



CATALOGO GENERALE
General Catalogue

2020

TESTE ANGOLARI *ANGLE HEADS*
MOTORIZZATI *LIVE TOOLS*
CAMBIO RAPIDO *SMART CHANGE*
ALTA VELOCITÀ *HIGH SPEED*



Teste angolari / Angle heads INDEX

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1970 Umberto rileva l'azienda del padre, improntata dapprima sulla costruzione di modelli per fonderia e poi successivamente si specializza negli stampi per materie plastiche. Per esigenze lavorative progetta e costruisce la sua prima testa angolare. Il prodotto funziona e si rende estremamente utile per diminuire i tempi di lavorazione. Dato che in commercio non esiste nulla di simile, Umberto capisce l'importanza di questo tipo di mercato e comincia a realizzare i primi modelli: Serie L (Leggera), Serie M (Media), e Serie P (Pesante).

Umberto took over his father's company that used to manufacture moulds for the metal foundry industry, then he specialized in the production for moulds for plastic components. The first angle head had been designed and assembled mainly for this machining needs. The idea worked very well and helped in reducing the machining time. Being the product unique in its kind, Umberto immediately understood the potential and began producing the first models: L line (Light), M line (Medium), P line (Heavy).

1980 La moglie Franca si unisce all'attività del marito, dirigendone l'amministrazione. Vengono introdotti i modelli orientabili TCU e TDU, perfezionati quelli esistenti e acquistati i primi macchinari: il primo centro di lavoro Olivetti, e i primi torni Biglia e Mori Seiki. Per poter ampliare le vendite in Italia e all'estero, si appoggia ad una rete distributiva internazionale che comincerà a commercializzare le teste Alberti in tutto il mondo.

His wife Franca joined the company as CFO. Umberto developed the adjustable heads: TCU and TDU models and improved the existing models. He bought the first CNC machine by Olivetti and the first Biglia and Mori Seiki lathes. In order to improve sales in Italy and especially abroad Umberto decided to rely on an international sales network which began to sell Alberti heads worldwide.



MISSION

Diventare partner ufficiale per tutti i clienti che hanno bisogno di soluzioni complete di alta qualità dalla fase del progetto a quella del prodotto finito.

Alberti aims at becoming a reliable partner for all customers who are looking for a complete high quality solution from design to simulation to finished products.



1990 L'azienda si trasferisce a Saronno. Aumenta il personale a 15 dipendenti e viene rinnovato l'intero parco macchine: vengono introdotte la 1° Makino, il 1° tornio Nakamura e la 1° rettificata Studer. Alberti comincia a diversificare la produzione introducendo la produzione dei motorizzati e di altri modelli di teste speciali, quali la linea inclinata TA e arretrata TR.

Alberti moved to Saronno. The company increased its number of employee to 15 people and renewed its machines: 1° Makino, 1° Nakamura lathe and the 1° Studer grinding. Alberti started to diversify its production by introducing other products such as live tools. He also introduced other special angle heads models, such as TA tilted serie and TR offset serie

2000 Vengono introdotte nuove linee di prodotti come la linea di teste ad alta velocità con motori ad aria ed elettromandrini. Grazie alle figlie Nadia ed Elisa l'azienda riesce a consolidare una rete distributiva affidata esclusivamente ai propri rivenditori e collaboratori e a commercializzare i propri prodotti in tutto il mondo.

New products have been projected, such as the high speed range of heads with air spindle motor. Thanks also to Nadia and Elisa, the company has developed its own worldwide sales network which relies on own exclusive dealers and partners.

2010 Nonostante alcuni anni difficili di crisi economica globale, l'azienda Alberti è in continua crescita. Attualmente si contano più di 30 persone impiegate tra produzione e ufficio tecnico e un ampliamento della sede con consistente rinnovamento del parco macchine, tra cui un'altra rettificata, un nuovo sistema integrato FMS 4.0 e una macchina di misura di alta precisione.

Despite the global crisis, Alberti grew in terms of employees, production plant and number of machines. At the moment there are more than 30 people hired among the production and technical department. The new building includes another grinding machine, 2 other lathes, a new FMS 4.0 integrated system and a high precision 3D measuring machine inside a controlled room temperature.

CHI SIAMO

Alberti ha iniziato a produrre teste angolari a fine anni Settanta e in brevissimo tempo le sue soluzioni si sono affermate in tutto il mondo per qualità, funzionalità e affidabilità ma anche per il raffinato design. Obiettivo dell'azienda è rispondere alle esigenze di un mercato di fascia alta, ovunque nel mondo, con tutte le soluzioni - di serie sviluppate ad hoc - necessarie per raggiungere i traguardi produttivi più ambiti. Grazie a questo approccio, Alberti si è affermato come il marchio dei prodotti "made in Italy", sia per la loro carica innovativa sia per i benchmark di comparazione prestazionale con gli altri competitor presenti sul mercato. Ogni singolo prodotto viene progettato realizzato interamente all'interno dell'azienda. La passione, il coinvolgimento e la cura dei particolari costituiscono apetti essenziali del modo di lavorare dell'azienda Alberti, che fa di essi un elemento di forza al di là di ogni altra logica puramente di mercato. In funzione dello scopo che il cliente deve raggiungere e del tipo di sforzo e di sollecitazione richiesti, i tecnici Alberti studiano la soluzione più adatta. A questa fase di ricerca applicativa e progettuale segue la realizzazione del prototipo e la sua sperimentazione in opera. Con il consueto servizio post-vendita, il prodotto viene poi supportato da Alberti durante tutto il ciclo di vita, con ogni intervento che si renda necessario.

Alberti started the production of angle heads at the end of the Seventies. In few years its solutions have come to dominate the international market thanks to huge quality, functionality, reliability as well as balanced design of its products. Aim of the company is to meet the demands of a discerning market niche worldwide and to offer optimum standard or custom-made solutions. Thanks to constant innovation and its modern solutions, Alberti is now leader among the manufacturers of the products "Made in Italy". Passion, involvement and great attention to details are the main features of Alberti philosophy and imply a point of strength in addition to market indicators. Every single internal part is designed and manufactured 100% inside the company. On the basis of the customers' information about the machining to be performed, the mechanical stress and the tools to be used, Alberti's technical department studies the most suitable solution. This stage of research and design is followed by the manufacturing and testing of the prototype in order to check real performances. All products are supported by an efficient after-sales service that allows Alberti to track back product life and repair history.

CARATTERISTICHE TECNICHE TESTE ALBERTI

TECHNICAL DATA

Albero con cono in acciaio cementato e temperato. Realizzato in un solo pezzo per aumentare il carico alla flessione del 25%, interamente rettificato ed equilibrato a 6,3G. Riesce a raggiungere alte velocità senza vibrazioni.

Spindle with arbor made as one solid piece of hardened steel to increase resistance to bending stress up to 25%. Completely ground and balanced at 6,3G. Possibility to reach higher RPM without vibrations

ALBERO CON CONO
SPINDLE W/ARBOR

Corpo testa in ghisa sferoidale GS-600 stabilizzata per un assorbimento totale delle vibrazioni. Stabilità termica e rigidità superiori ad altri materiali (es. acciaio e alluminio). Cromatura opaca sul corpo e sedi dei cuscinetti interamente rettificate.

Casting made of GS 600 stabilized spheroidal cast iron to better absorb vibrations. Increased thermal stability and rigidity compared to materials such as steel and aluminum. Mat chromed finishing outside and ground bearing housing

CORPO TESTA
BODY

Albero porta-utensile in acciaio legato, temperato e con doppio labirinto. Completamente rettificato, con tolleranze inferiori ai 5 micron, per garantire una durata maggiore dell'utensile in lavorazione.

Output spindle made of hardened alloyed steel with double labyrinth seal. Completely ground with tolerance lower than 5 micron to ensure a longer tool life.

MANDRINO
SPINDLE

Flangia di indexaggio monolitica per garantire un'iterasse preciso. Il perno cilindrico assicura una notevole stabilità durante le lavorazioni.

Flange arm and pin as monolithic piece to grant an increased rigidity and stability to the whole structure whilst machining. Very precise pitch dimension and perfect match of the cylindrical pin with the Stop Block sleeve.

FLANGIA INDEX
INDEXING FLANGE

Fasce lappate per il corretto allineamento dell'utensile

Lapped side surface for correct alignment of the tool.

FASCE LAPPATE
LAPPED SURFACE

Tutti i particolari sono caratterizzati da nostro logo e codice per garantirne l'autenticità del prodotto e facilitare la ricerca dei particolari di ricambio. Tutti i controlli sono affidati alla macchina di misura di alta precisione in camera controllata.

All spare parts are laser marked with Alberti logo to guarantee the authenticity and simplify the recognition of each single item. All parts are measured with our new high precision 3D measuring machine inside a controlled room temperature.

Le nostre teste dispongono di un QR Code per consentirne una facile e rapida identificazione. Our angular heads have a QR Code that enables an easy and quick identification.



CUSCINETTI BEARINGS

Cuscinetti a contatto obliquo precaricati in ABEC7-ABEC9. Con le sedi rettificate del corpo permettono una perfetta concentricità e stabilità di tutti gli organi rotanti, necessaria per raggiungere performance di lavorazioni superiori.

Angular contact super precision bearings with ABEC 7 and 9 accuracy rate. Mounted in ground bearing housing inside of the body, they ensure a perfect concentricity and stability during machining.



INGRANAGGI GEARS

Ingranaggi realizzati in superleghe di acciaio, temperati e interamente rettificati. Vengono trattati con lucidatura isotropica che conferisce loro una rugosità pari a 0,01 Ra e un abbattimento notevole delle vibrazioni e dell'attrito.

Gears made of steel superalloy. They are hardened, completely ground and treated with isotropic polishing which allows to reach 0,01Ra roughness with a dramatic reduction of the vibrations and friction.



TENUTE MECCANICHE MECHANICAL SEALS

Tenute meccaniche studiate appositamente per sopportare alte pressioni fino a 100 bar e alti numeri di giri.

Mechanical seal specially studied to reach high pressure up to 100 bar and higher RPM.



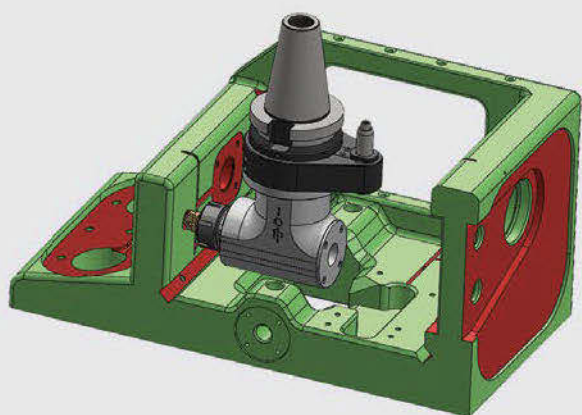
GUARNIZIONI SEALS

Tenute a bassissimo coefficiente d'attrito progettate dall'azienda con miscela particolare. Per le alte velocità sono previste tenute senza contatto con sistemi di pressurizzazioni.

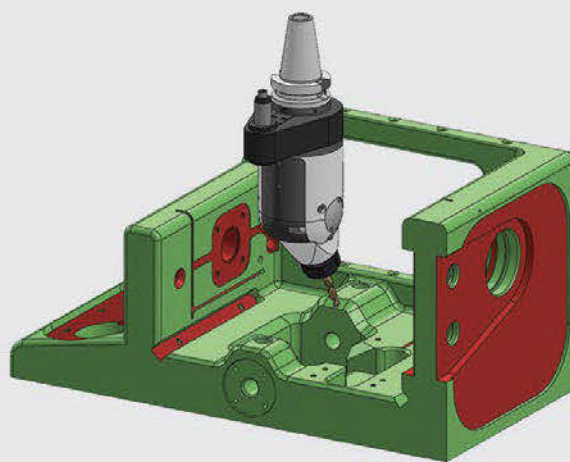
Low-friction seals made of a special composition. All studied and developed by Alberti.



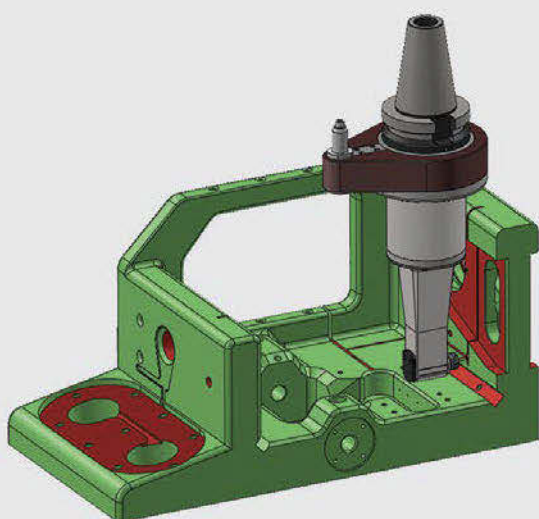
ESEMPI DI LAVORAZIONI STANDARD
EXAMPLES OF STANDARD MACHINING



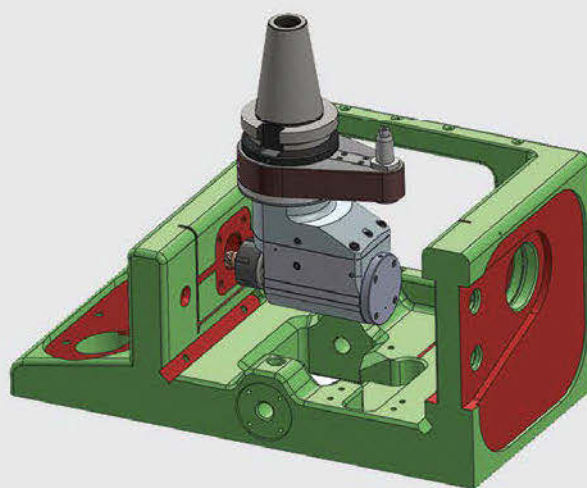
Testa a 90°
90° Head



Testa ad inclinazione regolabile
Head with adjustable angle +/- 90°



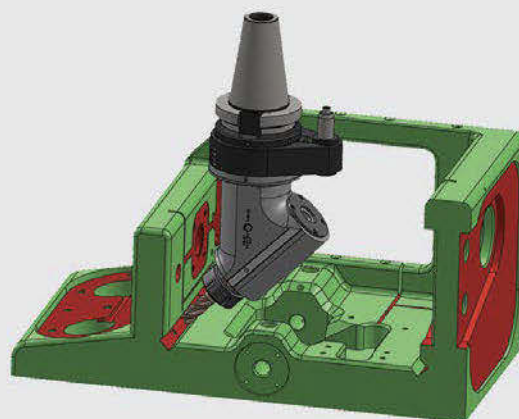
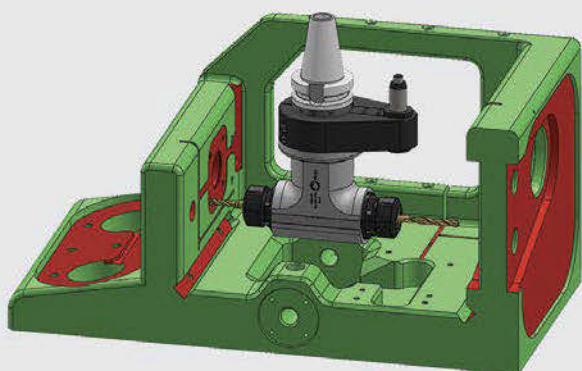
Testa a 90° prolungata
Extended length head



Testa con refrigerante
Head with internal coolant

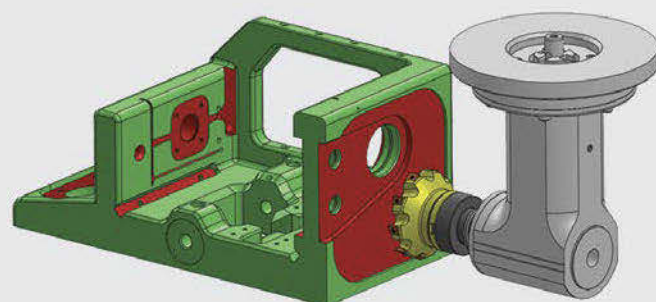
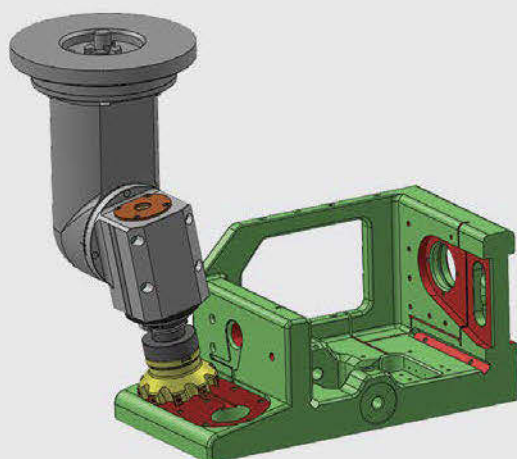
ESEMPI DI LAVORAZIONI STANDARD

EXAMPLES OF STANDARD MACHINING



Testa con uscita doppia (180°)
Dual output head (180°)

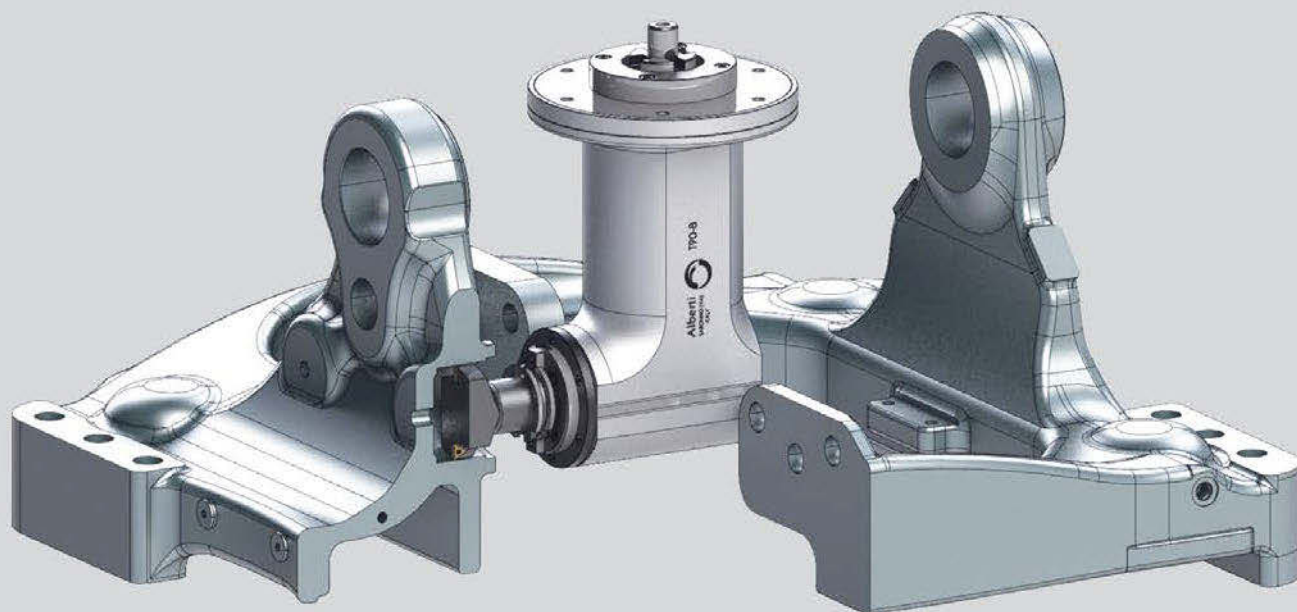
Testa ad inclinazione fissa
Head with special fixed angle



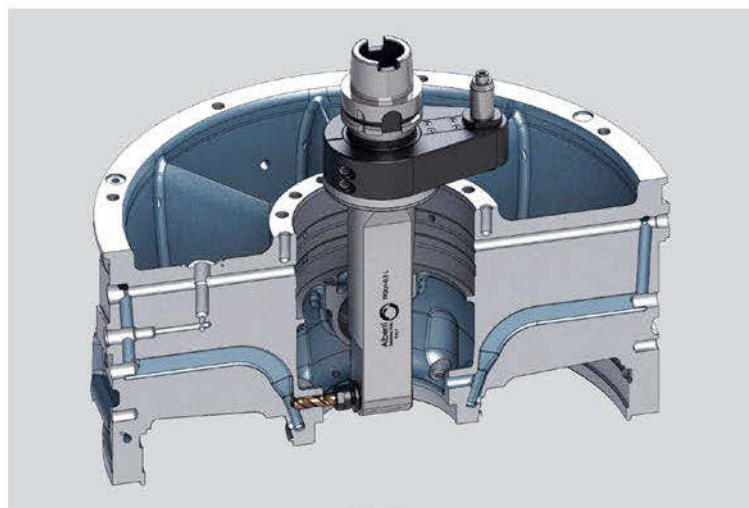
Testa orientabile di grosse dimensioni con montaggio manuale
Big sized adjustable head with manual mounting

Testa fissa di grosse dimensioni con montaggio manuale
Big sized fixed head with manual mounting

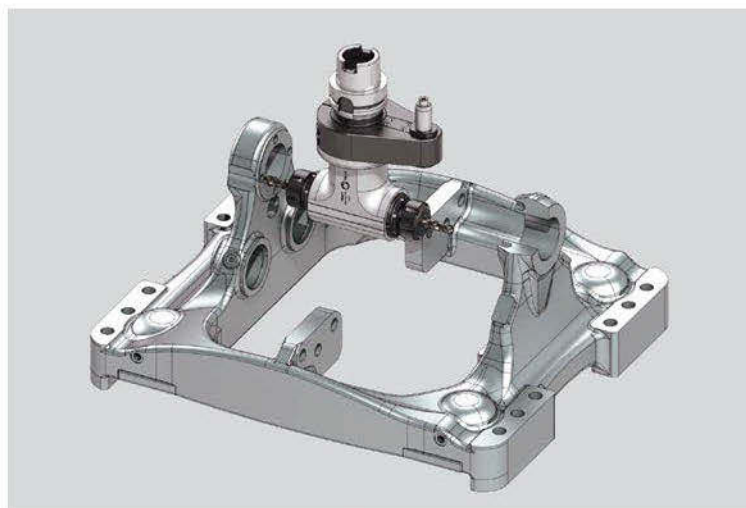
LA TESTA PIÙ IDONEA PER OGNI APPLICAZIONE
THE MOST SUITABLE HEAD FOR EACH APPLICATION



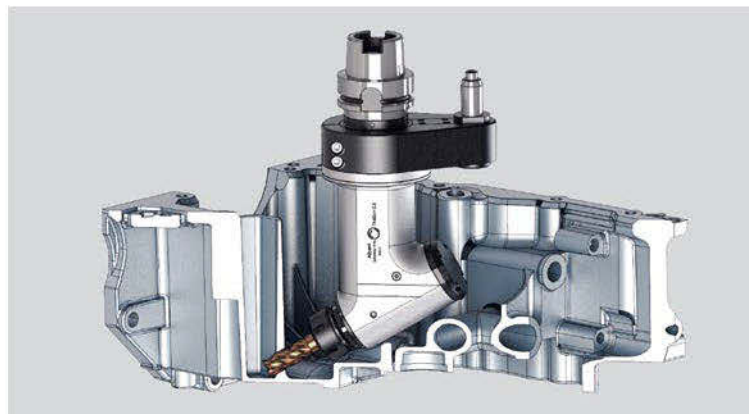
Testa a 90° con o senza flangia per pezzi grossi
90° Head with or without flange for big workpiece



Testa a 90° prolungata
90° head with extended length



Testa a 2 uscite contrapposte
Head with dual output opposite



Testa fissa ad angolo variabile
Head with variable fixed angle



Testa rinvia per spazi ristretti
Offset head for reduced spaces

ADDUZIONE REFRIGERANTE

COOLANT OPTIONS

LOW PRESSURE

COOLANT
INPUT



Refrigerante attraverso il perno e l'utensile
Pressione max 12 bar
Rotazione a secco NON possibile

*Coolant through pin and spindle
Max pressure 12 bar
Dry running NOT possible*

COOLANT
INPUT



Refrigerante attraverso il cono
Pressione max 12 bar
Rotazione a secco NON possibile

*Coolant through main spindle
Max pressure 12 bar
Dry running NOT possible*

COOLANT
INPUT



Refrigerante attraverso il perno
Pressione max 12 bar
Rotazione a secco possibile

*Coolant through main spindle
Max pressure 12 bar
Dry running possible*

HIGH PRESSURE

COOLANT
INPUT



Refrigerante attraverso il cono e l'utensile
Pressione max 100 bar
Rotazione a secco possibile

*Coolant through main spindle and tool
Max pressure 100 bar
Dry running possible*

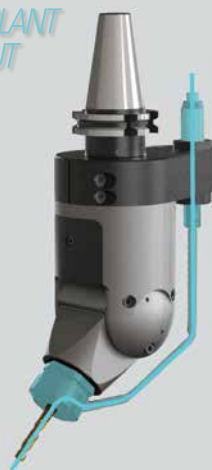
COOLANT
INPUT



Refrigerante attraverso cono
Pressione max 100 bar
Rotazione a secco possibile

*Coolant through main spindle
Max pressure 100 bar
Dry running possible*

COOLANT
INPUT





Refrigerante attraverso ghiera reCOOL
Max pressure 15 bar
Rotazione a secco possibile

*Coolant through reCOOL Nuts
Max pressure 15 bar
Dry running possible*

COME SCEGLIERE LA TESTA IN BASE ALLA GRANDEZZA DEL PORTAUTENSILE

HOW TO CHOOSE YOUR HEAD ACCORDING TO THE SIZE OF THE TOOLHOLDER

|   SHAUBLIN | | |
|--|---------------|-----------------|
| PINZA/COLLET ER-8 | WELDON Ø 6 mm | P6 (0,5-4,5 mm) |
| Testa/Head | | Pag |
| T90cn-0,4 | | 20 |
| TR90cn-0,4 | | 21 |
| T90-0,4 | | 70 |




|   WELDON Ø 6 mm | | |
|---|---------------|-----|
| PINZA/COLLET ER-11 | WELDON Ø 6 mm | |
| Testa/Head | | Pag |
| T90cn-0,5C | | 22 |
| T90cn-0,5L | | 23 |
| T90cn-0,5M | | 24 |
| TCUcn-0,5M | | 25 |
| TR90cn-0,5 | | 26 |
| T90-0,5C | | 71 |
| T90-0,5L | | 72 |



|    WELDON Ø 10 mm | | |
|--|----------------|------------------------------------|
| PINZA/COLLET ER-16 | WELDON Ø 10 mm | PORTAFRESA/SHELL MILL HOLDER 10 mm |
| Testa/Head | | Pag |
| T90cn-1,5 | | 27 |
| T90cn-1,5L | | 28 |
| T90cn-1,5 2U | | 29 |
| TH90cn-1,5 100 bar | | 30 |
| TH90cn-1,5L 100 bar | | 31 |
| TR90cn-1,5 | | 32 |
| TCUcn-1,5 | | 33 |
| T90cn-1,5M | | 34 |
| T90-1,5 | | 73 |
| T90-1,5L | | 74 |
| T90-1,5 2U | | 75 |

|    WELDON Ø 16 mm | | |
|--|----------------|------------------------------------|
| PINZA/COLLET ER-25 | WELDON Ø 16 mm | PORTAFRESA/SHELL MILL HOLDER 16 mm |
| T90cn-2,5 | | 35 |
| T90cn-2,5L | | 36 |
| T90cn-2,5 2U | | 37 |
| TH90cn-2,5 100 bar | | 38 |
| TH90cn-2,5L 100 bar | | 39 |
| TR90cn-2,5 | | 40 |
| TCUcn-2,5 | | 41 |
| T90cn-2,5M | | 42 |
| T90-2,5 | | 76 |
| T90-2,5L | | 77 |
| T90-2,5 2U | | 78 |
| TCU-2,5 | | 79 |

|    WELDON Ø 20 mm | | |
|--|----------------|------------------------------------|
| PINZA/COLLET ER-32 | WELDON Ø 20 mm | PORTAFRESA/SHELL MILL HOLDER 27 mm |
| Testa/Head | | Pag |
| T90cn-3,5 | | 43 |
| T90cn-3,5L | | 44 |
| T90cn-3,5 2U | | 45 |
| TH90cn-3,5 100 bar | | 46 |
| TH90cn-3,5L 100 bar | | 47 |
| TR90cn-3,5 | | 48 |
| TCUcn-3,5 | | 49 |
| T90cn-3,5M | | 50 |
| T90-3,5 | | 80 |
| T90-3,5L | | 81 |
| T90-3,5 2U | | 82 |
| TCU-3,5 | | 83 |
| T90cn-3,5 SC | | 124 |
| T90cn-3,5M SC | | 125 |
| TH90cn-3,5 SC | | 126 |
| TCUcn-3,5 SC | | 127 |

|    WELDON Ø 25 mm | | |
|--|----------------|------------------------------------|
| PINZA/COLLET ER-40 | WELDON Ø 25 mm | PORTAFRESA/SHELL MILL HOLDER 27 mm |
| T90cn-4,5 | | 51 |
| T90cn-4,5L | | 52 |
| T90cn-4,5 2U | | 53 |
| TH90cn-4,5 100 bar | | 54 |
| TH90cn-4,5L 100 bar | | 55 |
| TR90cn-4,5 | | 56 |
| T90-4,5 | | 84 |
| T90-4,5L | | 85 |

|    CAPTO C4 | | |
|--|----------|-------|
| PINZA/COLLET ISO40 DIN69871 - BT40 - CAT40 | CAPTO C4 | HSK63 |
| Testa/Head | | Pag |
| T90cn-5 | | 57 |
| T90cn-5 HP | | 58 |
| T90cn-5L | | 59 |
| T90-5 | | 86 |
| T90-5 HP | | 87 |
| T90-5L | | 88 |
| T90-8 HS | | 89 |
| T90-8 HP | | 90 |
| TDU-8 | | 91 |
| T90-8 XL | | 92 |
| TCU-8 RI 15 bar | | 94 |

|   HSK63 | |
|---|-------|
| PINZA/COLLET ISO50 DIN69871 - BT50 - CAT50 | HSK63 |
| T90-10 | 95 |
| TDU-10 | 96 |
| TCU-10 RI 15 bar | 97 |
| TR90-15 | 98 |
| TR90-8 AUTO | 101 |
| TR90-15 AUTO | 102 |
| T90-15 AUTO | 103 |

COME SCEGLIERE LA TESTA IN BASE ALLA GRANDEZZA DEL CONO

HOW TO CHOOSE YOUR HEAD ACCORDING TO THE SIZE OF THE SHANK

| CONO/SPINDLE ISO/BT 30 | |
|------------------------|-----|
| Testa/Head | Pag |
| T90cn-0,5M | 24 |
| TCUcn-0,5M | 25 |
| T90cn-1,5M | 34 |
| Turbodrill | 116 |

| CONO/SPINDLE ISO/BT/CAT 40 | |
|---|---------|
| Testa/Head | Pag |
| T90cn-0,4 | 20 |
| TR90cn-0,4 | 21 |
| T90cn-0,5C | 22 |
| T90cn-0,5L | 23 |
| TR90cn-0,5 | 26 |
| T90cn-1,5 | 27 |
| T90cn-1,5L | 28 |
| T90cn-1,5 2U | 29 |
| TH90cn-1,5 100 bar | 30 |
| TH90cn-1,5L 100 bar | 31 |
| TR90cn-1,5 | 32 |
| TCUcn-1,5 | 33 |
| T90cn-2,5 | 35 |
| T90cn-2,5L | 36 |
| T90cn-2,5 2U | 37 |
| TH90cn-2,5 100 bar | 38 |
| TH90cn-2,5L 100 bar | 39 |
| TR90cn-2,5 | 40 |
| TCUcn-2,5 | 41 |
| T90cn-2,5M | 42 |
| T90cn-3,5 | 48 |
| Tutte le teste Modular All modular heads | 70-103 |
| High Speed Line | 104-118 |

| CONO/SPINDLE HSK63 | |
|---------------------|-----|
| Testa/Head | Pag |
| T90cn-0,4 | 20 |
| TR90cn-0,4 | 21 |
| T90cn-0,5C | 22 |
| T90cn-0,5L | 23 |
| TR90cn-0,5 | 26 |
| T90cn-1,5 | 27 |
| T90cn-1,5L | 28 |
| T90cn-1,5 2U | 29 |
| TH90cn-1,5 100 bar | 30 |
| TH90cn-1,5L 100 bar | 31 |
| TR90cn-1,5 | 32 |
| TCUcn-1,5 | 33 |
| T90cn-2,5 | 35 |
| T90cn-2,5L | 36 |
| T90cn-2,5 2U | 37 |
| TH90cn-2,5 100 bar | 38 |
| TH90cn-2,5L 100 bar | 39 |
| TR90cn-2,5 | 40 |
| TCUcn-2,5 | 41 |
| T90cn-2,5M | 42 |
| T90cn-3,5 | 43 |

| CONO/SPINDLE HSK63 | |
|---|---------|
| Testa/Head | Pag |
| T90cn-3,5L | 44 |
| T90cn-3,5 2U | 45 |
| TH90cn-3,5 100 bar | 46 |
| TH90cn-3,5L 100 bar | 47 |
| TR90cn-3,5 | 48 |
| TCUcn-3,5 | 49 |
| T90cn-3,5M | 50 |
| T90cn-3,5 SC | 124 |
| T90cn-3,5M SC | 125 |
| TH90cn-3,5 SC | 126 |
| TCUcn-3,5 SC | 127 |
| Tutte le teste Modular All modular heads | 70-103 |
| High Speed Line | 104-118 |

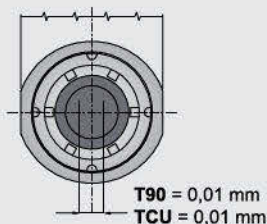
| CONO/SPINDLE ISO/BT/CAT 50 | |
|----------------------------|-----|
| Testa/Head | Pag |
| T90cn-0,4 | 20 |
| TR90cn-0,4 | 21 |
| T90cn-0,5C | 22 |
| T90cn-0,5L | 23 |
| TR90cn-0,5 | 26 |
| T90cn-1,5 | 27 |
| T90cn-1,5L | 28 |
| T90cn-1,5 2U | 29 |
| TH90cn-1,5 100 bar | 30 |
| TH90cn-1,5L 100 bar | 31 |
| TR90cn-1,5 | 32 |
| TCUcn-1,5 | 33 |
| T90cn-2,5 | 35 |
| T90cn-2,5L | 36 |
| T90cn-2,5 2U | 37 |
| TH90cn-2,5 100 bar | 38 |
| TH90cn-2,5L 100 bar | 39 |
| TR90cn-2,5 | 40 |
| TCUcn-2,5 | 41 |
| T90cn-2,5M | 42 |
| T90cn-3,5 | 43 |
| T90cn-3,5L | 44 |
| T90cn-3,5 2U | 45 |
| TH90cn-3,5 100 bar | 46 |
| TH90cn-3,5L 100 bar | 47 |
| TR90cn-3,5 | 48 |
| TCUcn-3,5 | 49 |
| T90cn-3,5M | 50 |
| T90cn-4,5 | 51 |
| T90cn-4,5L | 52 |
| T90cn-4,5 2U | 53 |
| TH90cn-4,5 100 bar | 54 |
| TH90cn-4,5L 100 bar | 55 |
| TR90cn-4,5 | 56 |
| T90cn-5 | 57 |
| T90cn-5 HP | 58 |
| T90cn-5L | 59 |

| CONO/SPINDLE ISO/BT/CAT 50 | |
|---|---------|
| Testa/Head | Pag |
| T90cn-3,5 SC | 124 |
| T90cn-3,5M SC | 125 |
| TH90cn-3,5 SC | 126 |
| TCUcn-3,5 SC | 127 |
| Tutte le teste Modular All modular heads | 70-103 |
| High Speed Line | 104-118 |

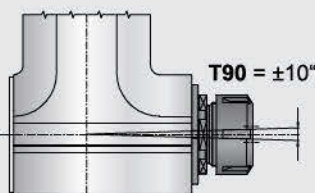
| CONO/SPINDLE HSK 80/100 | |
|---|---------|
| Testa/Head | Pag |
| T90cn-0,4 | 20 |
| TR90cn-0,4 | 21 |
| T90cn-0,5C | 22 |
| T90cn-0,5L | 23 |
| TR90cn-0,5 | 26 |
| T90cn-1,5 | 27 |
| T90cn-1,5L | 28 |
| T90cn-1,5 2U | 29 |
| TH90cn-1,5 100 bar | 30 |
| TH90cn-1,5L 100 bar | 31 |
| TR90cn-1,5 | 32 |
| TCUcn-1,5 | 33 |
| T90cn-2,5 | 35 |
| T90cn-2,5L | 36 |
| T90cn-2,5 2U | 37 |
| TH90cn-2,5 100 bar | 38 |
| TH90cn-2,5L 100 bar | 39 |
| TR90cn-2,5 | 40 |
| TCUcn-2,5 | 41 |
| T90cn-2,5M | 42 |
| T90cn-3,5 | 43 |
| T90cn-3,5L | 44 |
| T90cn-3,5 2U | 45 |
| TH90cn-3,5 100 bar | 46 |
| TH90cn-3,5L 100 bar | 47 |
| TR90cn-3,5 | 48 |
| TCUcn-3,5 | 49 |
| T90cn-3,5M | 50 |
| T90cn-4,5 | 51 |
| T90cn-4,5L | 52 |
| T90cn-4,5 2U | 53 |
| TH90cn-4,5 100 bar | 54 |
| TH90cn-4,5L 100 bar | 55 |
| TR90cn-4,5 | 56 |
| T90cn-5 | 57 |
| T90cn-5 HP | 58 |
| T90cn-5L | 59 |
| T90cn-3,5 SC | 124 |
| T90cn-3,5M SC | 125 |
| TH90cn-3,5 SC | 126 |
| TCUcn-3,5 SC | 127 |
| Tutte le teste Modular All modular heads | 70-103 |
| High Speed Line | 104-118 |



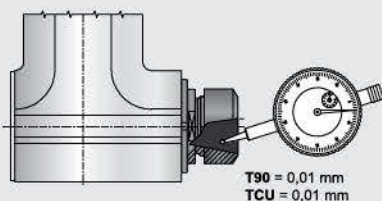
DATI TECNICI TECHNICAL DATA



Disassamento tra albero in entrata e mandrino portautensile
Maximum misalignment of input and output drive spindle



Errore angolare del mandrino portautensile rispetto ai 90° teorici
Tool spindle angular variation relative to 90° (theoretical value)



Oscillazione mandrino portautensile con testa in rotazione
Maximum runout of output spindle

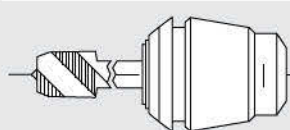
MASCHIATURA TAPPING

Per le operazioni di maschiatura, tutte le teste standard possono utilizzare le pinze compensate. Queste pinze sono perfettamente intercambiabili con le normali pinze elastiche utilizzate per le altre operazioni, e permettono ai maschi di avere una corsa assiale di compensazione per eventuali errori di avanzamento e per l'inversione della rotazione.

La stessa testa, quindi, può essere impiegata sia per forare che per maschiare compatibilmente alla capacità della relativa pinza.

For tapping operations, all standard heads can be equipped with axially-compensating collets. These collets are fully interchangeable with the normal collets and allow the tap to move axially thereby compensating for any feed error and facilitating reversal of direction of rotation.

A single head can therefore be used for both drilling and tapping, up to the diameter allowed by the collet.



| Head / Tipo testa | Collet / Tipo Pinza | Capacity / Capacità | Shift / Corsa |
|-------------------|---------------------|---------------------|---------------|
| T90-1,5 | ET-1-16 | M1-M6 | 7 mm |
| T90/TCU-2,5 | ET-1-25 | M1-M12 | 8 mm |
| T90/TCU-3,5 | ET-1-32 | M4-M16 | 10 mm |
| T90-4,5 | ET-1-40 | M6-M20 | 13 mm |

NOTE: Ogni pinza può portare una sola grandezza di maschio. Perciò sarà necessario specificare, in sede di ordine, il diametro del gambo del maschio che si intende utilizzare.
Each collet is designed to accommodate an individual tap size. Therefore, please specify the tap shank diameter when ordering collets.

TESTA PER CAMBIO UTENSILE AUTOMATICO
ANGLE HEAD FOR AUTOMATIC TOOL CHANGE

TESTA PER MONTAGGIO MANUALE
ANGLE HEAD FOR MANUAL MOUNTING



1. Tipo di portautensile e diametro utensile
Type of tool holder and cutting tool diameter

.....

2. Cono di attacco alla macchina
Machine spindle

.....

3. Distanza tra perno e cono attacco testa
Distance between pin and spindle

.....

4. Tipo di macchina e peso al cambio utensile
Type of the machine and weight at tool change

.....

5. **Stop Block**
Già presente in macchina oppure da realizzare
Already installed or to be manufactured

.....

OPTION

Refrigerante interno
Internal coolant

Doppia uscita
Dual output

Portautensile diverso
Different tool holder

Lunghezza extra
Extra length

1. Tipo di portautensile e diametro utensile
Type of tool holder and cutting tool diameter

.....

2. Cono di attacco alla macchina
Machine spindle

.....

OPTION

Refrigerante interno
Internal coolant

Doppia uscita
Dual output

Portautensile diverso
Different tool holder

Lunghezza extra
Extra length



LINEA CONTROL

La LINEA CONTROL comprende una serie di teste angolari adatte ad essere montate nel magazzino utensile e quindi essere scambiate automaticamente. La corretta installazione prevede il montaggio di uno stop block a bordo macchina. Per una maggior rigidità il cono di attacco alla macchina è realizzato in un unico pezzo con l'albero principale.

CONTROL LINES include a wide range of angle heads to be used on machining centres with ATC and therefore can be mounted in the tool magazine and automatically exchanged in the machine spindle. A stop block mounted on the machine spindle ensure a correct positioning and prevents rotation. The input spindle is one solid piece with the main shaft to grant a higher rigidity.

SCANNERIZZA IL QR CODE
per le istruzioni di montaggio

*SCAN THE QR CODE
for the set-up instructions*



Dimensioni STOP BLOCK per teste

Dimensions STOP BLOCK for heads

T90cn-0,4 / 0,5 / 1,5 / 2,5 / 3,5 / 4,5



Dimensioni STOP BLOCK per teste

Dimensions STOP BLOCK for heads

T90cn-5

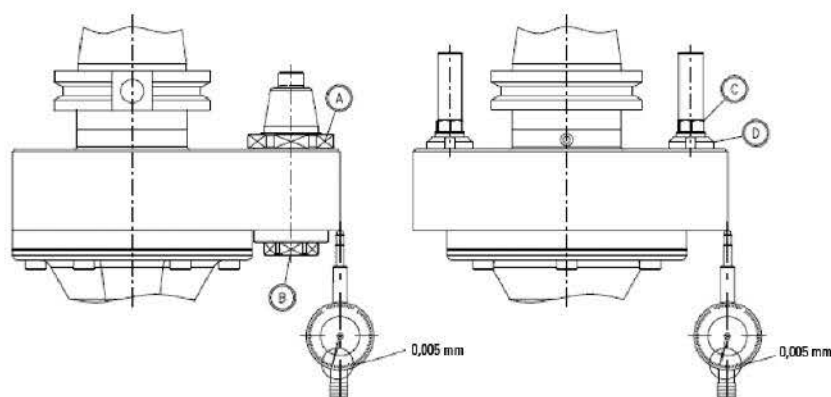
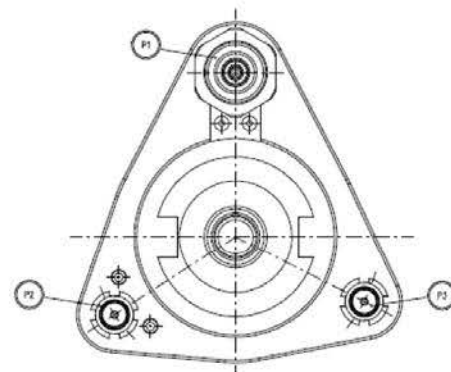


SUPPORTO 3 PUNTI 3 POINT SUPPORT

Per aumentare la rigidità e stabilità durante la lavorazione, è possibile realizzare una flangia con 3 punti di supporto. La flangia viene realizzata su misura a seconda delle dimensioni del mandrino macchina. Solitamente per questo tipo di realizzazione si prevede un magazzino esterno o una stazione pick up per accogliere la testa.

Ogni flangia con 3 punti di appoggio viene realizzata ad hoc in base al mandrino macchina pertanto non esiste uno standard. I punti di appoggio sono tutti regolabili e devono essere registrati durante la prima installazione.

In order to increase rigidity and stability during machining, Alberti can build a special flange with 3 point support system. The flange is custom-made according to the dimension of the machine spindle. With this system the head cannot be loaded into the tool magazine but requires an external uploading or pick up station.



ESEMPI DI STOP BLOCK E PERNO EXAMPLES OF STOP BLOCKS AND PINS

In caso non fosse possibile utilizzare uno dei perni o stop block già disponibili, Alberti fornisce tutta l'assistenza necessaria per realizzare uno stop block ad hoc per la propria macchina. Di seguito alcuni esempi.

In case the customer cannot use any of the pins or stop block already available, Alberti will help in finding the correct solution and provide the customized stop block for the machine. Following few examples.



A
Cod: 5951800001

*Perno e Stop Block
Alberti standard
Alberti standard
Pin and Block*

B
Cod: 595180006

*Perno e Stop Block
Alberti standard
Adjustable conical pin
and stop block*

C
Cod: 5951800073

*Perno e stop block
conico regolabile
Conical pin and
stop block*

D
Cod: 4951800091

*Perno e stop
block prismatico
Prismatic pin
and stop block*

E

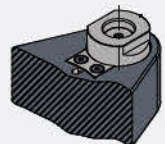
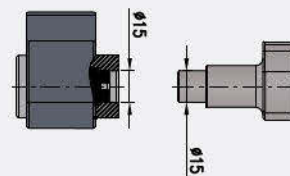
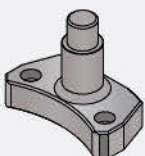
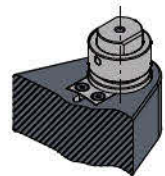
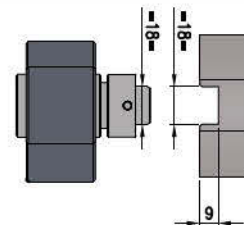
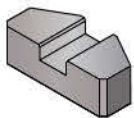
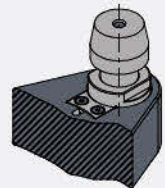
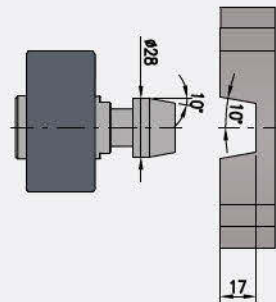
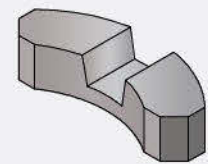
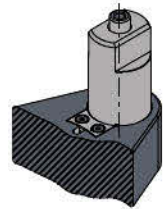
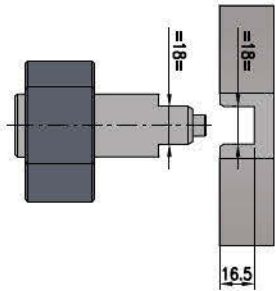
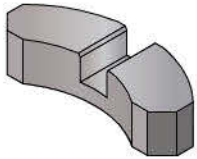
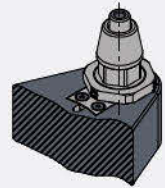
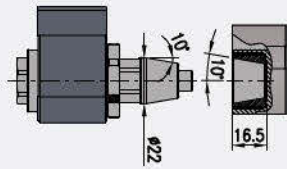
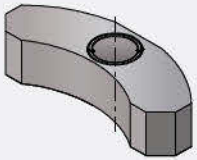
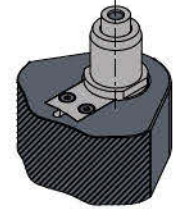
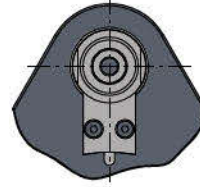
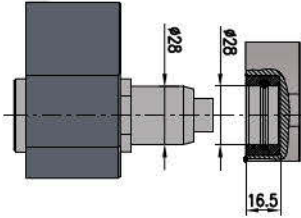
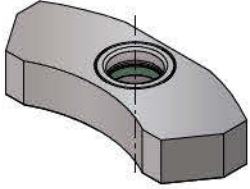
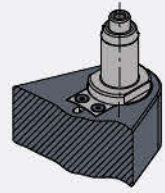
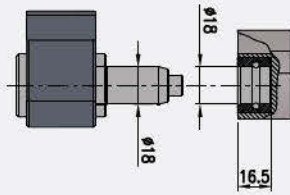
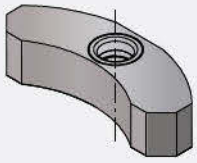
*Perno flottante
Floating pin*

F

*Perno maschio speciale
Special male pin*

G

*Perno femmina speciale
Special female pin*



T90cn-0,4

ACTC9004C



Ratio
Rapporto
1:1



RPM
Velocità
10.000 min⁻¹



Max. axial load
Max. carico assiale
100 N



Torque
Momento torcente
4 Nm

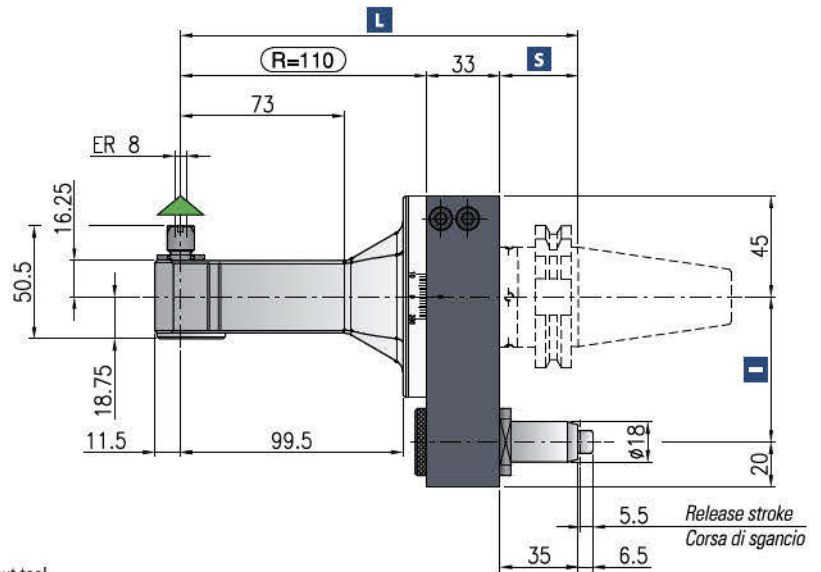


Weight
Peso
4 kg

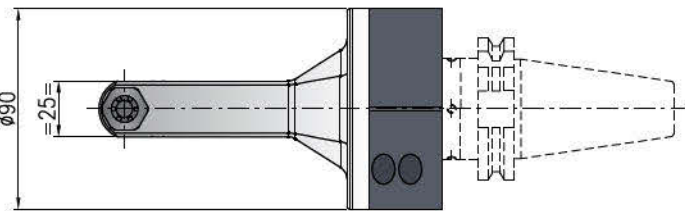
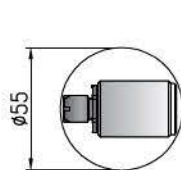


Collet
Pinza
ER-8 (ø 0,5/5 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritengo / Stop-Block

NOT INCLUDED - NON INCLUSO



▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--|----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | | |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 178 | 178 | 178 | 184 | 185 | 188 | 181 | 183 | 183 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno

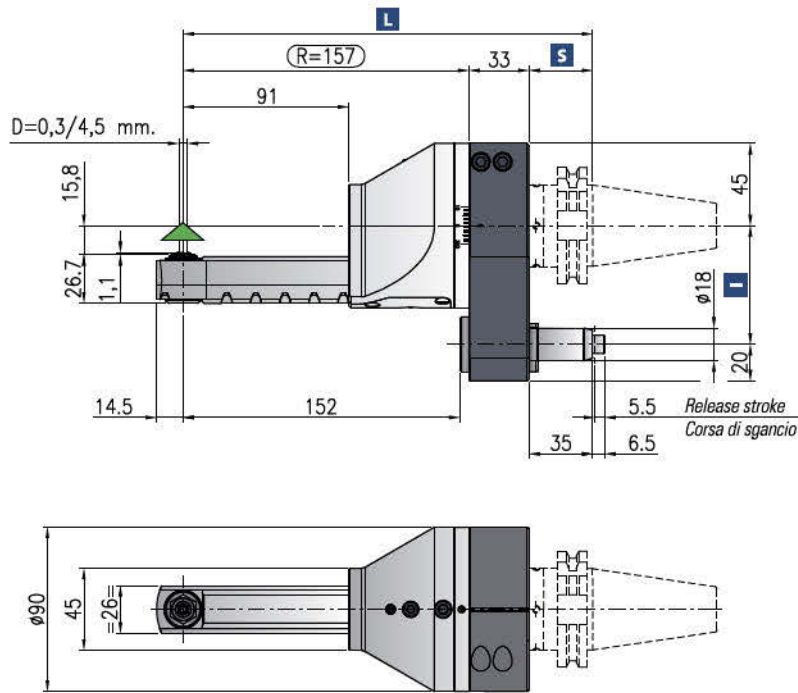


Ø mm max.
6

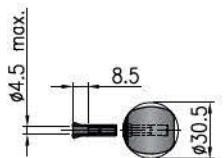
Weld on output
Weldon

TR90cn-0,4

ACTR904C



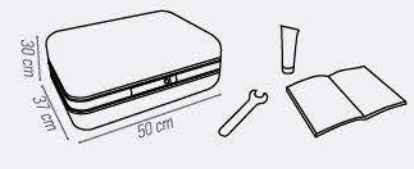
Minimum diameter without tool
Diametro minimo senza utensile



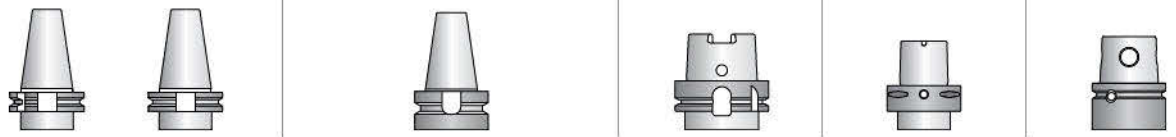
Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

- Ratio
Rapporto
1: 2.375 SPEEDER
- RPM
Velocità
8.000 min⁻¹ OUTPUT
- Max. axial load
Max. carico assiale
135 N
- Torque
Momento torcente
8 Nm
- Weight
Peso
4.5 kg
- Collet
Pinza
SCHAUBLIN P6

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--|----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | | |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 225 | 225 | 225 | 231 | 232 | 235 | 228 | 230 | 230 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto
*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno

T90cn-0,5C

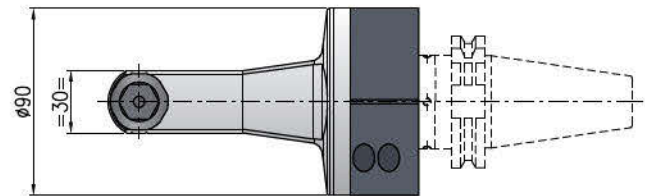
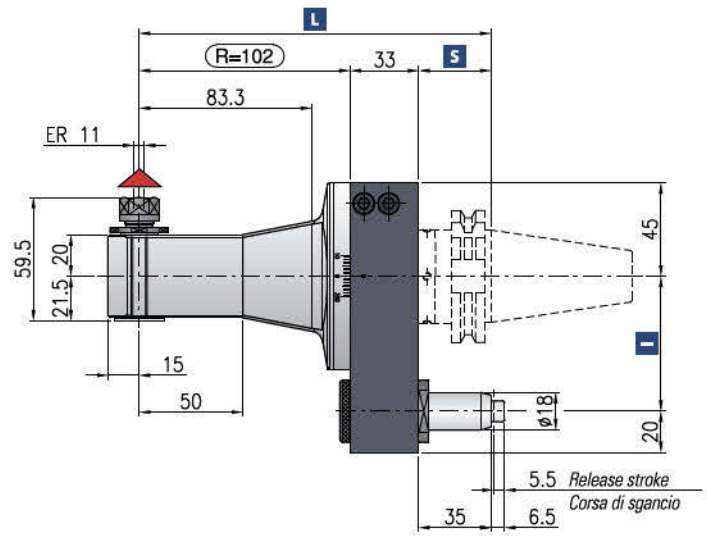
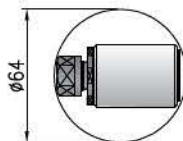
ACT9005C

-  Ratio
Rapporto
1:1
-  RPM
Velocità
10.000 min⁻¹
-  Max. axial load
Max. carico assiale
150 N
-  Torque
Momento torcente
8 Nm
-  Weight
Peso
4 kg
-  Collet
Pinza
ER-11 (Ø 0,5/7 mm)

*** STANDARD EQUIPMENT INCLUDES:**




Minimum diameter without tool
Diametro minimo senza utensile

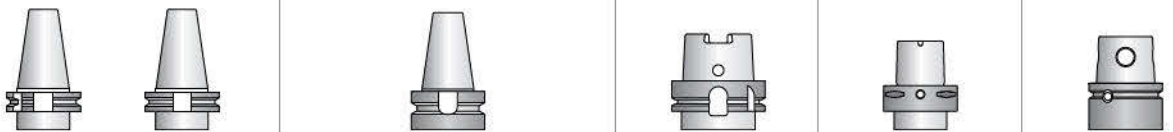


Retaining block / Tassello di ritengo / Stop-Block

NOT INCLUDED - NON INCLUSO



 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--|----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | | |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 170 | 170 | 170 | 176 | 177 | 180 | 173 | 175 | 175 | | |

Dual contact spindles available/Disponibilità con i cono a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno



Ø mm max.
Ø 0,5 / 7mm

ERAX-11

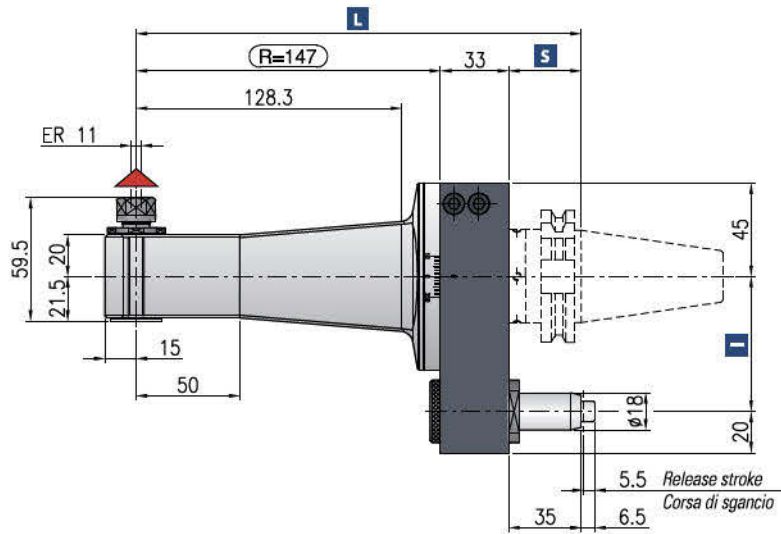


Ø mm max.
6

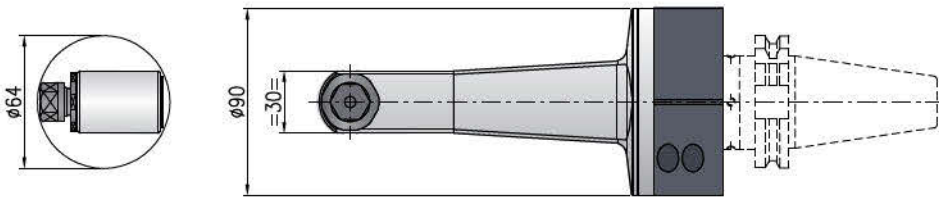
Weldon output
Weldon

T90cn-0,5L

ACT9005L



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio
Rapporto
1:1
- RPM
Velocità
10.000 min⁻¹
- Max. axial load
Max. carico assiale
150 N
- Torque
Momento torcente
8 Nm
- Weight
Peso
4,3 kg
- Collet
Pinza
ER-11 (Ø 0,5/7 mm)

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 215 | 215 | 215 | 221 | 222 | 225 | 218 | 220 | 220 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno



Ø mm max.
Ø 0,5 / 7mm

ERAX-11



Ø mm max.
6

Weldon output
Weldon

T90cn-0,5M Aluminum

ACT9005C.ALU



Ratio
Rapporto
1:1



RPM
Velocità
10.000 min⁻¹



Max. axial load
Max. carico assiale
120 N



Torque
Momento torcente
8 Nm



Weight
Peso
2,7 Kg

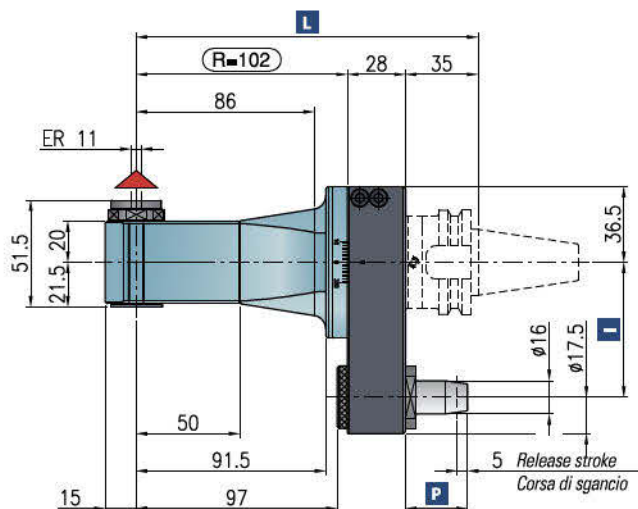


Collet
Pinza
ERAX-11 (ø 0,5/7 mm)

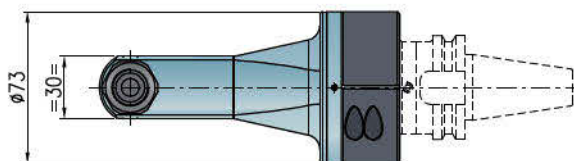
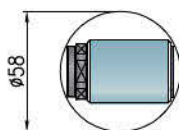


Shank
Cono
ISO 30DIN-69871/BT-30

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritengo / Stop-Block

NOT INCLUDED - NON INCLUSO



| | FANUC ROBODRILL | BROTHER S2D | BROTHER TC-32 | BROTHER R450X1 | BROTHER S500 S700 S1000 | DMG MORI MILLTAP 700 |
|---|--------------------|----------------|------------------|-------------------|-------------------------------|-------------------------|
| I | 65 | 80 | 80 | 50 | 80 | 65 |
| P | 24 | 24 | 30 | 24 | 25,75 | 24 |
| L | 165 | 165 | 165 | 165 | 165 | 165 |

Dual contact spindles available / Disponibilità con i doppio contatto

Direction of rotation opposite to machine spindle / *sensò di rotazione contrario al mandrino*

Opzione / Option



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

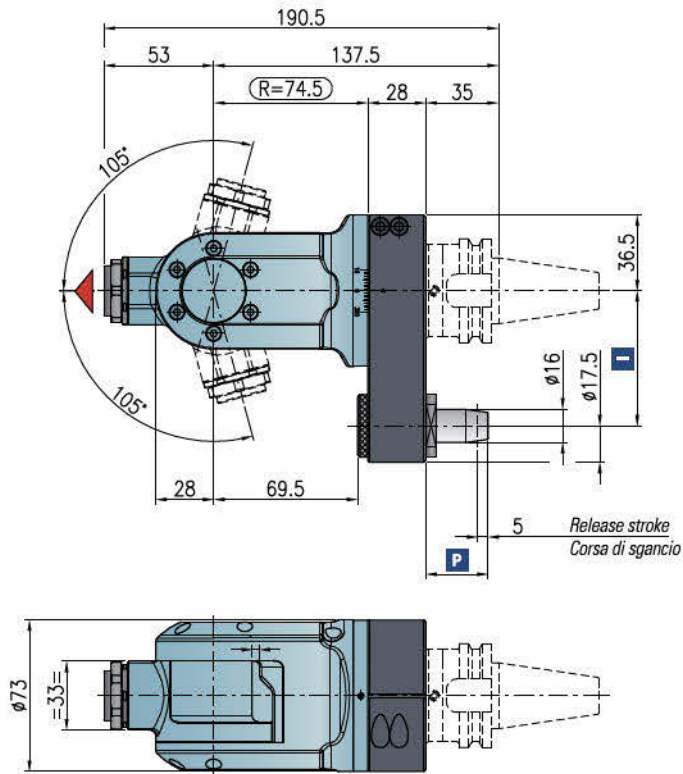


bar max
12

Coolant through pin
Refrigerante attraverso il perno

TCUcn-0,5M Aluminum

ACTCU05C.ALU



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

- Ratio
Rapporto
1:1.5 (Speeder)
- RPM OUTPUT
Velocità
6.000 min⁻¹
- Max. axial load
Max carico assiale
215N
- Torque
Momento torcente
8 Nm
- Weight
Peso
2,8 Kg
- Collet
Pinza
ERAX-11 (ø 0,5/7 mm)
- Shank
Cono
ISO 30DIN-69871/BT-30

* STANDARD EQUIPMENT INCLUDES:



| | FANUC ROBODRILL | BROTHER S2D | BROTHER TC-32 | BROTHER R450X1 | BROTHER S500 S700 S1000 | DMG MORI MILLTAP 700 |
|---|--------------------|----------------|------------------|-------------------|-------------------------------|-------------------------|
| I | 65 | 80 | 80 | 50 | 80 | 65 |
| P | 24 | 24 | 30 | 24 | 25,75 | 24 |

Dual contact spindles available / Disponibilità coni a doppio contatto

Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

Opzione / Option



bar max

12

Coolant through pin
Refrigerante attraverso il perno

TR90cn-0,5

ACTR905C



Ratio OUTPUT
Rapporto
1:2 speeder



RPM OUTPUT
Velocità
8.000 min⁻¹



Max. axial load
Max. carico assiale
200 N



Torque
Momento torcente
8 Nm

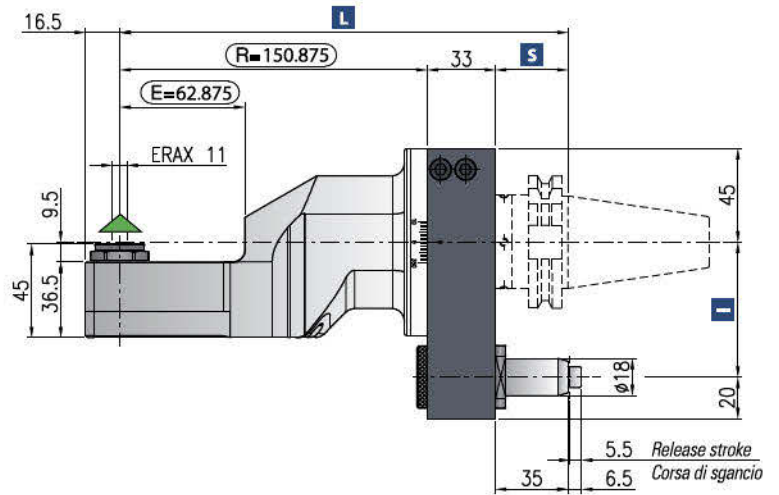


Weight
Peso
6 kg

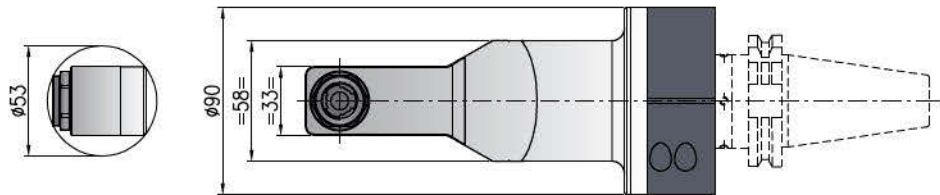


Collet
Pinza
ER-AX-11 (ø 0,5/7 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile

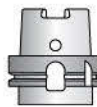


Retaining block / Tassello di ritegno / Stop-Block

NOT INCLUDED - NON INCLUSO



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|-----------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 63 |
| I | 65-80 | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 218,875 | 218,875 | 218,875 | 224,875 | 225,875 | 228,875 | 221,875 | 223,875 | 223,875 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



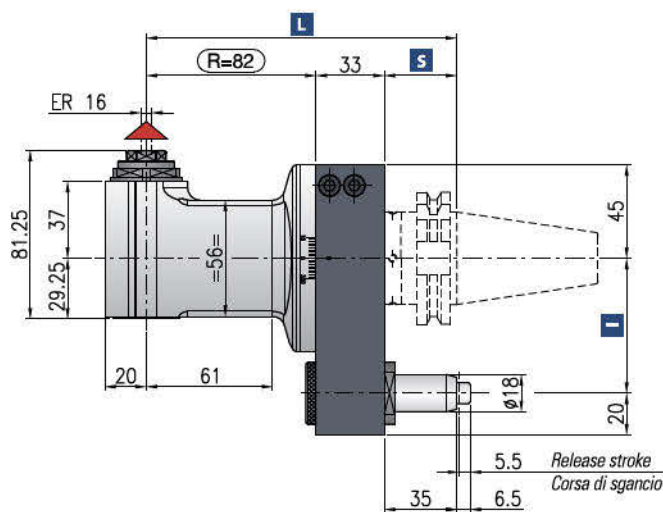
bar max

12

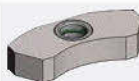
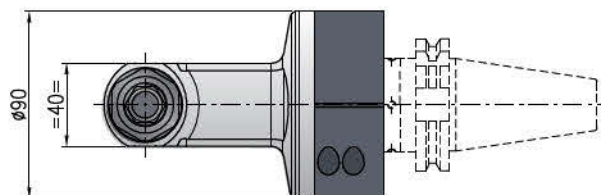
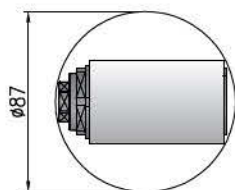
Coolant through pin
Adduzione refrigerante attraverso il perno

T90cn-1,5

ACT9015C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Ratio
Rapporto
1:1



RPM
Velocità
8.000 min⁻¹



Max. axial load
Max. carico assiale
250 N



Torque
Momento torcente
15 Nm



Weight
Peso
4,3 kg

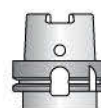


Collet
Pinza
ER-16 (ø 1/10 mm)

*** STANDARD EQUIPMENT INCLUDES:**



▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--|----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | | |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 150 | 150 | 150 | 156 | 157 | 160 | 153 | 155 | 155 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile



Ø mm
13

Arbor output
Porta fresa



Ø mm max.
10

Weldon output
Weldon



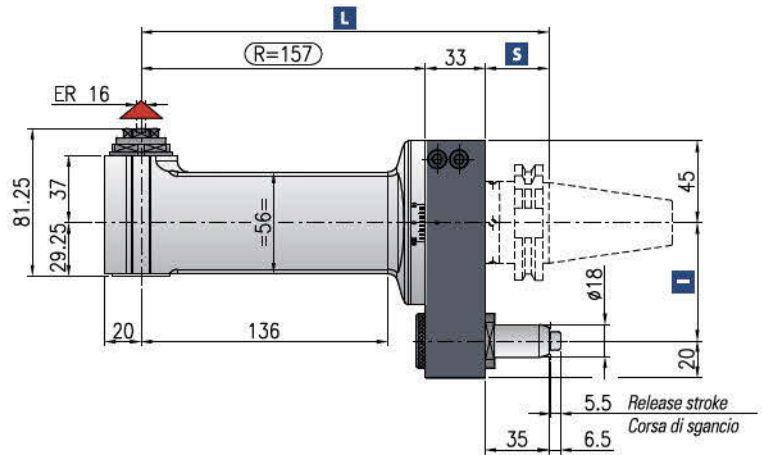
ER-16/ER-11

Double output
Doppia uscita

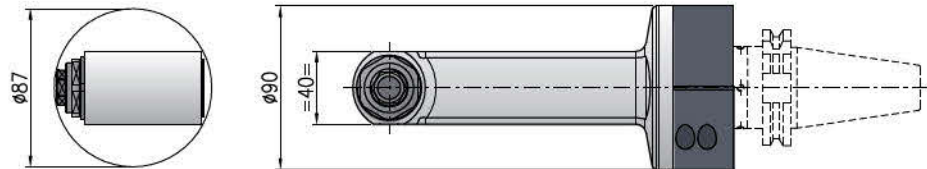
T90cn-1,5L

ACT9015L

-  Ratio
Rapporto
1:1
-  RPM
Velocità
8.000 min⁻¹
-  Max. axial load
Max. carico assiale
250 N
-  Torque
Momento torcente
15 Nm
-  Weight
Peso
5,2 kg
-  Collet
Pinza
ER-16 (ø 1/10 mm)



Minimum diameter without tool
Diametro minimo senza utensile




*** STANDARD EQUIPMENT INCLUDES:**

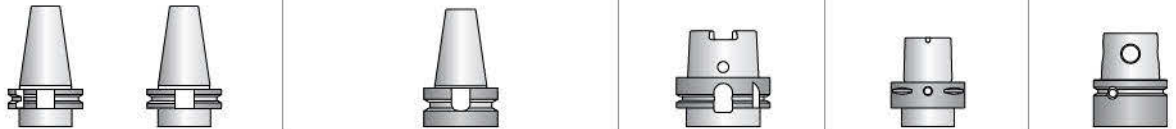


Retaining block / Tassello di ritengo / Stop-Block

NOT INCLUDED - NON INCLUSO



 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 225 | 225 | 225 | 231 | 232 | 235 | 228 | 230 | 230 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile



Ø mm
13

Arbor output
Porta fresa



Ø mm max.
10

Weldon output
Weldon

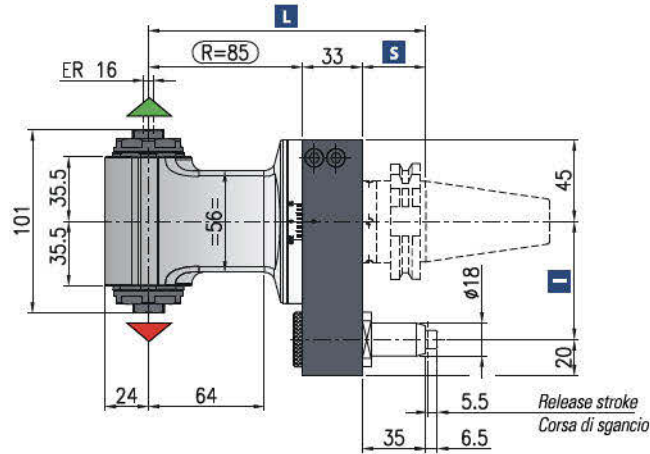


ER-16/ER-11

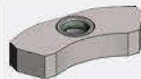
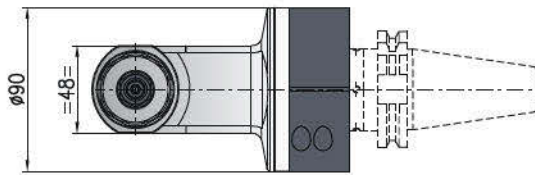
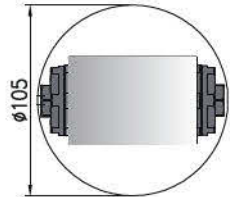
Double output
Doppia uscita

T90cn-1,5 2U

ACT9015D



Minimum diameter without tool
Diametro minimo senza utensile

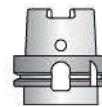


Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino
- Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio / Rapporto **1:1**
- RPM / Velocità **8.000 min⁻¹**
- Max. axial load / Max. carico assiale **250 N**
- Torque / Momento torcente **15 Nm**
- Weight / Peso **4,3 kg**
- Collet / Pinza **ER-16 (Ø 1/10 mm)**

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--|----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | | |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 153 | 153 | 153 | 159 | 160 | 163 | 156 | 158 | 158 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



Ø mm
13

Arbor output
Porta fresa



Ø mm max.
10

Weldon output
Weldon



ER-16/ER-11

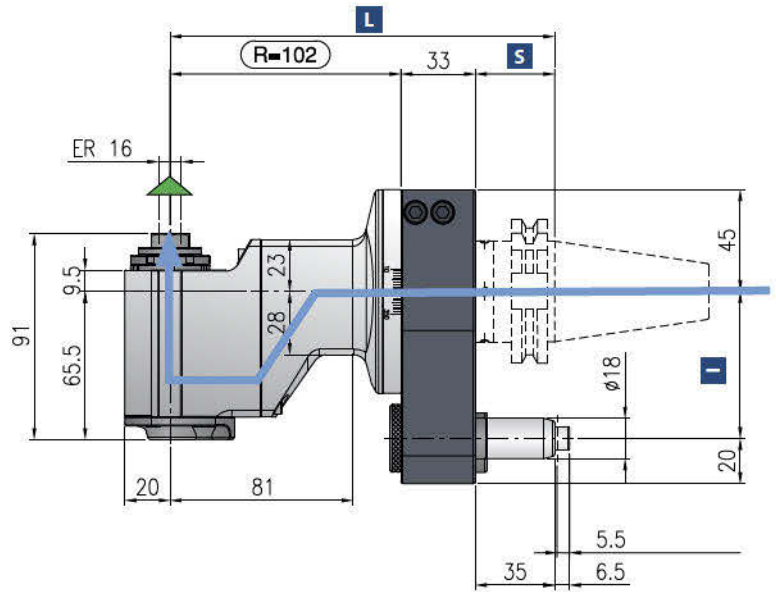
Double output
Doppia uscita

TH90cn-1,5 100 BAR

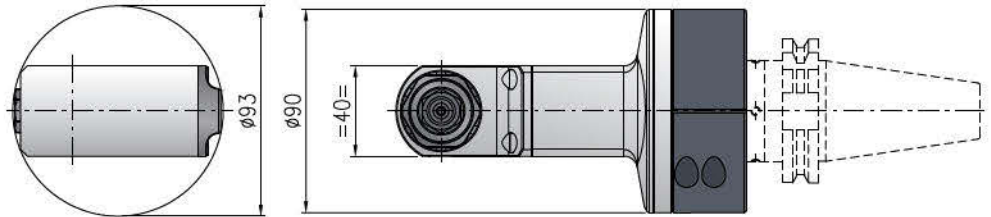
ACTH915C

-  Ratio
Rapporto
1:1
-  RPM
Velocità
10.000 min⁻¹
-  RPM Dry running
Velocità a secco
8.000 min⁻¹
-  Max. axial load
Max. carico assiale
250 N
-  Torque
Momento torcente
15 Nm
-  Weight
Peso
4,5 kg
-  Collet
Pinza
ER-16 (ø 1/10 mm)

* STANDARD EQUIPMENT INCLUDES:




Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Dry running also possible / Rotazione a secco possibile

 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--|----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 63-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | | |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 170 | 170 | 170 | 176 | 177 | 180 | 173 | 175 | 175 | | |

Dual contact spindles available/Disponibilità con i cono a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



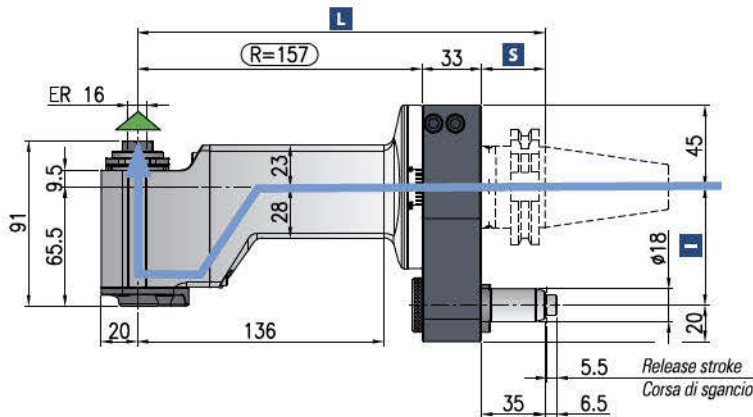
Ø mm max.

10

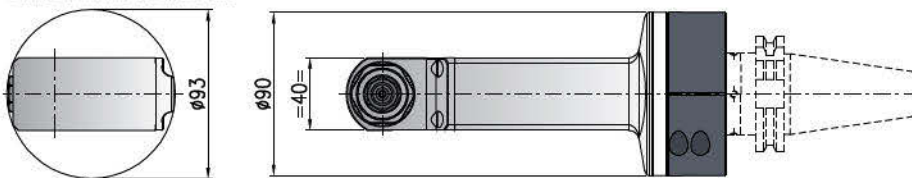
Weldon output
Weldon

TH90cn-1,5L 100 BAR

ACTH915L



Minimum diameter without tool
Diametro minimo senza utensile



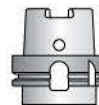
Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Dry running also possible / Rotazione a secco possibile

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

- Ratio / Rapporto: **1:1**
- RPM / Velocità: **10.000 min⁻¹**
- RPM Dry running / Velocità a secco: **8.000 min⁻¹**
- Max. axial load / Max. carico assiale: **250 N**
- Torque / Momento torcente: **15 Nm**
- Weight / Peso: **5,2 kg**
- Collet / Pinza: **ER-16 (ø 1/10 mm)**



| Shank/Cono | DIN-69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 225 | 225 | 225 | 231 | 232 | 235 | 228 | 230 | 230 |

Dual contact spindles available/Disponibilità coni a doppio contatto
*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



Ø mm
13

Arbor output
Porta fresa



Ø mm max.
10

Weldon output
Weldon



ER-16/ER-11

Double output
Doppia uscita

TR90cn-1,5

ACTR915C



Ratio
Rapporto
1: 1,5 speeder



RPM OUTPUT
Velocità
8.000 min⁻¹



Max. axial load
Max. carico assiale
350 N



Torque
Momento torcente
15 Nm

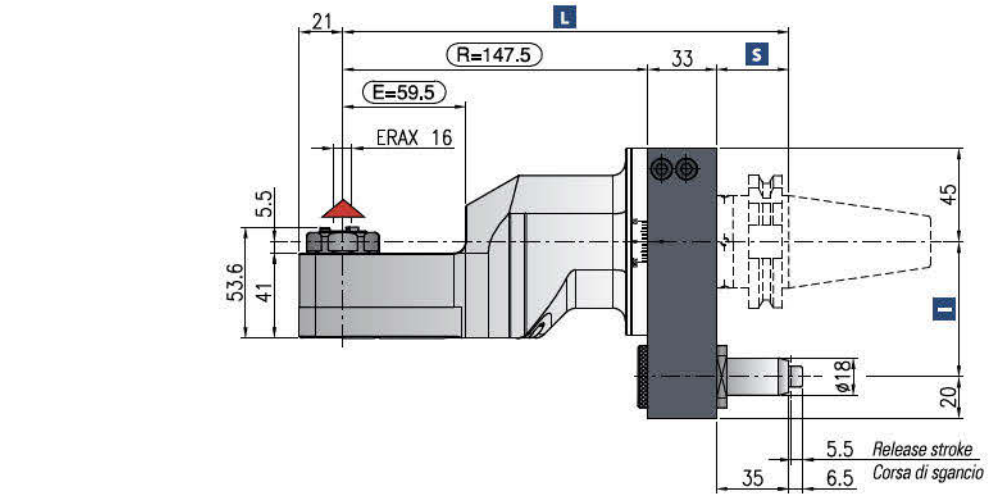


Weight
Peso
7 kg

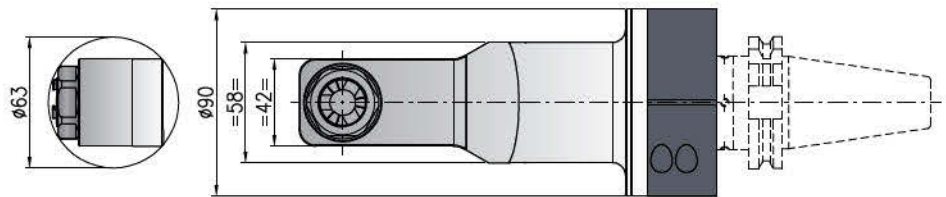


Collet
Pinza
ER-AX 16 (ø1/10 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritengo / Stop-Block
NOT INCLUDED - NON INCLUSO

Dry running also possible / Rotazione a secco possibile

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|-----------|-----------|---------------|-----------|---------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 63 | | |
| I | 65-80 | 80-(110*) | 65-80 -(110*) | 80-(110*) | 65-80 -(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 215,5 | 215,5 | 215,5 | 221,5 | 222,5 | 222,5 | 218,5 | 220,5 | 220,5 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



bar max
12

Coolant through pin
Refrigerante attraverso il perno

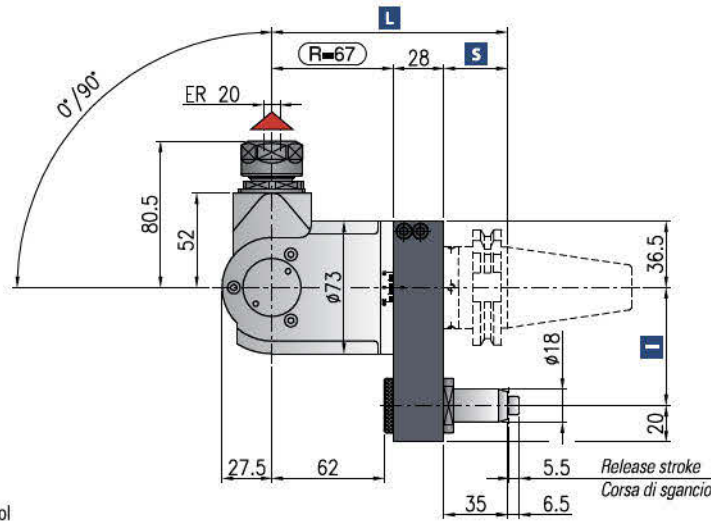


bar max
100

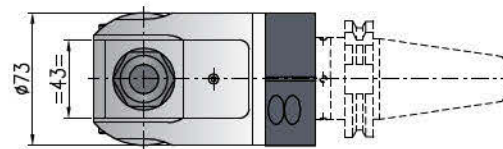
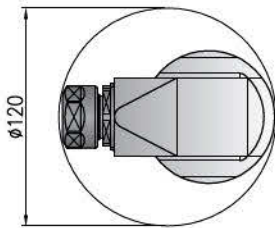
Coolant through spindle
Refrigerante attraverso il cono

TCUcn-1,5

ACTCU15C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
450 N



Torque
Momento torcente
6 Nm



Weight
Peso
4.2 kg

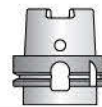


Collet
Pinza
ER-20 (ø 1/13 mm)

*** STANDARD EQUIPMENT INCLUDES:**



▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--|----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | | |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 42 | 40 | 40 | | |
| L | 130 | 130 | 130 | 136 | 137 | 140 | 133 | 135 | 220,5 | | |

Dual contact spindles available/Disponibilità con i doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il
perno



min⁻¹
8.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm max.
10

Welded output
Weldon

T90cn-1,5M Aluminum

ACT9015C.ALU



Ratio
Rapporto
1:1



RPM
Velocità
8.000 min⁻¹



Max. axial load
Max. carico assiale
250 N



Torque
Momento torcente
15 Nm



Weight
Peso
2,9 kg



Collet
Pinza
ER 16 (ø 1-10 mm)

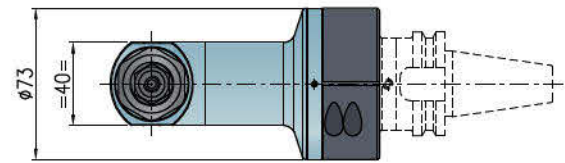
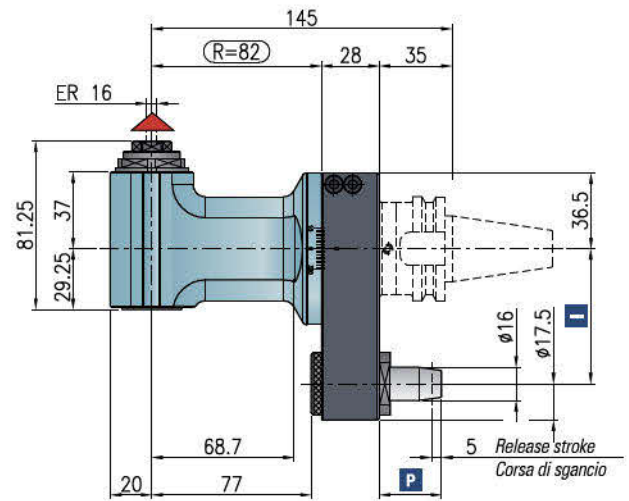
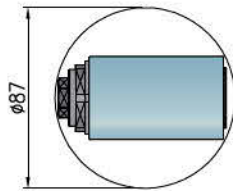


Shank
Cono
ISO 30DIN-69871/BT-30

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Possibilità refrigerante / Internal coolant

Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

| | FANUC ROBODRILL | BROTHER S2D | BROTHER TC-32 | BROTHER R450X1 | BROTHER S500 S700 S1000 | DMG MORI MILLTAP 700 |
|---|-----------------|-------------|---------------|----------------|-------------------------|----------------------|
| I | 65 | 80 | 80 | 50 | 80 | 65 |
| P | 24 | 24 | 30 | 24 | 25,75 | 24 |

Dual contact spindles available/Disponibilità con a doppio contatto

Opzione / Option



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

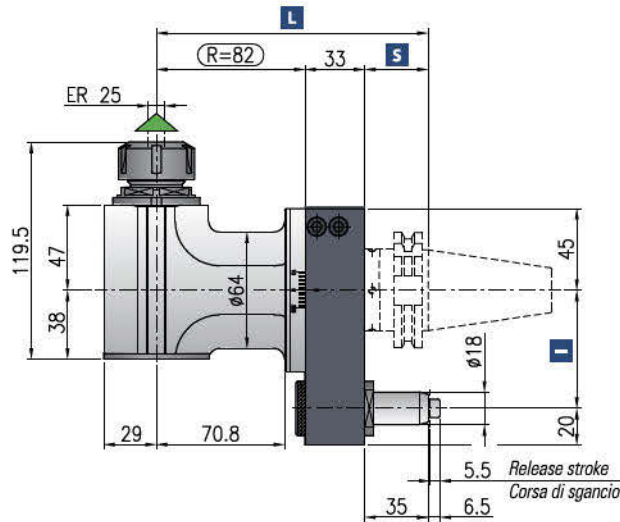


bar max
40

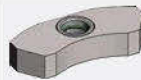
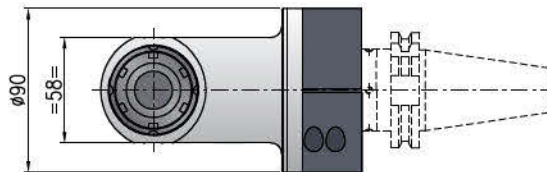
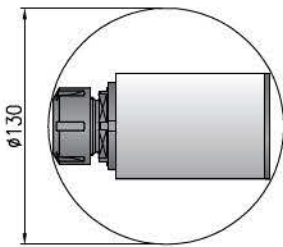
Coolant through spindle
Refrigerante attraverso il cono

T90cn-2,5

ACT9025C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
6.000 min⁻¹



Max. axial load
Max. carico assiale / Max. Axialbelastung
510 N



Torque
Momento torcente / Drehmoment
30 Nm

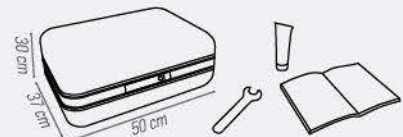


Weight
Peso / Gewicht
5,4 kg

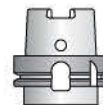


Collet
Pinza / Spannzange
ER-25 (Ø 1/16 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |
|----------------|-----------|-----------|--------------|-----------|--------------|-----------|
| Size/Grandezza | 40 | 50 | 40 | 63-80 | 100 | 63 |
| I | 65-80 | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) |
| S | 35 | 35 | 35 | 42 | 45 | 40 |
| L | 150 | 150 | 150 | 157 | 160 | 155 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno
attraverso utensile



min⁻¹
8.000

High speed RPM max.
Alta velocità RPM max.



Ø mm
16

Arbor output
Porta fresa



Ø mm max.
16

Weldon output
Weldon



HSK-32

Quick Change
Attacco rapido



ER-25/ER-16

Double output
Doppia uscita

T90cn-2,5L

ACT9025L



Ratio
Rapporto
1:1



RPM
Velocità
6.000 min⁻¹



Max. axial load
Max. carico assiale
510 N



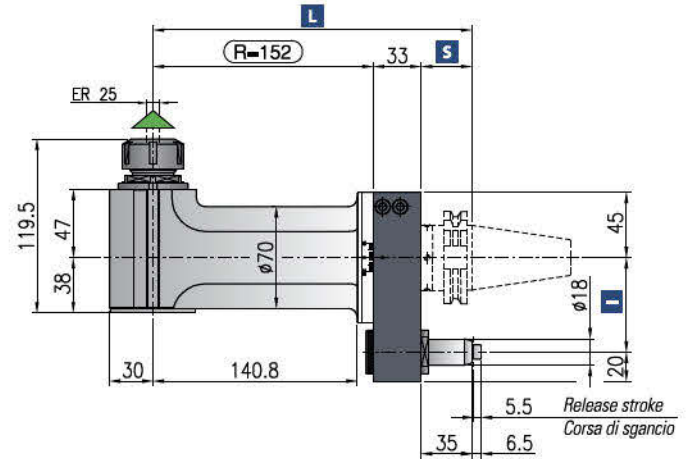
Torque
Momento torcente
30 Nm



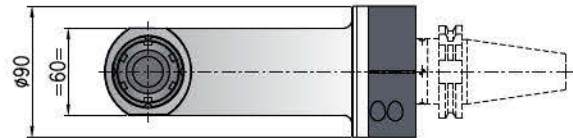
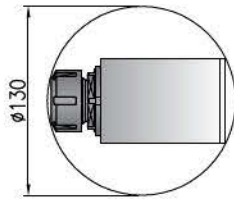
Weight
Peso
6,7 kg



Collet
Pinza
ER-25 (ø 1/16 mm)



Minimum diameter without tool
Diametro minimo senza utensile



* STANDARD EQUIPMENT INCLUDES:

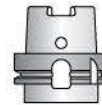


Retaining block / Tassello di ritegno / Stop-Block

NOT INCLUDED - NON INCLUSO



▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|-----------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 63 | | |
| I | 65-80 | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 220 | 220 | 220 | 226 | 227 | 230 | 223 | 225 | 225 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno
attraverso utensile



min⁻¹
8.000

High speed RPM max.
Alta velocità RPM max.



Ø mm
16

Arbor output
Porta fresa



Ø mm max.
16

Welding output
Welding



HSK-32

Quick Change
Attacco rapido

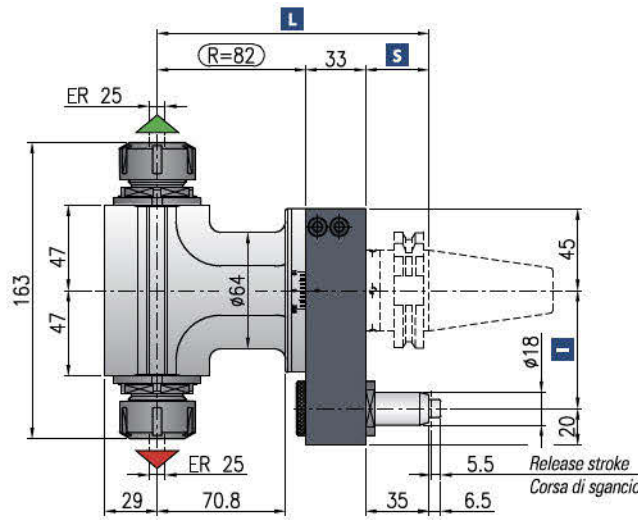


ER-25/ER-16

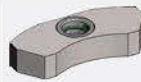
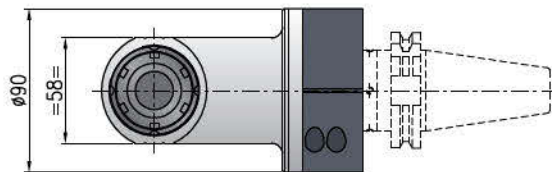
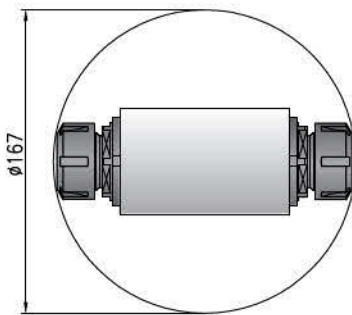
Double output
Doppia uscita

T90cn-2,5 2U

ACT9025D



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino
- Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio / Rapporto **1:1**
- RPM / Velocità **9.000 min⁻¹**
- RPM Dry running / Velocità a secco **6.000 min⁻¹**
- Max. axial load / Max. carico assiale **510 N**
- Torque / Momento torcente **30 Nm**
- Weight / Peso **6,4 kg**
- Collet / Pinza **ER-25 (Ø 1/16 mm)**

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |
|----------------|-----------|-----------|--------------|-----------|--------------|-----------|
| Size/Grandezza | 40 | 50 | 40 | 63-80 | 100 | 63 |
| I | 65-80 | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) |
| S | 35 | 35 | 35 | 42 | 45 | 40 |
| L | 150 | 150 | 150 | 157 | 160 | 155 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max.
12

Coolant through pin
Refrigerante attraverso il perno



min⁻¹
8.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm
16

Arbor output
Porta fresa



Ø mm max.
16

Welding output
Welding

TH90cn-2,5 100 BAR

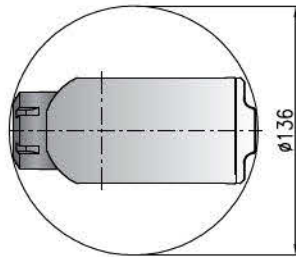
ACTH925C

-  Ratio
Rapporto
1:1
-  RPM
Velocità
9.000 min⁻¹
-  RPM Dry running
Velocità a secco
6.000 min⁻¹
-  Max. axial load
Max. carico assiale
510 N
-  Torque
Momento torcente
30 Nm
-  Weight
Peso
5,5 kg
-  Collet
Pinza
ER-25 (ø 1/16 mm)

* STANDARD EQUIPMENT INCLUDES:



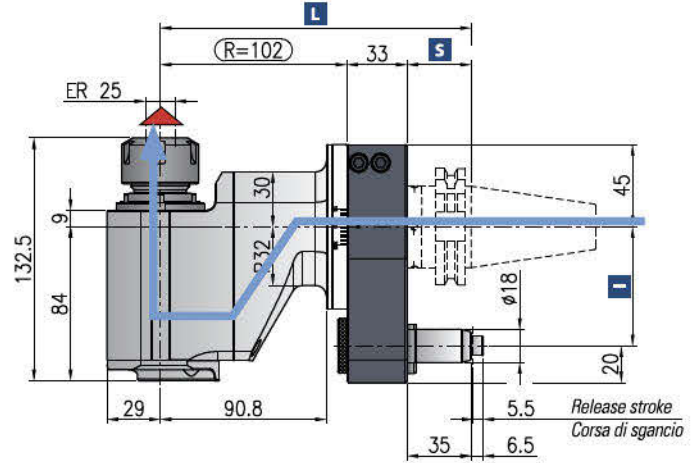
Minimum diameter without tool
Diametro minimo senza utensile




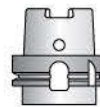
Retaining block / Tassello di ritengo / Stop-Block
NOT INCLUDED - NON INCLUSO



Dry running also possible / Rotazione a secco possibile



 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM | | | |
|----------------|-----------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 63 |
| I | 65-80 | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 170 | 170 | 170 | 176 | 177 | 180 | 173 | 175 | 175 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



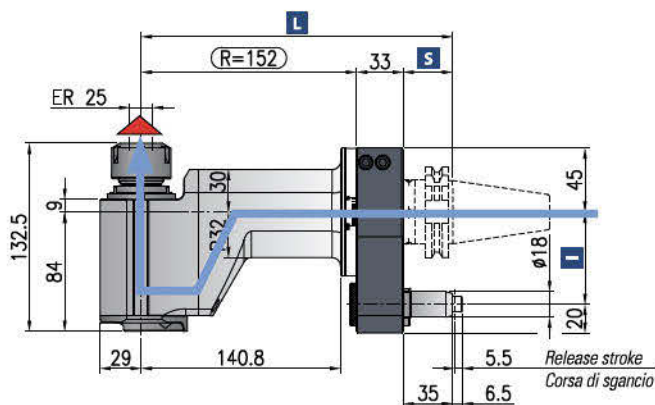
Ø mm max.

16

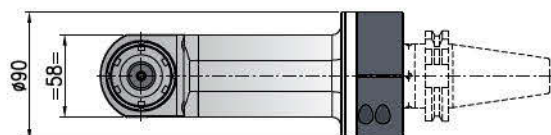
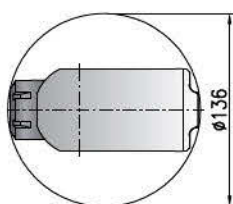
Weld on output
Weld on

TH90cn-2,5 L 100 BAR

ACTH925L



Minimum diameter without tool
Diametro minimo senza utensile

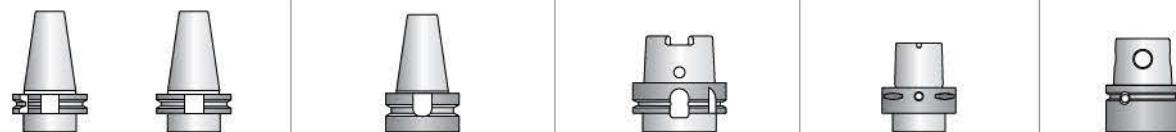


Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
510 N
- Torque
Momento torcente
30 Nm
- Weight
Peso
6,8 kg
- Collet
Pinza
ER-25(Ø2/16mm)

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |
|----------------|-----------|-----|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 38 | 40 |
| L | 250 | | 256 | 257 | 253 | 255 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



Ø mm max.

16

Weld on output
Weld on

TR90cn-2,5

ACTR925C



Ratio
Rapporto
1:1



RPM OUTPUT
Velocità
6000 min⁻¹



Max. axial load
Max. carico assiale
510 N



Torque
Momento torcente
30 Nm

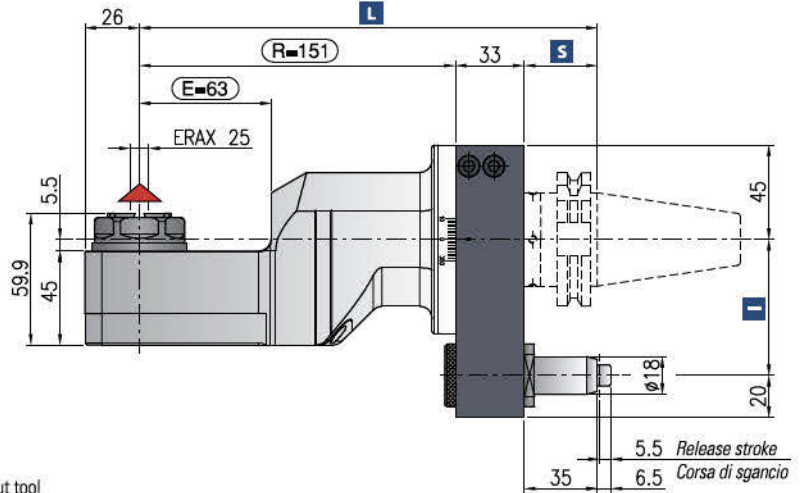


Weight
Peso
7.5 kg

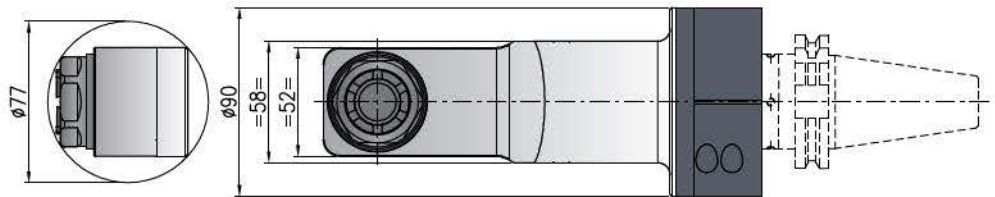


Collet
Pinza
ER-AX 25 (Ø1-16mm)

*** STANDARD EQUIPMENT INCLUDES:**



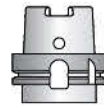
Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

Dry running also possible / Rotazione a secco possibile

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |
| L | 219 | 219 | 219 | 225 | 226 | 229 | 222 | 224 | 224 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno

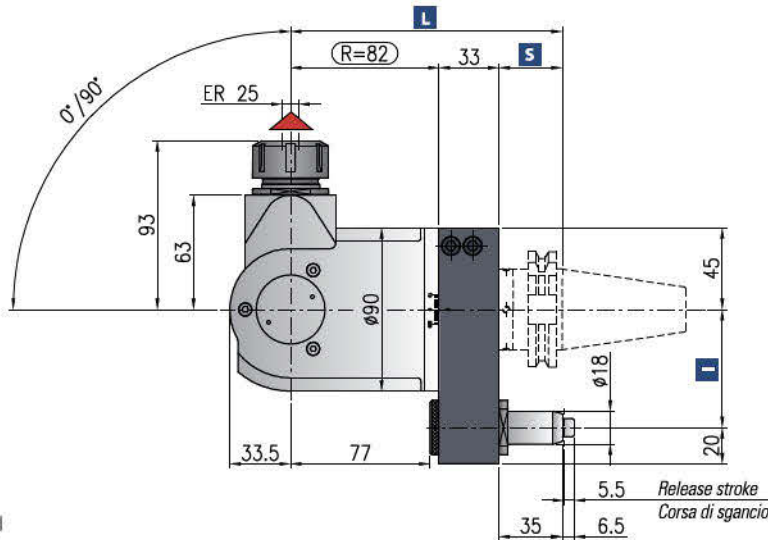


bar max
100

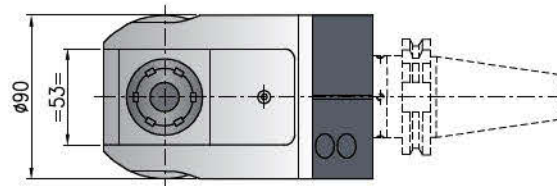
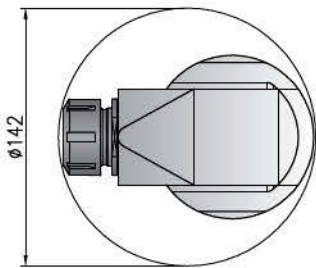
Coolant through spindle
Refrigerante attraverso il cono

TCUcn-2,5

ACTCU25C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritagno / Stop-Block

NOT INCLUDED - NON INCLUSO



▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
480 N
- Torque
Momento torcente
18 Nm
- Weight
Peso
7 kg
- Collet
Pinza
ER-25 (ø 1/16 mm)

*** STANDARD EQUIPMENT INCLUDES:**



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------------|----------------|-----------|----------------|-----------|----------------|-----------|--------------|-----------|--------------|-----------|--------------|
| | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| Size/Grandezza/Größe | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80 - (110*) | 80-(110*) | 65-80 - (110*) | 80-(110*) | 65-80 - (110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | 40 | 40 |
| L | 150 | 150 | 150 | 156 | 157 | 160 | 153 | 155 | 155 | 155 | 155 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm max.
16

Weldon output
Weldon

T90cn-2,5M Aluminum

ACT9025C.ALU



Ratio
Rapporto
1:1



RPM
Velocità
6.000 min⁻¹



Max. axial load
Max. carico assiale
510 N



Torque
Momento torcente
20 Nm



Weight
Peso
4,9 kg



Collet
Pinza
ER 25 - Ø1-16 mm

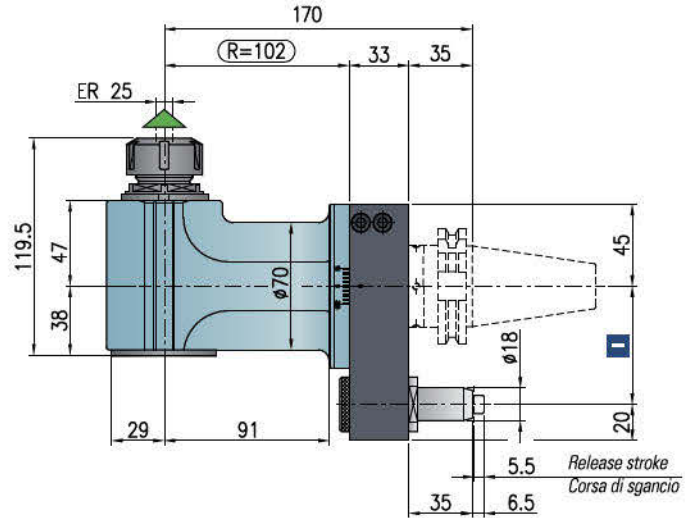


Shank
Cono
ISO40 DIN-69871/BT-40

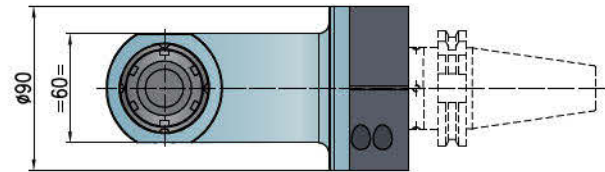
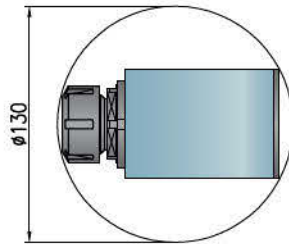
*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



| Shank/Cono | DIN-69871 | CAT | MAS-BT |
|----------------|-----------|-----------|--------------|
| Size/Grandezza | 40 | 40 | 40 |
| I | 65-80 | 80-(110*) | 65-80-(110*) |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



AIR/OIL

*Air / oil lubrication
Lubrificazione aria / olio*

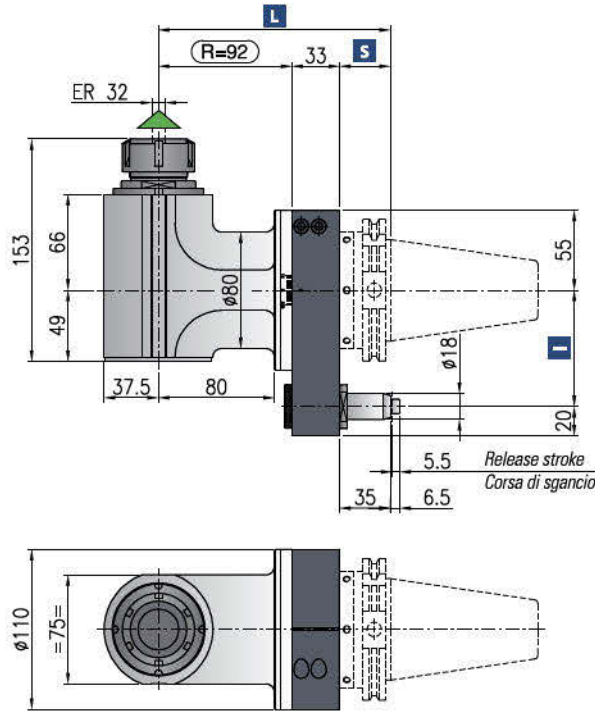


bar max
40

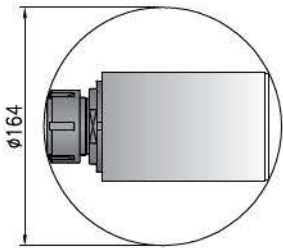
*Coolant through spindle
Refrigerante attraverso il cono*

T90cn-3,5

ACT9035C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritagno / Stop-Block
NOT INCLUDED - NON INCLUSO



- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
1.250 N
- Torque
Momento torcente
50 Nm
- Weight
Peso
11 kg
- Collet
Pinza
ER-32 (ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM | |
|----------------|-----------|--|--------|--|--------|--|---------------|--|---------------|--|--------|--|
| Size/Grandezza | 50 | | 50 | | 50 | | 63-80 100 | | C6 C8 | | 63 | |
| I | 80-110 | | 80-110 | | 80-110 | | 80-110 80-110 | | 80-110 80-110 | | 80-110 | |
| S | 35 | | 41 | | 42 | | 45 | | 38 40 | | 40 | |
| L | 160 | | 166 | | 167 | | 170 | | 163 165 | | 165 | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option

- bar max
12
Coolant through pin
Refrigerante attraverso il perno
- min⁻¹
6.000
High speed RPM max.
Alta velocità RPM max.
- Ø mm
27
Arbor output
Porta fresa
- Ø mm max.
20
Weldon output
Weldon
- ISO-30 HSK-40**
Quick Change
Attacco rapido
- ER-32/ER-20**
Double output
Doppia uscita

T90cn-3,5 L

ACT9035L



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.250 N



Torque
Momento torcente
50 Nm



Weight
Peso
13,2 kg

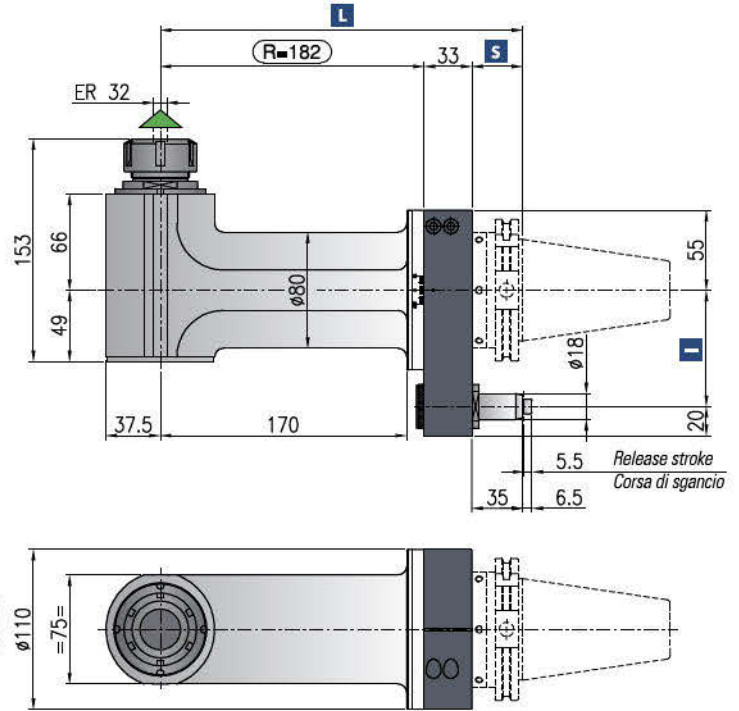
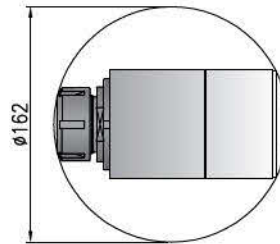


Collet
Pinza
ER-32 (ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**

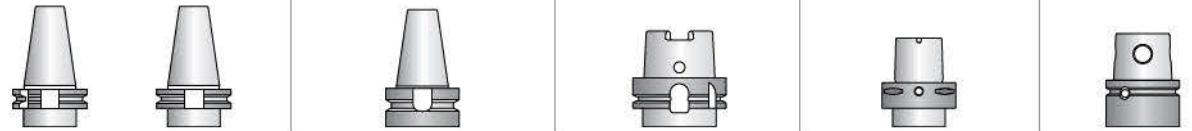


Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |
|----------------|-----------|-----|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | C6 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 38 | 40 |
| L | 250 | | 256 | 257 | 253 | 255 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile



min⁻¹
6.000

High speed RPM max.
Alta velocità RPM max



Ø mm
27

Arbor output
Porta fresa



Ø mm max.
20

Weldon output
Weldon



ISO-30 HSK-40

Quick Change
Attacco rapido

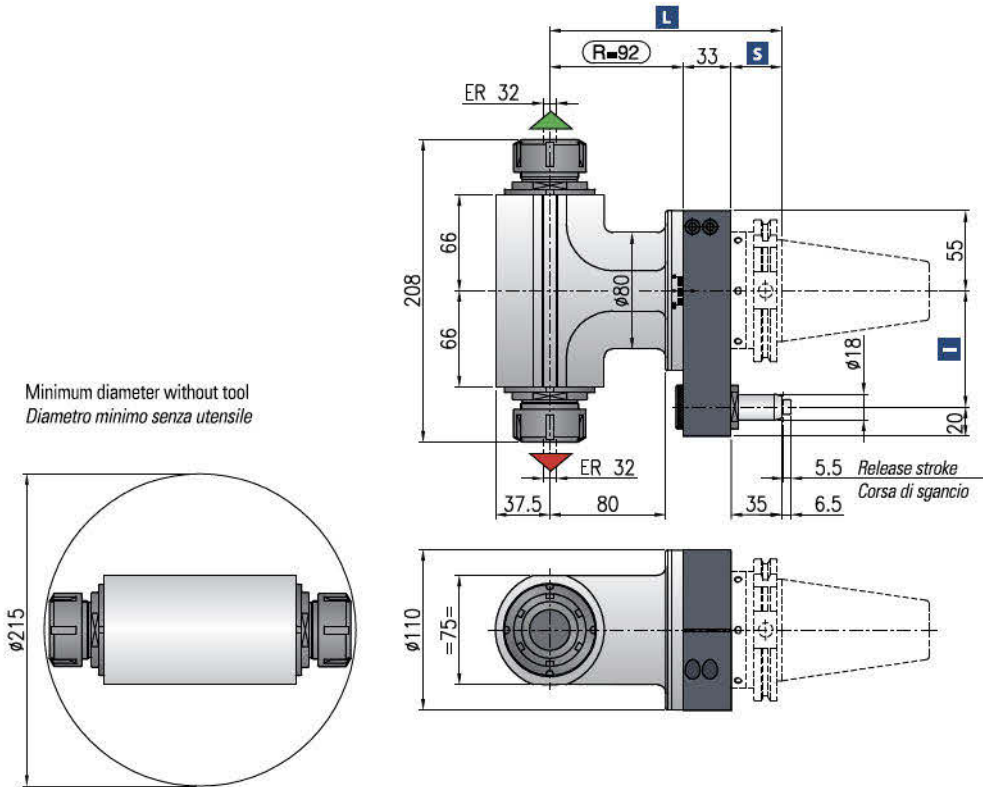


ER-32/ER-20

Double output
Doppia uscita

T90cn-3,5 2U

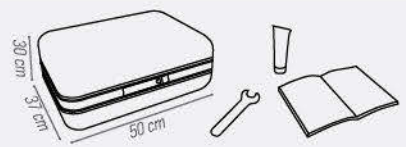
ACT9035D



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

- Ratio
Rapporto
1.1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
1.250 N
- Torque
Momento torcente
50 Nm
- Weight
Peso
12 kg
- Collet
Pinza
ER-32 (ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino
- Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 160 | | 166 | 167 | 170 | 163 | 165 | 165 |

Dual contact spindles available/Disponibilità coni a doppio contatto
*optional Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option

- 12**
Coolant through pin
Refrigerante attraverso il perno
- 6.000**
High speed optional RPM max.
Opzione alta velocità RPM max.
- 27**
Arbor output
Porta fresa
- 20**
Welding output
Weldon
- HSK-40**
Quick Change
Attacco rapido

TH90cn-3,5 100 BAR

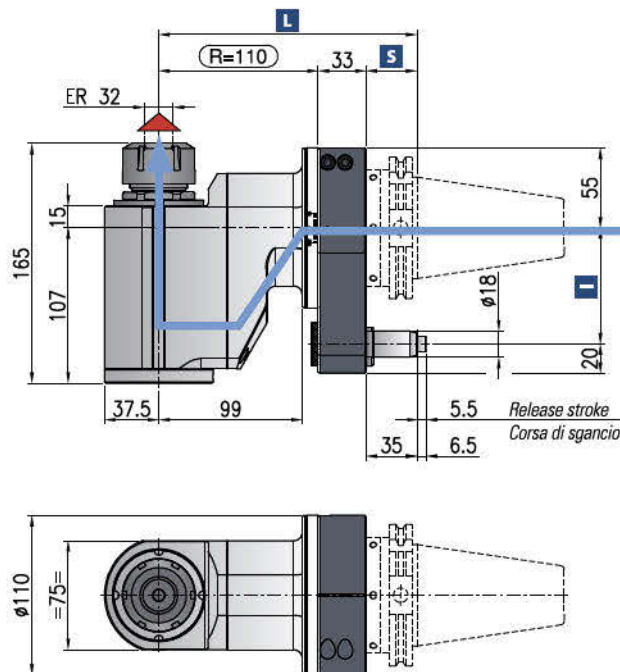
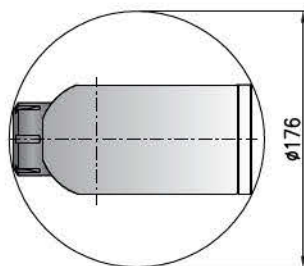
ACTH935C

-  Ratio
Rapporto
1:1
-  RPM
Velocità
8.000 min⁻¹
-  RPM Dry running
Velocità a secco
4.000 min⁻¹
-  Max. axial load
Max. carico assiale
1.250 N
-  Torque
Momento torcente
50 Nm
-  Weight
Peso
12 kg
-  Collet
Pinza
ER-32 (ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



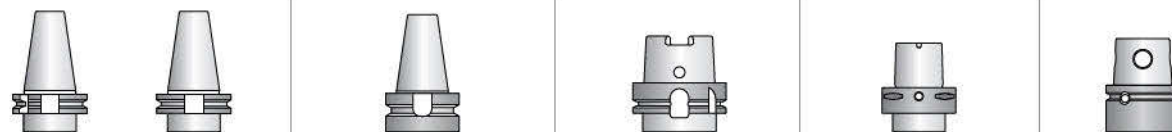
Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

Dry running also possible / Rotazione a secco possibile

 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |
|----------------|-----------|-----|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | C6 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 38 | 40 |
| L | 178 | | 184 | 185 | 181 | 183 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



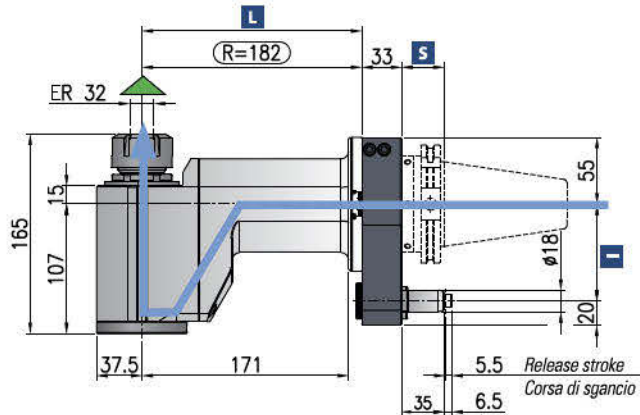
Ø mm max.

20

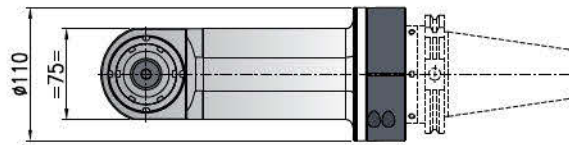
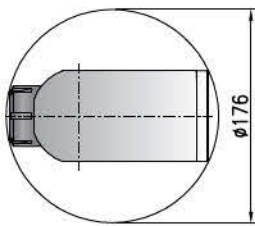
Weld on output
Weld on

TH90cn-3,5 L 100 BAR

ACTH935L



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Dry running also possible / Rotazione a secco possibile

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



Ratio
Rapporto
1.1



RPM
Velocità
8.000 min⁻¹



RPM Dry running
Velocità a secco
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.250 N



Torque
Momento torcente
50 Nm

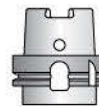


Weight
Peso
12 kg



Collet
Pinza
ER-32 (ø 2/20 mm)

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 160 | | 166 | 167 | 170 | 163 | 165 | 165 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



Ø mm max.

20

Weld on output
Weld on

TR90cn-3,5

ACTR935C



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
910 N



Torque
Momento torcente
50 Nm



Weight
Peso
10 kg

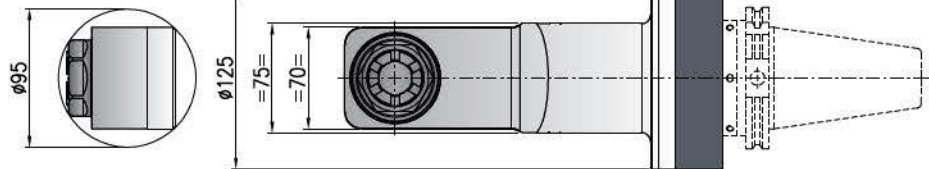


Collet
Pinza
ER-AX 32 (ø2-20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



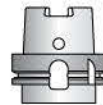
Retaining block / Tassello di ritengo / Stop-Block
NOT INCLUDED - NON INCLUSO



Possibilità refrigerante / Internal coolant / Max. 100 bar

Dry running also possible / Rotazione a secco possibile

Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 261 | | 267 | 268 | 271 | 264 | 266 | 266 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option

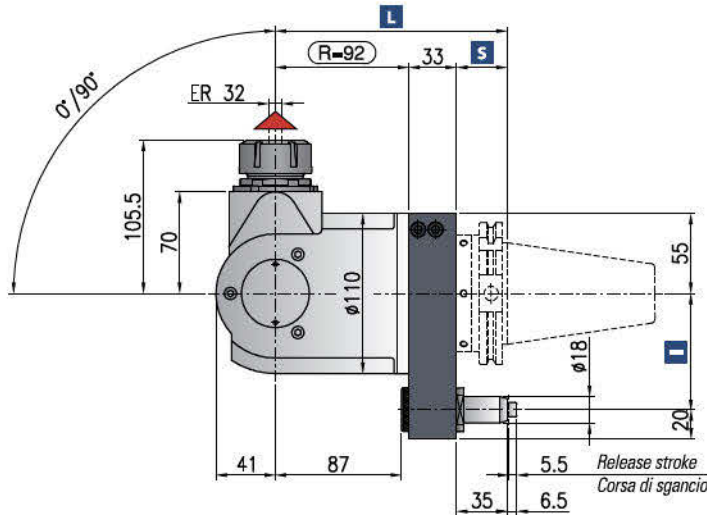


bar max
100

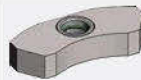
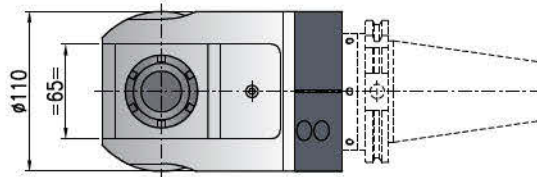
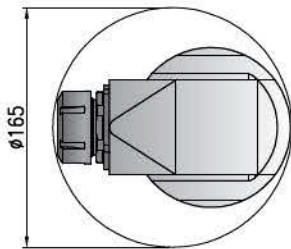
Coolant through spindle
Refrigerante attraverso il cono

TCUcn-3,5

ACTCU35C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
715 N
- Torque
Momento torcente
32 Nm
- Weight
Peso
13 kg
- Collet
Pinza
ER-32 (Ø 2/20 mm)

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|-----------|-----------|-----------|-----------|-----------|-----------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-110 | | 80-(110*) | 80-(110*) | 80-(110*) | 80-(110*) | 80-(110*) | 80-(110*) |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 160 | | 166 | 167 | 170 | 163 | 165 | 165 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm max.
20

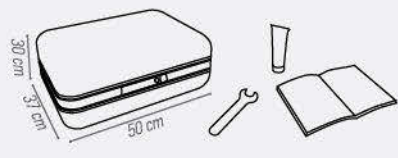
Weldon output
Weldon

T90cn-3,5M Aluminum

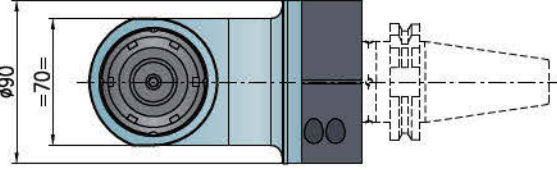
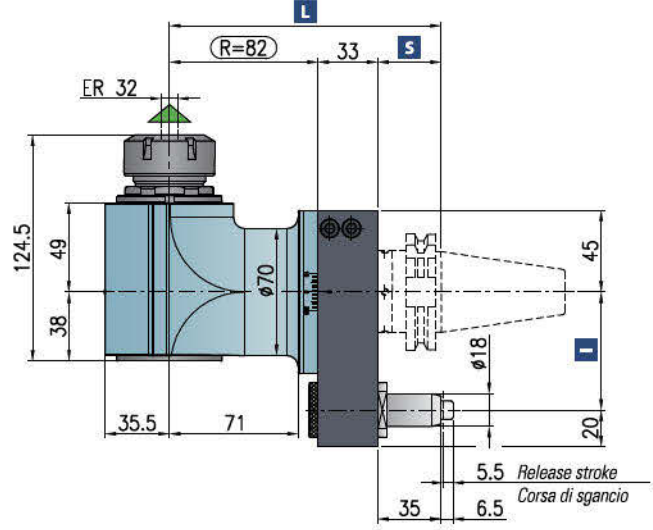
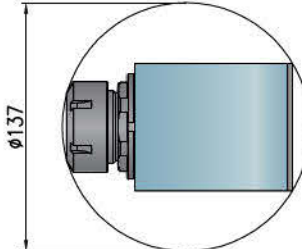
ACT9035C.ALU

-  Ratio
Rapporto
1:1
-  RPM
Velocità
4.000 min⁻¹
-  Max. axial load
Max. carico assiale
1250 N
-  Torque
Momento torcente
40 Nm
-  Weight
Peso
5,5 kg
-  Collet
Pinza
ER 32 - (ø2-20 mm)
-  Shank
Cono
ISO40 DIN-69871/BT-40

* STANDARD EQUIPMENT INCLUDES:




Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritengo / Stop-Block
NOT INCLUDED - NON INCLUSO



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT |
|----------------|-----------|-----------|--------------|
| Size/Grandezza | 40 | 40 | 40 |
| I | 65-80 | 80-(110*) | 65-80-(110*) |
| S | 35 | 35 | 35 |
| L | 150 | 150 | 150 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

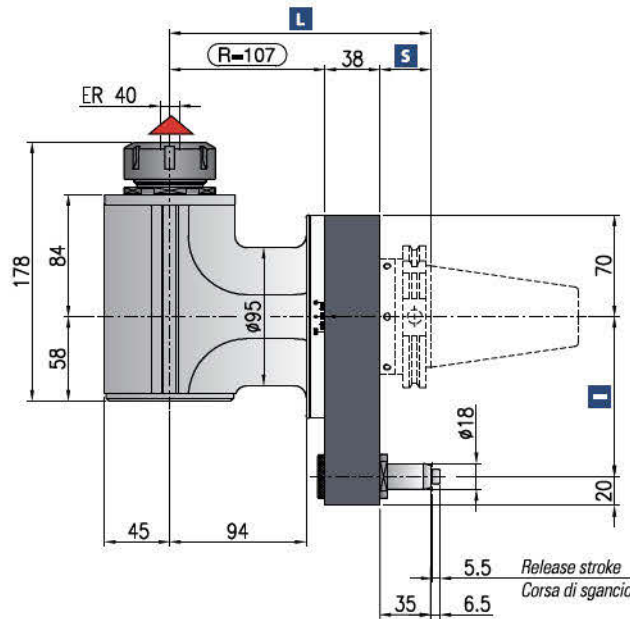


bar max
40

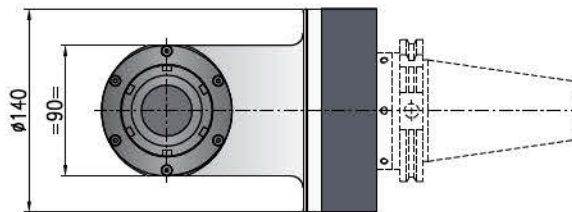
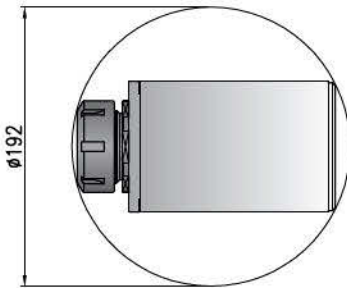
Coolant through spindle
Refrigerante attraverso il cono

T90cn-4,5

ACT9045C



Minimum diameter without tool
Diametro minimo senza utensile

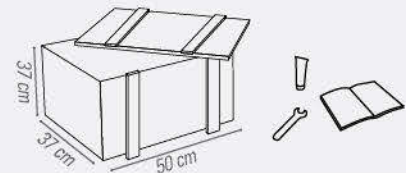


Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
1.750 N
- Torque
Momento torcente
75 Nm
- Weight
Peso
17 kg
- Collet
Pinza
ER-40 (Ø 3/30 mm)

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | |
|----------------|-----------|--|-----|--|--------|--|-----|--|-------|--|
| Size/Grandezza | 50 | | 50 | | 80 | | 100 | | C8 | |
| I | 110 | | 110 | | 110 | | 110 | | 110 | |
| S | 35 | | 41 | | 42 | | 45 | | 40 | |
| L | 180 | | 186 | | 187 | | 190 | | 185 | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm
27

Arbor output
Porta fresa



Ø mm max.
25

Weldon output
Weldon



ISO-30
HSK-40 CAPTO C4

Quick Change
Attacco rapido



ER-40/ER-25

Double output
Doppia uscita

T90cn-4,5 L

ACT9045L



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.750 N



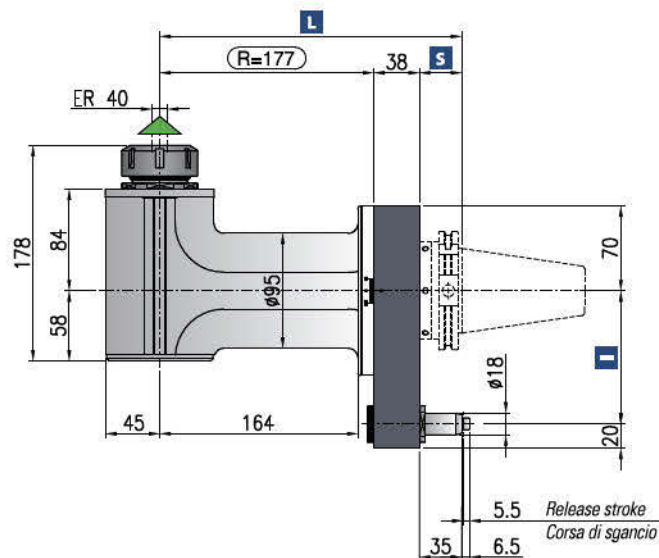
Torque
Momento torcente
75 Nm



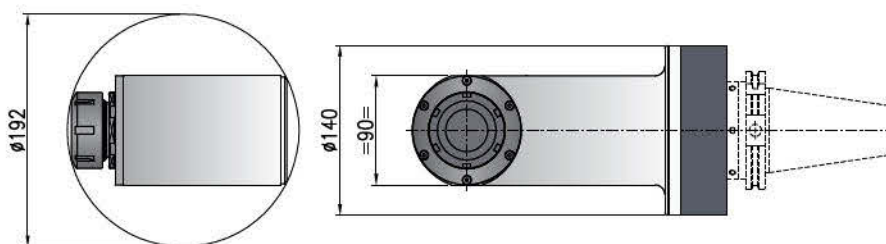
Weight
Peso
20 kg



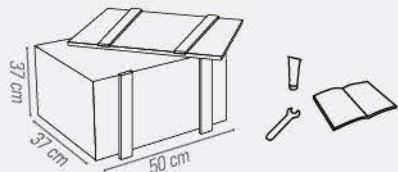
Collet
Pinza
ER-40 (ø 3/30 mm)



Minimum diameter without tool
Diametro minimo senza utensile



* STANDARD EQUIPMENT INCLUDES:



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | HSK | | CAPTO |
|----------------|-----------|--|-----|--|--------|-----|-----|-------|
| Size/Grandezza | 50 | | 50 | | 50 | 80 | 100 | C8 |
| I | 110 | | 110 | | 110 | 110 | 110 | 110 |
| S | 35 | | 41 | | 41 | 42 | 45 | 40 |
| L | 250 | | 256 | | 256 | 257 | 260 | 255 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile



min⁻¹
6.000

High speed RPM max.
Alta velocità RPM max.



Ø mm
27

Arbor output
Porta fresa



Ø mm max.
25

Weldon output
Weldon



ISO-30
HSK-40 CAPTO C4

Quick Change
Attacco rapido



ER-40/ER-25

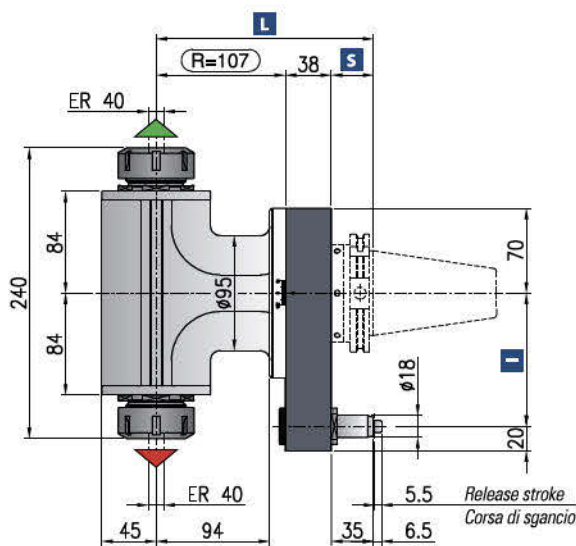
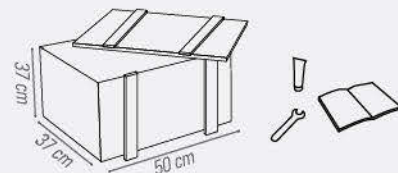
Double output
Doppia uscita

T90cn-4,5 2U

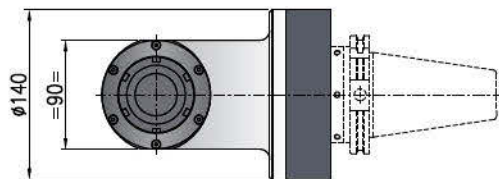
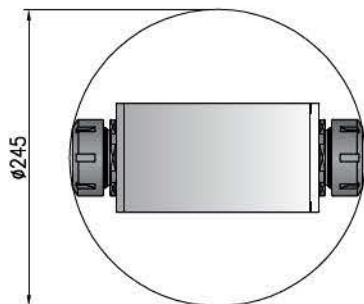
ACT9045D

- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
1.750 N
- Torque
Momento torcente
75 Nm
- Weight
Peso
20 kg
- Collet
Pinza
ER-40 (ø 3/30 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritagno / Stop-Block
NOT INCLUDED - NON INCLUSO

- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino
- Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO |
|----------------|-----------|-----|--------|-----|-----|-------|
| Size/Grandezza | 50 | | 50 | 80 | 100 | C8 |
| I | 110 | | 110 | 110 | 110 | 110 |
| S | 35 | | 41 | 42 | 45 | 40 |
| L | 180 | | 186 | 187 | 190 | 185 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm
27

Arbor output
Porta fresa



Ø mm max.
25

Welded output
Weldon



HSK-40

Quick Change
Attacco rapido

TH90cn-4,5 100 BAR

ACTH945C



Ratio
Rapporto
1:1



RPM
Velocità
6.000



RPM Dry Running
Funz. a secco
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.750 N



Torque
Momento torcente
75 Nm

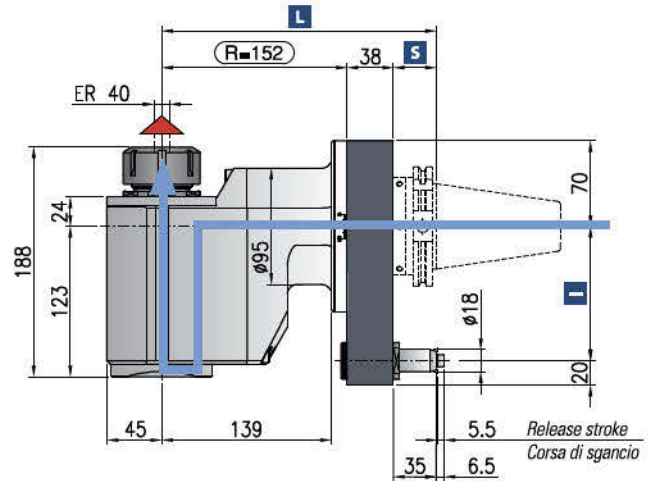
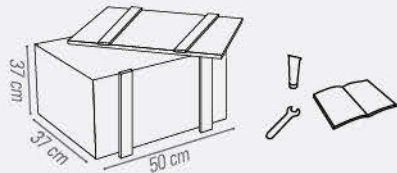


Weight
Peso
21 kg

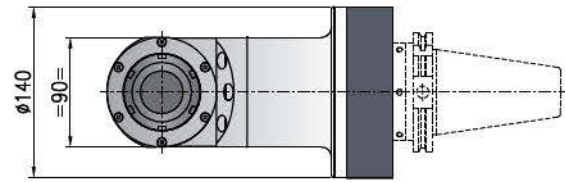
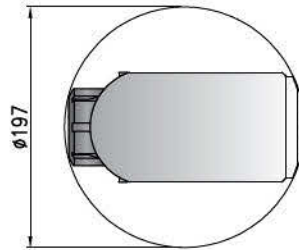


Collet
Pinza
ER-40 (ø 3/30 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



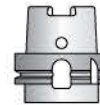
Retaining block / Tassello di ritegno / Stop-Block

NOT INCLUDED - NON INCLUSO



Dry running also possible / Rotazione a secco possibile

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO |
|----------------|-----------|-----|--------|-----|-------|
| Size/Grandezza | 50 | | 50 | 100 | C8 |
| I | 110 | | 110 | 110 | 110 |
| S | 35 | | 41 | 45 | 40 |
| L | 225 | | 231 | 235 | 230 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



Ø mm max.
25

Weldon output
Weldan

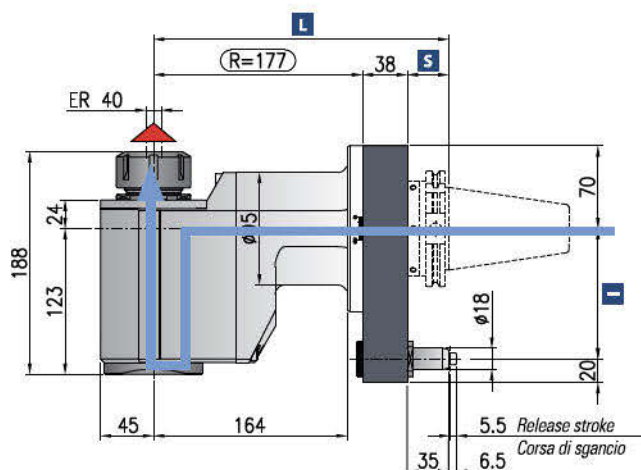


**ISO-30
HSK-40 CAPTO C4**

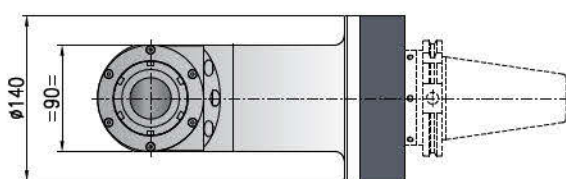
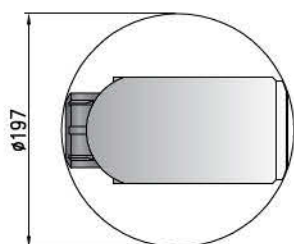
Quick Change
Attacco rapido

TH90cn-4,5 L 100 BAR

ACTH945L



Minimum diameter without tool
Diametro minimo senza utensile



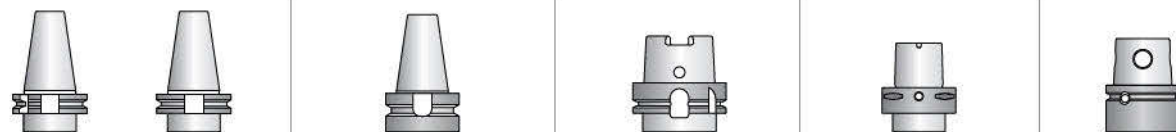
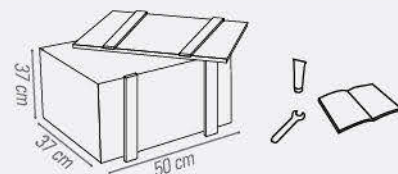
Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

Dry running also possible / Rotazione a secco possibile

Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

- Ratio
Rapporto
1:1
- RPM
Velocità
6.000 min⁻¹
- RPM Dry running
Velocità a secco
4.000 min⁻¹
- Max. axial load
Max. carico assiale
1.750 N
- Torque
Momento torcente
75 Nm
- Weight
Peso
26 kg
- Collet
Pinza
ER-40 (ø 3/30 mm)

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 250 | | 256 | 257 | 260 | 253 | 255 | 255 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



Ø mm max.
25

Weldon output
Weldon



ISO-30
HSK-40 CAPTO C4

Quick Change
Attacco rapido

TR90cn-4,5

ACTR945C



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.200 N



Torque
Momento torcente
75 Nm

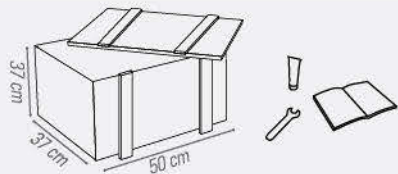


Weight
Peso
20 kg

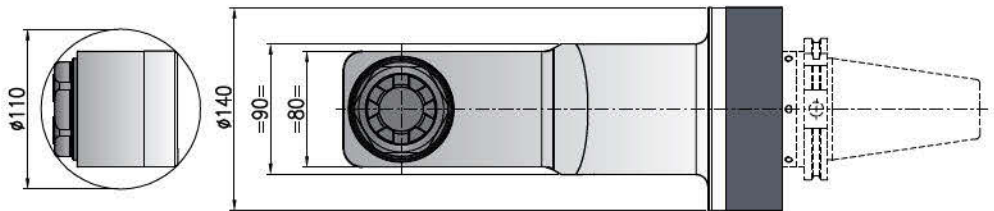
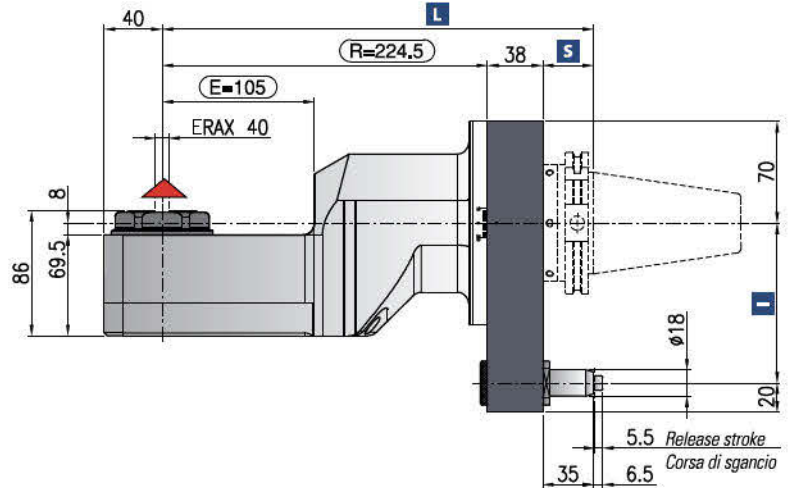


Collet
Pinza
ER-AX 40 (ø3/30 mm)

* STANDARD EQUIPMENT INCLUDES:



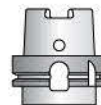
Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

Dry running also possible / Rotazione a secco possibile

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO |
|----------------|-----------|-----|--------|-------------|-------|
| Size/Grandezza | 50 | | 50 | 80 100 | C8 |
| I | 110 | | 110 | 110 | 110 |
| S | 35 | | 41 | 42 45 | 40 |
| L | 297,5 | | 303,5 | 304,5 307,5 | 302,5 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option

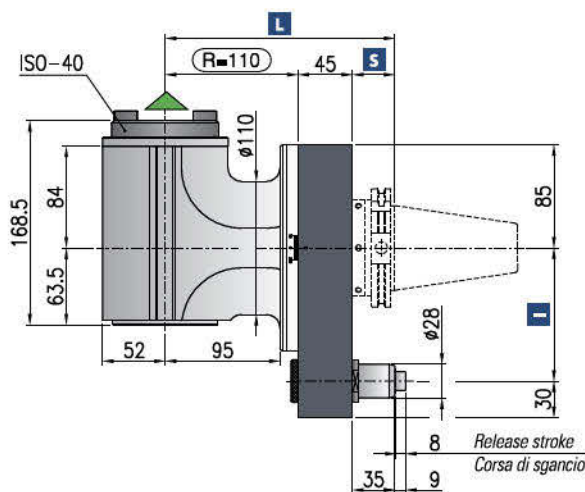


bar max
100

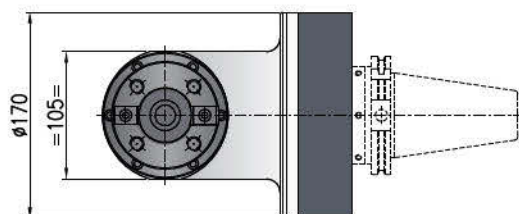
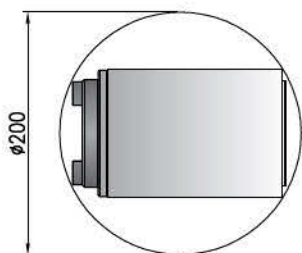
Coolant through spindle
Refrigerante attraverso il cono

T90cn-5

ACT905C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

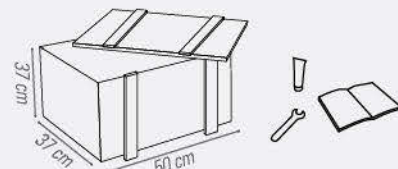


Possibilità refrigerante / Internal coolant - Max. 12 bar

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

- Ratio Rapporto **1:1**
- RPM Velocità **3.000 min⁻¹**
- Max. axial load Max. carico assiale **1.800 N**
- Torque Momento torcente **100 Nm**
- Weight Peso **22 kg**
- Collet Pinza **ISO 40**

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO |
|----------------|-----------|-----|--------|-----|-------|
| Size/Grandezza | 50 | | 50 | 100 | C8 |
| I | 110 | | 110 | 110 | 110 |
| S | 35 | | 41 | 45 | 40 |
| L | 190 | | 196 | 200 | 195 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



HSK-63 CAPTO C4 C5

Quick Change
Attacco rapido

T90cn-5 HP

ACT905HP



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
1.800 N



Torque
Momento torcente
160 Nm

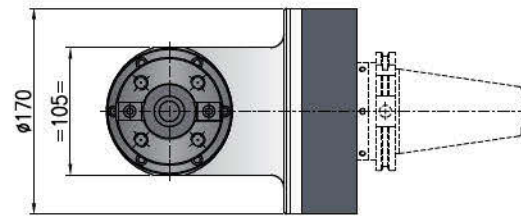
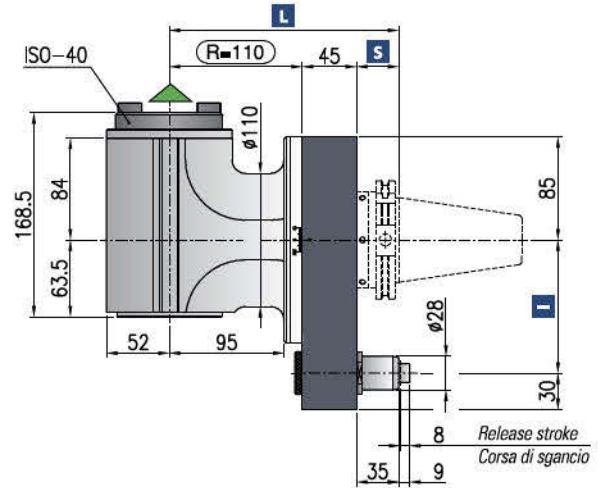
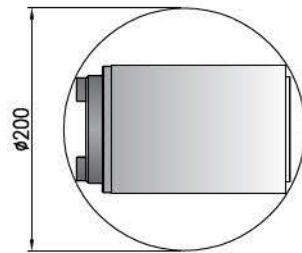
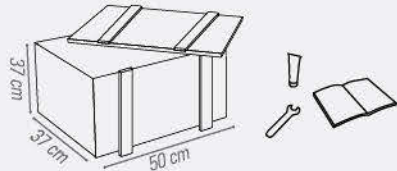


Weight
Peso
22 kg



Collet
Pinza
ISO 40

*** STANDARD EQUIPMENT INCLUDES:**

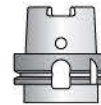


Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Possibilità refrigerante / Internal coolant - Max. 100 bar

▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO |
|----------------|-----------|-----|--------|-----|-------|
| Size/Grandezza | 50 | | 50 | 100 | C8 |
| I | 110 | | 110 | 110 | 110 |
| S | 35 | | 41 | 45 | 40 |
| L | 190 | | 196 | 200 | 195 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile

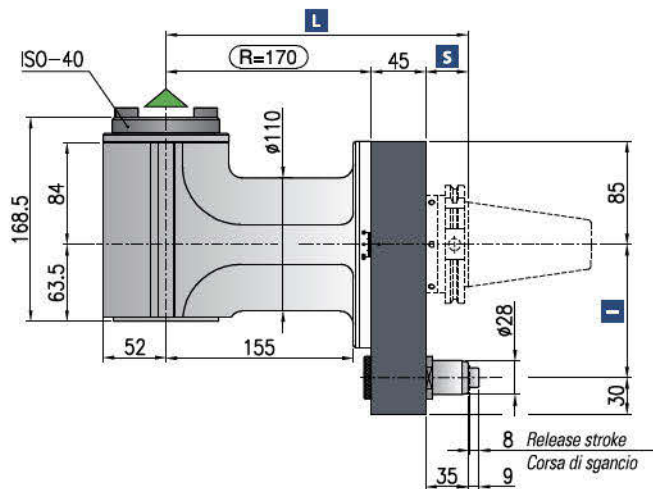


HSK-63 CAPTO C4 C5

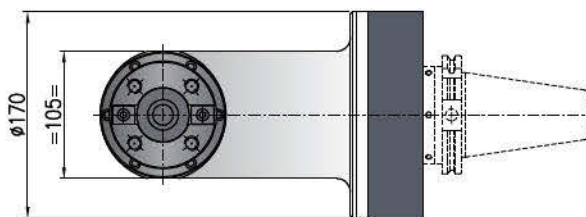
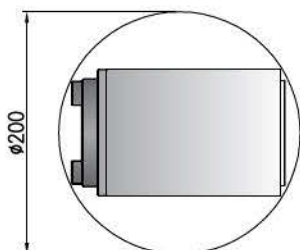
Quick Change
Attacco rapido

T90cn-5L

ACT905L



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
1.800 N



Torque
Momento torcente
100 Nm

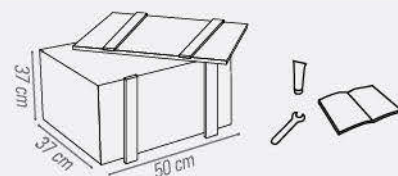


Weight
Peso
26,2 kg



Collet
Pinza
ISO 40

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO |
|----------------|-----------|-----|--------|-----|-------|
| Size/Grandezza | 50 | | 50 | 100 | C8 |
| I | 110 | | 110 | 110 | 110 |
| S | 35 | | 41 | 45 | 40 |
| L | 250 | | 256 | 260 | 255 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Opzione / Option



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max



HSK-63 CAPTO C4 C5

Quick Change
Attacco rapido

TA LINEA TA TESTE SPECIALI / SPECIAL HEADS



Ratio
Rapporto
1:1



RPM up to
Velocità fino
10.000 min⁻¹



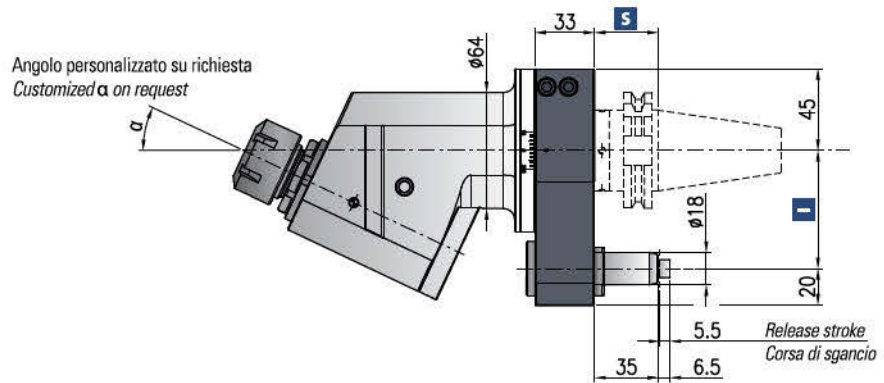
Angle
Angolo
A richiesta da
On request from
15°



Collet
Pinza
ER-16(ø1/10mm)
ER-25(ø2/16mm)
ER-32(ø3/20mm)

Per richieste speciali di teste con angoli superiori a 15°, Alberti ha studiato una Linea TA con possibilità di adduzione refrigerante interna alta pressione. Tra i modelli più richiesti e standardizzati ci sono TA 30° - TA45° - TA60°

For all special inquiries of fixed angle heads with angles bigger than 15°, Alberti has developed a separate line of heads type TA with internal coolant possibility. Among the most requested, hence standardized items are TA30° - TA45° and TA60°



*** STANDARD EQUIPMENT INCLUDES:**

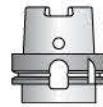


Retaining block / Tassello di ritengo / Stop-Block

NOT INCLUDED - NON INCLUSO



Possibilità refrigerante / Internal coolant



| Shank/Cono | DIN-69871 | | CAT | | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 | | |
| I | 65-80-(110°) | 80-(110°) | 65-80-(110°) | 80-(110°) | 65-80-(110°) | 80-(110°) | 65-80-(110°) | 80-(110°) | 65-80-(110°) | 80-(110°) | 65-80-(110°) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 | | |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

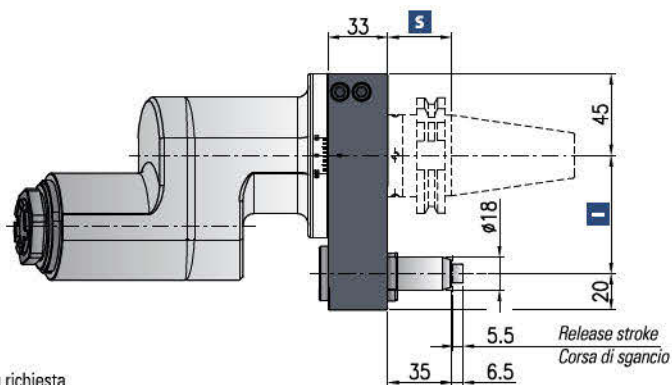
Non interchangeable input drive shank/ Coni di attacco non intercambiabili



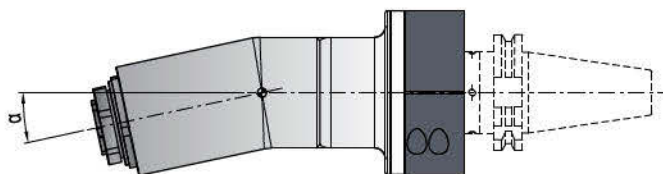
TDA LINEA TDA TESTE SPECIALI / SPECIAL HEADS

Per richieste speciali di teste con angoli inferiori a 15°, Alberti ha studiato una Linea TDA con possibilità di adduzione refrigerante interna alta pressione.

For all special inquiries of fixed angle heads with angles smaller than 15°, Alberti has developed a separate line of heads type TDA with internal coolant possibility.



Angolo personalizzato su richiesta
Customized α on request



Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



Possibilità refrigerante / Internal coolant



Ratio
Rapporto
1:1



RPM up to
Velocità fino
10.000 min⁻¹

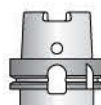


Angle
Angolo
A richiesta da
On request from
15°



Collet
Pinza
**ER-16(ø1/10mm)
ER-25(ø2/16mm)
ER-32(ø3/20mm)**

* STANDARD EQUIPMENT INCLUDES:



| Shank/Cono | DIN-69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80-(110°) | 80-(110°) | 65-80-(110°) | 80-(110°) | 65-80-(110°) | 80-(110°) | 65-80-(110°) | 80-(110°) | 65-80-(110°) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 |

Dual contact spindles available/Disponibilità coni a doppio contatto

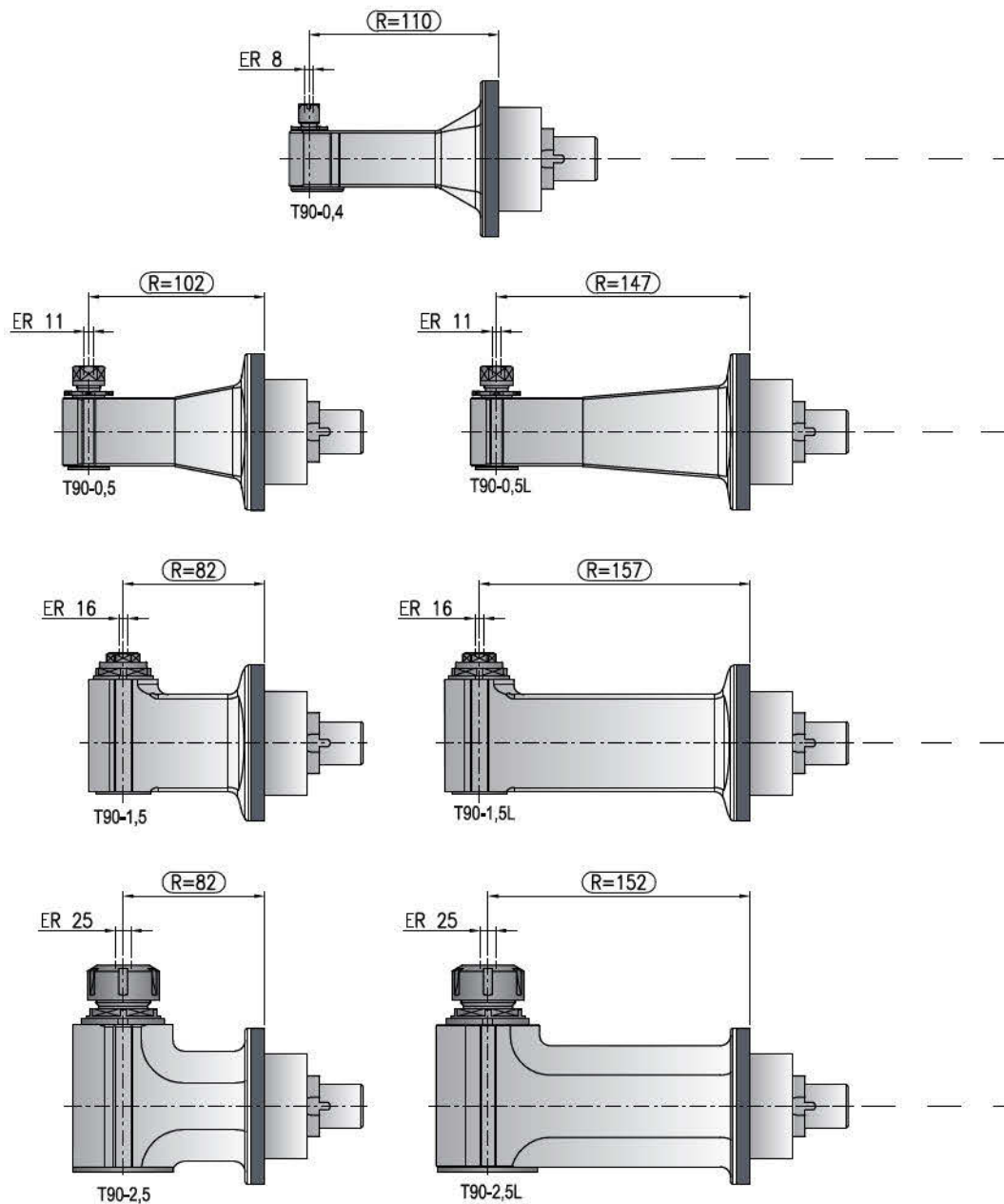
*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili



8000 Rpm

6000 Rpm



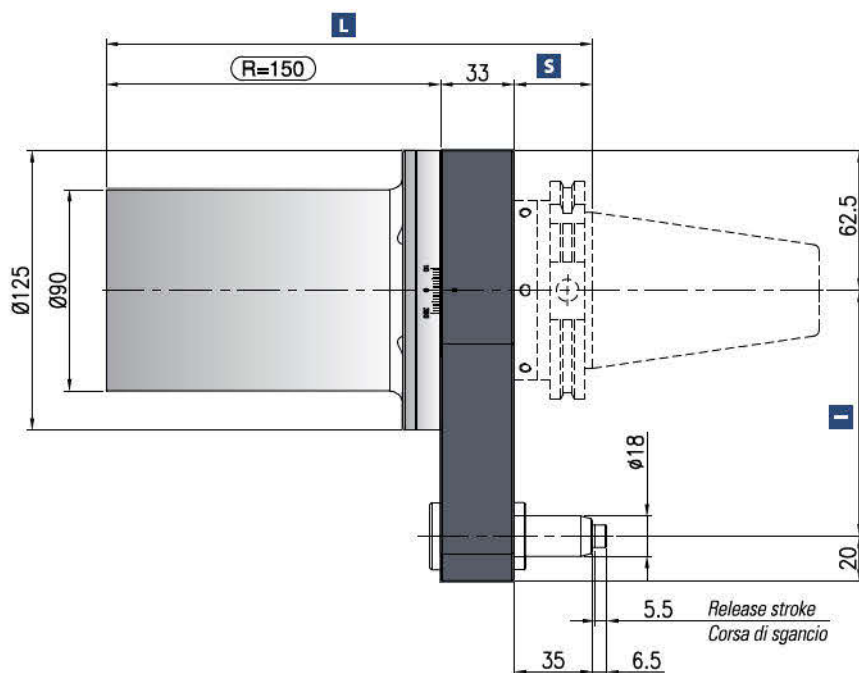
Caratteristiche tecniche a pagina/ Technical data page



| Testa/Head | Pagina/Page |
|------------|-------------|
| T90-0,4 | 62 |
| T90-0,5 | 63 |
| T90-0,5L | 64 |
| T90-1,5 | 65 |
| T90-1,5L | 66 |
| T90-2,5 | 67 |
| T90-2,5L | 68 |

Le teste con prolunga sono composte da un blocco modulo di prolunga sul quale vengono montate una selezione di teste standard.

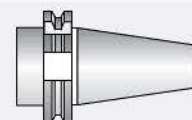
The extended heads are made up by a portion of extension spacer where it is possible to mount different standard heads.



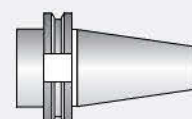
Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

OPTIONAL DRIVE SHANK*
Non interchangeable input drive shank
Coni non intercambiabili

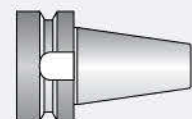
DIN-69871
ISO 50



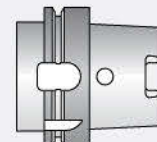
CAT
50



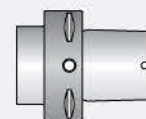
MAS-BT
50



HSK
63/80/100

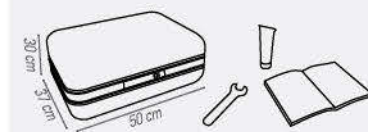


CAPTO
C8



Weight
Peso / Gewicht
10 kg

*** STANDARD EQUIPMENT INCLUDES:**



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | |
|----------------|-----------|-----|--------|-----------|--------|-----------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 |
| I | 80-110 | | 80-110 | 80-(110*) | 80-110 | 80-(110*) | 80-110 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 |
| L | 218 | | 224 | 225 | 228 | 221 | 223 |

Dual contact spindles available/Disponibilità coni a doppio contatto

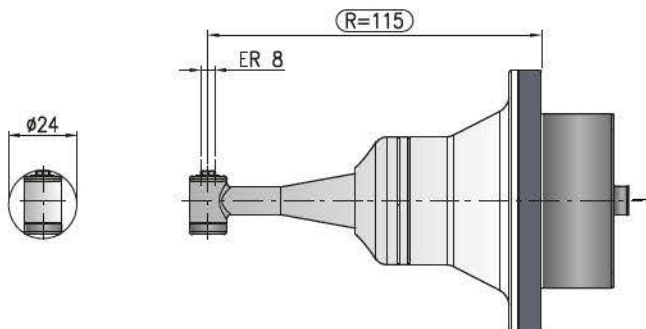
*optional

Lunghessa totale testa/ Total length (R+L)

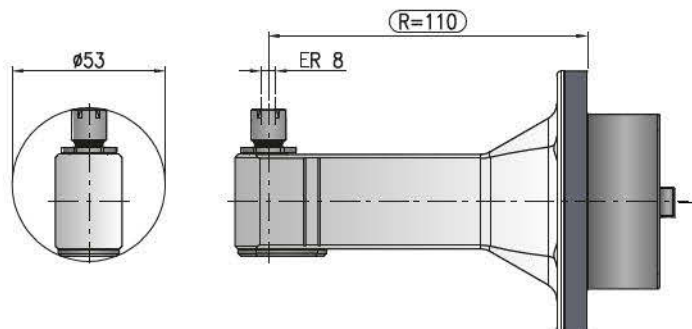
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | |
|----------------|-----------|-----|--------|-------|-----|-------|-----|
| Size/Grandezza | | 50 | 50 | 63-80 | 100 | C6 | C8 |
| T90-0.4 | mm | 328 | 334 | 335 | 338 | 331 | 333 |
| T90-0.5C | mm | 320 | 326 | 327 | 330 | 323 | 325 |
| T90-0.5L | mm | 365 | 371 | 372 | 375 | 368 | 370 |
| T90-1.5 | mm | 300 | 306 | 307 | 310 | 303 | 305 |
| T90-1.5L | mm | 375 | 381 | 382 | 385 | 378 | 380 |
| T90-2.5 | mm | 300 | 306 | 307 | 310 | 303 | 305 |
| T90-2.5L | mm | 370 | 376 | 377 | 380 | 373 | 375 |


T90-0,3 SLIMLINE

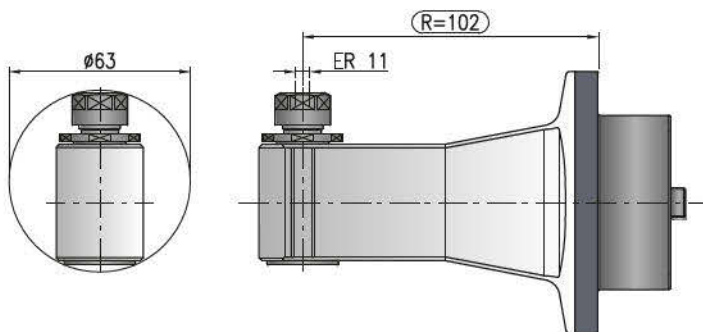
| Technical Data / Dati Tecnici | T90-0,3 |
|--|----------------|
| RPM max input. / Max. Velocità input min ⁻¹ | 15.000 |
| Ratio (reduction) | 3:4 |
| Weight / Peso | kg 3 |
| Collet / Pinza | 3mm |


T90-0,4

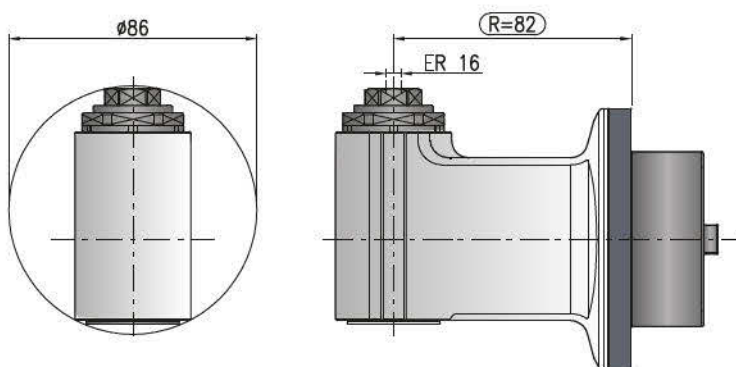
| Technical Data / Dati Tecnici | T90 0,4 |
|--|----------------|
| RPM max input. / Max. Velocità input min ⁻¹ | 10.000 |
| Ratio | 1:1 |
| Weight / Peso | kg 4 |
| Collet / Pinza | ER8 0,5/5mm |


T90-0,5

| Technical Data / Dati Tecnici | T90-0,5 |
|--|----------------|
| RPM max input. / Max. Velocità input min ⁻¹ | 10.000 |
| Ratio | 1:1 |
| Weight / Peso | kg 4 |
| Collet / Pinza | ER-11 0,5/7mm |

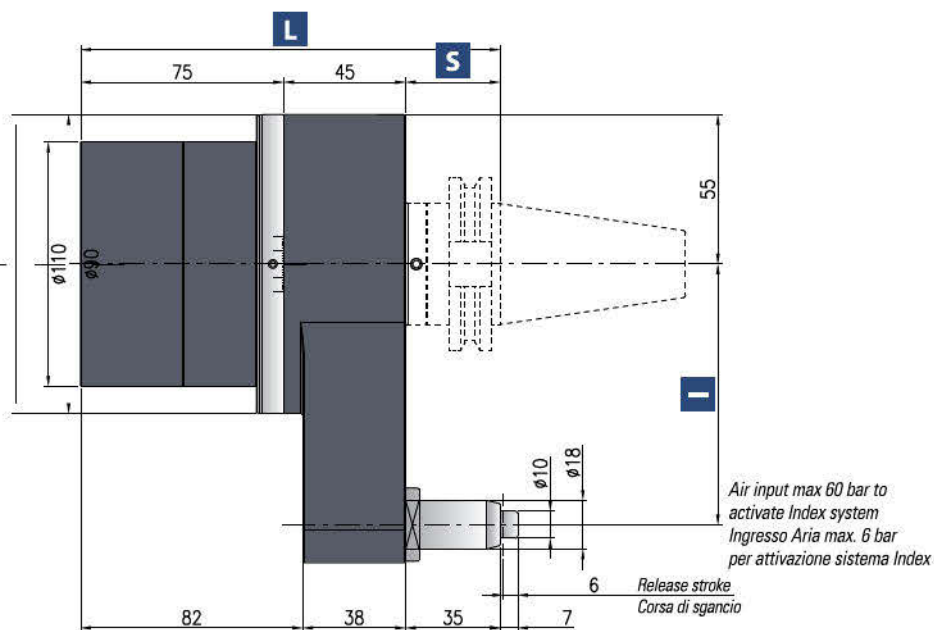

T90-1,5

| Technical Data / Dati Tecnici | T90-1,5 |
|--|----------------|
| RPM max input. / Max. Velocità input min ⁻¹ | 8.000 |
| Ratio | 1:1 |
| Weight / Peso | kg 4,3 |
| Collet / Pinza | ER-16 1/10mm |

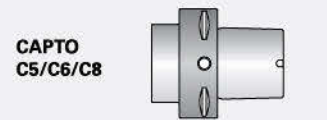
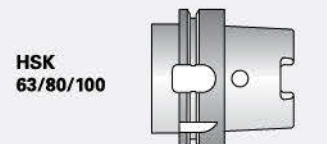
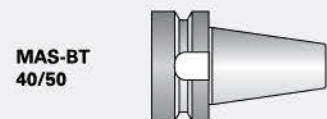
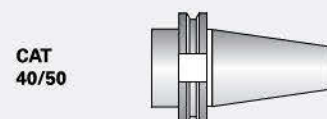
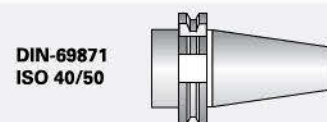


Posizionamento automatico del portautensile su 360° tramite mandrino macchina tramite un sistema di frizione interno attivato da aria compressa max 6 bar. **NESSUNA POSIZIONE FISSA. ORIENTAMENTO SU TUTTI GLI ANGOLI.**

*Automatic positioning of the cutting holder around 360° by using machine spindle through an internal clutch mechanism activated by compressed air max 6 bar. **NO FIXED POSITION. ANY ANGLE POSSIBLE.***



OPTIONAL DRIVE SHANK*
 Non interchangeable input drive shank
 Coni non intercambiabili



Weight
 Peso / Gewicht
7,5 kg

*** STANDARD EQUIPMENT INCLUDES:**



| Shank/Cono | DIN-69871 | CAT | MAS-BT | | HSK | | CAPTO | |
|----------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 |
| I | 80-(110*) | 80-110 | 80-(110*) | 80-110 | 80-(110*) | 80-110 | 80-(110*) | 80-110 |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 |
| L | 155 | 155 | 155 | 161 | 162 | 165 | 158 | 160 |

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

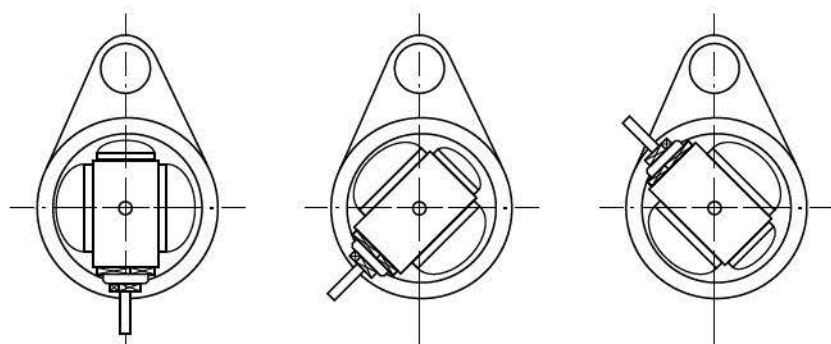
Lunghezza totale testa/ Total length (R+L)

| Shank/Cono | DIN-69871 | CAT | MAS-BT | | HSK | | CAPTO | |
|------------------|-----------|-----|--------|-----|-------|-----|-------|-----|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 |
| T90-0.3 SLIMLINE | mm | 270 | 270 | 276 | 277 | 280 | 273 | 275 |
| T90-0.4 | mm | 265 | 265 | 271 | 272 | 275 | 268 | 270 |
| T90-0.5 | mm | 257 | 257 | 263 | 264 | 267 | 260 | 262 |
| T90-1.5 | mm | 237 | 237 | 243 | 244 | 247 | 240 | 242 |

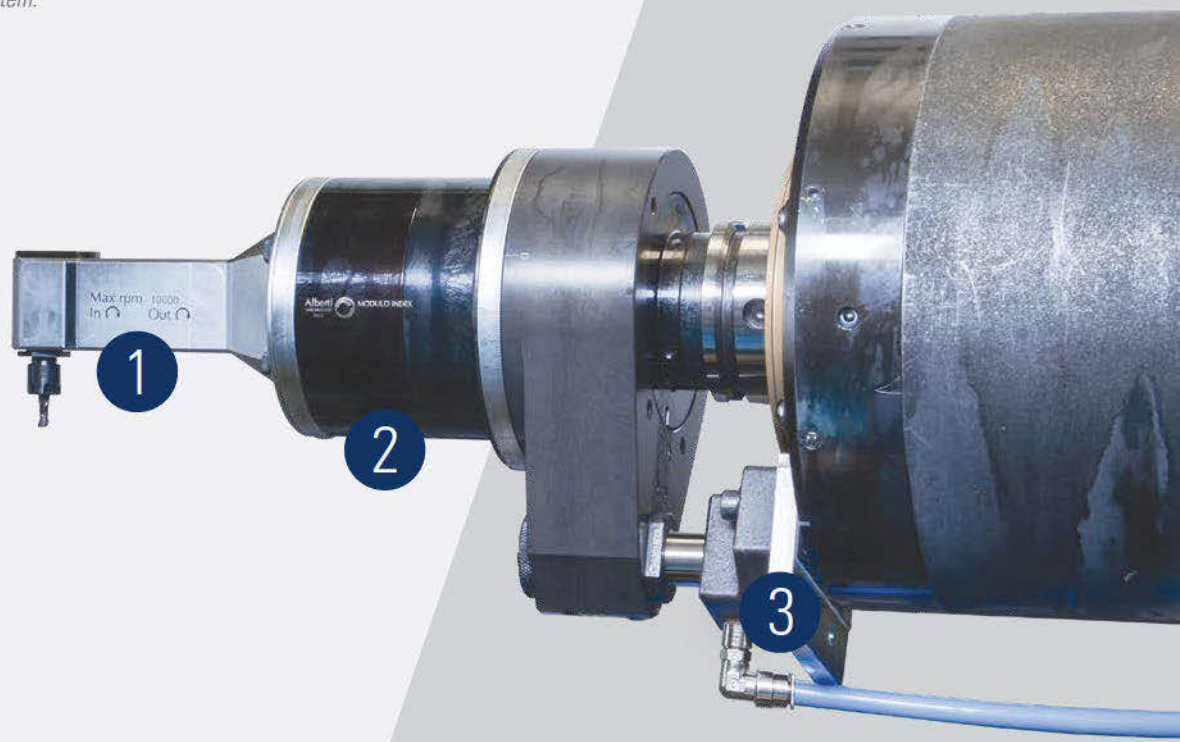
TESTE INDEX INDEX HEADS

Le teste della Linea INDEX consentono di posizionare il portautensile in modo automatico sui 360° utilizzando l'asse controllato della macchina utensile. Possono quindi essere montate **SOLAMENTE** su macchine con asse controllato e aria esterna (max 6 bar) tramite lo Stop Block.

*With the INDEX Line it is possible to orientate and position automatically over 360° the output of the head by using the controlled axis of the machine center. This line **CAN ONLY** be mounted on machines with controlled C axis and external air through the Stop Block (max 6 bar).*



1. Porzione di testa modular standard posizionabile su 360°.
Portion of the standard modular. Head to be oriented over 360°.
2. Porzione di testa con sistema INDEX.
Portion of the head with INDEX system.
3. Aria dallo Stop Block (6 bar).
Air trough the Stop Block (6 bar).



LINEA MODULAR

Le teste della linea MODULAR sono adatte ad essere montate su macchine utensili tradizionali da fissare al mandrino tramite apposita flangia. Sono dotate di un cono intercambiabile, una flangia universale e la possibilità di avere alcuni moduli di prolunga per variarne la lunghezza. Per un corretto montaggio, è necessario realizzare una flangia di adattamento da interporre tra la testa e il mandrino.

Angle heads of the MODULAR line are suitable to be mounted on traditional machine tools and are attached to the spindle through a flange. They are sold together with an interchangeable shank and a universal flange and they can extend the total length thanks to extension spacers. For a correct mounting, it is necessary to build an adapting flange to be screwed between the head and the machine spindle.

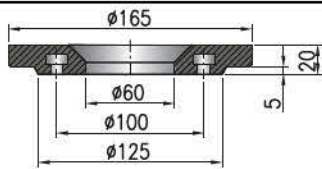
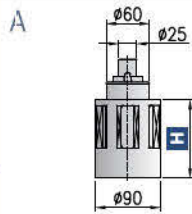
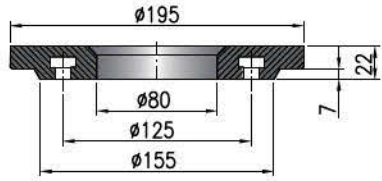
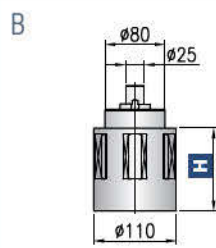
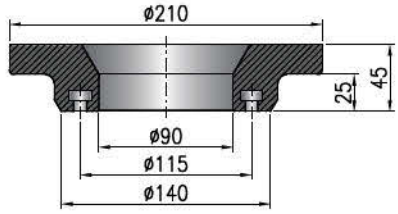
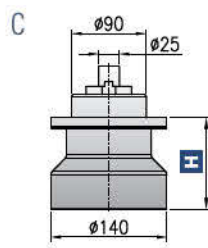
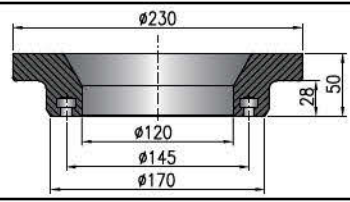
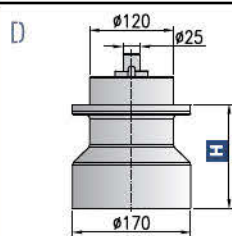


Esempio di montaggio in macchina / Example of mounting the head

FLANGIA UNIVERSALE - MODULI DI PROLUNGA
UNIVERSAL FLANGE - EXTENSION SPACER

Un sistema modulare componibile, rende possibile variare la lunghezza del corpo testa aggiungendo l'elemento di prolunga. Modulo, coni e flangia sono modulari e quindi intercambiabili su tutti i corpi testa appartenenti allo stesso ordine di grandezza.

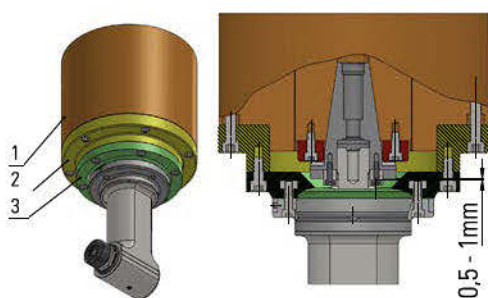
The modular system makes it possible to extend the length of the body by adding a spacer. The extension spacer, drive tapers and universal flange are modular and therefore interchangeable among all the heads of similar size.

| | Flangia Flange | Moduli di prolunga Extension Spacer | H | Codici Part number |
|---|---|--|----------|-------------------------------|
| T90-0,5 T90-1,5 T90-2,5 TCU-2,5 TCU-3,5 |  |  | 55 mm | 90006010 |
| | | | 110 mm | 90006A11 |
| | | | 150 mm | 90006A15 |
| | | | 250 mm | 90006A25 |
| T90-3,5 |  |  | 55 mm | 90008010 |
| | | | 110 mm | 90008A11 |
| | | | 150 mm | 90008A15 |
| | | | 250 mm | 90008A25 |
| | | | 360 mm | 90008A36 |
| 450 mm | 90008A45 | | | |
| T90-4,5 |  |  | 110 mm | 90009000 |
| | | | 150 mm | 90009050 |
| T90-5 |  |  | 150 mm | 90012005 |

MODULI DI PROLUNGA PER TESTE LINEA P MOLTIPLICATI EXTENSION SPACERS FOR HEADS LINEA P WITH SPEED INCREASE

| | |
|--------------------------------|--------------------------------|
| <p>$R = 1:2,25$</p> | <p>$R = 1:2,25$</p> |
| <p>T90-8 / TDU-8</p> | <p>T90-10 / TDU-10</p> |
| | |
| <p>54212000</p> | <p>54215000</p> |

ESEMPIO DI MONTAGGIO DI UNA TESTA TIPO MODULAR EXAMPLE OF FLANGE MOUNTING FOR MODULAR HEAD



- 1 Spindle
Mandrino
- 2 Flangia di interfaccia
Interface flange
- 3 Flangia universale
Universal flange

Per il corretto montaggio della testa in macchina, una volta avvitato il cono e la flangia universale sulla testa, è necessario realizzare un'ulteriore flangia di adattamento tra la testa e il mandrino della macchina seguendo attentamente le istruzioni sul libretto in dotazione.

For a correct flange mounting on the machine, once you fix the shank and the universal flange on the head, it's necessary to make an adapting spacer between the head and the machine spindle and follow carefully the instruction on the given manual.

Esempio di montaggio testa modular con flangia universale standard e moduli di prolunga

Example of flange mounting for modular heads including extension spacers



T90-0,4

AMT9004C



Ratio
Rapporto
1:1



RPM
Velocità
10.000 min⁻¹



Max. axial load
Max. carico assiale
100 N



Torque
Momento torcente
4 Nm

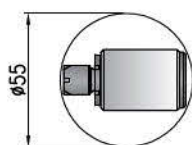
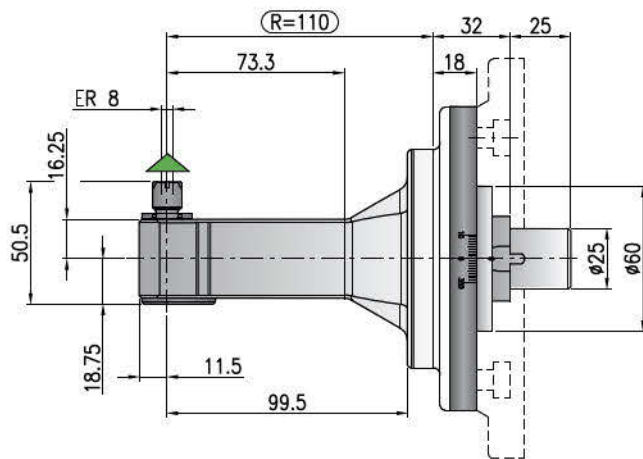
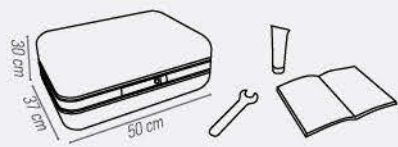


Weight
Peso
4 kg

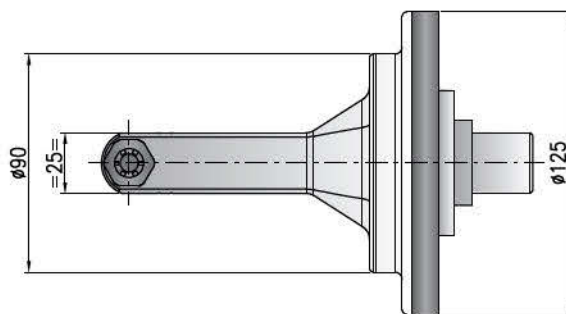


Collet
Pinza
ER-8 (ø 0,5/5 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna

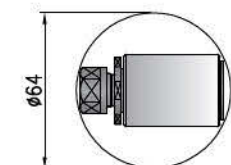
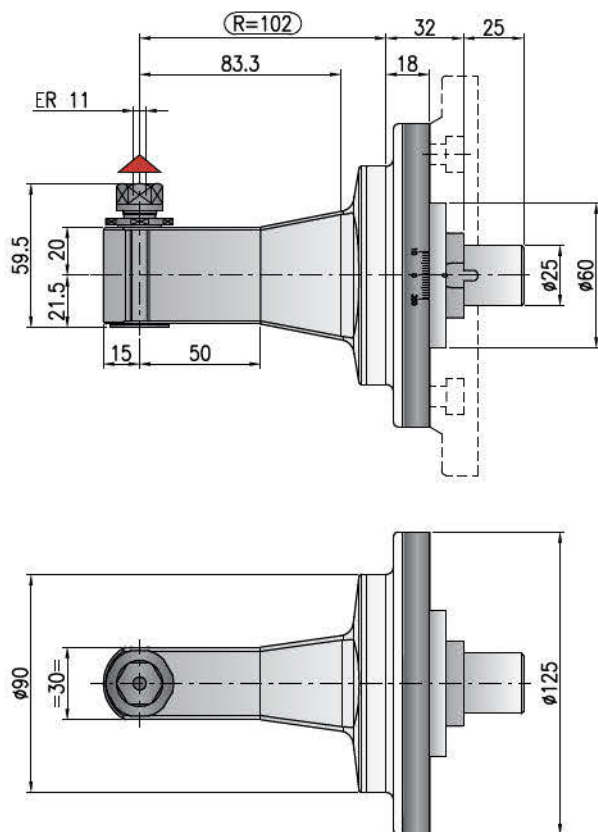


Ø mm max.
6

Welding output
Weldon

T90-0,5C

AMT9005C



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
10.000 min⁻¹



Max. axial load
Max. carico assiale
150 N



Torque
Momento torcente
8 Nm



Weight
Peso
4 kg



Collet
Pinza
ER-11 (ϕ 0,5/7 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation opposite to machine spindle / *sensò di rotazione contrario al mandrino*

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



ϕ mm max.
6

Welding output
Weldon

T90-0,5L

AMT9005L



Ratio
Rapporto
1:1



RPM
Velocità
10.000 min⁻¹



Max. axial load
Max. carico assiale
150 N



Torque
Momento torcente
8 Nm

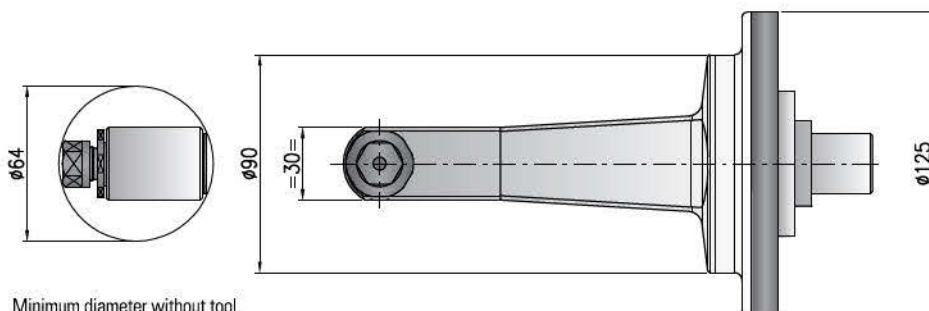
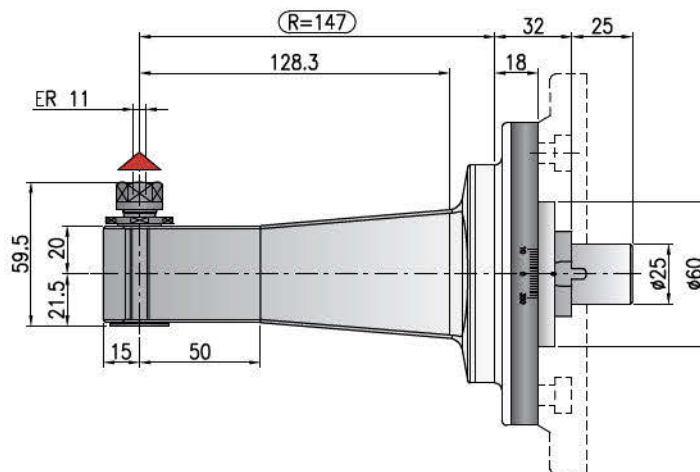


Weight
Peso
4,3 kg



Collet
Pinza
ER-11 (ø 0,5/7 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile

Direction of rotation opposite to machine spindle / *sensò di rotazione contrario al mandrino*



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/Cono

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna

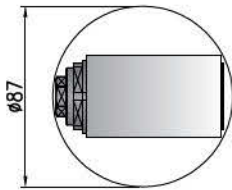
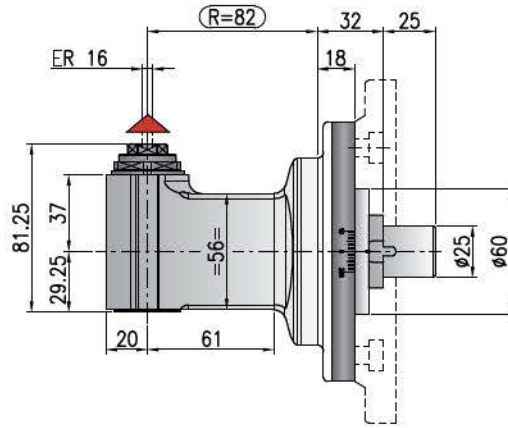


Ø mm max.
6

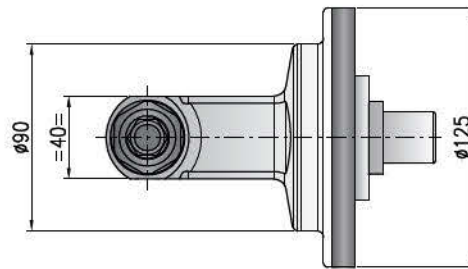
Weld on output
Weldon

T90-1,5

AMT9015C



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
8.000 min⁻¹



Max. axial load
Max. carico assiale
250 N



Torque
Momento torcente
15 Nm



Weight
Peso
4,3 kg



Collet
Pinza
ER-16 (Ø 1/10 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation opposite to machine spindle / *sensò di rotazione contrario al mandrino*

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / *Opzione*



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
10.000

High speed optional RPM max.
Opzione alta velocità RPM max



Ø mm
13

Arbor output
Porta fresa



Ø mm max.
10

Weldon output
Weldon



ER-16/ER11

Double output
Doppia uscita

T90-1,5L

AMT9015L



Ratio
Rapporto
1:1



RPM
Velocità
8.000 min⁻¹



Max. axial load
Max. carico assiale
250 N



Torque
Momento torcente
15 Nm

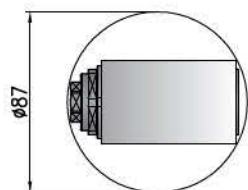
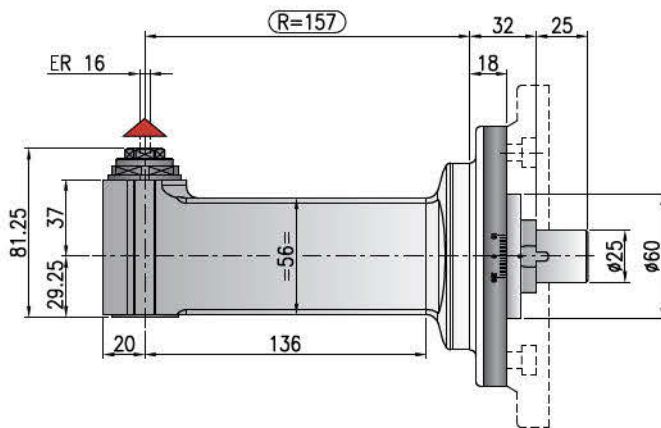


Weight
Peso
5,2 kg

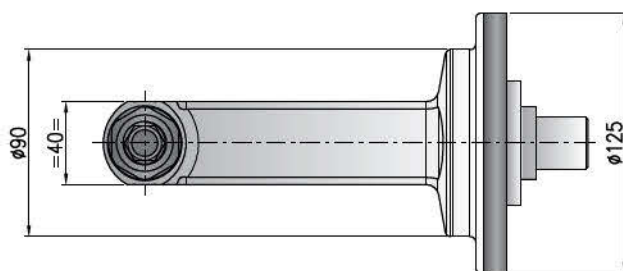


Collet
Pinza
ER-16 (ø 1/10 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



Shank/Cono



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
10.000

High speed optional RPM max.
Opzione alta velocità RPM max



ø mm
13

Arbor output
Porta fresa



ø mm max.
10

Weldon output
Weldon

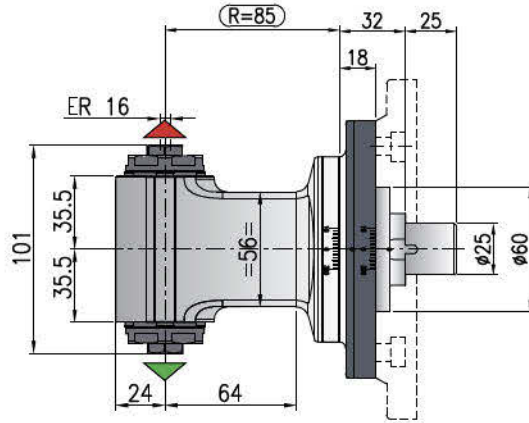


ER-16/ER11

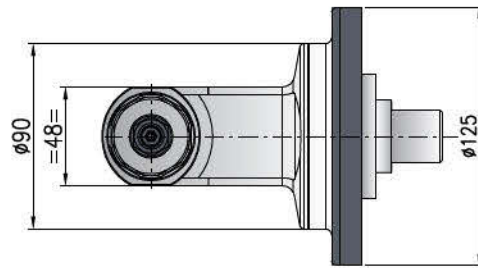
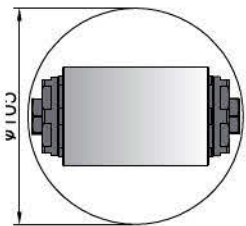
Double output
Doppia uscita

T90-1,5 2U

AMT9015D



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
6.000 min⁻¹



Max. axial load
Max. carico assiale
510 N



Torque
Momento torcente
30 Nm



Weight
Peso
5,4 kg



Collet
Pinza
ER-25 (ø 1/16 mm)



- Direction of rotation same as machine spindle / *senso di rotazione uguale al mandrino*
- Direction of rotation opposite to machine spindle / *senso di rotazione contrario al mandrino*

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / *Opzione*



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
8.000

High speed RPM max.
Alta velocità RPM max..



Ø mm
16

Arbor output
Porta fresa



Ø mm max.
16

Weldon output
Weldon



HSK-32

Quick Change
Attacco rapido



ER-25/ER-16

Double output
Doppia uscita

T90-2,5

AMT9025C



Ratio
Rapporto
1:1



RPM
Velocità
6.000 min⁻¹



Max. axial load
Max. carico assiale
510 N



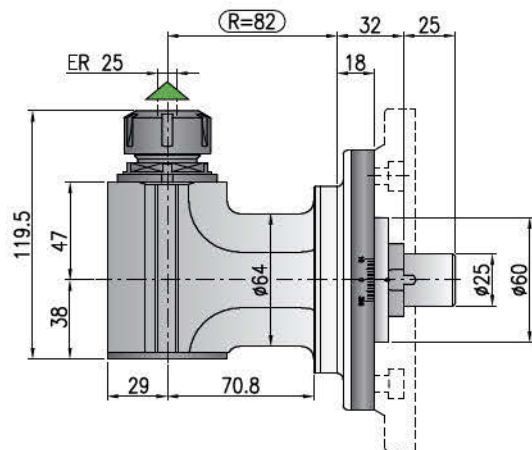
Torque
Momento torcente
30 Nm



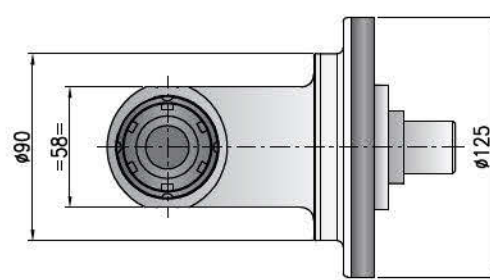
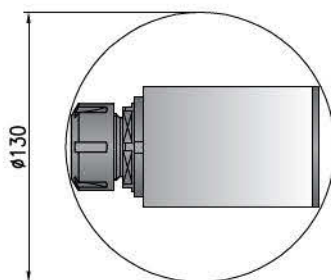
Weight
Peso
5,4 kg



Collet
Pinza
ER-25 (ø 1/16 mm)



Minimum diameter without tool
Diametro minimo senza utensile



*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|-------------------|------------------|------------|---------------|------------|--------------|-----------|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
8.000

High speed RPM max.
Alta velocità RPM max.



Ø mm
16

Arbor output
Porta fresa



Ø mm max.
16

Weldon output
Weldon



HSK-32

Quick Change
Attacco rapido

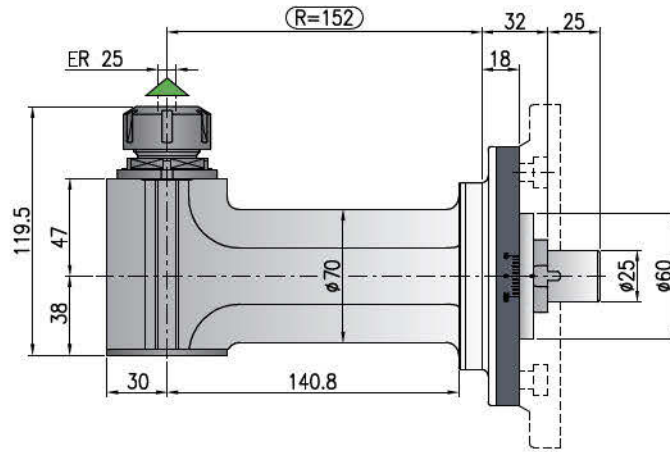


ER-25/ER-16

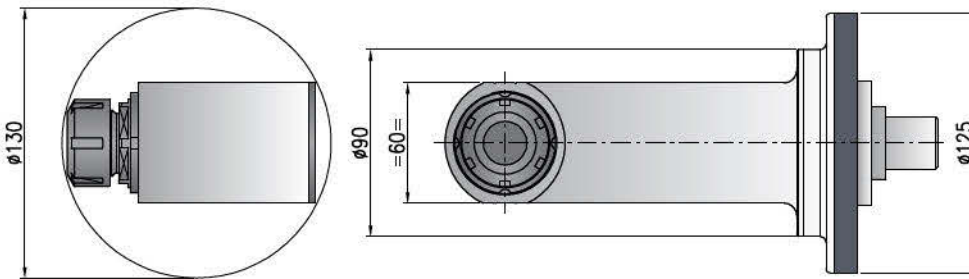
Double output
Doppia uscita

T90-2,5L

AMT9025L



Minimum diameter without tool
Diametro minimo senza utensile



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

- Ratio
Rapporto
1:1
- RPM
Velocità
6.000 min⁻¹
- Max. axial load
Max. carico assiale
510 N
- Torque
Momento torcente
30 Nm
- Weight
Peso
6,7 kg
- Collet
Pinza
ER-25 (ø 1/16 mm)

*** STANDARD EQUIPMENT INCLUDES:**



| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione

| | | | | | |
|---|---|-----------------------------|-------------------------|--------------------------------|--------------------------------|
| | | | | | |
| bar max 12 | min ⁻¹ 8.000 | Ø mm 16 | Ø mm max. 16 | HSK-32 | ER-25/ER-16 |
| Coolant through spindle Adduzione refrigerante interna | High speed RPM max. Alta velocità RPM max. | Arbor output Porta fresa | Weldon output Weldon | Quick Change Attacco rapido | Double output Doppia uscita |

T90-2,5 2U

AMT9025D



Ratio
Rapporto
1:1



RPM
Velocità
6.000 min⁻¹



Max. axial load
Max. carico assiale
510 N



Torque
Momento torcente
30 Nm

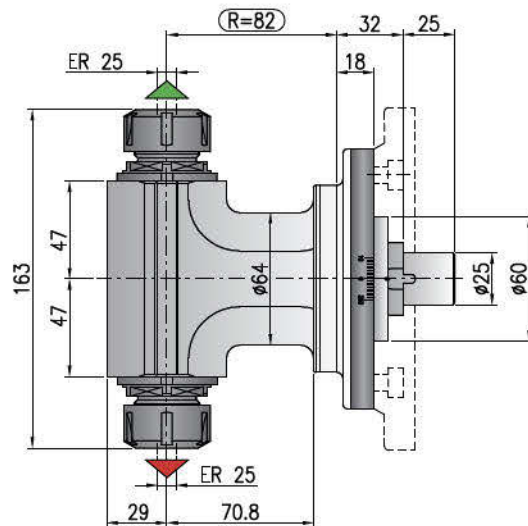


Weight
Peso
6,4 kg

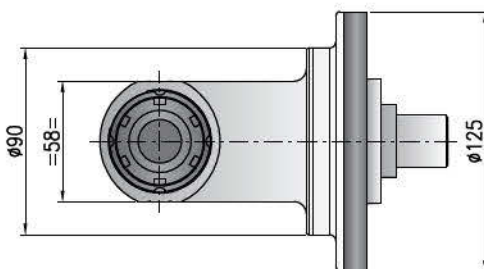
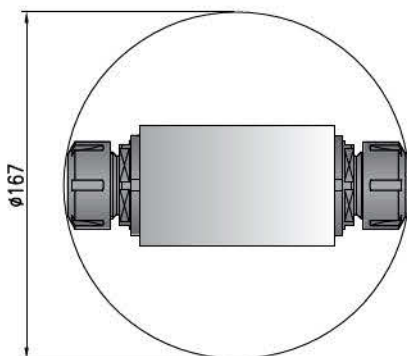


Collet
Pinza
ER-25 (ø 1/16 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino
- Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| Shank/Cono | | | | | | |
| | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



min⁻¹
8.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm
16

Arbor output
Porta fresa

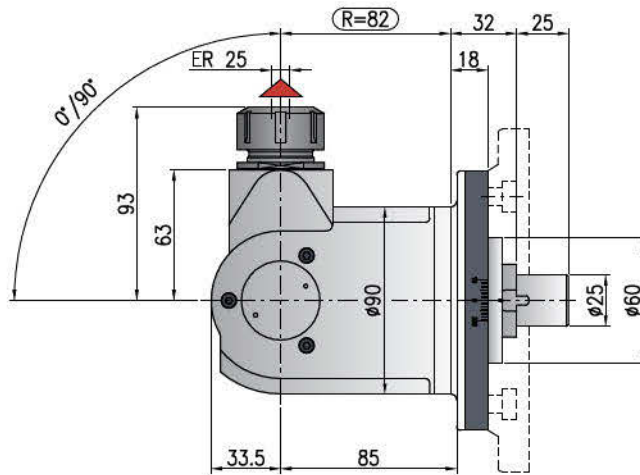


Ø mm max.
16

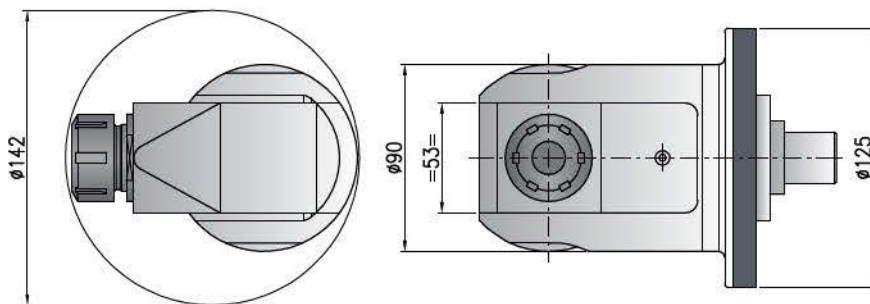
Weldon output
Weldon

TCU-2,5

AMTCU25C



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
480 N



Torque
Momento torcente
18 Nm



Weight
Peso
7 kg



Collet
Pinza
ER-25 (Ø 1/16 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm max.
16

Weldon output
Weldon

T90-3,5

AMT9035C



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.250 N



Torque
Momento torcente
50 Nm



Weight
Peso
11 kg

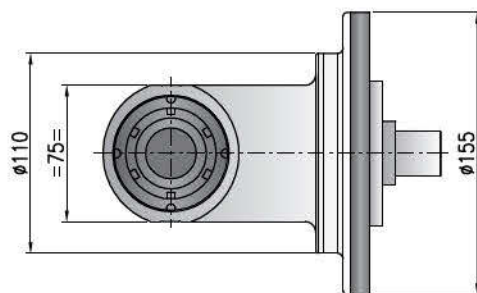
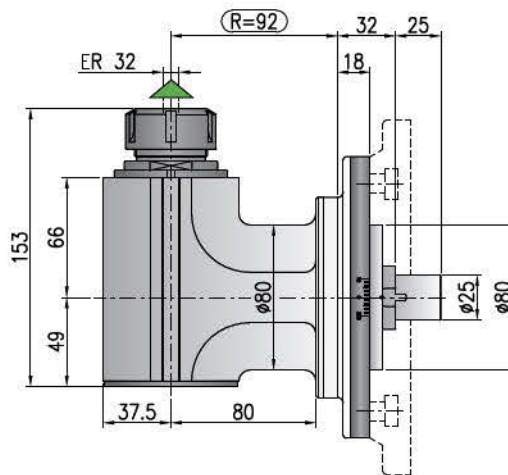
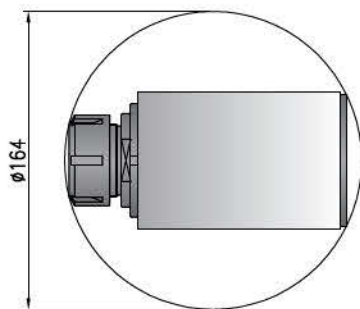


Collet
Pinza
ER-32 (ø 2/20 mm)




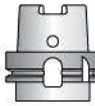


*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|---|---|---|--|---|---|
| Shank/Cono |  |  |  |  |  |  |
| | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm
27

Arbor output
Porta fresa



Ø mm max.
20

Weldon output
Weldon



ISO-30 HSK-40

Quick Change
Attacco rapido

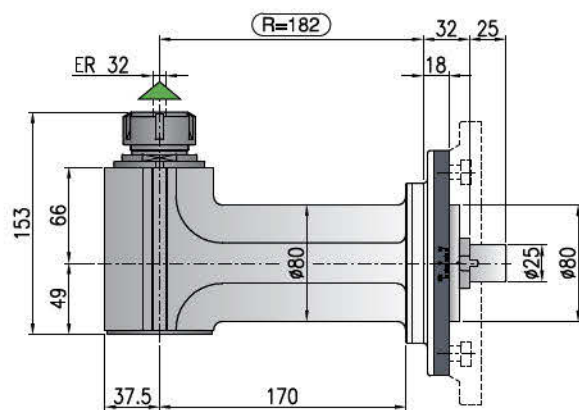


ER-32/ER-20

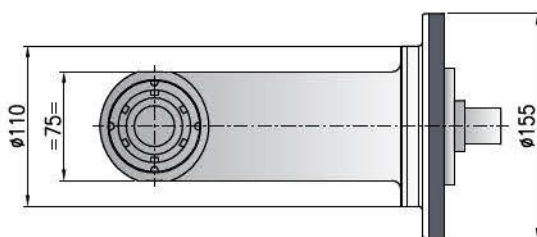
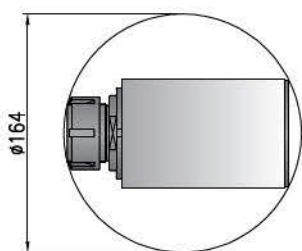
Double output
Doppia uscita

T90-3,5L

AMT9035L



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.250 N



Torque
Momento torcente
50 Nm

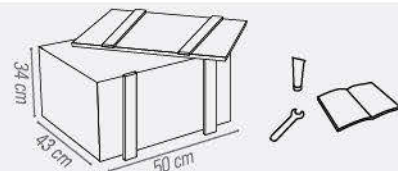


Weight
Peso
13,2 kg



Collet
Pinza
ER-32 (Ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/ **Cono**

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm
27

Arbor output
Porta fresa



Ø mm max.
20

Weldon output
Weldon



ISO-30 HSK-40

Quick Change
Attacco rapido



ER-32/ER-20

Double output
Doppia uscita

T90-3,5 2U

AMT9035D



Ratio
Rapporto
1.1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.250 N



Torque
Momento torcente
50 Nm

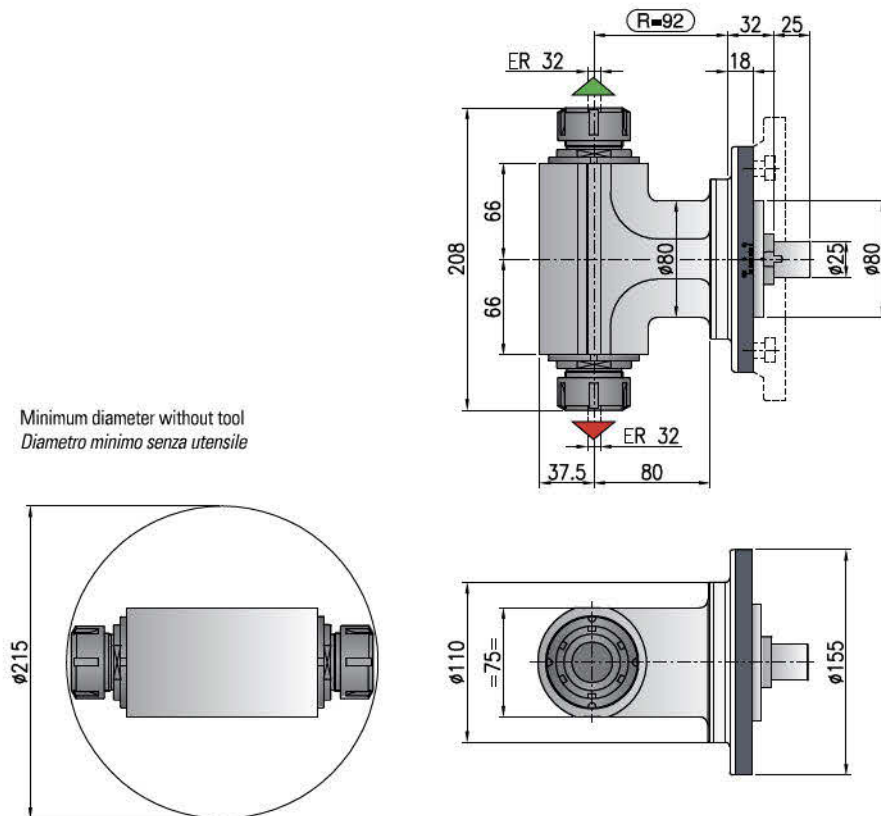


Weight
Peso
12 kg



Collet
Pinza
ER-32 (ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



- Direction of rotation same as machine spindle / *senso di rotazione uguale al mandrino*
- Direction of rotation opposite to machine spindle / *senso di rotazione contrario al mandrino*

| | | | | | | |
|------------|------------------|------------|---------------|------------|--------------|-----------|
| Shank/Cono | | | | | | |
| | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm
27

Arbor output
Porta fresa



Ø mm max.
20

Weldon output
Weldon

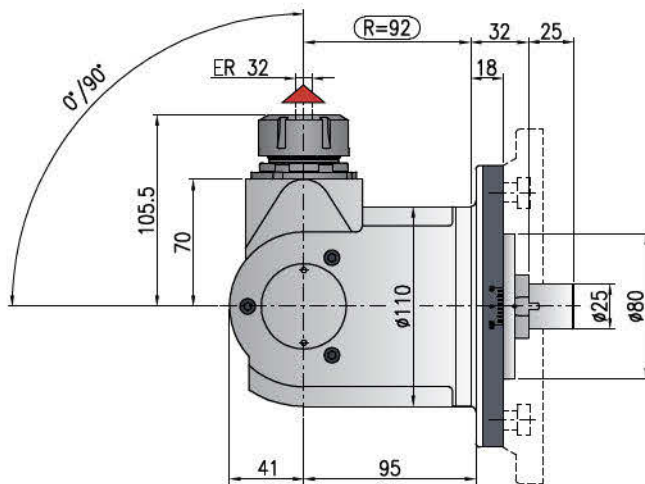


HSK-40

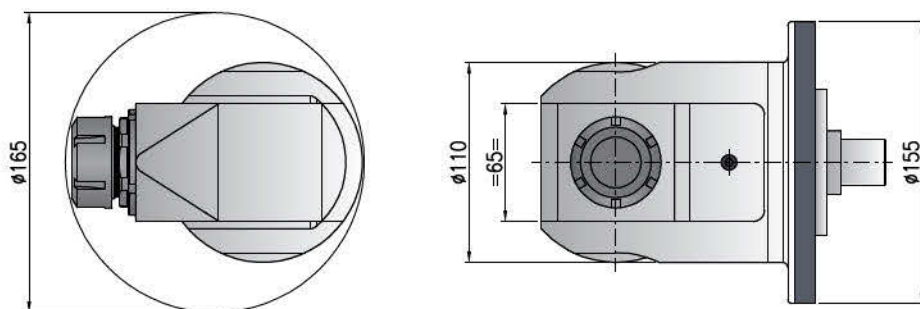
Quick Change
Attacco rapido

TCU-3,5

AMTCU35C



Minimum diameter without tool
Diametro minimo senza utensile



- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
715 N
- Torque
Momento torcente
32 Nm
- Weight
Peso
13 kg
- Collet
Pinza
ER-32 (Ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



Ø mm max.
20

Weldon output
Weldon

T90-4,5

AMT9045C



Ratio
Rapporto
1:1



RPM
Velocità
4.000 min⁻¹



Max. axial load
Max. carico assiale
1.750 N



Torque
Momento torcente
75 Nm

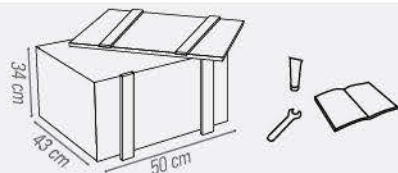


Weight
Peso
17 kg

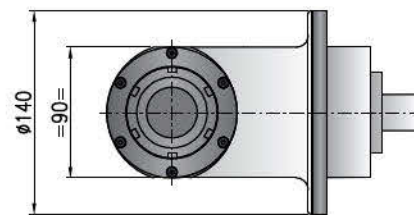
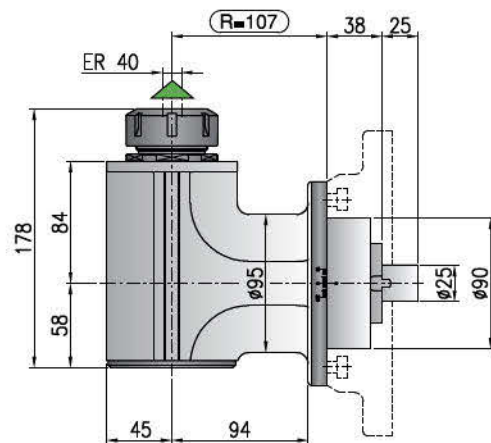
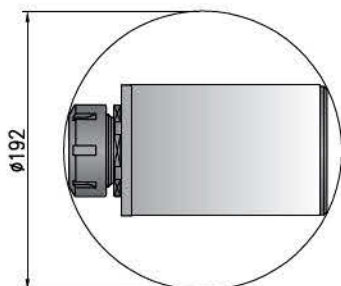


Collet
Pinza
ER-40 (ø 3/30 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



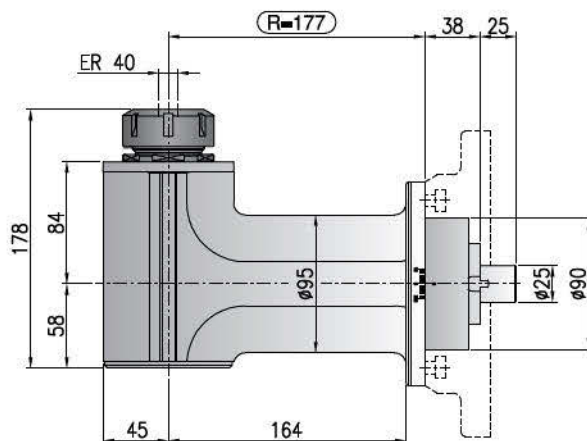
Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| Shank/Cono | | | | | | |
| | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

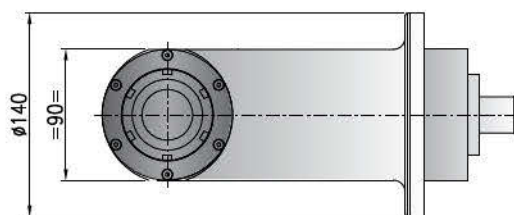
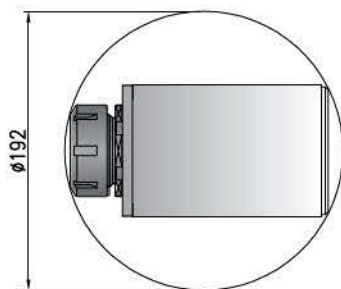
| Option / Opzione | | | | | |
|---|--|-----------------------------|-------------------------|----------------------------------|--------------------------------|
| | | | | | |
| bar max 12 | min ⁻¹ 6.000 | Ø mm 27 | Ø mm max. 25 | ISO-30 HSK-40 CAPTO C4 | ER-40/ER-25 |
| Coolant through spindle Adduzione refrigerante interna | High speed optional RPM max. Opzione alta velocità RPM max. | Arbor output Porta fresa | Weldon output Weldon | Quick Change Attacco rapido | Double output Doppia uscita |

T90-4,5L

AMT9045L

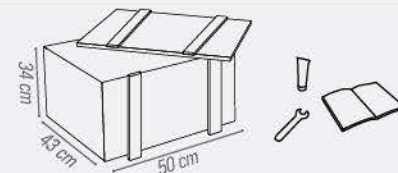


Minimum diameter without tool
Diametro minimo senza utensile



- Ratio
Rapporto
1:1
- RPM
Velocità
4.000 min⁻¹
- Max. axial load
Max. carico assiale
1.750 N
- Torque
Momento torcente
75 Nm
- Weight
Peso
20 kg
- Collet
Pinza
ER-40 (ø 3/30 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

| Option / Opzione | | | | | |
|---|--|-----------------------------|-------------------------|-----------------------------------|--------------------------------|
| | | | | | |
| bar max 12 | min ⁻¹ 6.000 | Ø mm 27 | Ø mm max. 25 | ISO-30 HSK-40 CAPTO C4 | ER-40/ER-25 |
| Coolant through spindle Adduzione refrigerante interna | High speed optional RPM max. Opzione alta velocità RPM max. | Arbor output Porta fresa | Weldon output Weldon | Quick Change Attacco rapido | Double output Doppia uscita |

T90-5

AMT9050C



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
1.800 N



Torque
Momento torcente
100 Nm

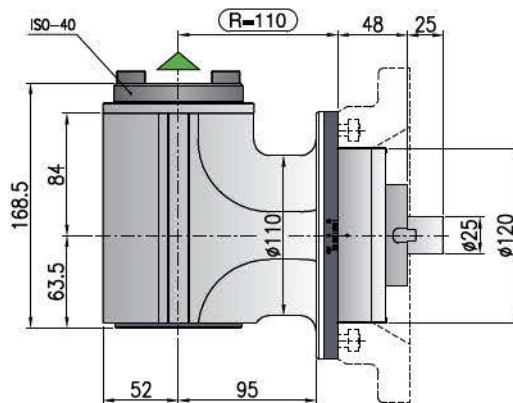
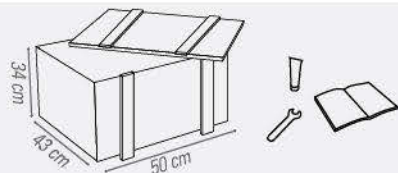


Weight
Peso
22 kg

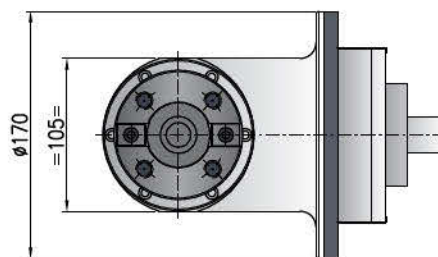
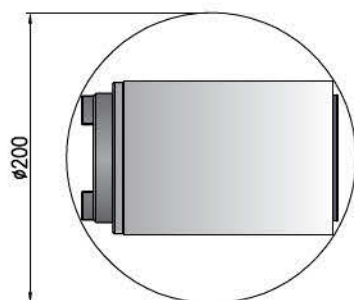


Collet
Pinza
ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



HSK-63 CAPTO C4 C5

Quick Change
Attacco rapido

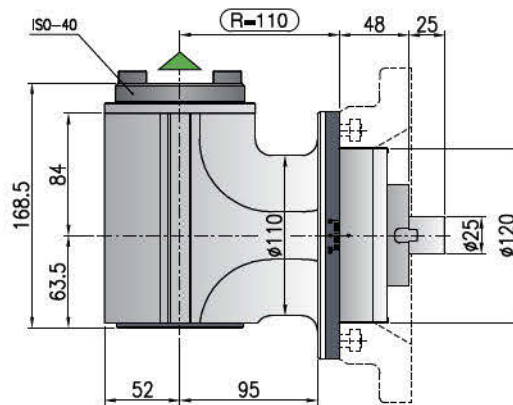


AIR/OIL

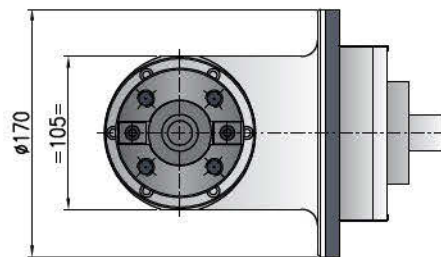
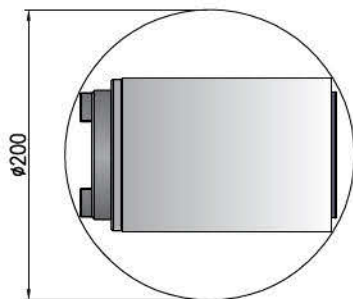
Air / oil lubrication
Lubrificazione aria / olio

T90-5 HP

AMT9050HP

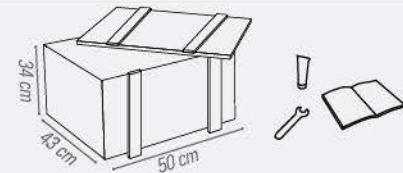


Minimum diameter without tool
Diametro minimo senza utensile



- Ratio
Rapporto
1:1
- RPM
Velocità
3.000 min⁻¹
- Max. axial load
Max. carico assiale
1.800 N
- Torque
Momento torcente
160 Nm
- Weight
Peso
22 kg
- Collet
Pinza
ISO/BT 40

* STANDARD EQUIPMENT INCLUDES:



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63 CAPTO C4 C5

Quick Change
Attacco rapido



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

T90-5L

AMT9050L



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
1.800 N



Torque
Momento torcente
100 Nm

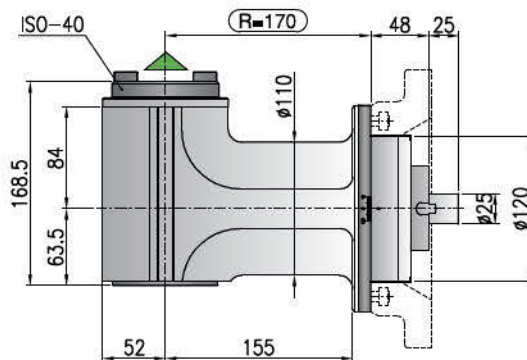
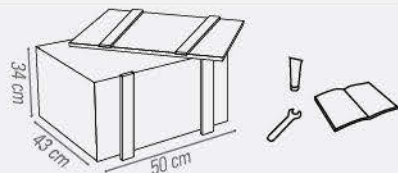


Weight
Peso
26,2 kg

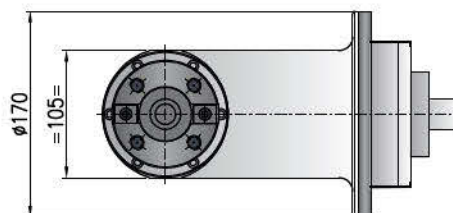
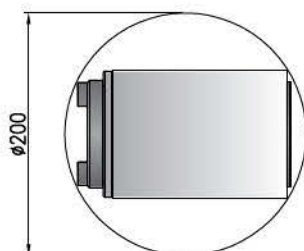


Collet
Pinza
ISO/BT 40

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



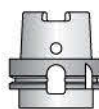
DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/Cono

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.



HSK-63 CAPTO C4 C5

Quick Change
Attacco rapido

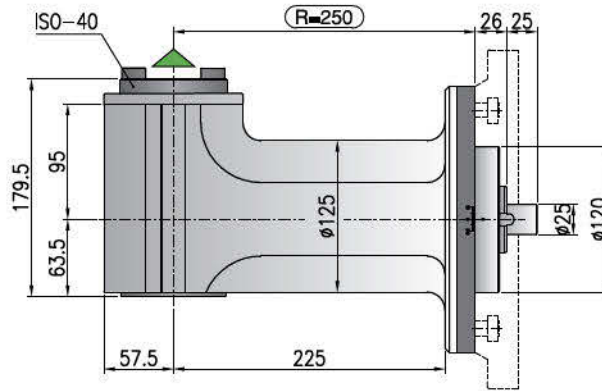


AIR/OIL

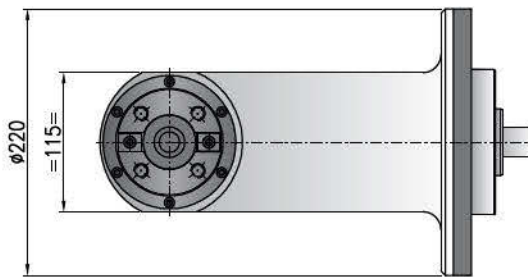
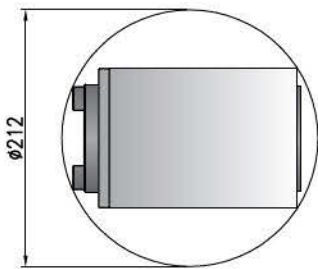
Air / oil lubrication
Lubrificazione aria / olio

T90-8 HS

APT908HS



Minimum diameter without tool
Diametro minimo senza utensile



Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*



Ratio
Rapporto
1:1



RPM
Velocità
5.000 min⁻¹



Max. axial load
Max. carico assiale
2.400 N



Torque
Momento torcente
100 Nm

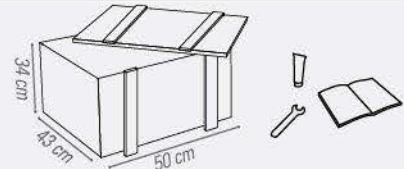


Weight
Peso
33 kg



ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**



| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / *Opzione*



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63 CAPTO C4 C5

Quick Change
Attacco rapido



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

T90-8 HP

APT908HP



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
2.400 N



Torque
Momento torcente
200 Nm

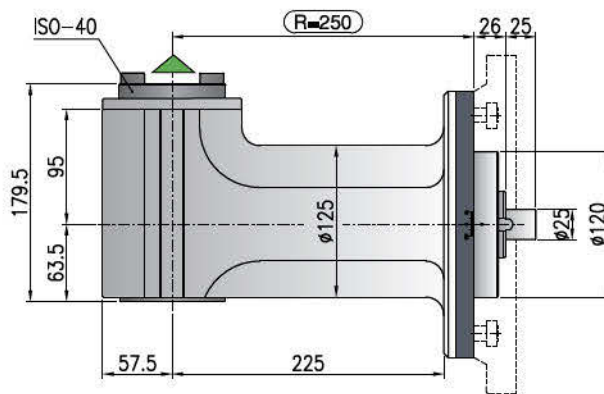
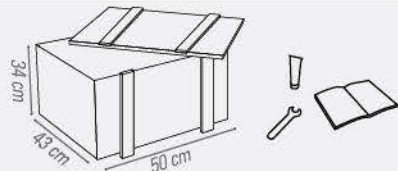


Weight
Peso
33 kg

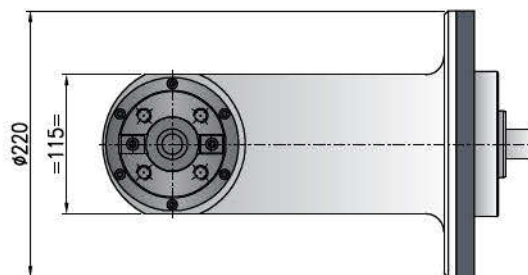
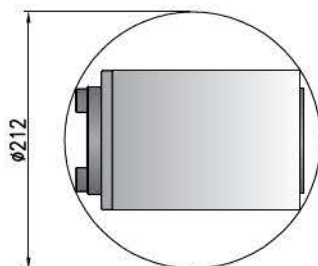


ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



▲ Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63A CAPTO C4 C5

Quick Change
Attacco rapido

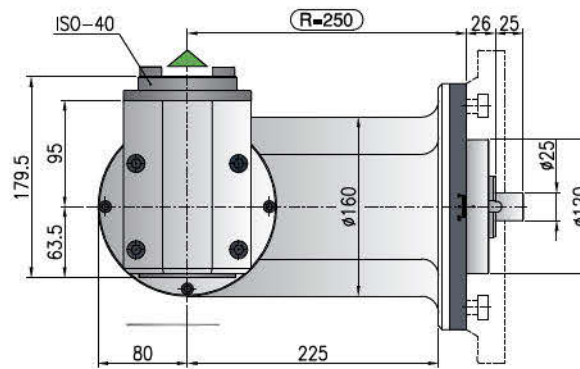


AIR/OIL

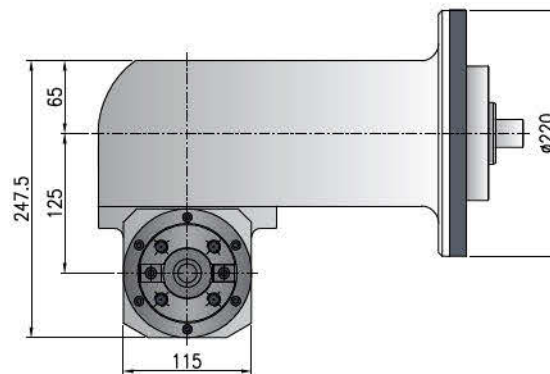
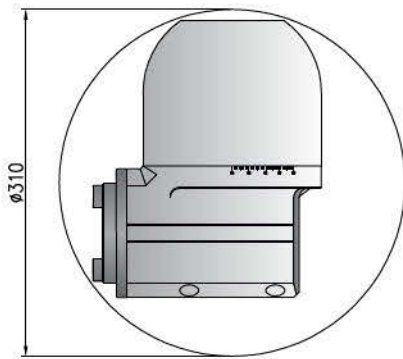
Air / oil lubrication
Lubrificazione aria / olio

TDU-8

APTDU80C



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
2.400 N



Torque
Momento torcente
100 Nm

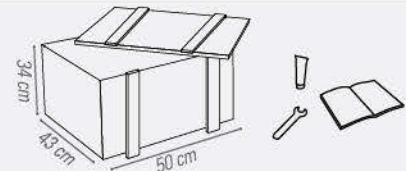


Weight
Peso
50 kg



Collet
Pinza

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63A CAPTO C4 C5

Quick Change
Attacco rapido



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

T90-8 XL - R=450 / 650 / 850



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
2.400 N



Torque
Momento torcente
100 Nm

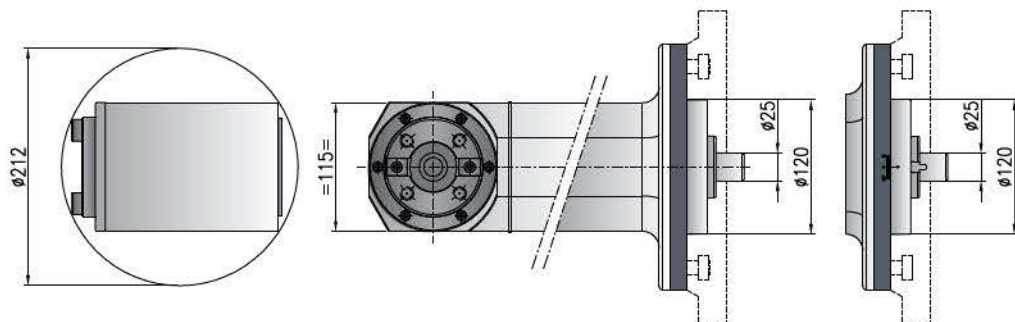


Collet
Pinza
ISO/BT 40

R= 450 / 650

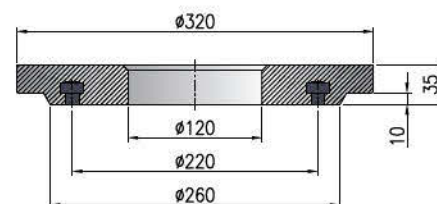
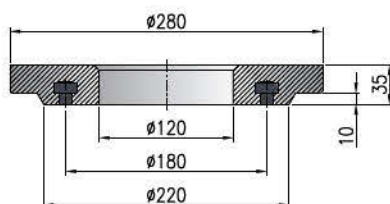
R= 850

Minimum diameter without tool
Diametro minimo senza utensile

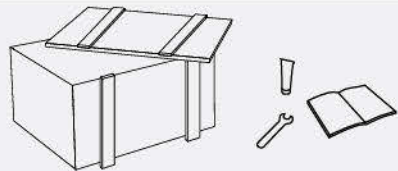


R= 450 / 650

R= 850



*** STANDARD EQUIPMENT INCLUDES:**



▲ Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/Cono

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63A CAPTO C4 C5

Quick Change
Attacco rapido

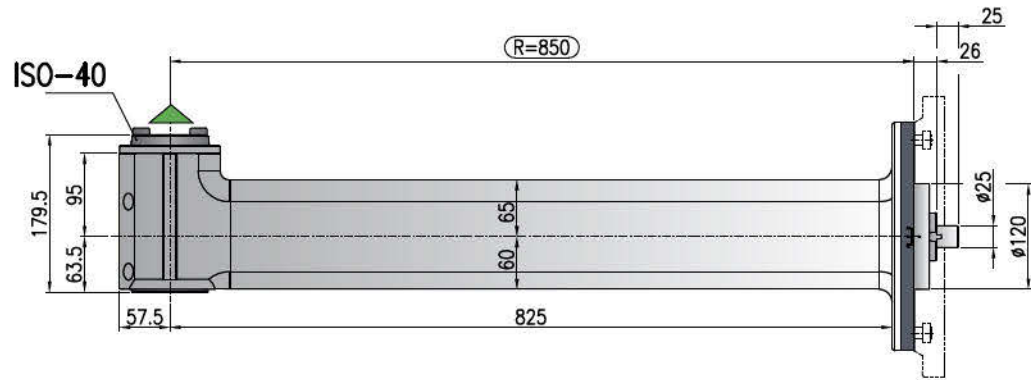


AIR/OIL

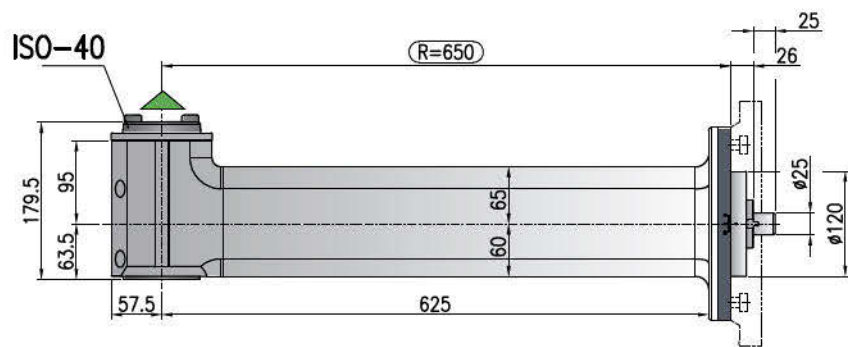
Air / oil lubrication
Lubrificazione aria / olio

APT9080P.450 / APT9080S.650 / APT9080S.850

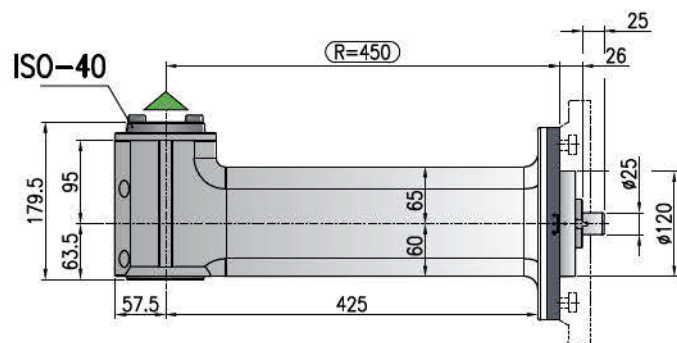
Weight
Peso
105 kg



Weight
Peso
75 kg



Weight
Peso
62 kg



TCU-8 R.I. 15 BAR

APTCU80C



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
2.400 N



Torque
Momento torcente
100 Nm

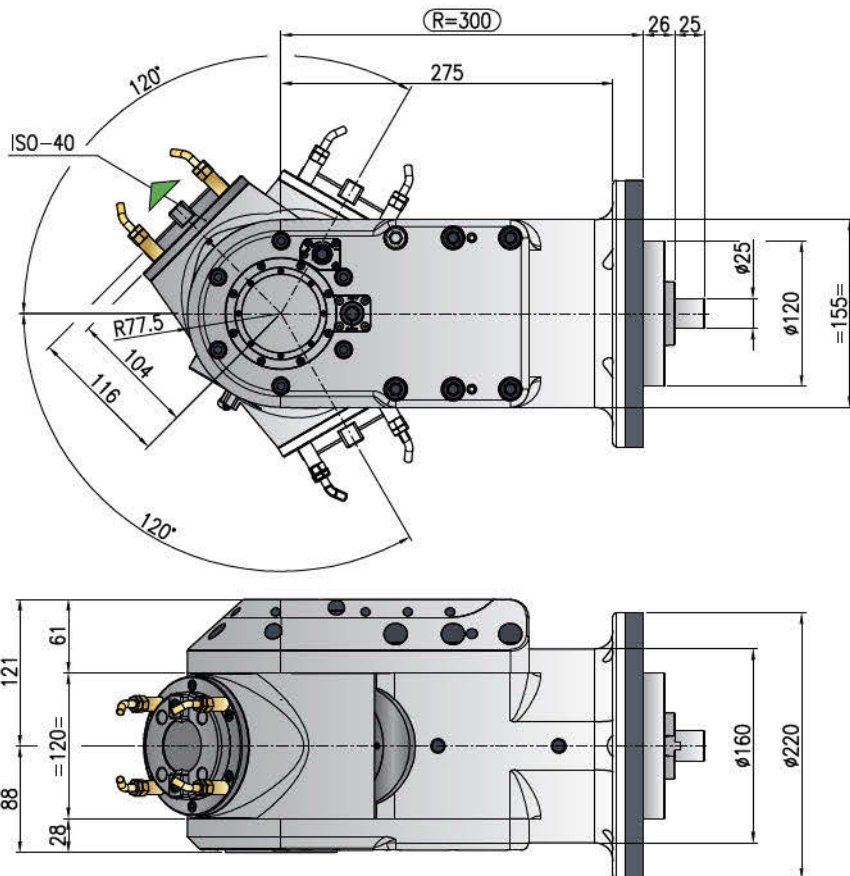
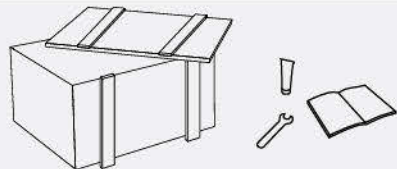


Weight
Peso
72 kg



ISO/BT 40

* STANDARD EQUIPMENT INCLUDES:



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/Cono

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63

Quick Change
Attacco rapido



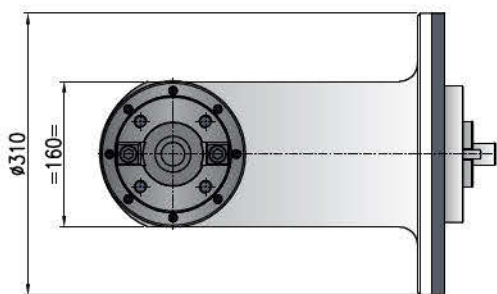
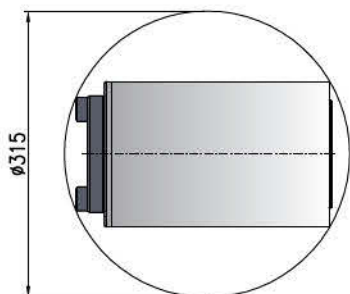
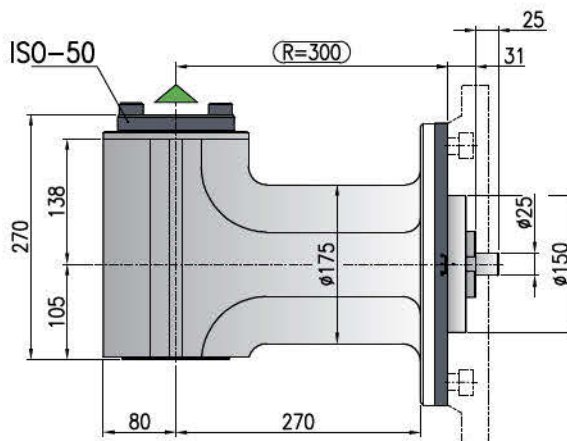
OIL

Oil lubrication
Lubrificazione

T90-10

APT9010C

Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
3.300 N



Torque
Momento torcente
250 Nm

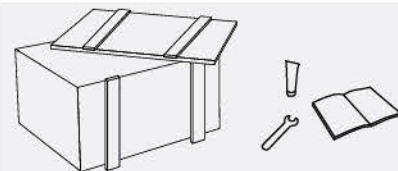


Weight
Peso
77 kg



Collet
Pinza
ISO/BT 50

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|------------------|------------|---------------|------------|--------------|-----------|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-100

Quick Change
Attacco rapido



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

TDU-10

APTDU10C



Ratio
Rapporto
1:1



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
3.300 N



Torque
Momento torcente
250 Nm

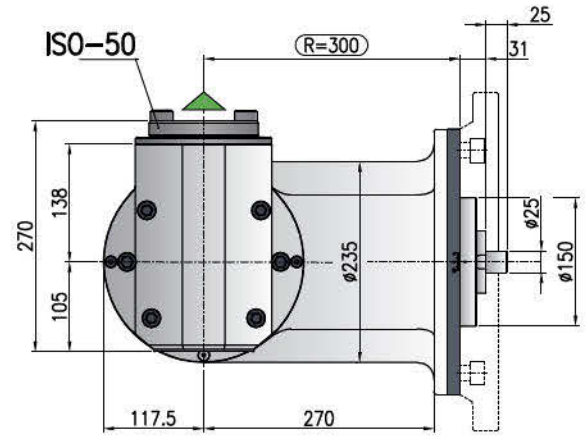
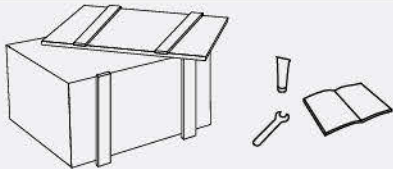


Weight
Peso
121 kg

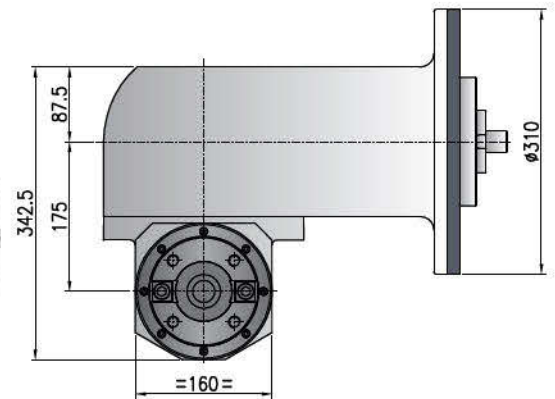
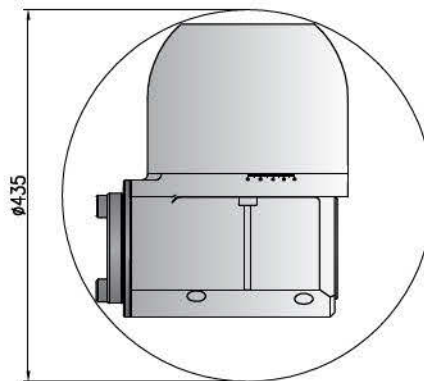


Collet
Pinza
ISO/BT 50

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



▲ Direction of rotation same as to machine spindle / *senso di rotazione uguale al mandrino*



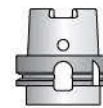
DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/*Cono*

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-100

Quick Change
Attacco rapido

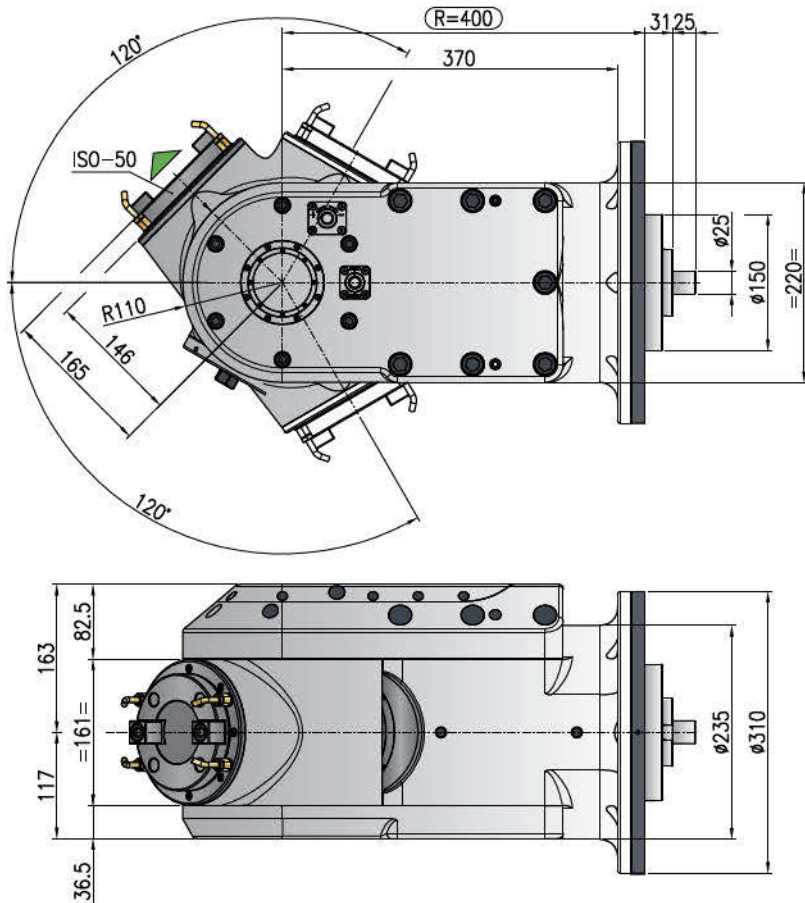


AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

TCU-10 R.I. 15 BAR

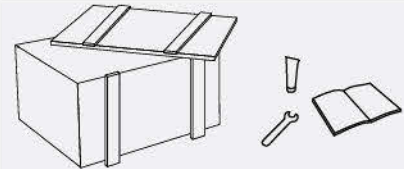
APTCU10C



Direction of rotation same as machine spindle / *senso di rotazione uguale al mandrino*

- Ratio
Rapporto
1:1
- RPM
Velocità
3.000 min⁻¹
- Max. axial load
Max. carico assiale
3.300 N
- Torque
Momento torcente
250 Nm
- Weight
Peso
194 kg
- Collet
Pinza
ISO/BT 50

*** STANDARD EQUIPMENT INCLUDES:**



| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-100

Quick Change
Attacco rapido



OIL

Oil lubrication
Lubrificazione

TR90-15



Ratio (riduzione)
Rapporto (reduction)
1.875:1



RPM
Velocità
2.500 min⁻¹



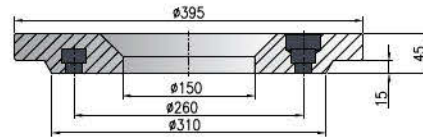
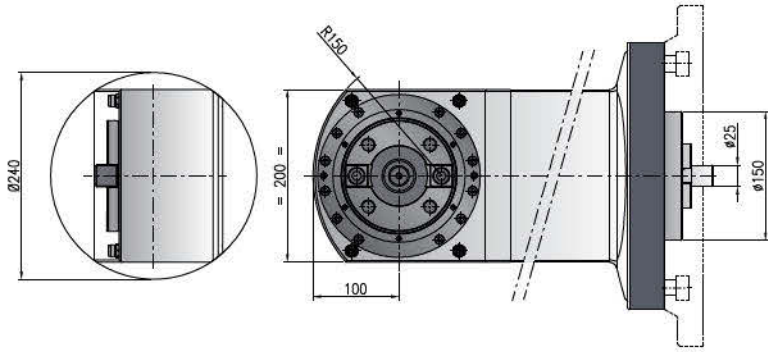
Max. axial load
Max. carico assiale
3.900 N



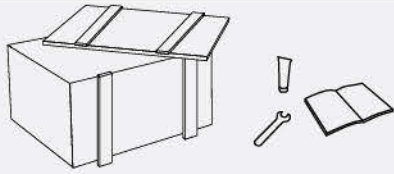
Torque
Momento torcente
600 Nm



Collet
Pinza
ISO/BT 50



*** STANDARD EQUIPMENT INCLUDES:**



▲ Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/*Cono*

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63

Quick Change
Attacco rapido



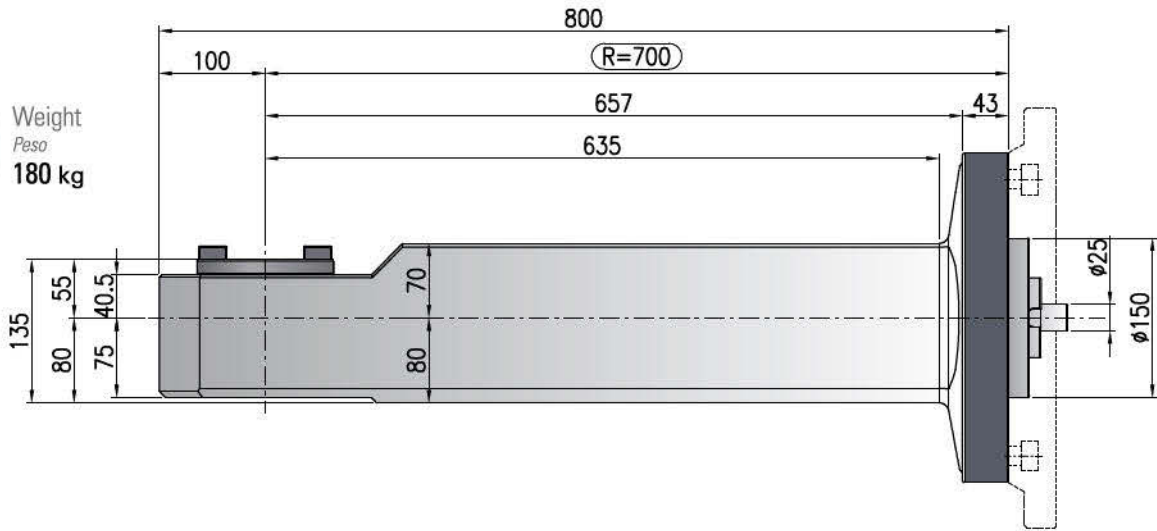
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

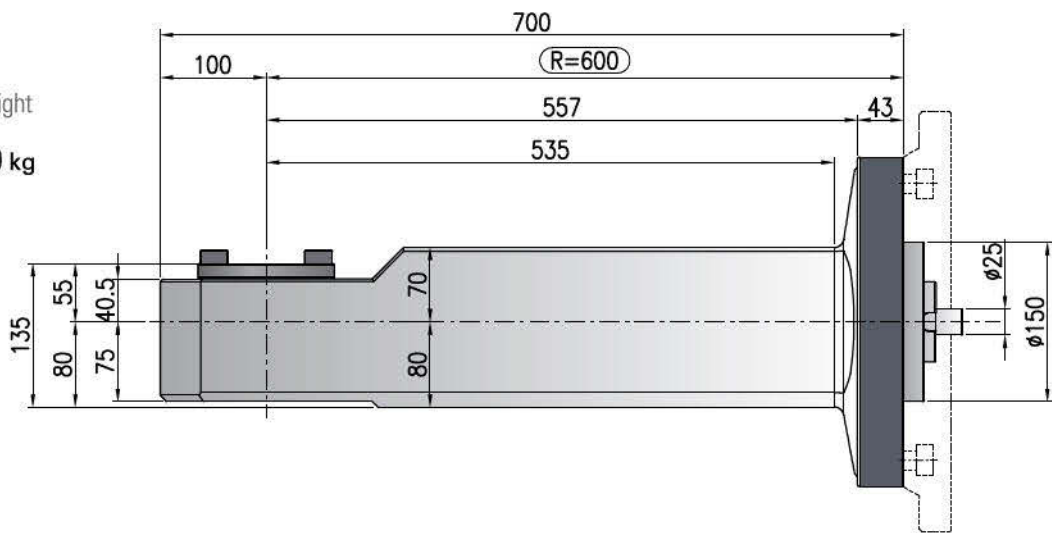
APTTR9015C



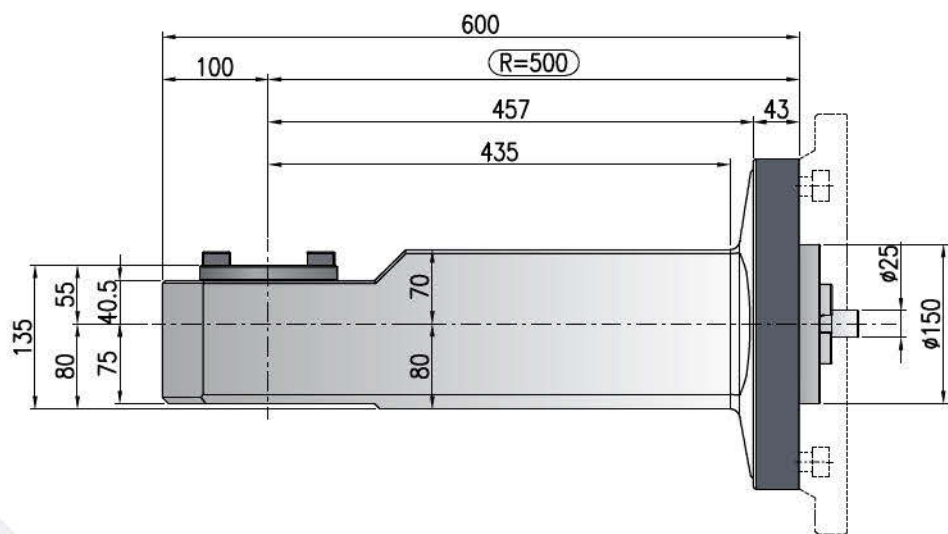
Weight
Peso
180 kg



Weight
Peso
140 kg



Weight
Peso
110 kg





TESTE "AUTO" CON TIRANTE AUTOMATICO "AUTO" ANGLE HEADS WITH AUTOMATIC CLAMPING TOOL

- Cono intercambiabile
Interchangeable shank
- Flangia di interfaccia realizzata su misura con sistema indexaggio cono per ATC
Customized connection flange including taper with indexing system for ATC
- Refrigerazione interna max. 70 bar
Internal coolant max. 70 bar
- Refrigerazione esterna max 20 bar
Low pressure external coolant max. 20 bar
- Refrigerazione esterna max 100 bar
High pressure external coolant max 100 bar
- MQL max 10 bar
MQL max 10 bar
- Pressurizzazione tenute
Seal pressurization
- Aria pulizia cono
Air for spindle cleaning
- Lubrificazione aria + olio
Air + oil lubrication
- Aspirazione olio in eccesso
Oil vacuum system
- Sensore di controllo cambio utensile
Sensor to detect ATC
- *Pick up di stoccaggio unità su misura*
Customized pick up station



TR90-8 AUTO

APTTR9080A



Ratio
Rapporto
1:1



Power
Potenza
25 kW



RPM
Velocità
3.000 min⁻¹



Max. axial load
Max. carico assiale
2.400 N



Torque
Momento torcente
200 Nm

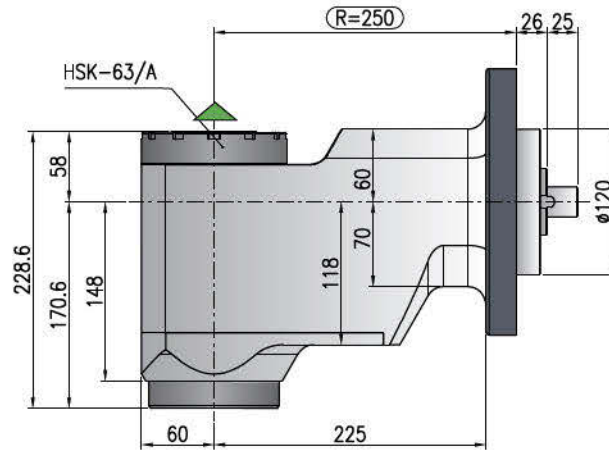
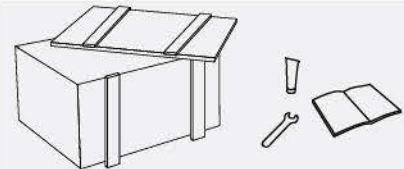


Weight
Peso
55 kg

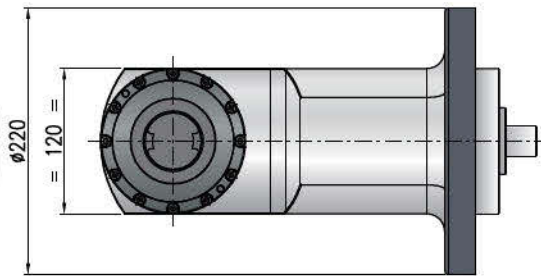
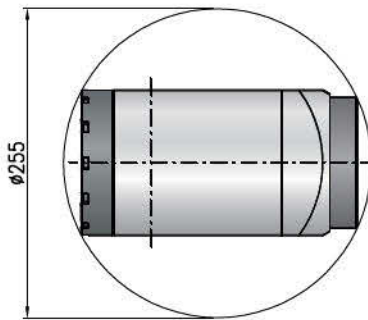


HSK/63A

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

| | | | | | | |
|------------|-----------|-----|--------|-----|-------|----|
| | | | | | | |
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
70

Coolant through spindle
Adduzione refrigerante interna



bar max
100

External coolant
Adduzione refrigerante esterna



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

TR90-15 AUTO

APTTR9015A



Ratio
Rapporto
1:1



Power
Potenza
25 kW



RPM
Velocità
2.500 min⁻¹



Max. axial load
Max. carico assiale
4.800 N



Torque
Momento torcente
600 Nm

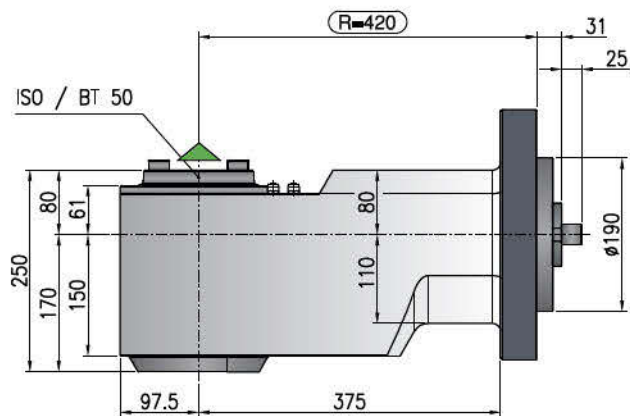
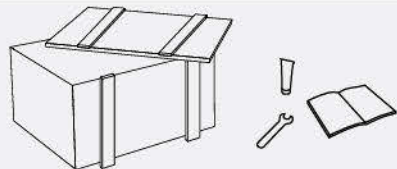


Weight
Peso
180 kg

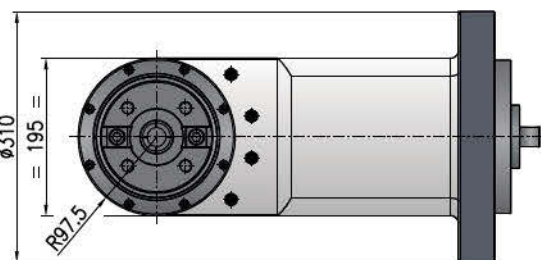
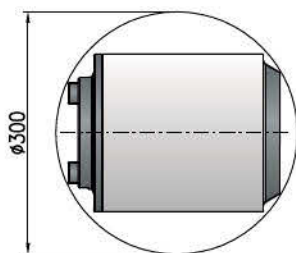


ISO/ BT50

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



▲ Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/**Cono**

Option / Opzione



bar max
70

Coolant through spindle
Adduzione refrigerante interna



bar max
100

External coolant
Adduzione refrigerante esterna

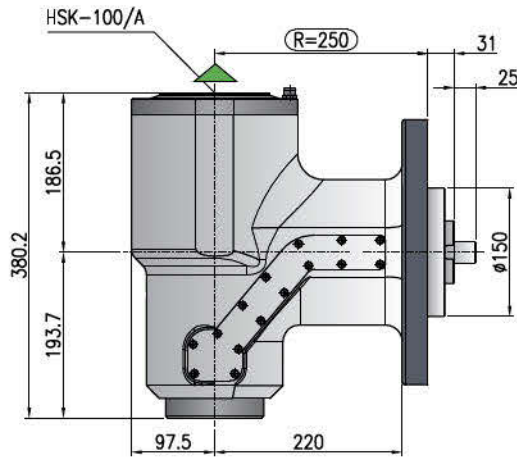


AIR/OIL

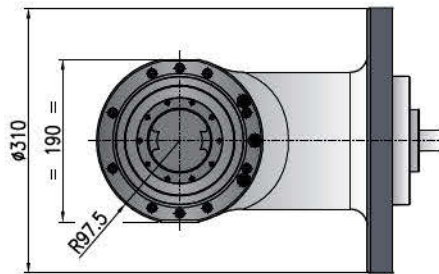
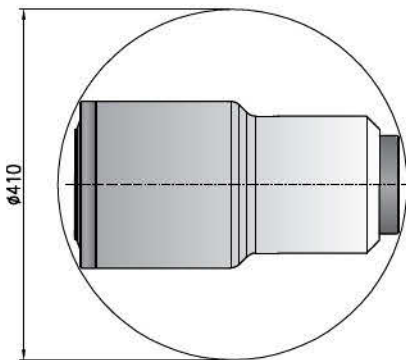
Air / oil lubrication
Lubrificazione aria / olio

T90-15 AUTO

APT9015A



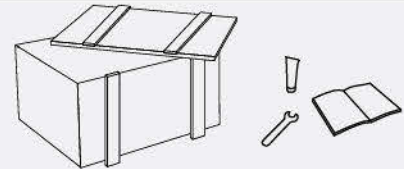
Minimum diameter without tool
Diametro minimo senza utensile



▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino

- Ratio
Rapporto
1:1.5 (Reduction)
- Power
Potenza
25 kW
- RPM
Velocità
6.000 min⁻¹
- Max. axial load
Max. carico assiale
6.000 N
- Torque
Momento torcente
600 Nm
- Weight
Peso
100 kg
- HSK/100A**

* STANDARD EQUIPMENT INCLUDES:



| | | | | | | |
|------------|------------------|------------|---------------|------------|--------------|-----------|
| Shank/Cono | | | | | | |
| | DIN-69871 | CAT | MAS-BT | HSK | CAPTO | KM |

Option / Opzione



bar max
70

Coolant through spindle
Adduzione refrigerante interna



bar max
100

External coolant
Adduzione refrigerante esterna



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio



LINEA HIGH SPEED
HIGH SPEED LINE

MOLTIPLICATORE
SPINDLE SPEEDER



MOLTIPLICATORE MECCANICO
MECHANICAL SPINDLE SPEEDER
Max 25.000 RPM



MOLTIPLICATORE AD ARIA
AIR DRIVEN SPEEDER
Max 60.000 RPM



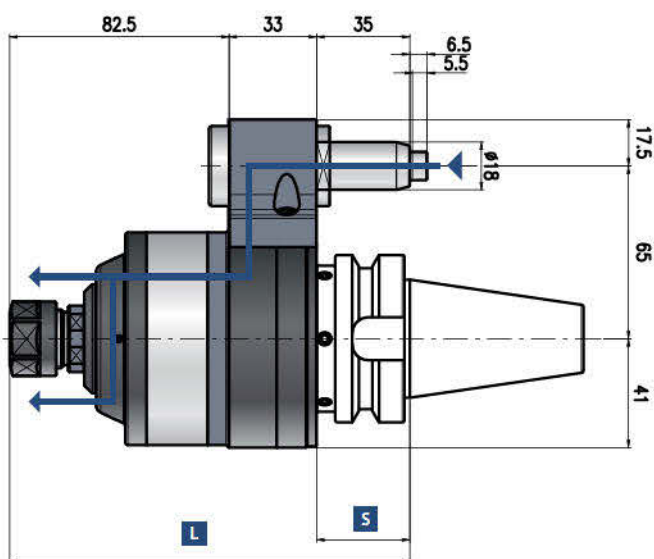
MOLTIPLICATORE ELETTRICO
ELECTROSPINDLE
Max 80.000 RPM

SLIMLINE

Rotazione tramite mandrino macchina
Rotation through machine spindle



MOLTIPLICATORE SPEEDER



Corpo principale con sistema di raffreddamento ad aria
Main body with air-water cooling system

Fori per raffreddamento ad aria o acqua
Bores for air-water cooling system



Entrata aria acqua
Air-coolant input

Pinza ER 16
ER 16 collet

Gruppo perno modulare
Interchangeable pitchdimension



Ratio
Rapporto
1:5



RPM
Velocità
25.000 min⁻¹



Max. axial load
Max. carico assiale
60 N



Torque
Momento torcente
4 Nm

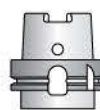


Weight
Peso
4 kg



Collet
Pinza
ER-16 ø 1/10 mm

*** STANDARD EQUIPMENT INCLUDES:**



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 40-50 | | 40-50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-100 | | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 150.5 | | 156.5 | 157.5 | 160.5 | 153.5 | 155.5 | 155.5 |

*optional

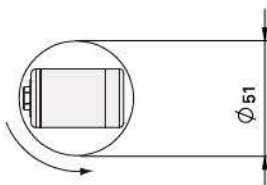
Non interchangeable input drive shank/ Coni di attacco non intercambiabili

ROTAZIONE CON MANDRINO MACCHINA - SLIMLINE SPINDLE DRIVEN

RA-100

Diameter without tool with RA-100
Diametro senza utensile con RA-100

RPM max. output
Max. Velocità output **5.620 rpm**

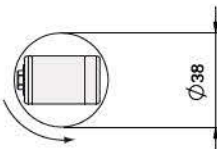


| Technical Data / Dati Tecnici | RA-100 |
|--------------------------------------|--------|
| RPM max. input / Max. Velocità input | 15.000 |
| Rt. reduction / Rt. in riduzione | 1/2,67 |
| Weight / Peso | Kg 3,5 |

RA-200

Diameter without tool with RA-200
Diametro senza utensile con RA-200

RPM max. output
Max. Velocità output **10.000 rpm**

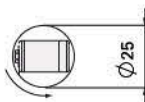


| Technical Data / Dati Tecnici | RA-200 |
|--------------------------------------|--------|
| RPM max. input / Max. Velocità input | 15.000 |
| Rt. reduction / Rt. in riduzione | 1/1,5 |
| Weight / Peso | Kg 3,5 |

IC-300

Diameter without tool with IC-300
Diametro senza utensile con IC-300

RPM max. output
Max. Velocità output **11.250 rpm**

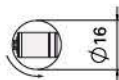


| Technical Data / Dati Tecnici | IC-300 |
|--------------------------------------|--------|
| RPM max. input / Max. Velocità input | 15.000 |
| Rt. reduction / Rt. in riduzione | 3/4 |
| Weight / Peso | Kg 3 |

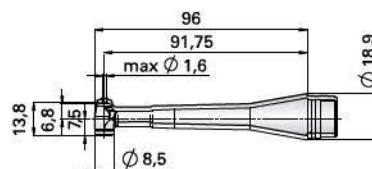
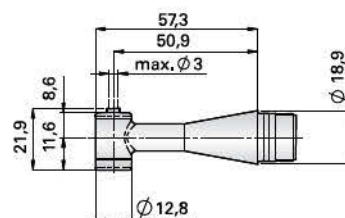
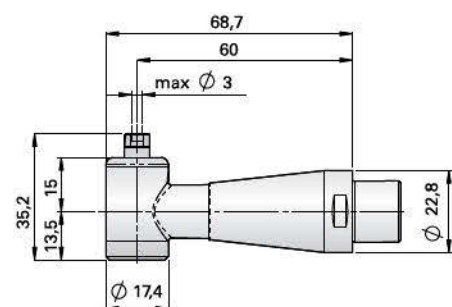
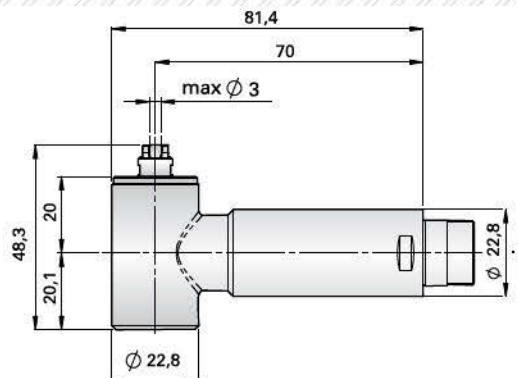
MFC-300 S

Diameter without tool with MFC-300
Diametro senza utensile con MFC-300

RPM max. output
Max. Velocità output **15.000 rpm**



| Technical Data / Dati Tecnici | MFC-300 |
|--------------------------------------|---------|
| RPM max. input / Max. Velocità input | 15.000 |
| Rt. reduction / Rt. in riduzione | 1/1 |
| Weight / Peso | Kg 3 |



Spindle Runout

| | |
|---|---------------------------|
| Spindle accuracy Precisione del Mandrino | 0,002 mm 0,00008 inch. |
|---|---------------------------|



Coolant Option

It is possible to use external coolant during the machining.
Consentito usare refrigerante esterno durante la lavorazione.

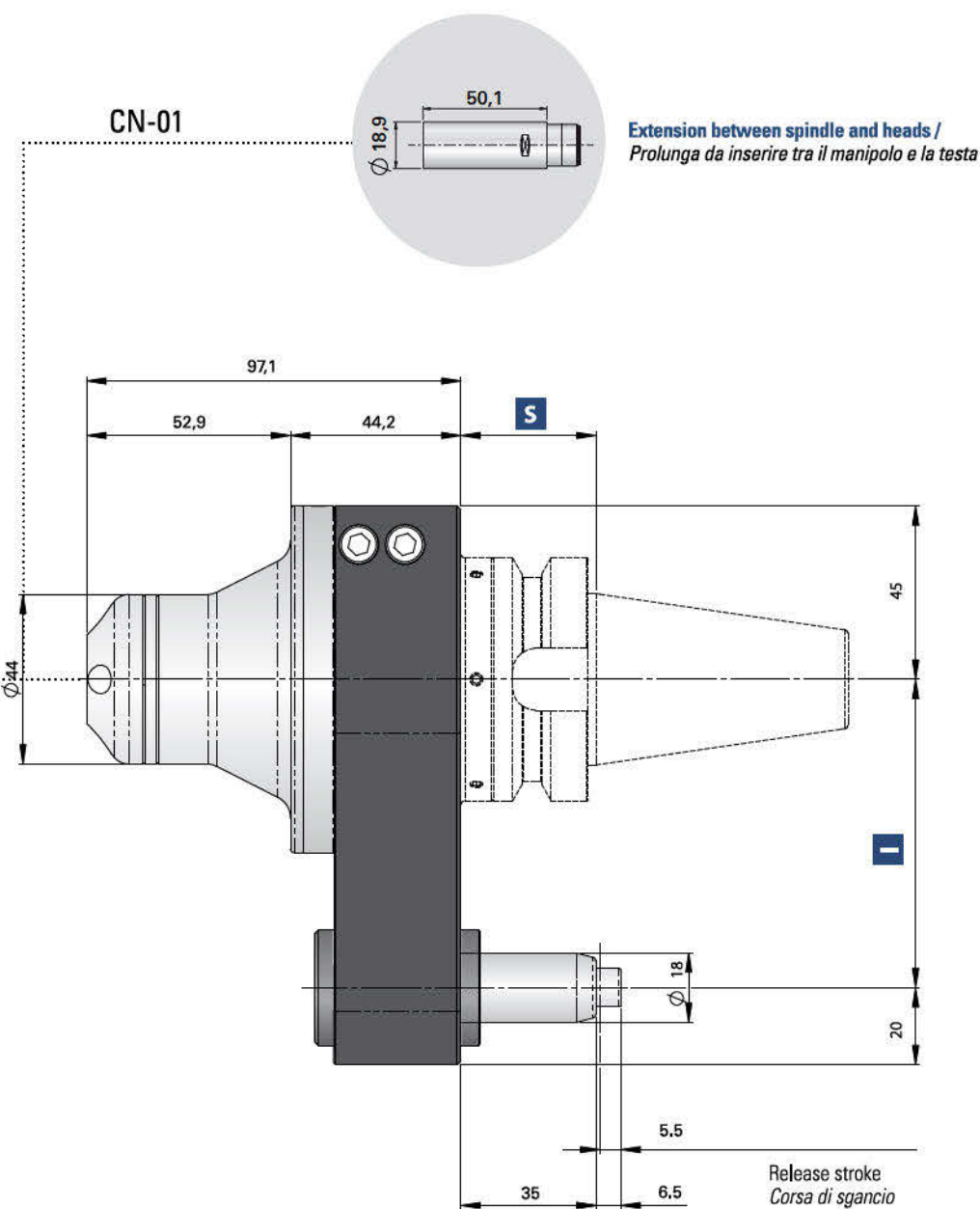


Collet

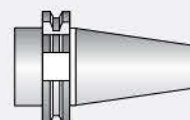
| | | |
|----------------|----|--|
| RA-100 | mm | CH8: Ø3 mm every 0,1 mm Ø 3mm |
| RA-200 | mm | CHS: Ø3mm, 2,35 every 1,6 and Ø2,35, Ø3,175 |
| IC-300 | mm | CHC: Ø3mm, Ø2,35mm, Ø1,6 mm, Ø2,00mm and Ø3,175 mm |
| MFC-300 | mm | K252 Ø1,6mm |

OPTIONAL DRIVE SHANK*

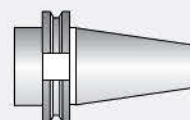
Non interchangeable input drive shank
Coni non intercambiabili



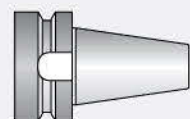
DIN-69871
ISO 40/50



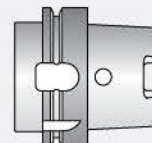
CAT
40/50



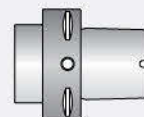
MAS-BT
40/50



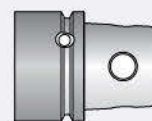
HSK
63/80/100



CAPTO
C5/C6/C8



KM
50/63



| Shank/Cono | DIN-69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|--------------|--------|--------------|--------|--------------|--------|--------------|--------|--------------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80-(110*) | 80-110 | 65-80-(110*) | 80-110 | 65-80-(110*) | 80-110 | 65-80-(110*) | 80-110 | 65-80-(110*) |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 |

*optional

| Accessories / Accessori | RA-100 | RA-200 | IC-300 | MFC-300 |
|---------------------------------------|--------|--------|--------|---------|
| Retaining block / Tassello di ritengo | Ø18 mm | Ø18 mm | Ø18 mm | Ø18 mm |
| Extension / Prolunga | CN-01 | CN-01 | CN-01 | CN-01 |

Retaining block / Tassello di ritengo /
Stop-Block

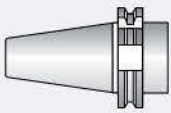


NOT INCLUDED
NON INCLUSO

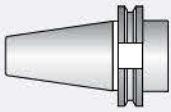
TESTE CON MOTORE AD ARIA

AIR DRIVEN ANGLE HEADS

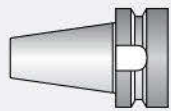
OPTIONAL DRIVE SHANK*
Non interchangeable input drive shank
Coni non intercambiabili



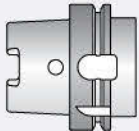
DIN-69871
ISO 40/50



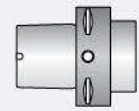
CAT
40/50



MAS-BT
40/50



HSK
63/80/100



CAPTO
63/80/100

Air line kit / Filtro regolatore aria

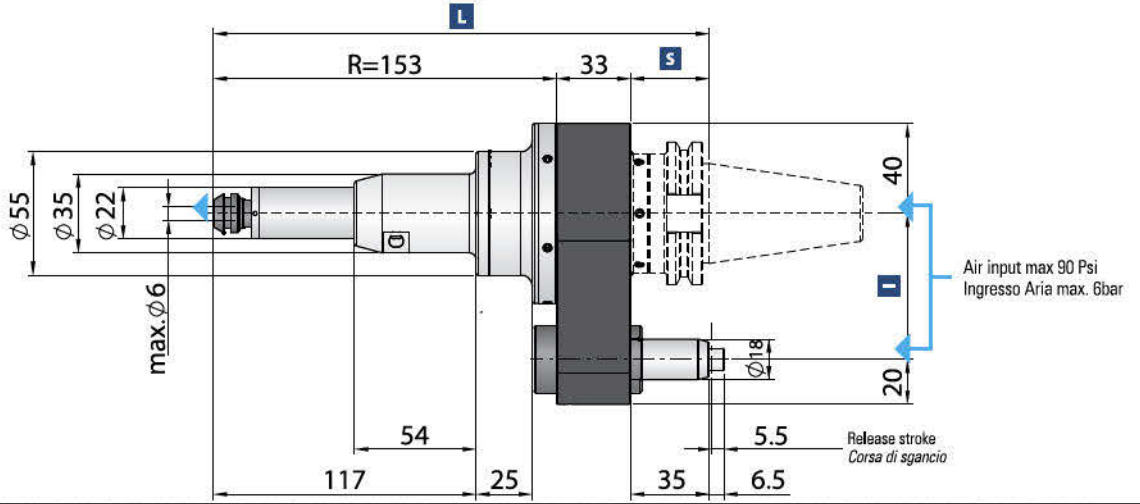


Retaining block /
Tassello di ritegno /
Stop-Block

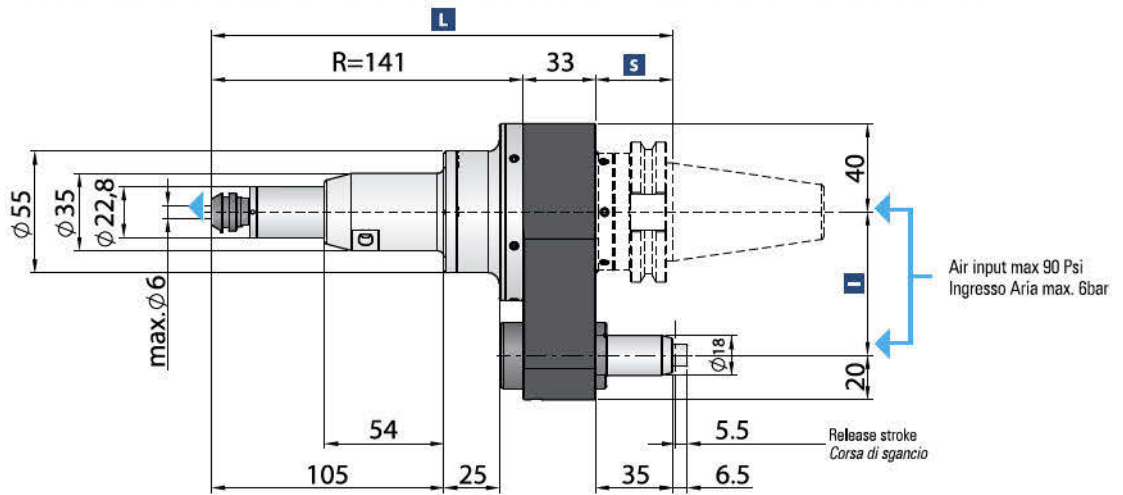


NOT INCLUDED
NON INCLUSO

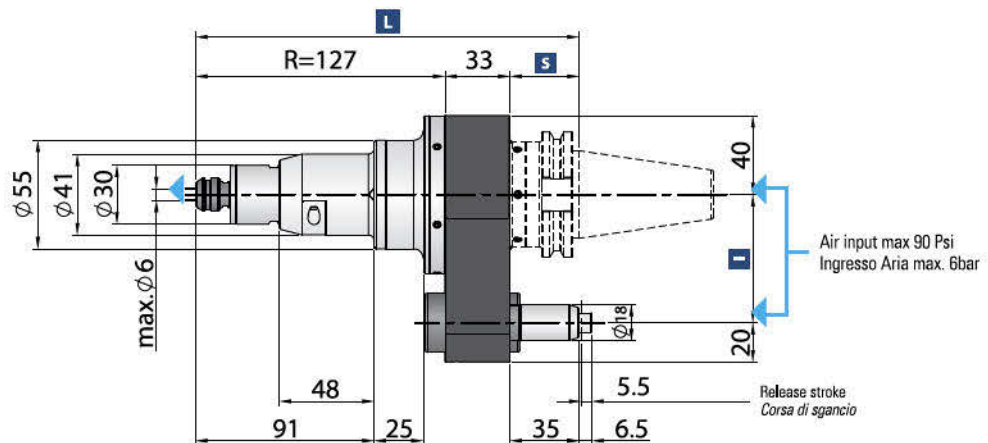
Turboflex 60.000 RPM



Turboflex 30.000 RPM



Turboflex 20.000 RPM



DATI TECNICI TECHNICAL DATA

NR2351

| Technical data / Dati tecnici | | NR-2351 |
|--------------------------------|-------------------|----------------------|
| RPM max. / Max. Velocità | min ⁻¹ | 60.000 ± 10% |
| Type motor / Tipo di motore | | AM-600 |
| Power / Potenza | W | 76 |
| Air pressure / Pressione aria | bar | max. 6 (max. 90 Psi) |
| Air consumption / Consumo aria | l/min | 160 |
| Weight / Peso | Kg | 4 |

Disponibile anche senza flangia.
Also available without flange.



| Shank/Cono | DIN 69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|-------------|--------|-------------|--------|-------------|--------|-----------|--------|-----------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80(110*) | 80-110 | 65-80(110*) | 80-110 | 65-80(110*) | 80-110 | 65-80-110 | 80-110 | 65-80-110 |
| S | 35 | 35 | 35 | 41 | 42 | 42 | 38 | 40 | 40 |

*optional



Collet

NR-2351
mm
CHK: ø 0,5 - max 6mm every 0,1



Coolant Option

Consentito usare refrigerante esterno durante la lavorazione.
It is possible to use external coolant during the machining.



Spindle Runout

Spindle accuracy | 0,002 mm
Precisione del Mandrino | 0,00008 inch.



È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa
It is strictly forbidden to rotate the machine spindle as it may cause damage to the head

NR303

| Technical data / Dati tecnici | | NR-303 |
|--------------------------------|-------------------|----------------------|
| RPM max. / Max. Velocità | min ⁻¹ | 30.000 ± 10% |
| Type motor / Tipo di motore | | AM-310 |
| Power / Potenza | W | 108 |
| Air pressure / Pressione aria | bar | max. 6 (max. 90 Psi) |
| Air consumption / Consumo aria | l/min | 226 |
| Weight / Peso | Kg | 4 |

Disponibile anche senza flangia.
Also available without flange.



| Shank/Cono | DIN 69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|-------------|--------|-------------|--------|-------------|--------|-----------|--------|-----------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80(110*) | 80-110 | 65-80(110*) | 80-110 | 65-80(110*) | 80-110 | 65-80-110 | 80-110 | 65-80-110 |
| S | 35 | 35 | 35 | 41 | 42 | 42 | 38 | 40 | 40 |

*optional



Collet

NR-303
mm
CHK: ø 0,5 - max 6mm every 0,1



Coolant Option

Consentito usare refrigerante esterno durante la lavorazione.
It is possible to use external coolant during the machining.



Spindle Runout

Spindle accuracy | 0,002 mm
Precisione del Mandrino | 0,00008 inch.



È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa
It is strictly forbidden to rotate the machine spindle as it may cause damage to the head

NR3060

| Technical data / Dati tecnici | | NR-3060 |
|----------------------------------|-------------------|----------------------|
| RPM max. / Max. Velocità | min ⁻¹ | 18.000 ± 10% |
| Type motor / Tipo di motore | | AM-3020 |
| Power / Potenza | W | 125 |
| Air pressure / Pressione aria | bar | max. 6 (max. 90 Psi) |
| Air consumption / Consumo aria | l/min | 178 |
| Output RPM / N° Giri in uscita | | 18.000 |
| Rt. reduction / Rt. in riduzione | | 1/1 |
| Weight / Peso | Kg | 4 |

Disponibile anche senza flangia.
Also available without flange.



| Shank/Cono | DIN 69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|-------------|--------|-------------|--------|-------------|--------|-----------|--------|-----------|
| Size/Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80(110*) | 80-110 | 65-80(110*) | 80-110 | 65-80(110*) | 80-110 | 65-80-110 | 80-110 | 65-80-110 |
| S | 35 | 35 | 35 | 41 | 42 | 42 | 38 | 40 | 40 |

*optional



Collet

NR-3060
mm
CHK: ø 0,8 - max 6mm every 0,1



Coolant Option

Consentito usare refrigerante esterno durante la lavorazione.
It is possible to use external coolant during the machining.



Spindle Runout

Spindle accuracy | 0,002 mm
Precisione del Mandrino | 0,00008 inch.

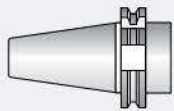


È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa
It is strictly forbidden to rotate the machine spindle as it may cause damage to the head

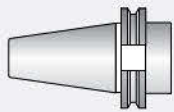
TESTE CON MOTORE AD ARIA
AIR DRIVEN ANGLE HEADS

Turboflex 30.000 RPM

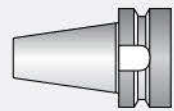
OPTIONAL DRIVE SHANK*
Non interchangeable input drive shank
Coni non intercambiabili



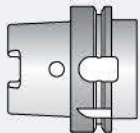
DIN-69871
ISO 40/50



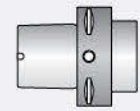
CAT
40/50



MAS-BT
40/50



HSK
63/80/100



CAPTO
63/80/100

Air line kit / Filtro regolatore aria

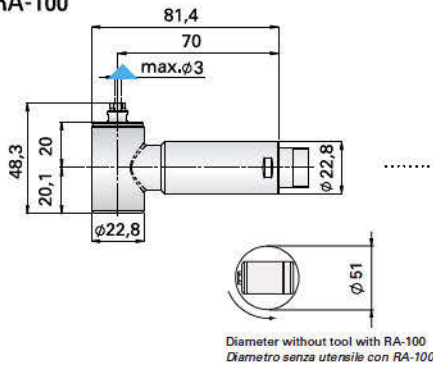


Retaining block /
Tassello di ritegno /
Stop-Block

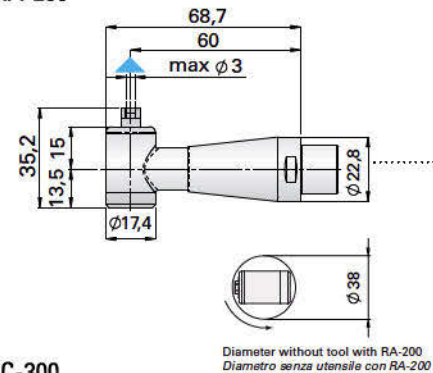


NOT INCLUDED
NON INCLUSO

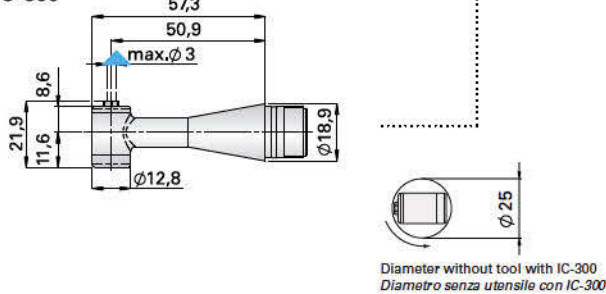
RA-100



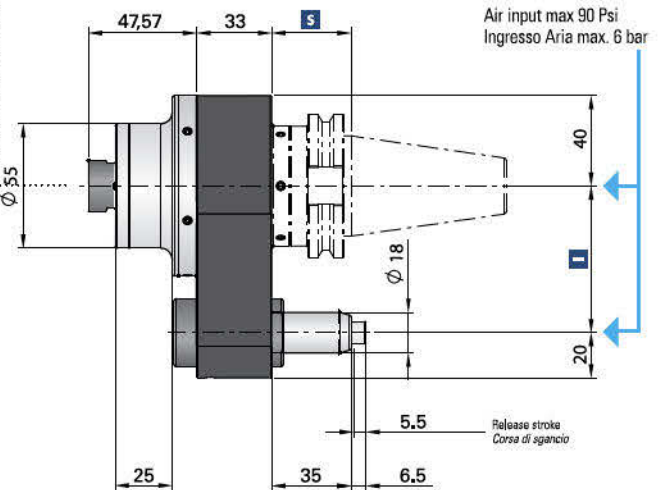
RA-200



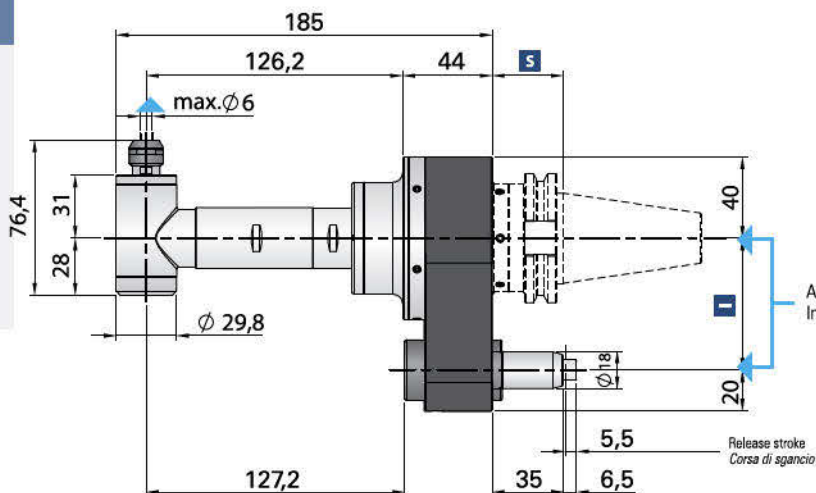
IC-300



CN-01



Turboflex 20.000 RPM



DATI TECNICI TECHNICAL DATA

| Technical Data / Dati Tecnici | | RA-100 | RA-200 | IC-300 |
|----------------------------------|-------------------|----------------------|----------------------|----------------------|
| RPM max. / Max. Velocità | min ⁻¹ | 30.000 ± 10% | 30.000 ± 10% | 30.000 ± 10% |
| Type motor / Tipo di motore | | AM-310 | AM-310 | AM-310 |
| Power / Potenza | W | 108 | 108 | 108 |
| Air pressure / Pressione aria | bar | max. 6 (max. 90 Psi) | max. 6 (max. 90 Psi) | max. 6 (max. 90 Psi) |
| Air consumption / Consumo aria | NI/min | 226 | 226 | 226 |
| Output RPM / N° Giri in uscita | min ⁻¹ | 11.230 ± 10% | 20.000 ± 10% | 22.000 ± 10% |
| Rt. reduction / Rt. in riduzione | | 1/2,67 | 1/1,5 | 3/4 |
| Weight / Peso | Kg | 4 | 4 | 4 |



Collet

RA-100 | mm | CH8: Ø0,8 Ø3 every 0,1 and Ø2,35 - Ø3,175

RA-200 | mm | CH8: Ø0,8 Ø3 every 0,1 and Ø2,35 - Ø3,175

IC-300 | mm | CH8: Ø0,8 Ø3 every 0,1 and Ø2,35 - Ø3,175



Spindle Runout

Spindle accuracy
Precisione del Mandrino | 0,002 mm
0,00008 inch.



Coolant Option

Consentito usare refrigerante esterno durante la lavorazione.
It is possible to use external coolant during the machining.



È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa

It is strictly forbidden to rotate the machine spindle as it may cause damage to the head

| Shank / Cono | DIN 69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|------------------|--------------|--------|--------------|--------|--------------|--------|-----------|--------|-----------|
| Size / Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80-(110*) | 80-110 | 65-80-(110*) | 80-110 | 65-80-(110*) | 80-110 | 65-80-110 | 80-110 | 65-80-110 |
| S | 35 | 35 | 35 | 41 | 42 | 42 | 38 | 40 | 40 |

*optional

Disponibile anche senza flangia.
Also available without flange.



| Technical Data / Dati Tecnici | | RAX-271E |
|----------------------------------|-------------------|----------------------|
| RPM max. / Max. Velocità | min ⁻¹ | 18.000 ± 10% |
| Type motor / Tipo di motore | | AM-3020 |
| Power / Potenza / Leistung | W | 125 |
| Air pressure / Pressione aria | bar | max. 6 (max. 90 Psi) |
| Air consumption / Consumo aria | NI/min | 178 |
| Output RPM / N° Giri in uscita | min ⁻¹ | 12.000 |
| Rt. reduction / Rt. in riduzione | | 1/1,5 |
| Weight / Peso | Kg | 4 |



RAX-271 | mm | CHK: Ø 0,5
max 6mm every 0,1



Spindle Runout

Spindle accuracy
Precisione del Mandrino | 0,002 mm
0,00008 inch.



Coolant Option

Consentito usare refrigerante esterno durante la lavorazione.
It is possible to use external coolant during the machining.



È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa

It is strictly forbidden to rotate the machine spindle as it may cause damage to the head

| Shank / Cono | DIN 69871 | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|------------------|--------------|--------|--------------|--------|--------------|--------|-----------|--------|-----------|
| Size / Grandezza | 40 | 50 | 40 | 50 | 63-80 | 100 | C5-C6 | C8 | 50-63 |
| I | 65-80-(110*) | 80-110 | 65-80-(110*) | 80-110 | 65-80-(110*) | 80-110 | 65-80-110 | 80-110 | 65-80-110 |
| S | 35 | 35 | 35 | 41 | 42 | 45 | 38 | 40 | 40 |

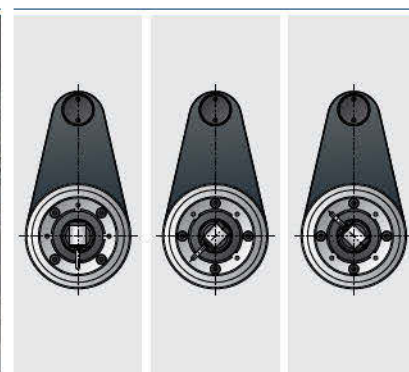
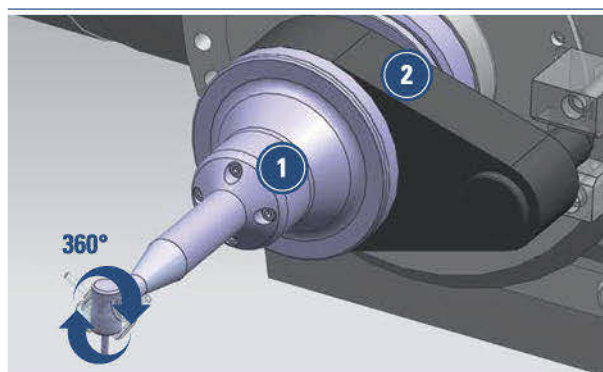
*optional

TURBOFLEX CON FLANGIA INDEXATA TURBOFLEX WITH INDEXING SYSTEM

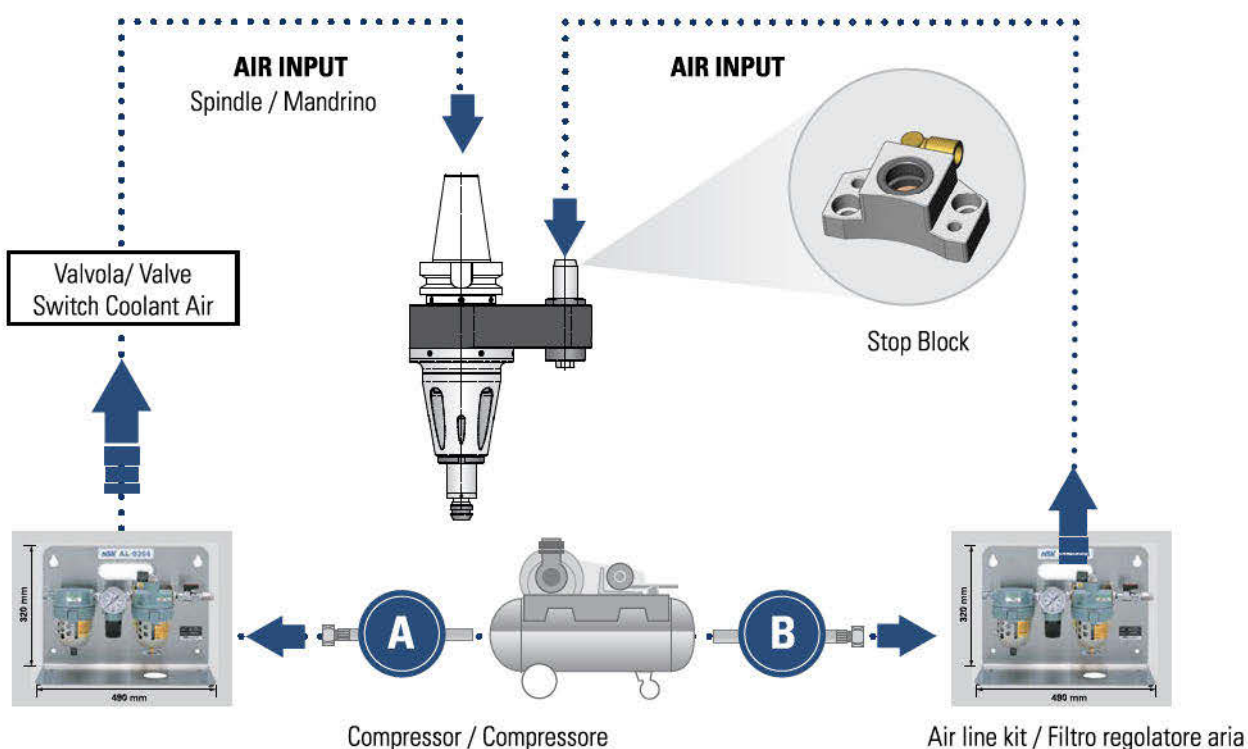
The cutting tool can be positioned over 360 degrees thanks to the indexing of the C axis of the machine while the rotation is given by the air motor mounted inside the head.

Il mandrino può essere posizionato su 360° grazie all'indexaggio dell'asse C della macchina, mentre la rotazione è assicurata dalla presenza del motore ad aria.

- 1 This portion rotates.
Questa parte ruota.
 - 2 This portion remains fixed.
Questa parte resta ferma.
 - 3 Air input from the machine spindle gives the rotation to the motor inside of the body.
L'aria garantisce la rotazione del motore nel corpo.
- The indexing system allows to self-position the tool without additional positioning.
Il sistema di indexaggio permette il posizionamento del mandrino su 360°.



COME FUNZIONA TURBOFLEX HOW IT WORKS



It is strictly forbidden to rotate the machine spindle as it may cause damage to the head
È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa

LINEA HIGH-SPEED - LEONARDO SYSTEM

Leonardo è un elettromandrino con cambio utensile automatico che viene montato sul mandrino macchina tramite Stop Block – da cui prende l'alimentazione – per poi essere scambiato automaticamente nel magazzino utensile. I grossi vantaggi sono la possibilità di regolare la velocità fino a 60.000RPM, l'integrazione completa con la macchina.

Leonardo System is an electrospindle with automatic tool change suitable to be mounted on the machine spindle with a Stop Block connected to the controller unit and power supply. Leonardo can be easily exchanged by the toolchanger and the main advantages are the possibility to adjust the RPM up to 60.000RPM and the interface with the machine.



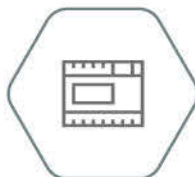
Velocità fino a
80.000 RPM regolabile
Adjustable speed
up to 80.000RPM



Tassello con contatti elettrici completamente
protetti da trucioli – Inclusi 10 mt di cavo
Stop Block with electric contacts completely
protected from chips 10 mt cable included



Completamente integrato alla
macchina utensile tramite codici M
Completely integrated with the
machine tool with M code



Centralina Nakanishi con regolazione di giri e
sensore per arresto mandrino
Nakanishi controller unit with adjustable RPM
and sensor to stop machine spindle

ELETTROMANDRINO "LEONARDO" SYSTEM
ELECTROSPINDLE "LEONARDO" SYSTEM

ATC 40



Power
Potenza
350 Watt



RPM
Velocità
60.000/80.000 min⁻¹



Weight
Peso
4,8 kg



Collet
Pinza
**6 mm CHK
ø0,8- ø6 mm**

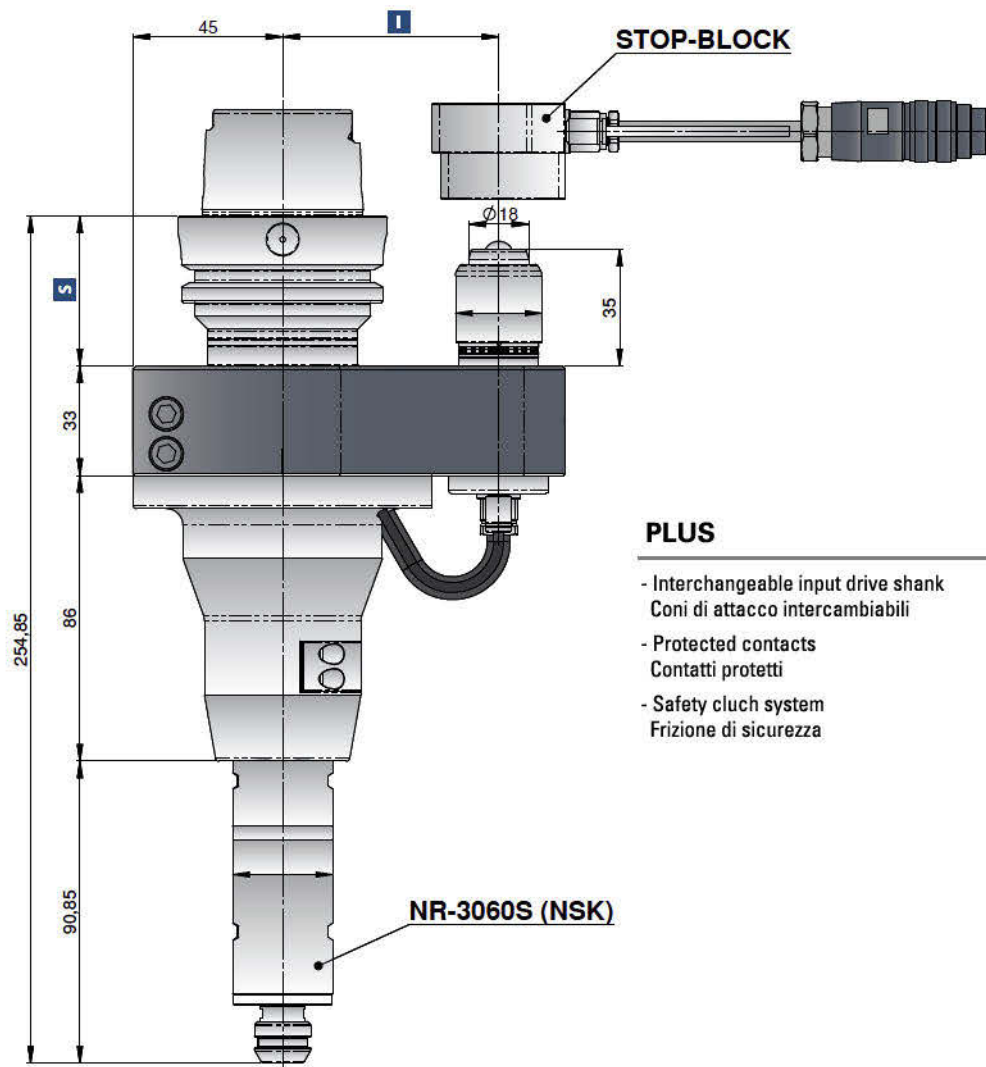


Spindle accuracy
Precisione
0,002 mm



Controller unit
Centralina
ISPEED5

* STANDARD EQUIPMENT INCLUDES:



PLUS

- Interchangeable input drive shank
Coni di attacco intercambiabili
- Protected contacts
Contatti protetti
- Safety clutch system
Frizione di sicurezza



It is strictly forbidden to rotate the machine spindle as it may cause damage to the head

È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa



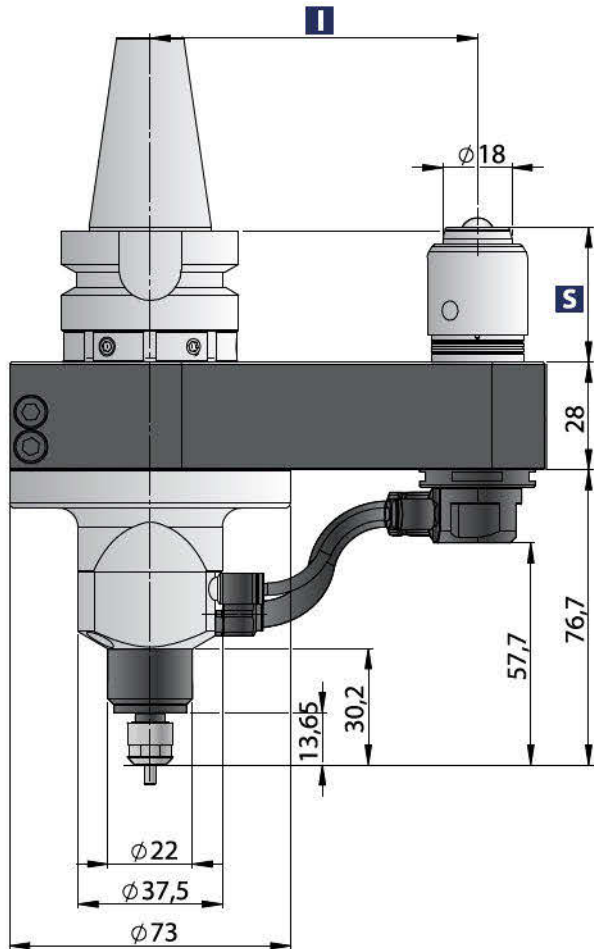
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-100 | | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 |
| S | 35 | | 42 | 42 | 45 | 38 | 40 | 40 |
| L | 160 | | 166 | 167 | 170 | 163 | 165 | 165 |

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

ELETTROMANDRINO "LEONARDO" SYSTEM
ELECTROSPINDLE "LEONARDO" SYSTEM

ATC 30



PLUS

- Interchangeable input drive shank
Coni di attacco intercambiabili
- Protected contacts
Contatti protetti
- Safety clutch system
Frizione di sicurezza



Power
Potenza
130 Watt



RPM up to
Velocità fino a
60.000/80.000 min⁻¹



Weight
Peso
3 kg



Collet
Pinza
**4 mm CHA
ø0,8 - ø4 mm**



Spindle accuracy
Precisione
1 μ



Controller unit
Centralina
ISPEED3

* STANDARD EQUIPMENT INCLUDES:



It is strictly forbidden to rotate the machine spindle as it may cause damage to the head
È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-100 | | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 |
| S | 35 | | 42 | 42 | 45 | 38 | 40 | 40 |
| L | 160 | | 166 | 167 | 170 | 163 | 165 | 165 |

*optional

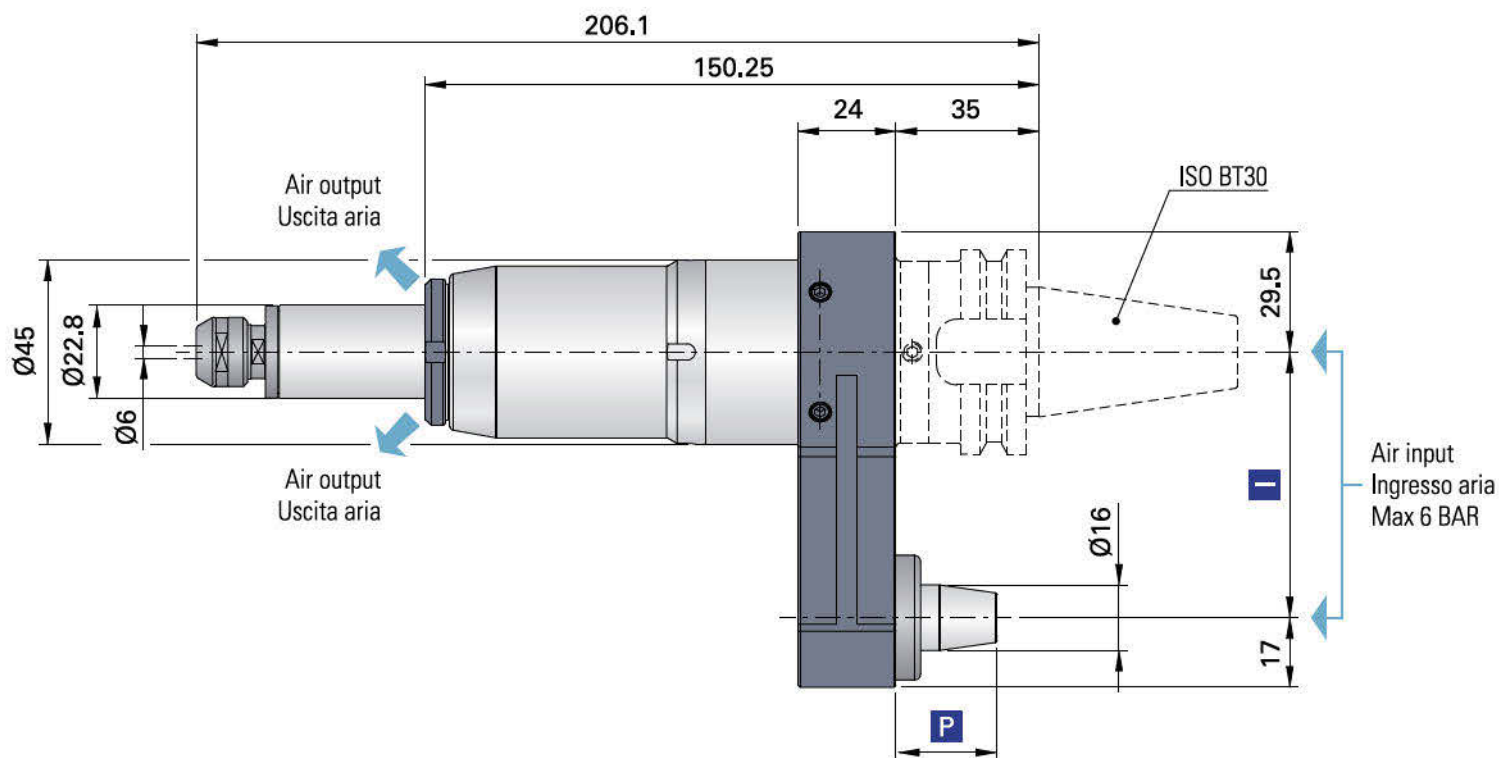
Non interchangeable input drive shank/ Coni di attacco non intercambiabili

TURBODRILL NR-2351

Driven through air motor / Azionamento con motore ad aria



Machine spindle must not rotate
Il mandrino macchina non deve assolutamente girare



Possibility of order TURBODRILL without flange and pin with air through spindle
Possibilità di avere TURBODRILL senza flangia e perno con presa aria

Per other applications with air motor with ISO/BT 40-50 please refer to Slimline Catalogue

Per le soluzioni ad aria con coni ISO/BT 40-50 fare riferimento al catalogo Slimline

Air line kit / Filtro regolatore aria



STANDARD EQUIPMENT INCLUDES:

- NAKANISHI Kit / Angle head / Collet Ø 3 mm / Wrenches / Instruction book / Case
- Testa / Manipolo NAKANISHI / Pinza Ø 3 mm / Chiavi di servizio / Libro istruzioni / Bauletto

Performance / Prestazioni

Technical Data / Dati Tecnici

| | | |
|----------------------------------|-------------------|----------------------|
| RPM max. / Max. Velocità | min ⁻¹ | 58.000 |
| Type motor / Tipo di motore | | AM-600 |
| Type spindle / Tipo di manipolo | | NR-2351 |
| Power / Potenza | W | 76 |
| Air pressure / Pressione Aria | Bar | max. 6 (max. 90 Psi) |
| Air consumption / consumo d'aria | NI/min | 160 |
| Weight / Peso | Kg | 2 |



CHK Ø 0,5 - max 6mm
every/ogni 0,1 mm

Collet
Pinza



Coolant option
Refrigerante opzionale

*It is possible to use coolant external during the machining.
Consentito usare refrigerante esterno durante la lavorazione.*

STOP BLOCK

PER MACCHINE BT-30
FOR BT-30 MACHINES

FANUC ROBODRILL



59516006

| | |
|---|----|
| I | 65 |
| P | 24 |

BROTHER S2D



59516003

| | |
|---|----|
| I | 80 |
| P | 24 |

BROTHER TC-32



59516008

| | |
|---|----|
| I | 80 |
| P | 30 |

BROTHER R450X1



59516009

| | |
|---|----|
| I | 50 |
| P | 24 |

BROTHER S500 S700 S1000



59516010

| | |
|---|-------|
| I | 80 |
| P | 25,75 |

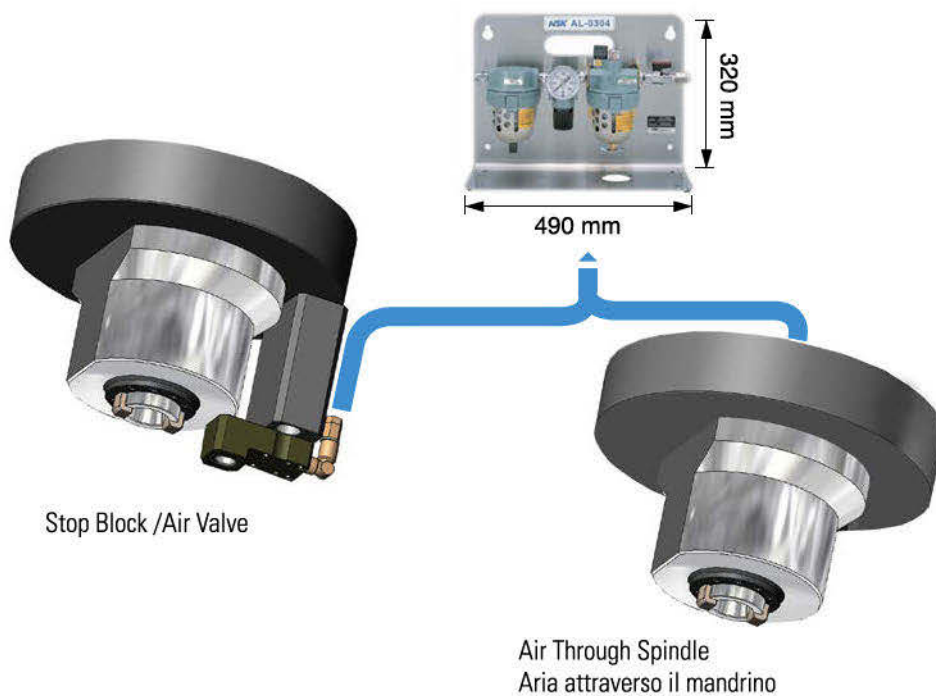
DMG MORI MILLTAP 700



59516007

| | |
|---|----|
| I | 65 |
| P | 24 |

AIR LINE KIT For Turbodrill only ref. pag.6 / Solo per Turbodrill, rif. Pag.6

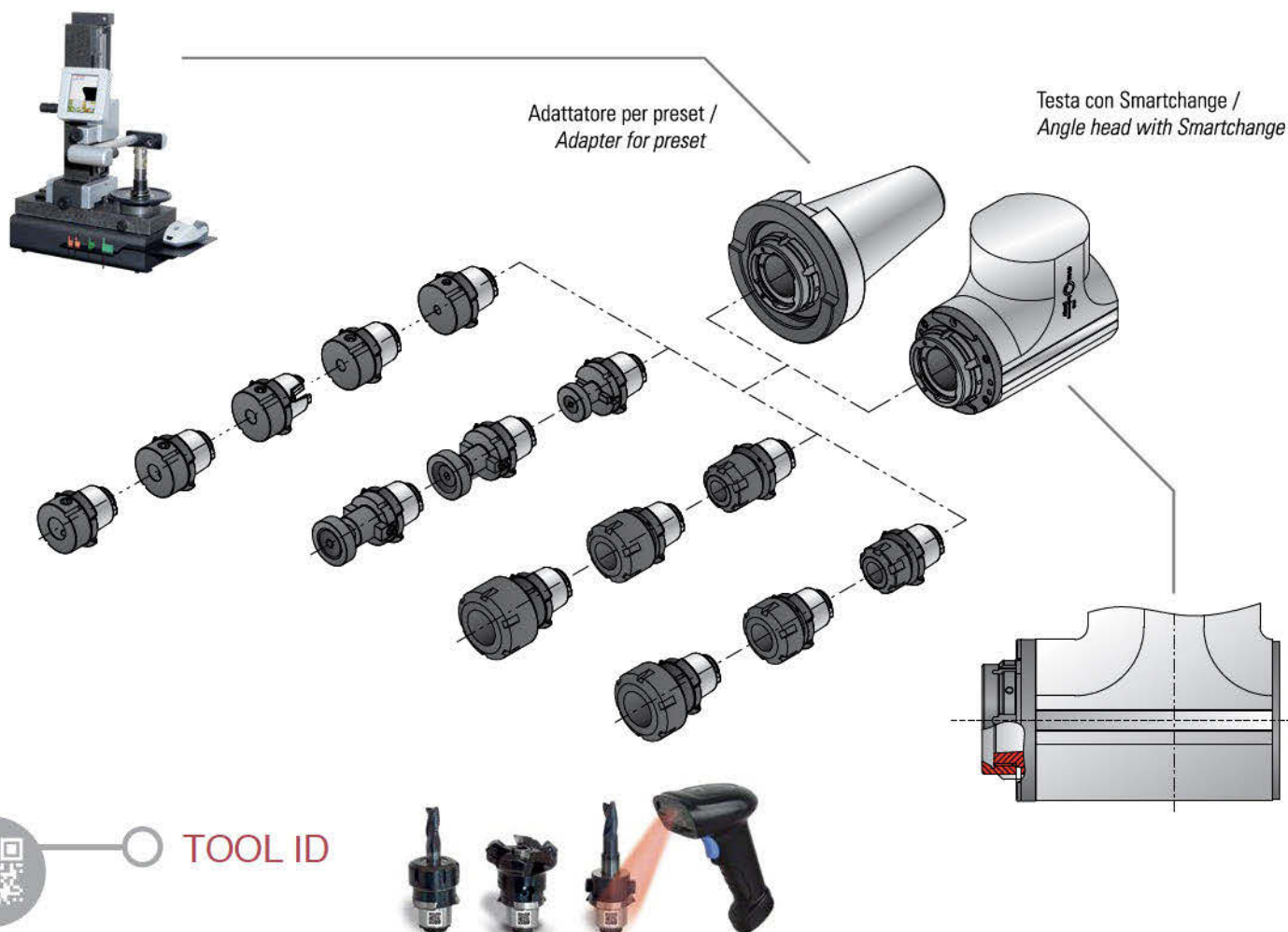






LINEA Smart Change

Smart Change è un sistema facile e innovativo, compatto nel design e veloce da utilizzare, che, grazie ad un triplo contatto, riesce a garantire una maggior rigidità e permette una miglior precisione durante la lavorazione. La modularità del sistema dà quindi la possibilità all'utente di poter usufruire di un'ampia gamma di adattatori di diversa dimensione che possono essere prelevati fuori macchina in tempo mascherato, aumentando così la produttività e diminuendo tempi e costi di attrezzamento macchina. Il sistema, già operativo su gran parte dei motorizzati, è stato adeguato anche per le teste angolari.



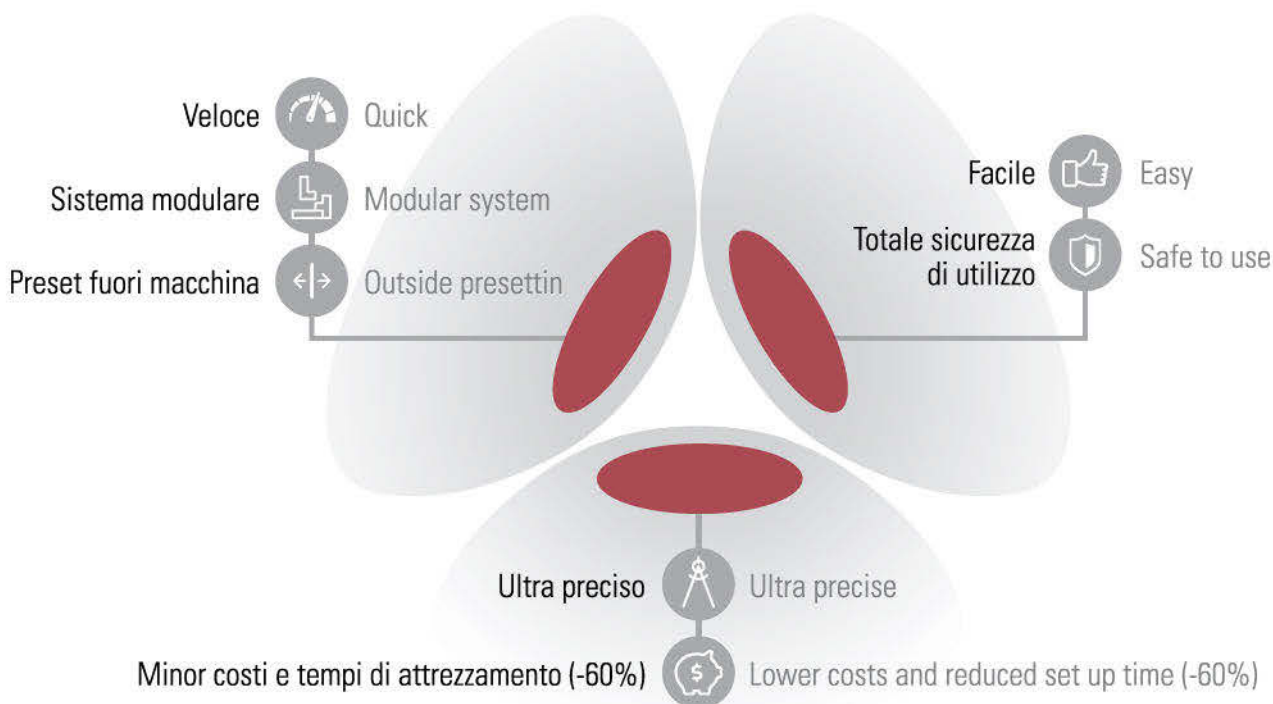
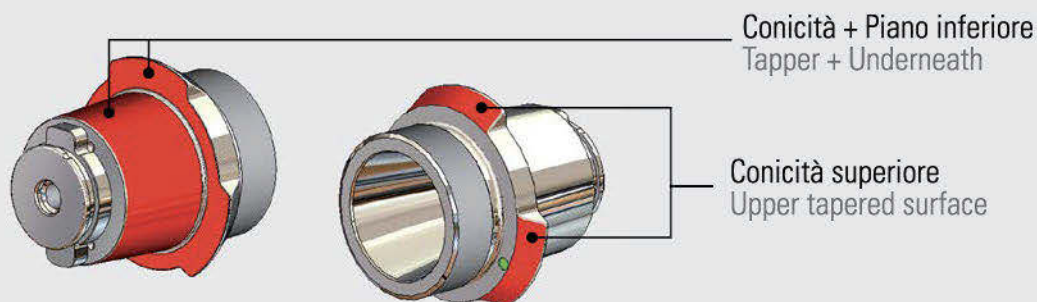
Le cartucce Smart Change sono provviste di DATAMATRIX per l'identificazione e la gestione utensile in modo automatico. Il codice univoco è identificativo della cartuccia con il suo utensile.

Smart Change adapters are marked with DATAMATRIX for the automatic tool identification and management. The unique code identify the adapter a long with its cutting tool.

LINEA SMART CHANGE

PERCHÈ 3 VOLTE SMART...
WHY 3 TIMES SMART...

Il sistema Smart Change sfrutta ben 3 superfici di contatto per una maggior precisione e ripetibilità.
Our Smart Change system features 3 contact surfaces as shown for a higher precision and accuracy



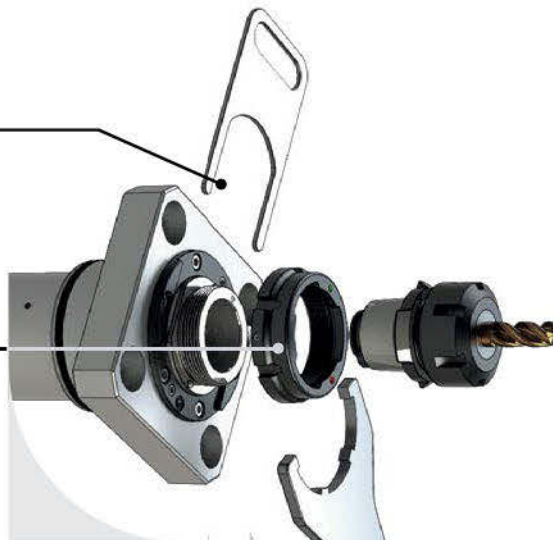
INCREMENTO DELLA PRODUTTIVITÀ
INCREASED PRODUCTIVITY

LINEA SMART CHANGE

COME È FATTO HOW IT IS MADE

● Chiave di riscontro SmartChange (permette montaggio con una sola mano)
SmartChange Wrench (one-hand handling)

● Ghiera SmartChange brevettata (fissata al corpo principale)
Patented SmartChange nut (fixed on the main body)

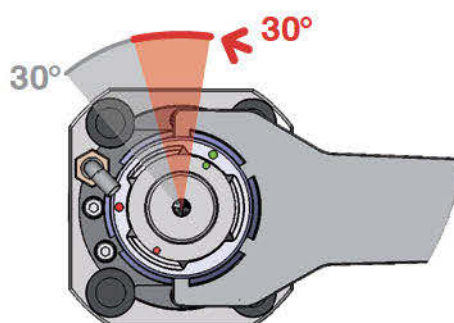


COME FUNZIONA HOW IT WORKS

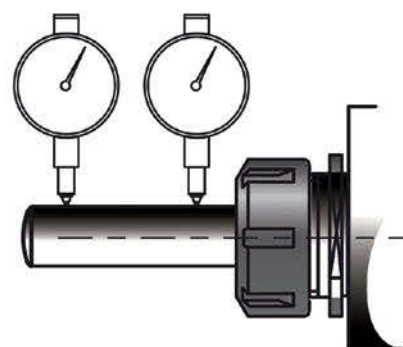
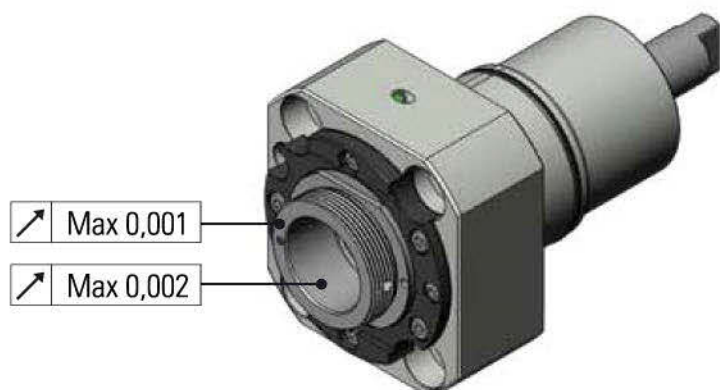
● Bloccaggio Ghiera
Clamping nut

● Sbloccaggio
Unclamping

● Estrazione
Pull out



| | | | |
|--|----------|--|--|
| Tempo massimo di sostituzione cartucce Time to change front end | 20" | Precisione con barra inserita nel mandrino Accuracy with gauge bar inserted in the collet chuck | |
| Ripetibilità / Repeatability | 0,003 mm | a 40 mm = 0,008 mm a 120 mm = 0,01 mm | at 40 mm = 0,008 mm at 120 mm = 0,01 mm |



LINEA SMART CHANGE

LA GAMMA COMPLETA THE COMPLETE SERIES



T90cn- 3,5



TCUcn - 3,5



TH90cn - 3,5



T90cn - 3,5M Aluminum



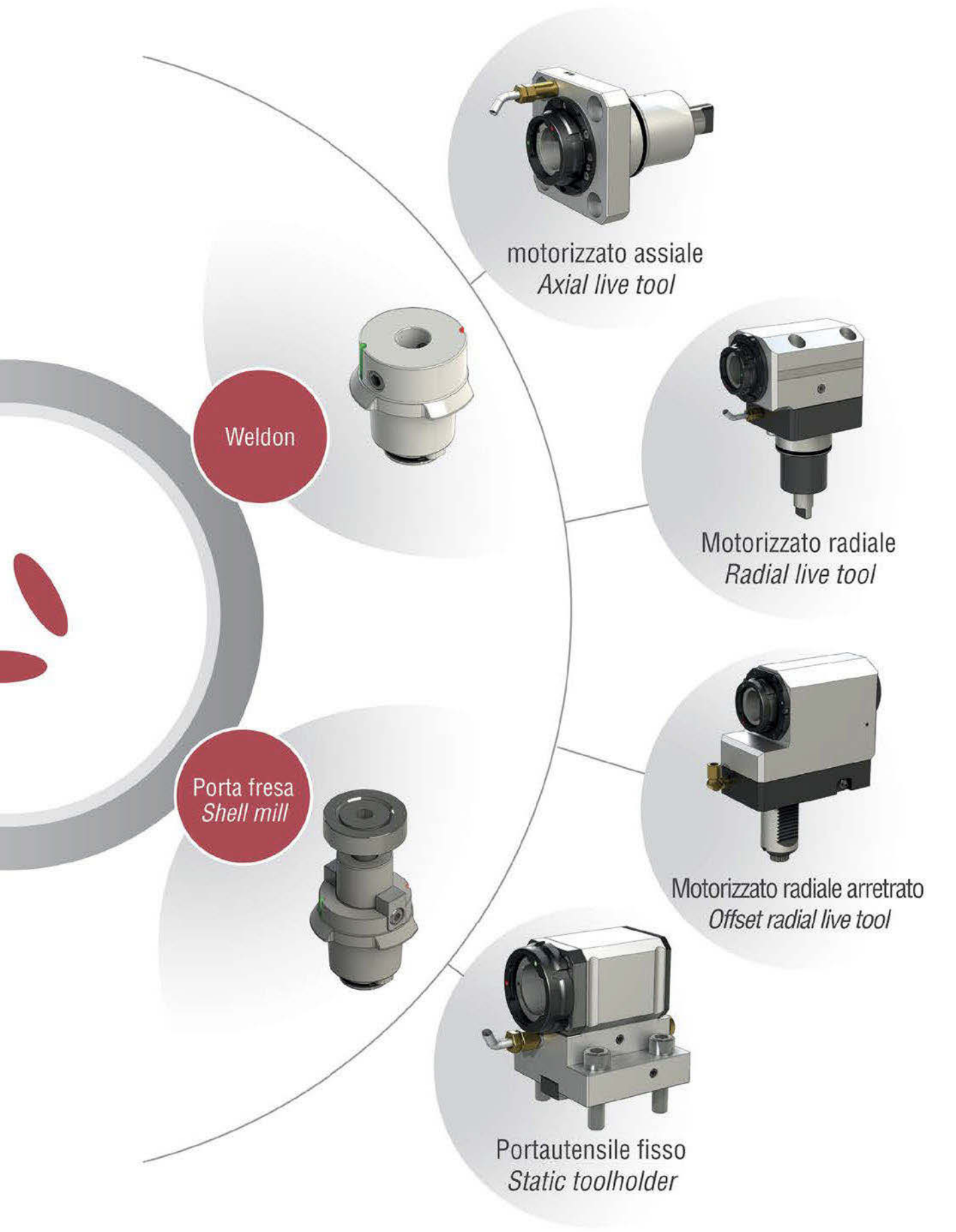
Porta pinza
Collet



Blanks

Calettamento
Shrink fit





Weldon



Porta fresa
Shell mill



motorizzato assiale
Axial live tool



Motorizzato radiale
Radial live tool



Motorizzato radiale arretrato
Offset radial live tool



Portautensile fisso
Static toolholder

T90cn-3,5 Smart Change



Ratio
Rapporto
1:1



RPM
Velocità
4000 min⁻¹



Max. axial load
Max. carico assiale
1.250 N



Torque
Momento torcente
50 Nm

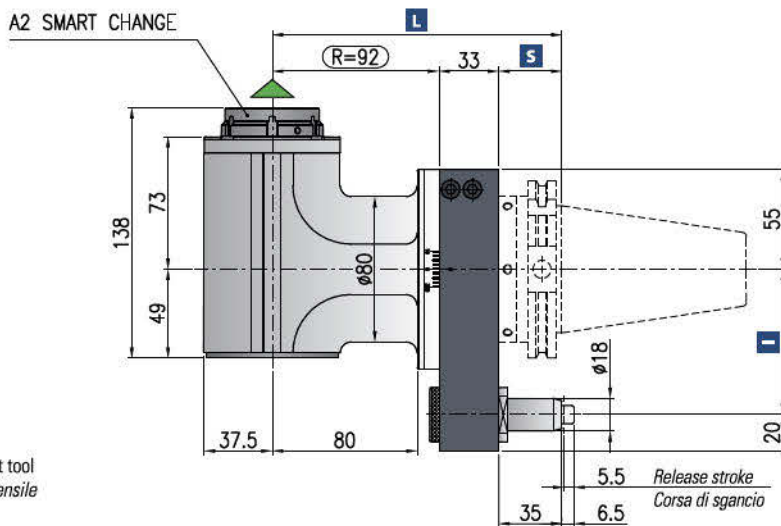


Weight
Peso
11 kg

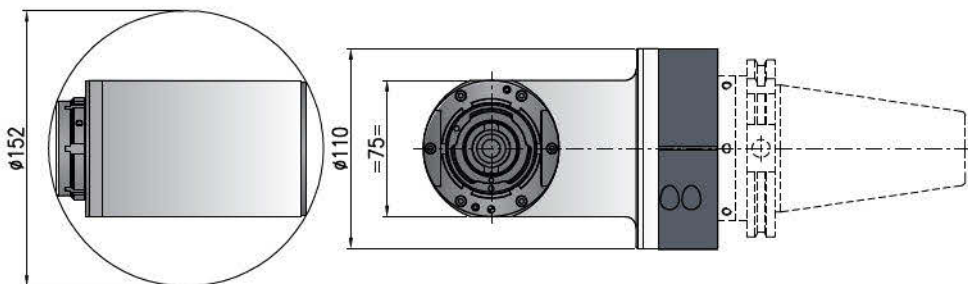


Collet
Pinza
SmartChange System

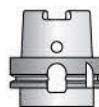
*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



▲ Direction of rotation same as machine spindle / *sensò di rotazione uguale al mandrino*



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-110 | | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 160 | | 166 | 167 | 170 | 163 | 165 | 165 |

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



bar max
12

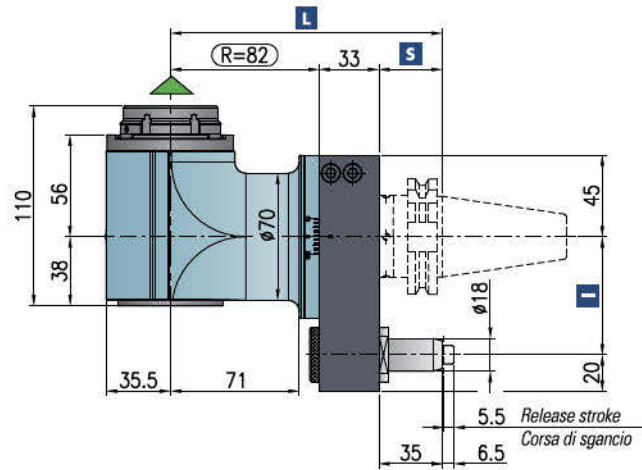
Coolant through pin and spindle
Refrigerante interno attraverso utensile



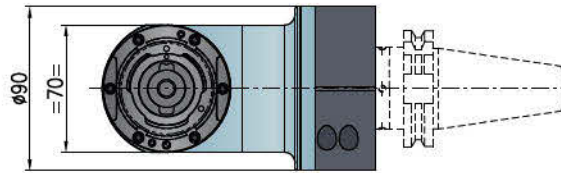
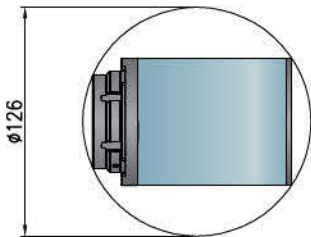
min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.

T90cn-3,5 Aluminum Smart Change



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
4000 min⁻¹



Max. axial load
Max. carico assiale
1.250 N



Torque
Momento torcente
40 Nm



Weight
Peso
5,5 kg



Collet
Pinza
Smart Change



Shank
Cono
ISO40 DIN-69871/BT-40

*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / *senso di rotazione uguale al mandrino*



| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | |
|----------------|-----------|-----|--------|-------|-----|--------|--------|--------|
| Size/Grandezza | 40 | | 40 | 63-80 | 100 | C6 | | 63 |
| I | 80-110 | | 80-110 | 110 | 80 | 80-110 | 80-110 | 80-110 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 150 | | 156 | 157 | 160 | 153 | 157 | 155 |

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



bar max
40

Coolant through pin
Refrigerante attraverso il perno



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

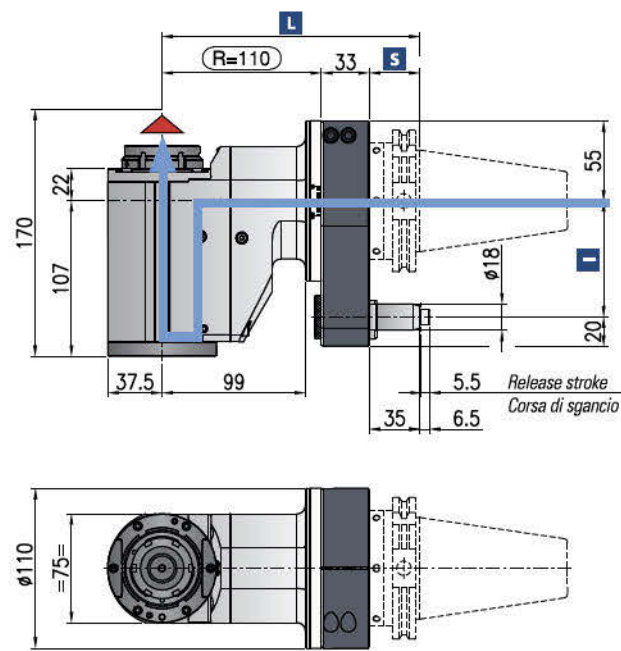
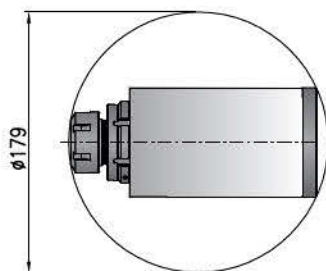
TH90cn-3,5 Smart Change

-  Ratio
Rapporto
1:1
-  RPM
Velocità
8.000
-  RPM Dry Running
Funz. a secco
4.000 min⁻¹
-  Max. axial load
Max. carico assiale
1.250 N
-  Torque
Momento torcente
50 Nm
-  Weight
Peso
12 kg
-  Collet
Pinza
A2 Smart Change


* STANDARD EQUIPMENT INCLUDES:

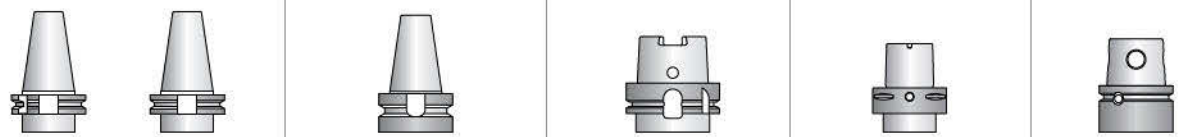


Minimum diameter without tool
Diametro minimo senza utensile



Dry running also possible / Rotazione a secco possibile

 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



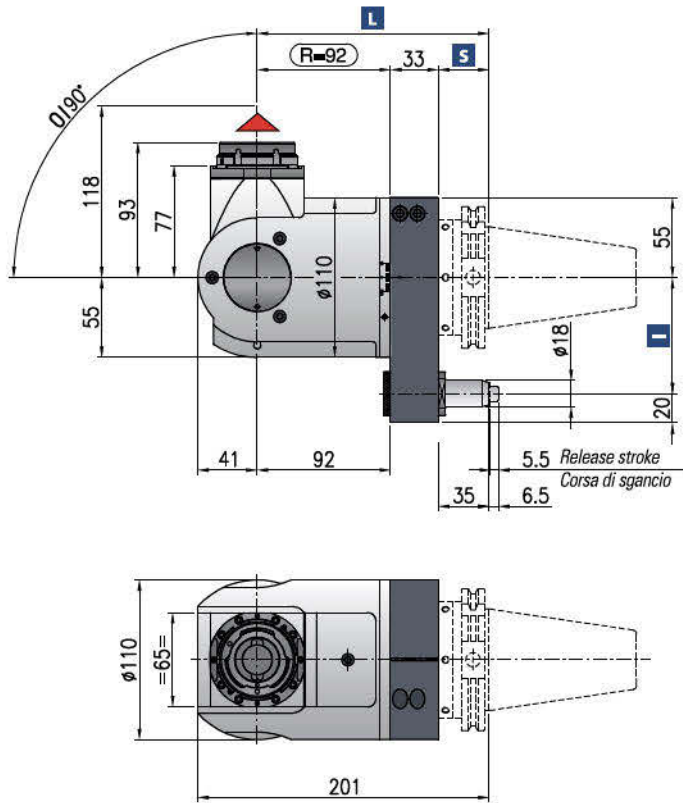
| Shank/Cono | DIN-69871 | CAT | MAS-BT | HSK | | CAPTO | | KM |
|----------------|-----------|-----|--------|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | 50 | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-100 | | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 |
| S | 35 | | 41 | 42 | 45 | 38 | 40 | 40 |
| L | 178 | | 184 | 185 | 188 | 181 | 183 | 183 |

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione

TCUcn-3,5 Smart Change

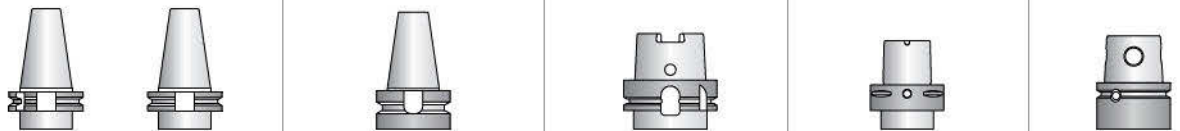


- Ratio
Rapporto
1:1
- RPM
Velocità
4000 min⁻¹
- Max. axial load
Max. carico assiale
715 N
- Torque
Momento torcente
32 Nm
- Weight
Peso
13 kg
- Collet
Pinza
A2 Smart Change

* STANDARD EQUIPMENT INCLUDES:



Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino



| Shank/Cono | DIN-69871 | | CAT | MAS-BT | | HSK | | CAPTO | | KM |
|----------------|-----------|--|-----|--------|--|--------|--------|--------|--------|--------|
| Size/Grandezza | 50 | | | 50 | | 63-80 | 100 | C6 | C8 | 63 |
| I | 80-100 | | | 80-100 | | 80-100 | 80-100 | 80-100 | 80-100 | 80-100 |
| S | 35 | | | 41 | | 42 | 45 | 38 | 40 | 40 |
| L | 160 | | | 166 | | 167 | 170 | 163 | 165 | 165 |

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione



bar max
12


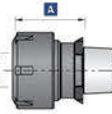

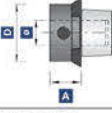
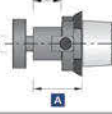

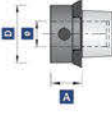


Coolant through pin
Adduzione refrigerante attraverso il perno



min⁻¹
6.000

High speed optional RPM max.
Opzione alta velocità RPM max.

DATI TECNICI TECHNICAL DATA

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------------|------|------|-------------------------|-------|-------|------------------------|------|------|--|------|------|------------------------|------|------|------------------------|------|----|------------------------|----|----|---|---|
|  PORTAPINZA INCASSATO IN-BUILT COLLET | ER-20A (Ø1/13mm) | | | ER-25A (Ø1/16mm) | | | | | | | | | | | | | | | | | | | |
| | Ø | A | D | Ø | A | D | | | | | | | | | | | | | | | | | |
| | 1/13 | 21.5 | 36.8 | 1/16 | 32.4 | 41 | | | | | | | | | | | | | | | | | |
|  PORTAPINZA / COLLET | ER-20 (Ø1/13mm) | | | ER-25 (Ø1/17mm) | | | ER-32 (Ø2/22mm) | | |  PORTAPINZA / COLLET | | | ERC20 (Ø1/13mm) | | | ERC25 (Ø1/16mm) | | | ERC32 (Ø2/20mm) | | | | |
| | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | | |
| | 1/13 | 28.5 | 34 | 1/16 | 30.5 | 42 | 2/20 | 41.5 | 50 | 1/13 | 33.5 | 34 | 1/16 | 35.5 | 42 | 2/20 | 46.5 | 50 | | | | | |
|  WELDON | (Ø6) | | | (Ø5) | | | (Ø10) | | | (Ø12) | | | (Ø16) | | | | | | | | | | |
| | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | | |
| | 6 | 20 | 36.8 | 8 | 20 | 36.8 | 10 | 20 | 36.8 | 12 | 20 | 36.8 | 16 | 20 | 36.8 | | | | | | | | |
|  PORTAFRESA / SHELL MILL | (Ø13) | | | (Ø16) | | | (Ø22) | | | | | | | | | | | | | | | | |
| | Ø | A | H | Ø | A | H | Ø | A | H | | | | | | | | | | | | | | |
| | 13 | 24.5 | 13 | 16 | 30.5 | 17 | 22 | 32.5 | 19 | | | | | | | | | | | | | | |
|  CALETTAMENTO / SHRINK FIT | (Ø3mm) | | | (Ø4mm) | | | (Ø6mm) | | | (Ø8mm) | | | (Ø10mm) | | | (Ø12) | | | (Ø16) | | | | |
| | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A |
| | 3 | 40 | 13 | 4 | 40 | 15 | 6 | 40 | 21 | 8 | 40 | 21 | 10 | 40 | 24 | 12 | 40 | 24 | 16 | 45 | 27 | | |
|  WELDON POLLICI / INCH | (Ø1/4") | | | (Ø3/8") | | | ER-20 (Ø1/2") | | | (Ø5/8") | | | (Ø3/4") | | | | | | | | | | |
| | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | Ø | A | D | | |
| | 1/4" | 20 | 36,8 | 3/8" | 20 | 36,8 | 1/2" | 20 | 36,8 | 5/8" | 20 | 36,8 | 3/4" | 20 | 36,8 | | | | | | | | |
|  PORTAFRESA POLLICI SHELL MILL INCH | (Ø3/4") | | | (Ø1") | | | | | | | | | | | | | | | | | | | |
| | Ø | A | H | Ø | A | H | | | | | | | | | | | | | | | | | |
| | 3/4" | 31 | 17,5 | 1" | 30,77 | 17,27 | | | | | | | | | | | | | | | | | |
|  BLANK | BLANK | | | | | | | | | | | | | | | | | | | | | | |
| | Ø | A | D | | | | | | | | | | | | | | | | | | | | |
| | / | 81 | 52 | | | | | | | | | | | | | | | | | | | | |



Accessori Accessories



Adattatore preset ISO/BT
Preset adapter ISO/BT



Adattatore preset HSK
Preset adapter HSK



Tool boy



Chiavi di servizio
Wrenches

PRESETTAGGIO FUORI MACCHINA OUTSIDE PRESETTING

Una volta montato l'utensile è possibile presetare la cartuccia utilizzando l'apposito adattatore.

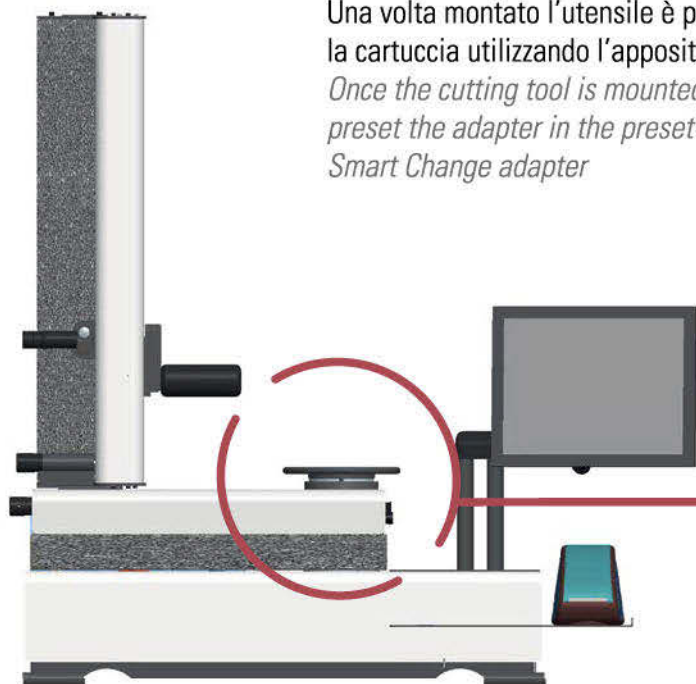
Once the cutting tool is mounted, it is possible to preset the adapter in the presetter thanks to the Smart Change adapter

Adattatori disponibili

ISO –BT 40 / 50 –HSK 63 / 100

Available adapters

ISO –BT 40 / 50 –HSK 63 / 100



Ciò permette di ridurre i tempi e i costi legati all'attrezzamento macchina che avverrà in tempo mascherato, aumentando notevolmente la produttività.

This system allows to reduce time and costs for the set up with tremendous increase in the productivity.

Grazie alla nuova applicazione è possibile presetare tutta la testa con una cartuccia montata. Una particolare attrezzatura su cui è fissato lo Stop Block permette di montare l'intera testa nel preset e rilevare le misure necessarie.

Thanks to the new application it is possible to preset the complete head with the adapter mounted. A special fixture with the Stop Block allows to install the head into the presetter to measure the needed dimensions.

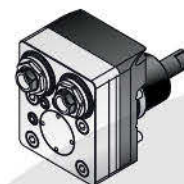
Immagine del presettaggio di una testa angolare regolabile: il preset misura l'angolo, dopo aver identificato i punti destro e sinistro, calcola in automatico il centro di rotazione dell'utensile e il suo diametro.

The picture shows the preset of an adjustable angle head: the preset measures the angle, after having identified the right and left points, it calculates automatically the rotations centre of the tool and its diameter.

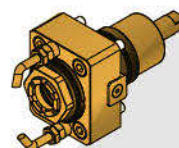


SCEGLI IL MODELLO DI PORTA UTENSILE
CHOOSE THE TYPE OF TOOLHOLDER

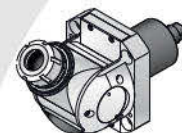
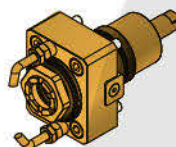
0120
**ASSIALE
2 USCITE**
STRAIGHT DUAL OUTPUT



010C
**ASSIALE
REFRIGERANTE**
STRAIGHT + COOLANT

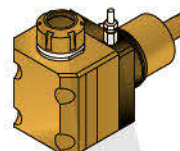


0100
ASSIALE
STRAIGHT

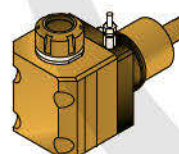


0500
ORIENTABILE
ADJUSTABLE

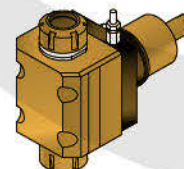
0200
RADIALE
90° TOOL



020C
**RADIALE
REFRIGERANTE**
90° TOOL + COOLANT



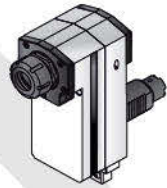
0300
**RADIALE
2 USCITE
CONTRAPPOSTE**
90° TOOL DUAL OPPOSITE OUTPUT



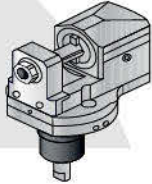
0220
**RADIALE 2 USCITE
FRONTALE**
90° TOOL DUAL FRONT OUTPUT



010S
ASSIALE
MOLTIPLICATO
STRAIGHT SPEEDER



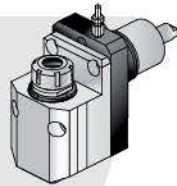
0400
ASSIALE
DISASSATO
STRAIGHT OFFSET



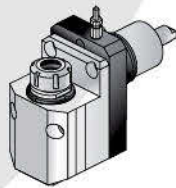
0900
PORTACREATORE
HOBGING HOLDER



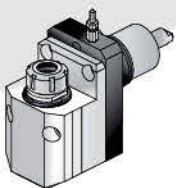
040C
ASSIALE
DISASSATO
REFRIGERANTE
STRAIGHT OFFSET + COOLANT



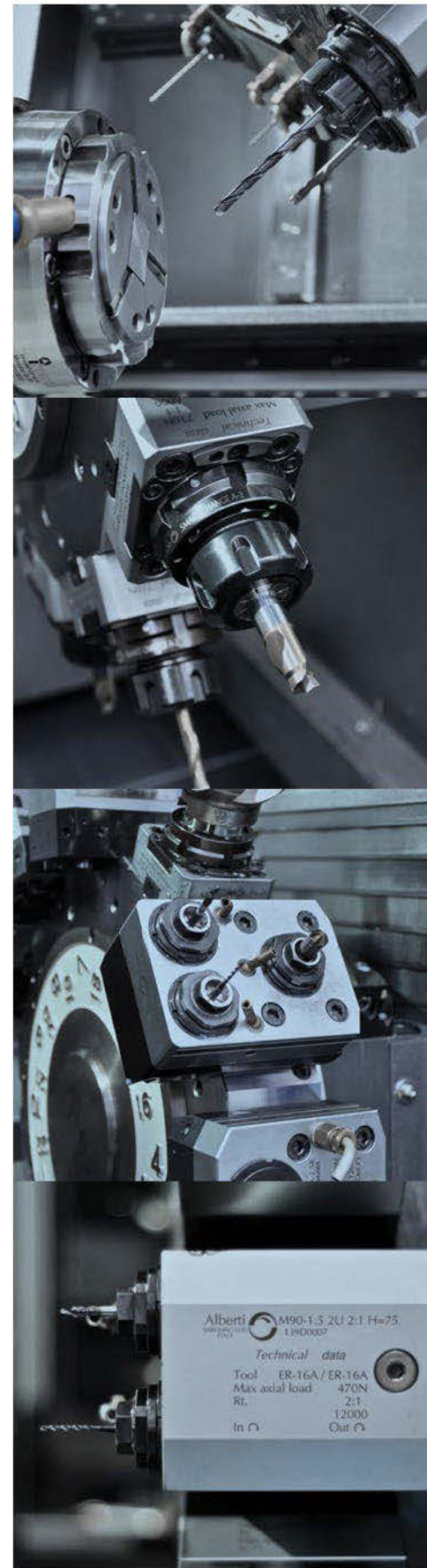
070S
RADIALE
MOLTIPLICATO
90° TOOL SPEEDER



070C
RADIALE
ARRETRATO
REFRIGERATO
90° TOOL OFFSET + COOLANT



0700
RADIALE
ARRETRATO
90° TOOL OFFSET



SCEGLI IL MODELLO DI TORNIO
CHOOSE THE TYPE OF LATHE



Tooling

DMG MORI



Tooling

MAZAK



Tooling

NAKAMURA



Tooling

OKUMA



Tooling

DOOSAN



Tooling

GOODWAY



Tooling

FEELER



Tooling

SAMSUNG



Tooling

HYUNDAI



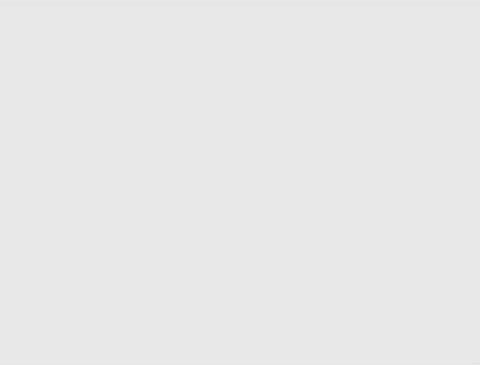
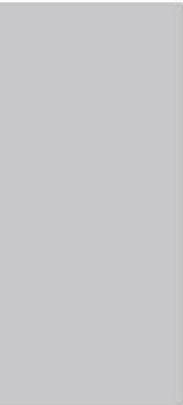
Tooling

HWACHEON

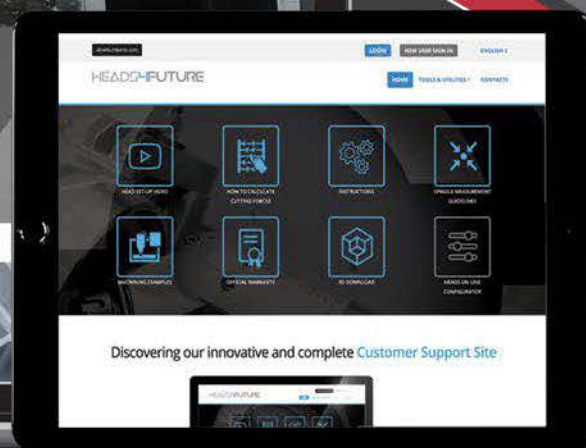
ACCESSORI ACCESSORIES



| | GHIERA <i>Clamping nut</i> | PINZA <i>Collet</i> | | DISCHETTO DI TENUTA <i>Sealing disk</i> | | CHIAVE PER GHIERA <i>Pin wrench</i> | CHIAVE DI CONTRASTO <i>Spanner</i> |
|--------------------|-------------------------------|--------------------------|------------------------|--|------------------------|---|--|
| | | Ø Serraggio min max | Incremento increase | Ø Serraggio min max | Incremento increase | | |
| ER-8 Serie 0.4 | ER-8 M | 0,5 - 5,0 | 0,5 mm | | | 30930800 | 40941700 |
| | 33212080 | | | | | | |
| ER-11 Serie 0.5 | UM/ER-11 | 0,5 - 7,0 | 0,5 mm | | | 40941700 | 40927000 |
| | 33213110 | | | | | | |
| ER-16 Serie 1.5 | ER-16A | 0,5 - 10,0 | 0,5 mm | 2,5 - 10,0 | 0,5 mm | 40941700 | 40932000 |
| | 43211161 | | | | | | |
| ER-20 TCU-1.5 | UM/ER 20 | 0,5 - 13,0 | 0,5 mm | 2,5 - 13,0 | 0,5 mm | 40930000 | 40932000 |
| | 33214200 | | | | | | |
| ER-25 Serie 2.5 | UM/ER 25 | 0,5 - 17,0 | 0,5 mm | | | 40932500 | 40939000 |
| | 33214250 | | | | | | |
| | IC/ER 25 | 0,5 - 17,0 | 0,5 mm | 2,5 - 16,0 | 0,5 mm | 40932500 | 40939000 |
| | 33215250 | | | | | | |
| ER-32 Serie 3.5 | UM/ER 32 | 1,0 - 22,0 | 0,5 mm | | | 40933200 | 40946000 |
| | 33214320 | | | | | | |
| | IC/ER 32 | 1,0 - 22,0 | 0,5 mm | 2,5 - 20,0 | 0,5 mm | 40933200 | 40946000 |
| | 33215320 | | | | | | |
| ER-40 Serie 4.5 | UM/ER 40 | 2,0 - 30,0 | 0,5 mm | | | 30934000 | 40959000 |
| | 33214400 | | | | | | |
| | IC/ER 40 | 2,0 - 30,0 | 0,5 mm | 2,5 - 26,0 | 0,5 mm | 30934000 | 40959000 |
| | 33215400 | | | | | | |







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Update database with examples of machining, working details and cutting data
- **File multimediali (disegni 3D, libretti istruzione e video tutorial)**
Multimedia files (3D drawings instruction books and videos)



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