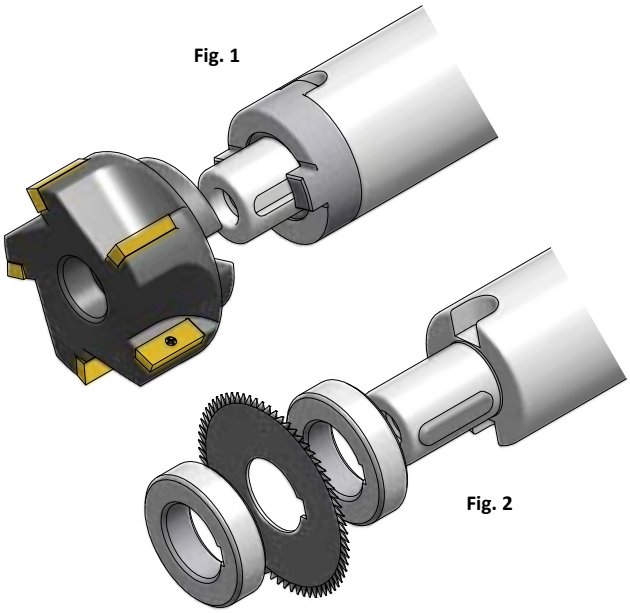
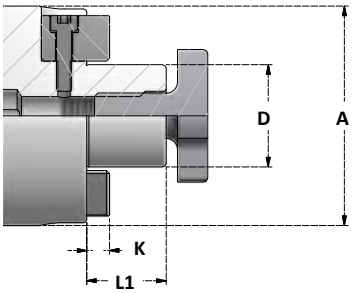
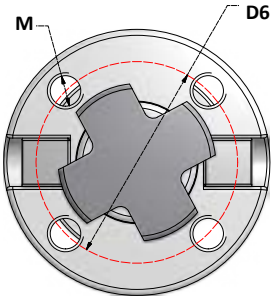


Fig. 2

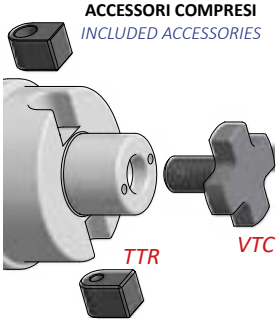
MANDRINI PORTAFRESE FISSI

SHELL MILL HOLDERS



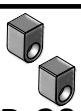


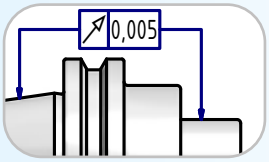
ACCESSORI COMPRESI
INCLUDED ACCESSORIES



Articolo	D	A	K	L1	D6	M	TTR	VTC
D16S	16	38	5	17	-	-	TTR.D16	VTC.D16
D22S	22	48	5,6	19	-	-	TTR.D22	VTC.D22
D27S	27	58	6,3	21	-	-	TTR.D27	VTC.D27
D32S	32	78	7	24	-	-	TTR.D32	VTC.D32
D40S	40	88	7	27	66,7	M12	TTR.D40	VTC.D40
D60S	60	129	8	40	101,6	M16	TTR.D60	VTC.D60


P. 304
VITI A CROCE
CROSS SCREWS

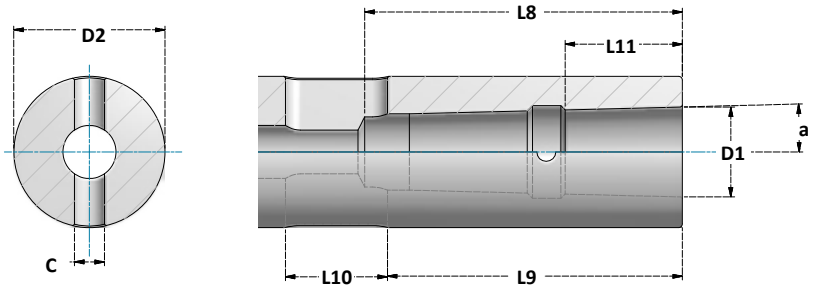

P. 304
TASSELLI
DRIVE KEYS



ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**40**
HSK - E	DIN 69893-5 Form E	**51**
HSK - F	DIN 69893-6 Form F	**55**
CPT	DIN ISO 26623-1	**63**
TC	DIN ISO 7988-1 (DIN 69871)	**92**
BT	MAS 403	**139**
ISO	DIN2080	**163**

MANDRINI DI RIDUZIONE CONO MORSE PER PUNTE

MORSE TAPER ADAPTERS FOR DRILLS



Articolo	D1	D2	L8	L9	L10	L11*	a	C
CM1	12,065	25	56	52	19	-	1°25'43"	5,2
CM2	17,78	32	67	62	22	22	1°25'50"	6,3
CM3	23,825	40	84	78	27	31	1°26'16"	7,9
CM4	31,267	48	107	98	32	41	1°29'15"	11,9
CM5	44,399	63	135	125	38	53	1°30'26"	15,9

* **= Solo nei mandrini TC e BT in forma AD+B**

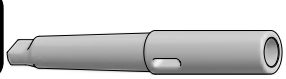
* *= Only for TC and BT toolholders with AD+B form*


P. 308
ESTRATTORI
PULLERS

ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**42**
TC	DIN ISO 7988-1 (DIN 69871)	**98**
BT	MAS 403	**142**
ISO	DIN2080	**164**
VDI	DIN 10889 (DIN 69880)	**180**

DIN 2185

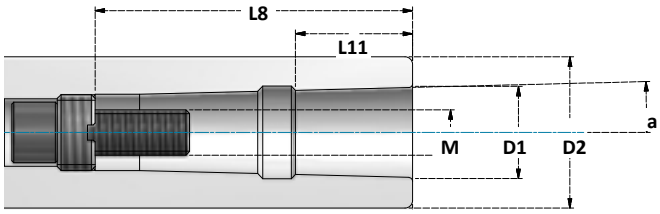
P. 188
RIDUZIONI CONO MORSE
MORSE TAPER SLEEVES

DIN 2187

P. 188
PROLUNGHE CONO MORSE
MORSE TAPER EXTENSIONS


P. 297
BUSSOLE CILINDRICHE CONO MORSE
MORSE TAPER EXTENSIONS

MANDRINI DI RIDUZIONE CONO MORSE PER FRESE

MORSE TAPER ADAPTERS FOR THREADED MILLS



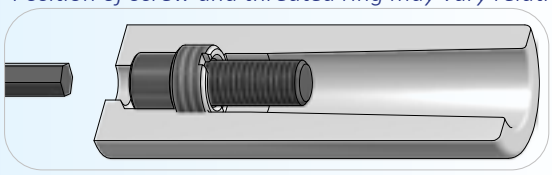
Articolo	D1	D2	L8	L11*	a	M
CM1	12,065	25	56	-	1°25'43"	M6
CM2	17,78	32	67	22	1°25'50"	M10
CM3	23,825	40	84	31	1°26'16"	M12
CM4	31,267	48	107	41	1°29'15"	M16
CM5	44,399	63	135	53	1°30'26"	M20

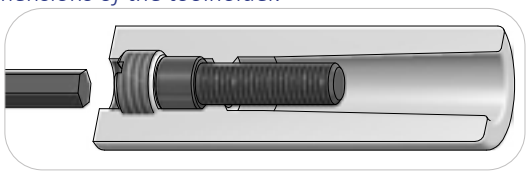
* **= Solo nei mandrini TC e BT in forma AD+B**

* *= Only for TC and BT toolholders with AD+B form*

La posizione dell'anello rispetto alla vite può variare in base alle caratteristiche costruttive del mandrino.

Position of screw and threated ring may vary relatively to dimensions of the toolholder.





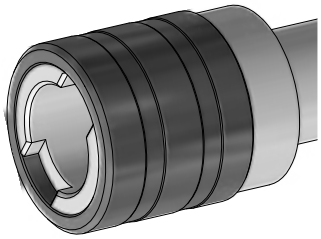
ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**42**
TC	DIN ISO 7988-1 (DIN 69871)	**99**
BT	MAS 403	**143**
ISO	DIN2080	**164**

PORTAUTENSILI A CAMBIO RAPIDO PER MASCHIATURA

MASCHIATURA RIGIDA - MASCHIATURA CON COMPENSAZIONE

QUICK CHANGE TAPPING TOOLHOLDERS

RIGID TAPPING - TAPPING WITH COMPENSATION



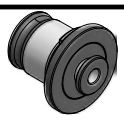
ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**43**
TC	DIN ISO 7988-1 (DIN 69871)	**102**
BT	MAS 403	**146**
ISO	DIN2080	**165**

ATTACCO SHANK	NORMATIVA NORM	PAG.
VDI	DIN 10889 (DIN 69880)	**181**
CM	DIN 228	**190**
WE	DIN 1835-1 Form B	**229**

INSERZIONI PORTAMASCHI CON FRIZIONE
INSERZIONI PORTAMASCHI SENZA FRIZIONE

TAPPING ADAPTERS WITH SAFETY CLUTCH

TAPPING ADAPTERS WITHOUT CLUTCH

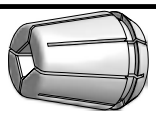


P. 298 INSERZIONI *ADAPTERS*

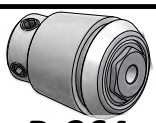
PINZE ER PORTAMASCHI

ER TAPPING COLLETS

DIN ISO 15488 (DIN6499)



P. 265 PINZE CON QUADRO *COLLETS WITH SQUARE*



P. 264 PINZE CON COMPENSAZIONE *COLLETS WITH COMPENSATION*

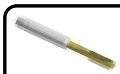
DIMENSIONI DEI GAMBI DEI MASCHI

TAP SHANKS DIMENSIONS



D	Q	DIN-352	DIN-371 CODOLO RINFORZATO *REINFORCED SHANK*	DIN-376 CODOLO PASSANTE *REDUCED SHANK*	ISO-529	ISO-529
2,5	2,1	M1	M1	M3,5		
		M1,4	M1,4			
		M1,6	M1,6			
		M1,8	M1,8			
2,8	2,1	M2	M2	M4		
		M2,2	M2,2			
		M2,5	M2,5			
3,15	2,5				M4	M3
3,5	2,7	M3	M3	M5		
3,55	2,8				M4,5	M3,5
4	3,15	M3,5	M3,5		M5	M4
4,5	3,4	M4	M4	M6		
5	4					M5
6	4,9	M5	M5			
		M6	M6			
		M8		M8		
6,3	5				M8	M6
7	5,5	M10		M10		
8	6,2		M8		M10	M8
9	7,1	M12		M12	M12	
10	8		M10			M10

D	Q	DIN-352	DIN-371 CODOLO RINFORZATO *REINFORCED SHANK*	DIN-376 CODOLO PASSANTE *REDUCED SHANK*	ISO-529	ISO-529
11	9	M14		M14		
11,2	9				M14	
12	9	M16		M16		
12,5	10				M16	
14	11	M18		M18		
14	11,2				M18	
					M20	
16	12	M20		M20		
16	12,5				M22	
18	14				M24	
18	14,5	M22		M22		
		M24		M24		
20	16	M27		M27	M27	
					M30	
22	18	M30		M30		
25	20	M33		M33	M36	
28	22	M36		M36		
32	24	M39		M39		
		M42		M42		
36	29	M45		M45		
		M48		M48		



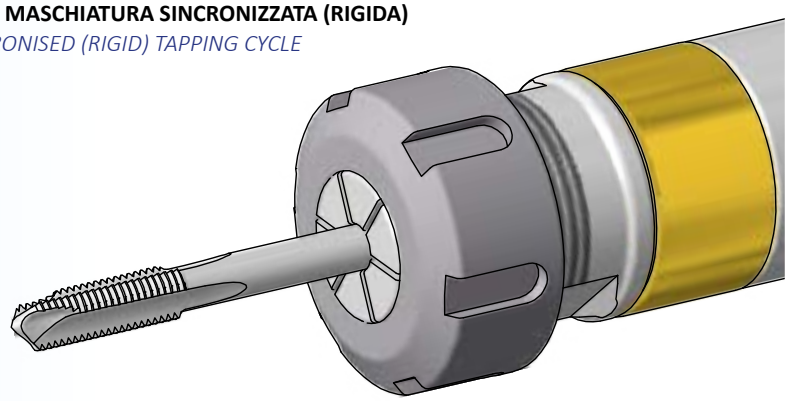
P. 336 MASCHI *TAPS*

MANDRINI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING

*** CORSA DI COMPRESSIONE MINIMA PER CICLI DI MASCHIATURA SINCRONIZZATA (RIGIDA)**
** MINIMUM LENGTH COMPENSATION FOR SYNCHRONISED (RIGID) TAPPING CYCLE*

*** COMPRESSIONE E TRAZIONE +/- 0,5mm**
** COMPRESSION AND ETENSION +/-0,5mm*

*** ALLUNGA LA VITA DELL'UTENSILE FINO AL 300%**
** INCREASE TOOL LIFE UP TO 300%*



VANTAGGI RISPETTO AL SISTEMA CON BUSSOLE
ADVANTAGES COMPARED TO ADAPTERS SYSTEM

*** PASSAGGIO DEL REFRIGERANTE**
** COOLANT THROUGH*

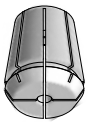
*** ADATTO PER MASCHIATURA AD ALTE VELOCITÀ**
** SUITABLE FOR HIGH SPEED TAPPING*

*** SISTEMA PORTAPINZE ER**
** ER COLLET SYSTEM*

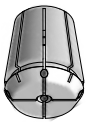


P. 265
PINZE CON QUADRO
COLLETS WITH SQUARE

PINZE ER PORTAMASCHI
TAPPING ER COLLETS



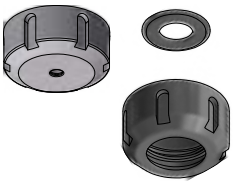
PINZE ER PORTAMASCHI A TENUTA
SEALED TAPPING ER COLLETS





P. 284
GHIERE A TENUTA
SEALED NUTS

GHIERE A TENUTA
SEALED NUTS



GHIERE STANDARD
STANDARD NUTS



Articolo	D (mm)	MASCHI TAPS
ERC16M	3,5 ÷ 10	M3 ÷ M12
ERC20M	3,5 ÷ 12	M3 ÷ M16
ERC25M	3,5 ÷ 16	M3 ÷ M20
ERC32M	3,5 ÷ 20	M3 ÷ M27
ERC40M	6 ÷ 25	M5 ÷ M33

Articolo	D (mm)	MASCHI TAPS
ERC16MRF	4 ÷ 8	M4 ÷ M10
ERC20MRF	4 ÷ 10	M4 ÷ M12
ERC25MRF	4 ÷ 12	M4 ÷ M16
ERC32MRF	4,5 ÷ 16	M4 ÷ M22
ERC40MRF	6 ÷ 20	M5 ÷ M27

ATTACCO SHANK	NORMATIVA NORM	PAG.
HSK - A	DIN 69893-1 Form A	**43**
TC	DIN ISO 7988-1 (DIN 69871)	**103**
BT	MAS 403	**147**
WE	DIN 1835-1 Form B	**229**



P. 336
MASCHI
TAPS

PORTA ALESATORI FLOTTANTI CON REFRIGERAZIONE INTERNA
FLOATING REAMER HOLDERS WITH COOLANT THROUGH

I porta alesatori flottanti, grazie all'oscillazione su una doppia gabbia di cuscinetti assiali che compensa gli errori di allineamento tra il mandrino della macchina e il pezzo, permettono di ottenere una lavorazione di alta qualità.

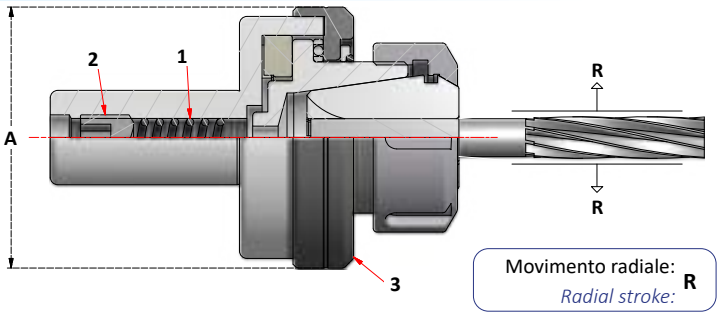
Il porta alesatore flottante viene regolato con un gioco assiale minimo e il flottaggio dell'alesatore è dato dall'oscillazione radiale. Per mantenere l'alesatore in centro il porta utensile è dotato di un perno di autocentraggio spinto da una molla regolabile in base alle dimensioni dell'alesatore montato.

I porta alesatori flottanti si possono usare anche per la maschiatura rigida.

Free moving between two axial bearing allows reamers to follow existing drilled hole for high quality work.

Floating reamer holder is adjusted with a minimum axial float and the float of reamer is given by the radial oscillation. To keep the reamer in center the tool holder is equipped with a self-centering pin pushed by a spring adjustable according to the size of the mounted reamer.

Floating reamer holders can also be used for rigid tapping.



Movimento radiale: **R**
Radial stroke:

Articolo	A	R	Collets Range	Ghiera Nut
...RM11	42	± 1 mm	1÷7	G11A.EX
...RM16	42	± 1 mm	1÷10	G16SE
...RM20	50	± 1 mm	1÷14	G20SE
...RM25	57	± 1 mm	1÷20	G25S
...RM32	69	± 1,5 mm	2÷22	G32S
...RM40	79	± 1,5 mm	3÷30	G40S

- La spinta della molla **1** mantiene l'utensile centrato anche in posizione orizzontale.
- La vite **2** regola la pressione della molla per regolare il movimento radiale.
- Allentando di 0,1/0,2mm la ghiera **3** si permette all'alesatore di avere un movimento pendolare. (Fig2)

*- Pressure of spring **1** keeps reamer centered, even in horizontal position.*
*- Screw **2** allows adjustment of floating level.*
*- Unscrewing nut **3** for 0,1/0,2mm, the reamer has a pendulum float. (Fig 2)*

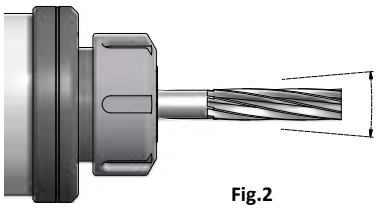


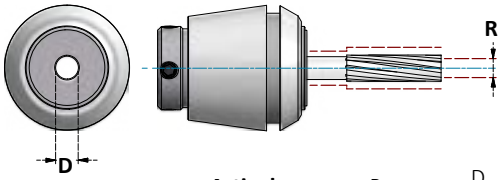
Fig.2

ATTACCO SHANK	NORMATIVA NORM	PAG.
VDI	DIN 10889 (DIN 69880)	**182**
CM	DIN 228	**191**
D CILINDRICO	DIN 1835-1 Form A	**230**

PINZE ER CON OSCILLAZIONE RADIALE PER ALESATORI
ER FLOATING COLLETS FOR REAMERS

- Si montano su tutti i tipi di mandrini portapinze ER.
- Sono adatte anche alla maschiatura rigida.
- Non utilizzare il refrigerante attraverso la pinza.
- Si possono montare solo in ghiere con estrazione eccentrica.

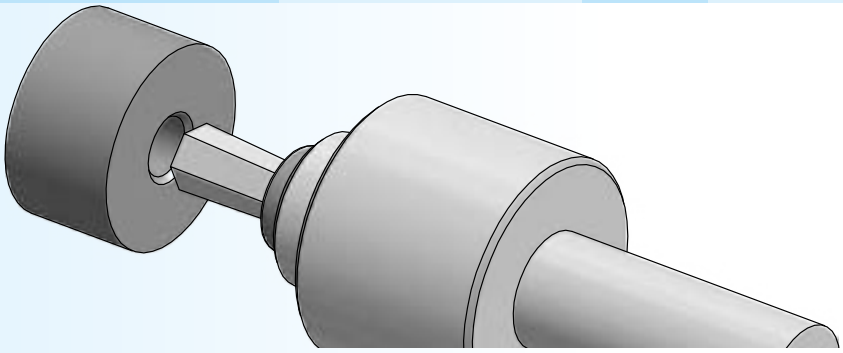
- Used with all types of ER collet chucks.
- Suitable also for tapping operations.
- Coolant throught collet not recommended.
- Can be mounted only on nuts with eccentric extractor.

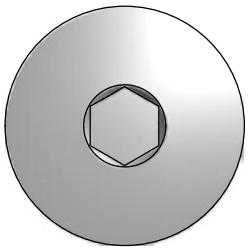


Articolo	R	D (mm)
ERC16PA	± 0,5 mm	2 ÷ 7
ERC20PA	± 0,5 mm	3 ÷ 8
ERC25PA	± 0,5 mm	3 ÷ 10
ERC32PA	± 0,5 mm	4 ÷ 14
ERC40PA	± 0,5 mm	5 ÷ 16



P. 268
PINZE CON OSCILLAZIONE
FLOATING COLLETS





Il **brocciatore** è un dispositivo che permette di eseguire cave regolari in fori passanti e ciechi.
É costruito in acciaio temperato e viene fornito con diverse tipologie di attacchi (cilindrico, cono morse e VDI) per applicazioni su diversi macchinari (Torni monomandrino, plurimandrino e cnc, centri di lavoro, trapani e transfer).

Le **brocce** sono costruite in acciaio a tempera totale con durezza molto elevata e sono idonee alla lavorazione di acciaio, ottone, alluminio, ghisa ed altri materiali. Sono fornibili a richiesta brocce con rivestimento TiN.

L'inclinazione (G°) della sede del brocciatore rispetto al corpo centrale dell'attrezzatura, insieme alla rotazione e l'avanzamento forniti dalla macchina utensile, consentono l'asportazione del materiale mediante la **broccia** avente il profilo frontale uguale a quello della figura che si vuole ottenere.

Il principio di funzionamento non cambia sui diversi macchinari:
- sui torni il pezzo da lavorare e l'utensile-broccia ruotano ed il brocciatore è fermo.
- sui centri di Lavoro Il pezzo da lavorare e l'utensile-broccia sono fermi e sarà invece il corpo del brocciatore a ruotare.

*The **broaching** toolholder is a device that allows to perform regular profiles in through and blind holes.*
It is manufactured in hardened steel and is supplied with various types of shanks (cylindrical, morse-taper and VDI) for use on different machines (single-spindle lathes, multi-spindle lathes, NC machines, cnc milling machines, drills and transfer machines).

*The **broaches** are made of tempered steel with very high hardness and are suitable for the machining of steel, brass, aluminum, cast iron and other materials. Broaches with TiN coating are also available on request.*

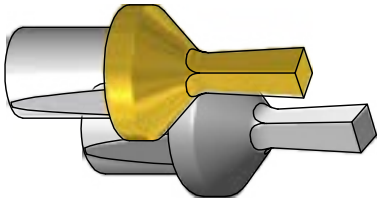
The centreline of the cutting tool is inclined (G°) from the centreline of the work piece. The rotation and cutting speed of the machine enable the removal of the material by the broach with same profile as the figure to be obtained.

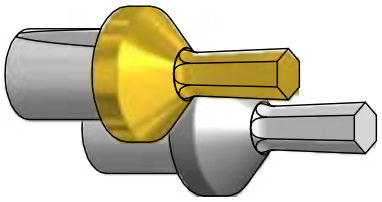
The device can be used on different machines:
- on the lathes the workpiece and the tool-broach rotate and the broaching toolholder is stopped.
- on milling machines the workpiece and the tool-broach are stopped and the broach toolholder body will rotate.

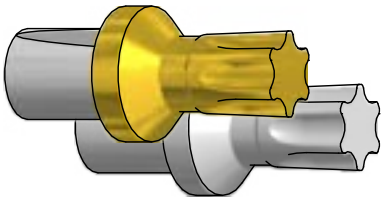
ISTRUZIONI *INSTRUCTIONS* Pag. 356

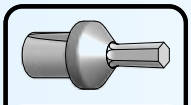
BROCCIATORI
BROACH HOLDERS

ATTACCO SHANK	NORMATIVA NORM	PAG.
VDI	DIN 10889 (DIN 69880)	**182**
CM	DIN 228	**192**
D CILINDRICO	DIN 1835-1 Form A	**231**








P. 332
BROCCE
BROACHES

PREPARAZIONE *PREPARATION*

Il diametro del preforo per eseguire la brocciatura deve essere maggiorato rispetto alla misura del profilo da eseguire, per rendere meno gravoso l'avanzamento dell'utensile. Eseguire uno smusso prima del preforo.

La lunghezza del preforo deve essere 20%-40% in più della lunghezza del profilo da eseguire.

Diameter of the hole must exceed the size of profile to be processed, this is for facilitate the cutting phase of broaching tool. Make a chamfer before the drill hole.
Length of the drill hole: 20%-40% more than the profile length to be executed.

		MAGGIORAZIONE / INCREASE
Per cave esagonali For hexagonal profiles	< 14 mm	1%- 3%
	> 14 mm e materiali duri / and hard materials	5%
	> 21 mm	10%
Per cave quadre For square profiles	< 14 mm	3%- 7%
	> 14 mm e materiali duri / and hard materials	10%
	> 17 mm	15%

Torx	Pre-foro / Pre-hole
5	Ø1,00 (-0,00 +0,05)
6	Ø1,40 (-0,00 +0,05)
7	Ø1,55 (-0,00 +0,07)
8	Ø1,90 (-0,00 +0,10)
10	Ø2,20 (-0,00 +0,10)
15	Ø2,60 (-0,00 +0,10)
20	Ø3,00 (-0,00 +0,10)

Torx	Pre-foro / Pre-hole
25	Ø3,40 (-0,00 +0,10)
27	Ø3,75 (-0,00 +0,10)
30	Ø4,20 (-0,00 +0,10)
40	Ø5,00 (-0,00 +0,15)
45	Ø5,80 (-0,00 +0,20)
50	Ø6,70 (-0,00 +0,20)
55	Ø8,20 (-0,00 +0,20)

CENTRATURA DELLA BROCCIA *BROACH CENTERING*

Per ottenere una buona finitura è molto importante che la punta della broccia sia perfettamente in centro con il pezzo da lavorare. Inoltre una corretta centratura preserva dall'usura l'utensile e i cuscinetti.
I brocciatori fissi del nostro catalogo sono sottoposti ad un rigoroso controllo per ottenere un perfetto centraggio della punta della broccia rispetto all'asse del dispositivo brocciatore montando brocce con sporgenza "H" specifica.

Il grado di precisione può essere influenzato da:
- disallineamento della macchina utensile;
- scarsa rigidità della macchina utensile che può provocare vibrazioni o disallineamento dovuto all'elevata spinta del brocciatore.

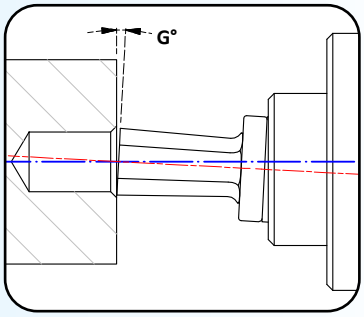
Se la brocciatura viene eseguita correttamente la misura della cava ricavata sarà identica alla misura dell'utensile- broccia.

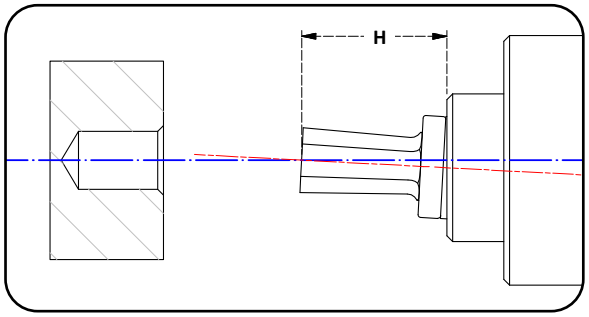
Se si riscontrano problemi è consigliabile regolare la centratura della macchina utensile.
Nei casi in cui non sia possibile regolare la macchina utensile utilizzare i brocciatori registrabili.

To broach properly the profile it is very important for the bit of the broach to be perfectly centred with the workpiece.
Broach holders from our catalogue are subjected to strict control to obtain a perfect centering of the device axis by mounting broaches with "H" thickness specific.

The degree of precision can be influenced by:
- misalignment of the tool machine;
- low rigidity of the machine tool that can generate vibration or misalignment due to the high thrust of the broacher.

If the broaching is done correctly the measurement of the slot obtained will be identical to the tool-broach size.
If there are problems, it is advisable to perfectly align the machine tool centering.
In cases where it is not possible to set the machine use adjustable broaching toolholder type.





PARAMETRI Pag. 357
PARAMETERS

PARAMETRI *PARAMETERS*

Velocità di rotazione: 1000-2500 giri/min. *Rotation speed: 1000-2500 r.p.m.*

La scelta dei parametri di avanzamento dipende da più fattori: la tipologia del materiale, la sezione, la quantità di materiale da asportare, la rigidità della macchina utensile e la presa del pezzo.
Nella fase della lavorazione in cui la broccia arriva in contatto con il pezzo da lavorare l'utensile tende a strisciare: è questo il momento di maggiore usura dell'utensile. Quando invece la broccia arriva in pieno contatto, l'utensile ed il pezzo hanno una rotazione sincronizzata. Per una maggiore durata è quindi consigliabile, ove possibile, iniziare la brocciatura con rotazione lenta o avanzamento rapido per una profondità di circa 0,5 mm e calare l'avanzamento sui parametri consigliati di seguito quando l'utensile e il pezzo sono in pieno contatto. Per uscire dal pezzo dopo aver eseguito la brocciatura utilizzare un avanzamento veloce ma non il rapido.

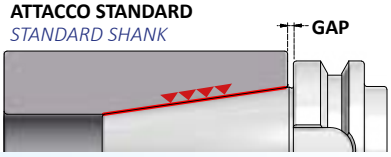
Major factor in the choice of the feeding parameters are: type of material, section, quantity of material to be removed, rigidity of the machine tool and the clamp of the piece.
In the processing phase where the broach touches the piece to be processed, it tends to dig (it is the major cause of tool wear).
When the broach reaches full contact, the tool and the piece rotate in synchronisation. To improve the process, it is advisable to start the broaching phase with slow rotation or fast feed for 0.5 mm deep and then reduce feed to recommended parameters when the tool and the piece are in full contact. To get out of the workpiece after broaching, use fast but not rapid feed.

Materiale da lavorare **Worked material**		**Avanzamento per giri** **Feed for r.p.m.**					
		Esagoni / Hexagons		Quadri / Squares		Torx	
		< 14mm	> 14mm	< 12mm	> 12mm	< T25	> t27
Acciaio dolce magnetico, Acciaio da costruzione, Acciaio da cementazione, Acciaio automatico (AVP) *Magnetic soft steel, Structural steel, Case carburizing steel, Free cutting steel (AVP)*	Rm < 700 N/mm²	0,10	0,08	0,06	0,04	0,10	0,08
Acciaio al carbonio- Acciaio legato- bonificato, fusioni d'acciaio *Plain carbon steel - Alloyed steel - heat-treatable steel, steel castings*	Rm 700 ÷ 850 N/mm²	0,08	0,06	0,05	0,03	0,08	0,06
Acciaio legato- bonificato- da nitrurazione- fusioni di acciaio *Alloyed steel - heat-treatable steel - nitriding steel - steel casting*	Rm 850 ÷ 1200 N/mm²	0,06	0,03	0,03	0,02	0,05	0,03
Acciaio legato- alta resistenza *Alloyed steel - high strength steel*	Rm 1200 ÷ 1400 N/mm²	0,02	0,02	0,02	0,02	0,03	0,02
Acciaio Inox automatico- acciaio inox austenico *Free machining stainless steel - austenitic stainless steel*	Rm < 850 N/mm²	0,08	0,06	0,04	0,03	0,08	0,06
Acciaio Inox ferritico- ferritico + austenico- Martensitico *Ferritic - ferritic + austenitic - martensitic stainless steel*	Rm > 850 N/mm²	0,04	0,03	0,03	0,02	0,04	0,03
Ghisa grigia lamellare *Lamellar grey cast iron*	Rm < 600 N/mm²	0,11	0,08	0,07	0,04	0,11	0,08
Ghisa grigia lamellare- ghisa sferoidale- ghisa malleabile *Lamellar grey cast iron - nodular cast iron - malleable cast iron*	Rm 600 ÷ 1000 N/mm²	0,07	0,05	0,04	0,03	0,07	0,05
Alluminio truciolo lungo *Aluminium long chipping*	Rm < 500 N/mm² Si < 10%	0,14	0,10	0,10	0,08	0,14	0,10
Alluminio truciolo corto *Aluminium short chipping*	Rm > 500 N/mm² Si > 10%	0,10	0,08	0,08	0,06	0,10	0,08
Rame- Ottone truciolo lungo *Cooper - soft brass long chipping*	Rm < 700 N/mm²	0,12	0,09	0,10	0,08	0,12	0,10
Rame- Bronzo truciolo corto *Cooper - hard brass short chipping*	Rm < 700 N/mm²	0,08	0,06	0,07	0,05	0,08	0,06
Titanio non legato *Titanium unalloyed*	Rm < 700 N/mm²	0,06	0,03	0,03	0,02	0,05	0,03
Leghe di titanio *Titanium alloys*	Rm > 700 N/mm²	0,03	0,02	0,02	0,02	0,03	0,02

SISTEMA A DOPPIO CONTATTO CONO+FLANGIA
DOUBLE CONTACT TAPER+FLANGE SYSTEM



MANDRINO MACCHINA STANDARD
STANDARD MACHINE SPINDLE
+
ATTACCO STANDARD
STANDARD SHANK

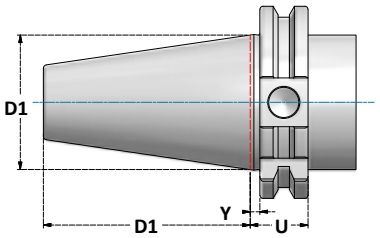


MANDRINO MACCHINA A DOPPIO CONTATTO
DOUBLE CONTACT MACHINE SPINDLE
+
ATTACCO A DOPPIO CONTATTO
DOUBLE CONTACT SHANK

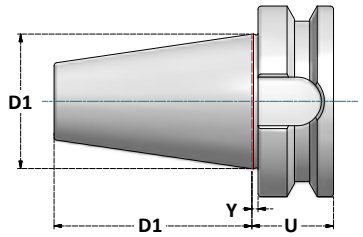


Disponibili per i mandrini **TC DIN ISO7388-1** (EX DIN69871) e per i mandrini **BT (MAS 403)**
Available for **TC DIN ISO7388-1** (EX DIN69871) *and* **BT (MAS 403)** *toolholders.*

CONO / TAPER	D1	L1	Y	U
TC30 **DTC30**	31,75	47,8	**3,2** **1**	19,1
TC40 / TCB40 **DTC40 / DTCB40**	44,45	68,4	**3,2** **1,01**	19,1
TC50 / TCB50 **DTC50 / DTCB50**	69,85	101,75	**3,2** **1,5**	19,1



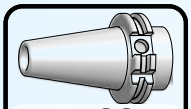
CONO / TAPER	D1	L1	Y	U
BT30 **DBT30**	31,75	48,4	**2** **1**	22
BT40 / BTB40 **DBT40 / DBTB40**	44,45	65,4	**2** **1,01**	27
BT50 / BTB50 **DBT50 / DBTB50**	69,85	101,8	**3** **1,5**	38



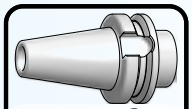
VANTAGGI:
Maggiore stabilità tra portautensile e macchina.
Vibrazioni ridotte per una maggiore precisione durante i lavori ad alta velocità o i lavori gravosi.
Ridotta usura dell'utensile.

BENEFITS:
Increased stiffnes and holding reliability.
Improved precision during high speed operations or heavy cutting applications.
Extended tool life.

I mandrini con sistema a doppio contatto si identificano con il prefisso D (es: DBT30... DTC40...).
Codes of toolholders with double contact system have prefix D (es: DBT30... DTC40...).



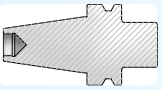
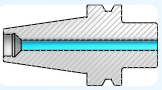
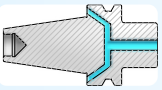
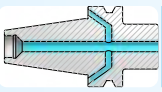
P. 66
ATTACCO TC
TC SHANK



P. 112
ATTACCO BT
BT SHANK

ADDUZIONE DEL REFRIGERANTE
COOLANT THROUGH

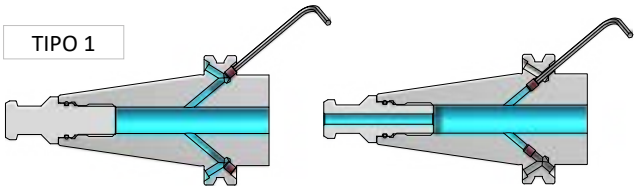
TC DIN ISO7388-1 (EX DIN69871) - **BT (MAS 403)**

	SENZA ADDUZIONE DEL REFRIGERANTE *WITHOUT COOLANT THROUGH*	A
	ADDUZIONE DEL REFRIGERANTE CENTRALE *COOLANT FROM CENTRE*	AD
	ADDUZIONE DEL REFRIGERANTE DALLA FLANGIA *COOLANT FROM FLANGE*	B
	ADDUZIONE DEL REFRIGERANTE CENTRALE O DALLA FLANGIA *COOLANT FROM CENTRE OR FLANGE*	AD+B

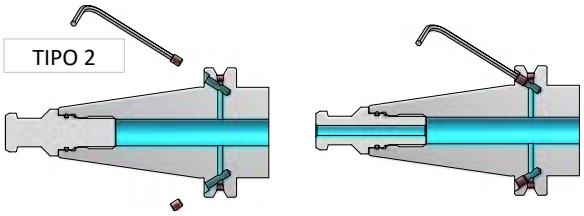
I mandrini in forma AD+B possono essere usati per l'adduzione del refrigerante dalla flangia e per l'adduzione del refigerante dal canale centrale.
Nel sistema "TIPO 1" la regolazione avviene chiudendo il grano.
Nel sistema "TIPO 2" la regolazione avviene rimuovendo il grano.

Toolholders AD+B can be used with coolant through "V" flange and with coolant through centre.
"TIPO 1" system works closing the screw.
"TIPO 2" system works removing the screw.

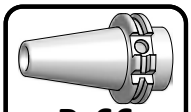
TIPO 1

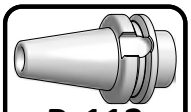


TIPO 2



CONO	TIPO 1	TIPO 2
40	M5	M4
50	M6	M5

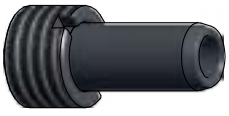

P. 66
ATTACCO TC
TC SHANK


P. 112
ATTACCO BT
BT SHANK

HSK DIN69893 - CPT DIN ISO 26623-1

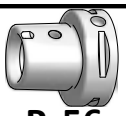
Per l'adduzione del refrigerante nei portautensili HSK DIN69893 e CPT DIN ISO 26623-1 è presente un foro filettato per montare i raccordi del refrigerante disponibili a catalogo.

For tcoolant through in HSK DIN69893 and CPT DIN ISO 26623-1 tool holders there is a threaded hole to mount the coolant tubes available in the catalogue.




P. 306
RACCORDI REFRIGERANTE
COOLANT TUBES


P. 20
ATTACCO HSK
HSK SHANK


P. 56
ATTACCO CPT
CPT SHANK

BILANCIATURA DEI PORTAUTENSILI

TOOLHOLDERS BALANCING

VANTAGGI:

Ridotta usura dei cuscinetti della macchina utensile.

Vibrazioni ridotte.

Ridotta usura dei taglienti dell'utensile.

Migliori finiture superficiali.

BENEFITS:

Reduced wear of machine tool bearings.

Reduced vibrations

Extended tool life.

Better superficial finishing.

BILANCIATURA DEI PORTAUTENSILI A CATALOGO

BALANCING OF THE TOOLHOLDERS IN THE CATALOGUE

Tutti i portautensili presenti a catalogo sono prodotti compensando le asimmetrie richieste dalle normative degli attacchi.
A richiesta, una seconda bilanciatura avviene attraverso la rimozione del materiale per piccole correzioni rilevate dalla macchina bilanciatrice.
La verifica della bilanciatura viene effettuata misurando con una macchina bilanciatrice lo squilibrio residuo del portautensile senza i suoi accesori mobili.
Fanno eccezione i portafresa weldon che vengono misurati con una spina cilindrica serrata con i grani del portautensile.

All the toolholders in the catalogue are produced by compensating the asymmetries required by the attachment regulations.
Upon request, a second balancing takes place through the removal of the material for small corrections detected by the balancing machine.
Balancing is done measuring toolholders unbalance without its mobile accessories.
Only weldon tool holders are an exception; unbalance is measured with a cylindrical pin tightened with weldon screws.

LO SQUILIBRIO

THE UNBALANCE

Lo squilibrio è uno scostamento del baricentro della massa rotante dall'asse di rotazione. La massa rotante comprende: mandrino macchina, portautensile, componenti intermedi (pinze), elementi aggiuntivi di portautensili (ghiere o viti) e utensile.
La ragione dello squilibrio è l'asimmetria geometrica, la tolleranza, errori di montaggio, ecc.
Lo squilibrio provoca vibrazioni del setup, che riducono la durata dell'utensile e la qualità della lavorazione.
Per limitare lo squilibrio ridurre al minimo i giochi sul mandrino e impostare utensili e portautensili adeguati.
Per le applicazioni più impegnative potrebbe essere necessario bilanciare non solo i portautensili, ma anche gli utensili.

Unbalance is a displacement of the center of gravity of the rotating mass from the axis of rotation. The rotating mass includes: machine spindle, toolholder, intermediate components (collets), other additional elements of toolholders (nuts) and tool.
The reason of unbalance is geometric asymmetry, tolerance of, mounting errors, etc.
Unbalance causes vibration of the setup, which reduces tool life and decreases quality of machining.
To limit to an acceptable level of unbalance minimize clearances on the spindle and set suitable tools and toolholders.
For most demanding applications it may be necessary not only balancing the toolholders, but also the tools.

LA BILANCIATURA

BALANCING

La bilanciatura consiste nel ridurre lo squilibrio spostando il centro della massa rotante nella direzione dell'asse.
Questo viene fatto studiando la geometria corretta e aggiungendo o rimuovendo peso.
Questo obiettivo può essere raggiunto solo in una certa misura, poichè ci sarà sempre dello squilibrio residuo.

Balancing consists of reducing the unbalance by moving the center of rotating mass in the direction of the axis.
This is done by ensuring the proper geometry and adding or removing weight.
This target can only be achieved to some degree, as there will always be residual unbalance.

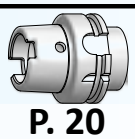
Sono previste due diversi classi di equilibratura:
G 2,5 con tolleranza più stretta per lavorazioni ad alte velocità
G 6,3 con tolleranza maggiore per lavorazioni normali

We provide two different classes of balancing:
G 2,5 with tight tolerance, designed for high speed machining
G 6,3 with higher tolerance, designed for general machining

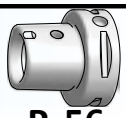
G2,5	G2,5	G6,3	G6,3	G6,3	G6,3	G6,3	G6,3
15000r.p.m.	25000r.p.m.	8000r.p.m.	10000r.p.m.	12000r.p.m.	15000r.p.m.	18000r.p.m.	24000r.p.m.

ALTRE BILANCIATURE ESEGUIBILI A RICHIESTA

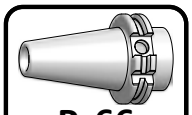
OTHER BALANCING AVAILABLE ON REQUEST



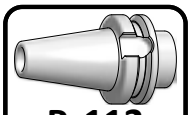
P. 20
ATTACCO HSK
HSK SHANK



P. 56
ATTACCO CPT
CPT SHANK



P. 66
ATTACCO TC
TC SHANK



P. 112
ATTACCO BT
BT SHANK

TABELLA PER CONVERSIONE MISURE POLLICI - MILLIMETRI

LIST OF INCHES SIZES AND CONVERSION TO METRIC SIZES

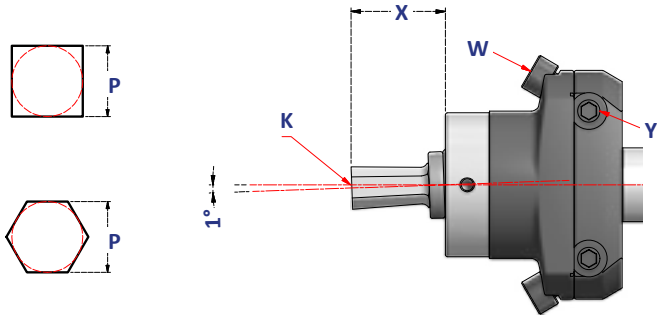
1” = 25,4mm

POLLICI INCH		mm	Progressione Progression	
FRAZIONI FRACTIONS	DECIMALI DECIMAL		x 16ths	x 32nds
1/64		0,397		
1/32		0,794		x
3/64		1,191		
1/16	.062	1,588	x	x
5/64		1,984		
3/32	.093	2,381		x
7/64		2,778		
1/8	.125	3,175	x	x
9/64		3,572		
5/32	.156	3,969		x
11/64		4,366		
3/16	.187	4,763	x	x
13/64		5,159		
7/32	.218	5,556		x
15/64		5,953		
1/4	.250	6,350	x	x
17/64		6,747		
9/32	.281	7,144		x
19/64		7,541		
5/16	.312	7,938	x	x
21/64		8,334		
11/32	.343	8,731		x
23/64		9,128		
3/8	.375	9,525	x	x
25/64		9,922		
13/32	.406	10,319		x
27/64		10,716		
7/16	.437	11,113	x	x
29/64		11,509		
15/32	.468	11,906		x
31/64		12,303		
1/2	.500	12,700	x	x
33/64		13,097		
17/32	.531	13,494		x
35/64		13,891		
9/16	.562	14,288	x	x
37/64		14,684		
19/32	.593	15,081		x
39/64		15,478		
5/8	.625	15,875	x	x
41/64		16,272		
21/32	.656	16,669		x
43/64		17,066		
11/16	.687	17,463	x	x
45/64		17,859		
23/32	.718	18,256		x
47/64		18,653		
3/4	.750	19,050	x	x

POLLICI INCH		mm	Progressione Progression	
FRAZIONI FRACTIONS	DECIMALI DECIMAL		x 16ths	x 32nds
49/64		19,447		
25/32	.781	19,844		x
51/64		20,241		
13/16	.812	20,638	x	x
53/64		21,034		
27/32	.843	21,431		x
55/64		21,828		
7/8	.875	22,225	x	x
57/64		22,622		
29/32	.906	23,109		x
59/64		23,416		
15/16	.937	23,813	x	x
61/64		24,209		
31/32	.969	24,606		x
63/64		25,003		
1”	1.000	25,4	x	x
1" - 1/64		25,797		
1" - 1/32	1.043	26,194		x
1" - 3/64		26,591		
1" - 1/16	1.062	26,988	x	x
1" - 5/64		27,384		
1" - 3/32	1.093	27,781		x
1" - 7/64		28,178		
1" - 1/8	1.125	28,575	x	x
1" - 9/64		28,972		
1" - 5/32	1.156	29,369		x
1" - 11/64		29,766		
1" - 3/16	1.187	30,163	x	x
1" - 13/64		30,559		
1" - 7/32	1.218	30,956		x
1" - 15/64		31,353		
1" - 1/4	1.250	31,750	x	x
1" - 17/64		32,147		
1" - 9/32	1.281	32,544		x
1" - 19/64		32,941		
1" - 5/16	1.312	33,338	x	x
1" - 21/64		33,734		
1" - 11/32	1.343	34,131		x
1" - 23/64		34,528		
1" - 3/8	1.375	34,925	x	x
1" - 25/64		35,322		
1" - 13/32	1.406	35,719		x
1" - 27/64		36,116		
1" - 7/16	1.437	36,513	x	x
1" - 29/64		36,909		
1" - 15/32	1.468	37,306		x
1" - 31/64		37,703		
1" - 1/2	1.500	38,100	x	x

POLLICI INCH		mm	Progressione Progression	
FRAZIONI FRACTIONS	DECIMALI DECIMAL		x 16ths	x 32nds
1" - 33/64		38,497		
1" - 17/32	1.531	38,894		x
1" - 35/64		39,291		
1" - 9/16	1.562	39,688	x	x
1" - 37/64		40,084		
1" - 19/32	1.593	40,481		x
1" - 39/64		40,878		
1" - 5/8	1.625	41,275	x	x
1" - 41/64		41,672		
1" - 21/32	1.656	42,069		x
1" - 43/64		42,466		
1" - 11/16	1.687	42,863	x	x
1" - 45/64		43,259		
1" - 23/32	1.718	43,656		x
1" - 47/64		44,053		
1" - 3/4	1.750	44,450	x	x
1" - 49/64		44,847		
1" - 25/32	1.781	45,244		x
1" - 51/64		45,641		
1" - 13/16	1.812	46,038	x	x
1" - 53/64		46,434		
1" - 27/32	1.843	46,831		x
1" - 55/64		47,228		
1" - 7/8	1.875	47,625	x	x
1" - 57/64		48,022		
1" - 29/32	1.906	48,419		x
1" - 59/64		48,816		
1" - 15/16	1.937	49,213	x	x
1" - 61/64		49,609		
1" - 31/32	1.969	50,006		x
1" - 63/64		50,403		
2”	2.000	50,8	x	x

BROCCIATORI REGISTRABILI
ADJUSTABLE BROACH HOLDERS



ISTRUZIONI D'USO
- DIAMETRO DI FORATURA
Eseguire una foratura maggiorata di 0,2 - 0,3mm rispetto alla quota **P** della brocciatura da eseguire per rendere meno gravoso l'avanzamento dell'utensile.
- GIRI DELLA BROCCIA
1000 - 1500 (giri/min)
- AVANZAMENTO DELLA BROCCIA
0,01 - 0,03 (mm/giro)
- LUNGHEZZA DELLE BROCCE
Si possono usare brocce di diversa lunghezza **X**, consentendo così di eseguire brocciature all'interno di incamerature relativamente poco profonde.
- CENTRATURA DELLA BROCCIA
La registrazione mediante le viti **Y** in senso laterale e le viti **W** in senso verticale permette di ottenere la centratura del punto **K** rispetto all'asse del gambo **D** più precisa rispetto ai tradizionali brocciatori non registrabili.
- DISASSAMENTO TORRETTA
Permette, nei casi in cui l'alloggiamento in macchina del gambo **D** non sia in asse con il mandrino della fantina, di correggere tale disassamento agendo sempre sulle viti di registrazione **Y** e **W**.

INSTRUCTIONS
- DRILLING DIAMETER
Make hole 0,2-0,3mm larger than size **P** of broach.
- ROTATION SPEED
1000 - 1500 (rpm)
- FEED
0,01 - 0,03 (mm/rpm)
- BROACHING LENGHT
You can use different broaching lenghts **X**, so that you can even broach inside quite deep chambers.
- BROACH CENTRING
By adjusting screws **Y** sideways and screws **W** vertically, you can centre point **K** compared to centre-line of shaft **D**, which is more precise compared to traditional broaching toolholders that are not adjustable.
- TURRET OFFSET
If shaft is not lodged in machine centred with chuck of head stock, you can correct this offset, again by adjusting screws **Y** and **W**.

BROCCIATORI REGISTRABILI
BROACH HOLDERS

ATTACCO SHANK	NORMATIVA NORM	PAG.
CM	DIN 228	**192**
D CILINDRICO	DIN 1835-1 Form A	**231**

INFORMAZIONI TECNICHE
TECHINCAL INFORMATION PAG. M2

MASCHI A MACCHINA AD ALTO RENDIMENTO
HIGH PERFORMANCE MACHINE TAPS

NOVITÀ NEW



TOP TAP HSSE-PM H1
DIN371- DIN376 PAG. M3

Gruppo di maschi a macchina destinati alla filettatura ad alte prestazioni in una vasta gamma di materiali come acciaio, acciaio inossidabile, ghisa, metalli non ferrosi, leghe resistenti al calore e leghe di titanio.
Group of machine taps intended for high performance thread cutting in a wide range of material such as steel, stainless steel, cast iron, non-ferrous metals, heat-resistant alloys, and titanium alloys.



FAN HSSE-PM S1
DIN371- DIN376 PAG. M4

Per acciai difficili da lavorare, legati ad alta resistenza, temprati e rinvenuti fino a 38 HRC, 800 MPa ≤Rm≤1200 Mpa.
For tool and difficult to process steels with tensile strenght of RM≤1200 Mpa and for heat treated steels up to 38 HRC.



800X HSSE T2
DIN371- DIN376- DIN374 PAG. M5-M6

I maschi 800x sono la soluzione per una vasta gamma di materiali da lavorazione inclusi gli acciai inossidabili.
L'innovativa tecnologia di costruzione garantisce una alta precisione ed efficacia di lavorazione aumentando la vita dell'utensile.
Taps 800X are the best choice for large range of application also for processing of stainless steel.
Innovative production technologies guaranties high precision and machining efficiency plus increased tool life.



800 HSSE
DIN371- DIN376 PAG. M7

Per acciai da costruzione, da cementazione, basso-legato, 600 MPa ≤ Rm ≤ 800 Mpa.
For structural, free machining and low alloy steels with tensile strenght 600 MPa ≤ Rm ≤ 800 Mpa.



INOX HSSE
DIN371- DIN376 PAG. M8

Per acciai legati, inossidabili e resistenti agli acidi, Rm≤1000 MPa.
For high alloy steels, stainless and acid resistant steels with tensile strenght of Rm ≤ 1000 MPa.

MASCHI A RULLARE
FORMING TAPS

NOVITÀ NEW

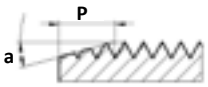


WGN HSSE-PM T2 C1
DIN371- DIN376 PAG. M9

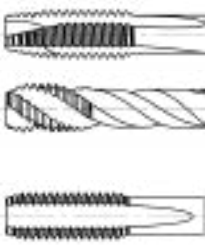
I maschi a rullare WGN sono progettati per la formatura plastica di filettature in materiali come acciaio e acciaio inossidabile con una resistenza alla trazione fino a 1000 MPa e metalli non ferrosi.
La lavorazione senza trucioli garantisce un'elevata sicurezza di processo.
L'utensile è realizzato in acciaio HSSE-PM ottenuto mediante tecnologia di metallurgia delle polveri, che garantisce una struttura uniforme e un'elevata resistenza all'usura.

The WGN forming taps are designed for plastic forming of threads in materials such as steel and stainless steel with a tensile strength of up to 1000 MPa, and non-ferrous metals. The chip-free machining ensures high process safety.
The tool is made of HSSE-PM steel obtained by powder metallurgy technology, which guarantees a uniform structure and high wear resistance.

INFORMAZIONI TECNICHE
TECHNICAL INFORMATION



	SCANALATURE / FLUTES	FORMA	a	P	
MASCHI A MACCHINA MACHINE TAPS	Dritte con imbocco corretto Straight with spiral point	B	8°	4-5P	Per fori passanti For open holes
	Elicoidali Spiral	C	17°	2-3P	Per fori ciechi For blind holes
MASCHI A RULLARE FORMING TAPS	Dritte Straight	C	8,5°	2-3P	Per fori passanti e ciechi For open and blind holes
		E	11,5°	1,5-2P	



RIVESTIMENTO / COATING	
T2	*TiAlN+TiN*
H1	*TiAlN+WC/C*
S1	*TiAlSiN*
C1	*TiN+TiCN*

MATERIALE / MATERIAL	
HSSE	acciaio superrapido al cobalto high speed cobalt steel
HSSE-PM	acciaio da polveri - sinterizzato high speed powder steel

GRUPPI E CAMPI DI APPLICAZIONE
GROUPS AND RANGE OF APPLICATION

			ACCIAIO / STEEL		Rm	HRC
P	Acciaio al carbonio Carbon steel	P1	*Acciaio dolce / magnetico*	*Free cutting steel*	750	-
		P2	*Acciaio non legato - Da costruzione, da cementazione*	*Non-alloyed steel C ≤ 0,55 %*	650	-
		P3	*Acciaio non legato - al carbonio*	*Non-alloyed steel C > 0,55 %*	650	-
		P4	*Acciaio non legato - bonificato*	*Non-alloyed steel C ≤ 0,55 %*	700	-
		P5	*Acciaio non legato - bonificato*	*Non-alloyed steel C ≤ 0,55 %*	1000	32
	Acciaio basso-legato Low-alloyed steel	P6	*Acciaio basso-legato*	*Low-alloyed steel*	600	-
		P7	*Acciaio basso-legato bonificato*	*Low-alloyed steel*	1000	32
		P8	*Acciaio basso-legato bonificato*	*Low-alloyed steel*	1200	41
		P9	*Acciaio basso-legato bonificato*	*Low-alloyed steel*	1400	45
	Acciaio legato High-alloyed steel	P10	*Acciaio legato / per utensili*	*High-alloyed steeland high-alloyed tool steel*	700	-
		P11	*Acciaio legato / per utensili*	*High-alloyed steeland high-alloyed tool steel*	1000	32
		P12	*Acciaio legato / per utensili*	*High-alloyed steeland high-alloyed tool steel*	1400	45
	Acciaio inossidabile Stainless steel	P13	*Inossidabile ferritico, martensitico*	*Stainless steel feritic/martensitic*	700	-
		P14	*Inossidabile martensitico*	*Stainless steel martensitic*	1100	34

			ACCIAIO INOSSIDABILE / STAINLESS STEEL		Rm	HRC
M	Acciaio inossidabile Stainless steel	M1	*Austenitico*	*Austenitic*	700	-
		M2	*Austenitico*	*Austenitic*	1000	32
		M3	*Ferritico+austenitico (Duplex)*	*Duplex*	800	23

			GHISA / CAST IRON		Rm	HRC
K	Ghisa Cast iron	K1	*Ghisa grigia (GJL)*	*Grey cast iron (GJL)*	*400*	-
		K2	*Ghisa con grafite vermiculare (GJV) CGI*	*Cast iron with vermicular graphite*	*550*	-
		K3	*Ghisa malleabile (GJMW / GJMB)*	*Malleable cast iron*	*500*	-
		K4	*Ghisa malleabile (GJMB)*	*Malleable cast iron*	*800*	-
		K5	*Ghisa con grafite sferoidale (GJS)*	*Cast iron with spheroidal graphite*	*700*	-
			Ghisa con grafite sferoidale (GJS) ADI	*Cast iron with spheroidal graphite*	*1400*	45

			METALLI NON FERROSI / NON-FERROUS METALS		Rm	HRC
N	Metalli non-ferrosi Non-ferrous Metals	N3	*Leghe di alluminio da getto e deformazione plastica con Si < 12%*	*Cast alluminium alloys*	*250*	-
		N4	*Leghe di alluminio da getto e deformazione plastica con Si <12%*	*Cast alluminium alloys*	*300*	-
		N5	*Leghe di alluminio da getto e deformazione plastica con Si >12%*	*Cast alluminium alloys*	*450*	-
		N6	*Magnesio e leghe di magnesio*	*Magnesium alloys*	*250*	-
		N7	*Rame / leghe di rame*	*Copper and copper alloys*	*350*	-
		N8	*Rame / leghe di rame truciolo lungo*	*Copper and copper alloys, long-chipping*	*600*	-
		N9	*Rame / leghe di rame truciolo corto*	*Copper and copper alloys, short-chipping*	*400*	-
		N10	*Rame / leghe di rame*	*Copper and copper alloys*	*1000*	32

MASCHI TOP TAP- RIVESTITI

TOP TAP - COATED

MASCHIATORI A CAMBIO RAPIDO
QUICK CHANGE TAPPING CHUCKS
P. 352

PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING
P. 353



HSSE PM | H1 | (6HX)



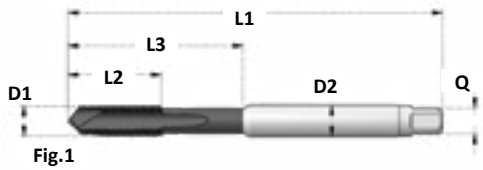


Fig.1

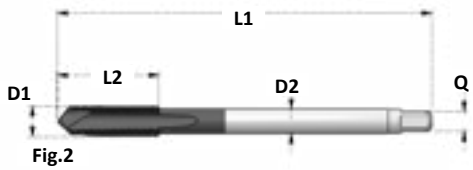


Fig.2

ISO	Vc (m/min)
P	5-40
M	5-15
K	10-30
N	10-30

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR OPEN HOLES

DIN 371

FORM B

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
600 PMH1 0030	M 3	0,50	56	5	18	3,5	2,7	2,50	1
600 PMH1 0040	M 4	0,70	63	7	21	4,5	3,4	3,30	1
600 PMH1 0050	M 5	0,80	70	8	25	6,0	4,9	4,20	1
600 PMH1 0060	M 6	1,00	80	10	30	6,0	4,9	5,00	1
600 PMH1 0080	M 8	1,25	90	13	35	8,0	6,2	6,80	1
600 PMH1 0100	M 10	1,50	100	15	39	10,0	8,0	8,50	1

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR OPEN HOLES

DIN 376

FORM B

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
601 PMH1 0080	M8	1,25	90	15		6,0	4,90	6,80	2
601 PMH1 0100	M10	1,50	100	17		7,0	5,50	8,50	2
601 PMH1 0120	M 12	1,75	110	18		9,0	7,0	10,20	2
601 PMH1 0140	M 14	2,00	110	20		11,0	9,0	12,00	2
601 PMH1 0160	M 16	2,00	110	20		12,0	9,0	14,00	2
601 PMH1 0180	M 18	2,50	125	25		14,0	11,0	15,50	2
601 PMH1 0200	M 20	2,50	140	25		16,0	12,0	17,50	2



HSSE PM | H1 | (6HX)



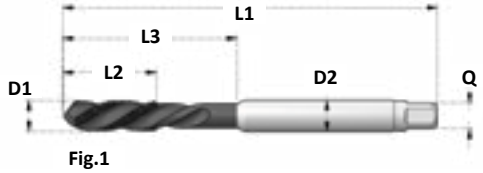


Fig.1

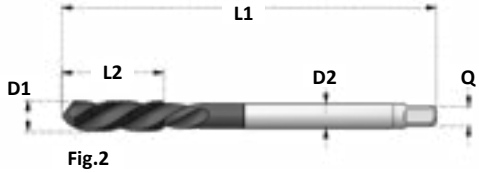


Fig.2

ISO	Vc (m/min)
P	5-40
M	5-15
K	10-30
N	10-30

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI CIECHI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR BLIND HOLES

DIN 371

FORM C-R45

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
645 PMH1 0030	M 3	0,50	56	5	18	3,5	2,7	2,50	1
645 PMH1 0040	M 4	0,70	63	7	21	4,5	3,4	3,30	1
645 PMH1 0050	M 5	0,80	70	8	25	6,0	4,9	4,20	1
645 PMH1 0060	M 6	1,00	80	10	30	6,0	4,9	5,00	1
645 PMH1 0080	M 8	1,25	90	13	35	8,0	6,2	6,80	1
645 PMH1 0100	M 10	1,50	100	15	39	10,0	8,0	8,50	1

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI CIECHI

ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR BLIND HOLES

DIN 376

FORM C-R45

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
646 PMH1 0080	M8	1,25	90	15		6,0	4,90	6,80	2
646 PMH1 0100	M10	1,50	100	17		7,0	5,50	8,50	2
646 PMH1 0120	M 12	1,75	110	18		9,0	7,0	10,20	2
646 PMH1 0140	M 14	2,00	110	20		11,0	9,0	12,00	2
646 PMH1 0160	M 16	2,00	110	20		12,0	9,0	14,00	2
646 PMH1 0180	M 18	2,50	125	25		14,0	11,0	15,50	2
646 PMH1 0200	M 20	2,50	140	25		16,0	12,0	17,50	2

MASCHI FAN1200- RIVESTITI

TAPS FAN1200 - COATED

MASCHIATORI A CAMBIO RAPIDO
QUICK CHANGE TAPPING CHUCKS
P. 352

PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING
P. 353

60° P | HSSE PM | S1 | ISO2 (6H)

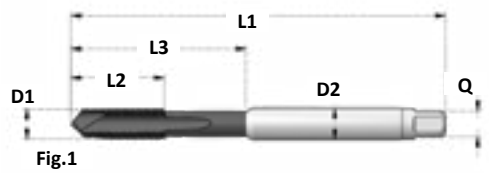


Fig.1

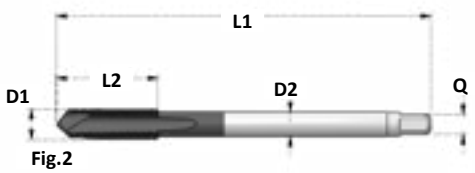


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
300 1041 0040	M 4	0,70	63	12	21	4,5	3,4	3,30	1
300 1041 0050	M 5	0,80	70	14	25	6,0	4,9	4,20	1
300 1041 0060	M 6	1,00	80	18	30	6,0	4,9	5,00	1
300 1041 0080	M 8	1,25	90	20	35	8,0	6,2	6,80	1
300 1041 0100	M 10	1,50	100	20	39	10,0	8,0	8,50	1

DIN 371

FORM B

ISO	Vc (m/min)
P	5-35
M	5-15
K	5-25
N	10-30

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
301 1041 0120	M 12	1,75	110	24		9,0	7,0	10,20	2
301 1041 0160	M 16	2,00	110	32		12,0	9,0	14,00	2
301 1041 0200	M 20	2,50	140	32		16,0	12,0	17,50	2

DIN 376

FORM B

60° P | HSSE PM | S1 | ISO2 (6H)

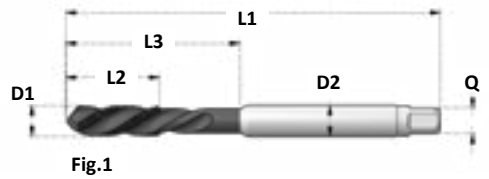


Fig.1

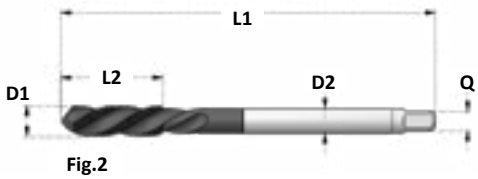


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI CIECHI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
340 1041 0040	M 4	0,70	63	7	21	4,5	3,4	3,30	1
340 1041 0050	M 5	0,80	70	8	25	6,0	4,9	4,20	1
340 1041 0060	M 6	1,00	80	10	30	6,0	4,9	5,00	1
340 1041 0080	M 8	1,25	90	13	35	8,0	6,2	6,80	1
340 1041 0100	M 10	1,50	100	15	39	10,0	8,0	8,50	1

DIN 371

FORM C-R40

ISO	Vc (m/min)
P	5-35
M	5-10
K	5-25
N	10-30

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI CIECHI

ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
341 1041 0120	M 12	1,75	110	18		9,0	7,0	10,20	2
341 1041 0160	M 16	2,00	110	20		12,0	9,0	14,00	2
341 1041 0200	M 20	2,50	140	25		16,0	12,0	17,50	2

DIN 376

FORM C-R40

MASCHI 800X - RIVESTITI

TAPS 800X - COATED

MASCHIATORI A CAMBIO RAPIDO
QUICK CHANGE TAPPING CHUCKS
P. 352

PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING
P. 353



HSSE | T2 | ISO2 (6H)



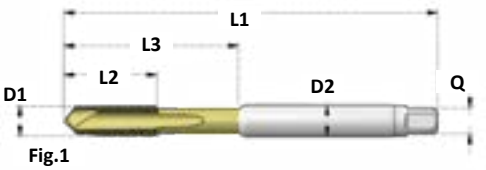


Fig.1

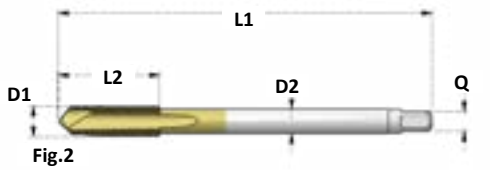


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
800X TN2 0030	M3	0,50	56	10	18	3,5	2,7	2,50	1
800X TN2 0040	M4	0,70	63	12	21	4,5	3,4	3,30	1
800X TN2 0050	M5	0,80	70	14	25	6,0	4,9	4,20	1
800X TN2 0060	M6	1,00	80	18	30	6,0	4,9	5,00	1
800X TN2 0080	M8	1,25	90	20	35	8,0	6,2	6,80	1
800X TN2 0100	M10	1,50	100	20	39	10,0	8,0	8,50	1

DIN 371

FORM B

ISO	Vc (m/min)
P	5-35
M	5-15
K	5-25
N	10-30

FILETTATURA METRICA A PASSO FINE - CODOLO PASSANTE - PER FORI PASSANTI

ISO METRIC FINE THREAD DIN13- REDUCED SHANK - FOR OPEN HOLES

Articolo	D1 MF	P	L1	L2	D2	Q	Ø preforo	Fig
800X TN2 0083	M8x1	1,00	90	20	6,0	4,9	7,00	2
800X TN2 0103	M10x1	1,00	90	20	7,0	5,5	9,00	2
800X TN2 0104	M10x1,25	1,25	100	20	7,0	5,5	8,80	2

DIN 374

FORM B

Pag. M6
M12 - M20



HSSE | T2 | ISO2 (6H)



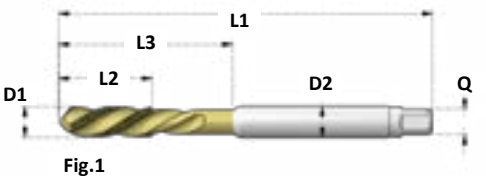


Fig.1

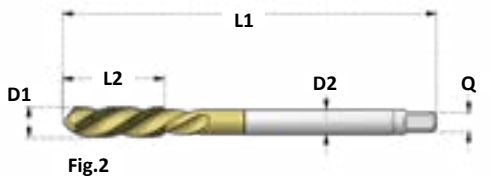


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI CIECHI

ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
835X TN2 0030	M3	0,50	56	5	18	3,5	2,7	2,50	1
835X TN2 0040	M4	0,70	63	7	21	4,5	3,4	3,30	1
835X TN2 0050	M5	0,80	70	8	25	6,0	4,9	4,20	1
835X TN2 0060	M6	1,00	80	10	30	6,0	4,9	5,00	1
835X TN2 0080	M8	1,25	90	13	35	8,0	6,2	6,80	1
835X TN2 0100	M10	1,50	100	15	39	10,0	8,0	8,50	1

DIN 371

FORM C-R40

ISO	Vc (m/min)
P	5-35
M	5-15
K	5-25
N	10-30

FILETTATURA METRICA A PASSO FINE - CODOLO PASSANTE - PER FORI CIECHI

ISO METRIC FINE THREAD DIN13- REDUCED SHANK - FOR BLIND HOLES

Articolo	D1 MF	P	L1	L2	D2	Q	Ø preforo	Fig
835X TN2 0083	M8x1	1,00	90	13	6,0	4,9	7,00	2
835X TN2 0103	M10x1	1,00	90	13	7,0	5,5	9,00	2
835X TN2 0104	M10x1,25	1,25	100	15	7,0	5,5	8,80	2

DIN 374

FORM C-R40

MASCHI 800X - RIVESTITI

TAPS 800X - COATED

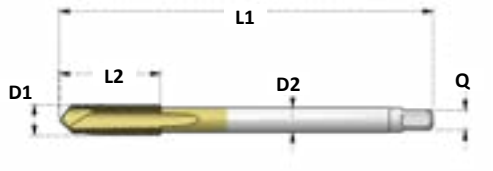
MASCHIATORI A CAMBIO RAPIDO
QUICK CHANGE TAPPING CHUCKS
P. 352

PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING
P. 353



HSSE | T2 | ISO2 (6H)





FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	D2	Q	Ø preforo
801X TN2 0120	M12	1,75	110	24	9,0	7,0	10,20
801X TN2 0140	M14	2,00	110	25	11,0	9,0	12,00
801X TN2 0160	M16	2,00	110	32	12,0	9,0	14,00
801X TN2 0180	M18	2,50	125	32	14,0	11,0	15,50
801X TN2 0200	M20	2,50	140	32	16,0	12,0	17,50

DIN 376

FORM B

FILETTATURA METRICA A PASSO FINE - CODOLO PASSANTE - PER FORI PASSANTI

ISO METRIC FINE THREAD DIN13 - REDUCED SHANK - FOR OPEN HOLES

Articolo	D1 MF	P	L1	L2	D2	Q	Ø preforo
801X TN2 0125	M12x1,5	1,50	100	20	9,0	7,0	10,50
801X TN2 0145	M14x1,5	1,50	100	20	11,0	9,0	12,50
801X TN2 0165	M16x1,5	1,50	100	20	12,0	9,0	14,50

DIN 374

FORM B

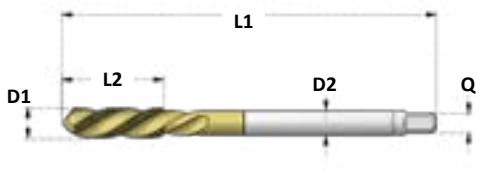
ISO	Vc (m/min)
P	5-35
M	5-15
K	5-25
N	10-30

Pag. M5
M3 - M10



HSSE | T2 | ISO2 (6H)





FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI CIECHI

ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	D2	Q	Ø preforo
836X TN2 0120	M12	1,75	110	18	9,0	7,0	10,20
836X TN2 0140	M14	2,00	110	20	11,0	9,0	12,00
836X TN2 0160	M16	2,00	110	20	12,0	9,0	14,00
836X TN2 0180	M18	2,50	125	25	14,0	11,0	15,50
836X TN2 0200	M20	2,50	140	25	16,0	12,0	17,50

DIN 376

FORM C-R40

ISO	Vc (m/min)
P	5-35
M	5-15
K	5-25
N	10-30

FILETTATURA METRICA A PASSO FINE - CODOLO PASSANTE - PER FORI CIECHI

ISO METRIC FINE THREAD DIN13 - REDUCED SHANK - FOR BLIND HOLES

Articolo	D1 MF	P	L1	L2	D2	Q	Ø preforo
836X TN2 0125	M12x1,5	1,50	100	15	9,0	7,0	10,50
836X TN2 0145	M14x1,5	1,50	100	15	11,0	9,0	12,50
836X TN2 0165	M16x1,5	1,50	100	15	12,0	9,0	14,50

DIN 374

FORM C-R40

MASCHI 800

TAPS 800

MASCHIATORI A CAMBIO RAPIDO
QUICK CHANGE TAPPING CHUCKS
P. 352

PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING
P. 353

60° P | HSSE | ISO2 (6H)

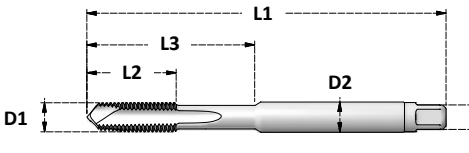


Fig.1

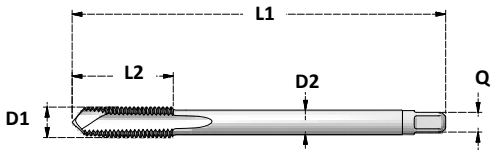


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
800 101 0030	M 3	0,50	56	10	18	3,5	2,7	2,50	1
800 101 0040	M 4	0,70	63	12	21	4,5	3,4	3,30	1
800 101 0050	M 5	0,80	70	14	25	6,0	4,9	4,20	1
800 101 0060	M 6	1,00	80	18	30	6,0	4,9	5,00	1
800 101 0080	M 8	1,25	90	20	35	8,0	6,2	6,80	1
800 101 0100	M 10	1,50	100	20	39	10,0	8,0	8,50	1

DIN 371

FORM B

ISO	Vc (m/min)
P	5-20

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI PASSANTI

WITH ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
801 101 0120	M 12	1,75	110	24		9,0	7,0	10,20	2
801 101 0140	M 14	2,00	110	25		11,0	9,0	12,00	2
801 101 0160	M 16	2,00	110	32		12,0	9,0	14,00	2
801 101 0180	M 18	2,50	125	32		14,0	11,0	15,50	2
801 101 0200	M 20	2,50	140	32		16,0	12,0	17,50	2

DIN 376

FORM B

60° P | HSSE | ISO2 (6H)

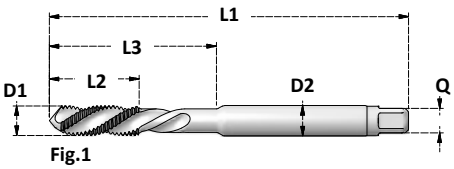


Fig.1

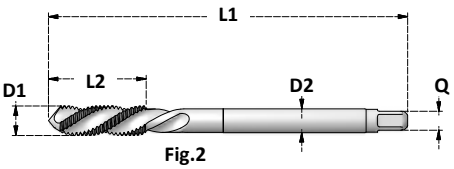


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI CIECHI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
835 101 0030	M 3	0,50	56	5	18	3,5	2,7	2,50	1
835 101 0040	M 4	0,70	63	7	21	4,5	3,4	3,30	1
835 101 0050	M 5	0,80	70	8	25	6,0	4,9	4,20	1
835 101 0060	M 6	1,00	80	10	30	6,0	4,9	5,00	1
835 101 0080	M 8	1,25	90	13	35	8,0	6,2	6,80	1
835 101 0100	M 10	1,50	100	15	39	10,0	8,0	8,50	1

DIN 371

FORM C-R40

ISO	Vc (m/min)
P	5-20

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI CIECHI

ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
836 101 0120	M 12	1,75	110	18		9,0	7,0	10,20	2
836 101 0140	M 14	2,00	110	20		11,0	9,0	12,00	2
836 101 0160	M 16	2,00	110	20		12,0	9,0	14,00	2
836 101 0180	M 18	2,50	125	25		14,0	11,0	15,50	2
836 101 0200	M 20	2,50	140	25		16,0	12,0	17,50	2

DIN 376

FORM C-R40

MASCHI INOX
TAPS INOX

MASCHIATORI A CAMBIO RAPIDO
QUICK CHANGE TAPPING CHUCKS
P. 352

PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING
P. 353



HSSE

ISO2 (6H)



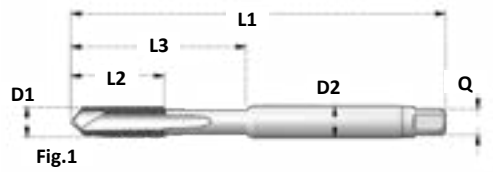


Fig.1

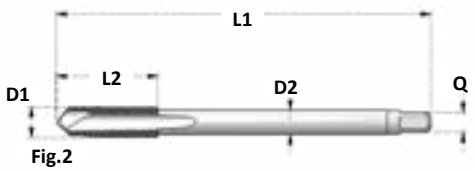


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI PASSANTI
WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
200 1011 0030	M 3	0,50	56	10	18	3,5	2,7	2,50	1
200 1011 0040	M 4	0,70	63	12	21	4,5	3,4	3,30	1
200 1011 0050	M 5	0,80	70	14	25	6,0	4,9	4,20	1
200 1011 0060	M 6	1,00	80	18	30	6,0	4,9	5,00	1
200 1011 0080	M 8	1,25	90	20	35	8,0	6,2	6,80	1
200 1011 0100	M 10	1,50	100	20	39	10,0	8,0	8,50	1

DIN 371

FORM B

ISO	Vc (m/min)
M	5-15

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI PASSANTI
WITH ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR OPEN HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
201 1011 0120	M 12	1,75	110	24		9,0	7,0	10,20	2
201 1011 0140	M 14	2,00	110	25		11,0	9,0	12,00	2
201 1011 0160	M 16	2,00	110	32		12,0	9,0	14,00	2
201 1011 0180	M 18	2,50	125	32		14,0	11,0	15,50	2
201 1011 0200	M 20	2,50	140	32		16,0	12,0	17,50	2

DIN 376

FORM B



HSSE

ISO2 (6H)



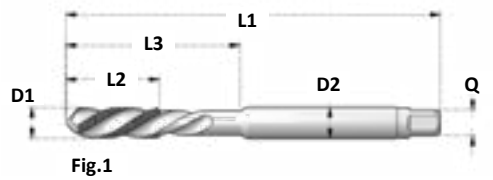


Fig.1

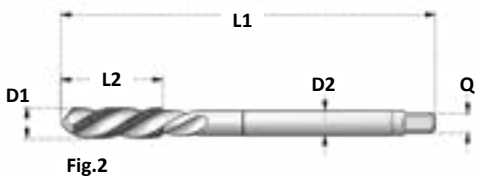


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI CIECHI
WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
235 1011 0030	M 3	0,50	56	5	18	3,5	2,7	2,50	1
235 1011 0040	M 4	0,70	63	7	21	4,5	3,4	3,30	1
235 1011 0050	M 5	0,80	70	8	25	6,0	4,9	4,20	1
235 1011 0060	M 6	1,00	80	10	30	6,0	4,9	5,00	1
235 1011 0080	M 8	1,25	90	13	35	8,0	6,2	6,80	1
235 1011 0100	M 10	1,50	100	15	39	10,0	8,0	8,50	1

DIN 371

FORM C-R40

ISO	Vc (m/min)
M	5-15

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI CIECHI
ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
236 1011 0120	M 12	1,75	110	18		9,0	7,0	10,20	2
236 1011 0140	M 14	2,00	110	20		11,0	9,0	12,00	2
236 1011 0160	M 16	2,00	110	20		12,0	9,0	14,00	2
236 1011 0180	M 18	2,50	125	25		14,0	11,0	15,50	2
236 1011 0200	M 20	2,50	140	25		16,0	12,0	17,50	2

DIN 376

FORM C-R40

MASCHI A RULLARE- RIVESTITI

FORMING TAPS - COATED

MASCHIATORI A CAMBIO RAPIDO
QUICK CHANGE TAPPING CHUCKS
P. 352

PORTAUTENSILI PER MASCHIATURA SINCRONIZZATA
TAPPING CHUCKS FOR SYNCHRONIZED TAPPING
P. 353



HSSE PM

T2

6HX





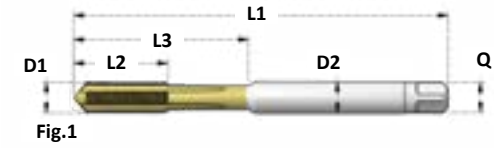


Fig.1

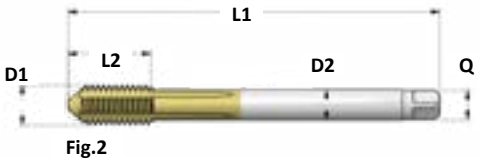


Fig.2

FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI PASSANTI E CIECHI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR OPEN AND BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
923 5 0030	M 3	0,50	56	10	18	3,5	2,7	2,80	1
923 5 0040	M 4	0,70	63	7	21	4,5	3,4	3,70	1
923 5 0050	M 5	0,80	70	8	25	6	4,9	4,65	1
923 5 0060	M 6	1,00	80	10	30	6	4,9	5,60	1
923 5 0080	M 8	1,25	90	13	35	8	6,2	7,45	1
923 5 0100	M 10	1,50	100	15	39	10	8	9,35	1

DIN 371

FORM C

ISO	Vc (m/min)
P	10-30
M	10-25
N	20-40

FILETTATURA METRICA A PASSO GROSSO - CODOLO PASSANTE - PER FORI PASSANTI E CIECHI

ISO METRIC COARSE THREAD DIN13 - REDUCED SHANK - FOR OPEN AND BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo	Fig
923 5 0120	M 12	1,75	110	18		9	7	11,25	2
923 5 0160	M 16	2,00	110	20		12	9	15,10	2
923 5 0200	M 20	2,50	140	25		16	12	18,85	2

DIN 376

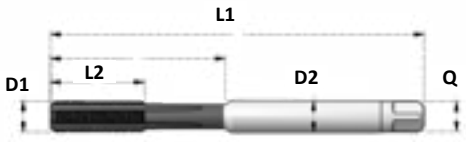
FORM C



HSSE PM

C1

6HX



FILETTATURA METRICA A PASSO GROSSO - CODOLO RINFORZATO - PER FORI PASSANTI E CIECHI

WITH ISO METRIC COARSE THREAD DIN13 - REINFORCED SHANK - FOR OPEN AND BLIND HOLES

Articolo	D1	P	L1	L2	L3	D2	Q	Ø preforo
945 5 0030	M 3	0,50	56	10	18	3,5	2,7	2,80
945 5 0040	M 4	0,70	63	7	21	4,5	3,4	3,70
945 5 0050	M 5	0,80	70	8	25	6	4,9	4,65
945 5 0060	M 6	1,00	80	10	30	6	4,9	5,60
945 5 0080	M 8	1,25	90	13	35	8	6,2	7,45
945 5 0100	M 10	1,50	100	15	39	10	8	9,35

DIN 371

FORM E

ISO	Vc (m/min)
P	10-30
M	10-25
N	20-60