

CATALOGO GENERALE

General Catalogue

2020

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



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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 elettromandri. 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.



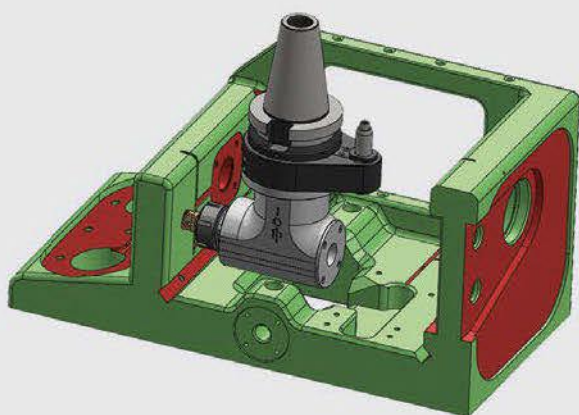
GUARNIZIONI SEALS

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

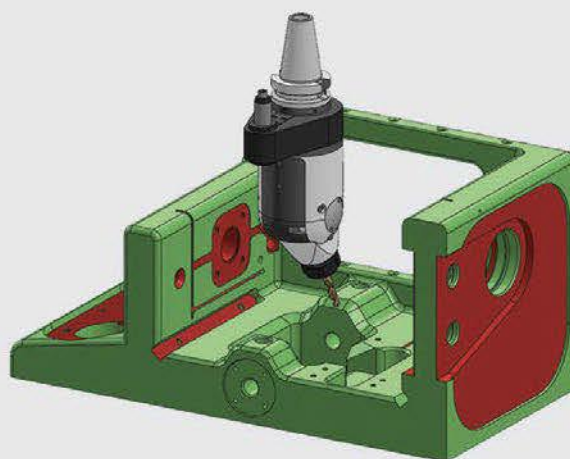
Low-friction seals made of a special composition. All studied and developed by Alberti.

ESEMPI DI LAVORAZIONI STANDARD

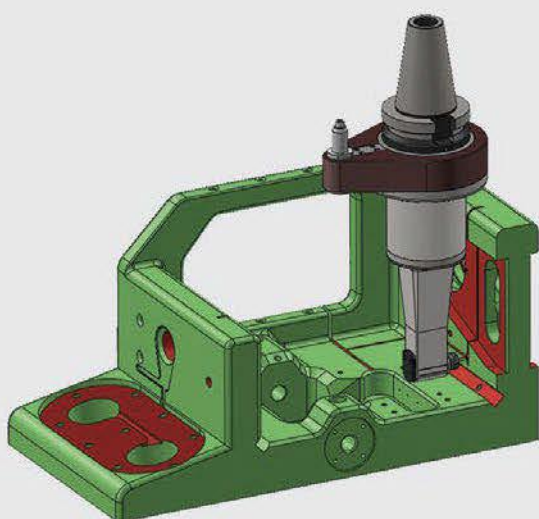
EXAMPLES OF STANDARD MACHINING



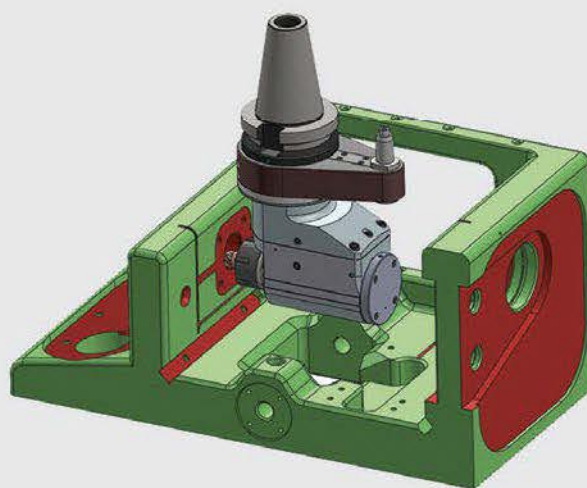
Testa a 90°
90° Head



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



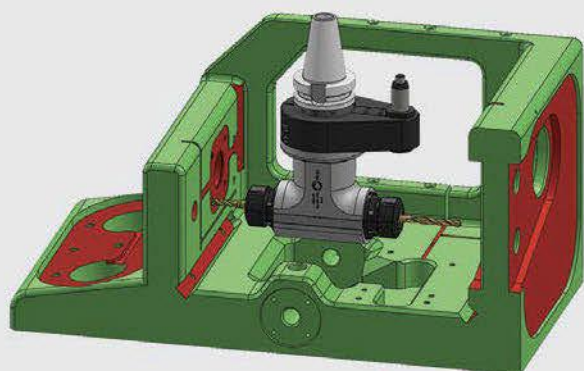
Testa a 90° prolungata
Extended length head



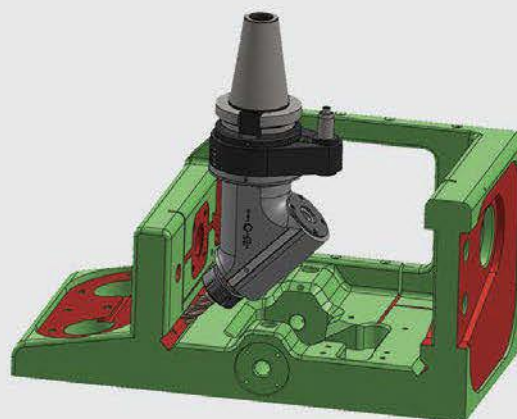
Testa con refrigerante
Head with internal coolant

ESEMPI DI LAVORAZIONI STANDARD

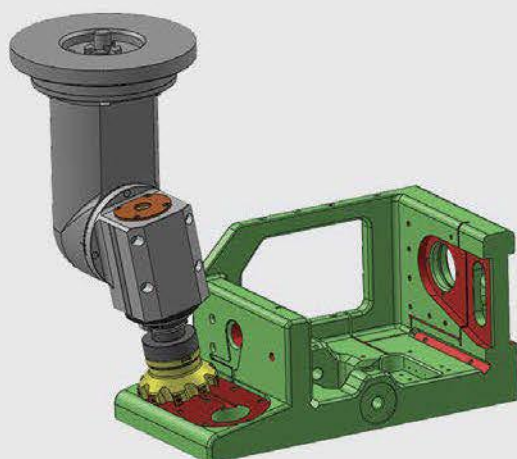
EXAMPLES OF STANDARD MACHINING



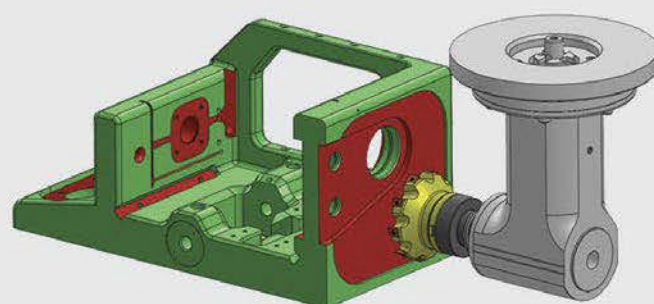
Testa con uscita doppia (180°)
Dual output head (180°)



Testa ad inclinazione fissa
Head with special fixed angle



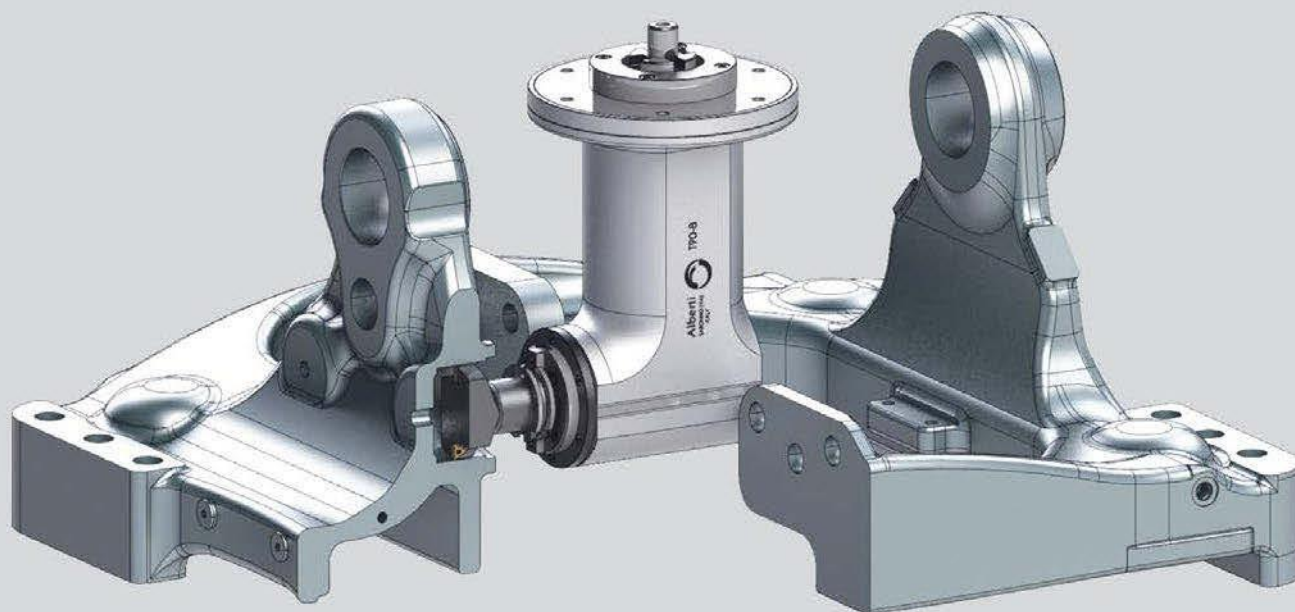
Testa orientabile di grosse dimensioni con
montaggio manuale
Big sized adjustable head with manual mounting



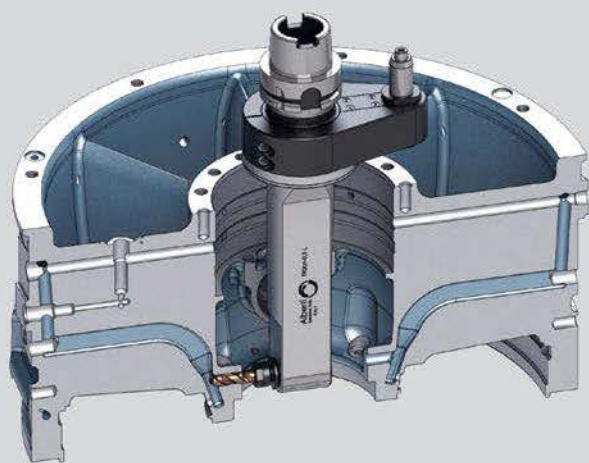
Testa fissa di grosse dimensioni con
montaggio manuale
Big sized fixed head with manual mounting

LA TESTA PIÙ IDONEA PER OGNI APPLICAZIONE

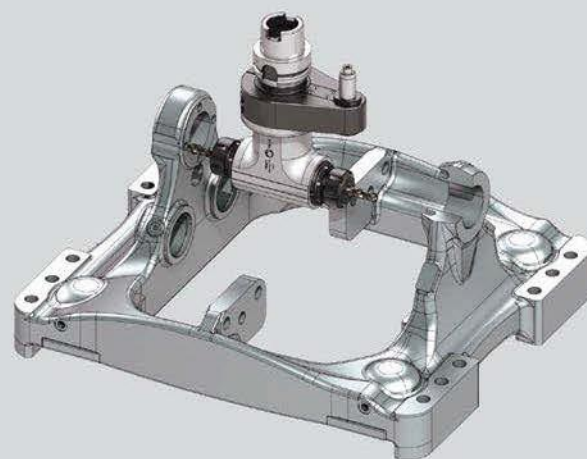
THE MOST SUITABLE HEAD FOR EACH APPLICATION



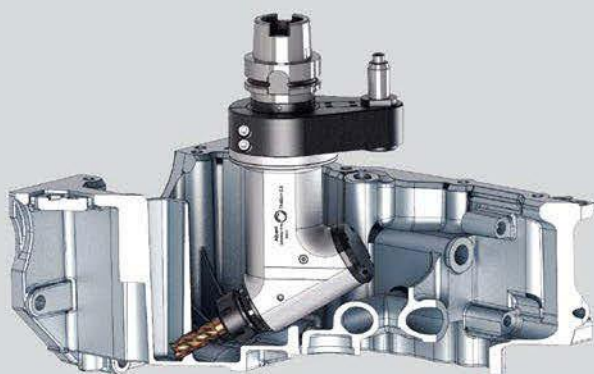
Testa a 90° con o senza flangia per pezzi grossi
90° Head with or without flange for big workpiece



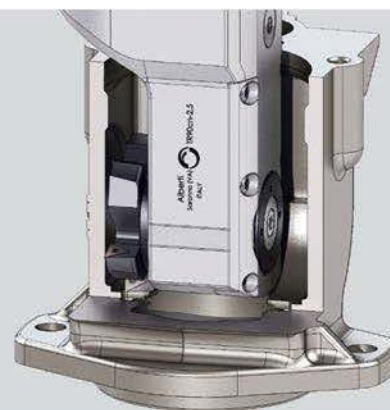
Testa a 90° prolungata
90° head with extended length



Testa a 2 uscite contrapposte
Head with dual output opposite



Testa fissa ad angolo variabile
Head with variable fixed angle

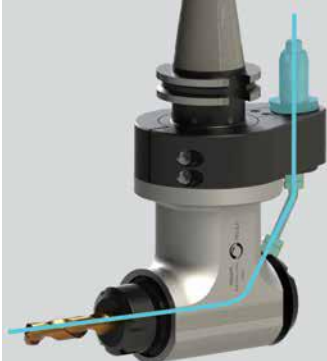


Testa rinvia per spazi ristretti
Offset head for reduced spaces

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

 		
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

  		
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
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

  		
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
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

  		
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
T90-8 XL		92
TCU-8 RI 15 bar		94
PINZA/COLLET ISO50 DIN69871 - BT50 - CAT50	HSK63	
T90-10		95
T90-10		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
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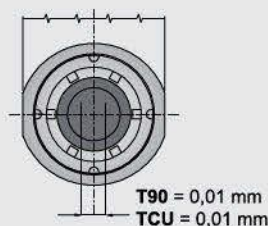
CONO/SPINDLE ISO/BT/CAT 50	
Testa/Head	Pag
T90cn-0,4	20
TR90cn-0,4	21
T90cn-0,5C	22
T90cn-0,5L	23
TR90cn-0,5	26
T90cn-1,5	27
T90cn-1,5L	28
T90cn-1,5 2U	29
TH90cn-1,5 100 bar	30
TH90cn-1,5L 100 bar	31
TR90cn-1,5	32
TCUcn-1,5	33
T90cn-2,5	35
T90cn-2,5L	36
T90cn-2,5 2U	37
TH90cn-2,5 100 bar	38
TH90cn-2,5L 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

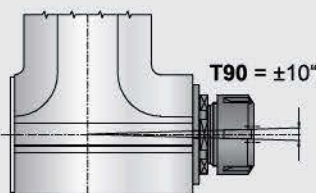
CONO/SPINDLE HSK 80/100	
Testa/Head	Pag
T90cn-0,4	20
TR90cn-0,4	21
T90cn-0,5C	22
T90cn-0,5L	23
TR90cn-0,5	26
T90cn-1,5	27
T90cn-1,5L	28
T90cn-1,5 2U	29
TH90cn-1,5 100 bar	30
TH90cn-1,5L 100 bar	31
TR90cn-1,5	32
TCUcn-1,5	33
T90cn-2,5	35
T90cn-2,5L	36
T90cn-2,5 2U	37
TH90cn-2,5 100 bar	38
TH90cn-2,5L 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

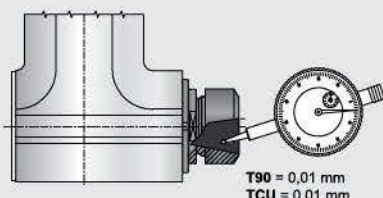
TECHNICAL DATA



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

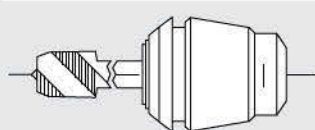
TAPPING

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

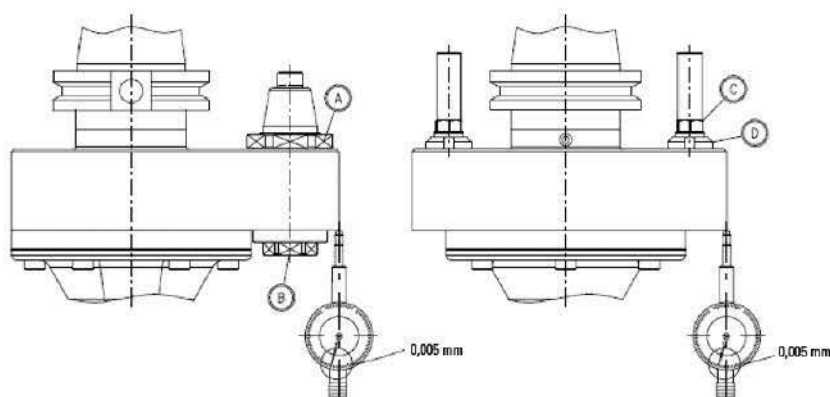
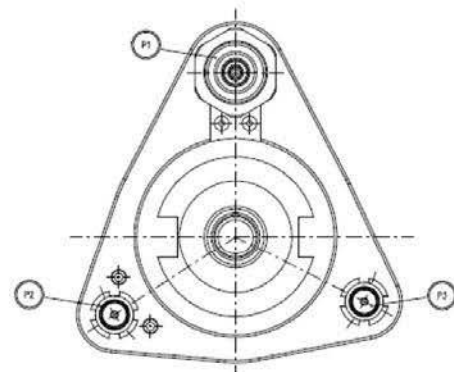


SUPPORTO 3 PUNTI 3 POINT SUPPORT

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

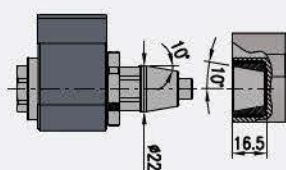
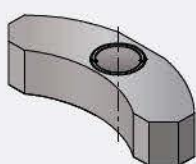
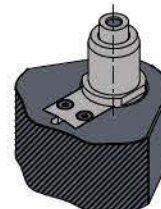
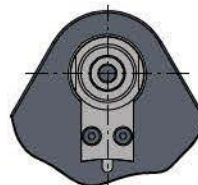
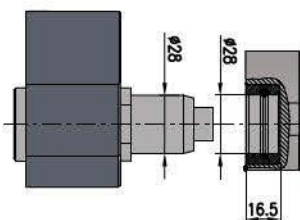
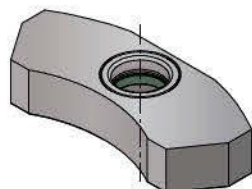
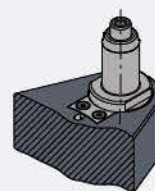
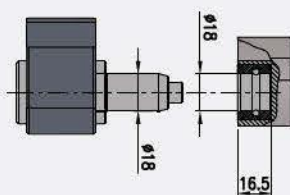
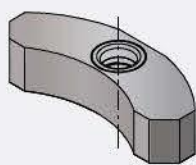
Perno flottante
Floating pin

F

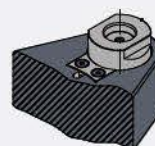
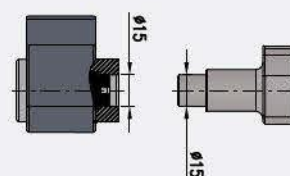
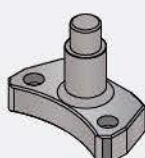
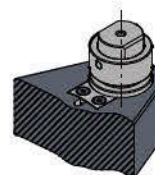
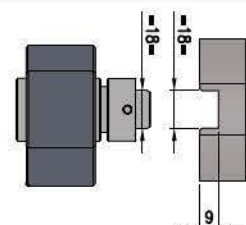
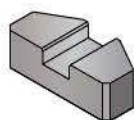
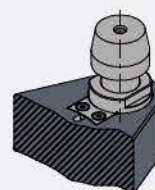
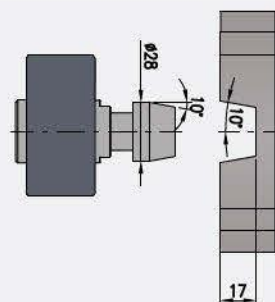
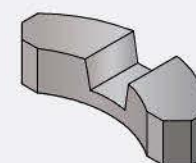
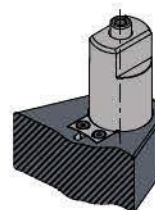
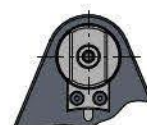
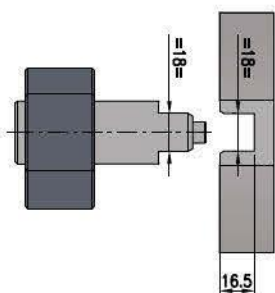
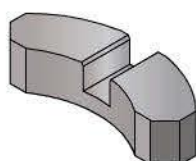
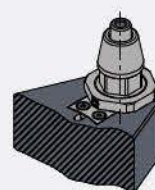
Perno maschio speciale
Special male pin

G

Perno femmina speciale
Special female pin



Perno regolabile
Adjustable 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

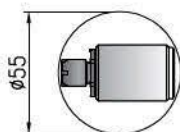


Collet
Pinza
ER-8 (ø 0,5/5 mm)

*** STANDARD EQUIPMENT INCLUDES:**

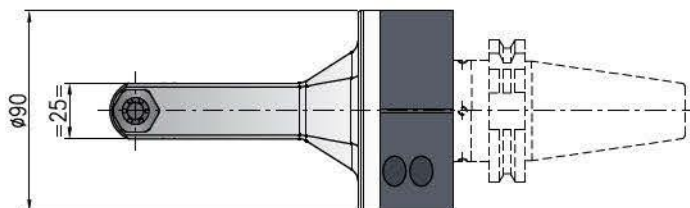
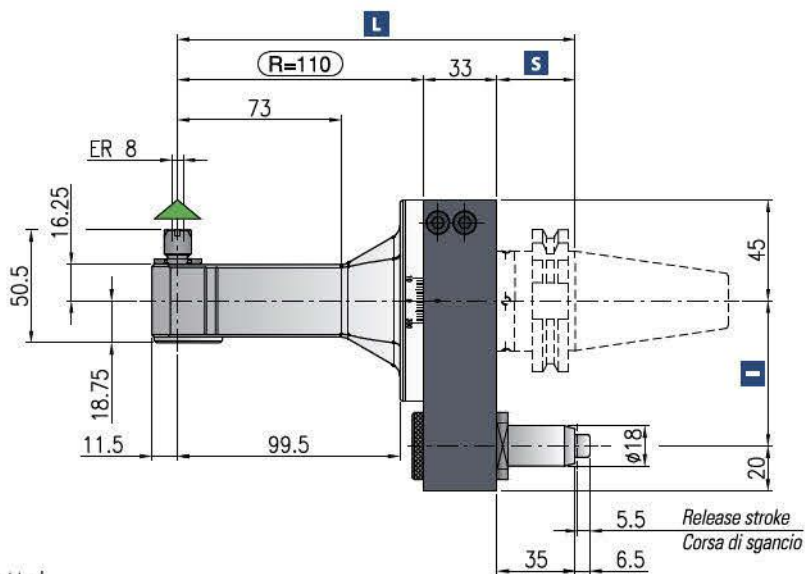


Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di 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	80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	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	35	41	42	45	38	40	40
L	178	178	178	184	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



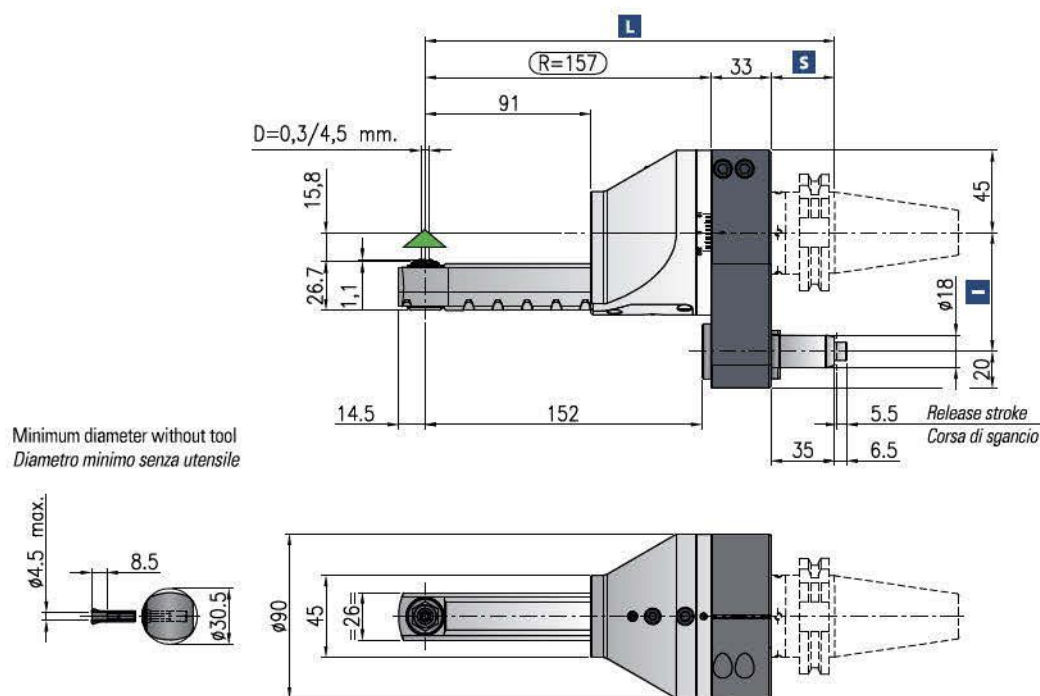
Ø mm max.

6

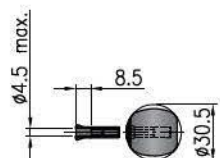
Weld on output

Weld on

TR90cn-0,4

ACTR904C

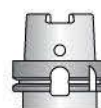
Minimum diameter without tool
Diametro minimo senza utensile



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

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

*** STANDARD EQUIPMENT INCLUDES:**



Shank/ <i>Cono</i>	DIN-69871 CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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

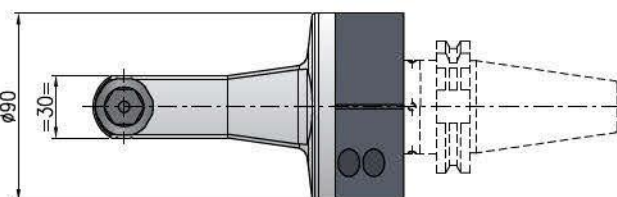
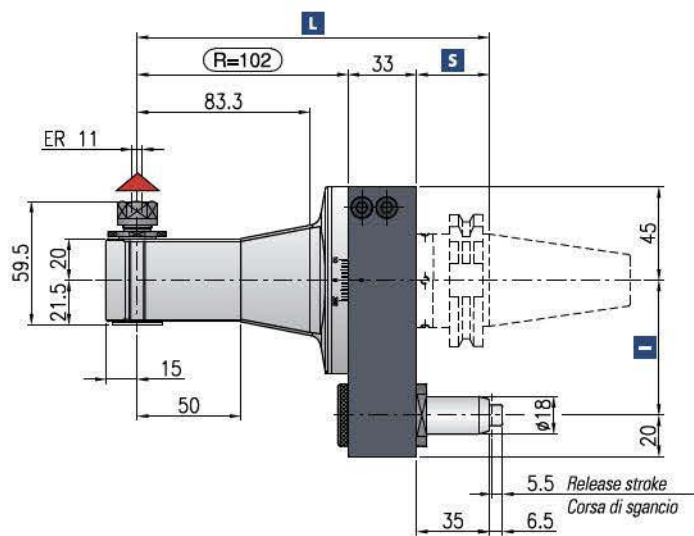
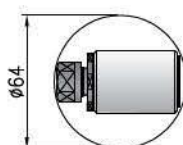


Collet
Pinza
ER-11 (ø 0,5/7 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / 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 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



Ø mm max.
Ø 0,5 / 7mm

ERAX-11

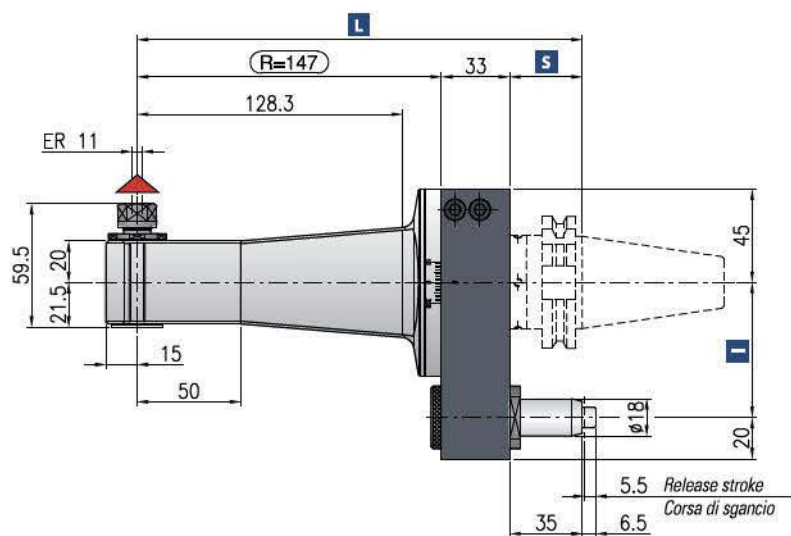


Ø mm max.
6

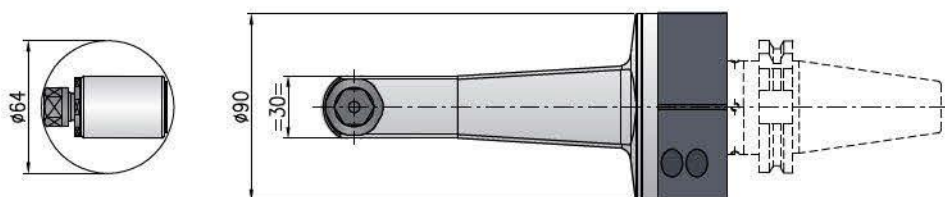
Weldon output
Weldon

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*)		
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

Welding output
Welding

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

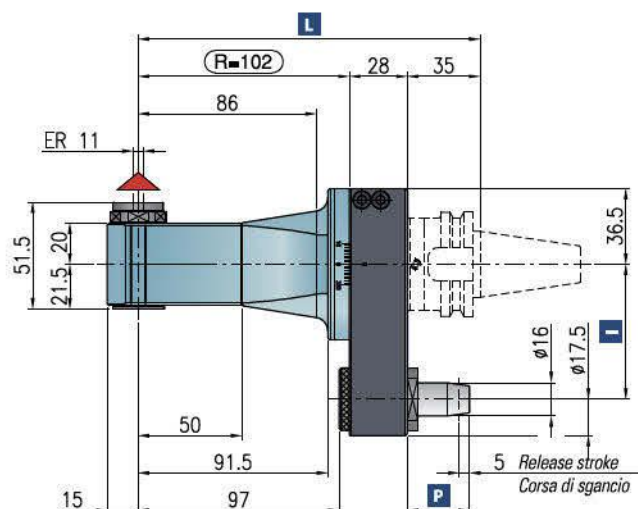


Collet
Pinza
ERAX-11 (ø 0,5/7 mm)

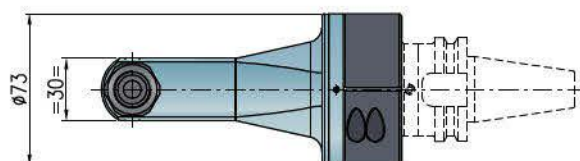
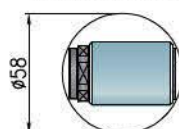


Shank
Cono
ISO 30DIN-69871/BT-30

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / 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 a doppio contatto



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

Opzione / Option



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

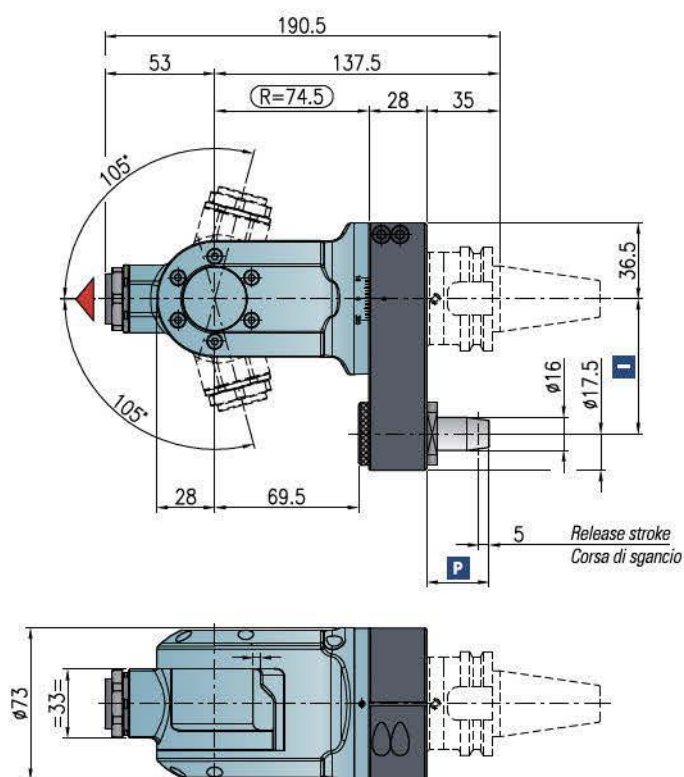


bar max
12

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



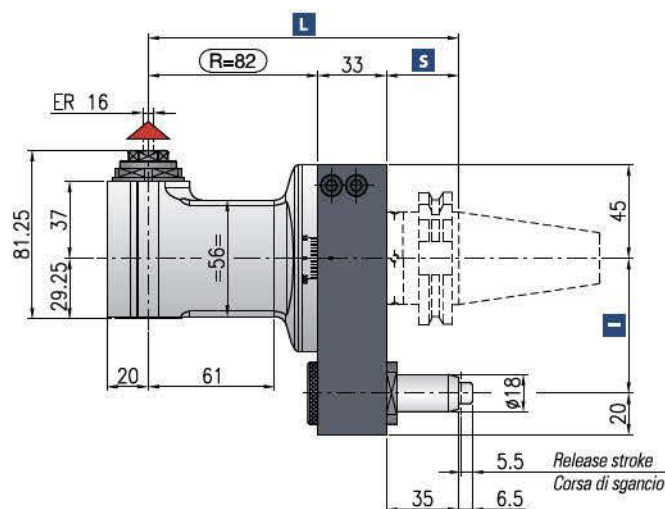
bar max

12

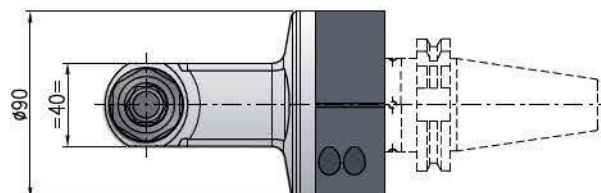
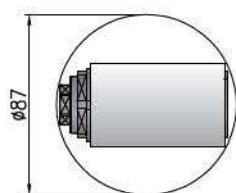
Coolant through pin
Refrigerante attraverso il perno

T90cn-1,5

ACT9015C



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: 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	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



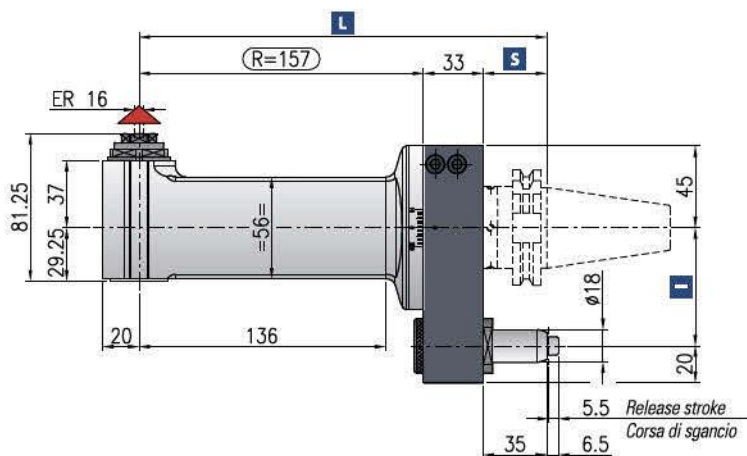
Torque
Momento torcente
15 Nm



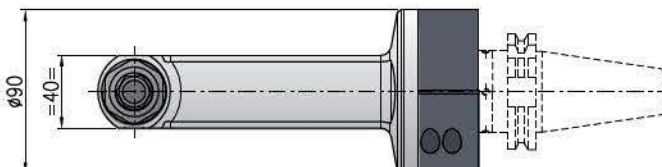
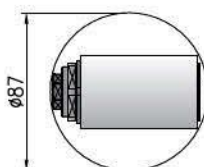
Weight
Peso
5,2 kg



Collet
Pinza
ER-16 (ø 1/10 mm)



Minimum diameter without tool
Diametro minimo senza utensile



*** STANDARD EQUIPMENT INCLUDES:**



Retaining block / Tassello di ritegno / 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

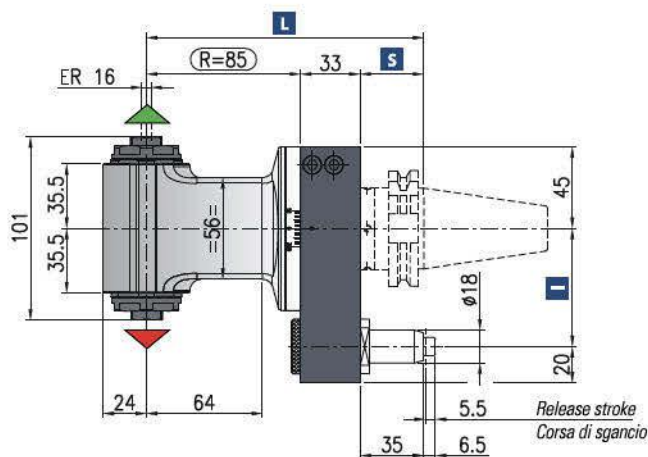


ER-16/ER-11

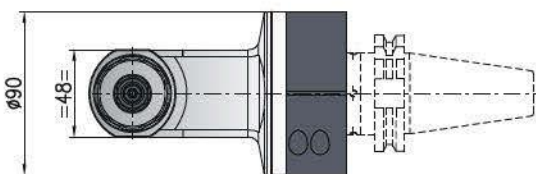
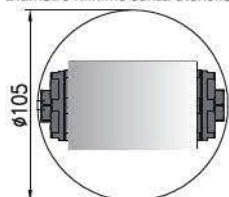
Double output
Doppia uscita

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

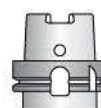


Weight
Peso
4,3 kg



Collet
Pinza
ER-16 (Ø 1/10 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Shank/ <i>Cono</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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

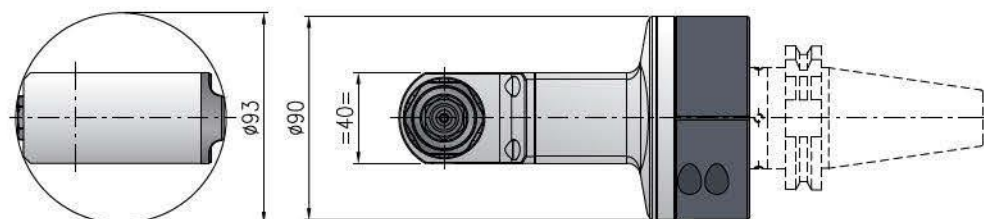
ACTH915C

-  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

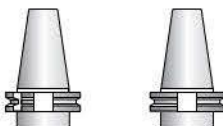
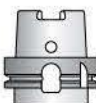


Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO



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*)	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

Option / Opzione



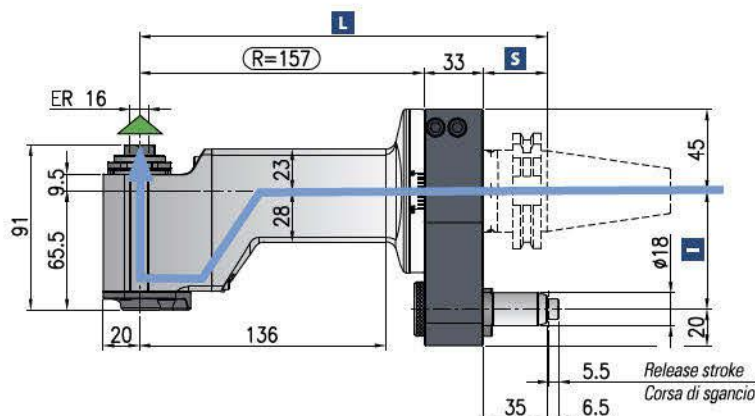
Ø mm max.

10

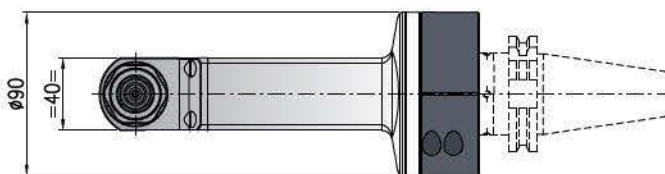
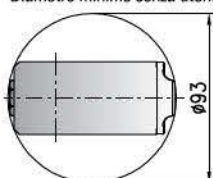
Weldon output
Weldon

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/ <i>Cono</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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	231	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

Weld on 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

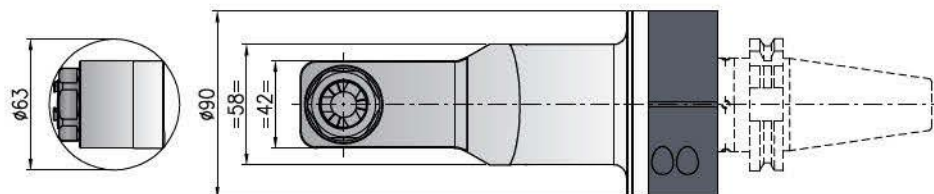


Collet
Pinza
ER-AX 16 (ø1/10 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di 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	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	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



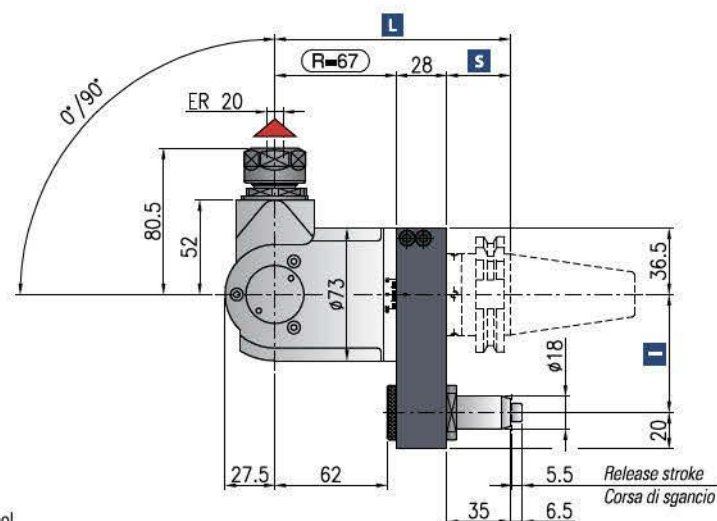
bar max

100

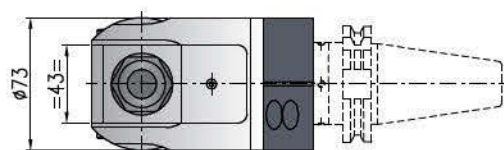
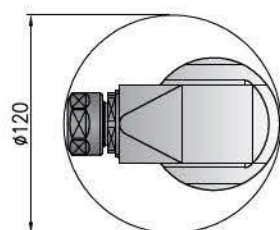
Coolant through spindle
Refrigerante attraverso il cono

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 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
8.000

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



Ø mm max.
10

Weldon 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)

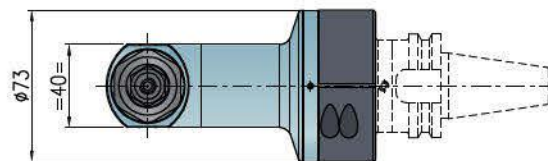
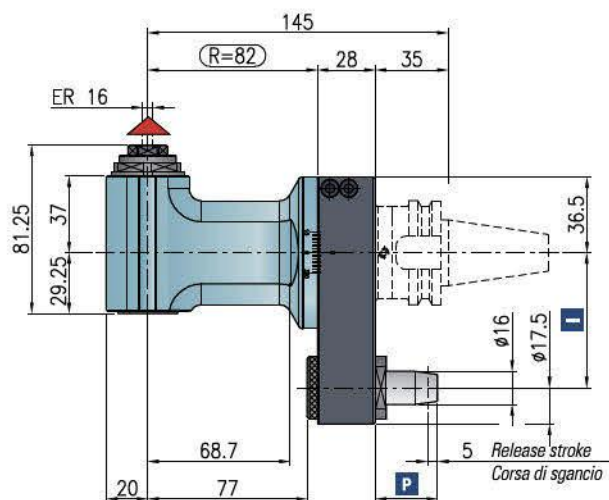
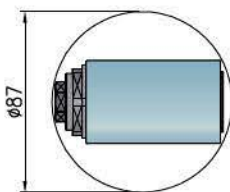


Shank
Cono
ISO 30DIN-69871/BT-30

*** 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 coni a doppio contatto

Opzione / Option



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

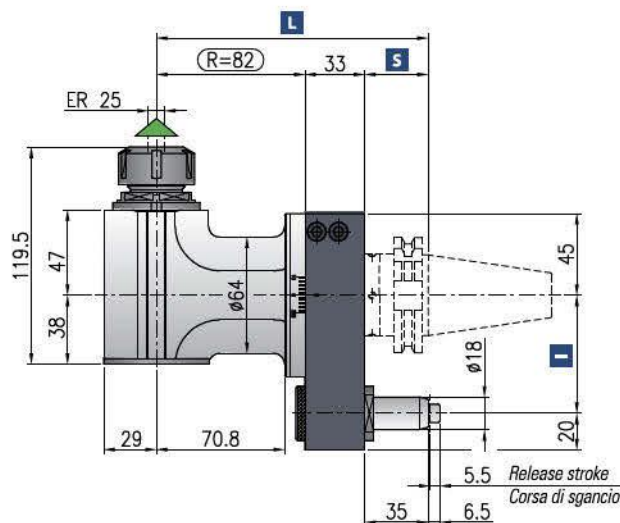


bar max
40

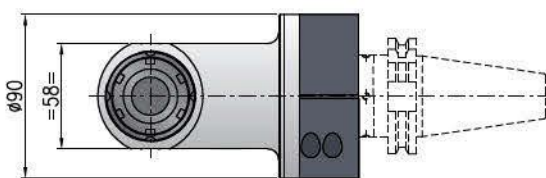
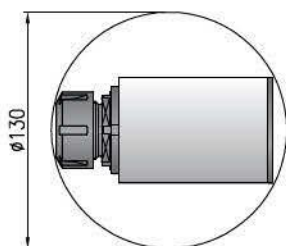
Coolant through spindle
Refrigerante attraverso il cono

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/ <i>Cono</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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	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



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

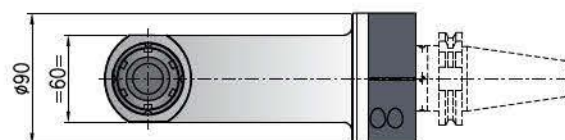
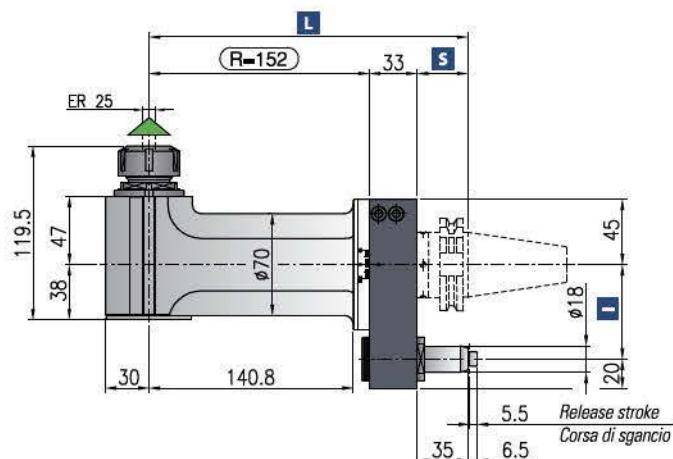
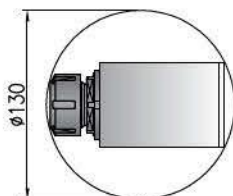
ACT9025L

-  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)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile

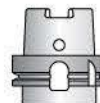


Retaining block / Tassello di ritegno / Stop-Block

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	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

Weldon output
Weldon



HSK-32

Quick Change
Attacco rapido

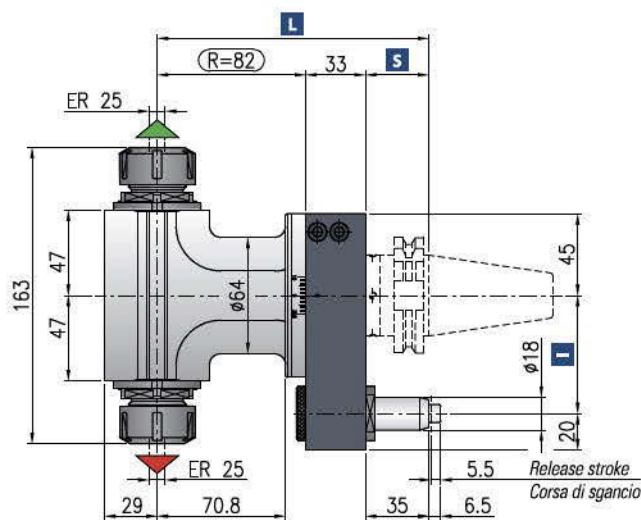


ER-25/ER-16

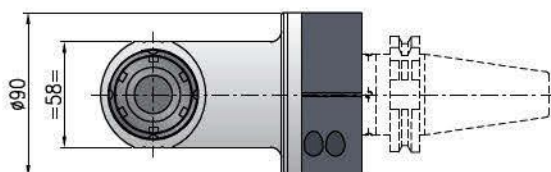
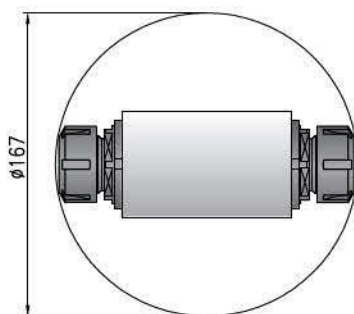
Double output
Doppia uscita

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/ <i>Cono</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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	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
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

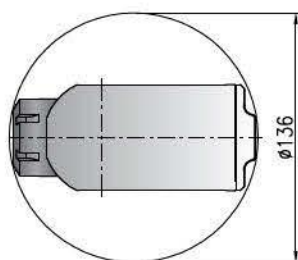
ACTH925C

- 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

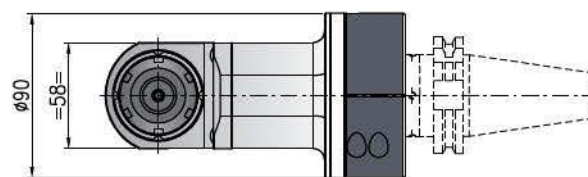
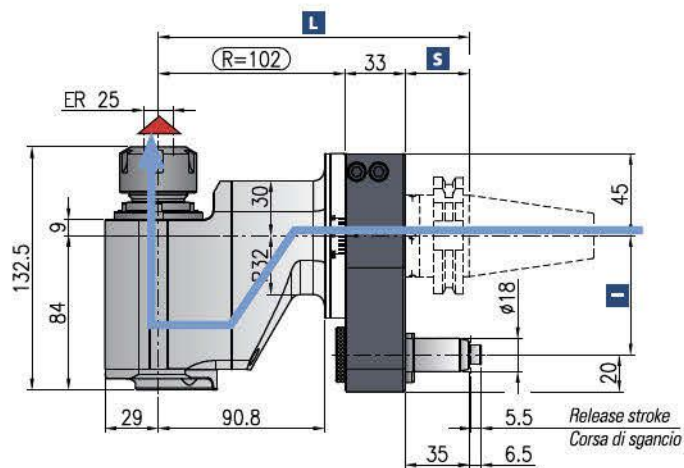


Retaining block / Tassello di ritegno / Stop-Block

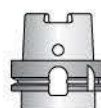
NOT INCLUDED - NON INCLUSO



Dry running also possible / Rotazione a secco possibile



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



Shank/ <i>Cono</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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.

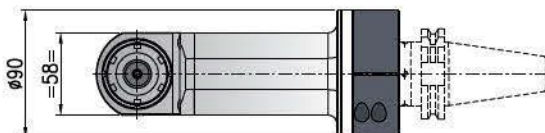
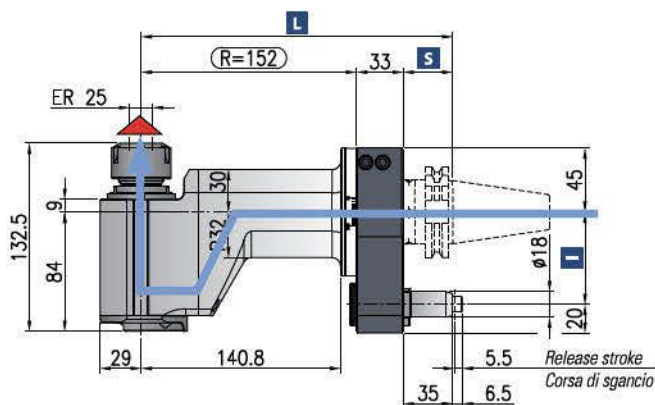
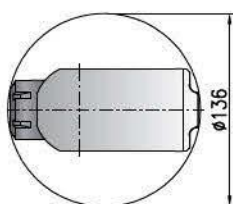
16

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	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



Ø mm max.

16

Welding output
Welding

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

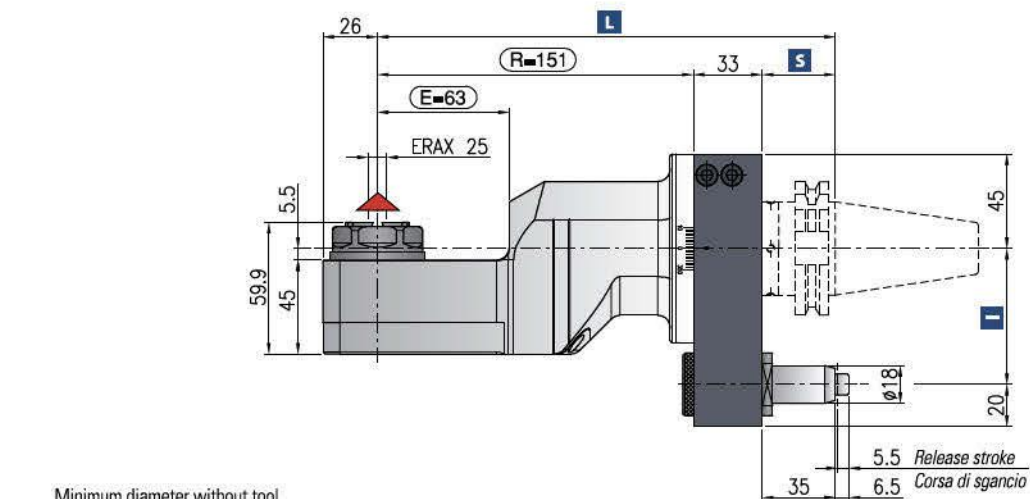


Weight
Peso
7.5 kg

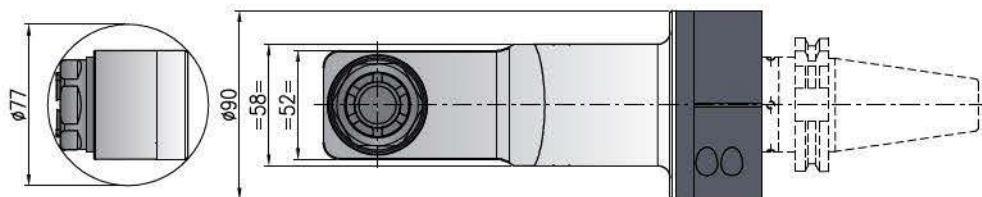


Collet
Pinza
ER-AX 25 (ø1-16mm)

*** STANDARD EQUIPMENT INCLUDES:**



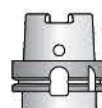
Minimum diameter without tool
Diametro minimo senza utensile



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/ <i>Cono</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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	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

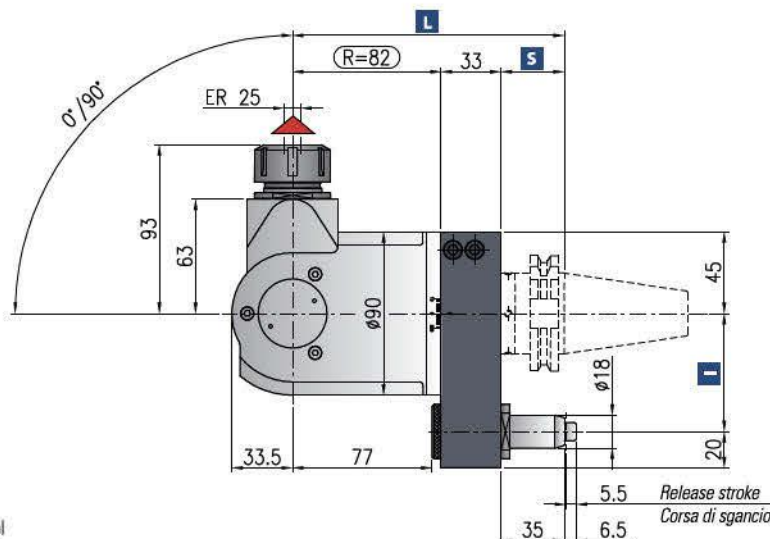


bar max
100

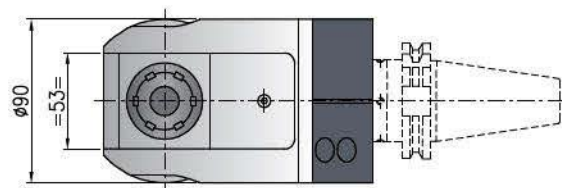
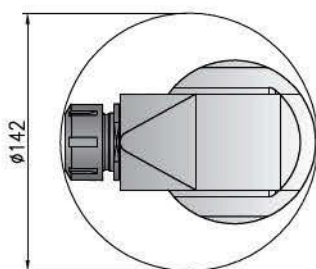
Coolant through spindle
Refrigerante attraverso il cono

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
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*)		
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
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

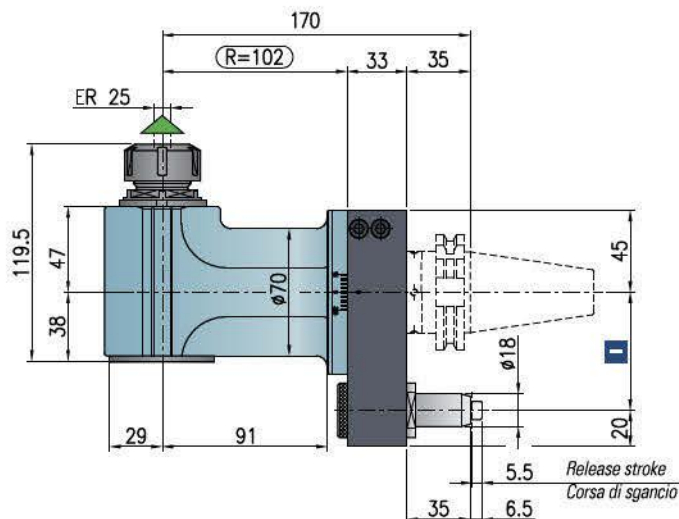


Shank
Cono
ISO40 DIN-69871/BT-40

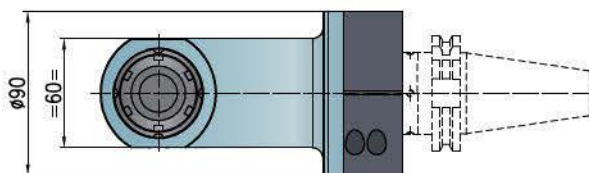
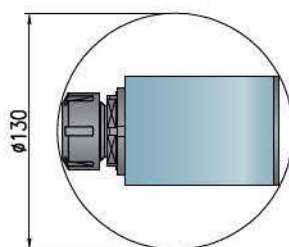
*** STANDARD EQUIPMENT INCLUDES:**



Direction of rotation same as machine spindle / senso 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

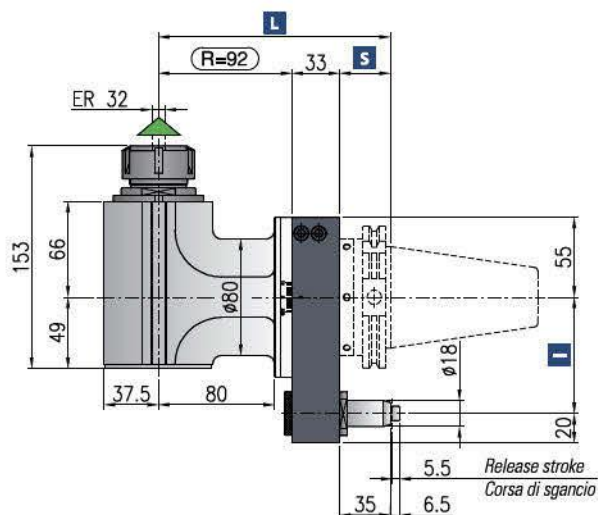


bar max
40

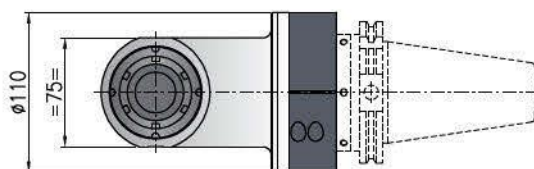
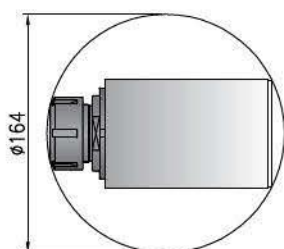
Coolant through spindle
Refrigerante attraverso il cono

T90cn-3,5

ACT9035C



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di 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 **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:**



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



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

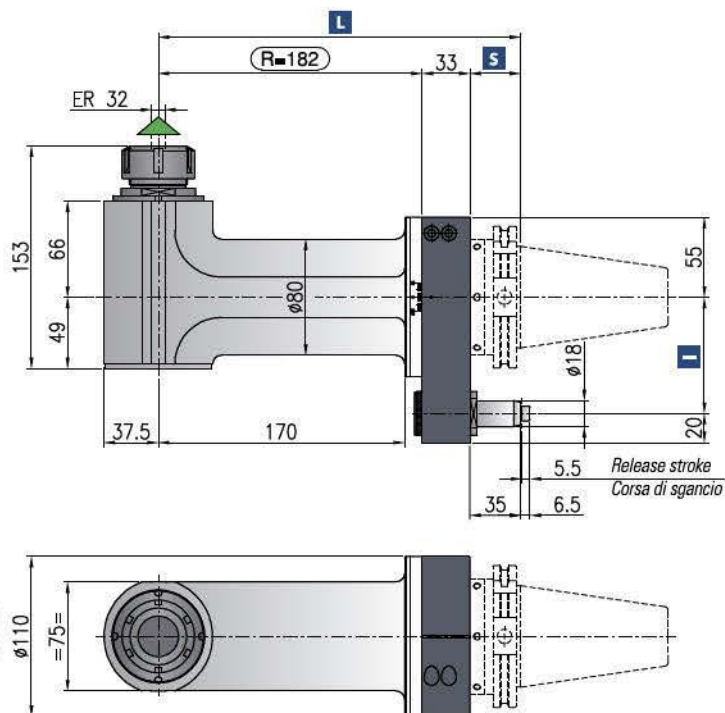
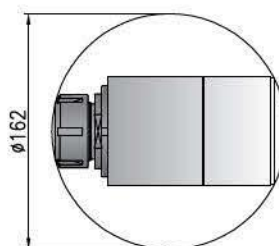
ACT9035L

-  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

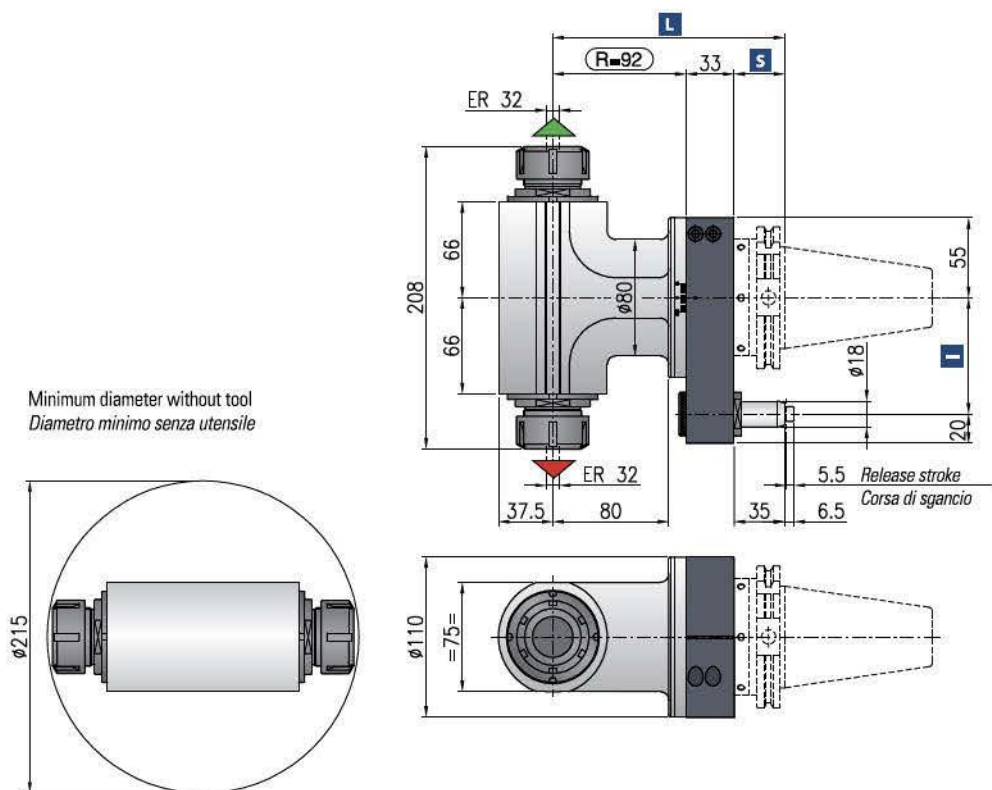


ER-32/ER-20

Double output
Doppia uscita

T90cn-3,5 2U

ACT9035D



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

*** STANDARD EQUIPMENT INCLUDES:**



								
Shank/ <i>Cono</i>	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM		
Size/ <i>Grandezza</i>	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

bar max
12

Coolant through pin
Refrigerante attraverso il perno

6.000 min^{-1}

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



Ø mm
27

Arbor output
Porta fresca



Ø mm max.
20

Weldon output
Weldon



HSK-40

Quick Change
Attacco rapido

TH90cn-3,5 100 BAR

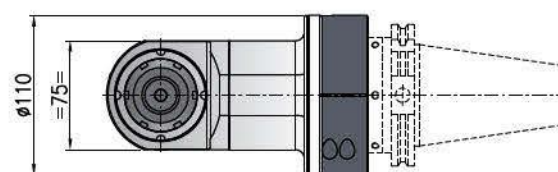
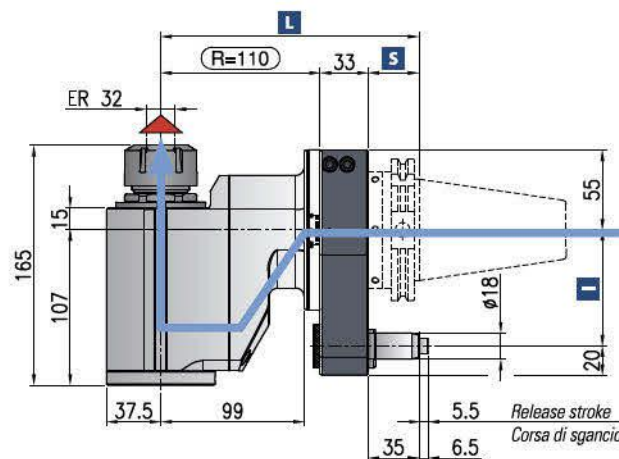
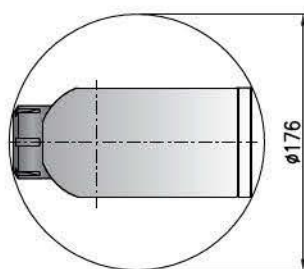
ACTH935C

-  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:



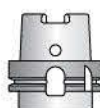
Minimum diameter without tool
Diametro minimo senza utensile



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.

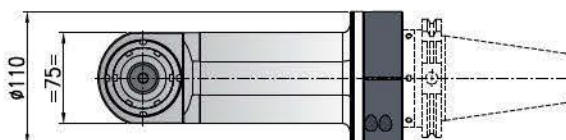
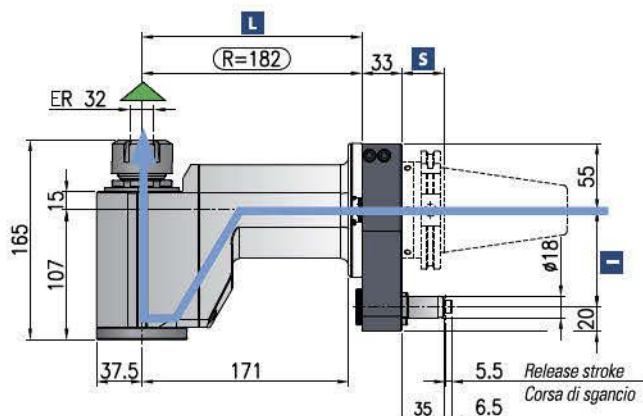
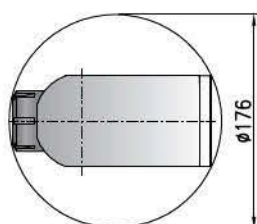
20

Welding output
Welding

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

Welding output
Welding

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

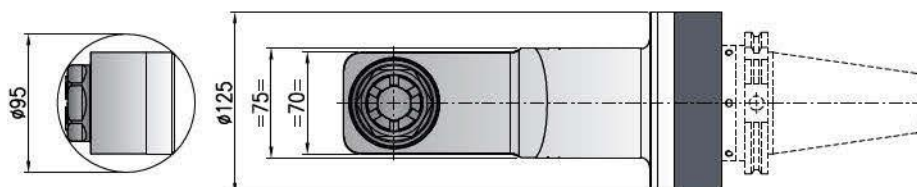


Collet
Pinza
ER-AX 32 (ø2-20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Retaining block / Tassello di ritegno / Stop-Block

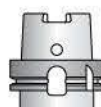
NOT INCLUDED - NON INCLUSO



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

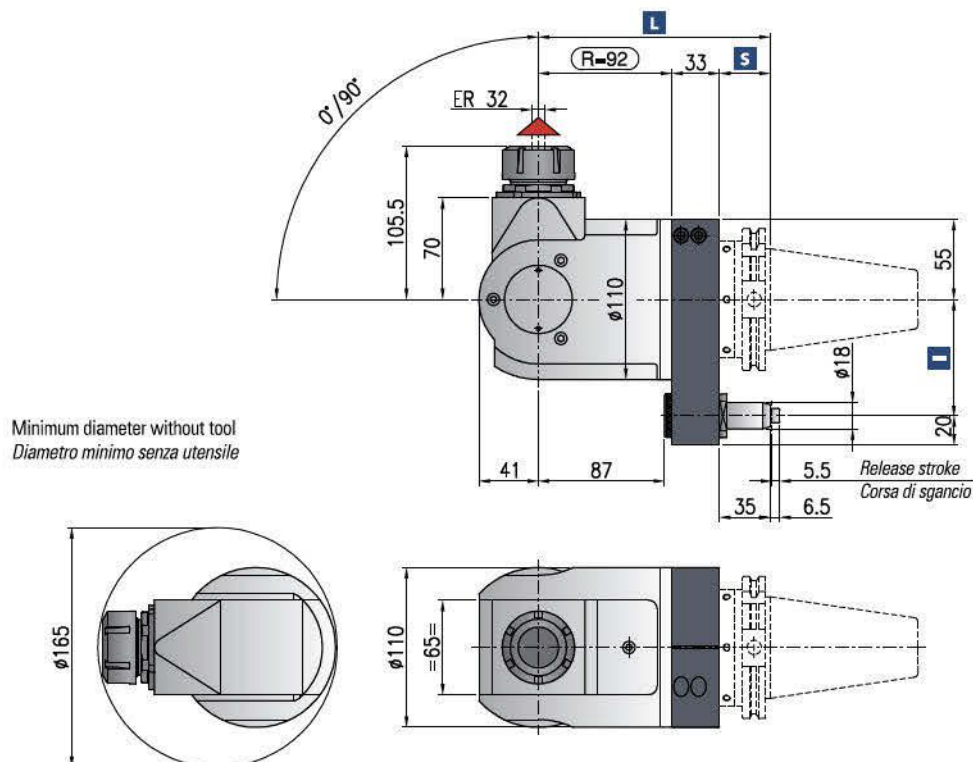


bar max
100

Coolant through spindle
Refrigerante attraverso il cono

TCUcn-3,5

ACTCU35C



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 **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
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	160		166	167	163	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 pemo



min⁻¹
6.000

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



Ø mm max.
20

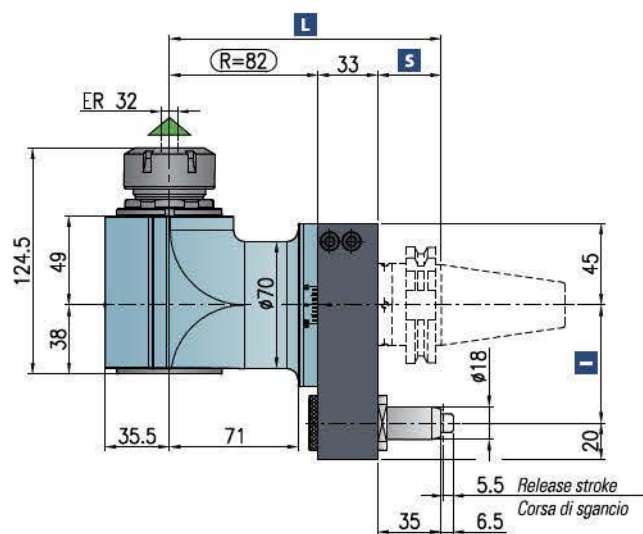
Weld on output
Weld on

T90cn-3,5M Aluminum

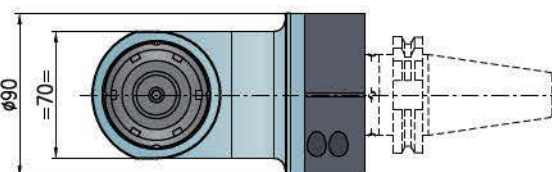
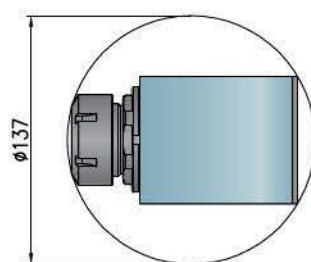
ACT9035C.ALU

-  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 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
Size/Grandezza	40	40	40	40
I	65-80	80-(110*)	80-(110*)	65-80-(110*)
S	35	35	35	35
L	150	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

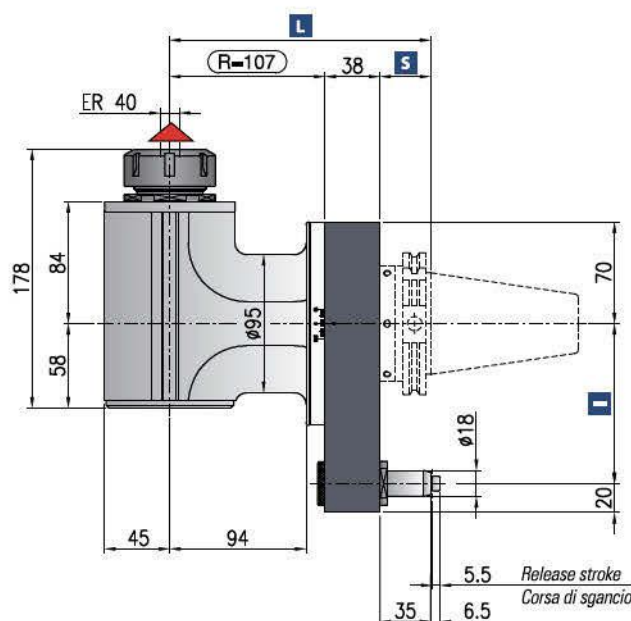


bar max
40

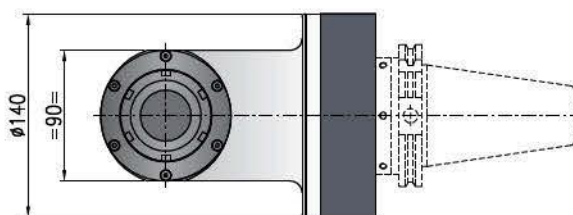
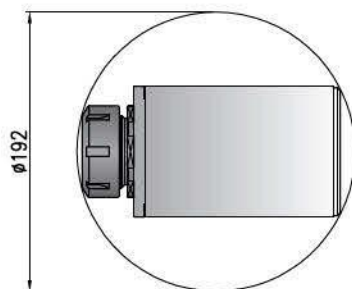
Coolant through spindle
Refrigerante attraverso il cono

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						
Size/Grandezza	DIN-69871 CAT		MAS-BT	HSK		CAPTO
I	50		50	80	100	C8
S	110		110	110	110	110
L	35		41	42	45	40
	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

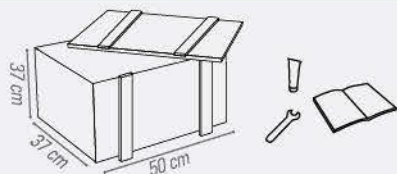
Double output
Doppia uscita

T90cn-4,5 L

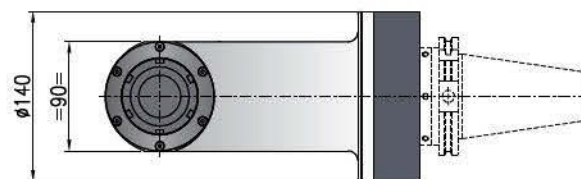
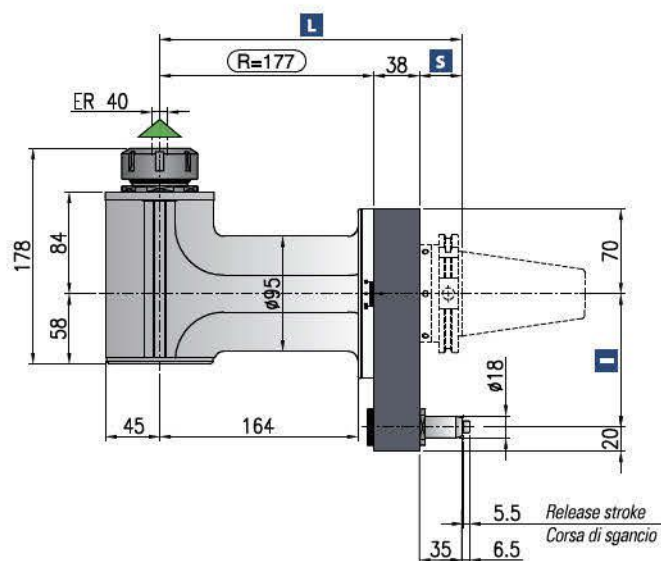
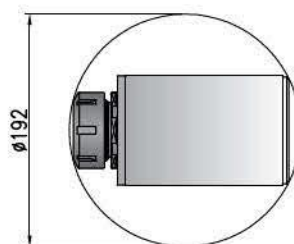
ACT9045L

-  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)

* 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
Size/Grandezza	50		50	80 100	C8
I	110		110	110	110
S	35		41	42 45	40
L	250		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

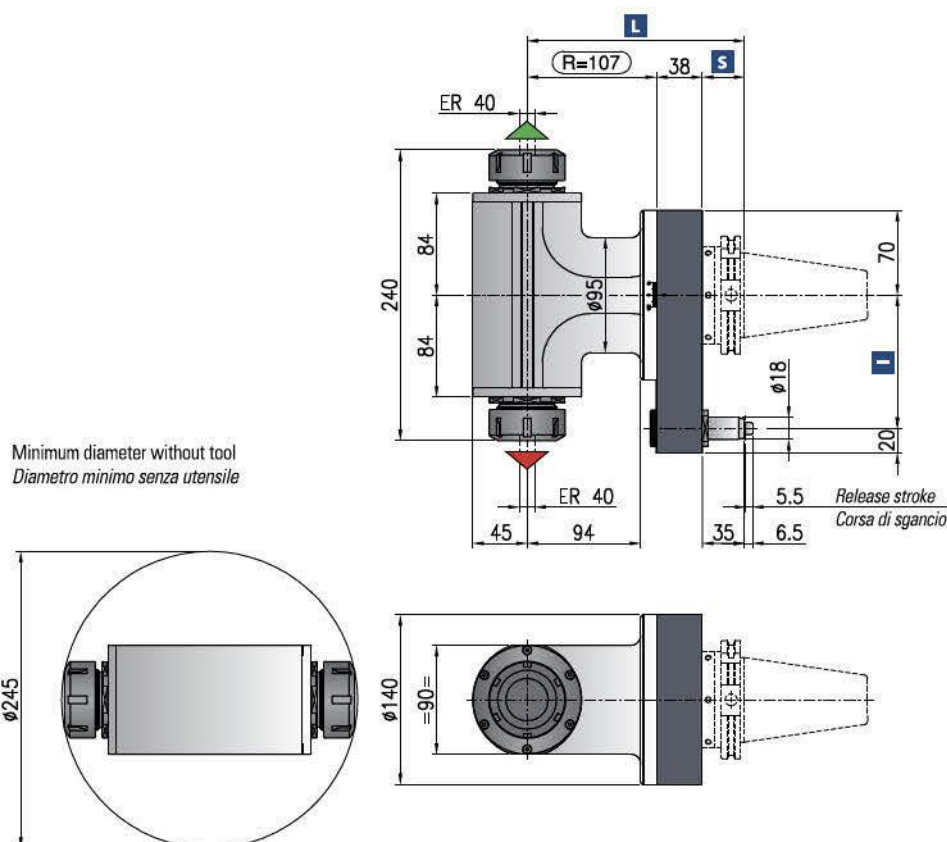
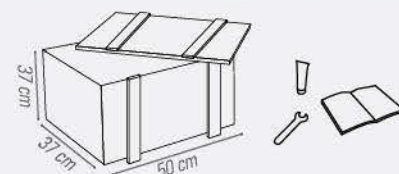
Double output
Doppia uscita

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:**



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

Shank/Cono						
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

Weldon output
Weldon



HSK-40

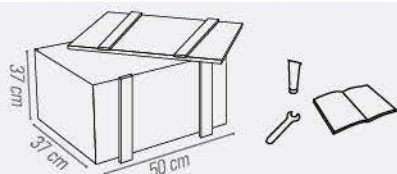
Quick Change
Attacco rapido

TH90cn-4,5 100 BAR

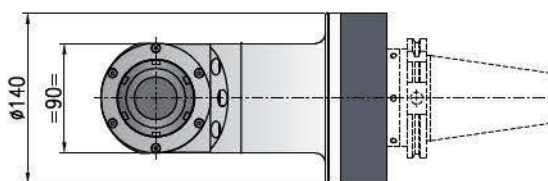
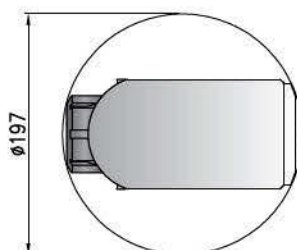
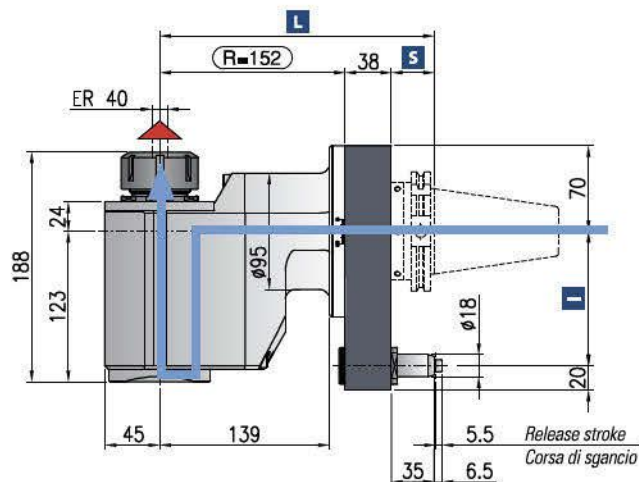
ACTH945C

-  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
Weldon



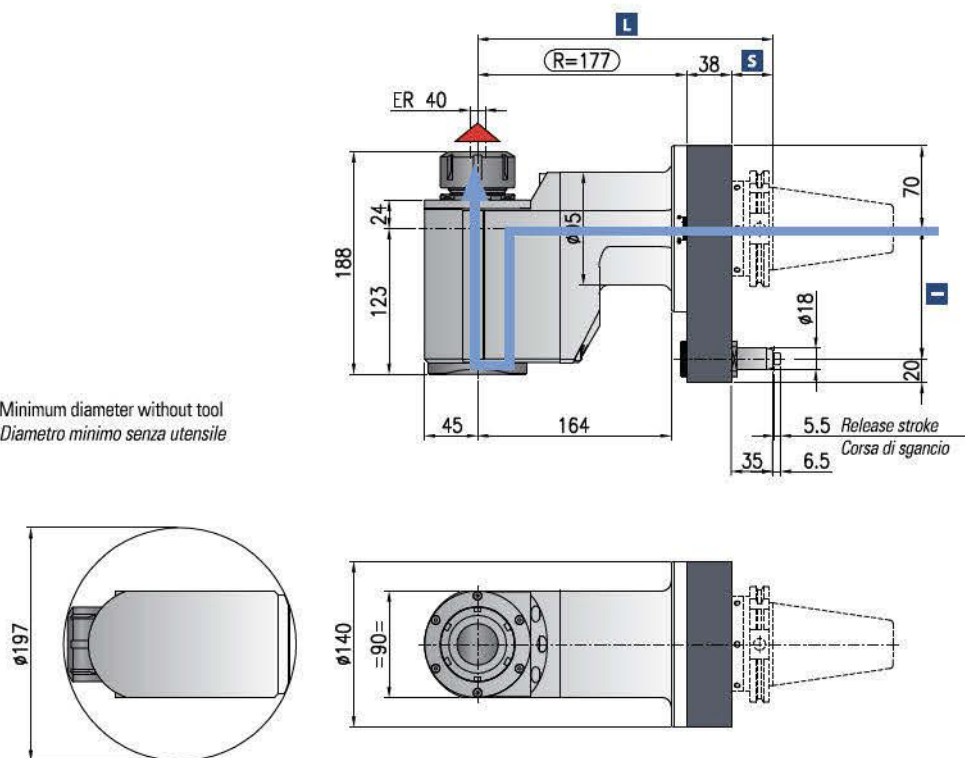
ISO-30
HSK-40 CAPTO C4

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

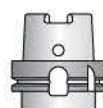


Weight
Peso
26 kg



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	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



Ø mm max.
25

Weldon output
Weldon



ISO-30
HSK-40 CAPTO C4

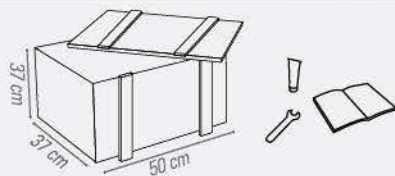
Quick Change
Attacco rapido

TR90cn-4,5

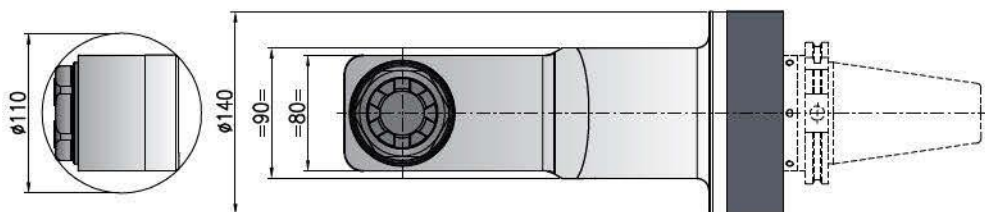
ACTR945C

- 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	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

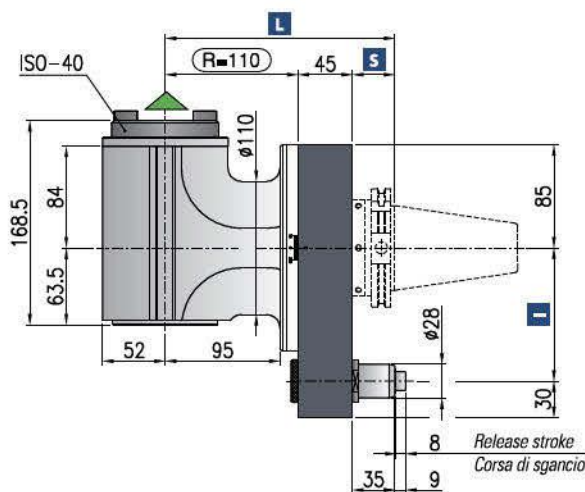


bar max
100

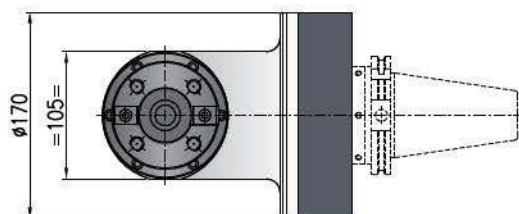
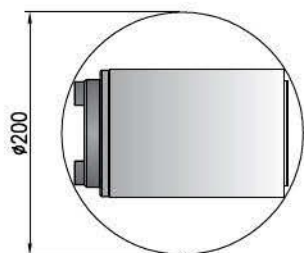
Coolant through spindle
Refrigerante attraverso il cono

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

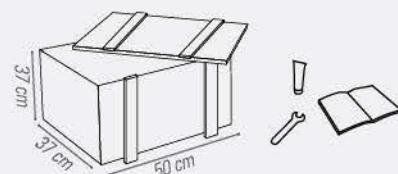


Weight
Peso
22 kg



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

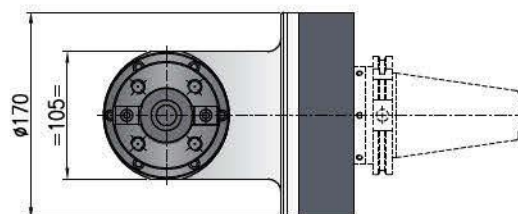
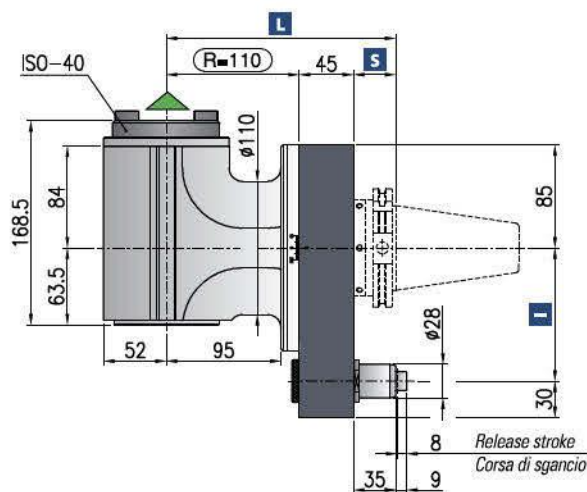
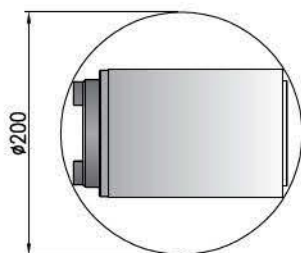
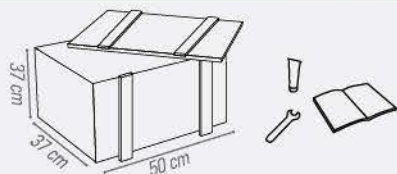


Weight
Peso
22 kg



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

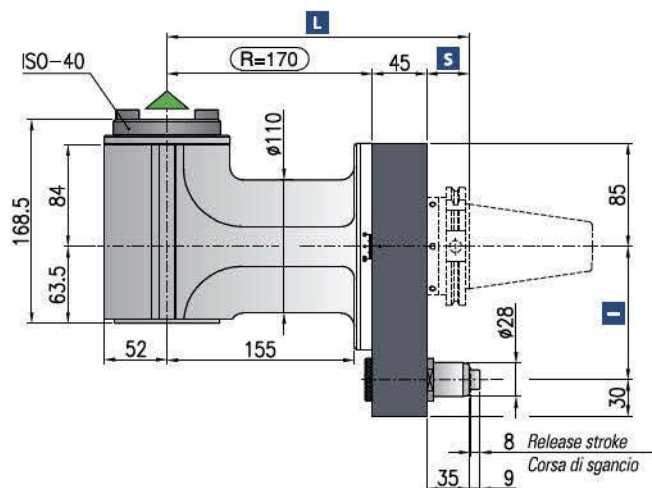


HSK-63 CAPTO C4 C5

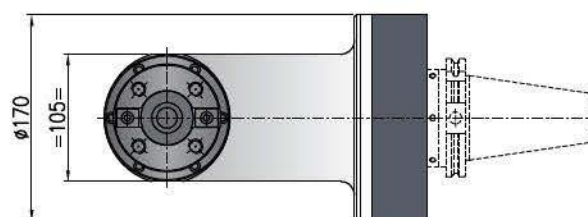
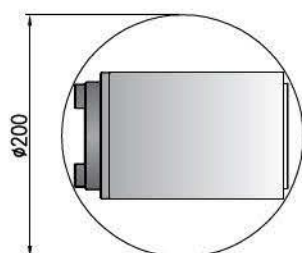
Quick Change
Attacco rapido

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



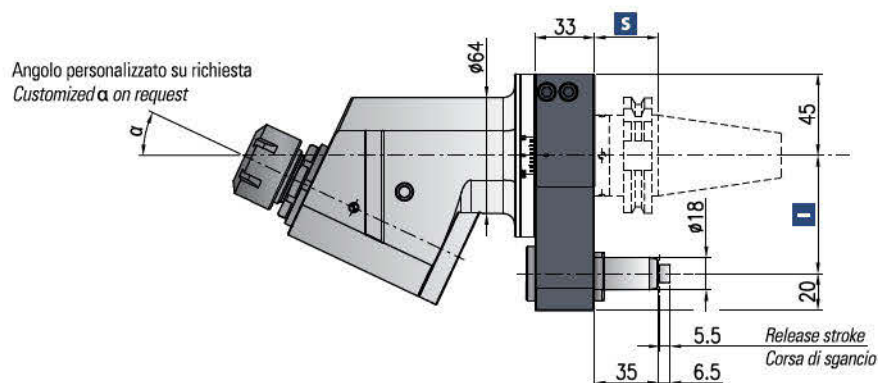
Angle
Angolo
A richiesta da
On request from
15°



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:

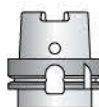


Retaining block / Tassello di ritegno / Stop-Block

NOT INCLUDED - NON INCLUSO



Possibilità refrigerante / Internal coolant



Shank/ <i>Cono</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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

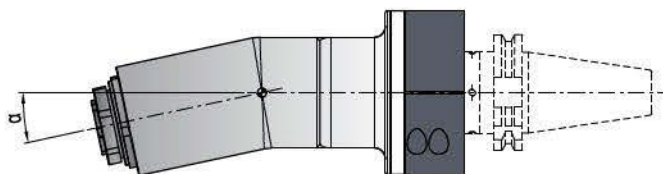
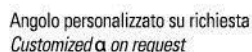
*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili



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.



*** STANDARD EQUIPMENT INCLUDES:**



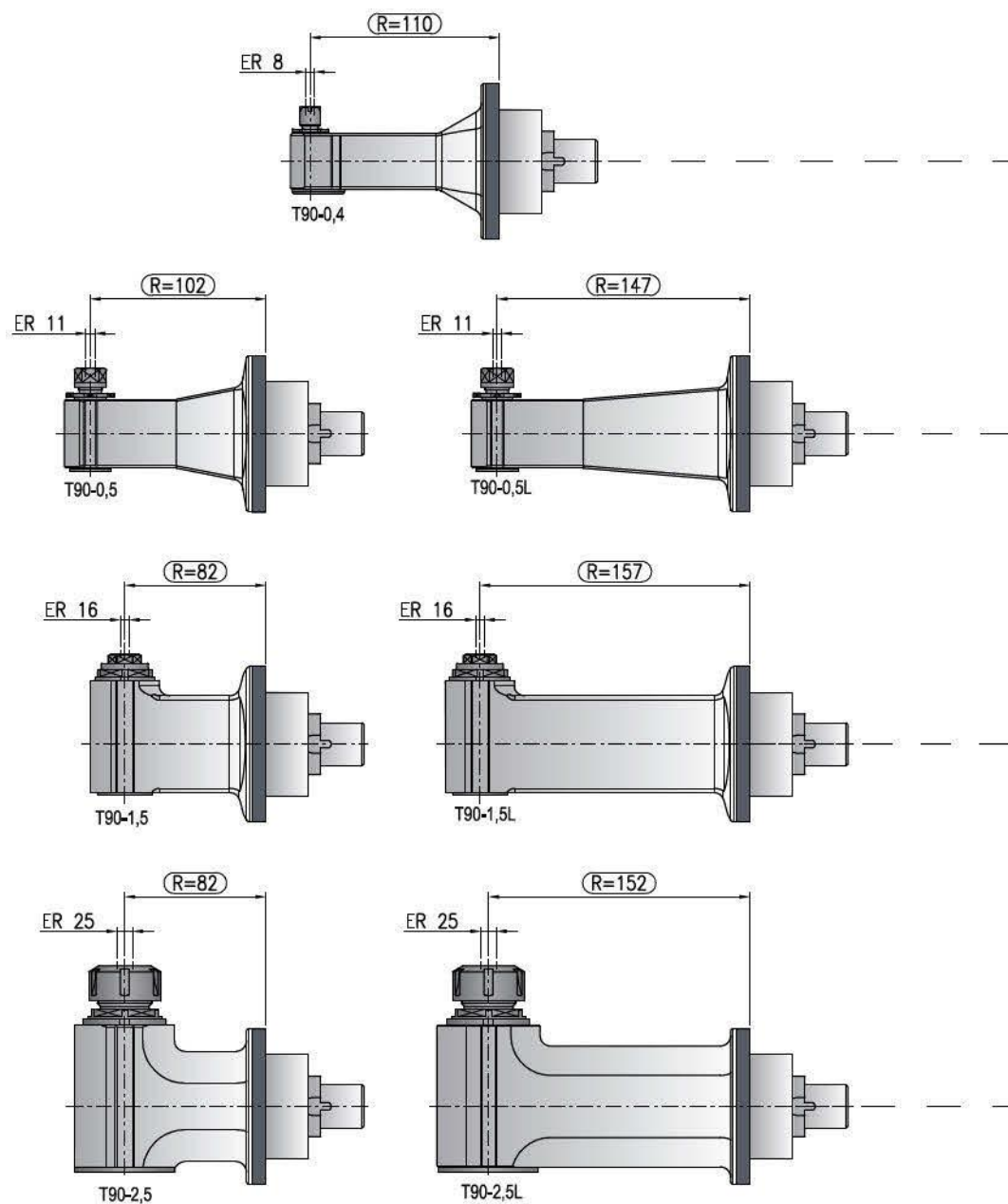
Non interchangeable input drive shank/ Coni di attacco non intercambiabili

*optional



8000 Rpm

6000 Rpm



Caratteristiche tecniche a pagina/ Technical data page

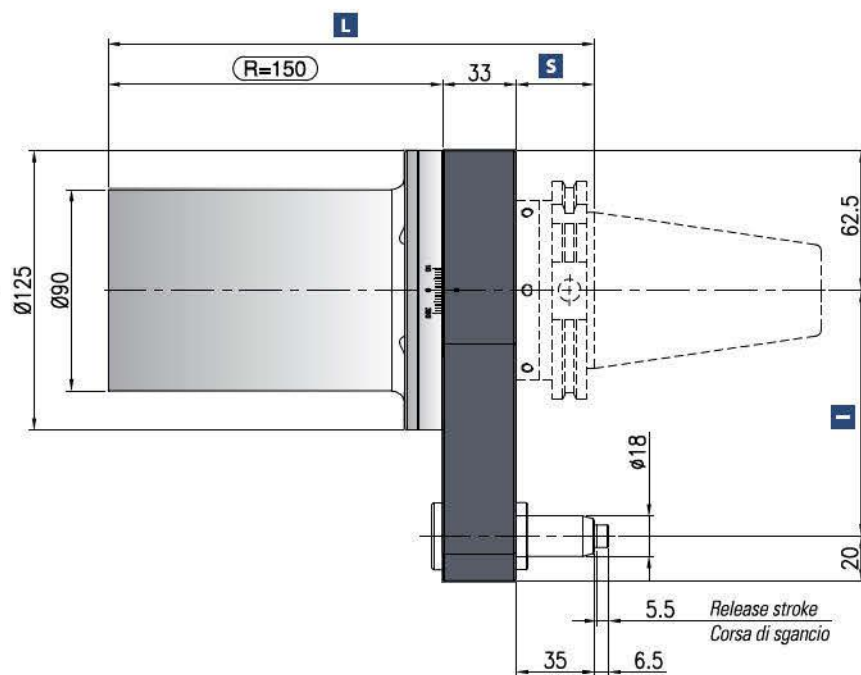


Testa/Head	Pagina/Page
T90-0,4	62
T90-0,5	63
T90-0,5L	64
T90-1,5	65
T90-1,5L	66
T90-2,5	67
T90-2,5L	68

LINEA CONTROL

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.

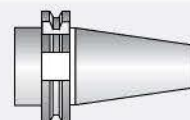


Retaining block / Tassello di ritegno / Stop-Block
NOT INCLUDED - NON INCLUSO

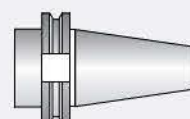
OPTIONAL DRIVE SHANK*

Non interchangeable input drive shank
Coni non intercambiabili

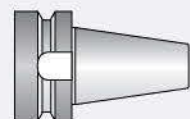
DIN-69871
ISO 50



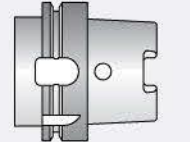
CAT
50



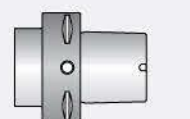
MAS-BT
50



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	C6
I	80-110		80-110	80-110*	80-110*
S	35		41	42	38
L	218		224	225	221

Dual contact spindles available/Disponibilità coni a doppio contatto

*optional

Lunghezza totale testa/ Total length (R+L)

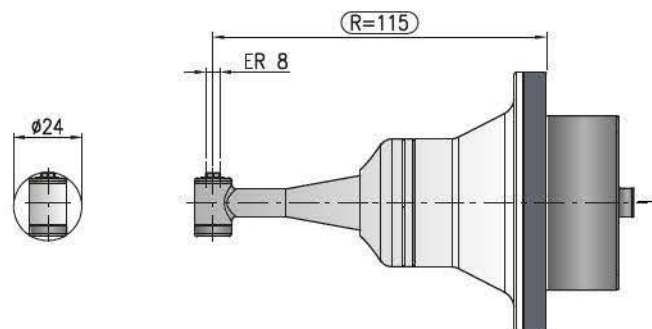
Shank/Cono	DIN-69871	CAT	MAS-BT	HSK	CAPTO
Size/Grandezza	50		50	63-80	C6
T90-0.4	mm	328	334	335	331
T90-0.5C	mm	320	326	327	323
T90-0.5L	mm	365	371	372	368
T90-1.5	mm	300	306	307	303
T90-1.5L	mm	375	381	382	378
T90-2.5	mm	300	306	307	303
T90-2.5L	mm	370	376	377	373

LINEA CONTROL

LINEA INDEX INDEXLINE

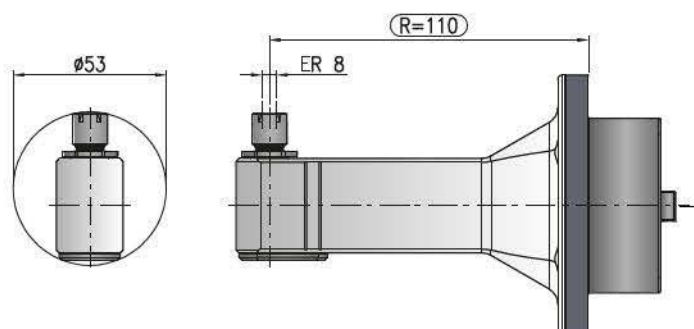
T90-0,3 SLIMLINE

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



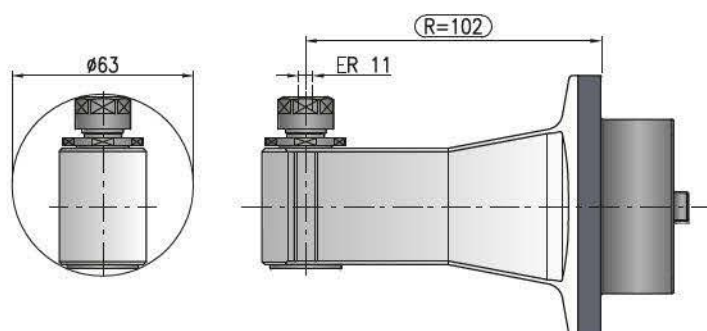
T90-0,4

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



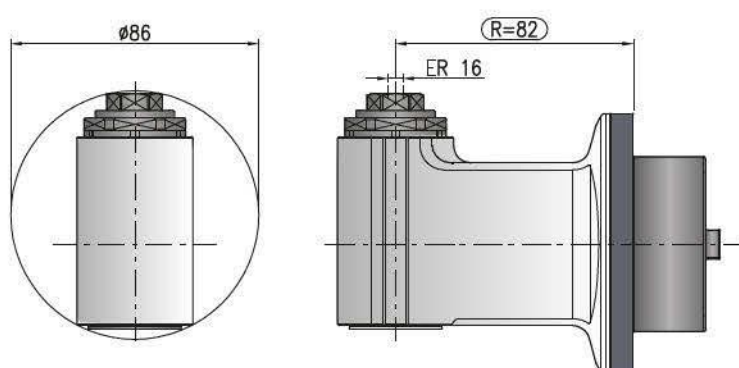
T90-0,5

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

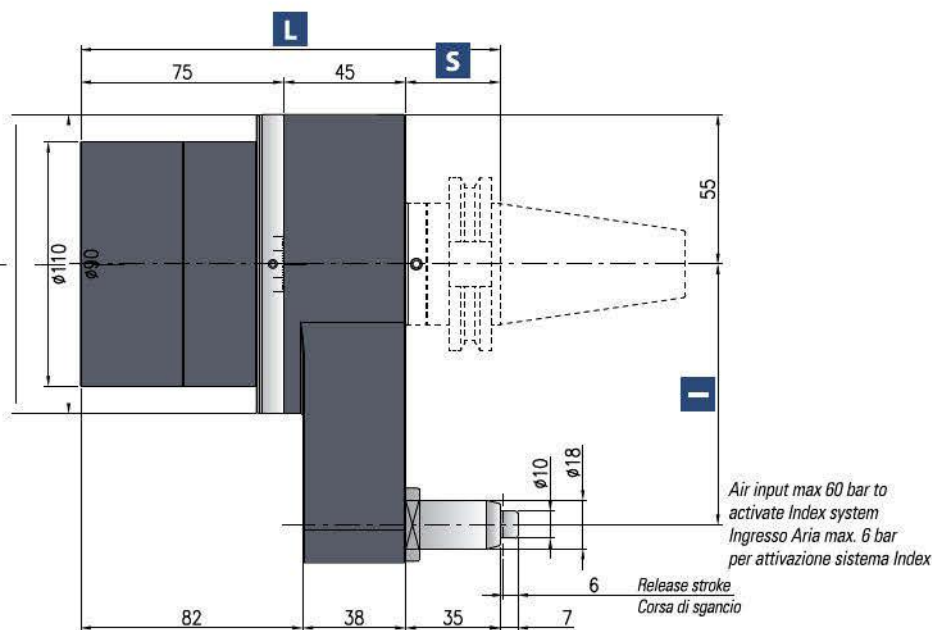
Technical Data / Dati Tecnici		T90-1,5
RPM max input. / Max. Velocità input min ⁻¹		8.000
Ratio		1:1
Weight / Peso	kg	4,3
Collet / Pinza		ER-16 1/10mm



LINEA CONTROL

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.

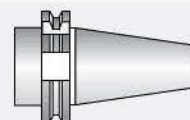
Automatic positioning of the cutting holder around 360° by using machine spindle through an internal clutch mechanism activated by compressed air max 6 bar. NO FIXED POSITION. ANY ANGLE POSSIBLE.



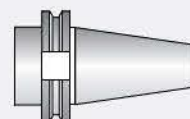
OPTIONAL DRIVE SHANK*

Non interchangeable input drive shank
Coni non intercambiabili

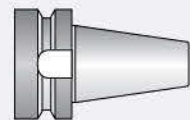
DIN-69871
ISO 40/50



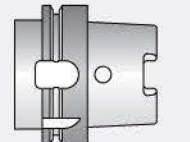
CAT
40/50



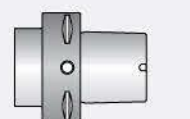
MAS-BT
40/50



HSK
63/80/100



CAPTO
C5/C6/C8



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

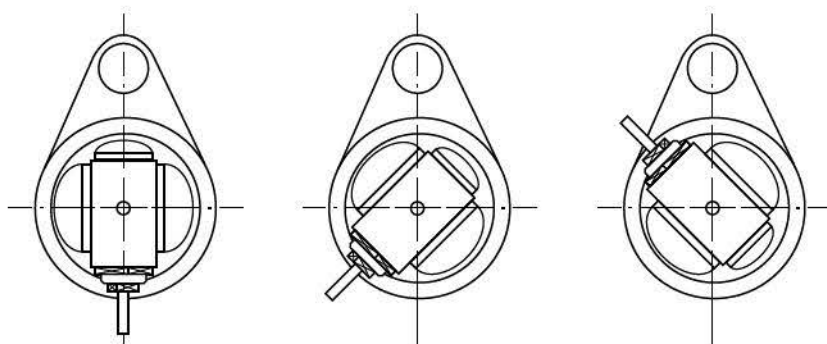
Lunghezza totale testa/ Total length (R+L)

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	270	276	277	280	273	275
T90-0.4	mm	265	265	265	271	272	275	268	270
T90-0.5	mm	257	257	257	263	264	267	260	262
T90-1.5	mm	237	237	237	243	244	247	240	242

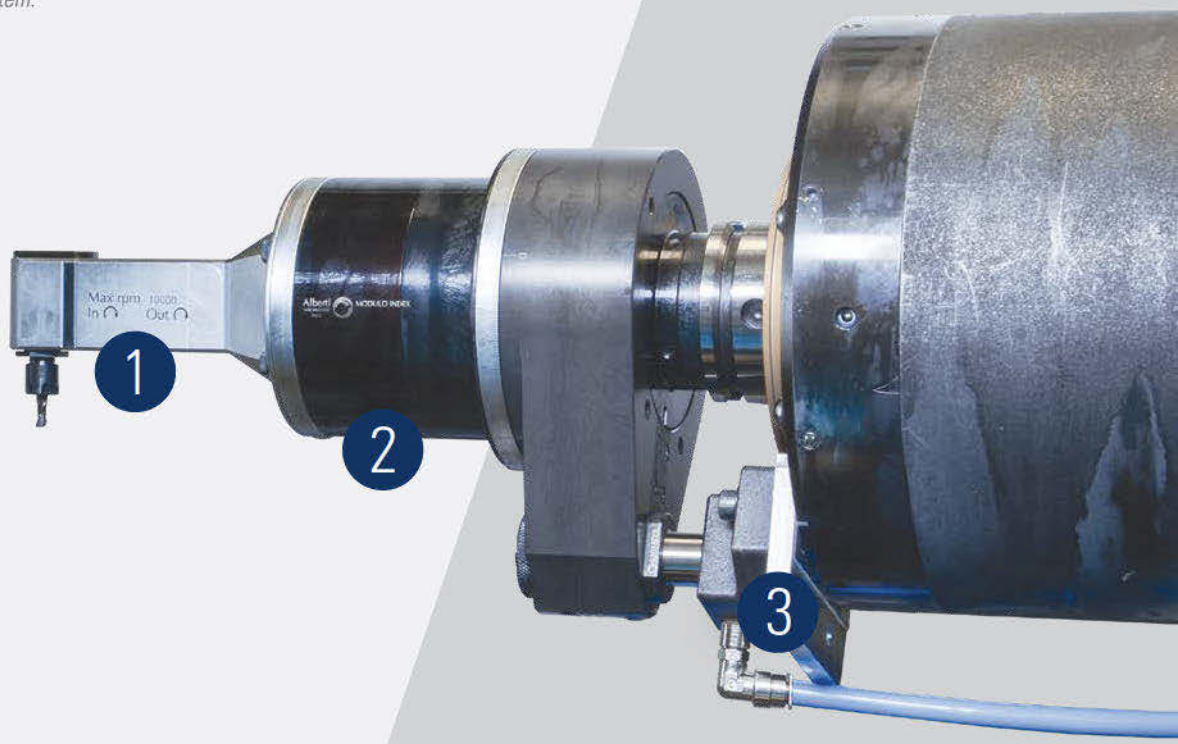
TESTE INDEX INDEX HEADS

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 variane 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.



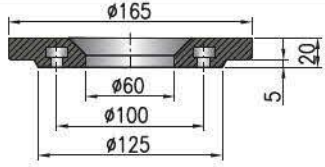
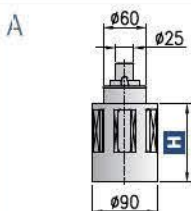
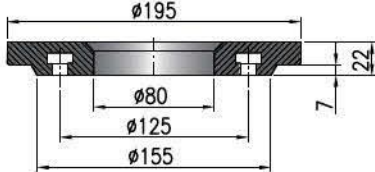
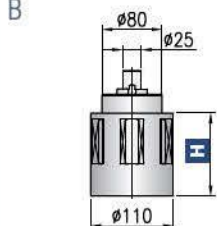
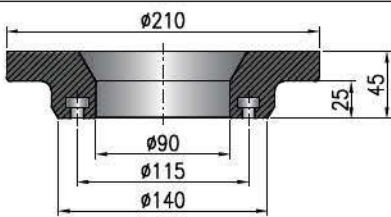
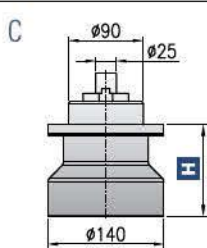
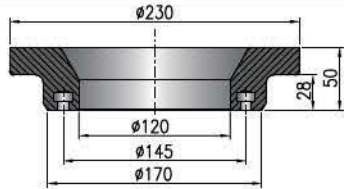
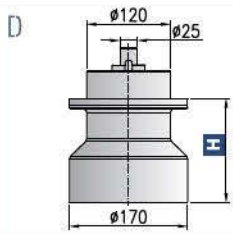
Esempio di montaggio in macchina / Example of mounting the head

LINEA MODULAR

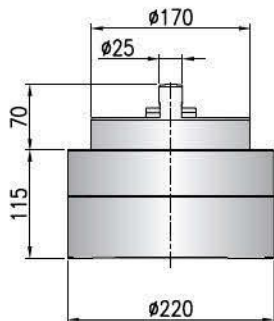
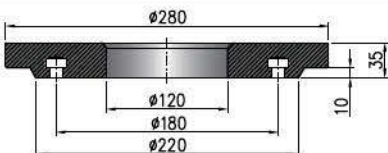
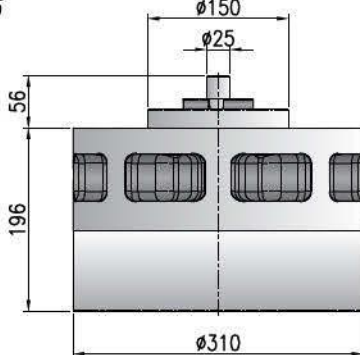
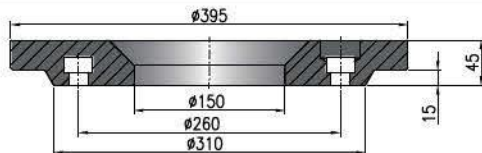
FLANGIA UNIVERSALE - MODULI DI PROLUNGA UNIVERSAL FLANGE - EXTENSION SPACER

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.

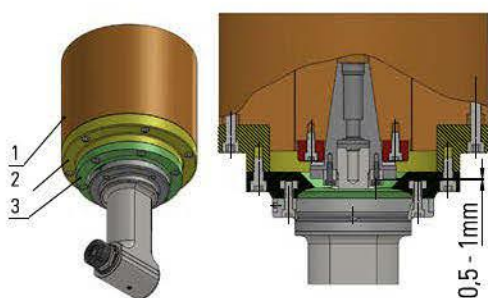
The modular system makes it possible to extend the length of the body by adding a spacer. The extension spacer, drive tapers and universal flange are modular and therefore interchangeable among all the heads of similar size.

	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

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

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

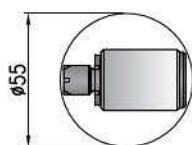
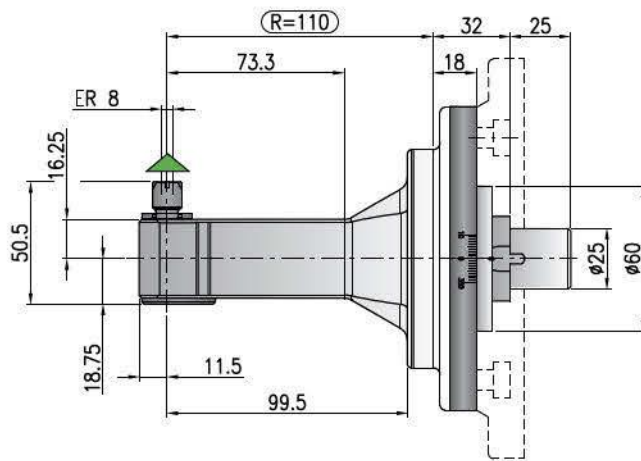


Weight
Peso
4 kg

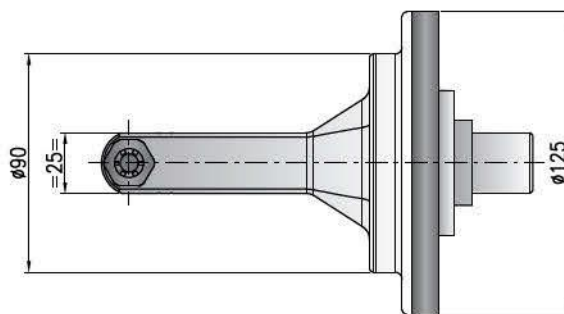


Collet
Pinza
ER-8 (ø 0,5/5 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



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



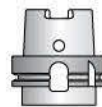
DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/Cono

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna

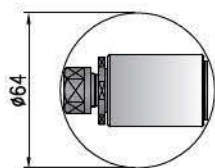
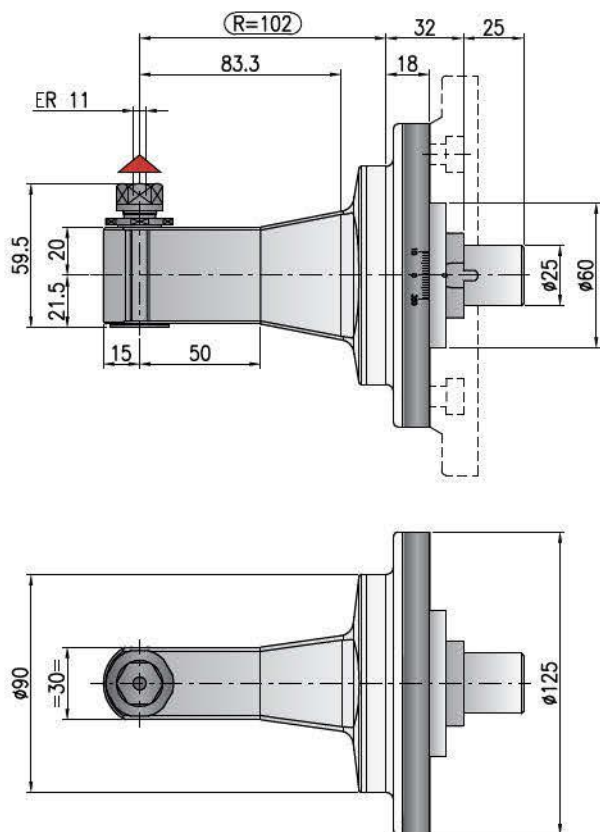


Ø mm max.
6

Weldon 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 (ø 0,5/7 mm)

*** STANDARD EQUIPMENT INCLUDES:**



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

Option / *Opzione*

bar max
12

Coolant through spindle
Adduzione refrigerante interna



Ø mm max.
6

Weldon 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

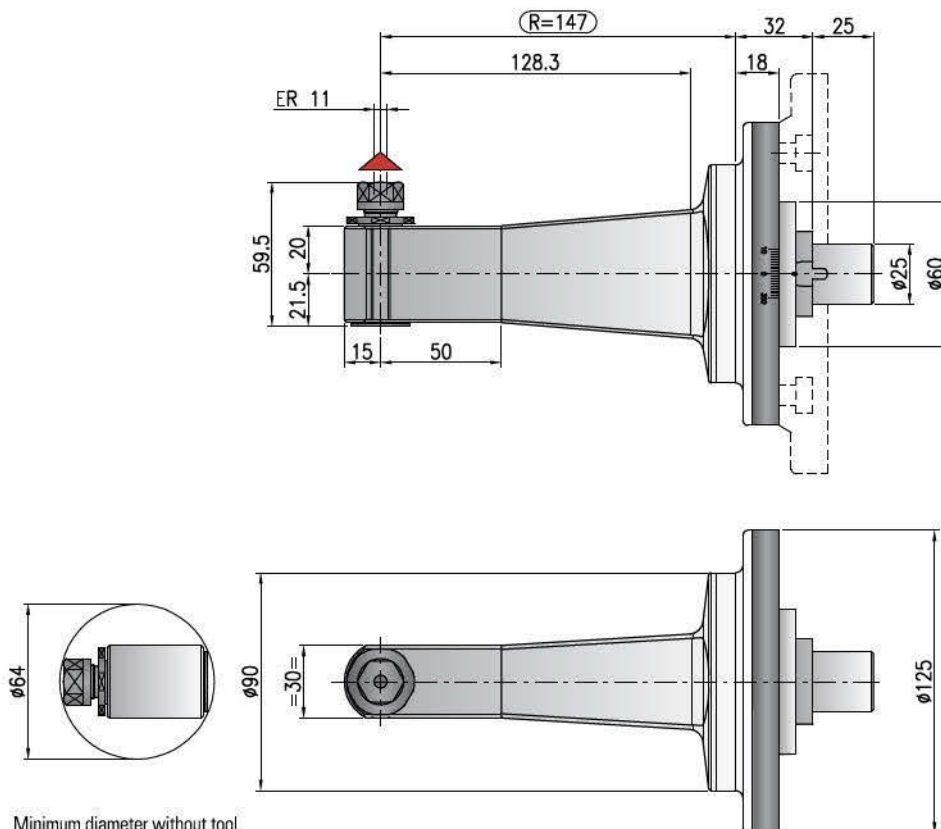


Weight
Peso
4,3 kg



Collet
Pinza
ER-11 (ø 0,5/7 mm)

* STANDARD EQUIPMENT INCLUDES:



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



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna

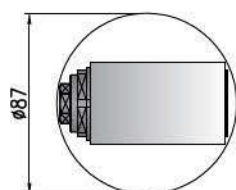
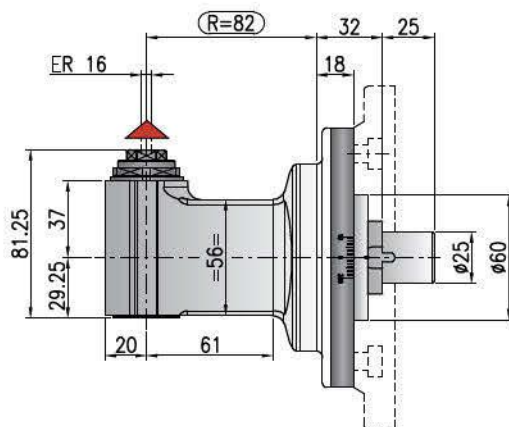


Ø mm max.
6

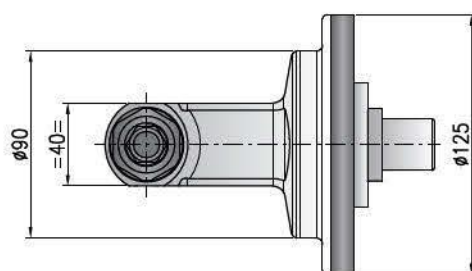
Weldon output
Weldon

T90-1,5

AMT9015C



Minimum diameter without tool
Diametro minimo senza utensile



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

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

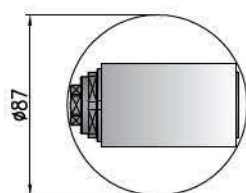
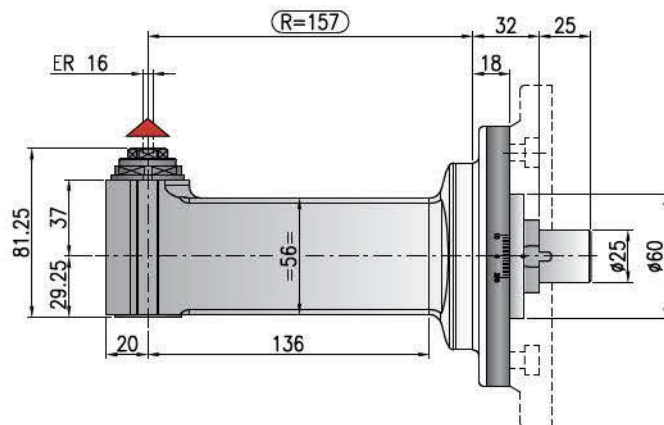


Weight
Peso
5,2 kg

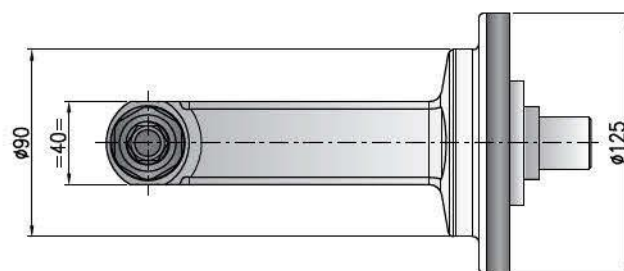


Collet
Pinza
ER-16 (ø 1/10 mm)

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



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



DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/Cono

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

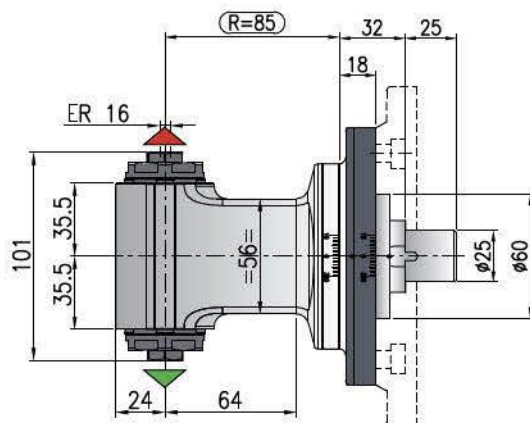


ER-16/ER11

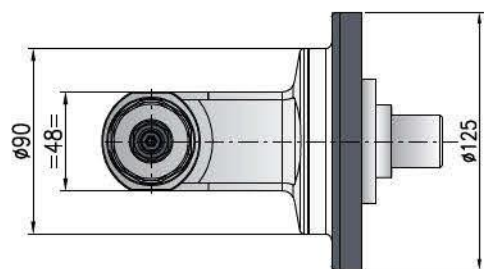
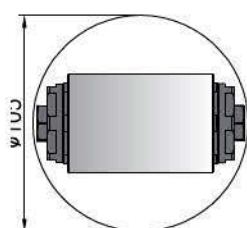
Double output
Doppia uscita

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

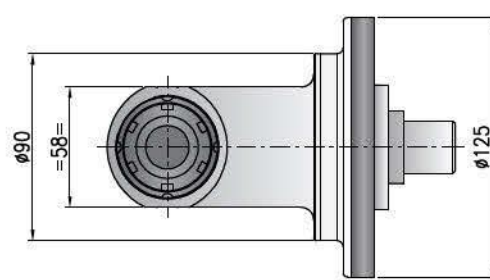
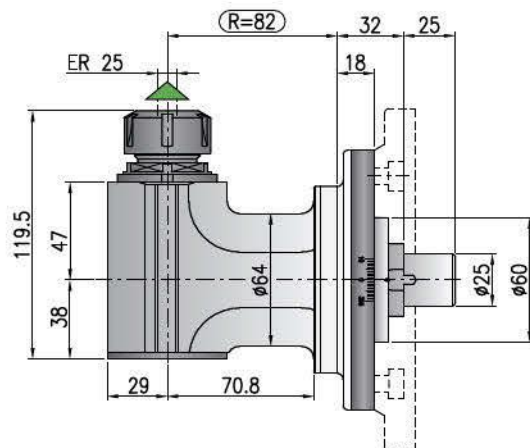
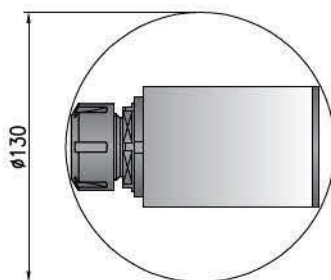


Collet
Pinza
ER-25 (ø 1/16 mm)

*** 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
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

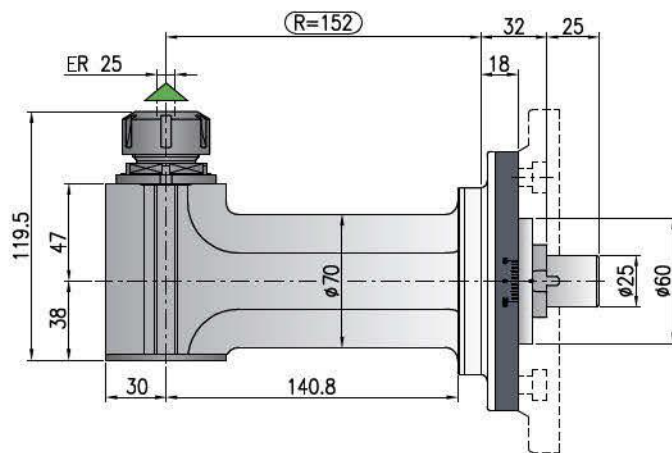


ER-25/ER-16

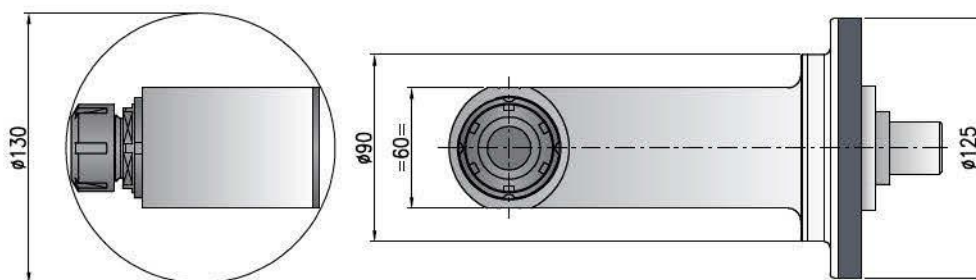
Double output
Doppia uscita

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

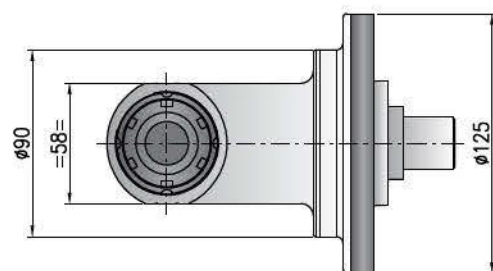
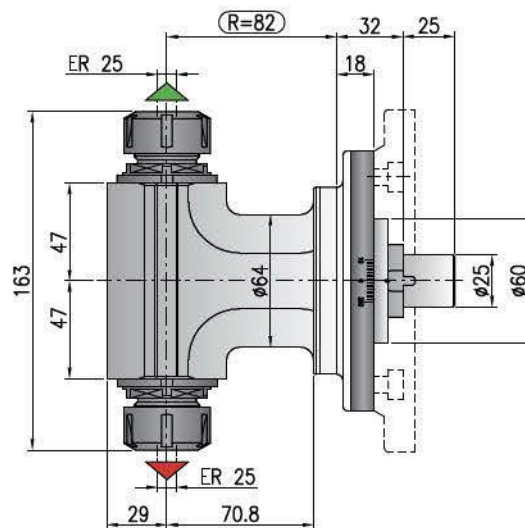
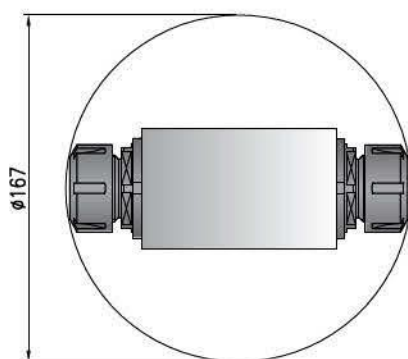


Collet
Pinza
ER-25 (ø 1/16 mm)

* 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

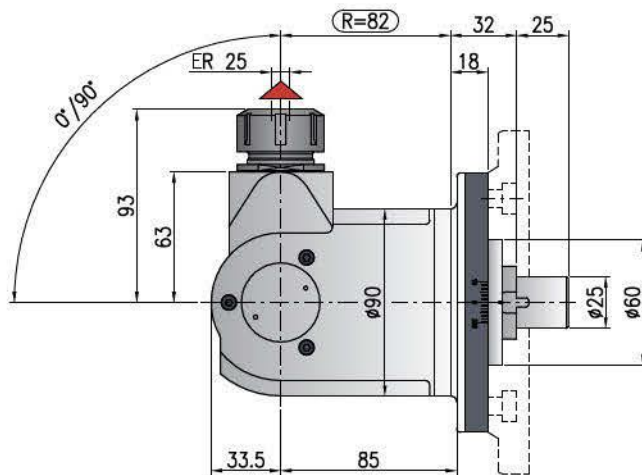


Ø mm max.
16

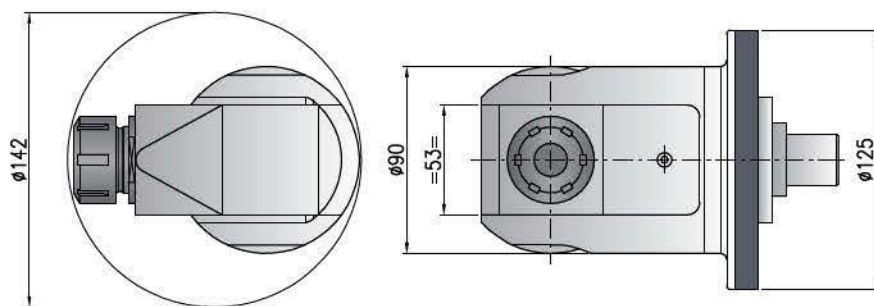
Welding output
Welding

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

Welding output
Welding

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

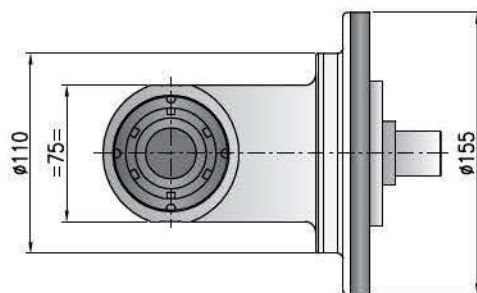
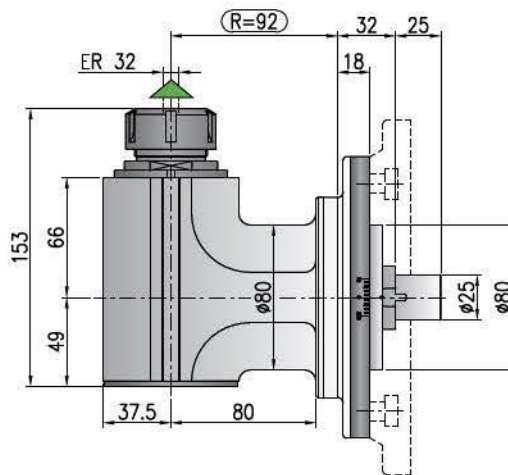
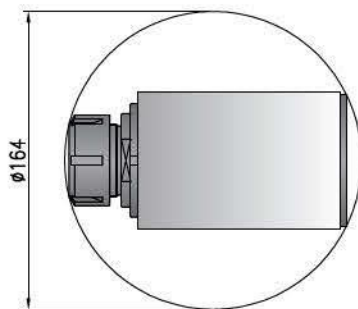


Collet
Pinza
ER-32 (ø 2/20 mm)

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



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



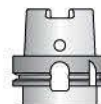
DIN-69871



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

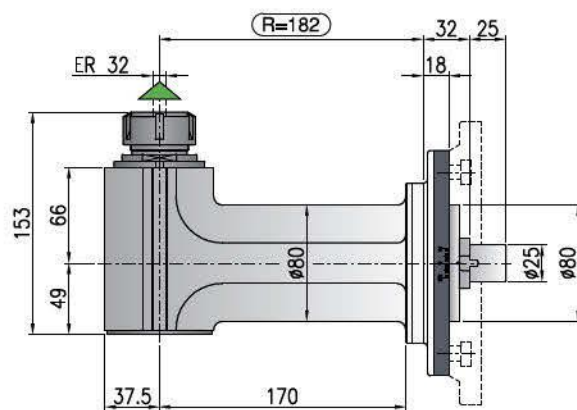


ER-32/ER-20

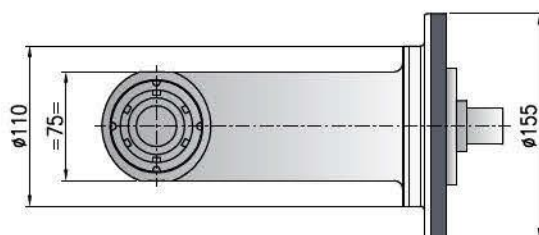
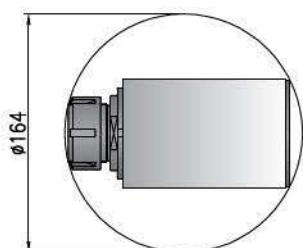
Double output
Doppia uscita

T90-3,5L

AMT9035L

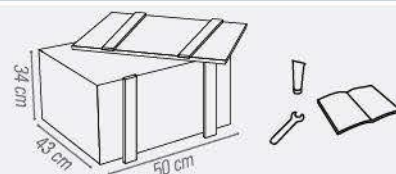


Minimum diameter without tool
Diametro minimo senza utensile



- | | |
|---|---|
|  | Ratio
<i>Rapporto</i>
1:1 |
|  | RPM
<i>Velocità</i>
4.000 min⁻¹ |
|  | Max. axial load
<i>Max. carico assiale</i>
1.250 N |
|  | Torque
<i>Momento torcente</i>
50 Nm |
|  | Weight
<i>Peso</i>
13,2 kg |
|  | Collet
<i>Pinza</i>
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

Option / *Opzione*

bar max
12

Coolant through spindle
Adduzione refrigerante interna

6.000 min^{-1}

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



Ø mm
27

Arbor output
Porta fresca



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

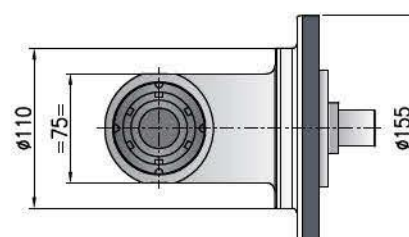
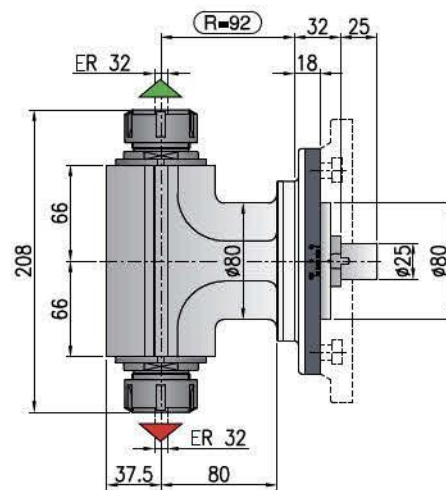
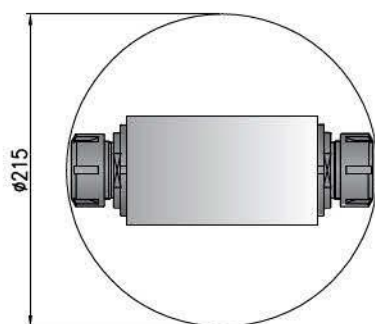
AMT9035D

-  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:



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
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

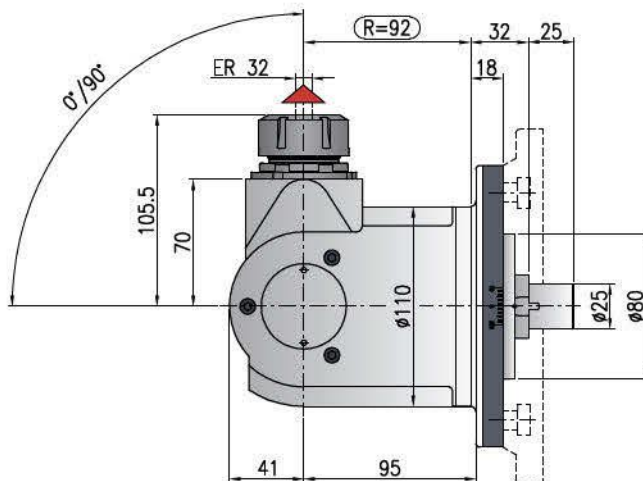


HSK-40

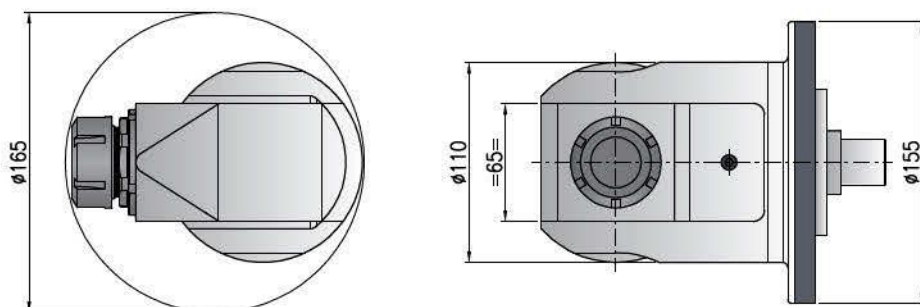
Quick Change
Attacco rapido

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

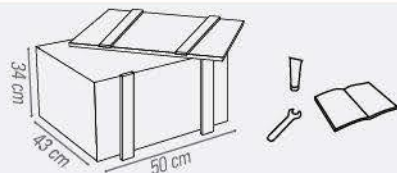
Weldon output
Weldon

T90-4,5

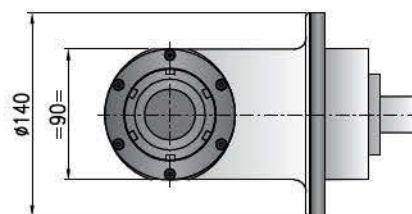
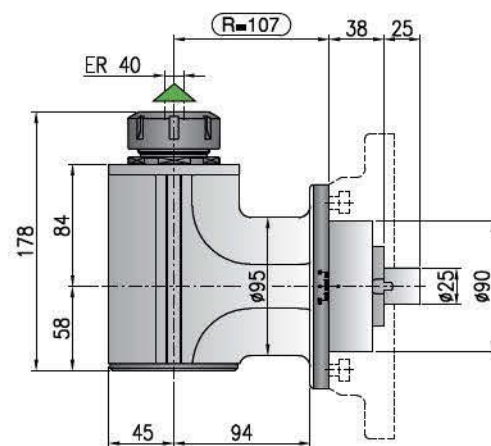
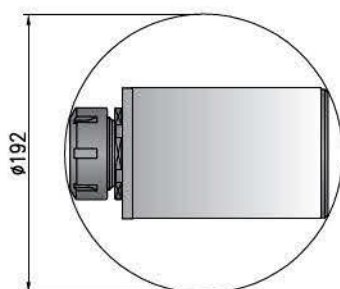
AMT9045C

-  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

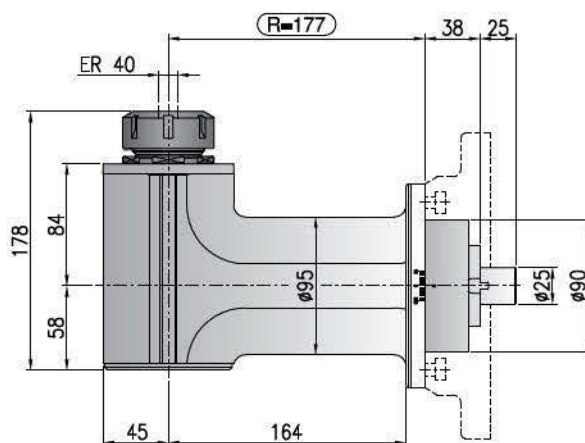
						
Shank/Cono	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM

Option / Opzione

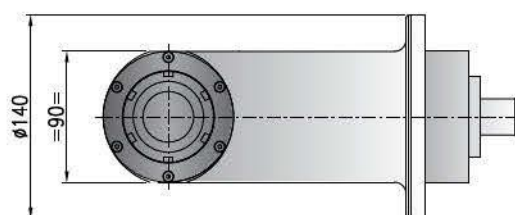
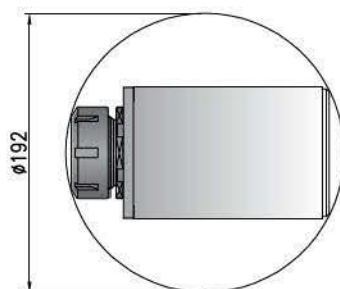
					
bar max 12	min ⁻¹ 6.000	Ø mm 27	Ø mm max. 25	ISO-30 HSK-40 CAPTO C4	ER-40/ER-25
Coolant through spindle Adduzione refrigerante interna	High speed optional RPM max. Opzione alta velocità RPM max.	Arbor output Porta fresa	Weldon output Weldon	Quick Change Attacco rapido	Double output Doppia uscita

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

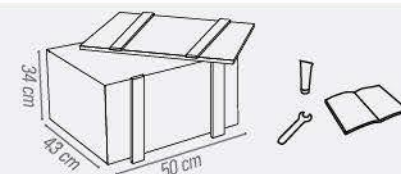


Weight
Peso
20 kg



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
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.
25
Weldon output
Weldon



ISO-30
HSK-40 CAPTO C4
Quick Change
Attacco rapido



ER-40/ER-25
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

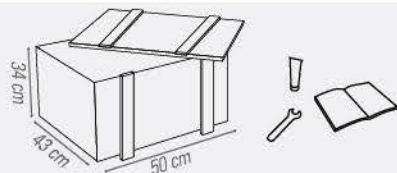


Weight
Peso
22 kg

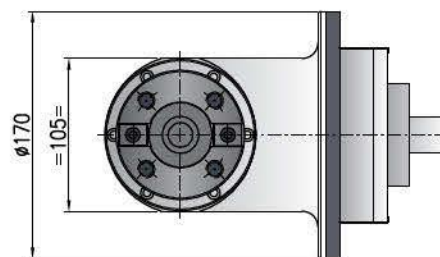
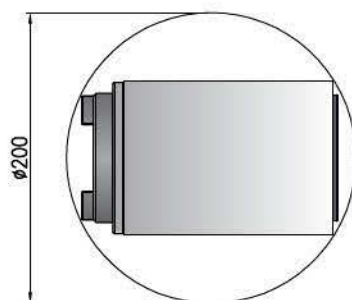
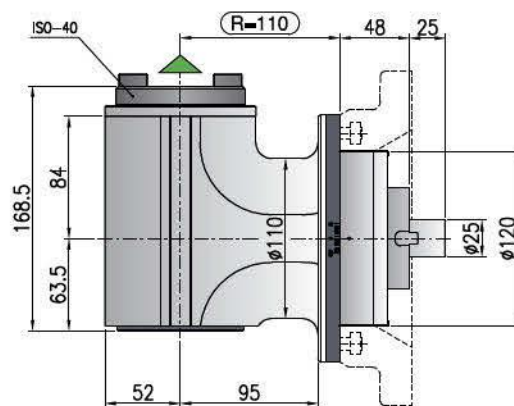


Collet
Pinza
ISO/BT 40

*** 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
Addizione 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



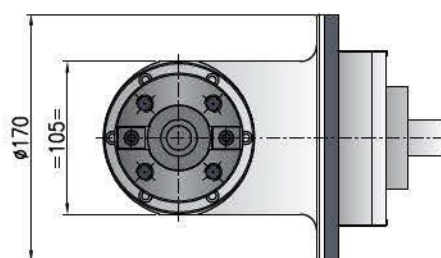
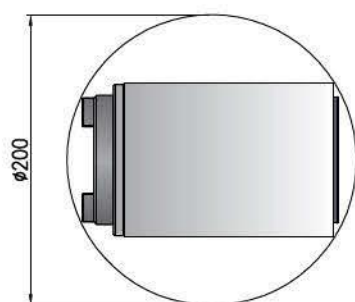
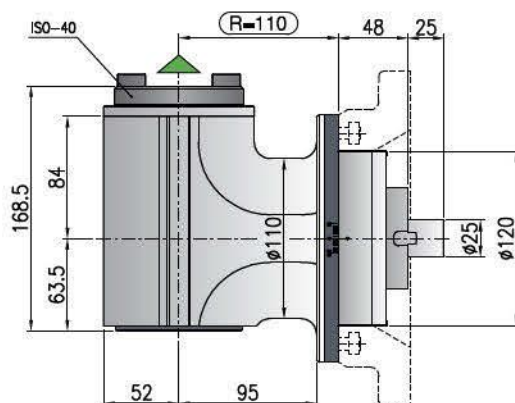
AIR/OIL

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

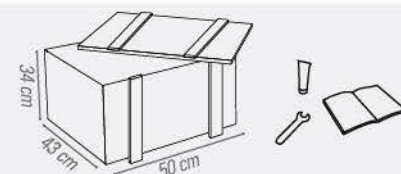


Weight
Peso
22 kg



Collet
Pinza
ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**



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



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

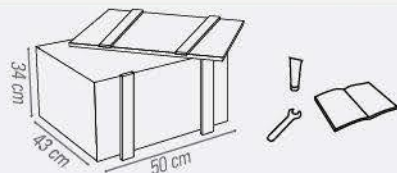
Air / oil lubrication
Lubrificazione aria / olio

T90-5L

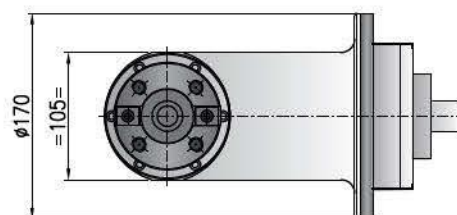
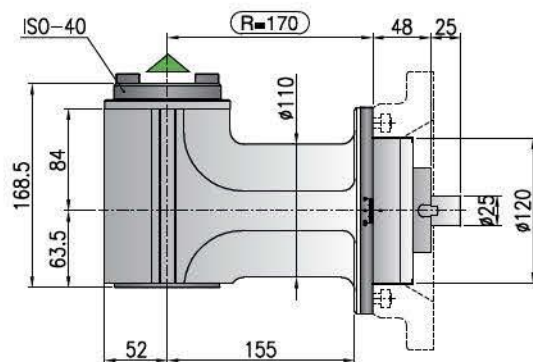
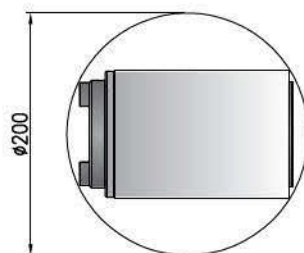
AMT9050L

-  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

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

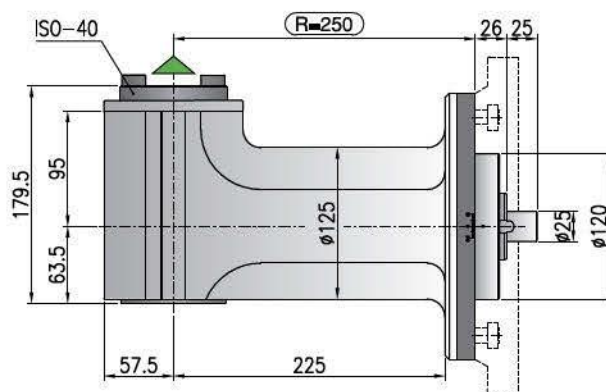


AIR/OIL

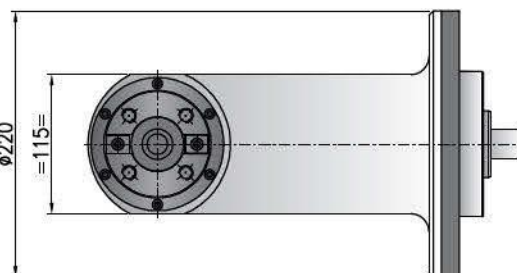
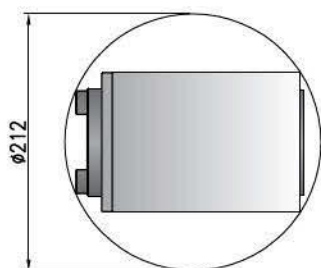
Air / oil lubrication
Lubrificazione aria / olio

T90-8 HS

APT908HS



Minimum diameter without tool
Diametro minimo senza utensile



Ratio
Rapporto
1:1



RPM
Velocità
5.000 min⁻¹



Max. axial load
Max. carico assiale
2.400 N



Torque
Momento torcente
100 Nm

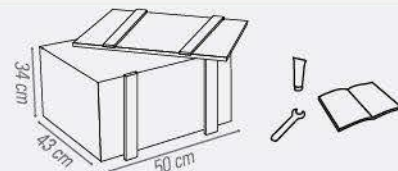


Weight
Peso
33 kg



ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**



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

T90-8 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

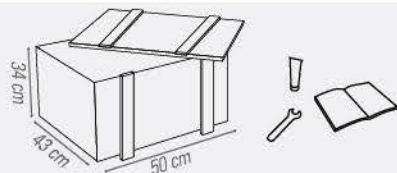


Weight
Peso
33 kg

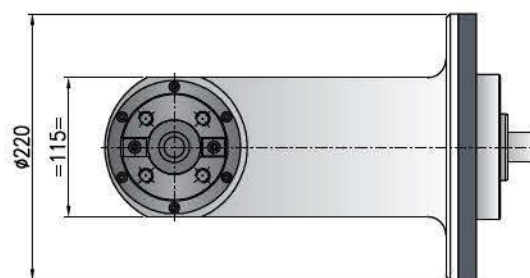
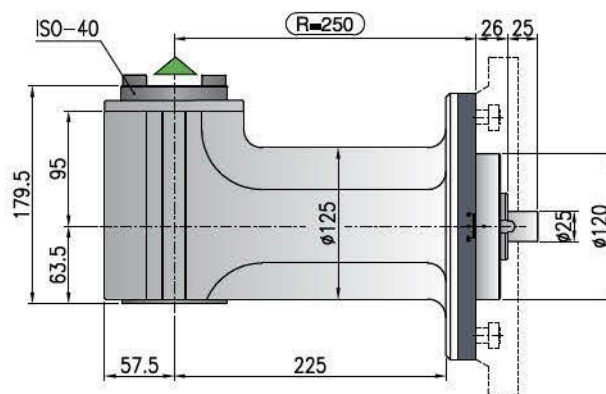
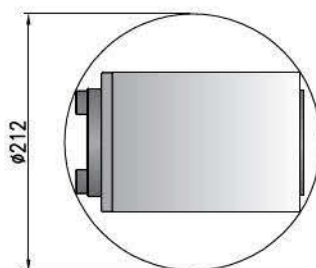


ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



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



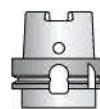
DIN-69871



CAT



MAS-BT



HSK



CAPTO



KM

Shank/Cono

Option / Opzione



bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63A CAPTO C4 C5

Quick Change
Attacco rapido



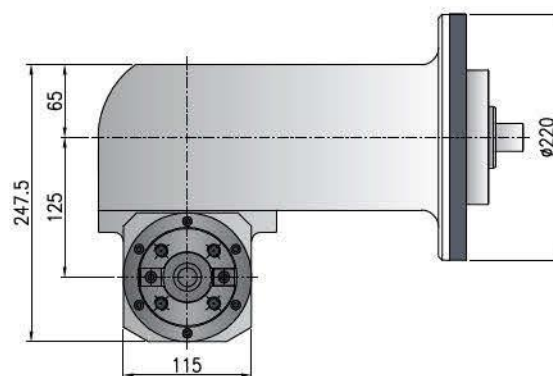
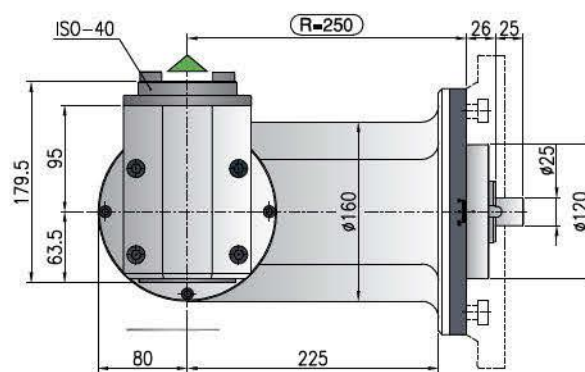
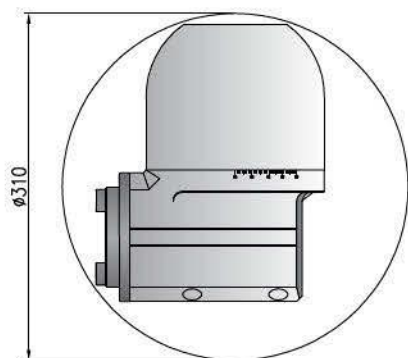
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

TDU-8

APTDU80C

Minimum diameter without tool
Diametro minimo senza utensile



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
2.400 N



Torque
Momento torcente
100 Nm

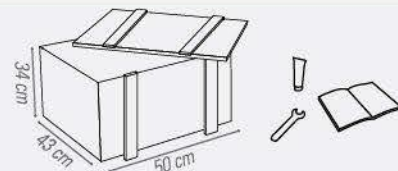


Weight
Peso
50 kg



Collet
Pinza

*** STANDARD EQUIPMENT INCLUDES:**



	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

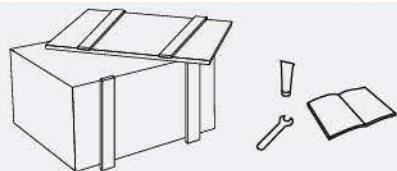


Torque
Momento torcente
100 Nm

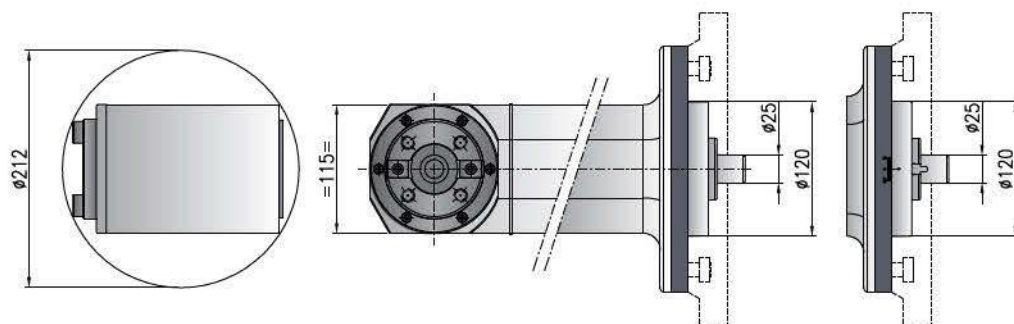


Collet
Pinza
ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**

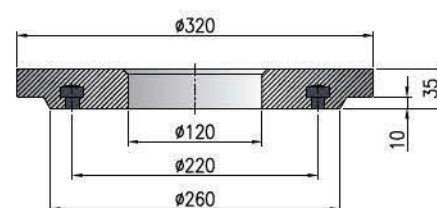
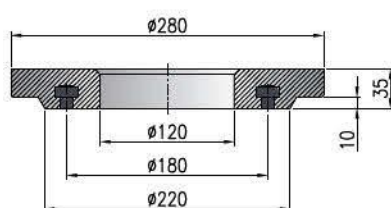


Minimum diameter without tool
Diametro minimo senza utensile



R= 450 / 650

R= 850



▲ 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



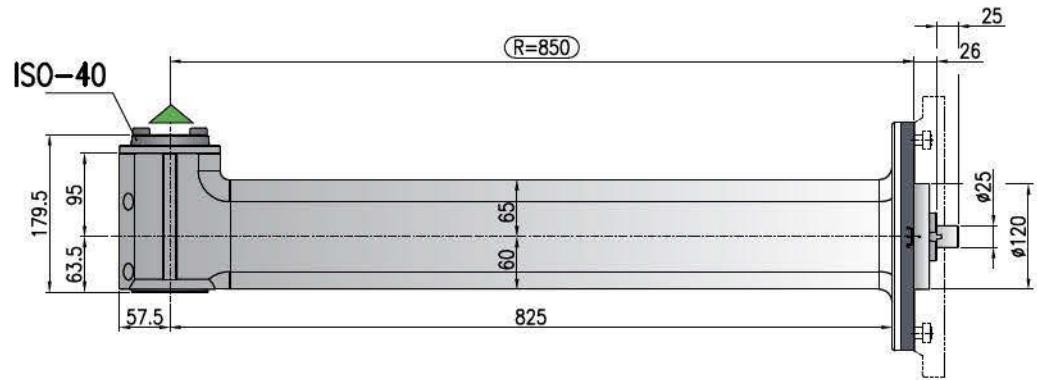
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

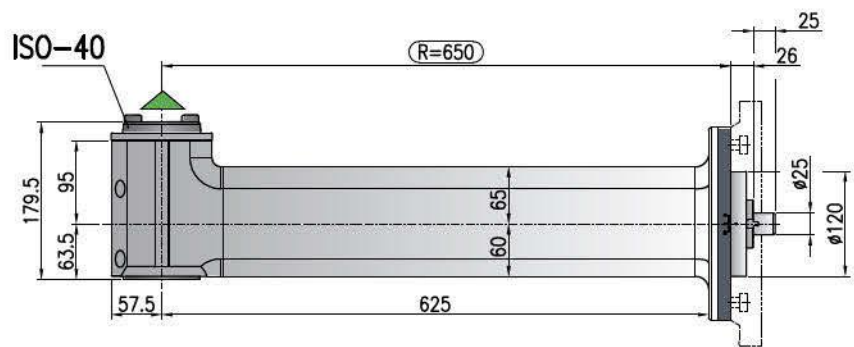
APT9080P.450 / APT9080S.650 / APT9080S.850



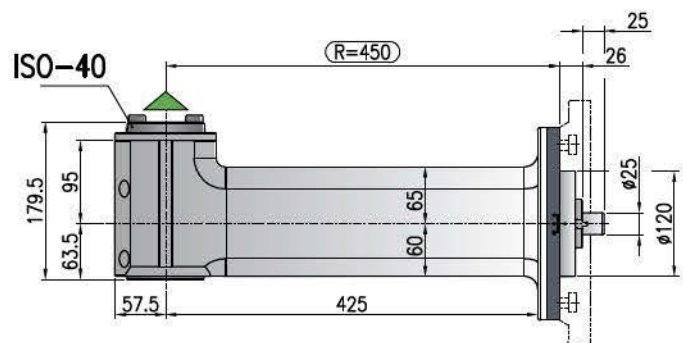
Weight
Peso
105 kg



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

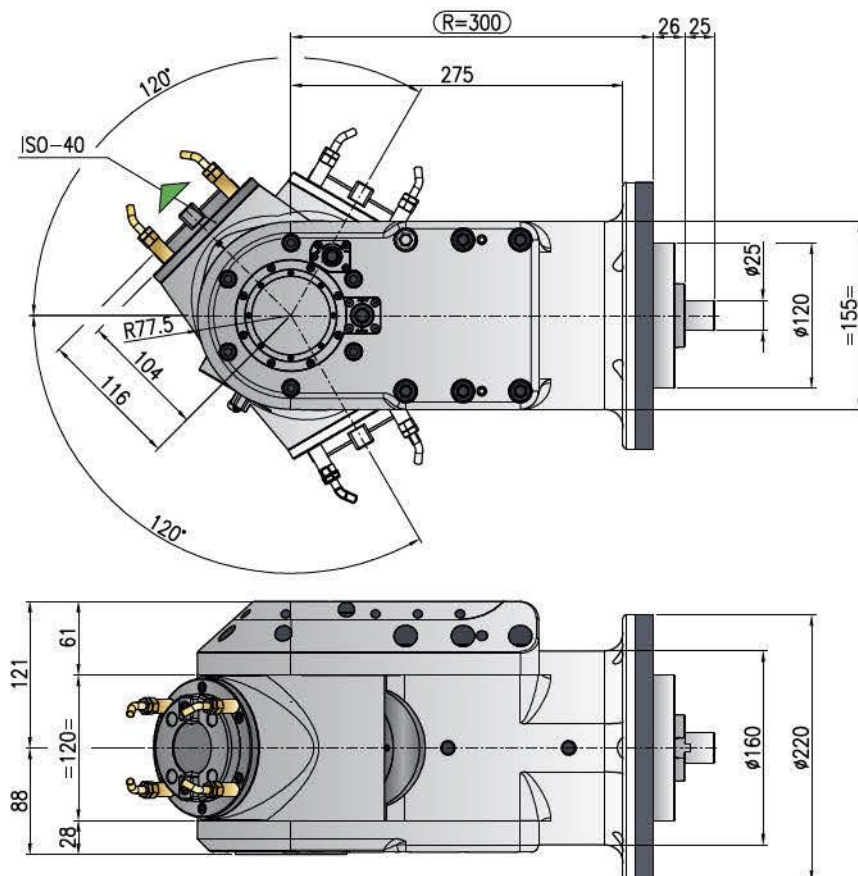
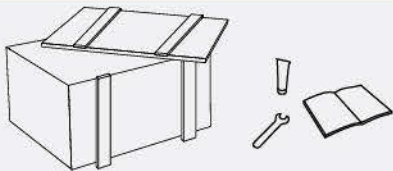


Weight
Peso
72 kg



ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**



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

Shank/*Cono*

DIN-69871

CAT

MAS-BT

HSK

CAPTO

KM

Option / *Opzione*

bar max
12

Coolant through spindle
Adduzione refrigerante interna



HSK-63

Quick Change
Attacco rapido



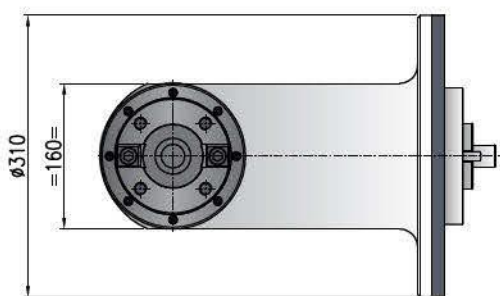
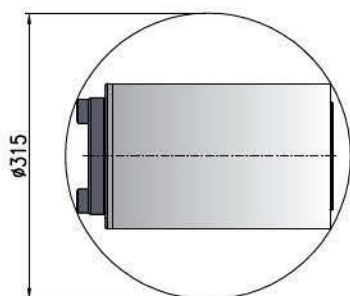
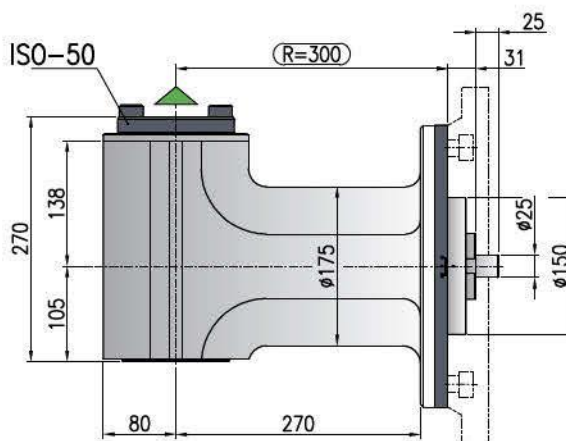
OIL

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

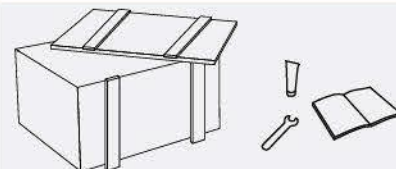


Weight
Peso
77 kg



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				

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

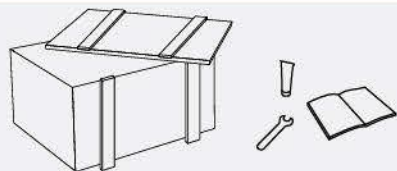


Weight
Peso
121 kg

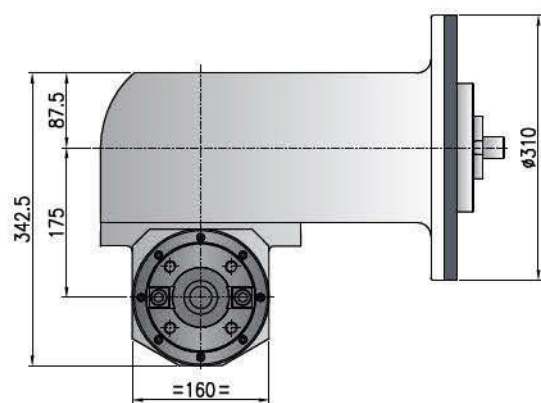
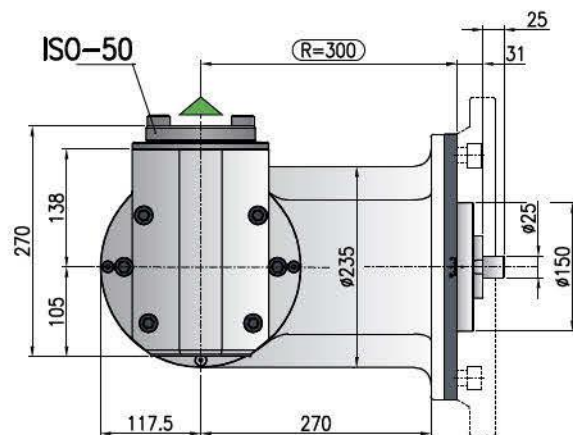
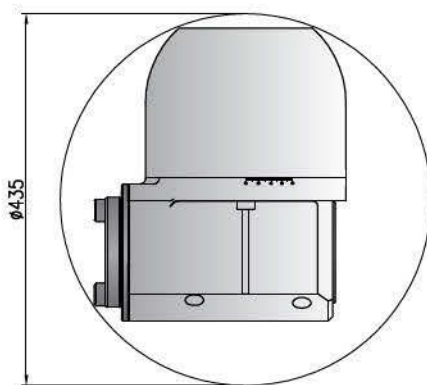


Collet
Pinza
ISO/BT 50

*** 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

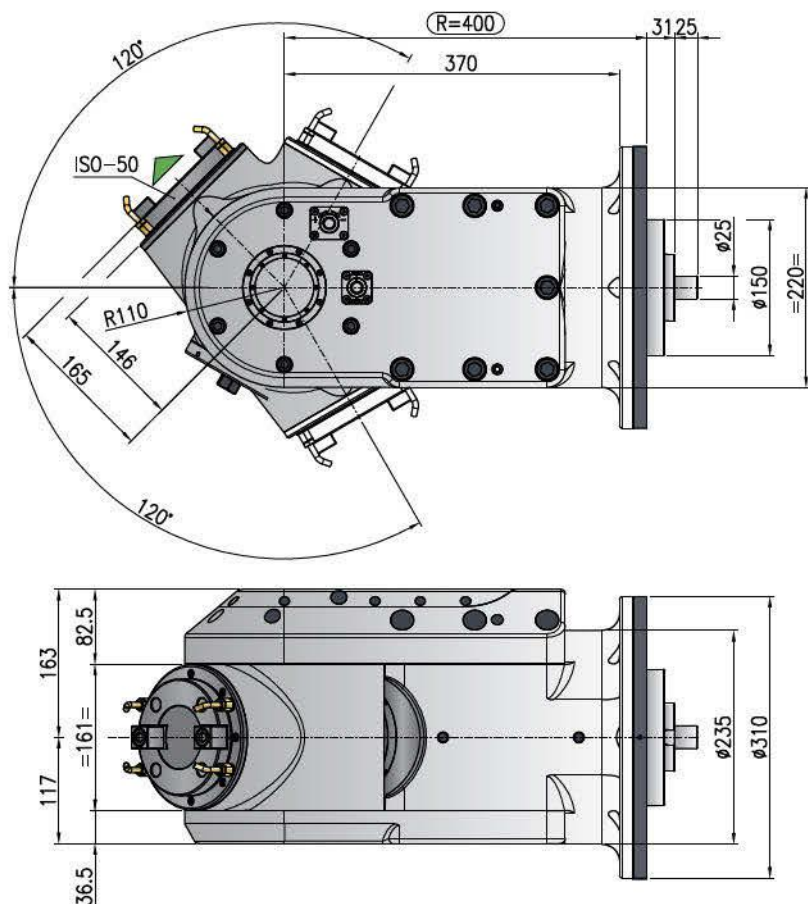


AIR/OIL

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

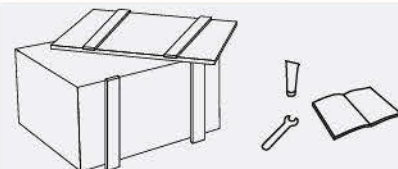


Weight
Peso
194 kg



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



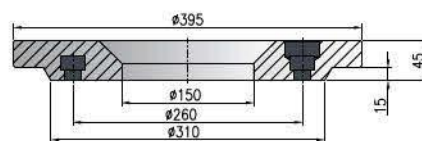
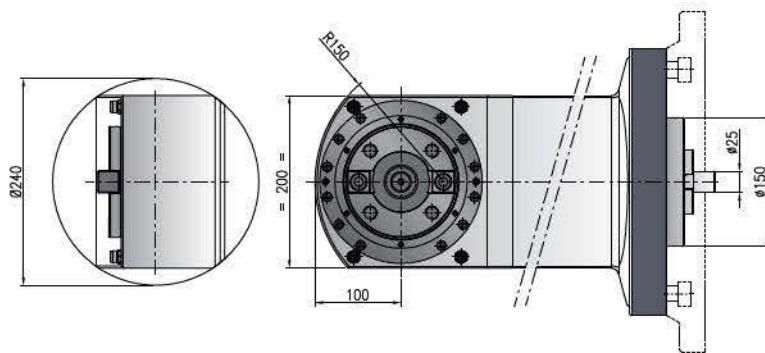
Max. axial load
Max. carico assiale
3.900 N



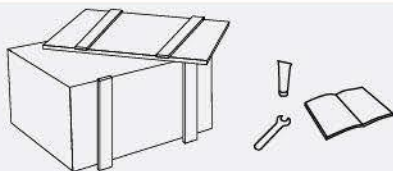
Torque
Momento torcente
600 Nm



Collet
Pinza
ISO/BT 50



*** STANDARD EQUIPMENT INCLUDES:**



▲ Direction of rotation same as machine spindle / 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



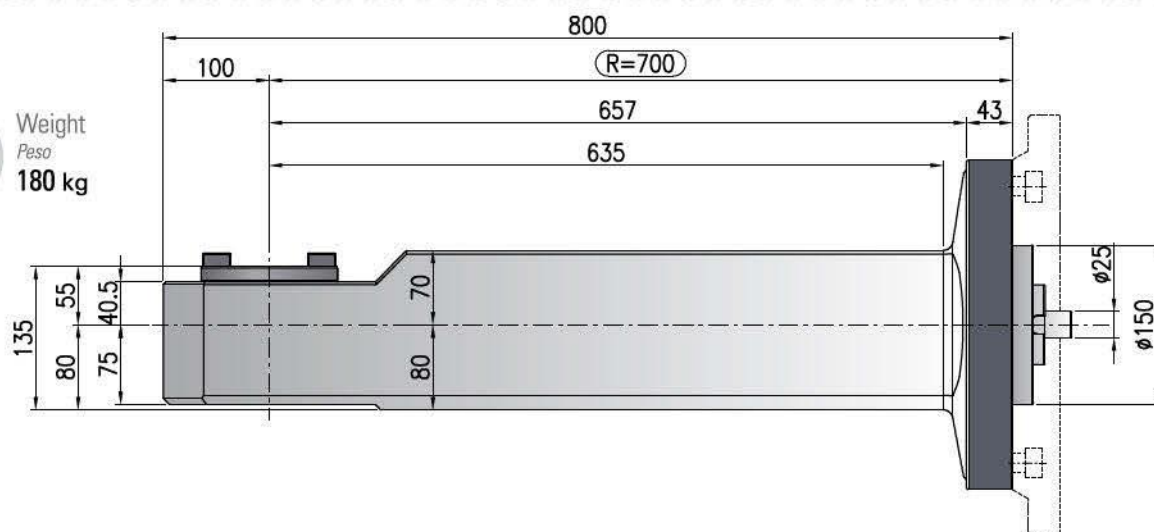
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

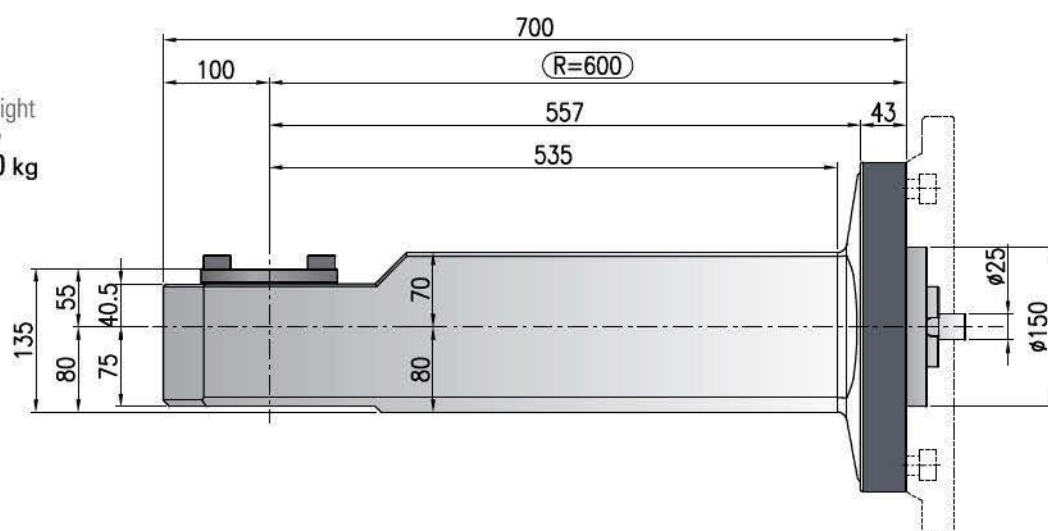
APTTR9015C



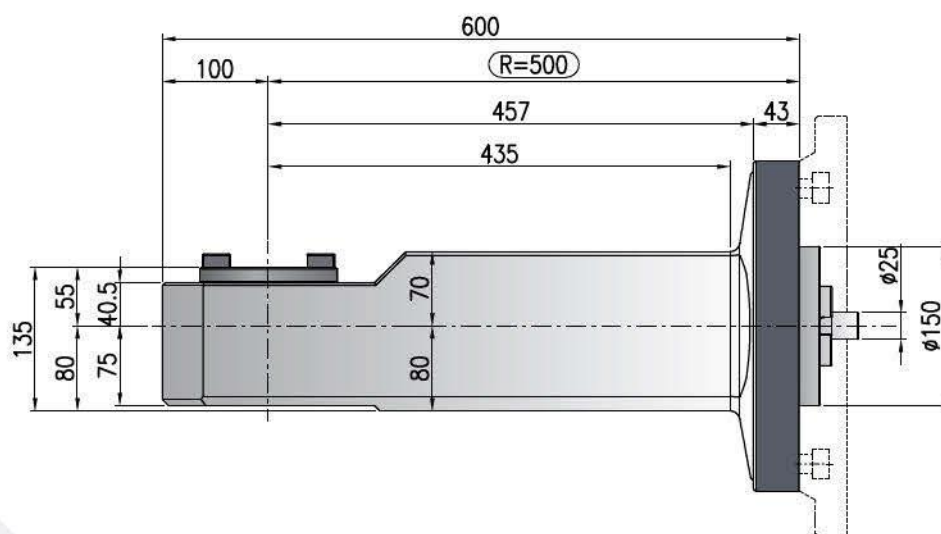
Weight
Peso
180 kg



Weight
Peso
140 kg



Weight
Peso
110 kg





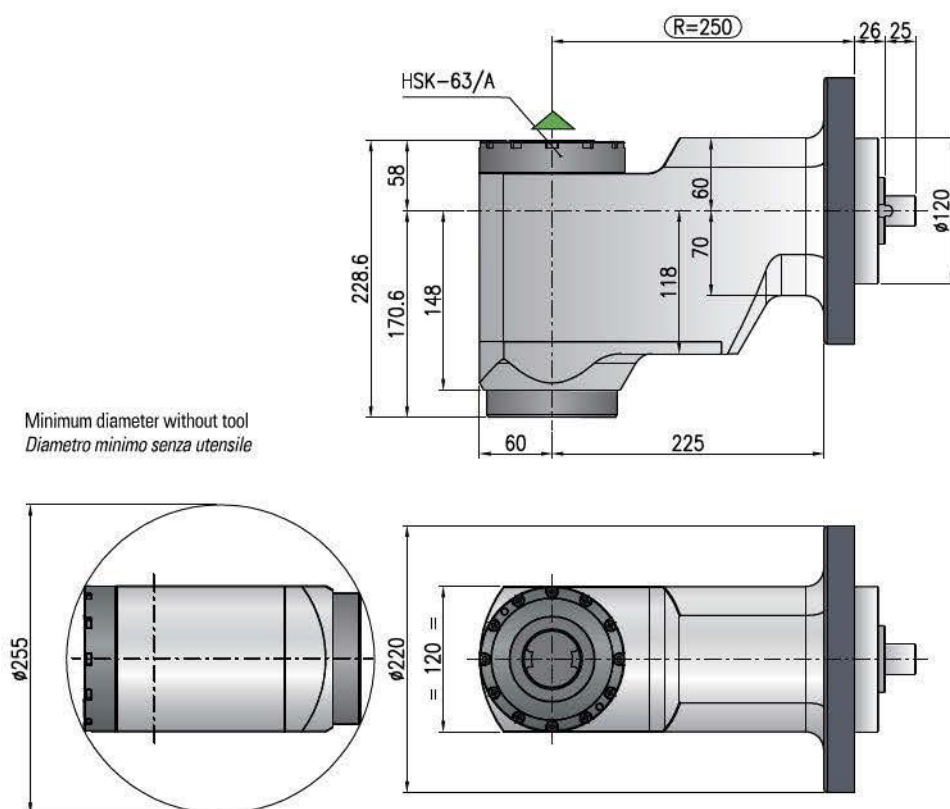
TESTE "AUTO" CON TIRANTE AUTOMATICO "AUTO" ANGLE HEADS WITH AUTOMATIC CLAMPING TOOL

- 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:**



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

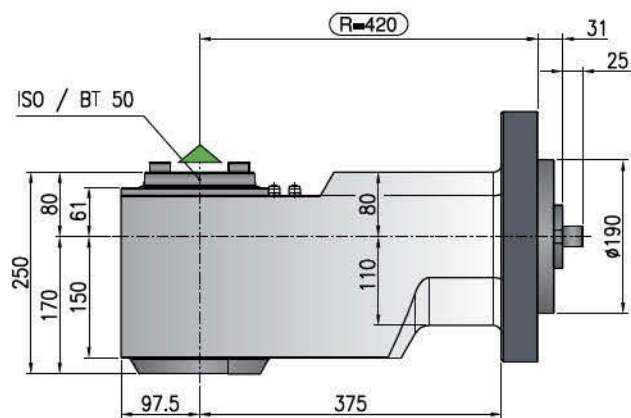
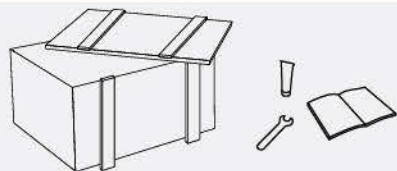


Weight
Peso
180 kg

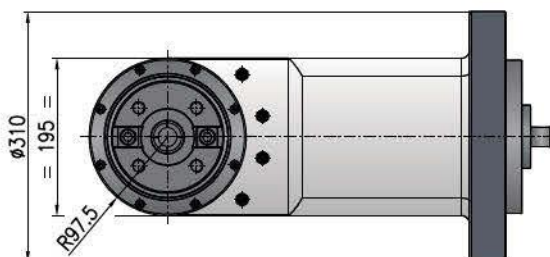
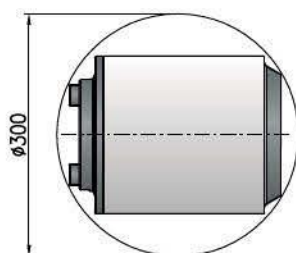


ISO/ BT50

* STANDARD EQUIPMENT INCLUDES:



Minimum diameter without tool
Diametro minimo senza utensile



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



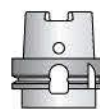
DIN-69871



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



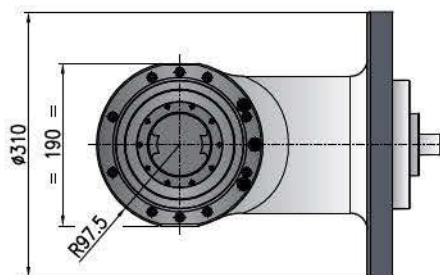
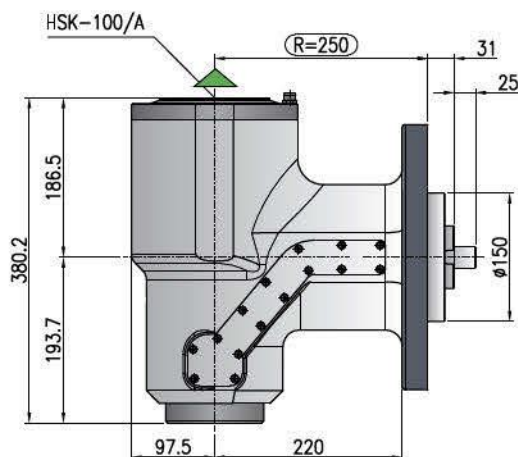
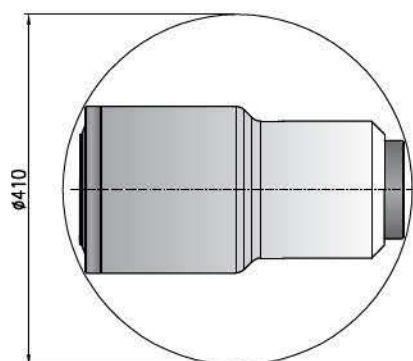
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio

T90-15 AUTO

APT9015A

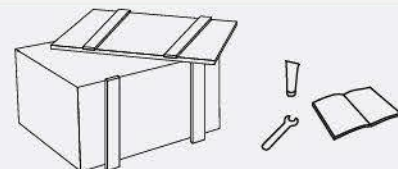
Minimum diameter without tool
Diametro minimo senza utensile



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



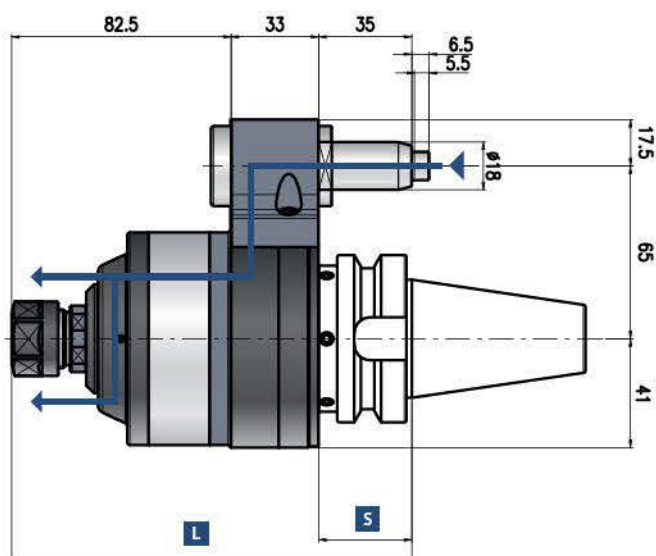
MOLTIPLICATORE ELETTRICO
ELECTROSPINDLE
Max 80.000 RPM

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

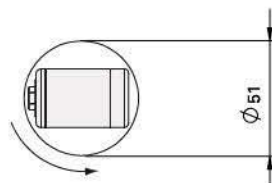
ROTAZIONE CON MANDRINO MACCHINA - SLIMLINE SPINDLE DRIVEN

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

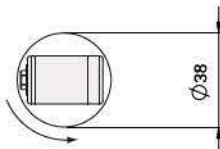
RPM max. input / Max. Velocità input	15.000
Rt. reduction / Rt. in riduzione	1/2,67
Weight / Peso	Kg 3,5

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

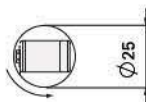
RPM max. input / Max. Velocità input	15.000
Rt. reduction / Rt. in riduzione	1/1,5
Weight / Peso	Kg 3,5

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

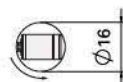
RPM max. input / Max. Velocità input	15.000
Rt. reduction / Rt. in riduzione	3/4
Weight / Peso	Kg 3

MFC-300 S

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

RPM max. output
Max. Velocità output

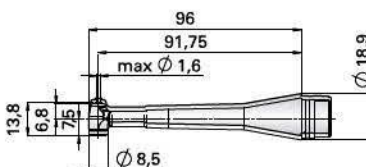
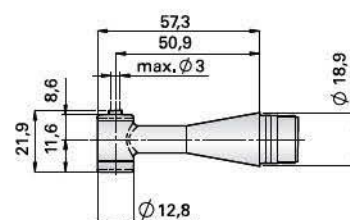
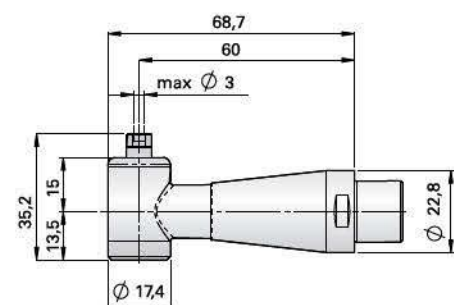
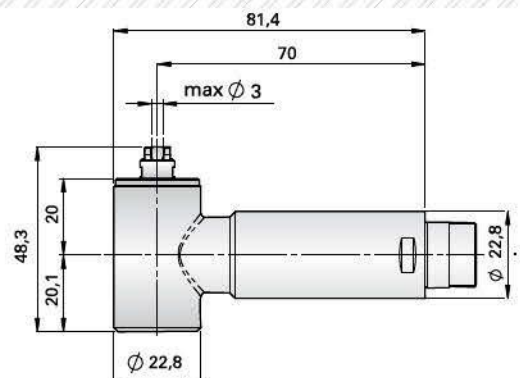
15.000 rpm



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.



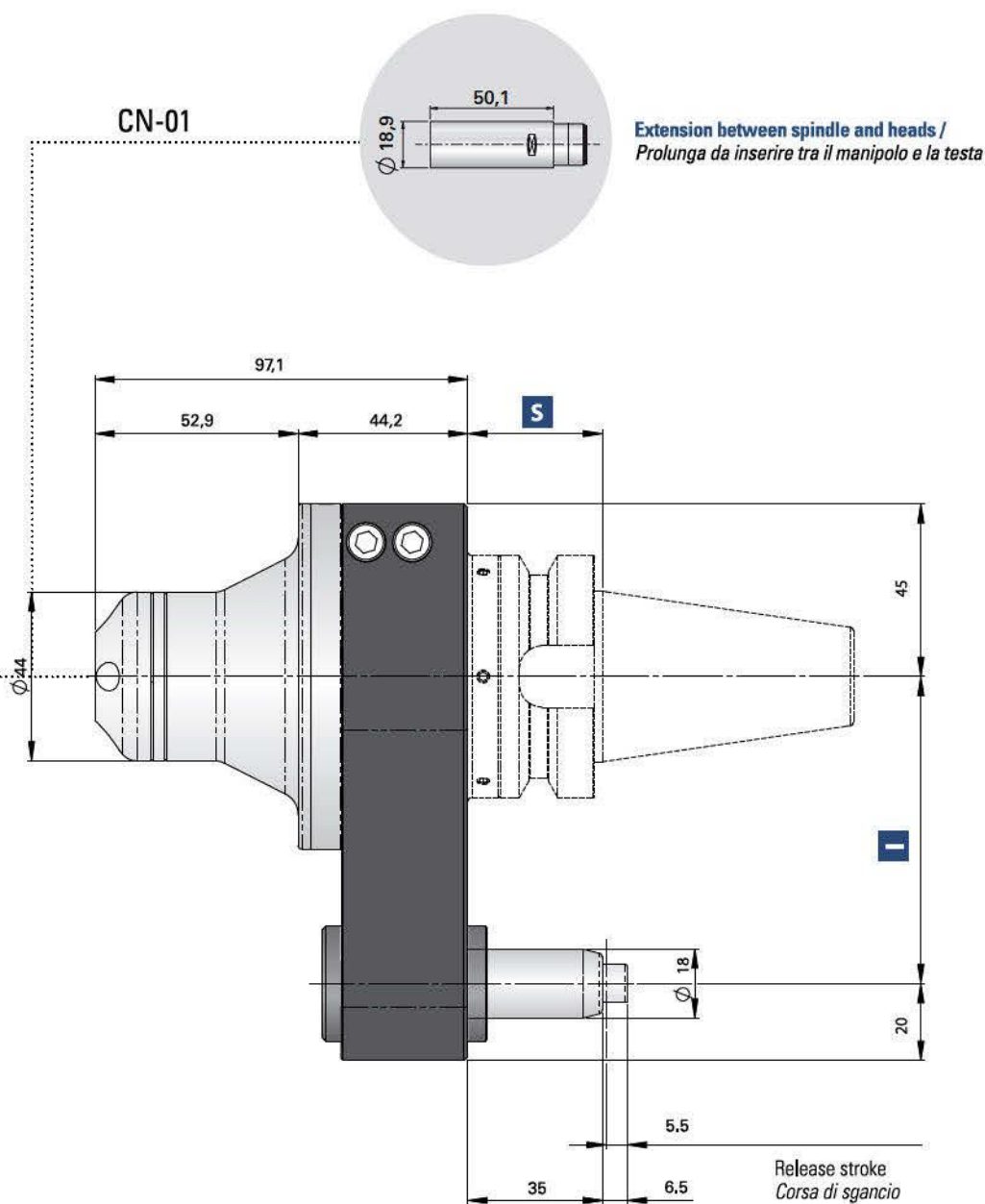
Coolant Option

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



Collet

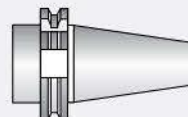
RA-100	mm	CH8: Ø3 mm every 0,1 mm Ø 3mm
RA-200	mm	CHS: Ø3mm, 2,35 every 1,6 and Ø2,35, Ø3,175
IC-300	mm	CHC: Ø3mm, Ø2,35mm, Ø1,6 mm, Ø2,00mm and Ø3,175 mm
MFC-300	mm	K252 Ø1,6mm



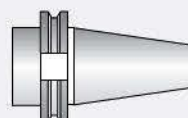
OPTIONAL DRIVE SHANK*

Non interchangeable input drive shank
Coni non intercambiabili

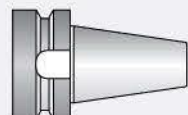
DIN-69871
ISO 40/50



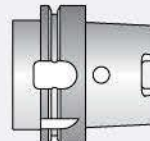
CAT
40/50



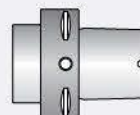
MAS-BT
40/50



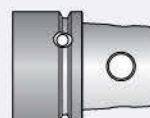
HSK
63/80/100



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

<i>Accessories / Accessori</i>	RA-100	RA-200	IC-300	MFC-300
<i>Retaining block / Tassello di ritegno</i>	Ø18 mm	Ø18 mm	Ø18 mm	Ø18 mm
<i>Extension / Prolunga</i>	CN-01	CN-01	CN-01	CN-01

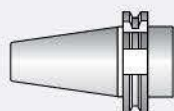
**Retaining block / Tassello di ritegno /
Stop-Block**



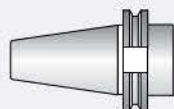
**NOT INCLUDED
NON INCLUSO**

TESTE CON MOTORE AD ARIA AIR DRIVEN ANGLE HEADS

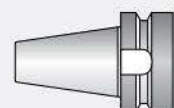
OPTIONAL DRIVE SHANK*
Non interchangeable input drive shank
Coni non intercambiabili



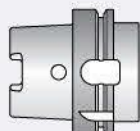
**DIN-69871
ISO 40/50**



**CAT
40/50**



**MAS-BT
40/50**



**HSK
63/80/100**



**CAPTO
63/80/100**

Air line kit / Filtro regolatore aria

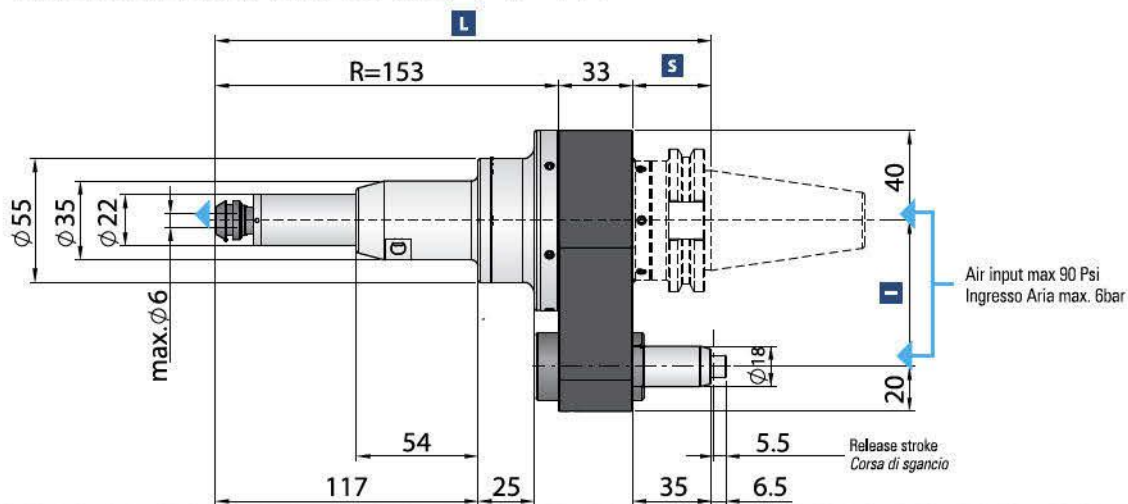


Retaining block /
Tassello di ritegno /
Stop-Block

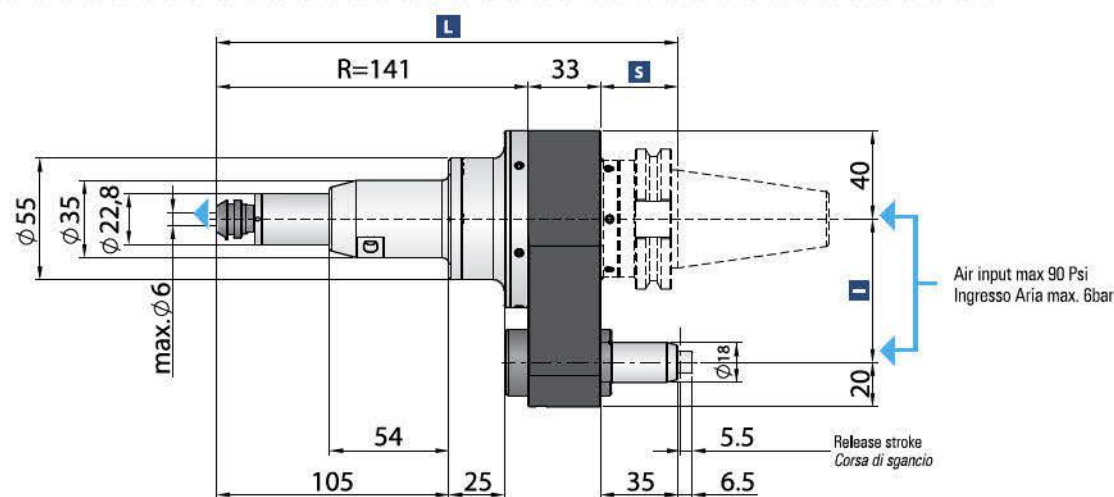


**NOT INCLUDED
NON INCLUSO**

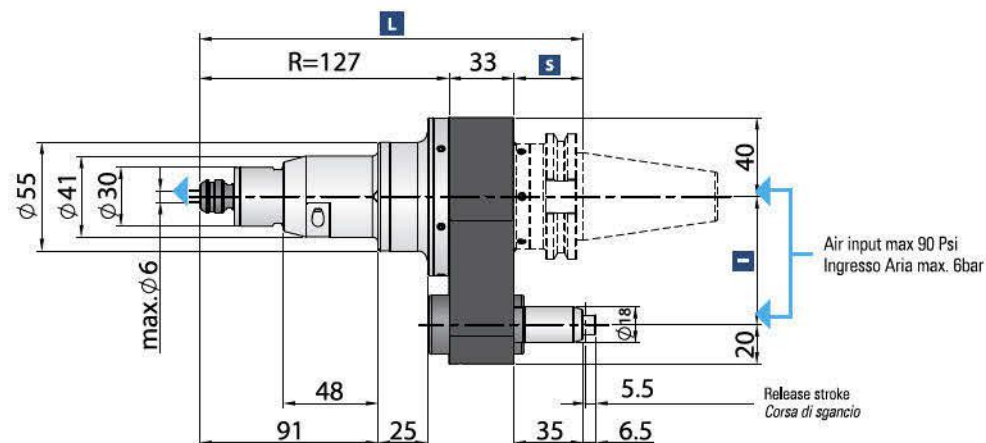
Turboflex 60.000 RPM



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	NI/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
Precisione del Mandrino | 0,002 mm
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	NI/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
Precisione del Mandrino | 0,002 mm
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	NI/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
Precisione del Mandrino | 0,002 mm
0,00008 inch.

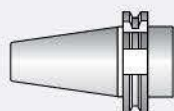


È severamente vietato far ruotare il mandrino macchina causa danneggiamento della testa
It is strictly forbidden to rotate the machine spindle as it may cause damage to the head

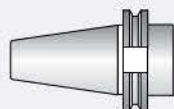
TESTE CON MOTORE AD ARIA

AIR DRIVEN ANGLE HEADS

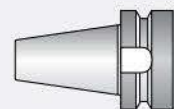
OPTIONAL DRIVE SHANK*
Non interchangeable input drive shank
Coni non intercambiabili



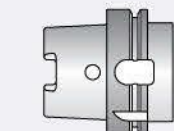
DIN-69871
ISO 40/50



CAT
40/50



MAS-BT
40/50



HSK
63/80/100



CAPTO
63/80/100

Air line kit / Filtro regolatore aria



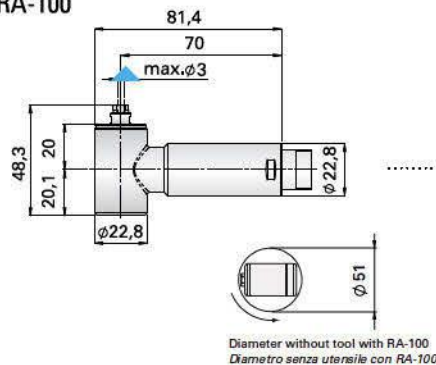
Retaining block /
Tassello di ritegno /
Stop-Block



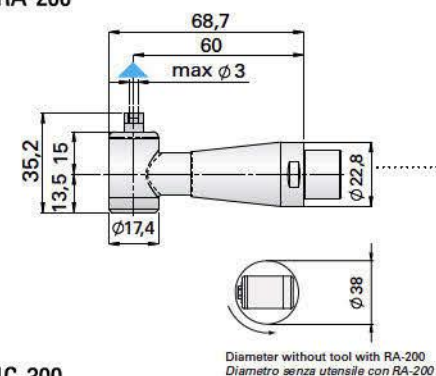
NOT INCLUDED
NON INCLUSO

Turboflex 30.000 RPM

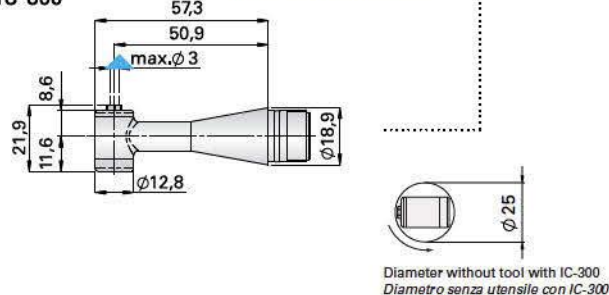
RA-100



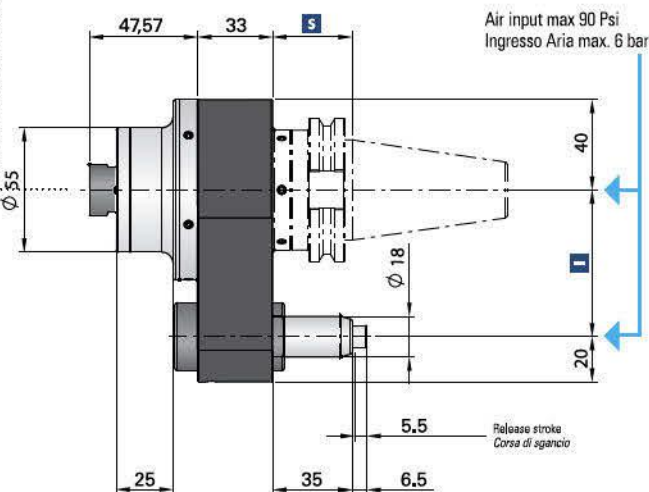
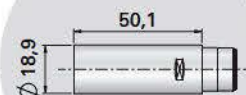
RA-200



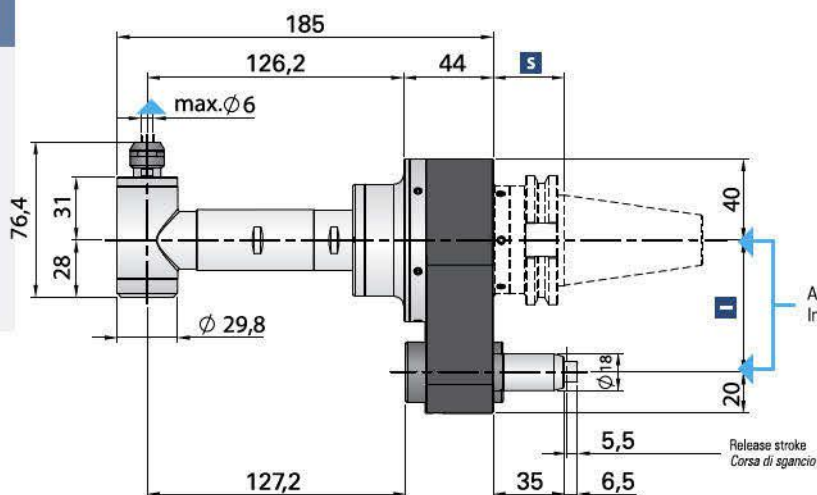
IC-300



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	l/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	l/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.

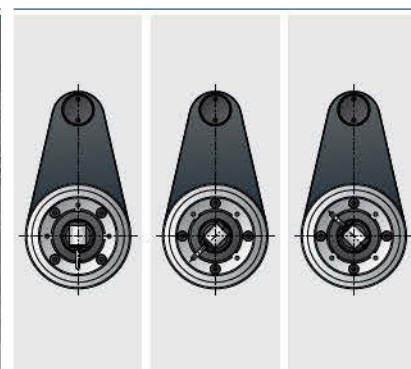
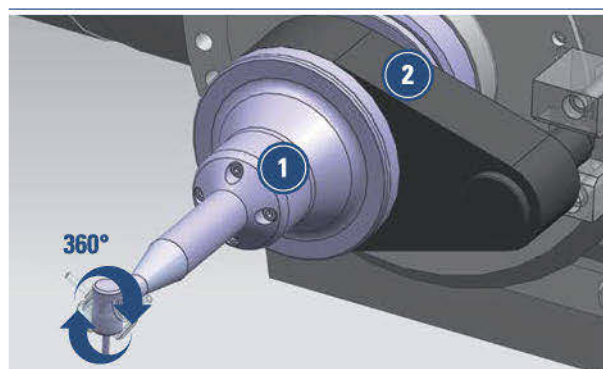
Il mandrino può essere posizionato su 360° grazie all'indexaggio dell'asse C della macchina, mentre la rotazione è assicurata dalla presenza del motore ad aria.

- 1 This portion rotates.
Questa parte ruota.
- 2 This portion remains fixed.
Questa parte resta ferma.

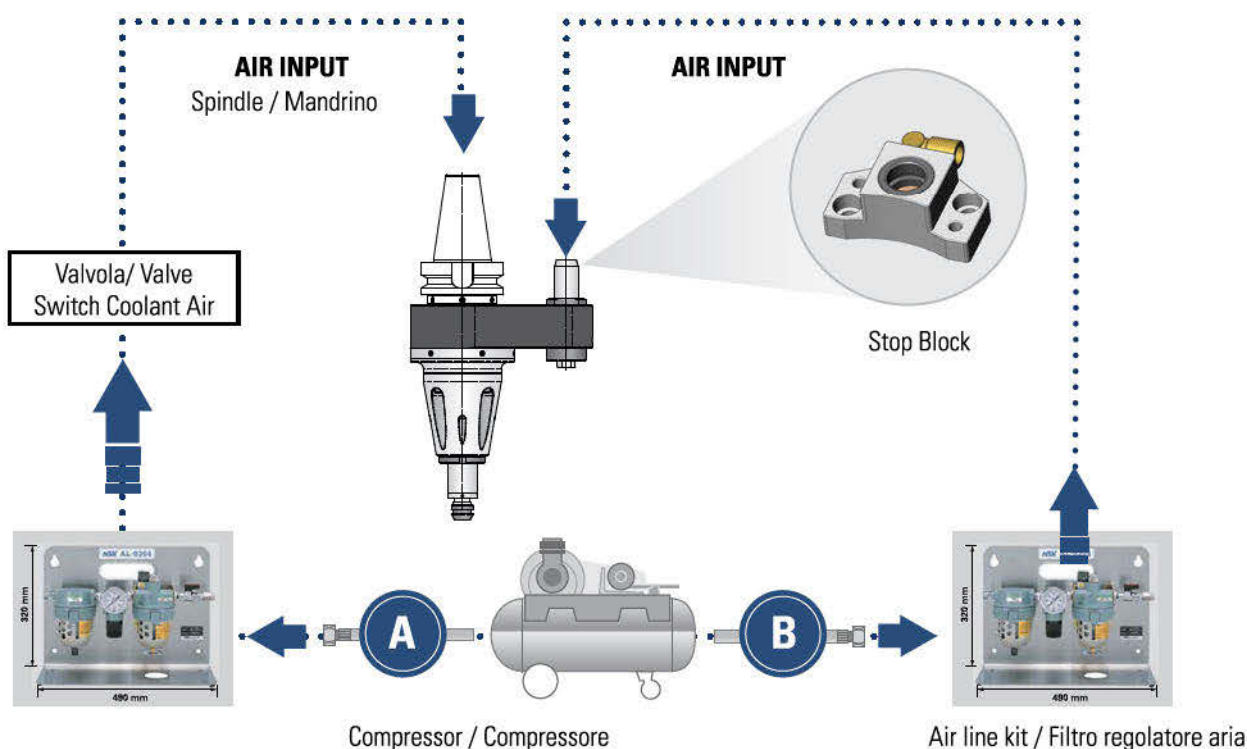
- 3 Air input from the machine spindle gives the rotation to the motor inside of the body.
L'aria garantisce la rotazione del motore nel corpo.

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.



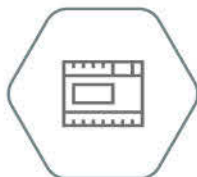
Velocità fino a
80.000 RPM regolabile
Adjustable speed
up to 80.000RPM



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



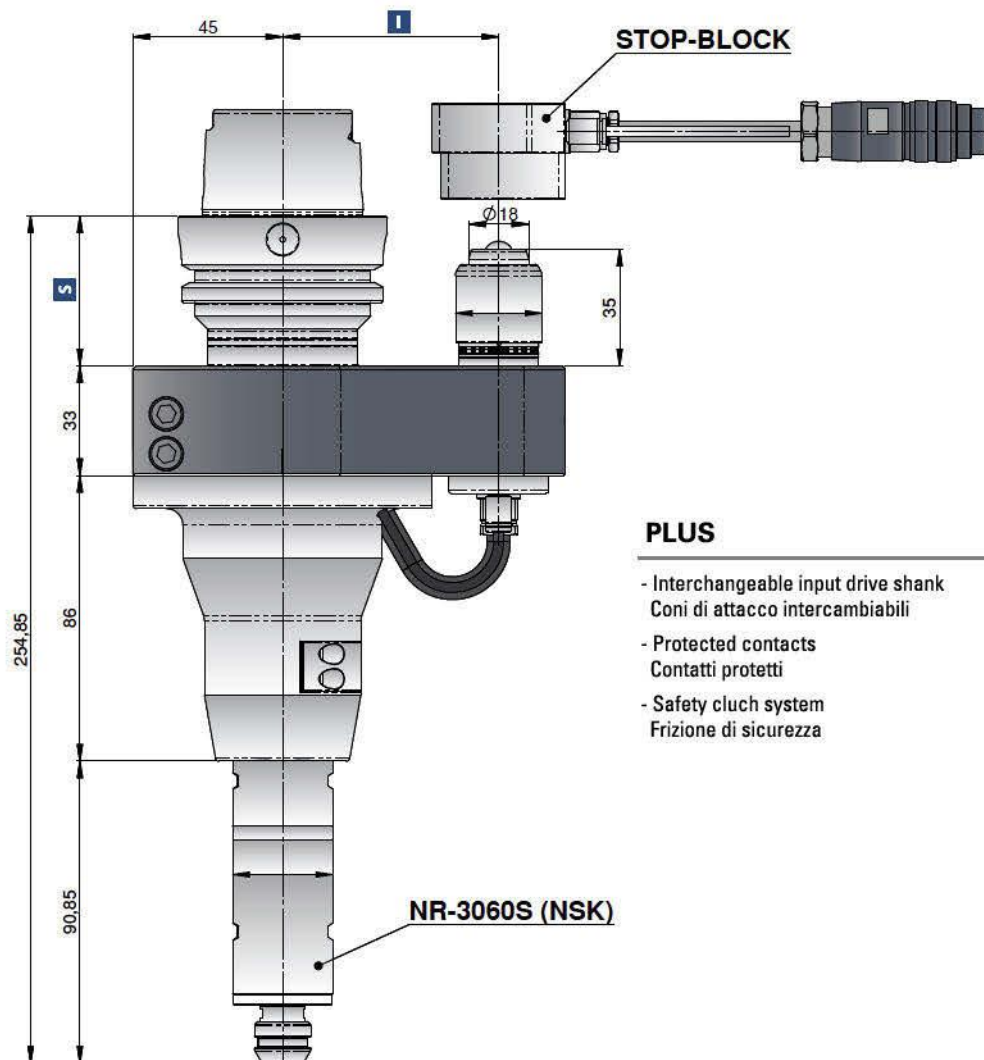
Centralina Nakanishi con regolazione di giri e
sensore per arresto mandrino
Nakanishi controller unit with adjustable RPM
and sensor to stop machine spindle

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



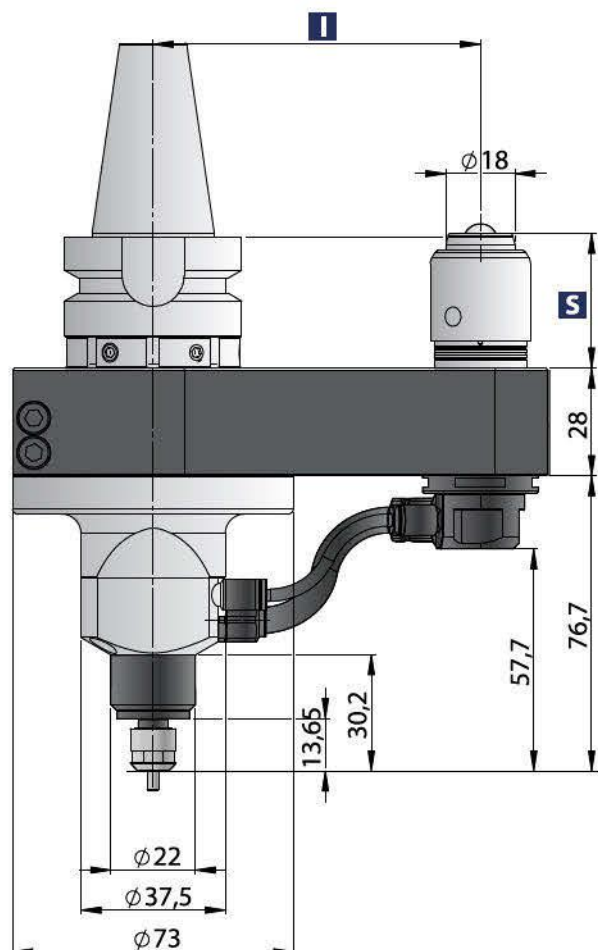
Shank/ <i>Cono</i>	DIN-69871	CAT	MAS-BT	HSK		CAPTO		KM
Size/ <i>Grandezza</i>	50		50	63-80	100	C6	C8	63
I	80-100		80-100	80-100	80-100	80-100	80-100	80-100
S	35		42	42	45	38	40	40
L	160		166	167	170	163	165	165

*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**

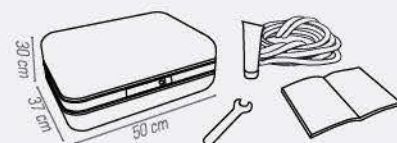


Spindle accuracy
Precisione
1 µ



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/ <i>Cono</i>	DIN-69871	CAT	MAS-BT	HSK		CAPTO		KM
Size/ <i>Grandezza</i>	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

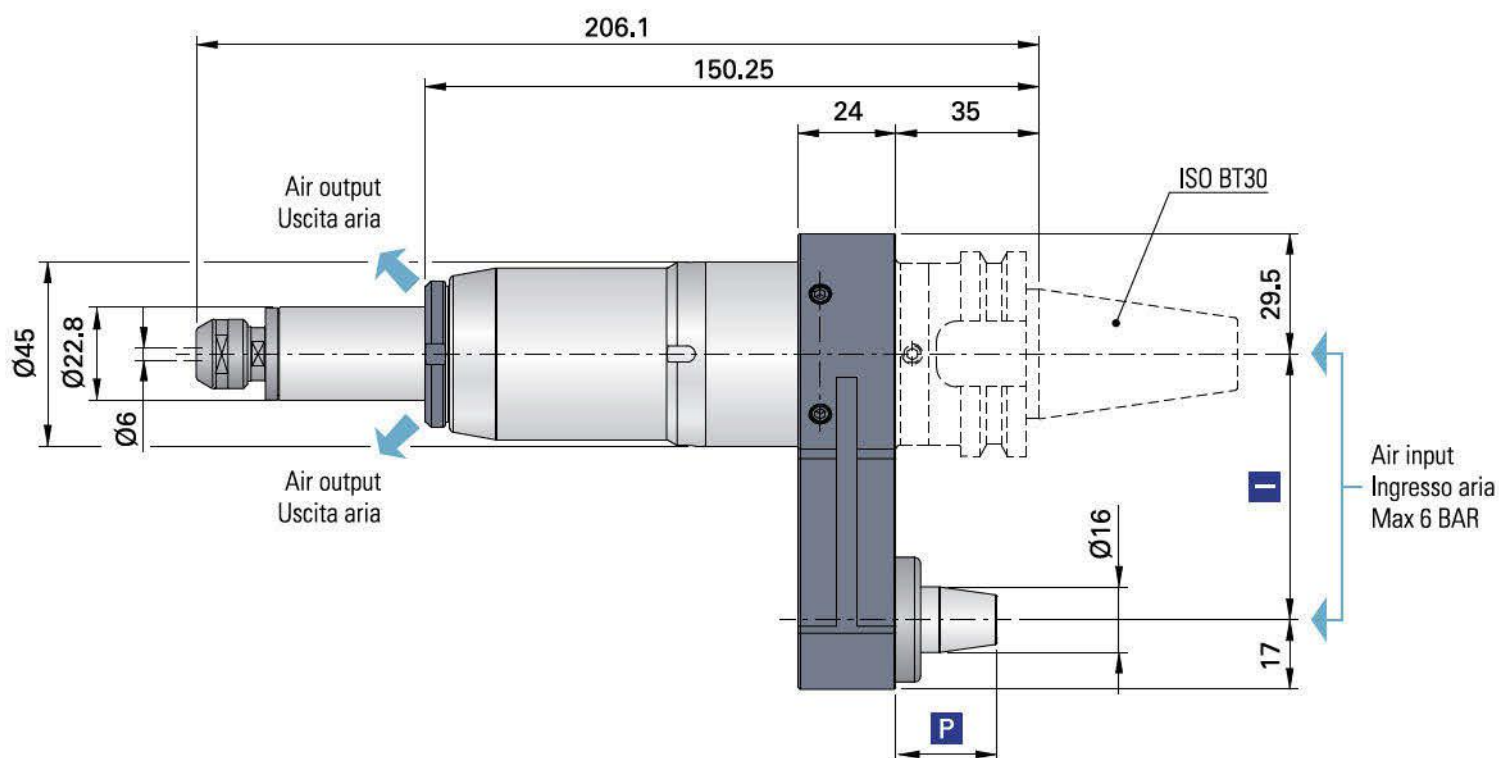
Non interchangeable input drive shank/ Coni di attacco non intercambiabili

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

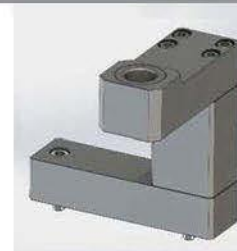
FANUC ROBODRILL



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

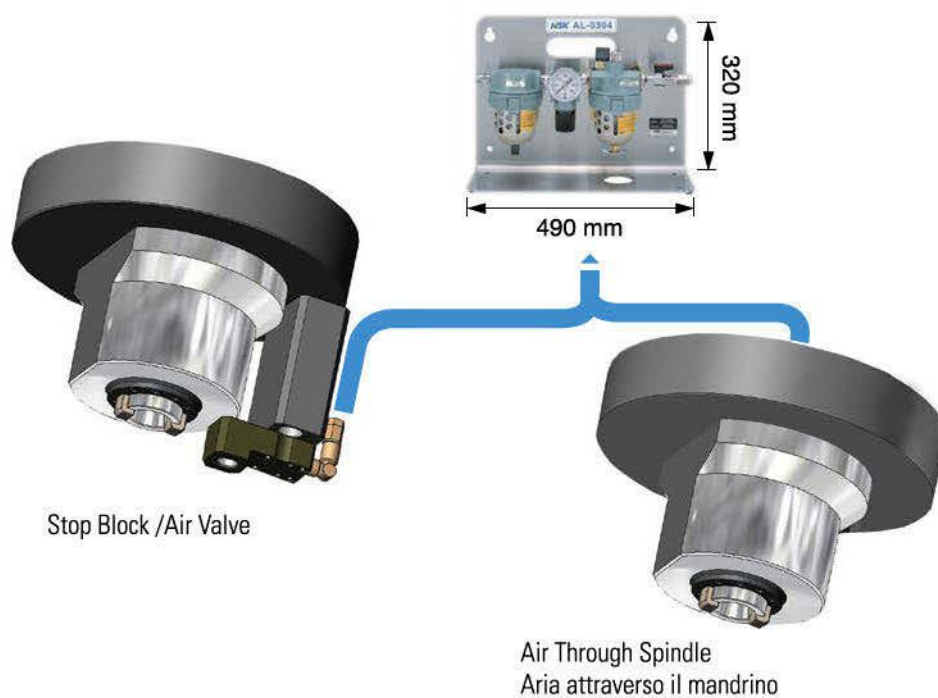
DMG MORI MILLTAP 700



59516007

I	65
P	24

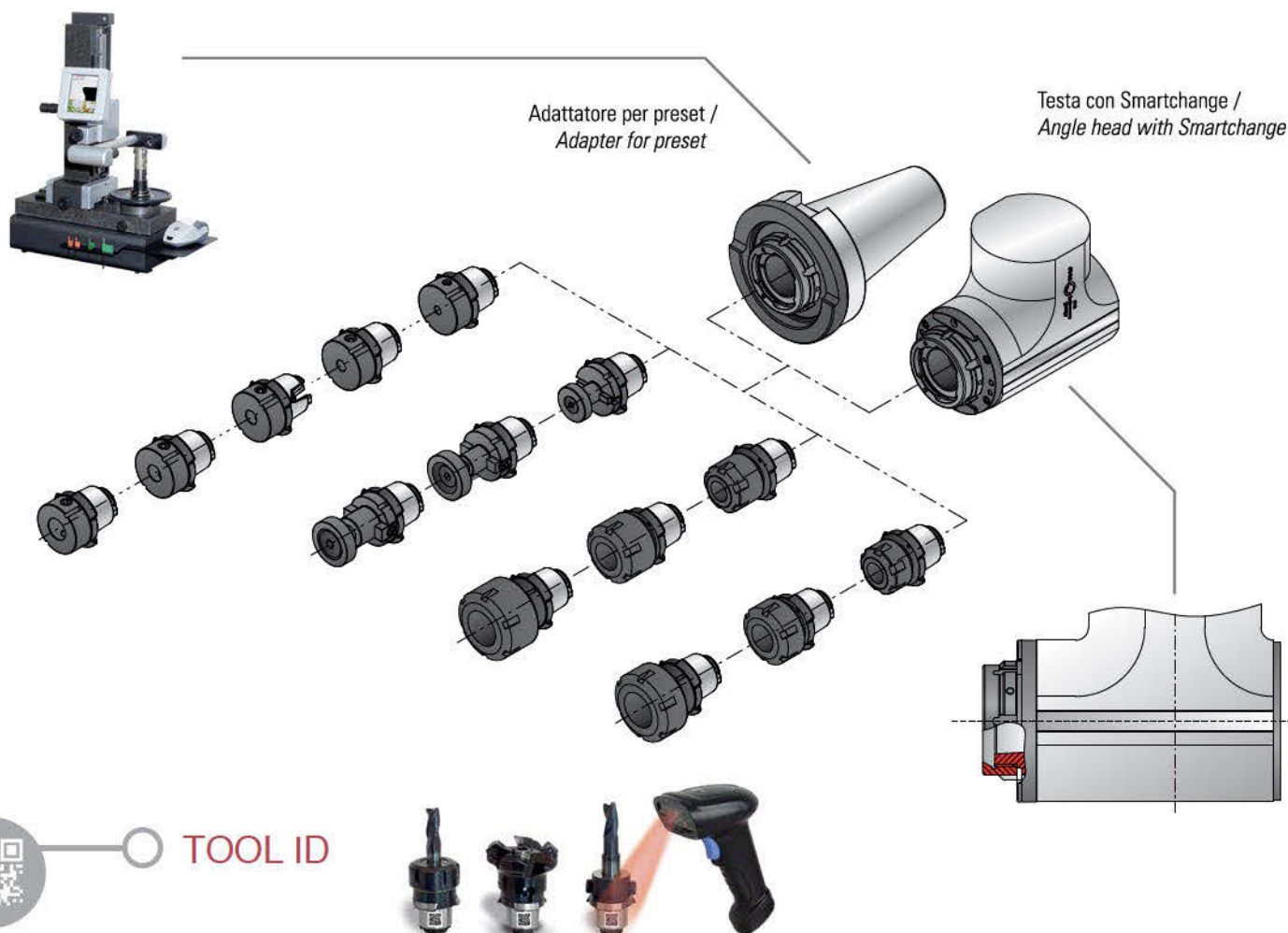
AIR LINE KIT For Turbodrill only ref. pag.6 / Solo per Turbodrill, rif. Pag.6





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'utilizzatore 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.



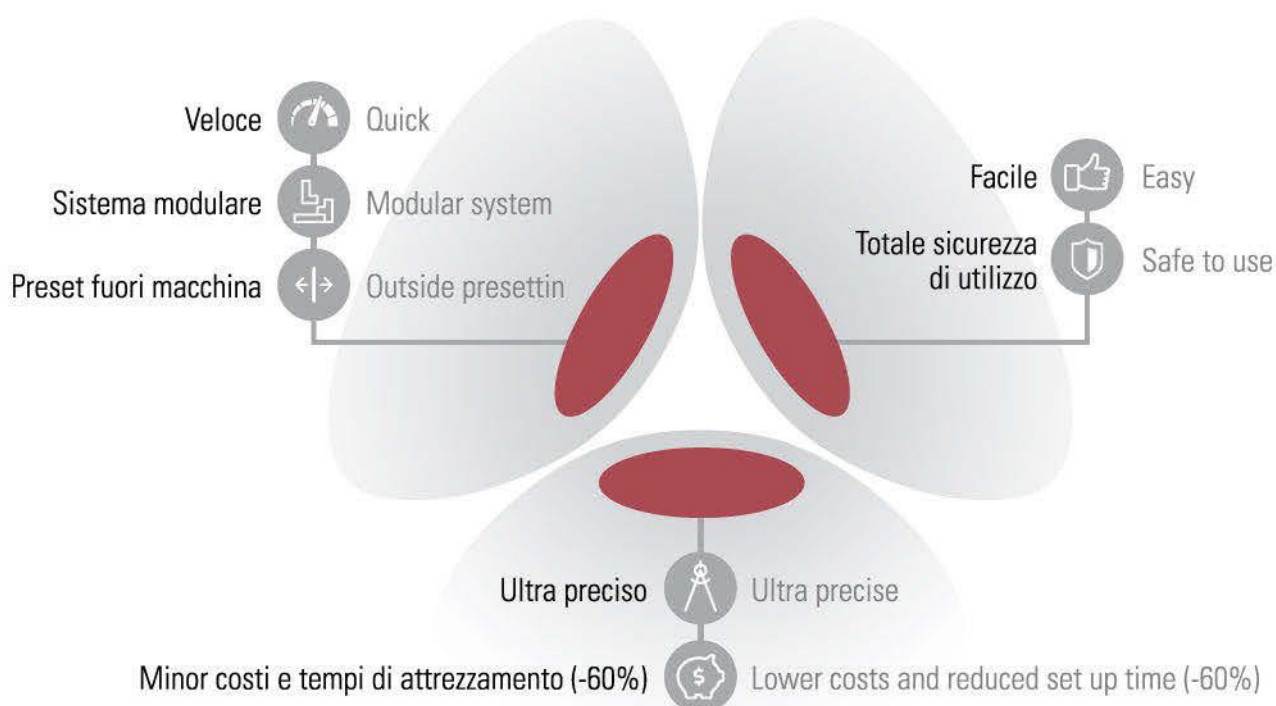
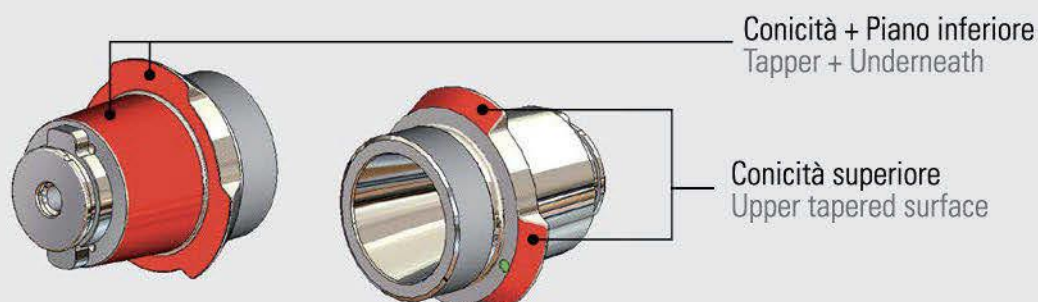
Le cartucce Smart Change sono provviste di DATAMATRIX per l'identificazione e la gestione utensile in modo automatico. Il codice univoco è identificativo della cartuccia con il suo utensile.

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

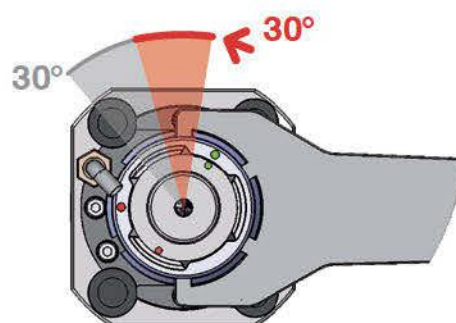
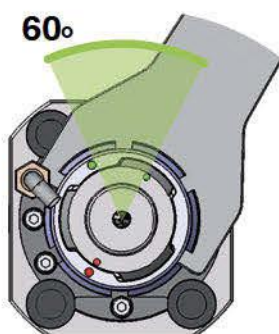
- Chiave di riscontro SmartChange (permette montaggio con una sola mano)
SmartChange Wrench (one-hand handling)

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

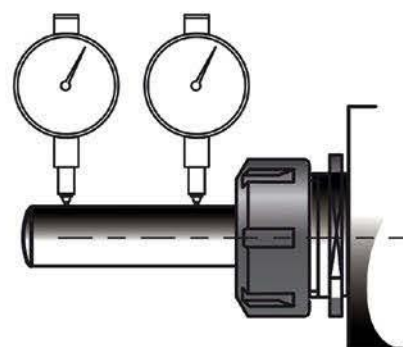
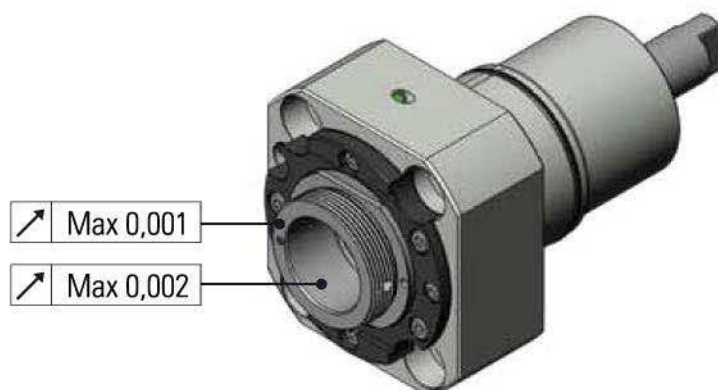


COME FUNZIONA HOW IT WORKS

- 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	at 40 mm = 0,008 mm
		a 120 mm = 0,01 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



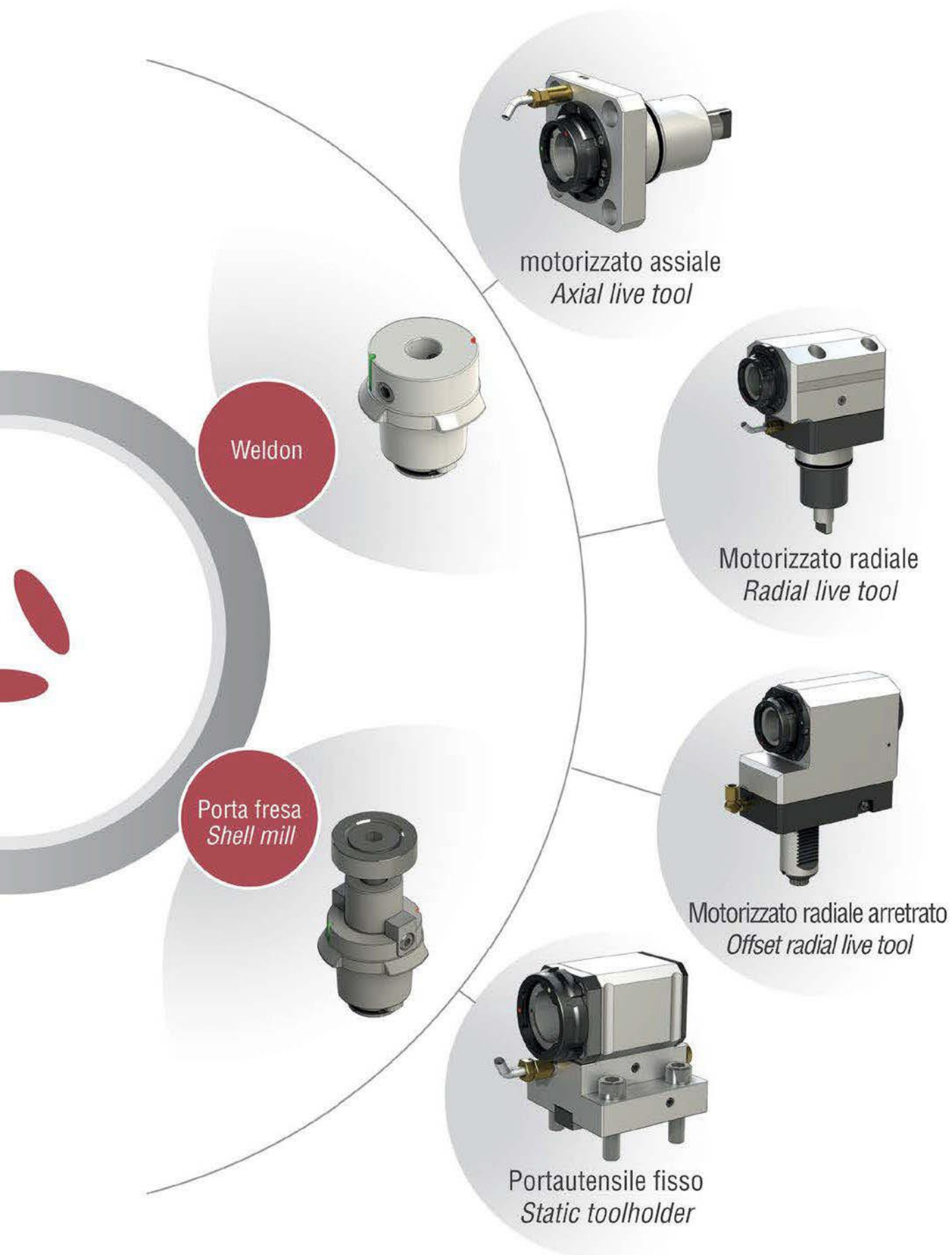
Porta pinza
Collet



Blanks



Calettamento
Shrink fit



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

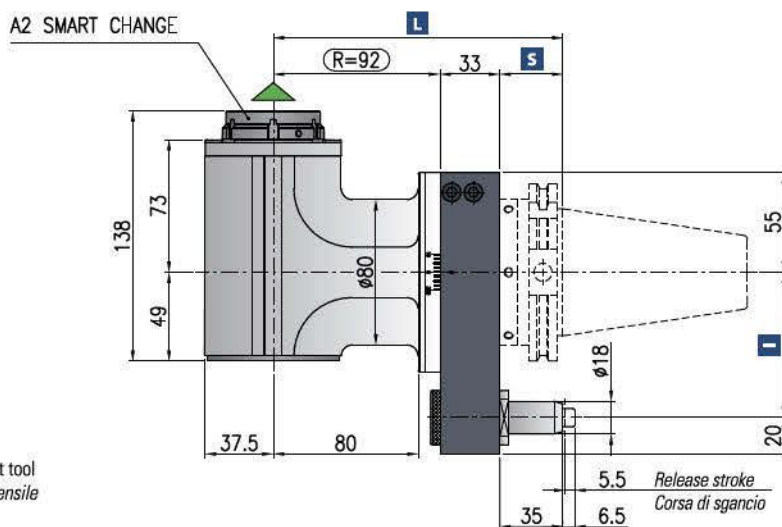


Weight
Peso
11 kg

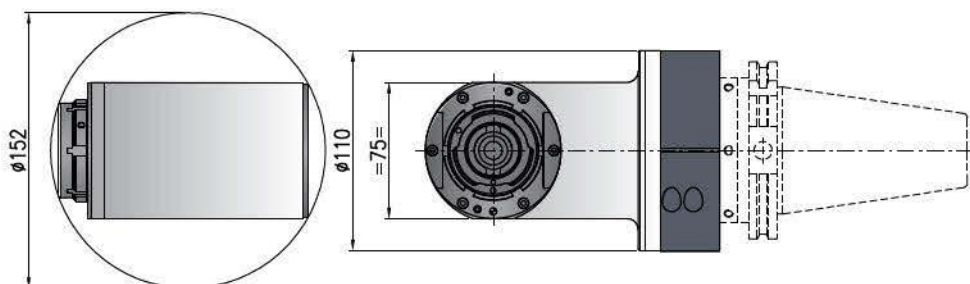


Collet
Pinza
SmartChange System

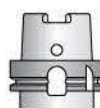
*** STANDARD EQUIPMENT INCLUDES:**



Minimum diameter without tool
Diametro minimo senza utensile



Direction of rotation same as machine spindle / senso 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

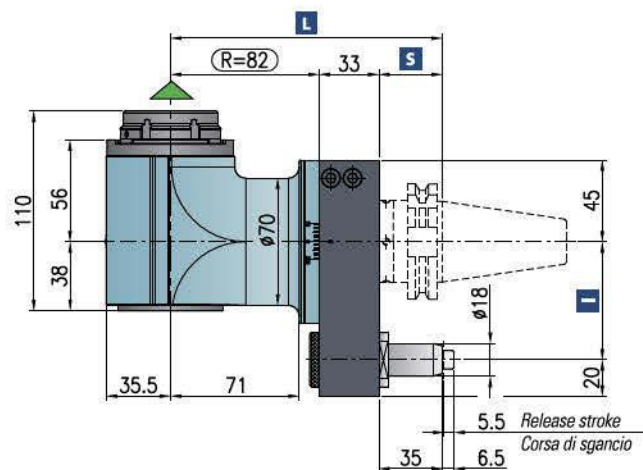
Coolant through pin and spindle
Refrigerante interno attraverso utensile



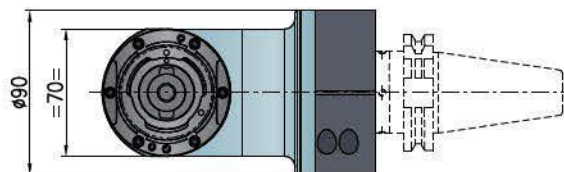
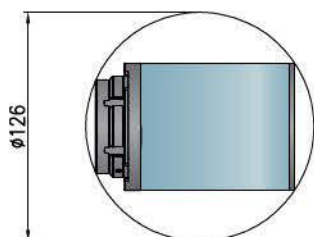
min⁻¹
6.000

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

T90cn-3,5 Aluminum Smart Change



Minimum diameter without tool
Diametro minimo senza utensile



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



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:**



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

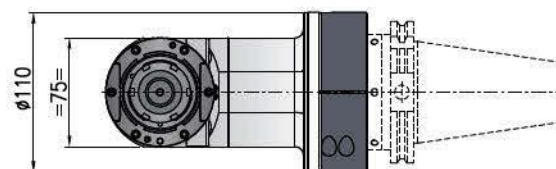
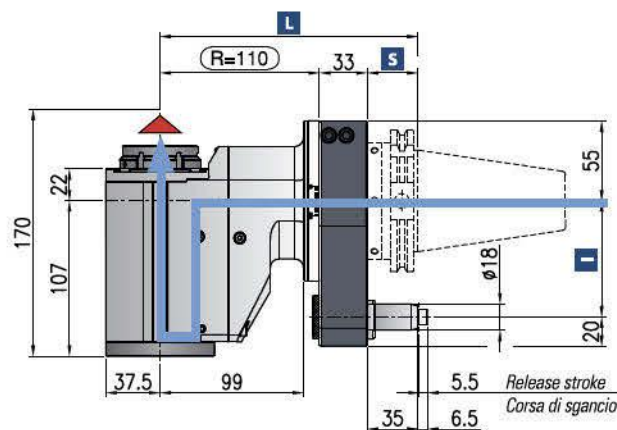
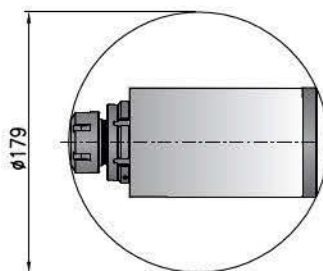
TH90cn-3,5 Smart Change

-  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



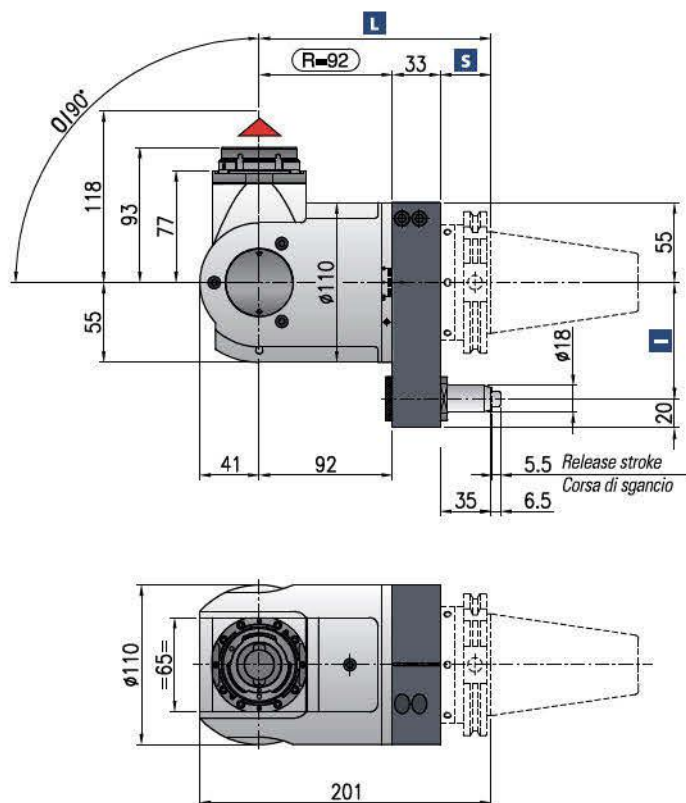
Shank/Cono	DIN-69871		CAT	MAS-BT	HSK		CAPTO		KM
Size/Grandezza	50			50	63-80	100	C6	C8	63
I	80-100			80-100	80-100	80-100	80-100	80-100	80-100
S	35			41	42	45	38	40	40
L	178			184	185	188	181	183	183

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili

Option / Opzione

TCUcn-3,5 Smart Change



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

- 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:



Shank/Cono								
Size/Grandezza	DIN-69871		CAT	MAS-BT	HSK	CAPTO	KM	
I	50		50	50	63-80	100	C6	63
S	80-100		80-100	80-100	80-100	80-100	C8	80-100
L	35		41	42	45	38	40	40
	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
Addizione refrigerante attraverso il pemo



min⁻¹
6.000

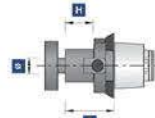
High speed optional RPM max.
Opzione alta velocità RPM max.

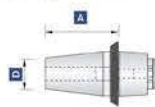
DATI TECNICI TECHNICAL DATA

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

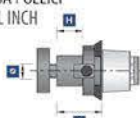
PORTAPINZA / COLLET 	ER-20 (Ø1/13mm)			ER-25 (Ø1/17mm)			ER-32 (Ø2/22mm)			PORTAPINZA / COLLET 	ERC20 (Ø1/13mm)			ERC25 (Ø1/16mm)			ERC32 (Ø2/20mm)		
	Ø	A	D	Ø	A	D	Ø	A	D		Ø	A	D	Ø	A	D	Ø	A	D
	1/13	28.5	34	1/16	30.5	42	2/20	41.5	50		1/13	33.5	34	1/16	35.5	42	2/20	46.5	50

WELDON 	(Ø6)			(Ø5)			(Ø10)			(Ø12)			(Ø16)		
	Ø	A	D	Ø	A	D	Ø	A	D	Ø	A	D	Ø	A	D
	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
	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
	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

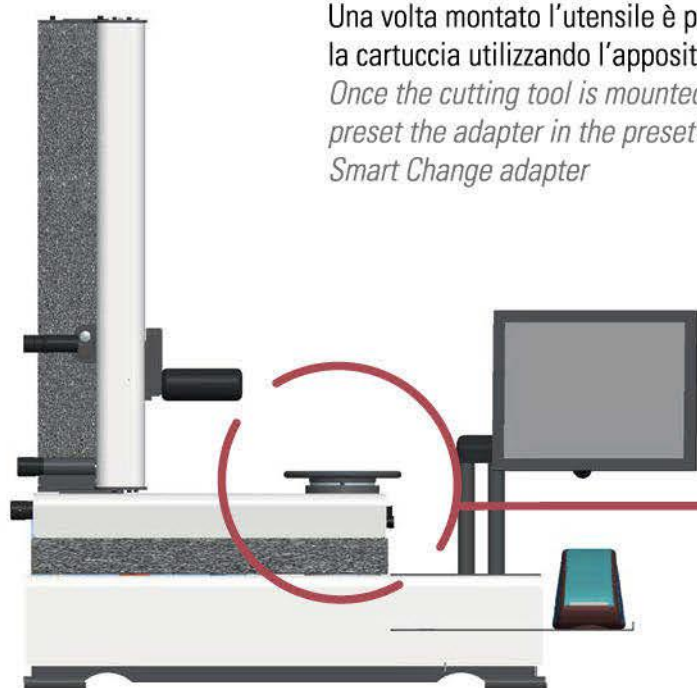


Tool boy



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.

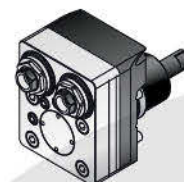
The picture shows the preset of an adjustable angle head: the preset measures the angle, after having identified the right and left points, it calculates automatically the rotations centre of the tool and its diameter.



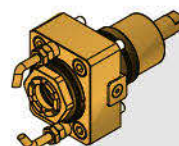
SCEGLI IL MODELLO DI PORTA UTENSILE CHOOSE THE TYPE OF TOOLHOLDER



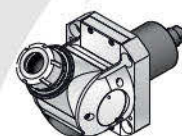
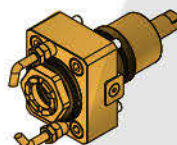
0120
**ASSIALE
2 USCITE**
STRAIGHT DUAL OUTPUT



010C
**ASSIALE
REFRIGERANTE**
STRAIGHT + COOLANT

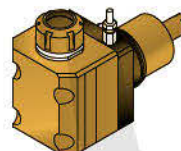


0100
ASSIALE
STRAIGHT

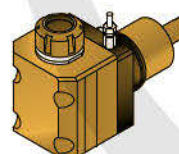


0500
ORIENTABILE
ADJUSTABLE

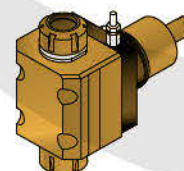
0200
RADIALE
90° TOOL



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



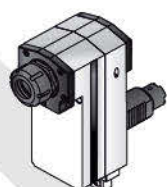
0300
**RADIALE
2 USCITE
CONTRAPPOSTE**
90° TOOL DUAL OPPOSITE OUTPUT



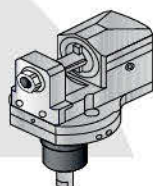
0220
**RADIALE 2 USCITE
FRONTALE**
90° TOOL DUAL FRONT OUTPUT



010S
ASSIALE
MOLTIPLICATO
STRAIGHT SPEEDER



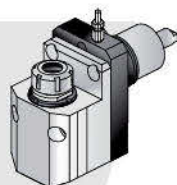
0400
ASSIALE
DISASSATO
STRAIGHT OFFSET



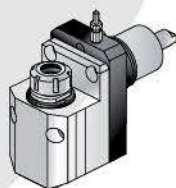
0900
PORTACREATORE
HOBGING HOLDER



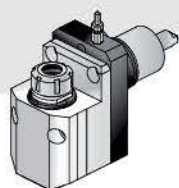
040C
ASSIALE
DISASSATO
REFRIGERANTE
STRAIGHT OFFSET + COOLANT



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



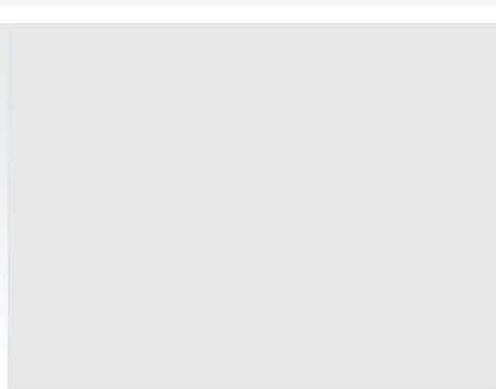
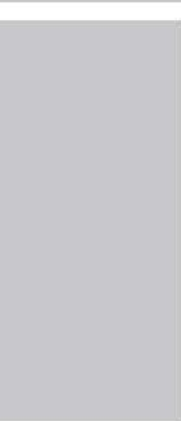
Tooling

HWACHEON

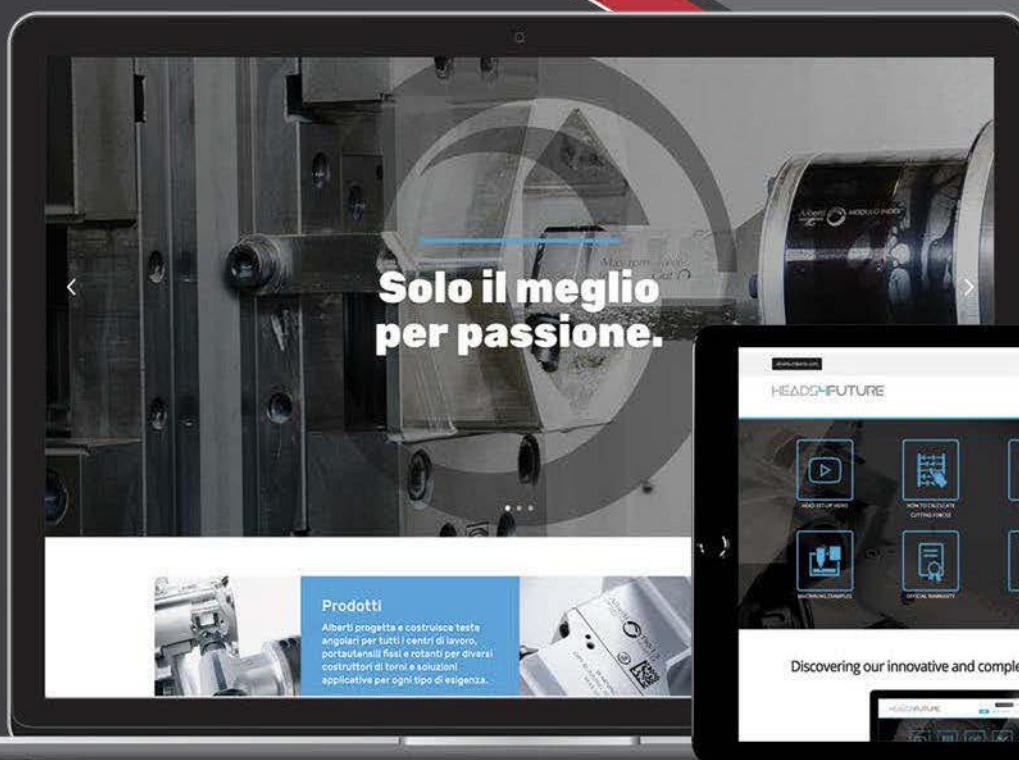
ACCESSORI ACCESSORIES



	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
	3321540						







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- **Contatto diretto con cliente**
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- **Più versatilità**
Much flexibility

NUOVO SITO HEADS FOR FUTURE

New Heads For Future website

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- **Database aggiornato con esempi di applicazioni, dettagli di lavorazione e parametri di taglio**
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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