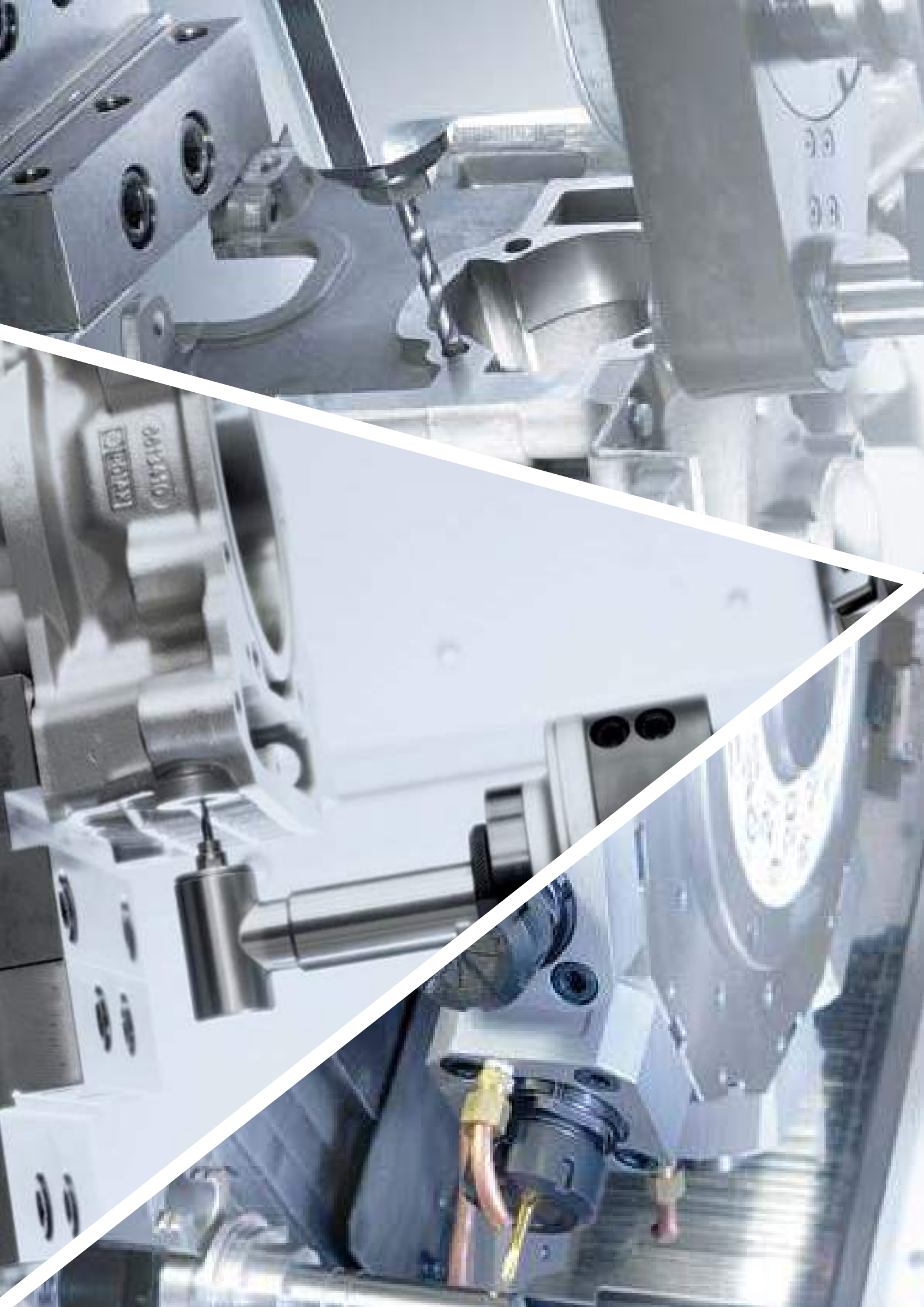


2017/2018

Catalogo Generale

General Catalogue / Hauptkatalog





Teste angolari / Angle heads / Winkelköpfe

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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 o 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 e realizzato interamente all'interno dell'azienda.

La passione, il coinvolgimento e la cura dei particolari costituiscono aspetti 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 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.

Alberti begann die Produktion der Winkelschneidköpfe am Ende der 70er Jahren. Innerhalb weniger Jahren konnten sie, dank der hohen Qualität, Funktionalität, Verlässlichkeit und ausgewogene Design der Produkte, bereits den internationalen Markt

dominieren. Jeder Produkt wird völlig entworfen und hergestellt in der Firma.

Das Ziel der Firma ist die weltweiten Kunden zufrieden zu stellen, nicht nur mit Standard Lösungen sondern auch mit Sonderlösungen. Danke der beständigen Innovation und modernen Lösungen, Alberti ist Leader unter den Herstellern der Made in Italy Produkten. Passion, Engagement und eine besondere Aufmerksamkeit auf Details liegen am Herz der Alberti Philosophie. Die Entwurfs- und Produktionsphase der Alberti Winkelschneidköpfe -sowohl der Standard – Modelle als auch kundenspezifische Ausführungen – beginnen in der technischen Abteilung. Diese ist für das Konzept, den Entwurf und die Entwicklung der Produkte verantwortlich. Nach der Entwurfsphase werden die Winkelschneidköpfe in unserer hochmodernen Fertigung hergestellt. Alle Produkten zählen auf eine effizienten After-Sale Dienstleistung, die das Leben des Werkzeuges und die Reparationsgesichte folgt.



ALBERO CON CONO
SPINDLE W/ARBOR
ANTRIEBSPINDEL



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

Spindel und Kegel sind aus gehärtetem Stahl. Aus einem Stück gefertigt, um die Biegefestigkeit um 25% zu erhöhen. Komplette geschliffen und auf 6,3G ausgewuchtet. Es ist möglich, höhere Drehzahlen ohne Vibrationen zu erreichen.

CORPO TESTA
BODY
GEHÄUSE



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 rettificati.

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

Gehäuse aus stabilisiertem GS 600 Gußeisen, um die Vibrationen besser zu dämpfen. Bessere Wärmestabilität und Steifigkeit im Vergleich zu anderen Materialien wie Stahl und Aluminium. Matte Chrombeschichtung und innere Kugellagersitze komplett geschliffen.

MANDRINO
SPINDLE
AUFNAHME



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.

Aufnahme aus gehärtetem legierten Stahl mit Doppellabyrinthdichtung. Komplette geschliffen mit Toleranzen unter 5 µm, um eine längere Standzeit zu sichern.

FLANGIA INDEX
INDEXING FLANGE
FLANSCH



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.

Flansch und Drehmomentstütze in monolithischem Design, um eine bessere Steifheit und Stabilität während der Bearbeitung zu gewährleisten. Sehr genaue Abstandmaße und präzise Abstimmung zwischen Drehmomentstütze und Anschlagblock.

FASCE LAPPATE
LAPPED SURFACE
GELÄPPTES BAND



Fasce lappate per il corretto allineamento dell'utensile

Lapped side surface for correct alignment of the tool.

Geläpptes Band für die korrekte Ausrichtung (Einstellung) des Werkzeugs.



CUSCINETTI BEARINGS KUGELLAGER



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.

Super präzise Kugellager mit ABEC 7- und 9-Genauigkeitsgrad. Sie sind in vorgeschliffene Sitze innerhalb des Gehäuses eingebaut, um die beste Rundlaufgenauigkeit und Stabilität während der Bearbeitung zu sichern.

INGRANAGGI GEARS GETRIEBE



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.

Getriebe aus Stahl-Superlegierung. Nach dem Härten und Schleifen werden die Zahnräder auch trowalisiert, um eine Rauigkeit von 0,01Ra sowie eine bemerkenswerte Reduzierung von Reibung und Vibrationen zu erreichen.

TENUTE MECCANICHE MECHANICAL SEALS MECHANISCHE DICHTUNGEN



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.

Mechanische Dichtungen, die für Hochdruck bis 100 bar und erhöhte Drehzahlen spezifisch entwickelt wurden.

GUARNIZIONI SEALS DICHTUNGEN



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.

Reibungsoptimierte Dichtungen aus einer Sonderzusammenstellung, die von Alberti entwickelt wurde.

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.

Alle Einzelteile sind mit unserem Logo und der Artikelnummer markiert, um die Authentizität der Produkte zu beweisen und deren Erkennung zu erleichtern.

Alle Teile werden auf unserer neuer hochpräzise 3D Messmaschine in kontrollierten Temperatur Raum gemessen.



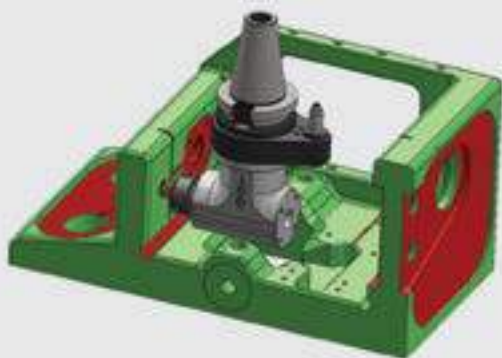
Le nostre teste dispongono di un QR Code per consentire una facile e rapida identificazione.

Our angular heads have a QR Code that enables an easy and quick identification.

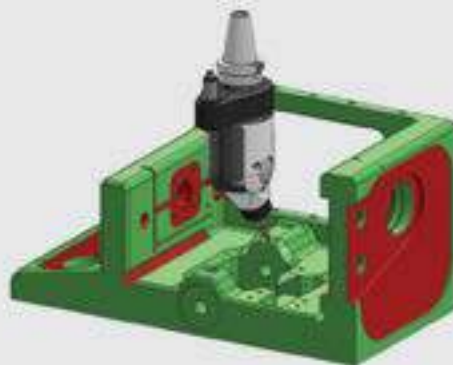
Unsere Winkelköpfe haben ein QR Code um eine einfachere und schnellere Anerkennung zu ermöglichen.

ESEMPI DI LAVORAZIONI STANDARD

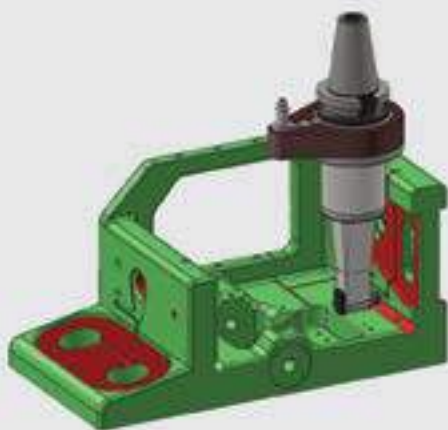
EXAMPLES OF STANDARD MACHINING / BEISPIELE VON STANDARDANWENDUNGEN



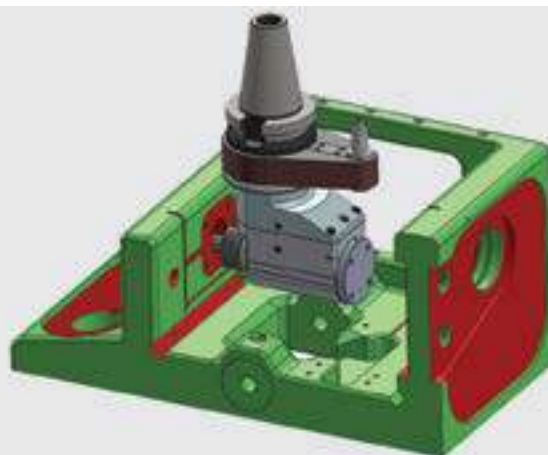
Testa a 90°
90° Head / 90° Winkelkopf



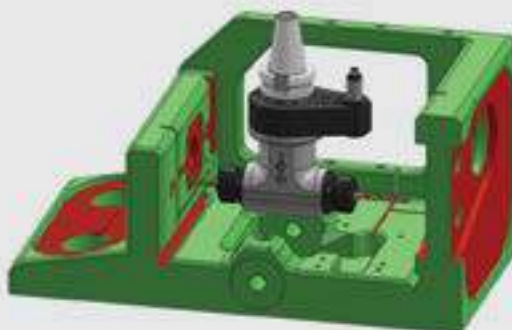
Testa ad inclinazione regolabile
Head with adjustable angle +/- 90° / Einstellbarer Winkelkopf +/- 90°



Testa a 90° prolungata
Extended lenght head / Verlängerter Winkelkopf



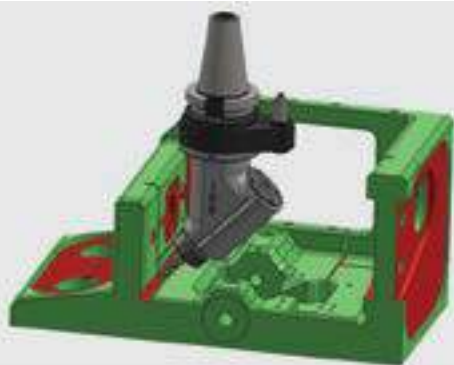
Testa con refrigerante
Head with internal coolant / Kopf mit innere Kühlmittel



Testa con uscita doppia (180°)
Dual output head (180°) / Doppelseitiger Kopf (180°)

ESEMPI DI LAVORAZIONI STANDARD

EXAMPLES OF STANDARD MACHINING / BEISPIELE VON STANDARDANWENDUNGEN



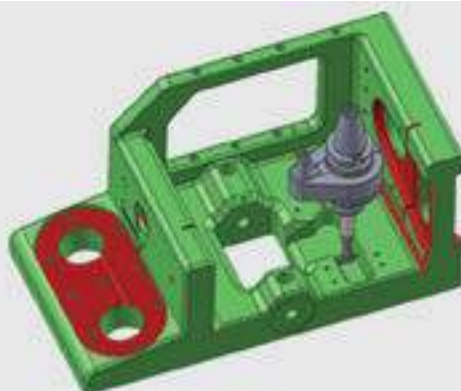
Testa ad inclinazione fissa

Head with special fixed angle / Winkelkopf mit festem Winkel



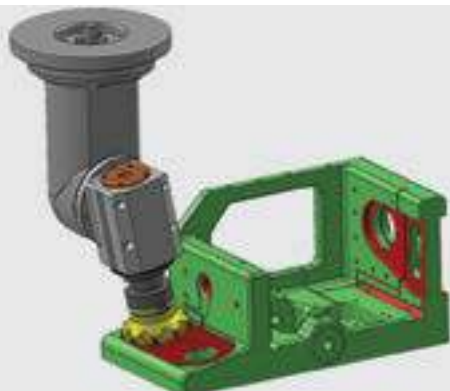
Testa arretrata

Offset head / Zurückgesetzter Winkelkopf



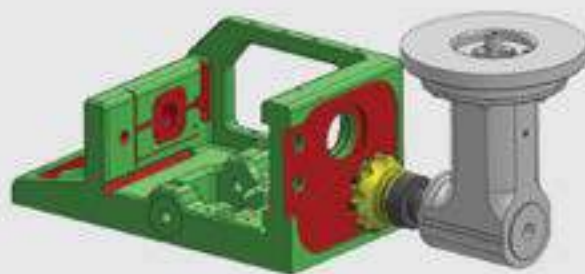
Testa dimensioni ridotte

Ultraslim head / Schmäler Winkelkopf



Testa orientabile di grosse dimensioni con montaggio manuale

*Big sized adjustable head with manual mounting
Größer einstellbarer Köpf mit Handaufbau*

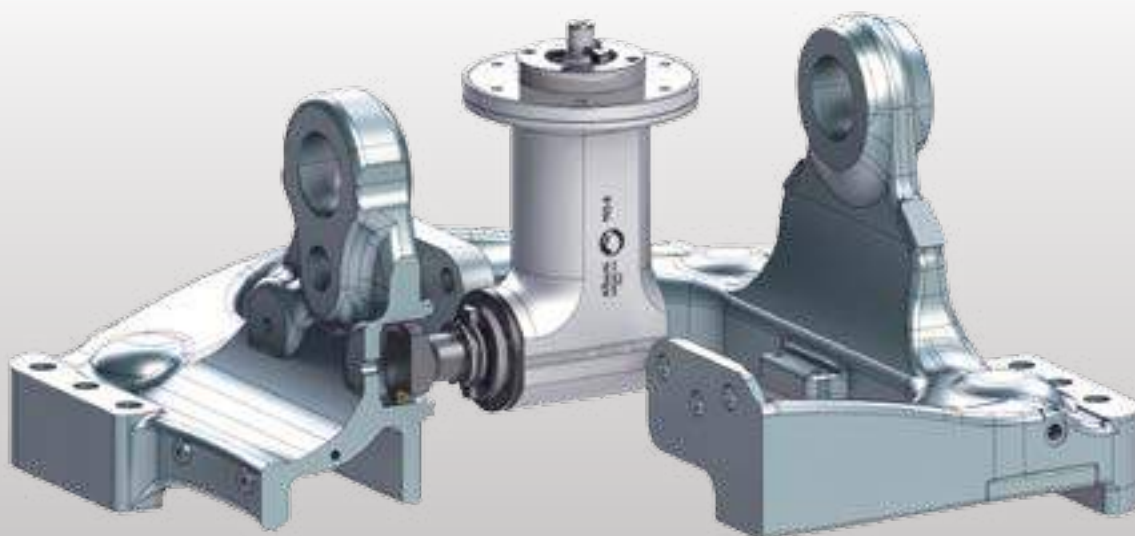


Testa fissa di grosse dimensioni con montaggio manuale

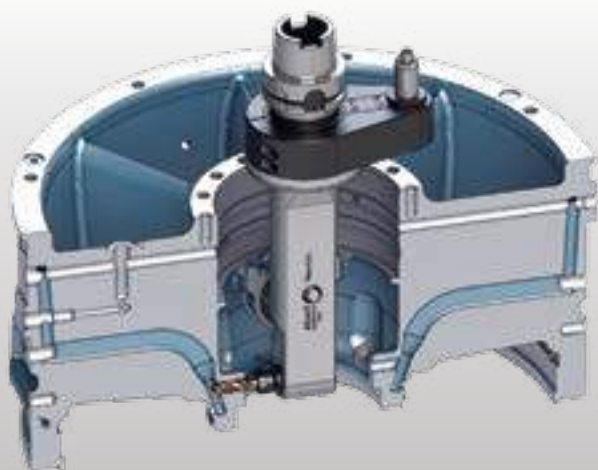
*Big sized fixed head with manual mounting
Größer fester Köpf mit Handaufbau*

LA TESTA PIÙ IDONEA PER OGNI APPLICAZIONE

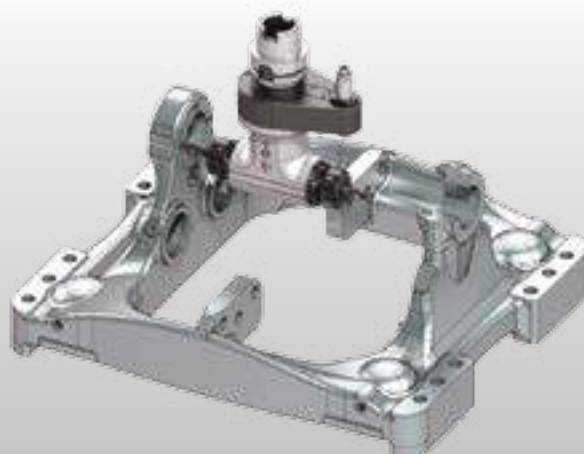
THE MOST SUITABLE HEAD FOR EACH APPLICATION / DIE BESTE LÖSUNG FÜR JEDE ANWENDUNG



Testa a 90° con o senza flangia per pezzi grossi
90° Head with or without flange for big workpiece / 90° Kopf mit oder ohne Abstützung für größte Werkstück



Testa a 90° prolungata
90° head with extended length / 90° Kopf mit verlängerter maße



Testa a 2 uscite contrapposte
Head with dual output opposite / Kopf mit zwei gegeneinanderen Aufnahmen



Testa fissa ad angolo variabile
Head with variable fixed angle / Kopf mit unterschiedlichen festen Winkel



Testa rinviata per spazi ristretti
Offset head for reduced spaces / Zurückgesetzter Kopf für schmale reduzierte Räume

ADDUZIONE REFRIGERANTE COOLANT OPTIONS / KÜHLMITTELZUFÜHRUNG

Quasi tutte le teste (ad eccezione delle più piccole) possono avere l'adduzione refrigerante interna ed esterna. Di seguito sono illustrate le diverse opzioni e caratteristiche tecniche.

Almost all heads – with the exception of the smallest one - can have the internal and external coolant. Following are the available options and the technical data.

Fast all Winkelköpfe – außer die kleinsten – können die innere und äußere Kühlmittelzufuhr haben. Folgend sind alle Optionen und technische Daten.

TIPOLOGIE DISPONIBILI OPTIONS AVAILABLE / ALLE OPTIONEN



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

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

*Kühlmittelzufuhr durch – Bolzen & Spindel
Max Druck 12 bar
Trockene Bearbeitung NICHT möglich*



Refrigerante attraverso il cono e l'utensile
Pressione max 40 bar
Rotazione a secco NON possibile

*Coolant through shank and tool
Max pressure 40 bar
Dry running NOT possible*

*Kühlmittelzufuhr durch Kegel und Werkzeug
Max Druck 40 bar
Trockene Bearbeitung NICHT möglich*



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

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

*Kühlmittelzufuhr durch Kegel und Werkzeug
Max Druck 100 bar
Trockene Bearbeitung möglich*

COME SCEGLIERE LA TESTA IN BASE ALLA GRANDEZZA DEL PORTAUTENSILE

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

WIE KANN MAN DEN KOPF NACH DER AUFNAHMEN WÄHLEN

⁽¹⁾ Schaublin 4.5mm - ⁽²⁾ WELDON	
⁽¹⁾ ER 8 (0,5-5mm) - ⁽²⁾ 6mm	Pag.
T90cn-0,4	18
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⁽¹⁾ PINZA / COLLET / AUFNAHME - ⁽²⁾ WELDON	
⁽¹⁾ ER11 (0,5-7mm) - ⁽²⁾ 6mm	Pag.
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T90cn-0,5L	21
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⁽¹⁾ PINZA / COLLET / AUFNAHME - ⁽²⁾ WELDON - ⁽³⁾ PORTAFRESA / SHELL MILL HOLDER / FRÄSDORN	
⁽¹⁾ ER16 (1-10mm) - ⁽²⁾ 10mm - ⁽³⁾ 13mm	Pag.
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T90cn-1,5L	26
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THcn-15 100 BAR	27
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⁽¹⁾ PINZA / COLLET / AUFNAHME - ⁽²⁾ WELDON - ⁽³⁾ PORTAFRESA / SHELL MILL HOLDER / FRÄSDORN	
⁽¹⁾ ER25 (1-16mm) - ⁽²⁾ 16mm - ⁽³⁾ HSK 32	Pag.
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⁽¹⁾ PINZA / COLLET / AUFNAHME - ⁽²⁾ WELDON - ⁽³⁾ PORTAFRESA / SHELL MILL HOLDER / FRÄSDORN	
⁽¹⁾ ER 32 - ⁽²⁾ 27mm - ⁽³⁾ 27mm	Pag.
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⁽¹⁾ PINZA / COLLET / AUFNAHME - ⁽²⁾ WELDON - ⁽³⁾ PORTAFRESA / SHELL MILL HOLDER / FRÄSDORN	
⁽¹⁾ ER 40 - ⁽²⁾ 25mm - ⁽³⁾ 27mm	
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⁽¹⁾ PINZA / COLLET / AUFNAHME - ⁽²⁾ CAPTO	
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T90cn-5L	51
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COME SCEGLIERE LA TESTA IN BASE ALLA GRANDEZZA DEL CONO

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

WIE KANN MAN DEN KOPF NACH MASCHINENSPINDEL WÄHLEN

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TR90cn-0,5	24
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T90cn-1,5L	26
TH90cn-1,5	27
TR90cn-1,5	28
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T90cn-1,5L	26
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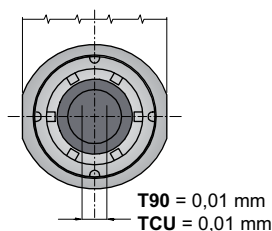
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TR90cn-0,5	24
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T90cn-1,5L	26
TH90cn-1,5	27
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T90cn-0,4	18
TR90cn-0,4	19
T90cn-0,5C	20
T90cn-0,5L	21
TR90cn-0,5	24
T90cn-1,5	25
T90cn-1,5L	26
TH90cn-1,5	27
TR90cn-1,5	28
TCUcn-1,5	29
T90cn-2,5	31
T90cn-2,5L	32
T90cn-2,5 2U	33
TH90cn-2,5	34
TR90cn-2,5	35
TCUcn-2,5	36
T90cn-2,5M	37
T90cn-3,5	38
T90cn-3,5L	39
T90cn-3,5 2U	40
TH90cn-3,5	41
TR90cn-3,5	42
TCUcn-3,5	43
T90cn-3,5M	44
T90cn-4,5	45
T90cn-4,5L	46
T90cn-4,5 2U	47
TH90cn-4,5	48
TR90cn-4,5	49
T90cn-5	50
T90cn-5L	51
T90cn-5 IC	52
T90cn-3,5 SC	96
TH90cn-3,5 SC	98
TCUcn-3,5 SC	99
Tutte le teste modular All modular heads Alle Modular Köpfe	62-84
Smart Change + High speed	94-119

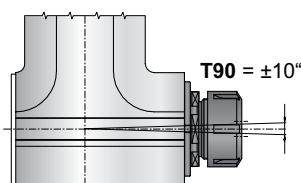


DATI TECNICI

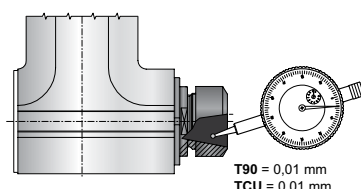
TECHNICAL DATA - TECHNISCHE DATEN



Maximum misalignment of input and output drive spindle
Disassamento tra albero in entrata e mandrino portautensile
 Maximale Abweichung der angetriebenen Achsen



Tool spindle angular variation relative to 90° (theoretical value)
Errore angolare del mandrino portautensile rispetto al 90° teorici
 Winkelabweichung relativ zu 90° (theoretisch)



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

MASCHIATURA

TAPPING - GEWINDESCHNEIDEN

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.

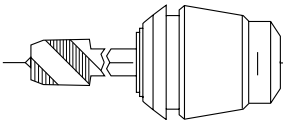
La stessa testa, quindi, può essere impiegata sia per forare che per maschiare compatibilmente alla capacità della relativa pinza.

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.

Alle Standardköpfe können für das Gewindeschneiden mit axial-ausgleichenden Spannzangen ausgerüstet werden. Diese Spannzangen sind mit den normalen Spannzangen voll kompatibel und ermöglichen dem Gewindeschneidwerkzeug sich axial zu bewegen und damit etwaige Einspeisungsfehler auszugleichen und die Richtungsumkehr der Rotation zu erleichtern.

Ein einzelner Kopf kann somit für beides – Bohren und Gewindeschneiden – verwendet werden.

	Head / Tipo testa / Kopf	Collet / Tipo Pinza / Spannzange	Capacity / Capacità / Durchmesser	Shift / Corsa / Weg
	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: Each collet is designed to accommodate an individual tap size. Therefore, please specify the tap shank diameter when ordering collets.
 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.
 Jede Spannzange ist für spezifische Gewindegrößen gemacht. Bitte geben Sie bei Ihrer Bestellung von Spannzangen den Gewindedurchmesser an.

TESTA PER CAMBIO UTENSILE AUTOMATICO
ANGLE HEAD FOR AUTOMATIC TOOL CHANGE
WINKELKÖPF FÜR AUTOMATISCHEN WERKZEUGWECHSEL



1. Tipo di portautensile e diametro utensile
Type of tool holder and cutting tool diameter
Modell des Werkzeughalters und Durchmesser des Werkzeuges

2. Cono di attacco alla macchina
Machine spindle / Maschinenaufnahme

3. Distanza tra perno e cono attacco testa
Distance between pin and spindle / Abstand zwischen Bolzen und Kegel

4. Tipo di macchina e peso al cambio utensile
Type of the machine and weight at tool change
Modell der Maschine und Gewicht beim Werkzeugwechsel

5. **Stop Block**
Già presente in macchina oppure da realizzare
Already installed or to be manufactured
Auf der Maschine oder zu fertigen.

OPTION

Refrigerante interno <i>Internal coolant/ Innerer Kühlmittelzufuhr</i>	☐
Doppia uscita <i>Dual output/ Doppelaufnahme</i>	☐
Portautensile diverso <i>Different tool holder/ verschiedener Werkzeughalter</i>	☐
Lunghezza extra <i>Extra length/ verlängerter gröÙe</i>	☐

TESTA PER MONTAGGIO MANUALE
ANGLE HEAD FOR MANUAL MOUNTING
WINKELKÖPF VERBINDUNGSFLANSCH



1. Tipo di portautensile e diametro utensile
Type of tool holder and cutting tool diameter
Modell des Werkzeughalters und Durchmesser des Werkzeuges

2. Cono di attacco alla macchina
Machine spindle / Maschinenaufnahme

3. Tipo di macchina e peso al cambio utensile
Type of the machine and weight at tool change
Modell der Maschine und Gewicht beim Werkzeugwechsel

OPTION

Refrigerante interno <i>Internal coolant/ Innerer Kühlmittelzufuhr</i>	☐
Doppia uscita <i>Dual output/ Doppelaufnahme</i>	☐
Portautensile diverso <i>Different tool holder/ verschiedener Werkzeughalter</i>	☐
Lunghezza extra <i>Extra length/ verlängerter gröÙe</i>	☐

LINEA CONTROL

Questa linea di teste per macchine con cambio utensile automatico possono essere montate nel magazzino utensili ed essere scambiate automaticamente al mandrino macchina. La corretta posizione in macchina è assicurata dalla presenza dello Stop Block montato sul mandrino che garantisce sia l'antirotazione della testa che la perfetta stabilità. Una caratteristica primaria delle teste CONTROL è l'albero centrale realizzato in un solo pezzo con il cono di attacco, per offrire la massima rigidità.

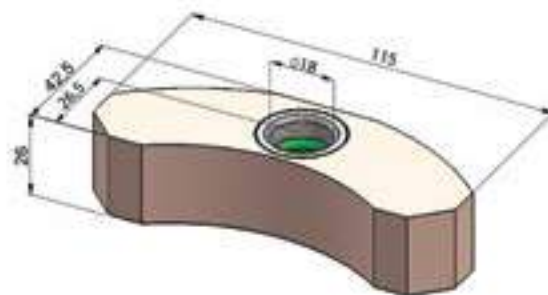
This range of angle heads is designed to be used on machining centres with ATC tool changer and therefore can be mounted in the tool magazine and be automatically exchanged in the machine spindle. The correct positioning of the head is ensured by the Stop Block mounted on the machine spindle which also prevents the rotation. A major feature of the CONTROL heads is the main input shaft, which is integral with the driver taper to ensure maximum rigidity.

Diese Winkelh  pe sind f  r die NC Bearbeitungszentren mit Werkzeugwechslergeeignet und k  nnen von Werkzeugmagazin zur Maschinenspindel automatisch transportiert werden. Der Stop Block, der auf dem Maschinenspindel angeschraubt ist, erm  glicht die korrekte Position des Kopfes auf der Spindel welche auch die Rotation des Kopfes verhindert. Eine wesentliche Eigenschaft der CONTROL Winkelh  pe ist, dass sie bleiben steif dank dem Kegel mit Zentralspindel.

Dimensioni STOP BLOCK per teste

Dimensions STOP BLOCK for heads / Ma e von STOP BLOCK f  r K  pfe

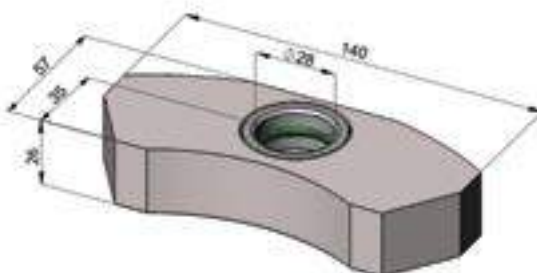
T90cn-0,4 / 0,5 / 1,5 / 2,5 / 3,5 / 4,5



Dimensioni STOP BLOCK per teste

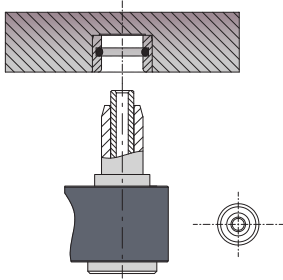
Dimensions STOP BLOCK for heads / Ma e von STOP BLOCK f  r K  pfe

T90cn-5

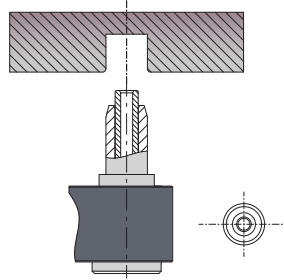


ESEMPI DI STOP BLOCK

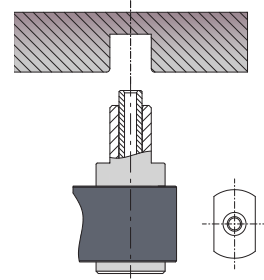
EXAMPLES OF STOP BLOCKS AND PINS - STOP BLOCK UND BOLZEN BEISPIELEN



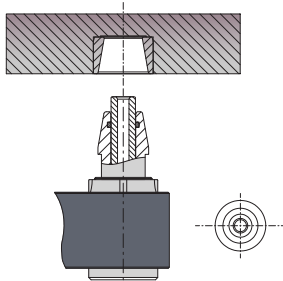
Alberti standard
Alberti standard
Alberti standard



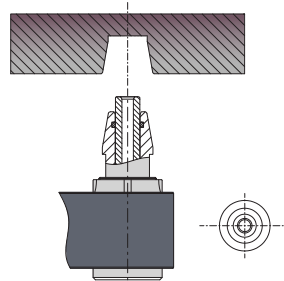
Alberti standard + Stop Block prismatico
Alberti standard + prismatic Stop Block
Alberti standard + prismatisches Stop Block



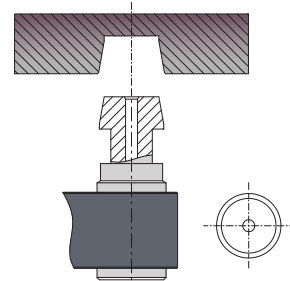
Perno prismatico + Stop Block prismatico
Prismatic pin + prismatic Stop Block
Prismatischer Bolzen + prismatisches Stop Block



Perno conico regolabile - Stop Block con boccia conica
Adjustable conical pin - Stop Block with conical bush
Verstellbarer konischer Bolzen - Stop Block mit konischer Buchse



Perno conico regolabile - Stop Block prismatico conico
Adjustable conical pin - Prismatic conical Stop Block
Verstellbarer konischer Bolzen - Prismatisches konisches Stop Block



Perno conico flottante - Stop Block prismatico conico
Sliding conical pin - Prismatic conical Stop Block
Schiebbolzen - Prismatisches konisches Stop Block

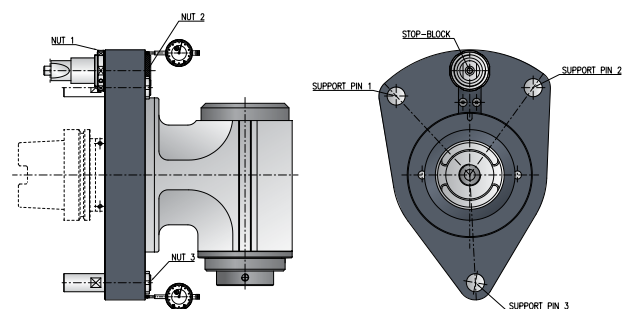
SUPPORTO 3 PUNTI

3 POINT SUPPORT - 3 PUNKTE ABSTÜTZUNGEN

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

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

Um die Starrheit und Rigidität während der Bearbeitung zu erhöhen, können alle Köpfe mit einer 3-Punkte Abstützungen ausgerüstet werden. Der Flansch wird nach Kundenwunsch und gemäß der Maße der Maschinenspindel gefertigt. Mit solchem System ist es nicht möglich den Kopf im Werkzeugmagazin zu laden sondern soll der Kopf auf einer separat Pick Up Station gestützt sein.



T90cn-0,4



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
10.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
4 Nm



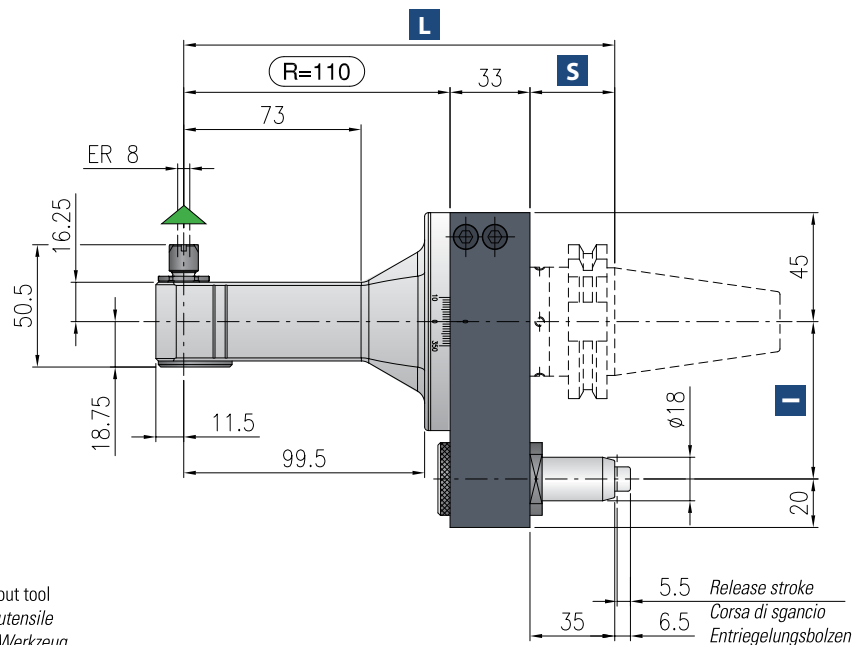
Weight
Peso / Gewicht
4 kg



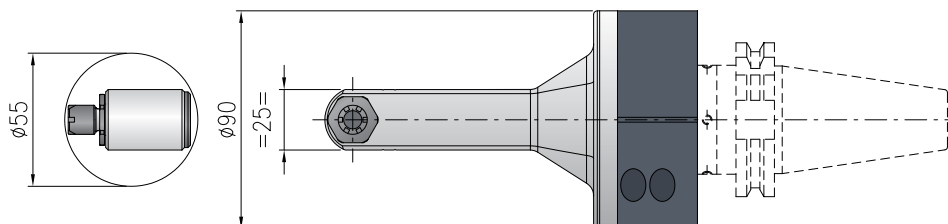
Collet
Pinza / Spannzange
ER-8 Ø 0,5/5 mm

* STANDARD EQUIPMENT INCLUDES:

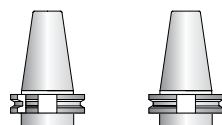
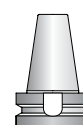
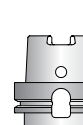
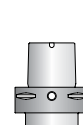
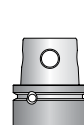
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

										
Shank/ <i>Cono/Aufnahme</i>	DIN-69871 CAT		MAS-BT			HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)
S	35	35	30	35	41	42	45	38	40	40
L	178	178	173	178	184	185	188	181	183	183

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max

12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

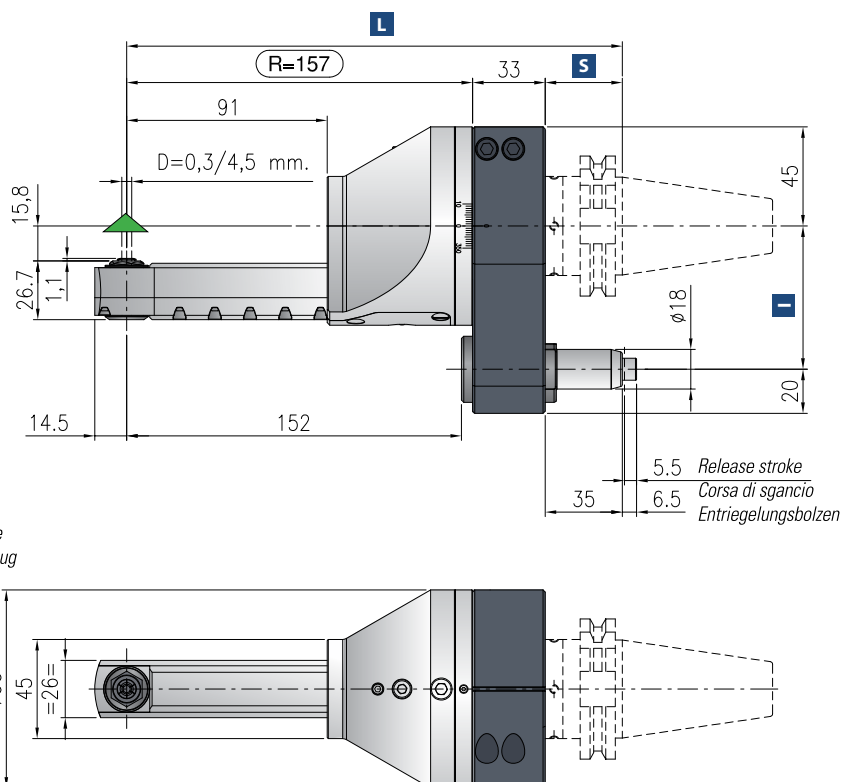


Ø mm max.

6

Weld on output
Weld on
Weld on-Aufnahme

TR90cn-0,4



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
2.375:1



RPM
Velocità / Drehzahl max.
3.500 min⁻¹



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



Torque
Momento torcente / Drehmoment
8 Nm



Weight
Peso / Gewicht
4.5 kg

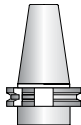
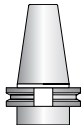
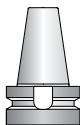
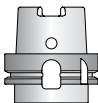


Collet
Pinza / Spannzange
SCHAUBLIN P6

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

												
Shank/ <i>Cono/Aufnahme</i>	DIN-69871		CAT		MAS-BT			HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	40	50	30	40	50	63-80	100	C5-C6	C8	50-63		
I	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)		
S	35	35	30	35	41	42	45	38	40	40		
L	170	170	165	170	176	177	180	173	175	175		

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max

12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

T90cn-0,5C



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
10.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
8 Nm



Weight
Peso / Gewicht
4 kg

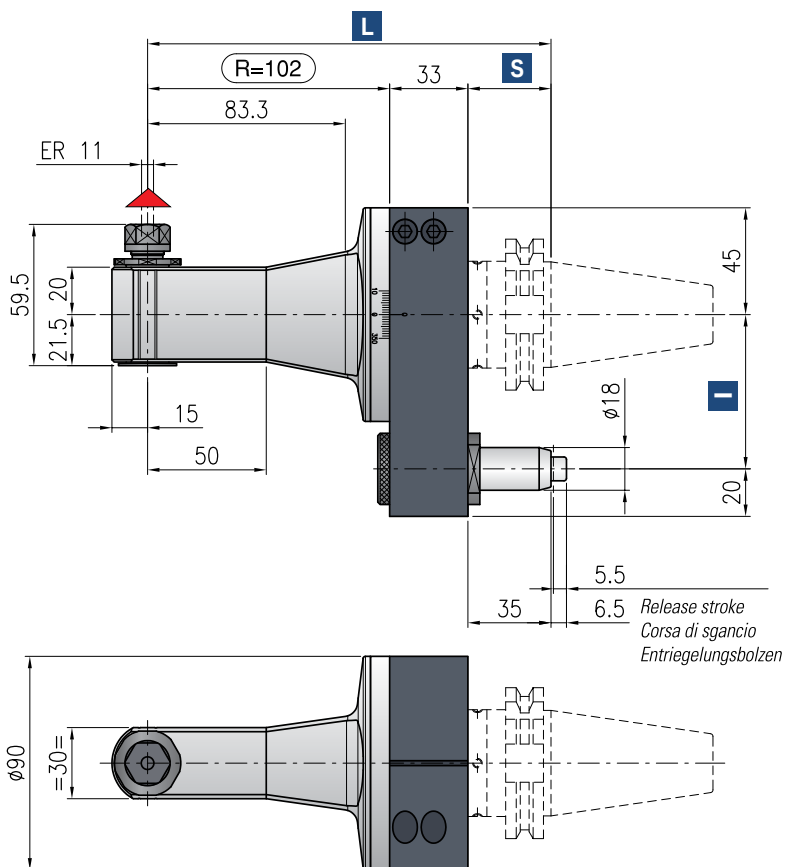
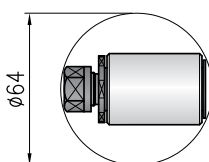


Collet
Pinza / Spannzange
ER-11 ø 0,5/7 mm

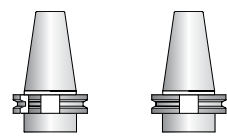
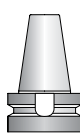
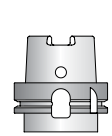
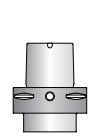
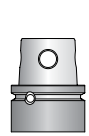
* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



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

										
Shank/ <i>Cono/Aufnahme</i>	DIN-69871 CAT		MAS-BT			HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)
S	35	35	30	35	41	42	45	38	40	40
L	170	170	165	170	176	177	180	173	175	175

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



Ø mm max.
7

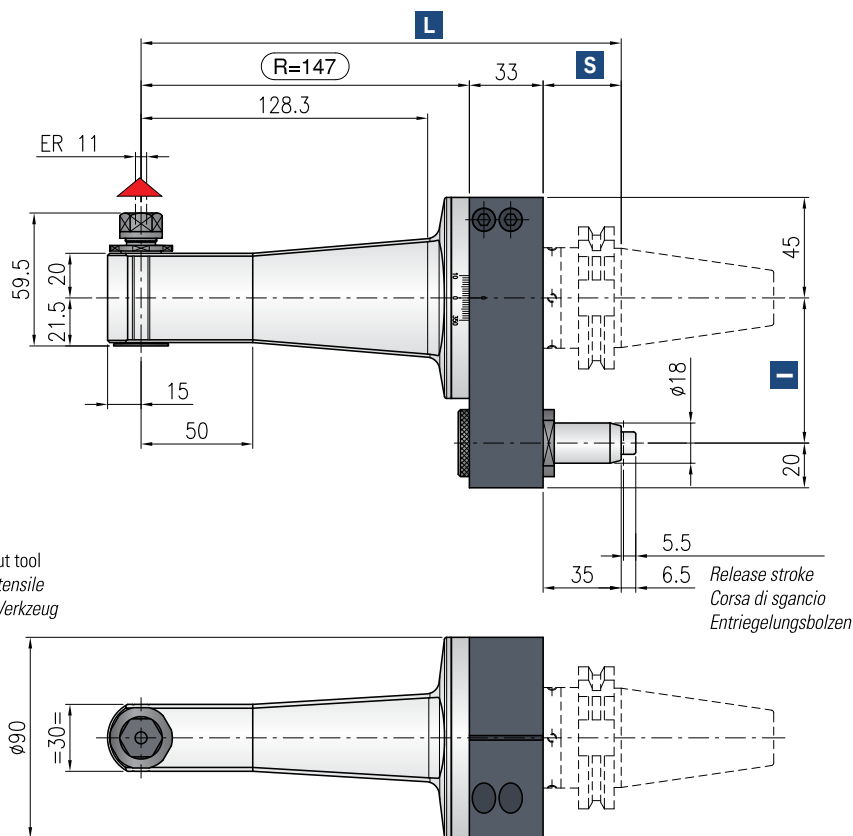
ERAX-11



Ø mm max.
6

Weld on output
Weld on
Weld on-Aufnahme

T90cn-0,5L



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug

- Ratio
Rapporto / Verhältnis
1:1
- RPM
Velocità / Drehzahl max.
10.000 min⁻¹
- Max. axial load
Max. carico assiale / Max. Axialbelastung
150 N
- Torque
Momento torcente / Drehmoment
8 Nm
- Weight
Peso / Gewicht
4,3 kg
- Collet
Pinza / Spannzange
ER-11 $\varnothing$ 0,5/7 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

										
Shank/ <i>Cono/Aufnahme</i>	DIN-69871 CAT		MAS-BT			HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)
S	35	35	30	35	41	42	45	38	40	40
L	215	215	210	215	221	222	225	218	220	220

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



$\varnothing$ mm max.
7

ERAX-11



$\varnothing$ mm max.
6

Weld on output
Weld on
Weld on-Aufnahme

T90cn-0,5M Aluminium



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
10.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
8 Nm



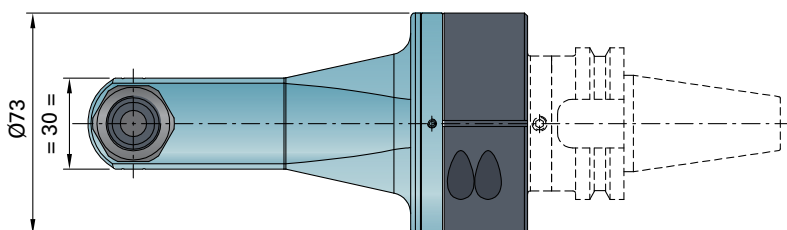
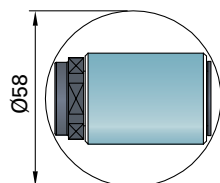
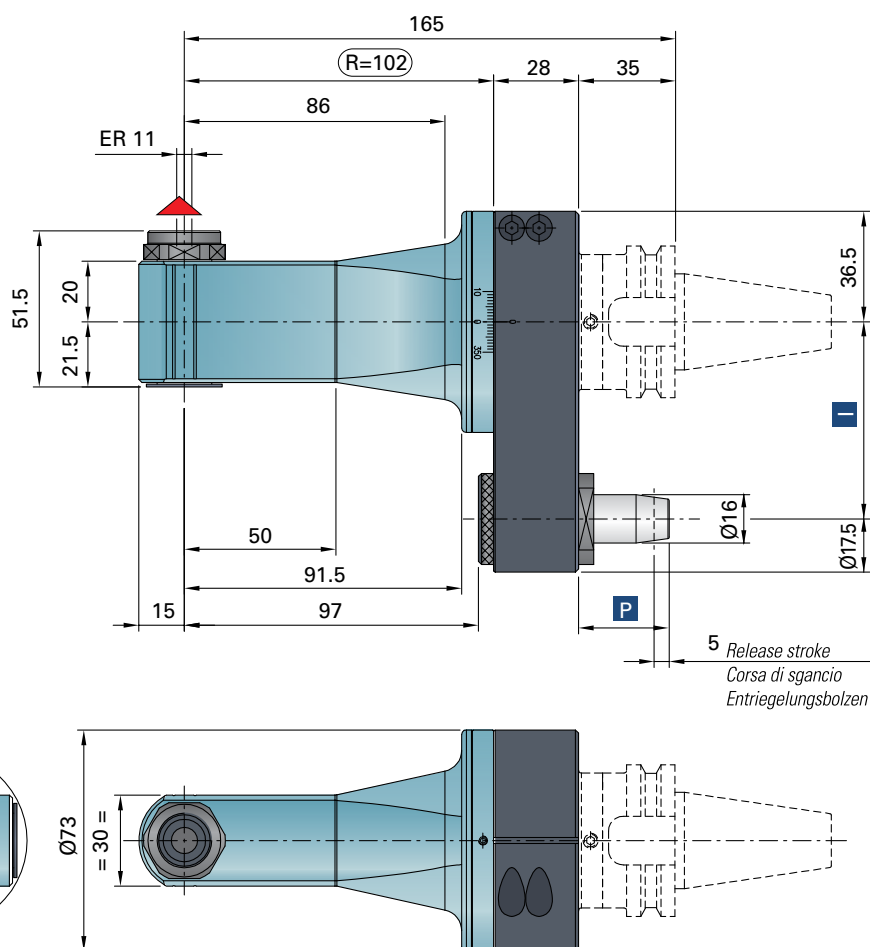
Weight
Peso / Gewicht
2,7 kg



Collet
Pinza / Spannzange
ERAX-11 (0,5-7 mm)



Shank
Cono / Aufnahme
ISO 30DIN-69871/BT-30



* STANDARD EQUIPMENT INCLUDES:

- Instruction book / wrenches / special bag
- Libro istruzioni / chiavi di servizio / bauletto
- Bedienungsanleitung / Schraubenschlüssel / Koffer
- Stop Block

	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

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

Option / Opzione / Option



AIR/OIL

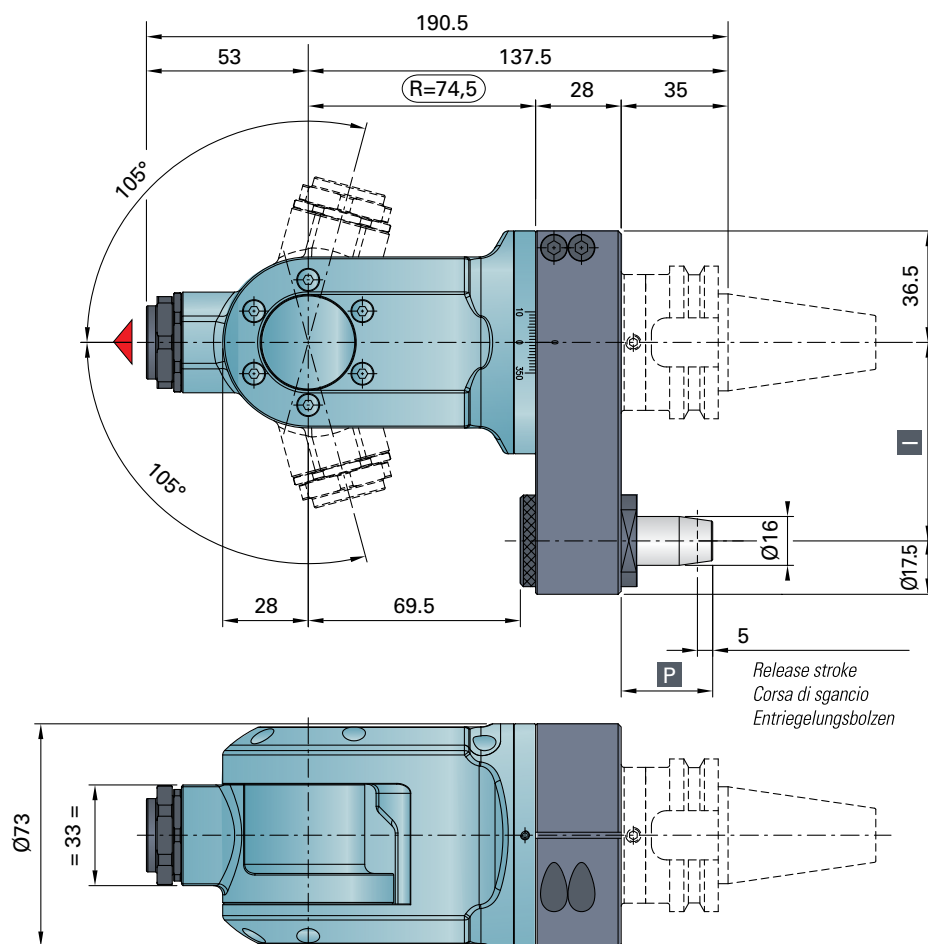
Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

TCUcn-0,5M Aluminium



- Ratio**
Rapporto / Verhältnis
1:1.5 (Speeder)
- RPM**
Velocità / Drehzahl max.
6.000 min⁻¹
- Max. axial load**
Max. carico assiale / Max. Axialbelastung
215 N
- Torque**
Momento torcente / Drehmoment
8 Nm
- Weight**
Peso / Gewicht
2,8 kg
- Collet**
Pinza / Spannzange
ERAX-11 (0.5-7 mm)
- Shank**
Cono / Aufnahme
ISO 30DIN-69871/BT-30

* STANDARD EQUIPMENT INCLUDES:

- Instruction book / wrenches / special bag
- Libro istruzioni / chiavi di servizio / bauletto
- Bedienungsanleitung / Schraubenschlüssel / Koffer

	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

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

Option / Opzione / Option



bar max

12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

TR90cn-0,5



Ratio
Rapporto / Verhältnis
1:2 speeder



RPM
Velocità / Drehzahl max.
8.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
8 Nm



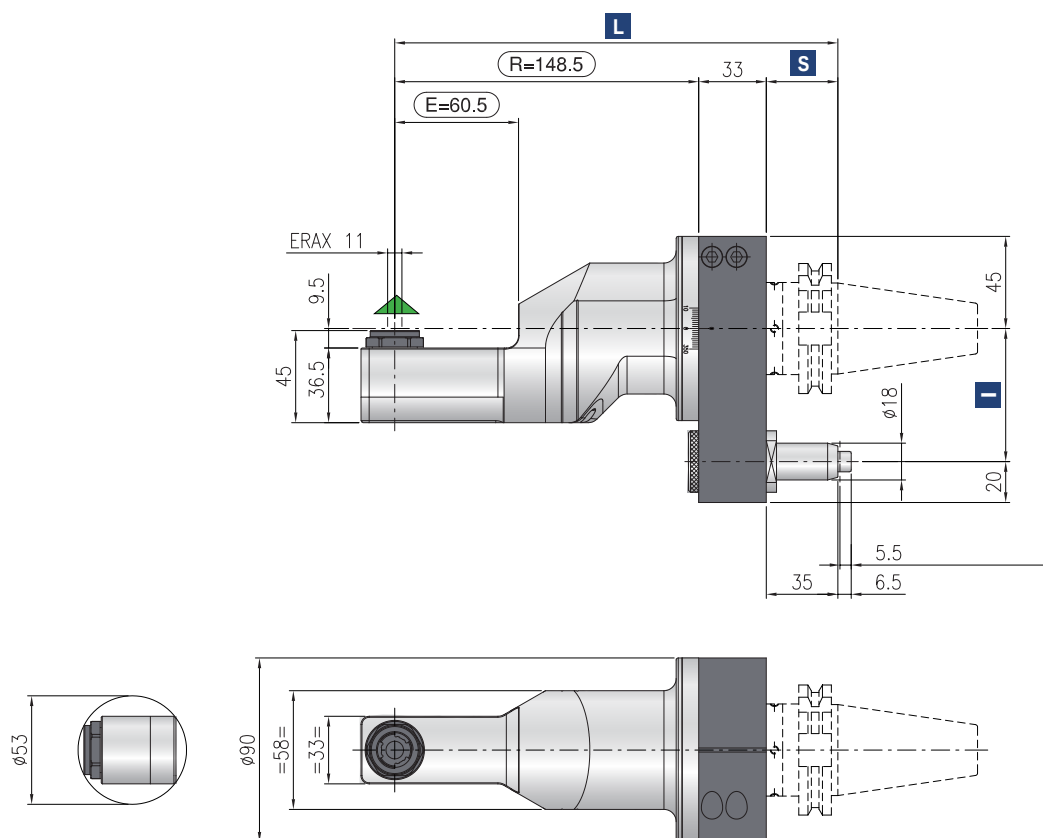
Weight
Peso / Gewicht
6 kg



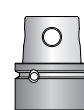
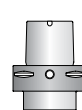
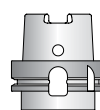
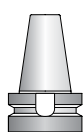
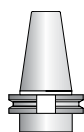
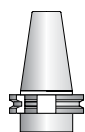
Collet
Pinza / Spannzange
ER-AX-11 (0,5-7 mm)

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max

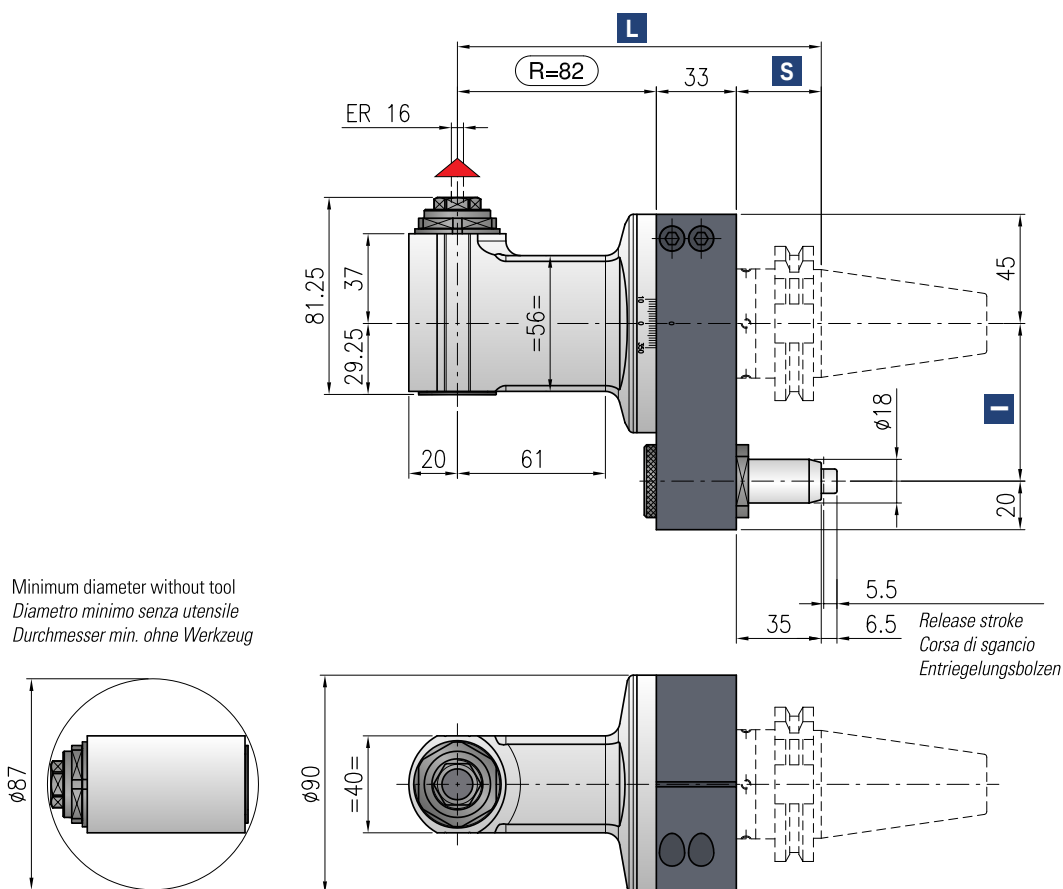
12

Coolant through pin

Adduzione refrigerante attraverso il perno

Kühlmittelzufuhr durch Bolzen

T90cn-1,5

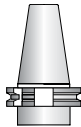
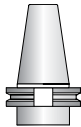
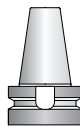
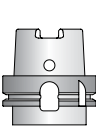
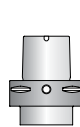
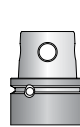


- Ratio
Rapporto / Verhältnis
1:1
- RPM
Velocità / Drehzahl max.
8.000 min⁻¹
- Max. axial load
Max. carico assiale / Max. Axialbelastung
250 N
- Torque
Momento torcente / Drehmoment
15 Nm
- Weight
Peso / Gewicht
4,3 kg
- Collet
Pinza / Spannzange
ER-16 Ø 1/10 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

												
Shank/ <i>Cono/Aufnahme</i>	DIN-69871		CAT		MAS-BT			HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	40	50	30	40	50	63-80	100	C5-C6	C8	50-63		
I	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)		
S	35	35	30	35	41	42	45	38	40	40		
L	150	150	145	150	156	157	160	153	155	155		

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



Ø mm
13

Arbor output
Porta fresa
Fräsaufnahme



Ø mm max.
10

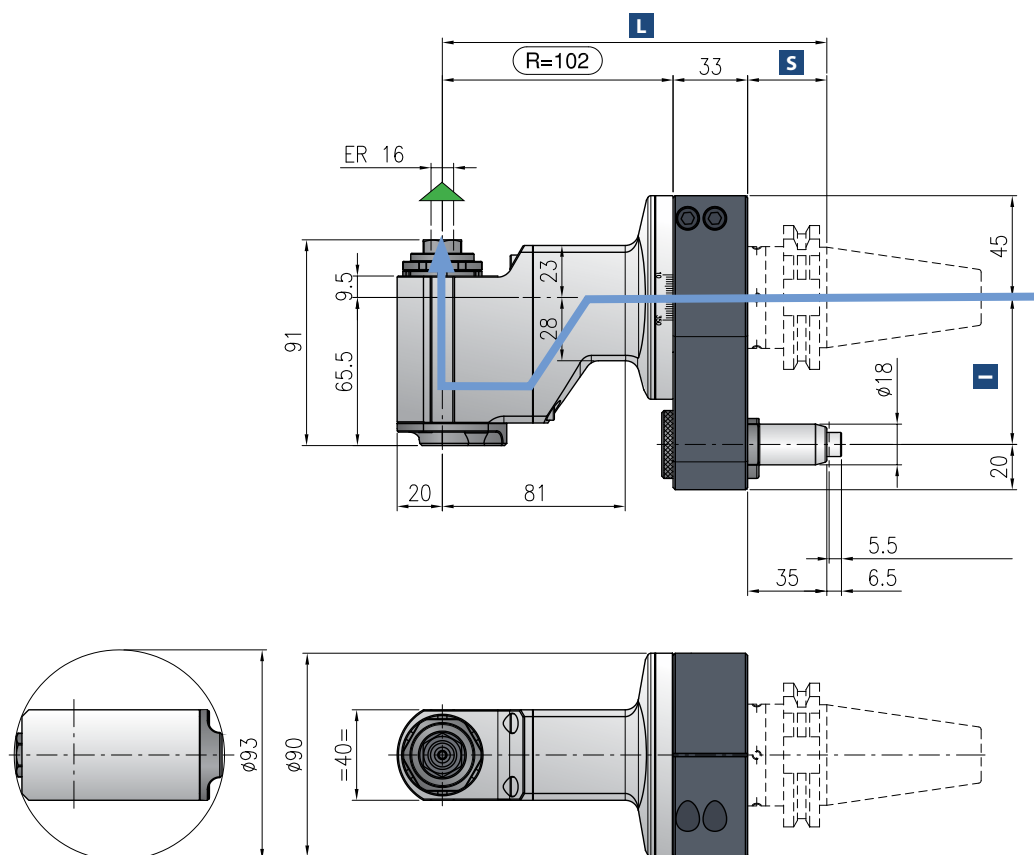
Weldon output
Weldon
Weldon-Aufnahme



ER-16/ER-11

Double output
Doppia uscita
Doppelter Ausgang

TH90cn-1,5 100 BAR



- Ratio
Rapporto / Verhältnis
1:1
- RPM
Velocità / Drehzahl max.
10.000 min⁻¹
- RPM Dry running
Velocità a secco / Drehzahl max.
8.000 min⁻¹
- Max. axial load
Max. carico assiale / Max. Axialbelastung
250 N
- Torque
Momento torcente / Drehmoment
15 Nm
- Weight
Peso / Gewicht
4,5 kg
- Collet
Pinza / Spannzange
ER-16 Ø 1/10 mm

*** STANDARD EQUIPMENT INCLUDES:**

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Dry running also possible / Rotazione a secco possibile / Trockene Bearbeitung möglich

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

												
Shank/ <i>Cono/Aufnahme</i>	DIN-69871		CAT		MAS-BT			HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	40	50	30	40	50	63-80	100	C5-C6	C8	50-63		
I	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)		
S	35	35	30	35	41	42	45	38	40	40		
L	170	170	165	170	176	177	180	173	175	175		

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



Ø mm max.

10

Weld on output
Weld on
Weld on-Aufnahme

TR90cn-1,5



Ratio
Rapporto / Verhältnis
1: 1,5 speeder



RPM
Velocità / Drehzahl max.
8.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
15 Nm



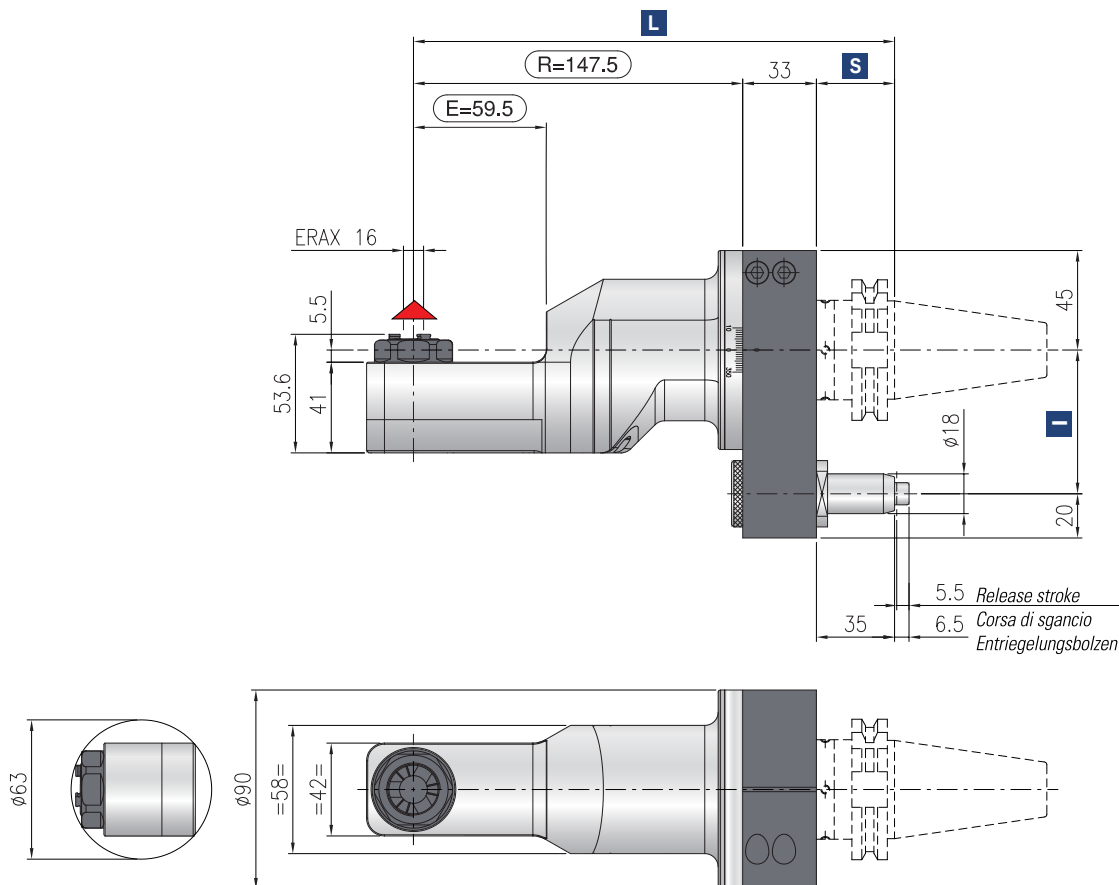
Weight
Peso / Gewicht
7 kg



Collet
Pinza / Spannzange
ER-AX / Ø1-10 mm

* STANDARD EQUIPMENT INCLUDES:

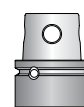
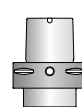
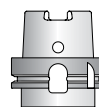
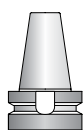
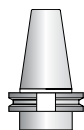
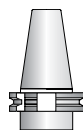
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 100 bar



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



Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT		HSK		CAPTO		KM
Size/Grandezza/Größe	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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option

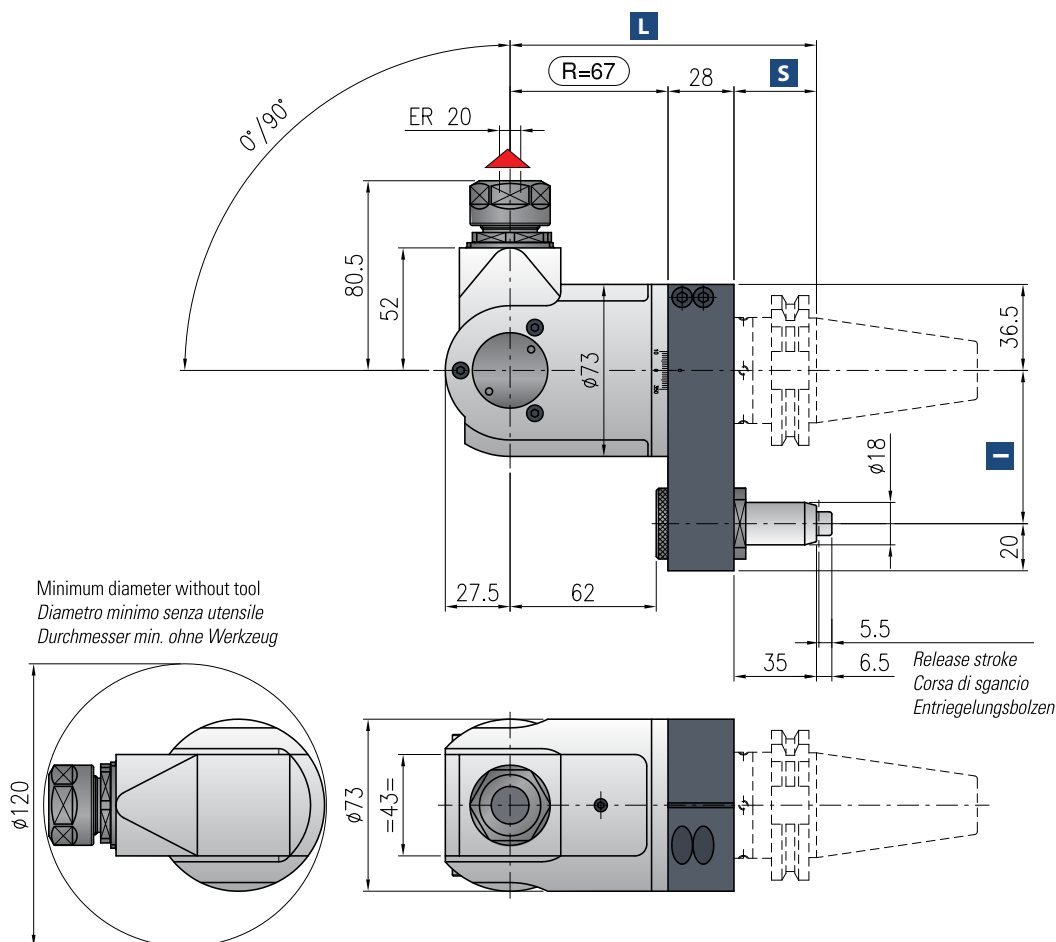


bar max

12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

TCUcn-1,5



- Ratio
Rapporto / Verhältnis
1:1
- RPM
Velocità / Drehzahl max.
4.000 min⁻¹
- Max. axial load
Max. carico assiale / Max. Axialbelastung
450 N
- Torque
Momento torcente / Drehmoment
6 Nm
- Weight
Peso / Gewicht
4.2 kg
- Collet
Pinza / Spannange
ER-20 Ø 1/13 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

										
Shank/ <i>Cono/Aufnahme</i>	DIN-69871 CAT		MAS-BT			HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)
S	35	35	30	35	41	42	45	42	40	40
L	130	130	125	130	136	137	140	133	135	135

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



min⁻¹
8.000

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



Ø mm max.
10

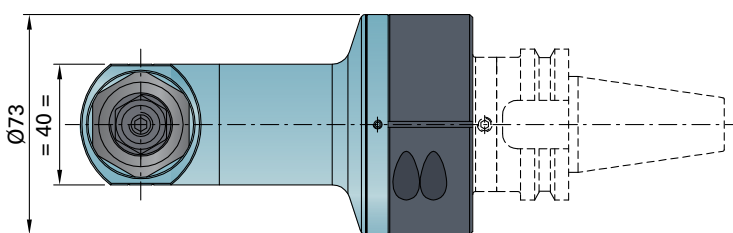
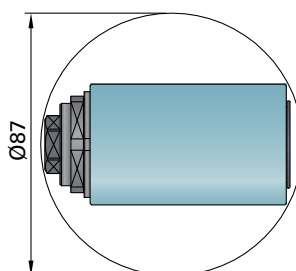
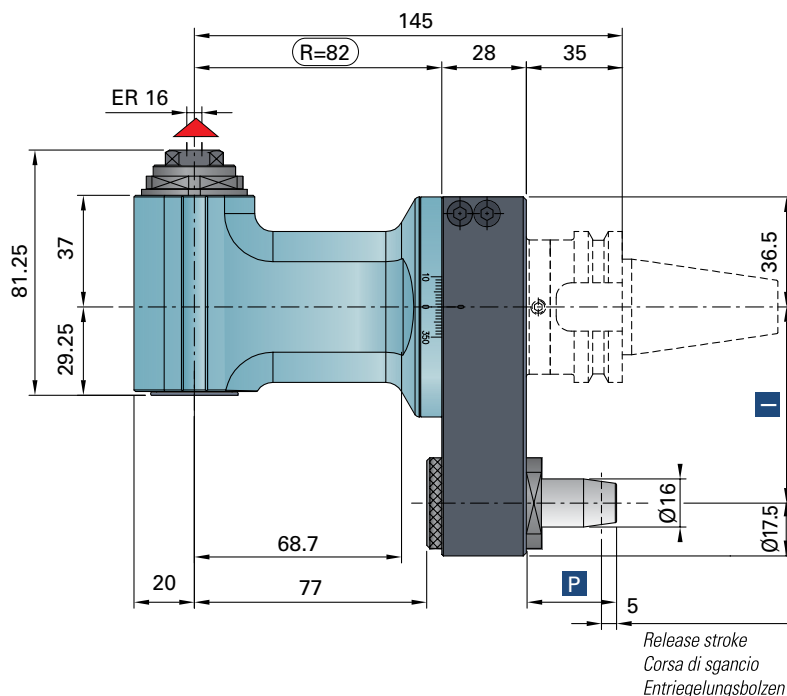
Weld on output
Weld on
Weld on-Aufnahme

T90cn-1,5M Aluminium

-  **Ratio**
Rapporto / Verhältnis
1:1
-  **RPM**
Velocità / Drehzahl max.
8.000 min⁻¹
-  **Max. axial load**
Max. carico assiale / Max. Axialbelastung
250 N
-  **Torque**
Momento torcente / Drehmoment
15 Nm
-  **Weight**
Peso / Gewicht
2,9 kg
-  **Collet**
Pinza / Spannzange
ER 16 (1-10 mm)
-  **Shank**
Cono / Aufnahme
ISO 30DIN-69871/BT-30

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 40 bar

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

	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

Option / Opzione / Option



AIR/OIL

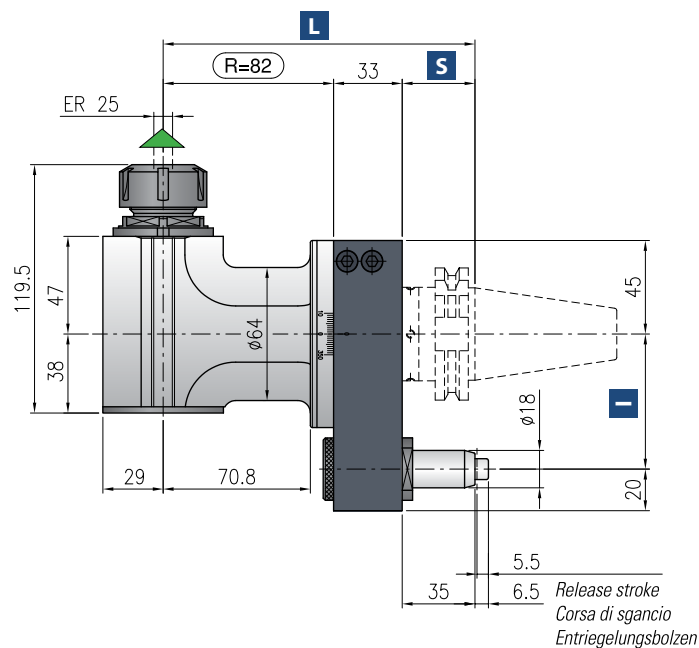
Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung



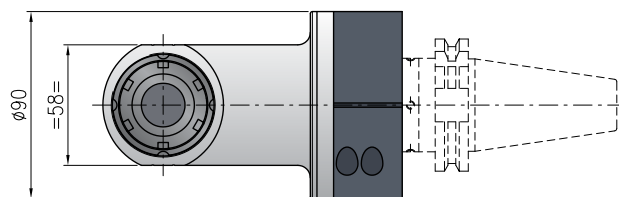
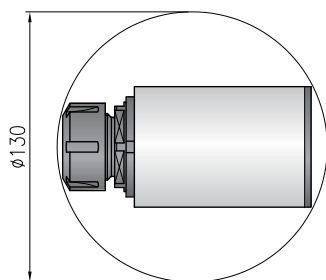
bar max
40

Coolant through spindle
Refrigerante attraverso il cono
Kühlmittelzufuhr durch Spindel

T90cn-2,5



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug

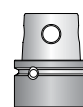
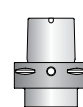
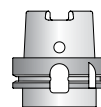
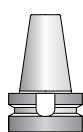
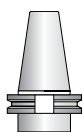
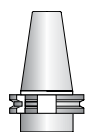


- Ratio
Rapporto / Verhältnis
1:1
- RPM
Velocità / Drehzahl max.
6.000 min⁻¹
- Max. axial load
Max. carico assiale / Max. Axialbelastung
510 N
- Torque
Momento torcente / Drehmoment
30 Nm
- Weight
Peso / Gewicht
5,4 kg
- Collet
Pinza / Spannzange
ER-25 Ø 1/16 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT		HSK		CAPTO		KM
Size/Grandezza/Größe	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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
8.000

High speed RPM max.
Alta velocità RPM max.
Drehzahl max.



Ø mm
16

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
16

Weldon output
Weldon
Weldon-Aufnahme



HSK-32

Quick Change
Attacco rapido
Schnellwechselaufnahme



ER-25/ER-16

Double output
Doppia uscita
Doppelter Ausgang

T90cn-2,5L



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



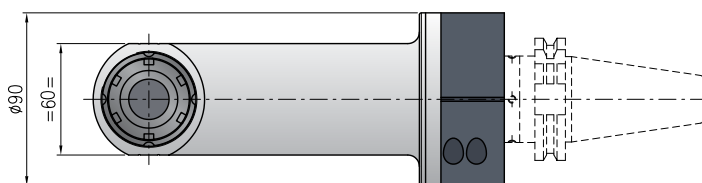
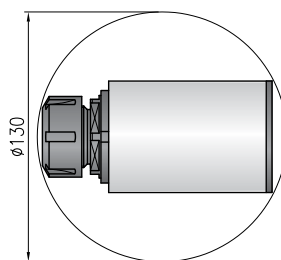
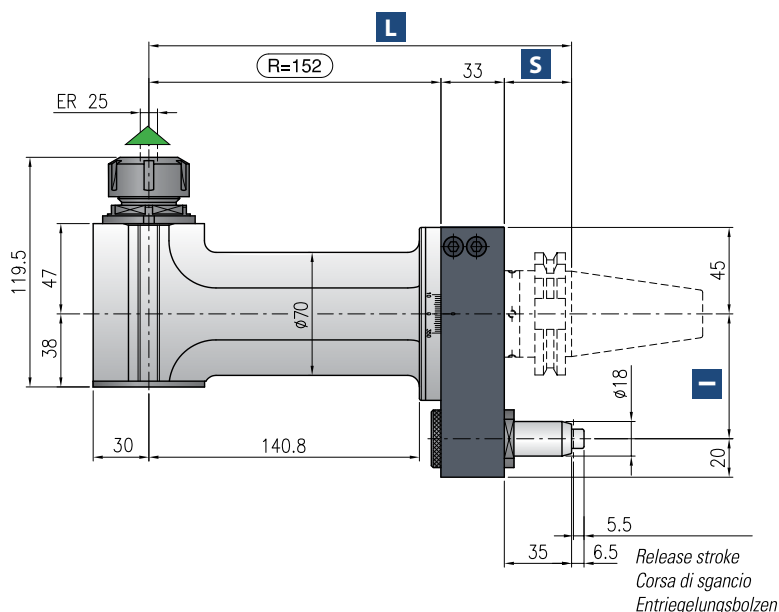
Weight
Peso / Gewicht
6,7 kg



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

*** STANDARD EQUIPMENT INCLUDES:**

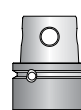
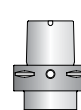
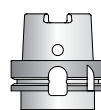
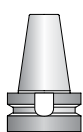
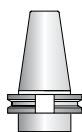
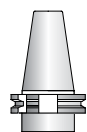
- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 40 bar



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM
Size/Grandezza/Größe	40	50	40	63-80	C5-C6	63
I	65-80	80-(110*)	65-80-(110*)	65-80-(110*)	65-80-(110*)	65-80-(110*)
S	35	35	35	42	38	40
L	220	220	220	227	223	225

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
8.000

High speed RPM max.
Alta velocità RPM max.
Drehzahl max.



Ø mm
16

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
16

Weldon output
Weldon
Weldon-Aufnahme



HSK-32

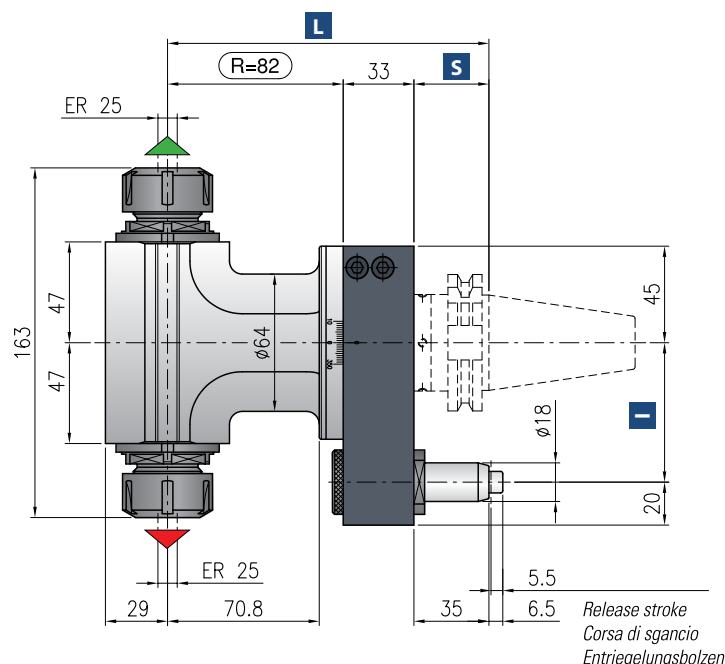
Quick Change
Attacco rapido
Schnellwechselaufnahme



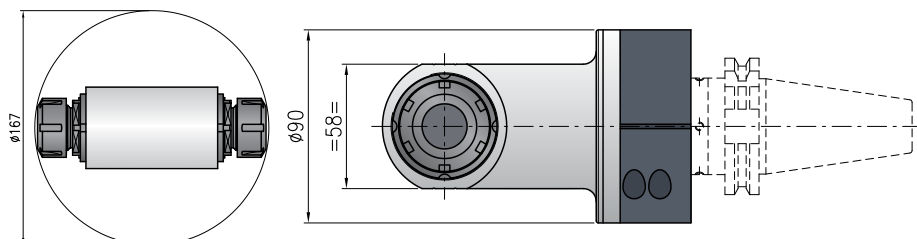
ER-25/ER-16

Double output
Doppia uscita
Doppelter Ausgang

T90cn-2,5 2U



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel
 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegen Antriebsspindel



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



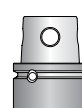
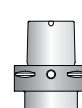
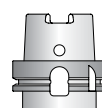
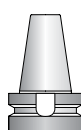
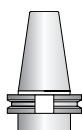
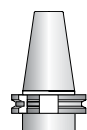
Weight
Peso / Gewicht
6,4 kg



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

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



min⁻¹
8.000

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



Ø mm
16

Arbor output
Porta fresa
Fräseaufnahme



Ø mm max.
16

Weld on output
Weld on
Weldon-Aufnahme

TH90cn-2,5 100 BAR



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
9.000 min⁻¹



RPM Dry running
Velocità a secco / Drehzahl max.
6.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
30 Nm



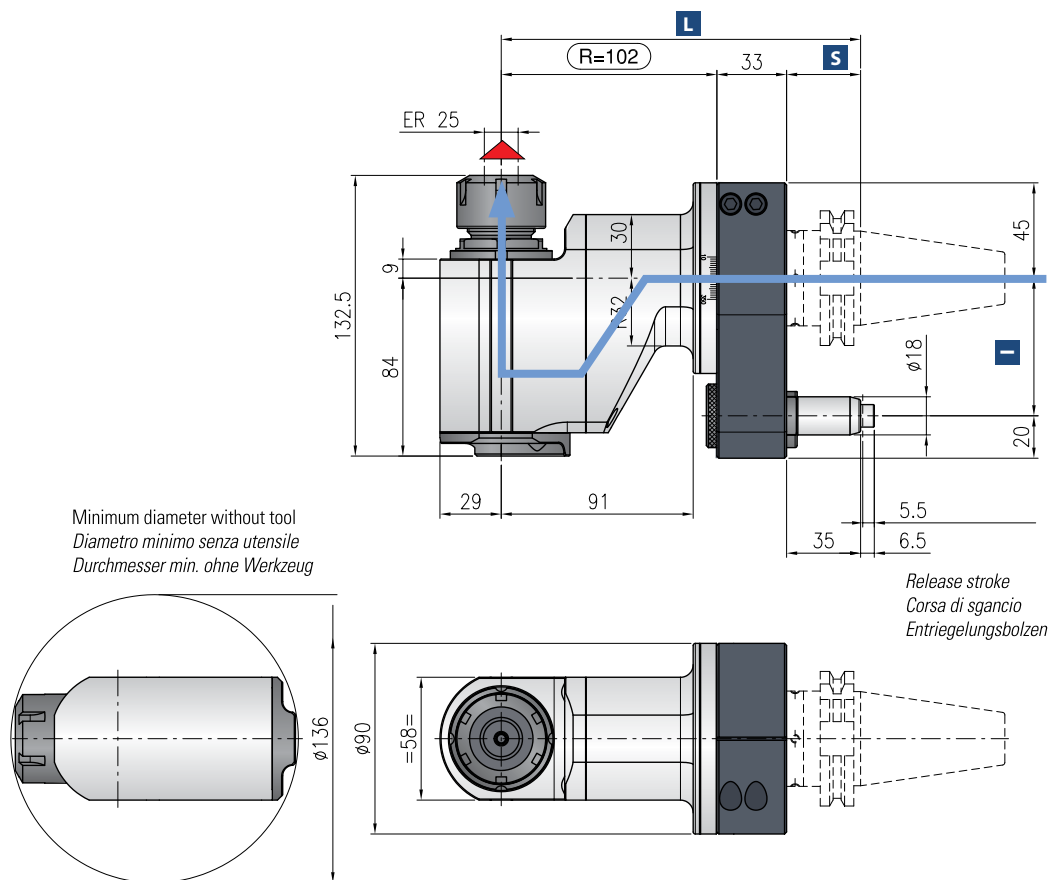
Weight
Peso / Gewicht
5,5 kg



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

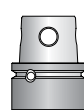
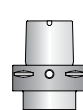
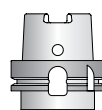
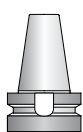
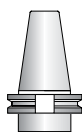
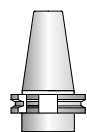
*** STANDARD EQUIPMENT INCLUDES:**

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Dry running also possible / Rotazione a secco possibile / Trockene Bearbeitung möglich

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



Shank/ <i>Cono/Aufnahme</i>	DIN-69871		CAT		MAS-BT		HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</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	220	220	220	226	227	230	223	225	225		

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option

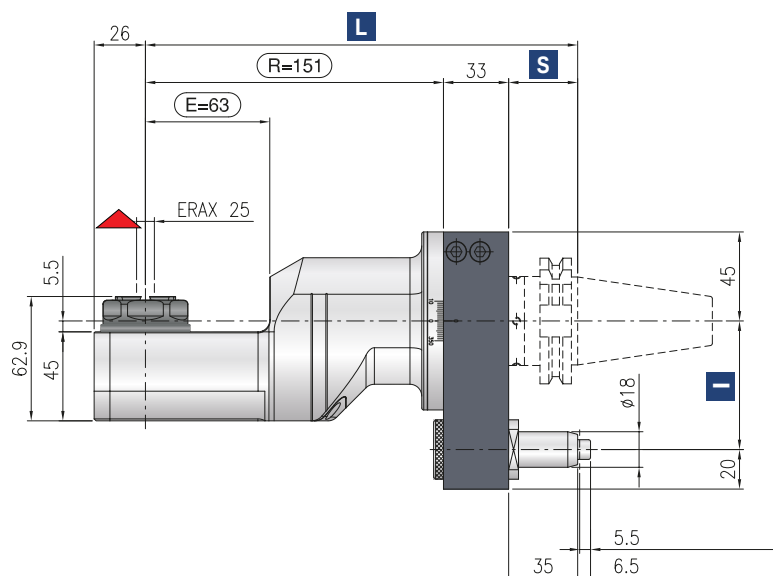


Ø mm max.

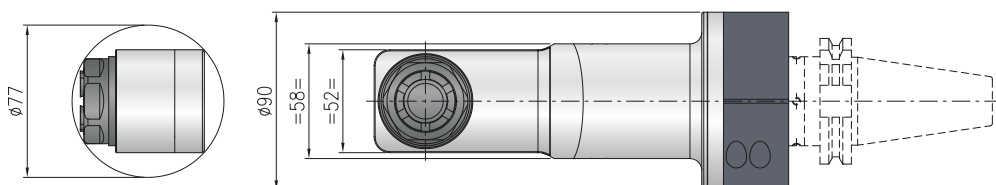
16

Weld on output
Weld on
Weldon-Aufnahme

TR90cn-2,5



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
6000 min⁻¹



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



Torque
Momento torcente / Drehmoment
30 Nm



Weight
Peso / Gewicht
7.5 kg



Collet
Pinza / Spannzange
ER-AX 25 (Ø1-16mm)

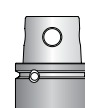
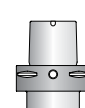
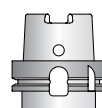
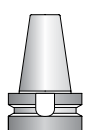
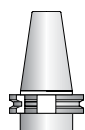
* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 100 bar

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



Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM
Size/Grandezza/Größe	40	50	40	63-80	C5-C6	50-63
I	65-80-(110*)	80-(110*)	65-80-(110*)	65-80-(110*)	65-80-(110*)	65-80-(110*)
S	35	35	35	42	38	40
L	216	216	216	223	219	221

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max

12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

TCUcn-2,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
18 Nm



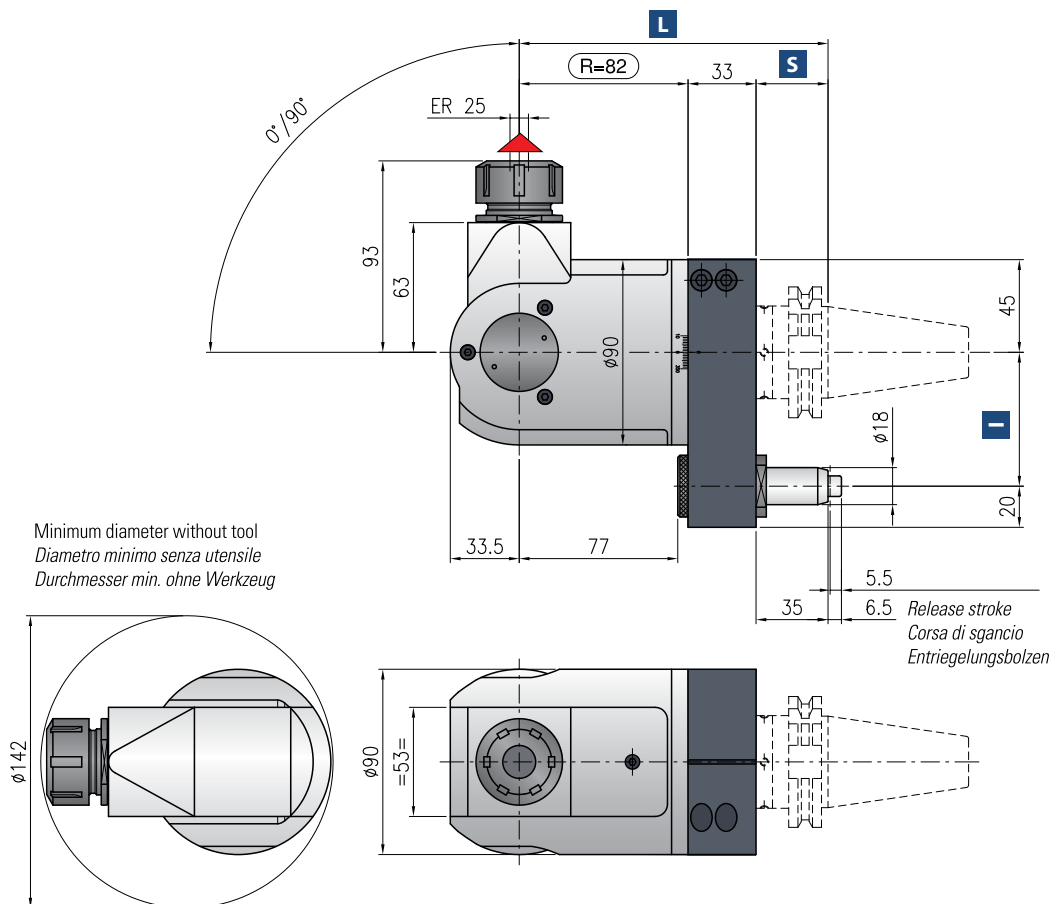
Weight
Peso / Gewicht
7 kg



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

*** STANDARD EQUIPMENT INCLUDES:**

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



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

Shank/Cono/Aufnahme	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		

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



min⁻¹
6.000

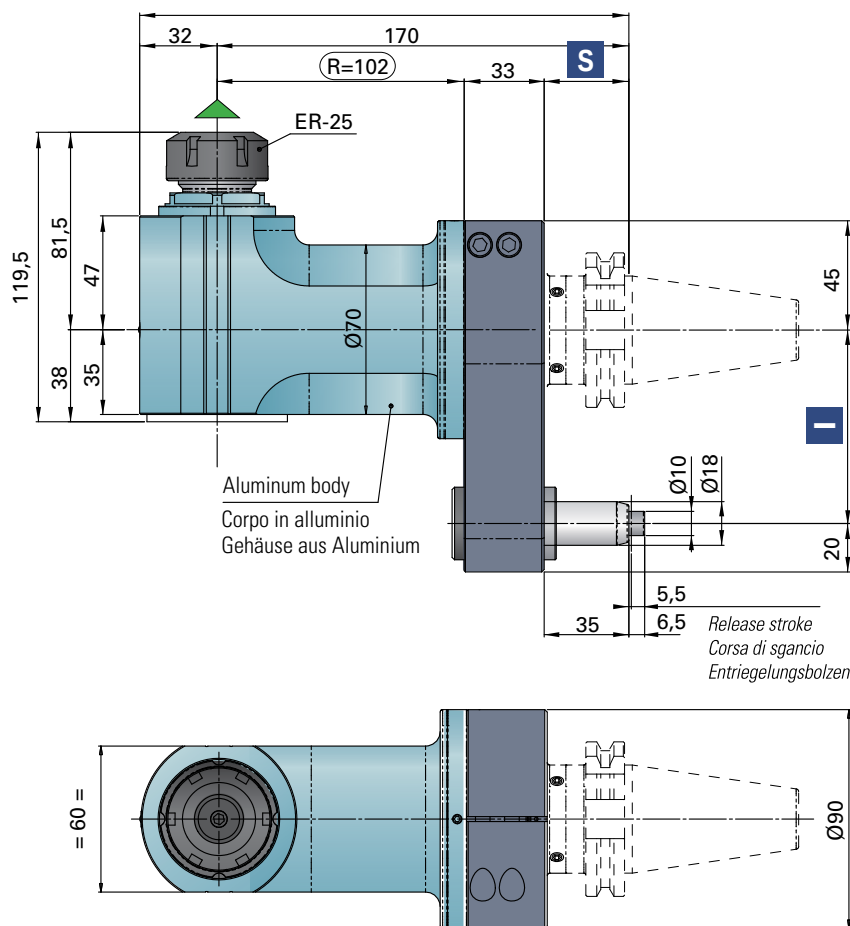
High speed optional RPM max.
Opzione alta velocità RPM max.
Drehzahl max.



Ø mm max.
16

Weld on output
Weld on
Weld on-Aufnahme

T90cn-2,5M Aluminium



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
20 Nm



Weight
Peso / Gewicht
4,9 kg



Collet
Pinza / Spannzange
ER 25 - Ø1-16 mm

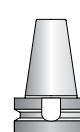
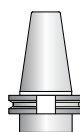
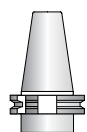


Shank
Cono / Aufnahme
ISO40 DIN-69871/BT-40

* STANDARD EQUIPMENT INCLUDES:

- Instruction book / wrenches / special bag
- Libro istruzioni / chiavi di servizio / bauletto
- Bedienungsanleitung / Schraubenschlüssel / Koffer

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT
Size/Grandezza/Größe	40	50	40
I	65-80	80-(110*)	65-80-(110*)
S	35	35	35
L	170	170	170

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung



bar max
40

Coolant through spindle
Refrigerante attraverso il cono
Kühlmittelzufuhr durch Spindel

T90cn-3,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



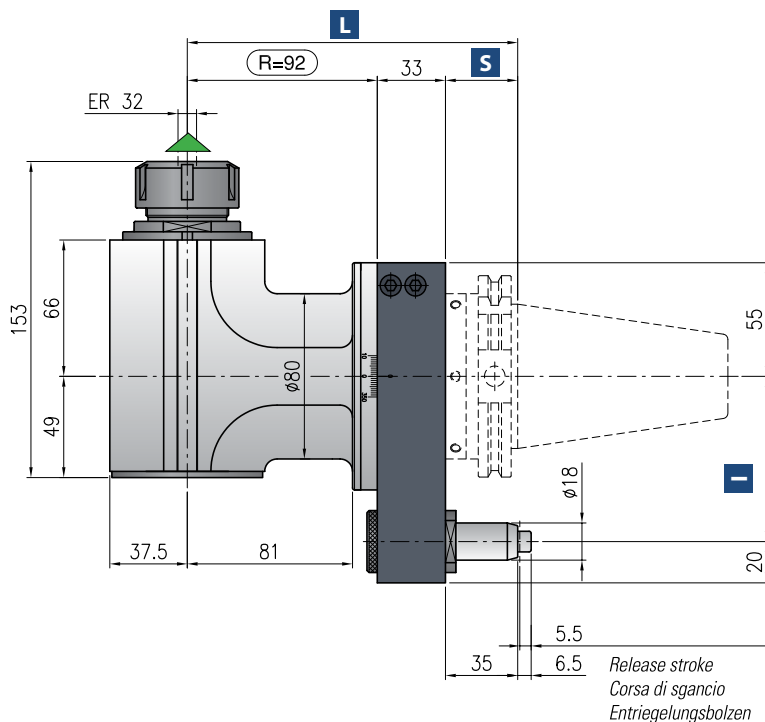
Weight
Peso / Gewicht
11 kg



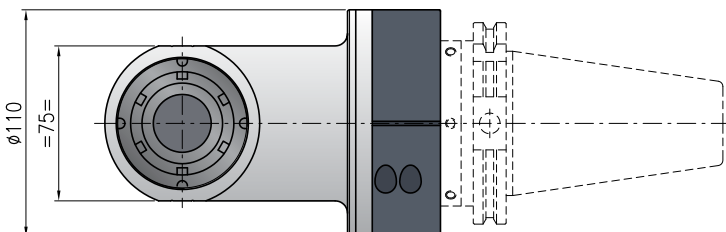
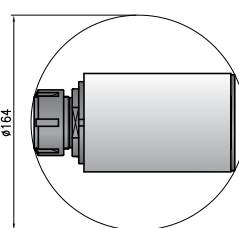
Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM
Size/Grandezza/Größe	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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
6.000

High speed RPM max.
Alta velocità RPM max.
Drehzahl max.



Ø mm
27

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
20

Weld on output
Weld on
Weldon-Aufnahme

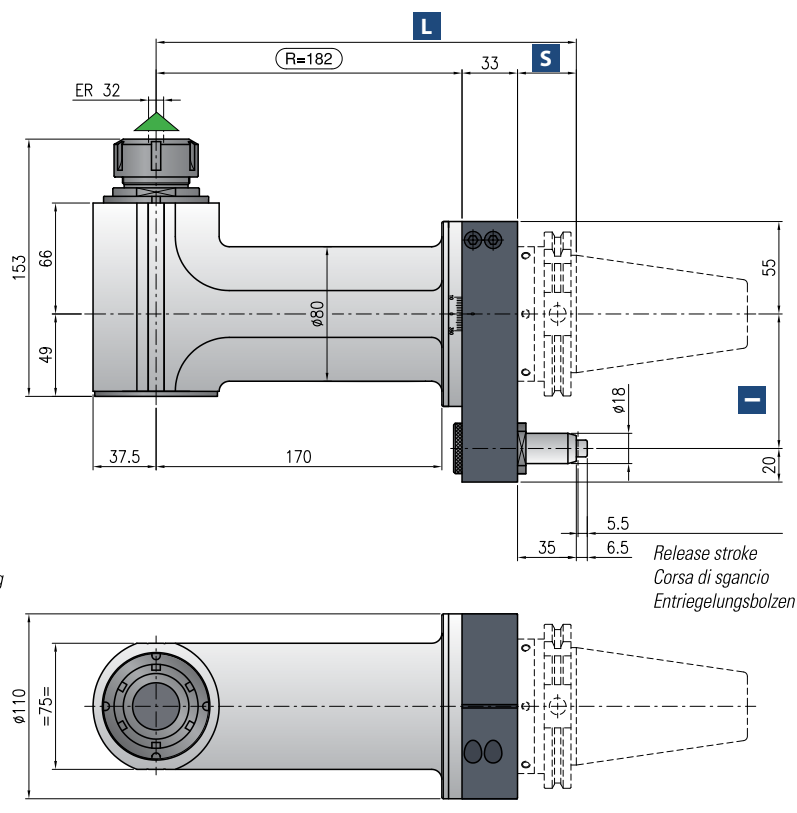


ISO-30 HSK-40
Quick Change
Attacco rapido
Schnellwechselaufnahme



ER-32/ER-20
Double output
Doppia uscita
Doppelter Ausgang

T90cn-3,5 L



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug

- Ratio
Rapporto / Verhältnis
1:1
- RPM
Velocità / Drehzahl max.
4.000 min⁻¹
- Max. axial load
Max. carico assiale / Max. Axialbelastung
1.250 N
- Torque
Momento torcente / Drehmoment
50 Nm
- Weight
Peso / Gewicht
13,2 kg
- Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 40 bar

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM
Size/Grandezza/Größe	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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
6.000

High speed RPM max.
Alta velocità RPM max.
Drehzahl max.



Ø mm
27

Arbor output
Porta fresa
Fräseaufnahme



Ø mm max.
20

Weldon output
Weldon
Weldon-Aufnahme



ISO-30 HSK-40

Quick Change
Attacco rapido
Schnellwechselaufnahme



ER-32/ER-20

Double output
Doppia uscita
Doppelter Ausgang

T90cn-3,5 2U



Ratio
Rapporto / Verhältnis
1.1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



Weight
Peso / Gewicht
12 kg

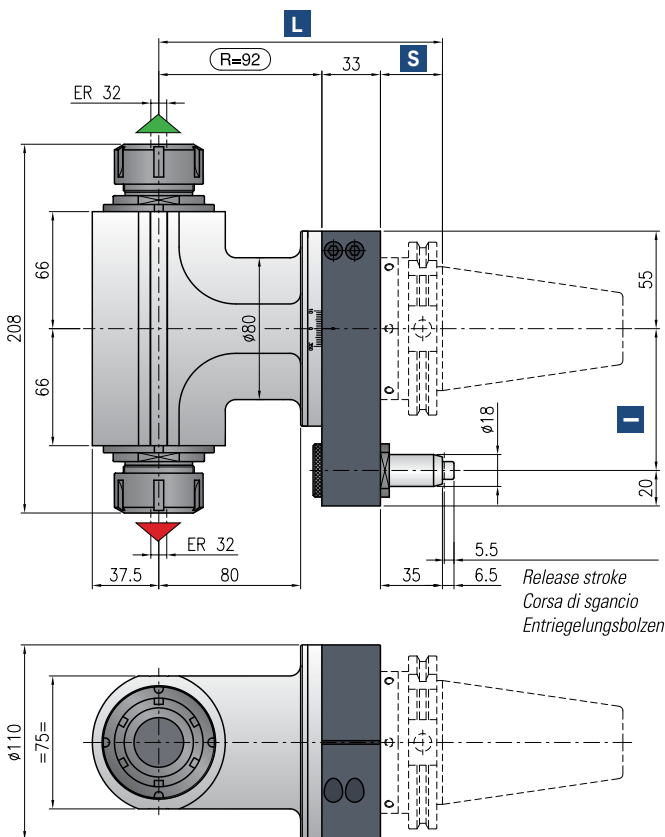
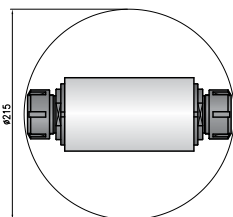


Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

*** STANDARD EQUIPMENT INCLUDES:**

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspinde
- Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegen Antriebsspinde

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM
Size/Grandezza/Größe	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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



min⁻¹
6.000

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



Ø mm
27

Arbor output
Porta fresa
Fräsaufnahme



Ø mm max.
20

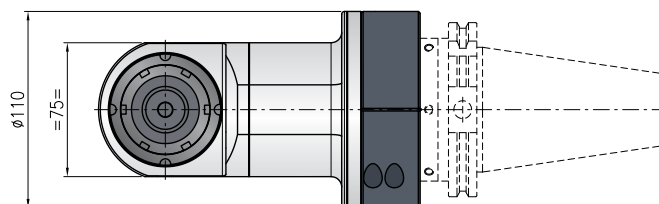
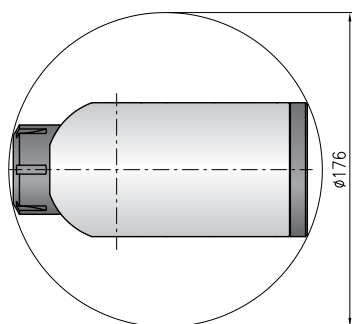
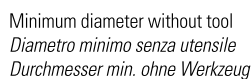
Weld on output
Weld on
Weld on-Aufnahme



HSK-40

Quick Change
Attacco rapido
Schnellwechselaufnahme

TH90cn-3,5 100 BAR



- * STANDARD EQUIPMENT INCLUDES:**

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

								
Shank/ <i>Cono/Aufnahme</i>	DIN-69871	CAT	MAS-BT	HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</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	250		256	257	260	253	255	255

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / *Opzione* / *Option*

Ø mm max.

20

Weldon output
Weldon
Weldon-Aufnahme

TR90cn-3,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



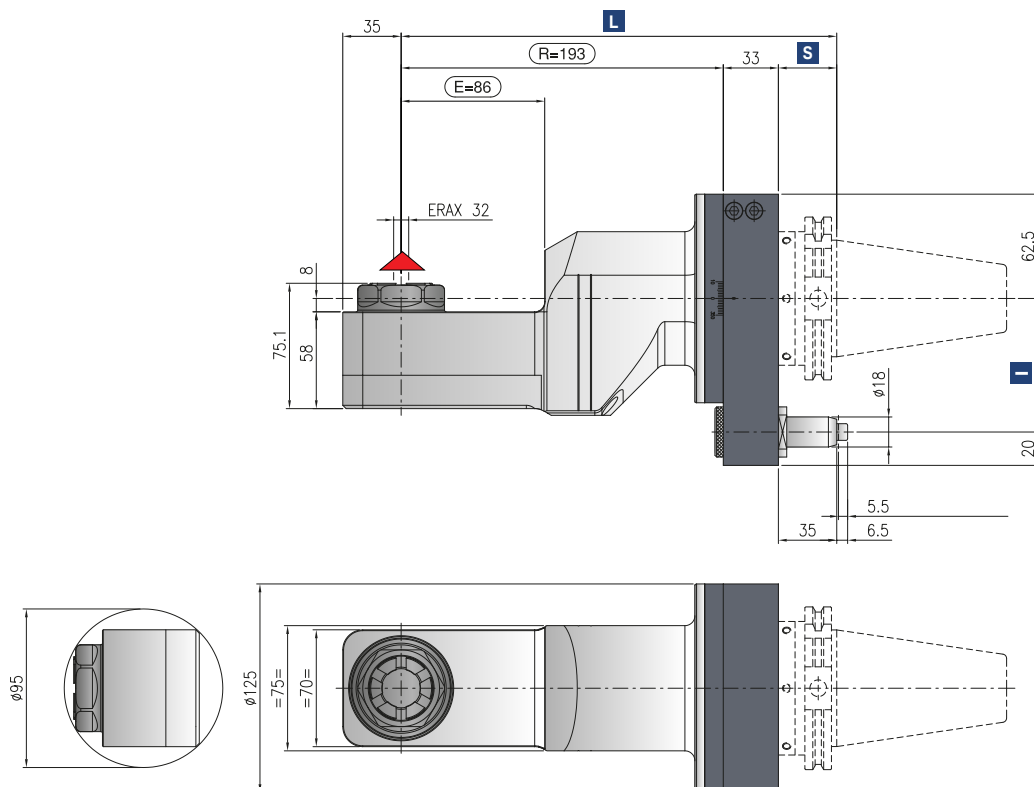
Weight
Peso / Gewicht
10 kg



Collet
Pinza / Spannzange
ER-AX 32 (ø2-20 mm)

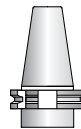
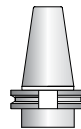
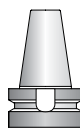
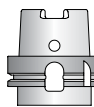
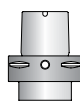
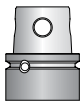
*** STANDARD EQUIPMENT INCLUDES:**

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 100 bar

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

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

Option / **Opzione** / Option

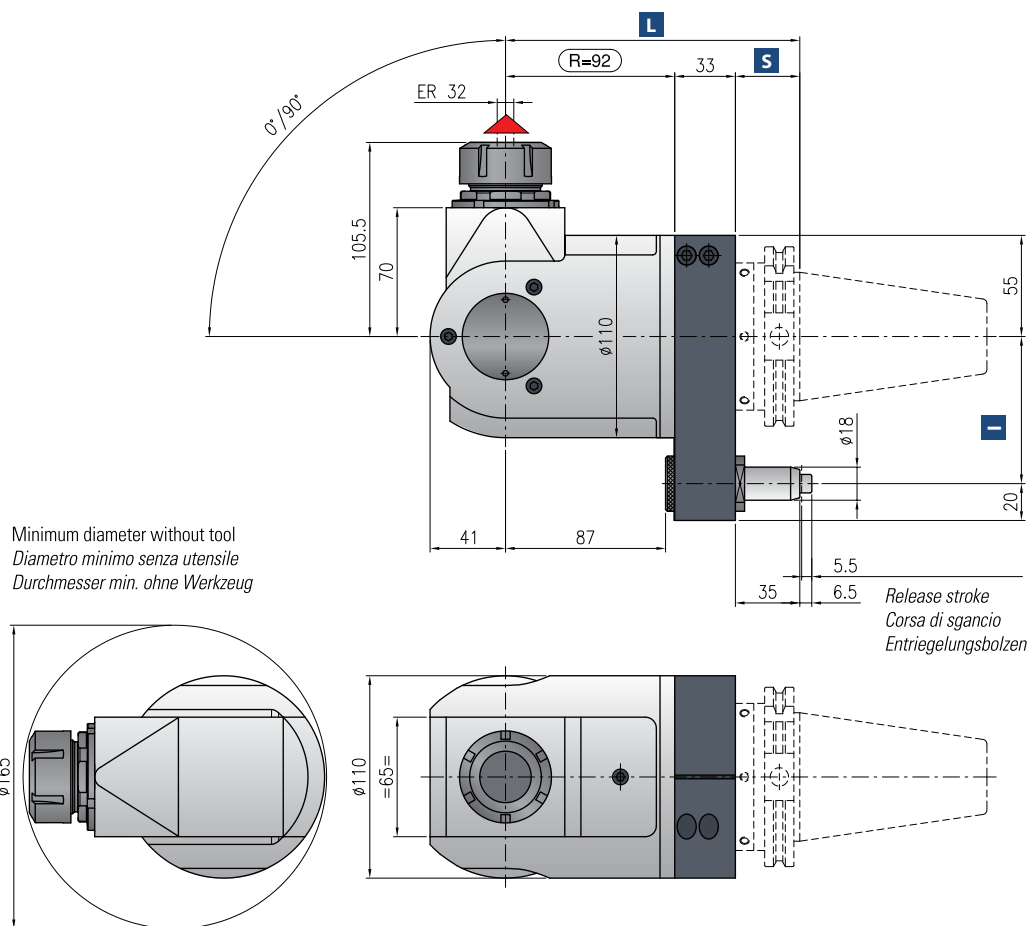


bar max

12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

TCUcn-3,5



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
32 Nm



Weight
Peso / Gewicht
13 kg



Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK		CAPTO		KM
Size/Grandezza/Größe	50		50	63-80	100	C6	C8	63
I	80-110		80-(110*)	65-80-(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/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



min⁻¹
6.000

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



Ø mm max.
20

Weld on output
Weld on
Weld on-Aufnahme

T90cn-3,5M Aluminium



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



Max. axial load
Max. carico assiale / Max. Axialbelastung
1250 N



Torque
Momento torcente / Drehmoment
40 Nm



Weight
Peso / Gewicht
5,5 kg



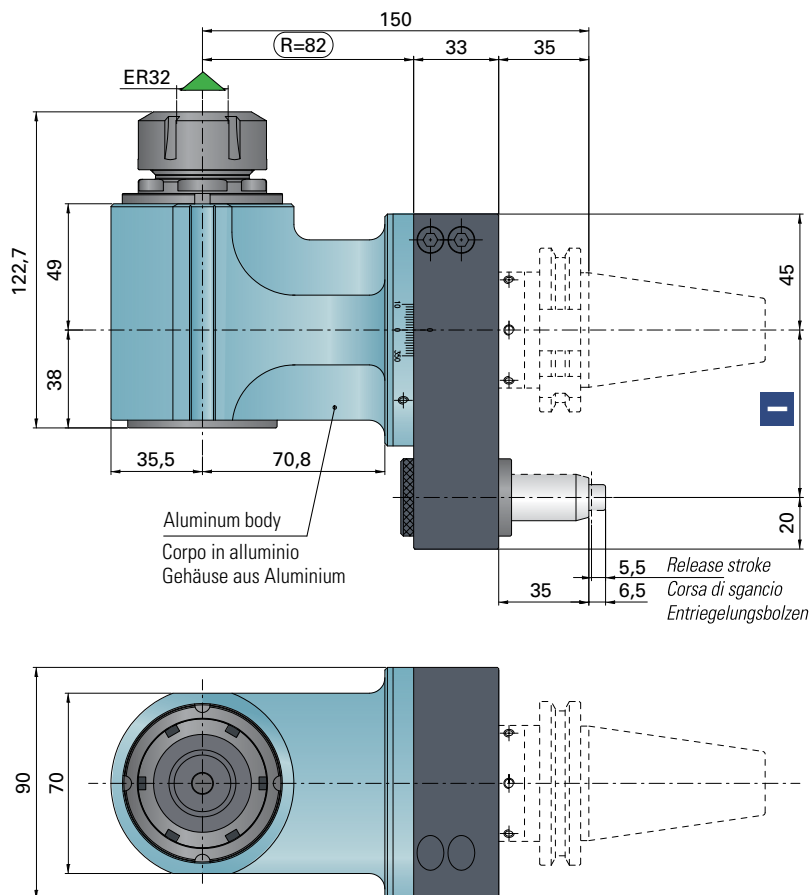
Collet
Pinza / Spannzange
ER 32 - Ø2-20 mm



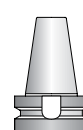
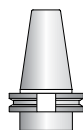
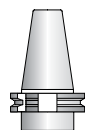
Shank
Cono / Aufnahme
ISO40 DIN-69871/BT-40

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT
Size/Grandezza/Größe	40	50	40
I	65-80	80-(110*)	65-80-(110*)
S	35	35	35
L	170	170	170

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



AIR/OIL

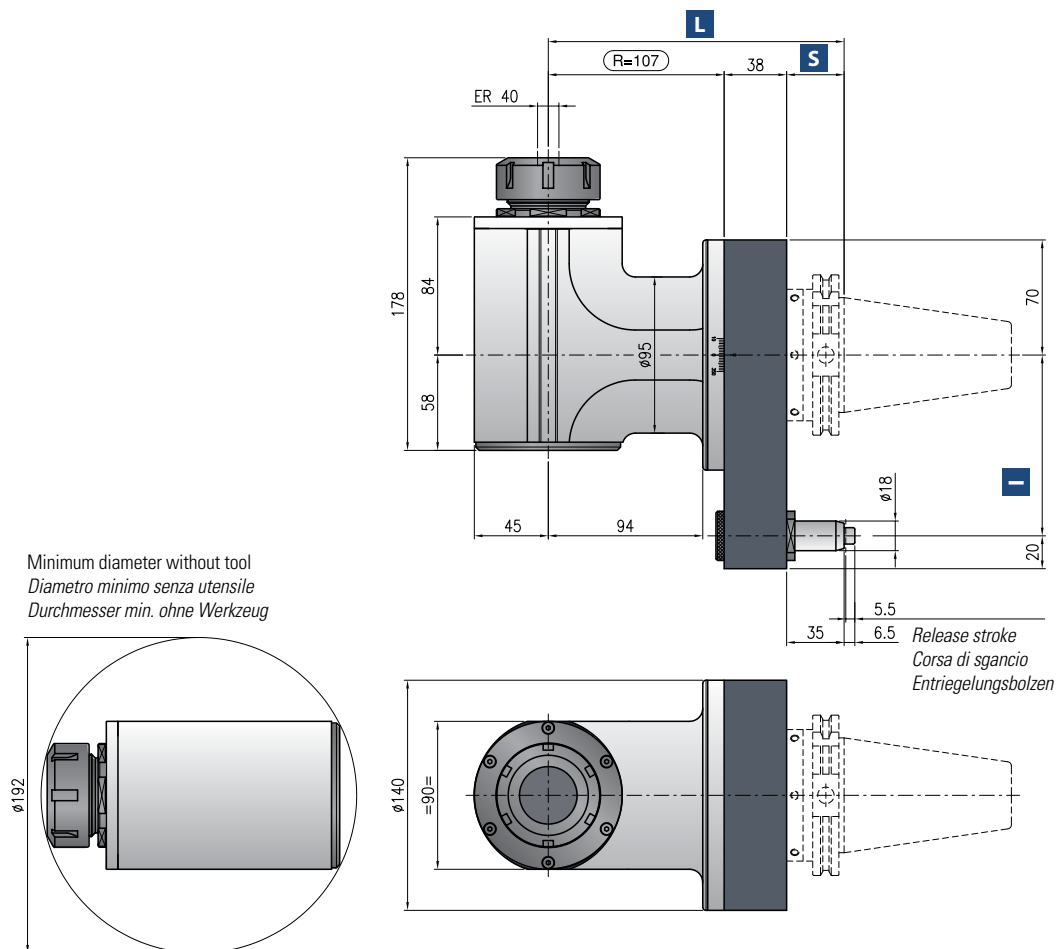
Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung



bar max
40

Coolant through spindle
Refrigerante attraverso il cono
Kühlmittelzufuhr durch Spindel

T90cn-4,5



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug

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

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno- Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option

bar max 12	bar max 12	min ⁻¹ 6.000	Ø mm 27	Ø mm max. 25	ISO-30 HSK-40	ER-40/ER-25
Coolant through pin Refrigerante attraverso il perno Kühlmittelzufuhr durch Bolzen	Coolant through pin and spindle Refrigerante interno attraverso utensile Kühlmittelzufuhr durch Bolzen und Spindel	High speed optional RPM max. Opzione alta velocità RPM max. Drehzahl max.	Arbor output Porta fresa Fräseaufnahme	Weldon output Weldon Weldon-Aufnahme	Quick Change Attacco rapido Schnellwechselaufnahme	Double output Doppia uscita Doppelter Ausgang

T90cn-4,5 L



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
75 Nm



Weight
Peso / Gewicht
20 kg

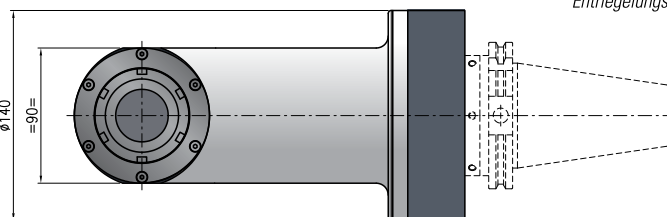
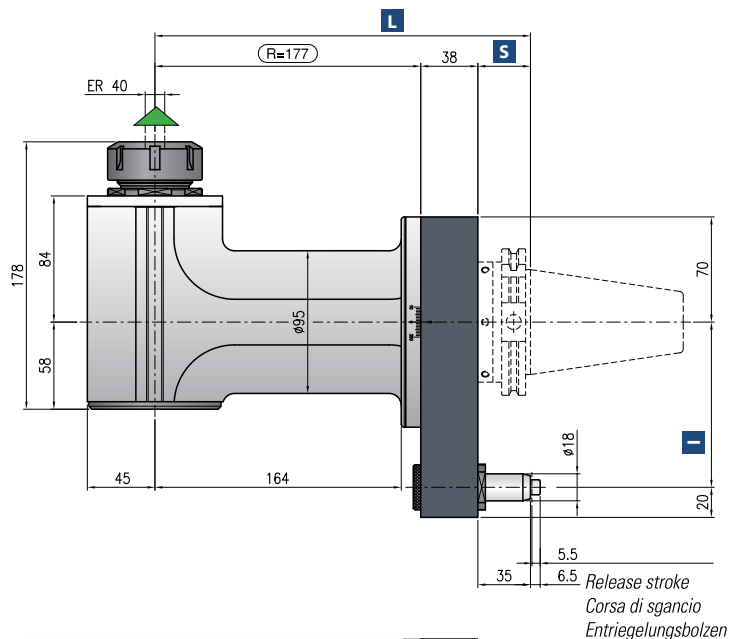
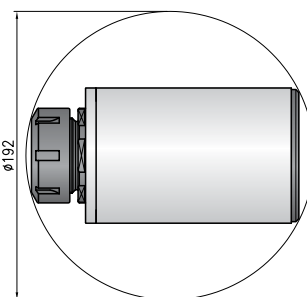


Collet
Pinza / Spannzange
ER-40 Ø 3/30 mm

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

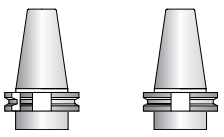
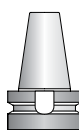
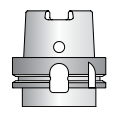
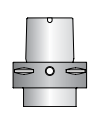
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 12 bar



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
6.000

High speed RPM max.
Alta velocità RPM max.
Drehzahl max.



Ø mm
27

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
25

Weldon output
Weldon
Weldon-Aufnahme



**ISO-30
HSK-40**

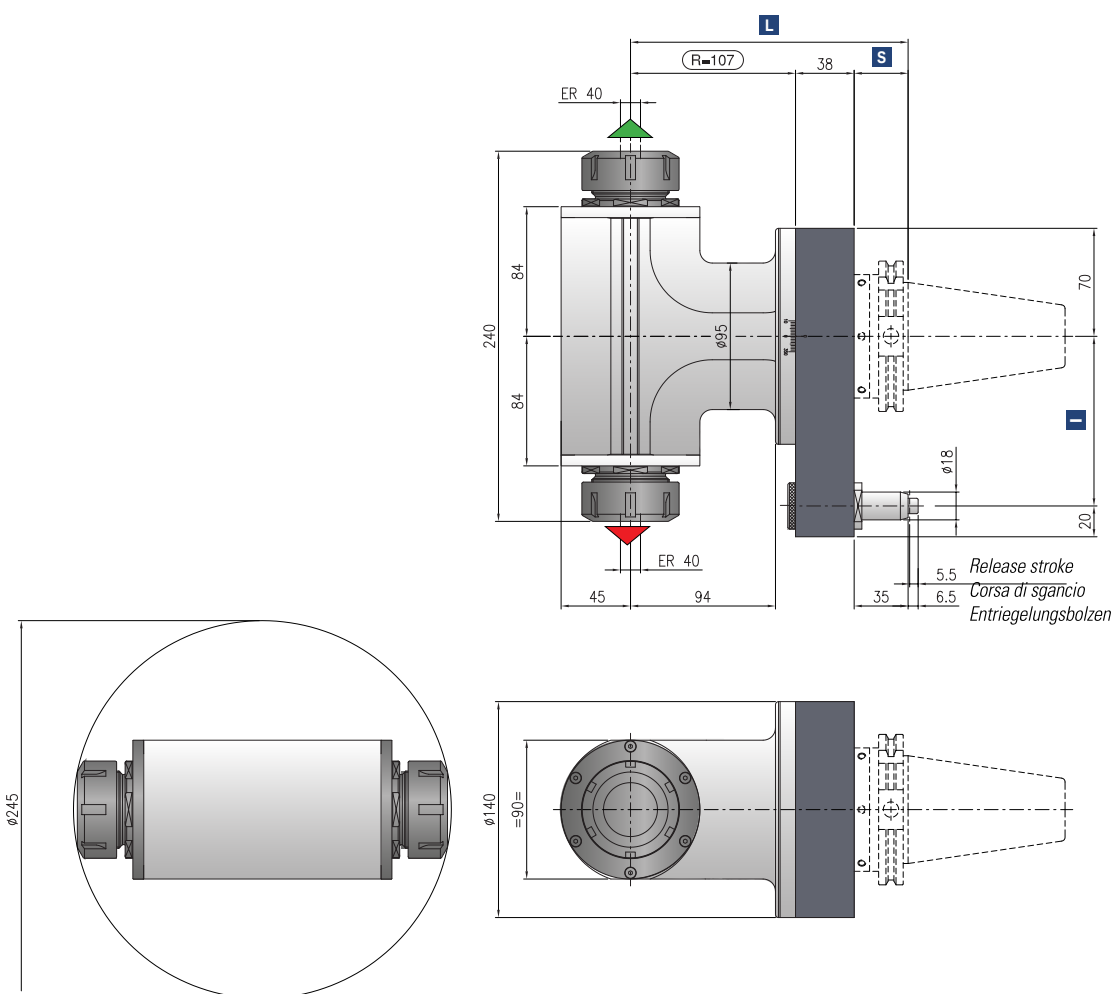
Quick Change
Attacco rapido
Schnellwechselaufnahme



ER-40/ER-25

Double output
Doppia uscita
Doppelter Ausgang

T90cn-4,5 2U



- Ratio**
Rapporto / Verhältnis
1:1
- RPM**
Velocità / Drehzahl max.
4.000 min⁻¹
- Max. axial load**
Max. carico assiale / Max. Axialbelastung
1.750 N
- Torque**
Momento torcente / Drehmoment
75 Nm
- Weight**
Peso / Gewicht
20 kg
- Collet**
Pinza / Spannzange
ER-40 Ø 3/30 mm

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

- Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel
- Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegen Antriebsspindel

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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



min⁻¹
6.000

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



Ø mm
27

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
25

Weldon output
Weldon
Weldon-Aufnahme



HSK-40

Quick Change
Attacco rapido
Schnellwechselaufnahme

TH90cn-4,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
8.000



RPM Dry Running
Funz. a secco / Trockenlauf
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
75 Nm



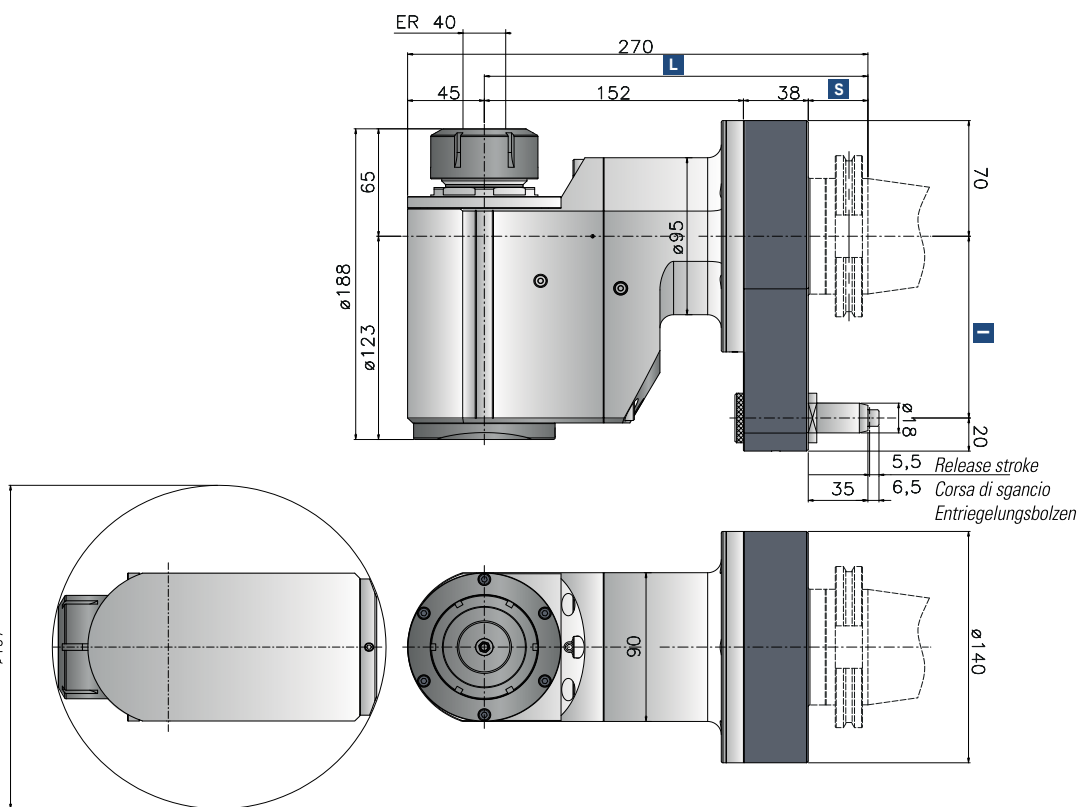
Weight
Peso / Gewicht
21 kg



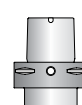
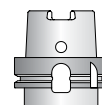
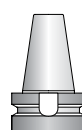
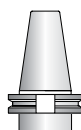
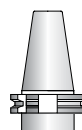
Collet
Pinza / Spannzange
ER-40 ø 3/30 mm

*** STANDARD EQUIPMENT INCLUDES:**

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



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



Shank/ <i>Cono/Aufnahme</i>	DIN-69871	CAT	MAS-BT	HSK	CAPTO
Size/ <i>Grandezza/Größe</i>	50		50	100	C8
I	110		80-110	110	80-110
S	35		41	45	40
L	250		256	260	255

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

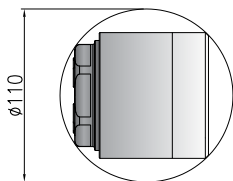
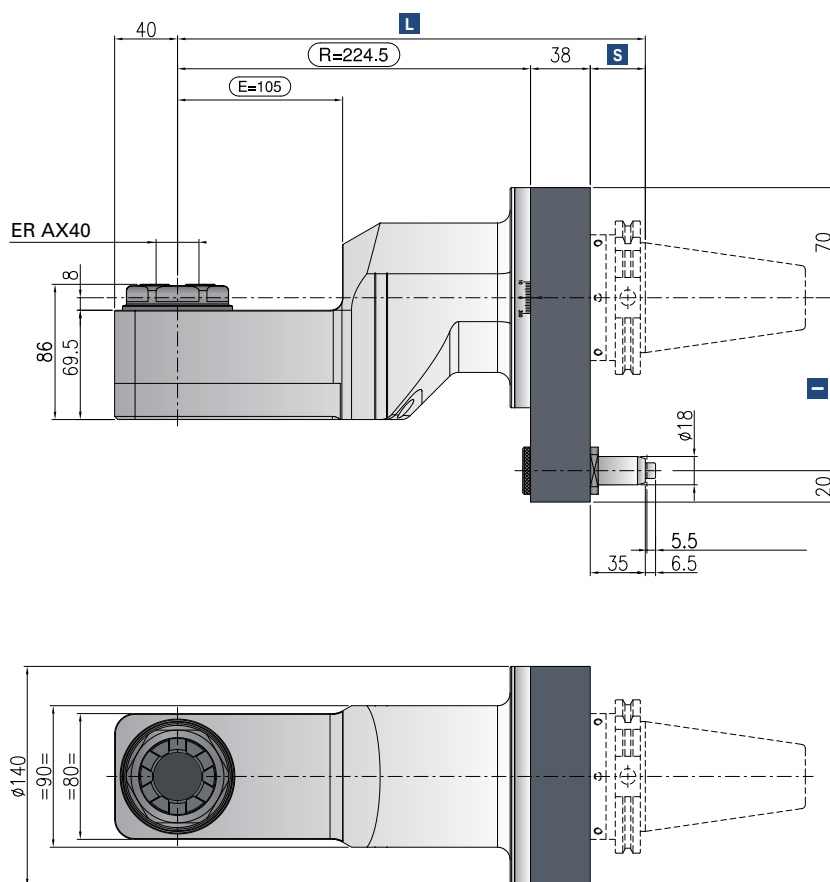
Option / **Opzione** / Option

Ø mm max.

25

Weldon output
Weldon
Weldon-Aufnahme

TR90cn-4,5



- 

Ratio
Rapporto / Verhältniss
1:1
 - 

RPM
Velocità / Drehzahl max.
4.000 min⁻¹
 - 

Max. axial load
Max. carico assiale / Max. Axialbelastung
1.200 N
 - 

Torque
Momento torcente / Drehmoment
75 Nm
 - 

Weight
Peso / Gewicht
20 kg
 - 

Collet
Pinza / Spannzange
ER-AX 40 (ø3/30 mm)

*** STANDARD EQUIPMENT INCLUDES:**

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzuführ - Max. 100 bar

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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / *Opzione* / *Option*

bar max

12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar

100

Coolant through spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Spindel

T90cn-5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
100 Nm



Weight
Peso / Gewicht
22 kg

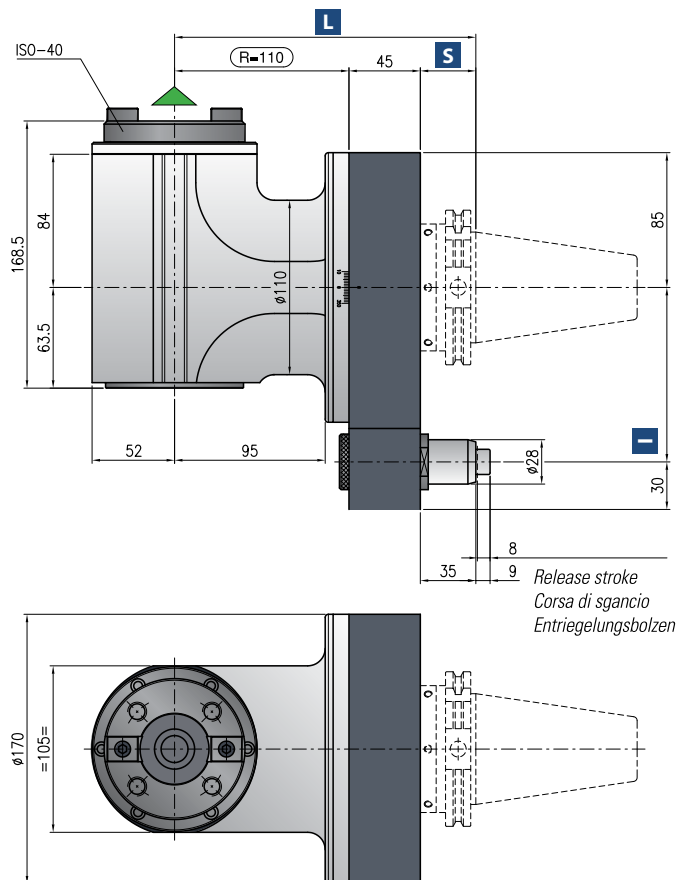
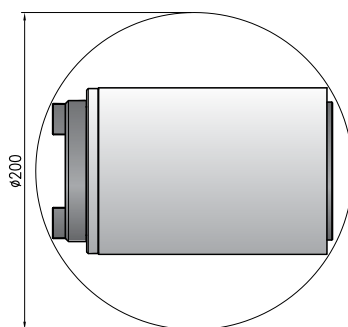


Collet
Pinza / Spannzange
ISO 40

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

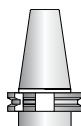
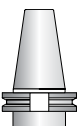
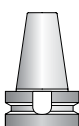
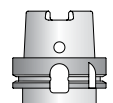
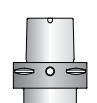
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 12 bar



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

					
Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO
Size/Grandezza/Größe	50		50	100	C8
I	110		110	110	80-110
S	35		41	45	40
L	190		196	200	195

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
6.000

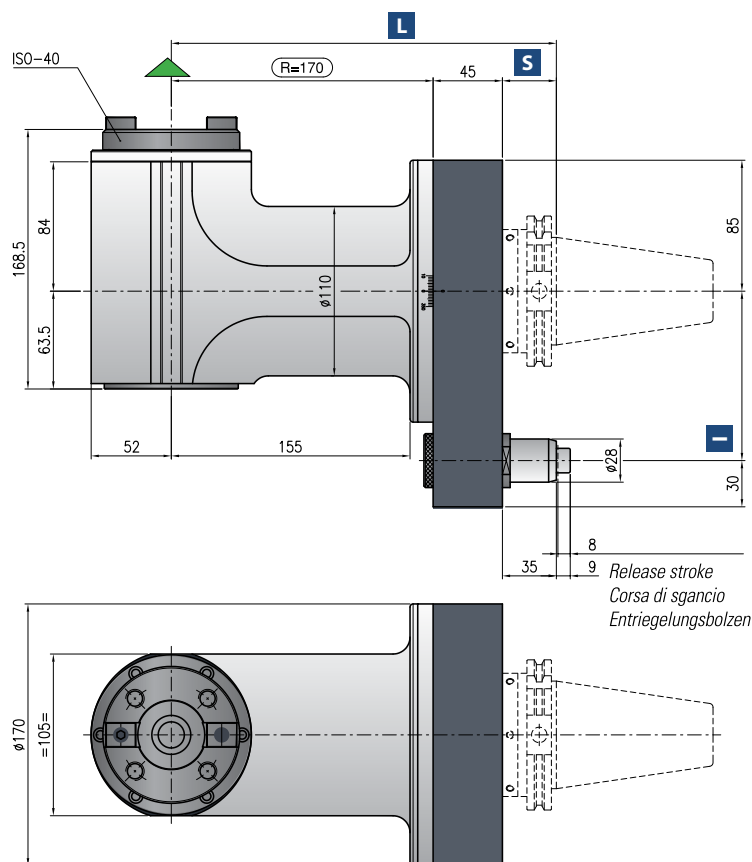
High speed optional RPM max.
Opzione alta velocità RPM max.
Drehzahl max.



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme

T90cn-5L



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
100 Nm



Weight
Peso / Gewicht
26,2 kg



Collet
Pinza / Spannzange
ISO 40

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max. 12 bar

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
6.000

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



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme

T90cn-5 COOLANT



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
75 Nm



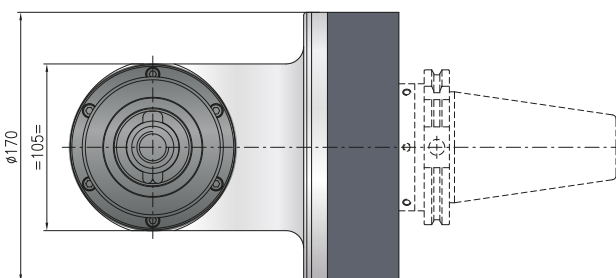
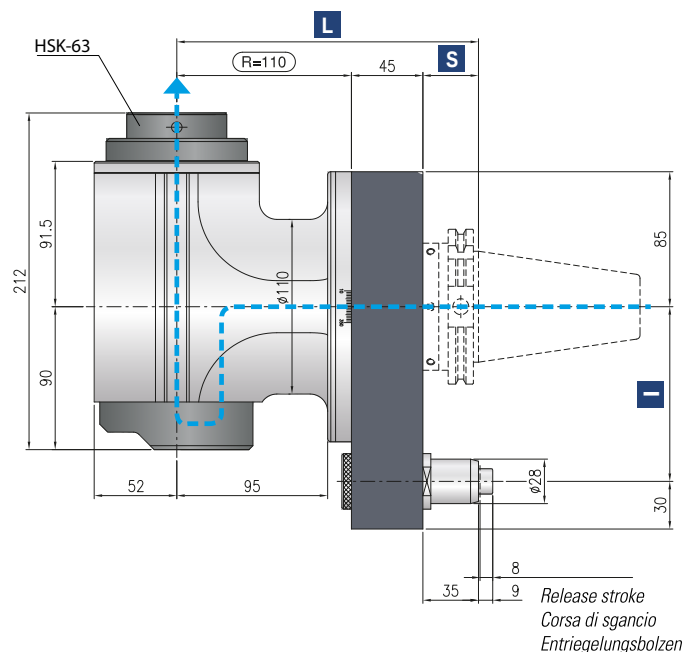
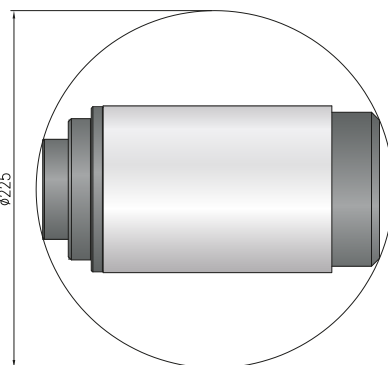
Weight
Peso / Gewicht
20 kg

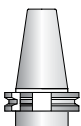
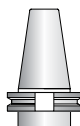
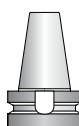
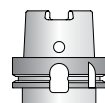
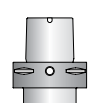


Collet
Pinza / Spannzange
HSK-63

*** STANDARD EQUIPMENT INCLUDES:**

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



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

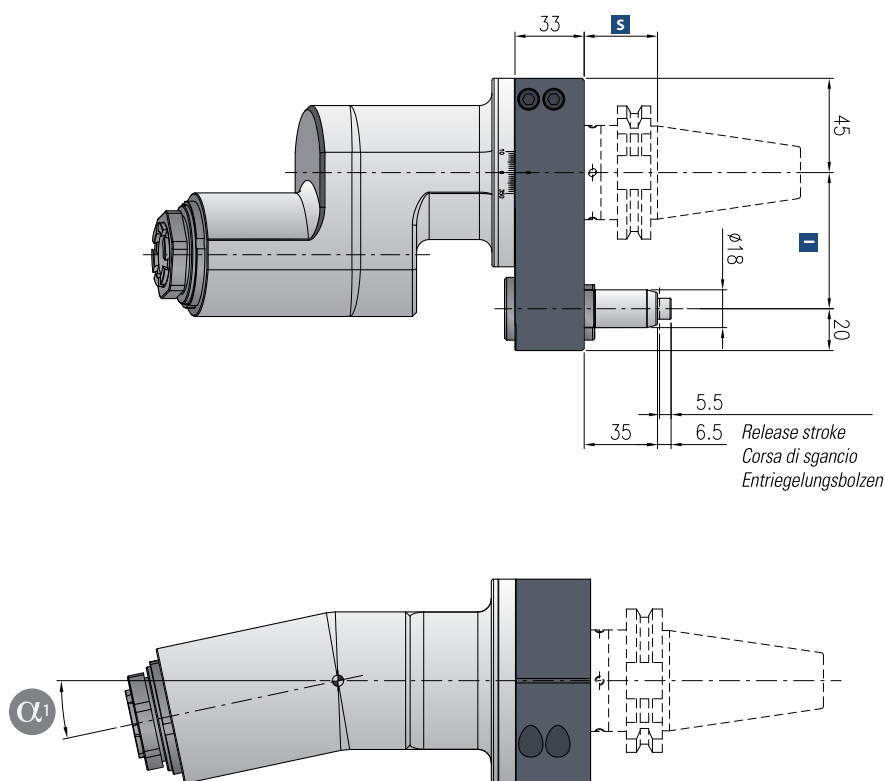
*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / **Opzione** / Option

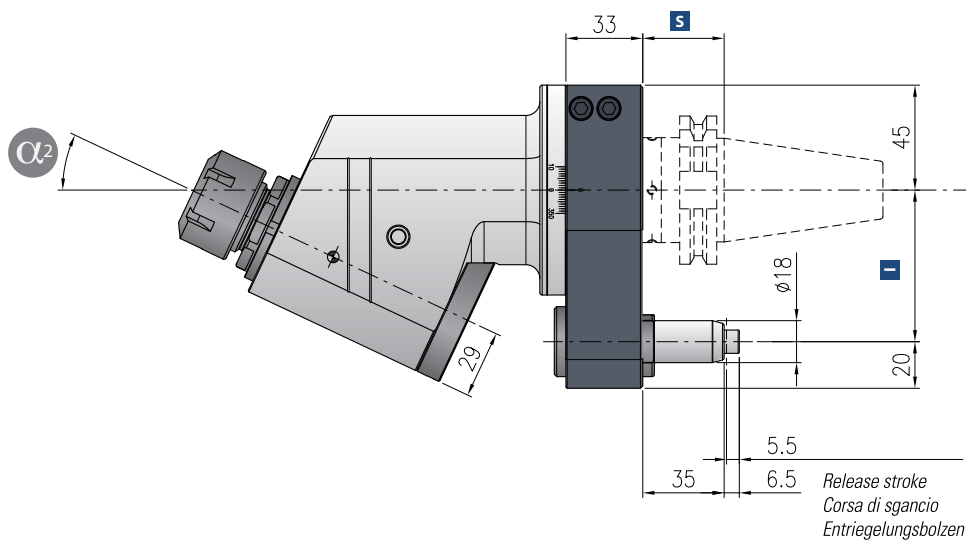
TDA

PER ANGOLI FINO 15°
FOR ANGLES UP TO 15° - FÜR WINKEL BIS 15°



TA

PER ANGOLI DA 15°
FOR ANGLES FROM 15° - FÜR WINKEL VON 15°



Ratio
Rapporto / Verhältnis
1:1



RPM up to
Velocità fino a / Drehzahl max.
10.000 min⁻¹



Angle
Angolo / Winkel
A richiesta fino
On request up / Nach Wunsch bis
15°



Angle
Angolo / Winkel
A richiesta da
On request from / Nach Wunsch ab
15°



Size
Grandezza / Größe
A richiesta
On request / Nach Wunsch



Collet
Pinza / Spannzange
ER-16 ø 1/10 mm
ER-25 ø 2/16 mm
ER-32 ø 3/20 mm



Shank
Cono / Kegel
DIN 69871
BT
CAT
HSK
CAPTO

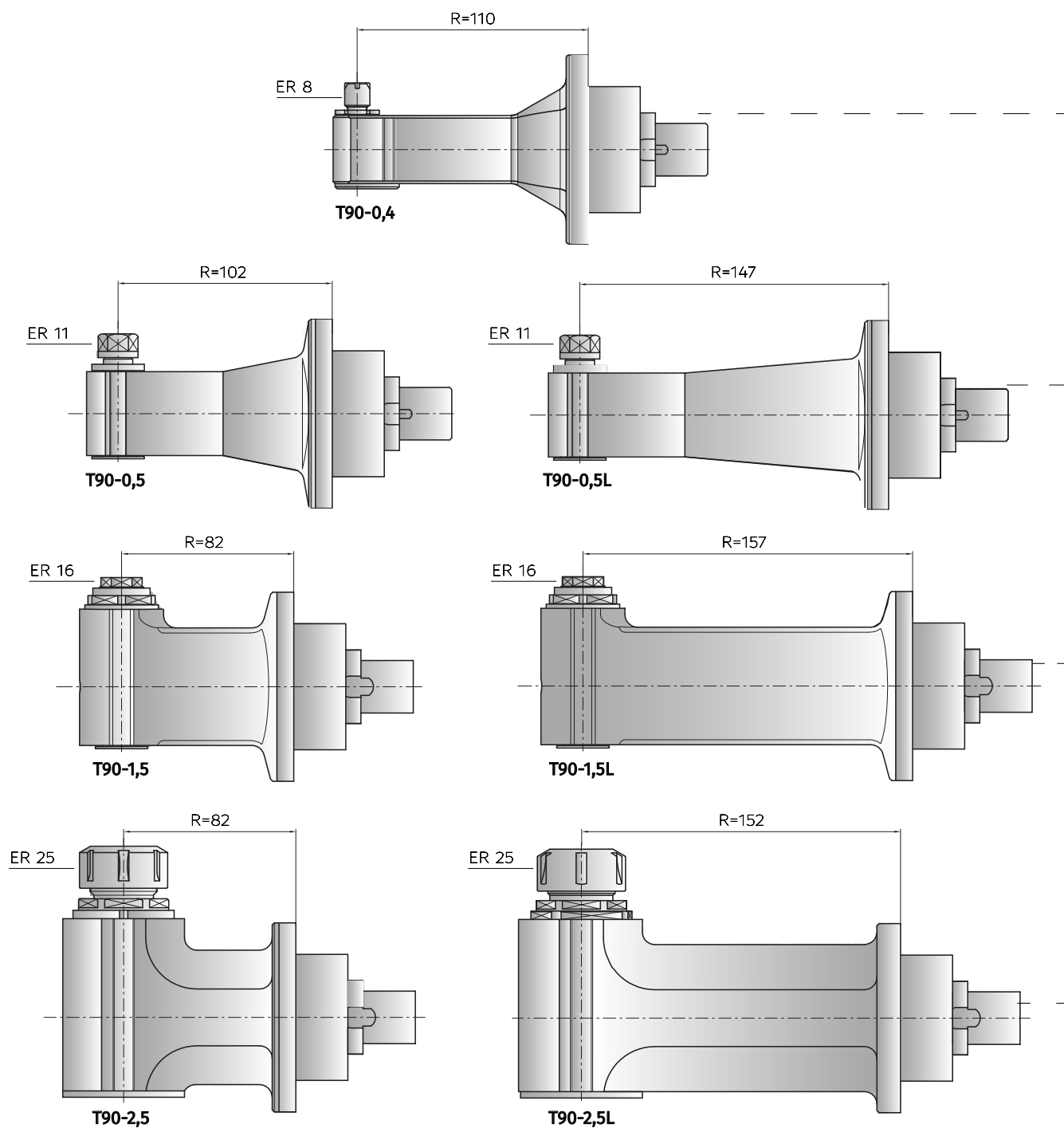
* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Fino a 45° possibilità refrigerante / Up to 45° internal coolant / Bis 45° innere Kühlmittelzufuhr - Max. 70 bar
Da 45° a 89° possibilità refrigerante / From 45° to 89° internal coolant / Von 45° bis 89° innere Kühlmittelzufuhr - Max. 40 bar

TESTE CON PROLUNGA EXTENDED HEADS / VERLÄNGERTE KÖPFE



Caratteristiche tecniche a pagina/ Technical data page/ Technische Daten Seite

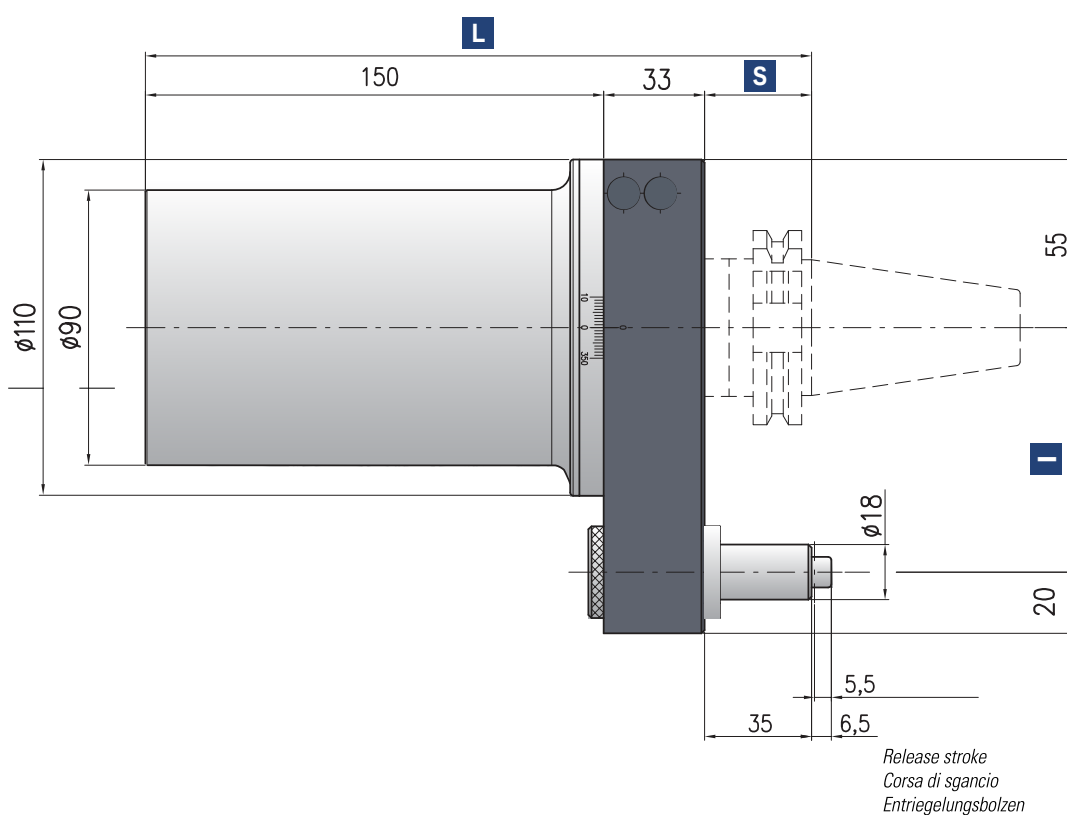
Testa/Head/Kopf	T90-0,4	T90-0,5	T90-0,5L	T90-1,5	T90-1,5L	T90-2,5	T90-2,5L
Pagina/Page/Seite	62	63	64	65	66	67	68

LINEA CONTROL

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

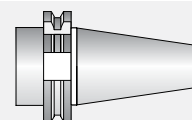
The extended heads are made up by a portion of extension spacer where it is possible to mount sever standard heads from the line Modular.

Die verlängerte Köpfe sind von einem Verlängerungsmodul und einer kleiner Auswahl von Standardköpfe der Linie Modular zusammengesetzt

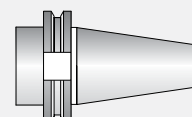


OPTIONAL DRIVE SHANK*
Non interchangeable input drive shank
Coni non intercambiabili
Nicht wechselbare Aufnahme

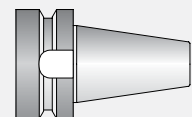
DIN-69871
ISO 40/50



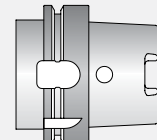
CAT
40/50



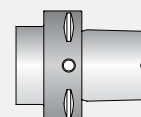
MAS-BT
40/50



HSK
63/80/100



CAPTO
C6/C8



Weight
Peso / Gewicht
10 kg

*** STANDARD EQUIPMENT INCLUDES:**

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

*optional

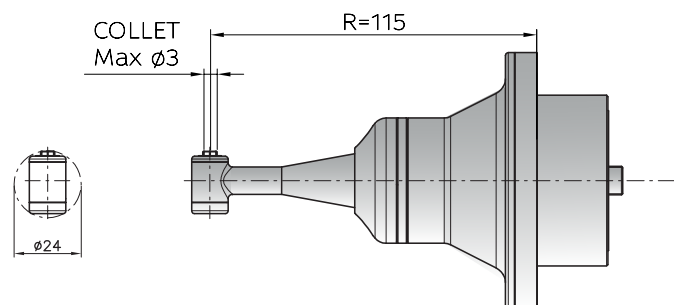
Lunghezza totale testa/ Total length/ Gesamtlänge (R+L)

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT		HSK		CAPTO	
Size/Grandezza/Größe	40	50	40	50	63-80	100	C6	C8
T90-0.4	mm	328	328	328	335	338	331	333
T90-0.5C	mm	320	320	320	327	330	323	325
T90-0.5L	mm	365	365	365	371	375	368	370
T90-1.5	mm	300	300	300	306	310	303	305
T90-1.5L	mm	375	375	375	381	385	378	380
T90-2.5	mm	300	300	300	307	310	303	305
T90-2.5L	mm	370	370	370	377	380	373	375

TESTE INDEX INDEX HEADS / INDEX KÖPFE

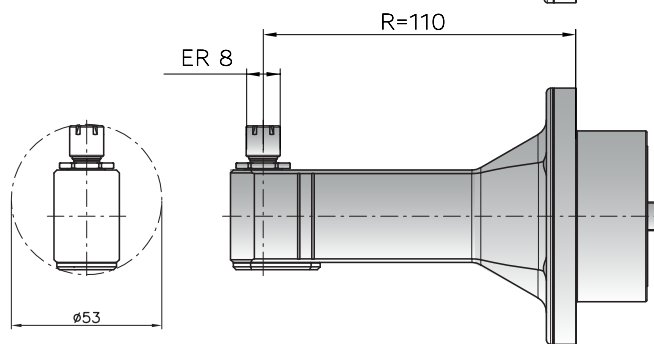
T90-0,3 SLIMLINE

Technical Data / Dati Tecnici / Technische Daten		T90-0,3
RPM max input. / Max. Velocità input / Drehzahl max. input min ⁻¹		15.000
Ratio (reduction)		3:4
Weight / Peso / Gewicht	Kg	3
Collet / Pinza / Spannzange		3mm



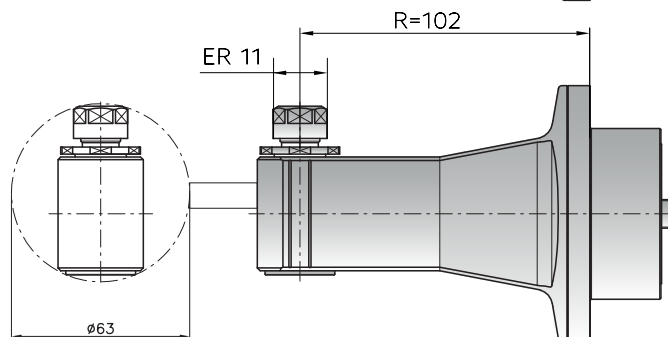
T90-0,4

Technical Data / Dati Tecnici / Technische Daten		T90 0,4
RPM max input. / Max. Velocità input / Drehzahl max. input min ⁻¹		10.000
Ratio		1:1
Weight / Peso / Gewicht	Kg	4
Collet / Pinza / Spannzange		ER8 0,5/5mm



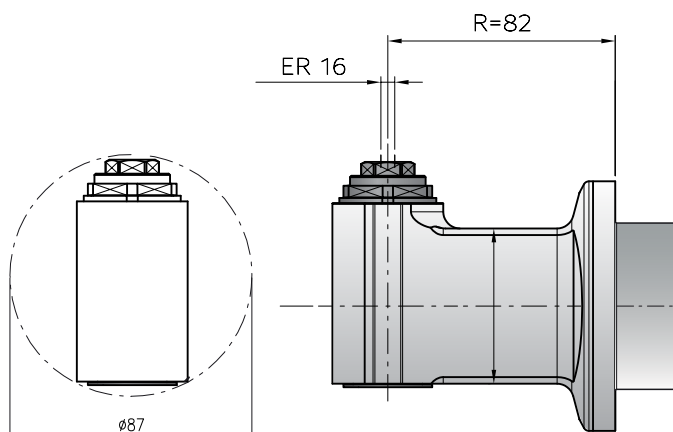
T90-0,5

Technical Data / Dati Tecnici / Technische Daten		T90-0,5
RPM max input. / Max. Velocità input / Drehzahl max. input min ⁻¹		10.000
Ratio		1:1
Weight / Peso / Gewicht	Kg	4
Collet / Pinza / Spannzange		ER-11 0,5/7mm



T90-1,5

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

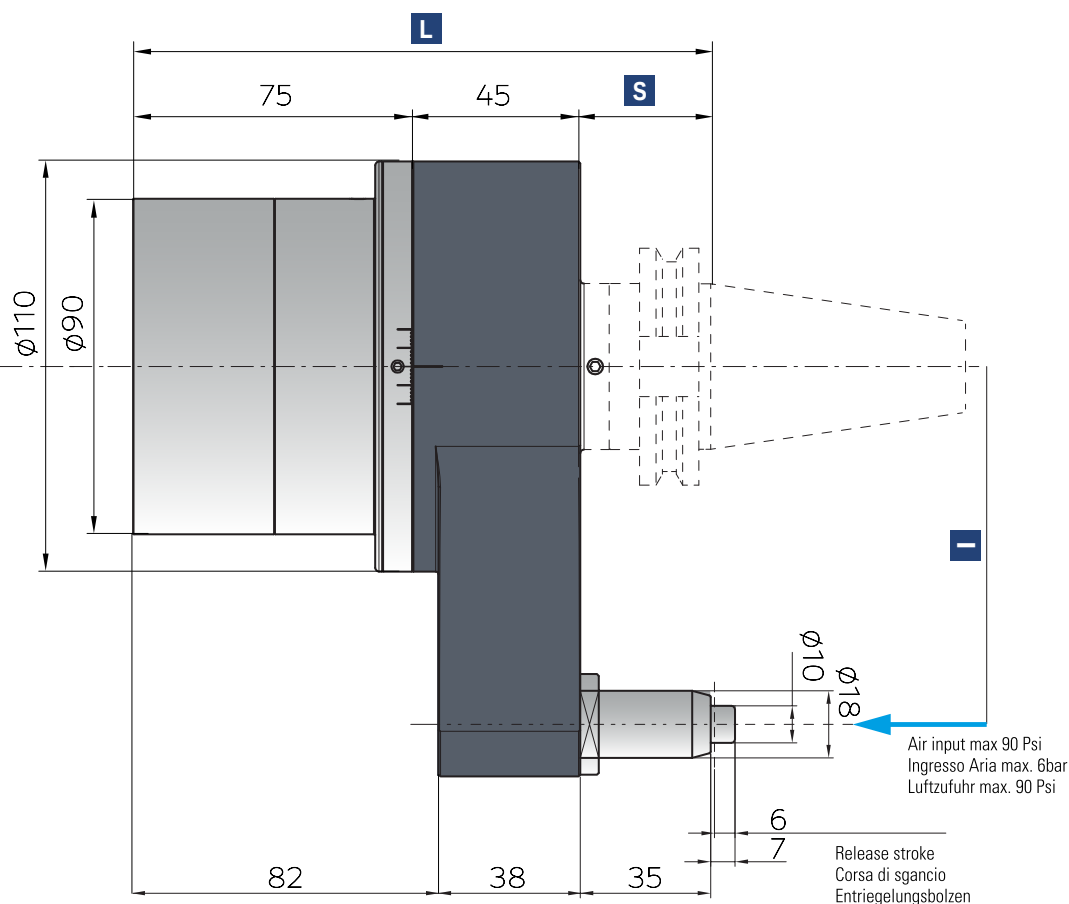


LINEA CONTROL

Le teste INDEX sono composte da un modulo fisso sul quale possono essere montate teste tipo Modular. Caratteristica principale è la possibilità di posizionarsi su 360° tramite azionamento ad aria dal perno oppure meccanico.

INDEX heads are made of a modul and different types of standard Modular heads. Main feature is the possibility of orienting the head over 360°. The mechanism is activated by air trough pin or mechanically.

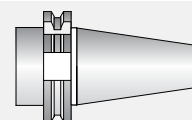
INDEX Köpfe sind durch ein Modul und einen Standardkopf der Linie Modular zusammengesetzt. Hauptmerkmal ist die Möglichkeit den Kopf automatisch über 360° zu positionieren. Das System funktioniert mit Luft oder mechanisch durch Bolzen.



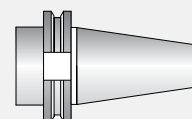
OPTIONAL DRIVE SHANK*

*Non interchangeable input drive shank
Coni non intercambiabili
Nicht wechselbare Aufnahme*

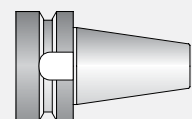
**DIN-69871
ISO 40/50**



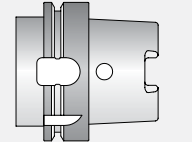
**CAT
40/50**



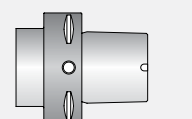
**MAS-BT
40/50**



**HSK
63/80/100**



**CAPTO
C5/C6/C8**



* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO
Size/Grandezza/Größe	40	50	40	63-80	C5-C6
I	80-(110*)	80-110	80-(110*)	80-110	80-(110*)
S	35	35	35	42	38
L	155	155	155	162	158

*optional

Lunghezza totale testa/ Total length/ Gesamtlänge (R+L)

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO
Size/Grandezza/Größe	40	50	40	63-80	C5-C6
T90-0.3 SLIMLINE	270	270	270	277	273
T90-0.4	265	265	265	272	268
T90-0.5	257	257	257	264	260
T90-1.5	237	237	237	244	240

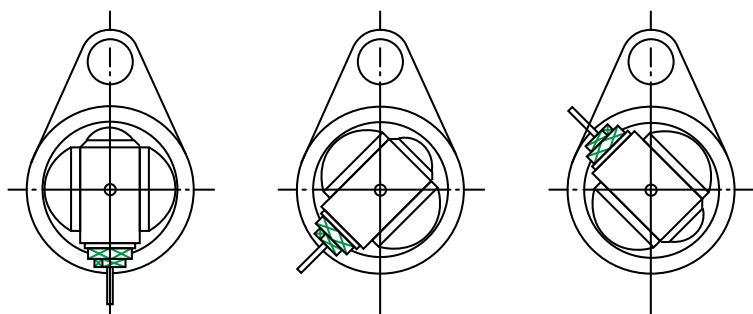
TESTE INDEX

INDEX HEADS / INDEX KÖPFE

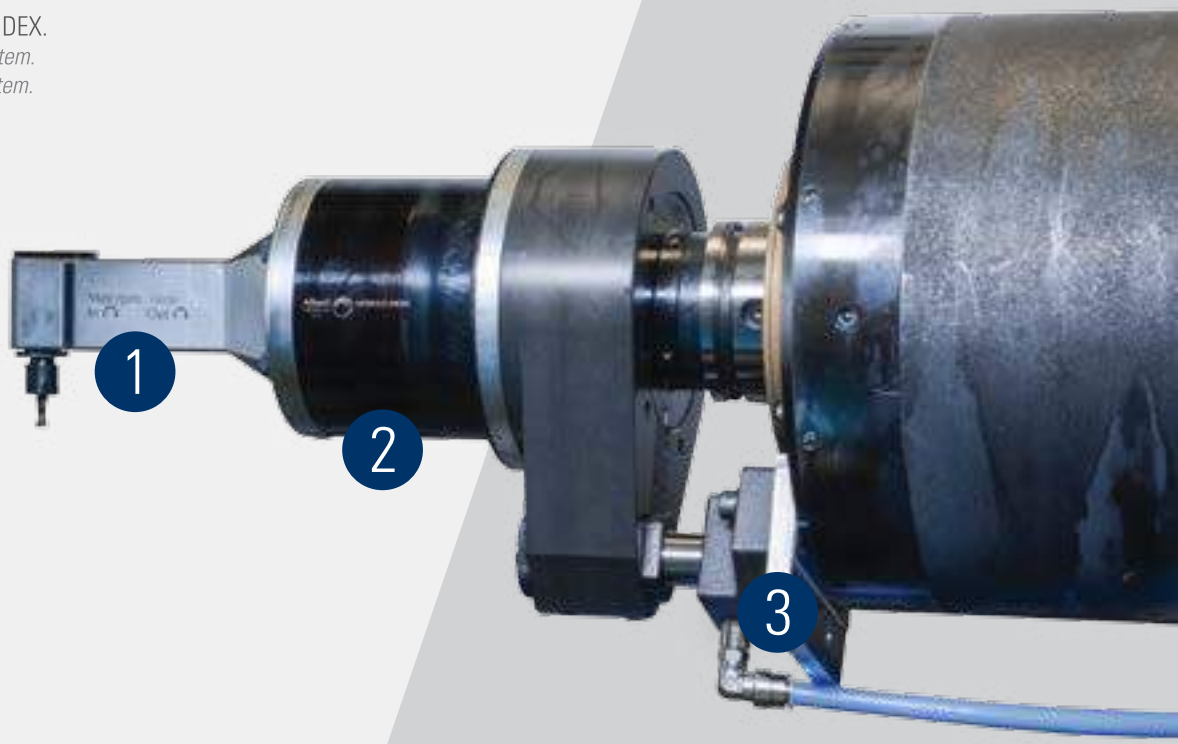
Le teste della Linea INDEX consentono di posizionare il portautensile in modo automatico sui 360° utilizzando l'asse controllato della macchina utensile. Possono quindi essere montate SOLAMENTE su macchine con asse controllato e aria esterna (max 6 bar) tramite lo Stop Block.

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).

Mit der INDEX Linie ist es möglich den Werkzeughalter des Kopfes automatisch auf 360° mithilfe der kontrollierten Achse der Maschine. Die Köpfe dieser Linie können NUR auf Werkzeugmaschinen mit kontrollierter C Achse und Luftdruck durch die Referenzbohrung (max. 6 bar) montiert werden.



1. Porzione di testa modular standard posizionabile su 360°.
Portion of the standard modular. Head to be oriented over 360°.
Teil des Standard-Modulkopfes, mit automatischer Positionierung auf 360.
2. Porzione di testa con sistema INDEX.
Portion of the head with INDEX system.
Teil des Kopfes mit indexierungssystem.
3. Aria dallo Stop Block (6 bar).
Air trough the Stop Block (6 bar).
Luft durch Referenzbohrung (6 bar).



LINEA MODULAR

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

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

Winkelköpfe von Linea MODULAR sind für traditionelle Werkzeugmaschinen geeignet und werden an der Maschinenspindel durch einen Flansch angebaut. Diese Köpfe sind zusammen mit einem wechselbaren Kegel und Universalflansch verkauft und können unterschiedlichen Verlängerungsmodule als Option verwendet werden um die Gesamtlänge zu ändern. Für eine korrekte Montage, soll man ein Abstandstück zwischen dem Kopf und Maschinenspindel fertigen.



Esempio di montaggio in macchina con modulo di prolunga / Example of mounting the head on the machine with extension / Beispiel von Montage mit Verlängerungsmodul

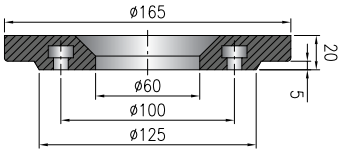
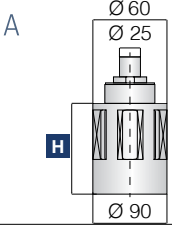
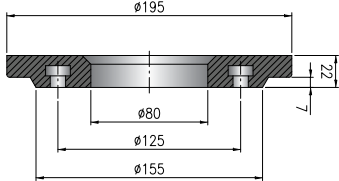
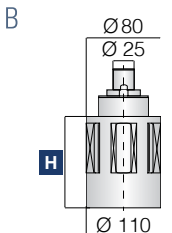
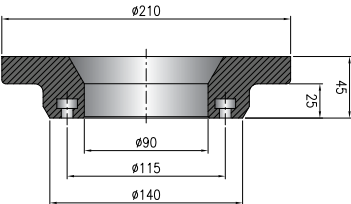
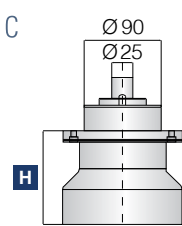
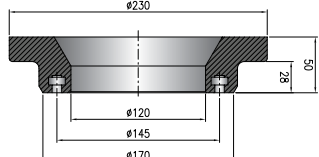
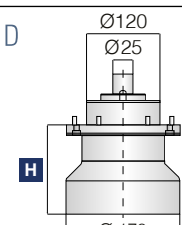
FLANGIA UNIVERSALE - MODULI DI PROLUNGA

UNIVERSAL FLANGE - EXTENSION SPACER / ANSCHLUSSFLANSCH - VERLÄNGERUNGEN

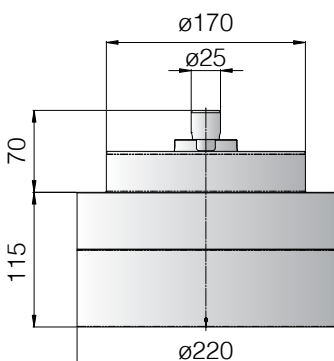
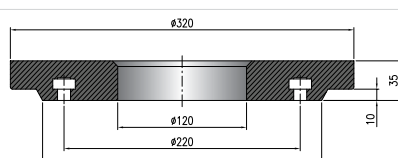
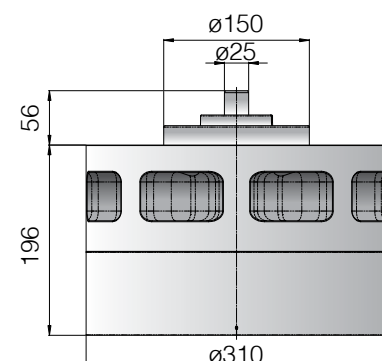
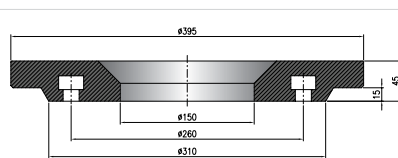
Un sistema modulare componibile, rende possibile variare la lunghezza del corpo testa aggiungendo l'elemento di prolunga. Modulo, coni e flangia sono modulari e quindi intercambiabili su tutti i corpi testa appartenenti allo stesso ordine di grandezza.

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.

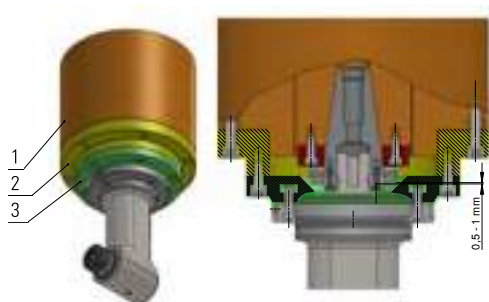
Das modulare System ermöglicht es, den Körper der Winkelköpfe durch anbringen einer Verlängerung zu erweitern. Die Verlängerungen, Kegel und universeller Anschlussflansch sind modular und somit unter allen Köpfen gleicher Größe auswechselbar.

Flangia Flange / Flansch		Moduli di prolunga Extension Spacer / Verlängerungs	H	Codici Part number / Kode
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 VERLÄNGERUNGSMODULE FÜR KÖPFE LINEA P MIT SCHNELLAUFSPINDEL

$R = 1:2,25$  T90-8 / TDU-8  542120000	$R = 1:2,25$  T90-10 / TDU-10  54215000
---	--

ESEMPIO DI MONTAGGIO DI UNA TESTA TIPO MODULAR EXAMPLE OF FLANGE MOUNTING FOR MODULAR HEAD / ANFLANSCHUNGSBEISPIEL FÜR MODULKÖPFE



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.

Für die korrekte Montage der Flansch, nach der Befestigung von kegel und Universalflansch an dem Kopf, ist es notwendig ein Abstandstück zwischen dem Kopf und Maschinenspindel. Bitte um Gebrauchsanweisungen aufmerksam lesen.

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

Example of flange mounting for modular heads including extension spacers

Anflanschbeispiel für Modulköpfe mit Verlängerungsmodulen



T90-0,4



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
10.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
4 Nm



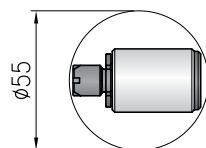
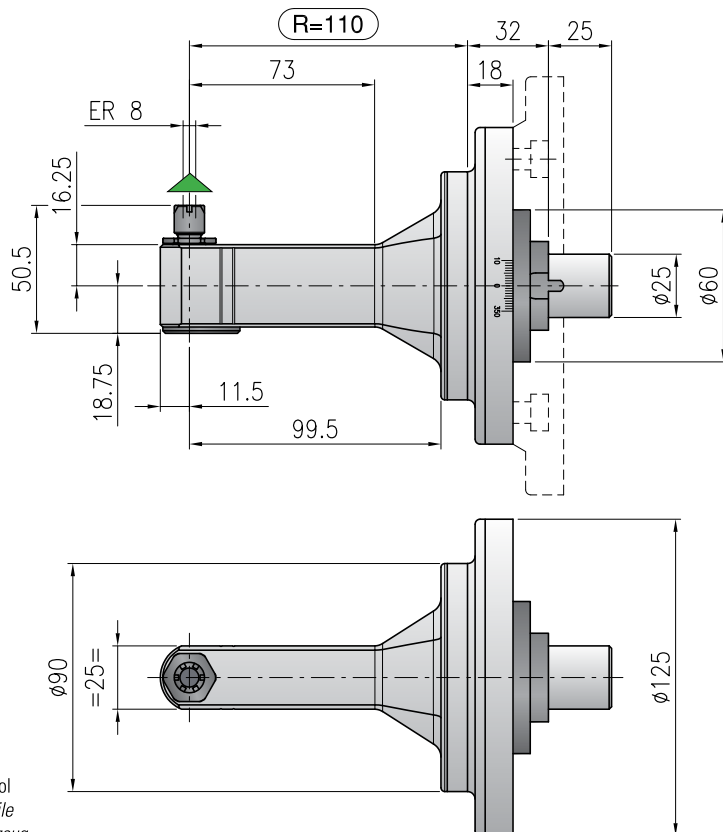
Weight
Peso / Gewicht
4 kg



Collet
Pinza / Spannzange
ER-8 Ø 0,5/5 mm

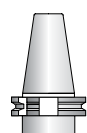
* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

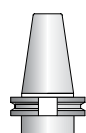


Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug

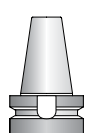
 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



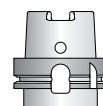
DIN-69871



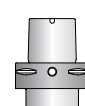
CAT



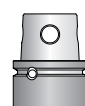
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



bar max
12

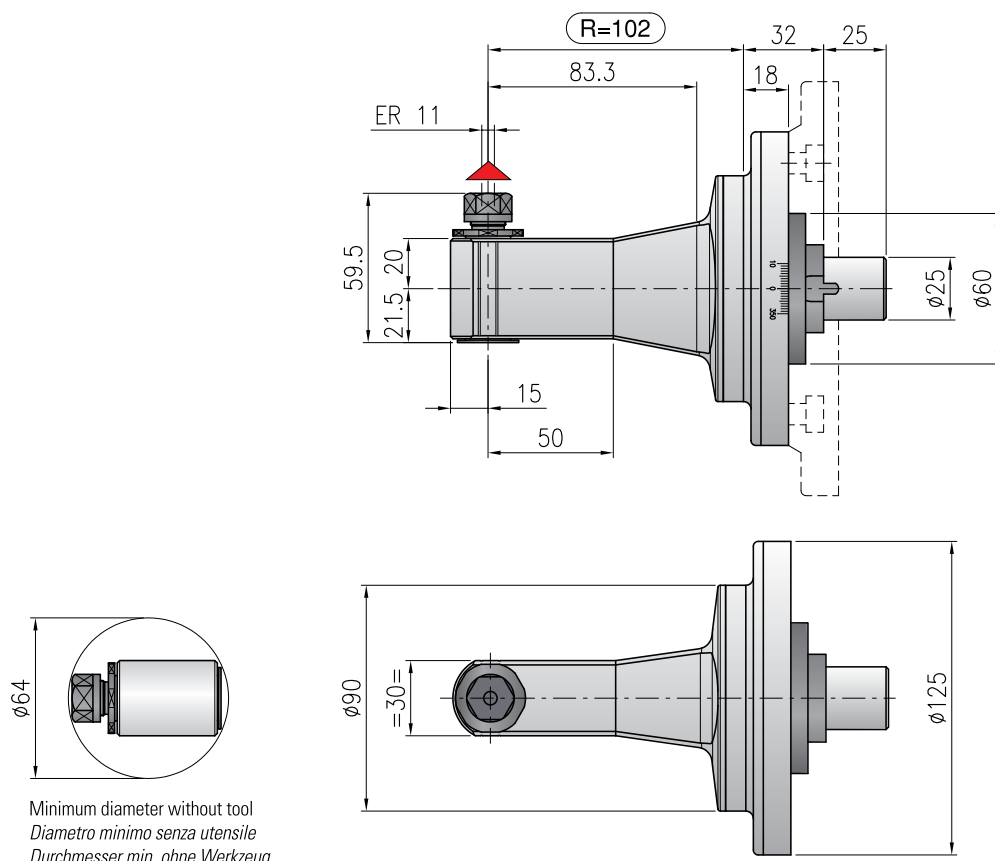
Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



Ø mm max.
6

Weld on output
Weld on
Weld on-Aufnahme

T90-0,5C



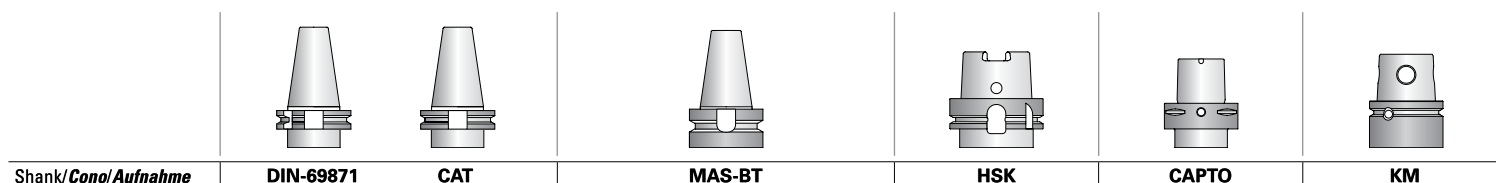
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug

- | | |
|---|---|
|  | Ratio
<i>Rapporto / Verhältnis</i>
1:1 |
|  | RPM
<i>Velocità / Drehzahl max.</i>
10.000 min⁻¹ |
|  | Max. axial load
<i>Max. carico assiale / Max. Axialbelastung</i>
150 N |
|  | Torque
<i>Momento torcente / Drehmoment</i>
8 Nm |
|  | Weight
<i>Peso / Gewicht</i>
4 kg |
|  | Collet
<i>Pinza / Spannzange</i>
ER-11 ø 0,5/7 mm |

*** STANDARD EQUIPMENT INCLUDES:**

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

Option / **Opzione** / Option

bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



Ø mm max.
6

Weldon output
Weldon
Weldon-Aufnahme

T90-0,5L



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
10.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
8 Nm



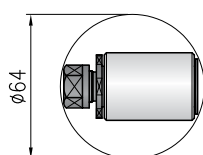
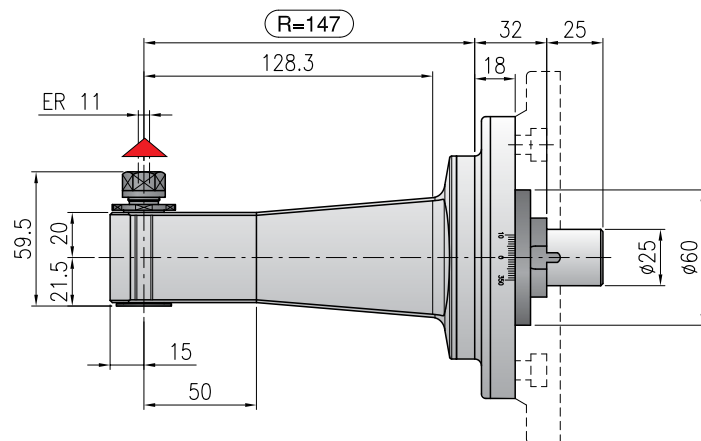
Weight
Peso / Gewicht
4,3 kg



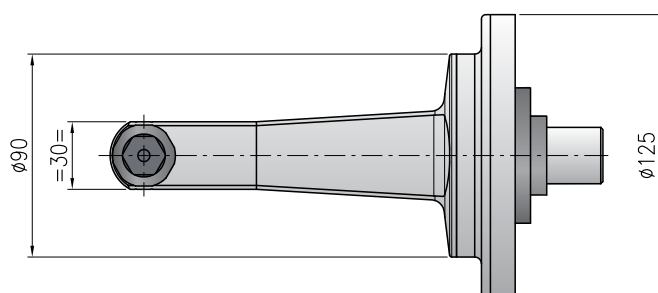
Collet
Pinza / Spannzange
**ER-11 Ø 0,5/7 mm
ERAX-11**

* STANDARD EQUIPMENT INCLUDES:

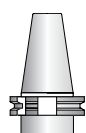
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- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



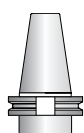
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



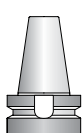
 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegen Antriebsspindel



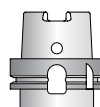
DIN-69871



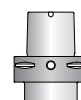
CAT



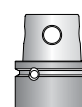
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



bar max
12

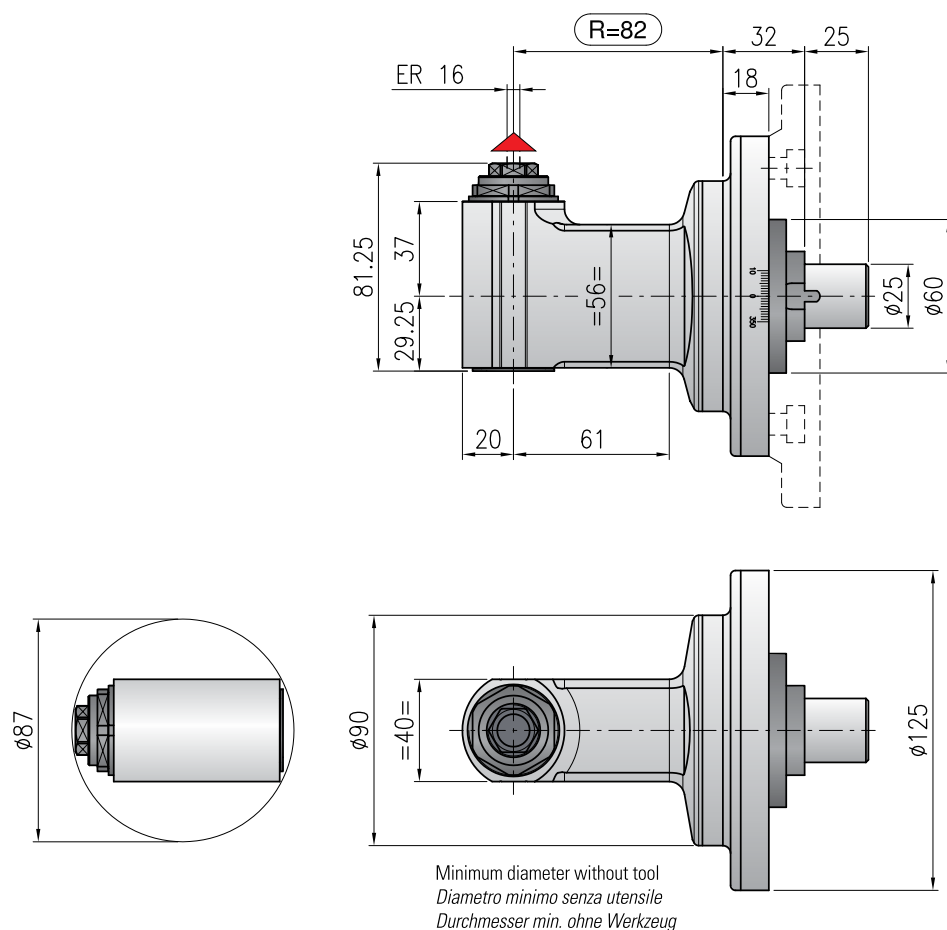
Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



Ø mm max.
6

Weldon output
Weldon
Weldon-Aufnahme

T90-1,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
8.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
15 Nm



Weight
Peso / Gewicht
4,3 kg



Collet
Pinza / Spannzange
ER-16 Ø 1/10 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

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

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
10.000

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



Ø mm
13

Arbor output
Porta fresa
Fräsaufnahme



Ø mm max.
10

Weldon output
Weldon
Weldon-Aufnahme



ER-16/ER11

Double output
Doppia uscita
Doppelter Ausgang

T90-1,5L



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
8.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
15 Nm



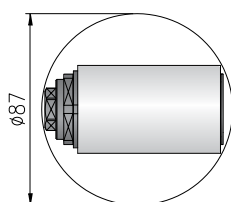
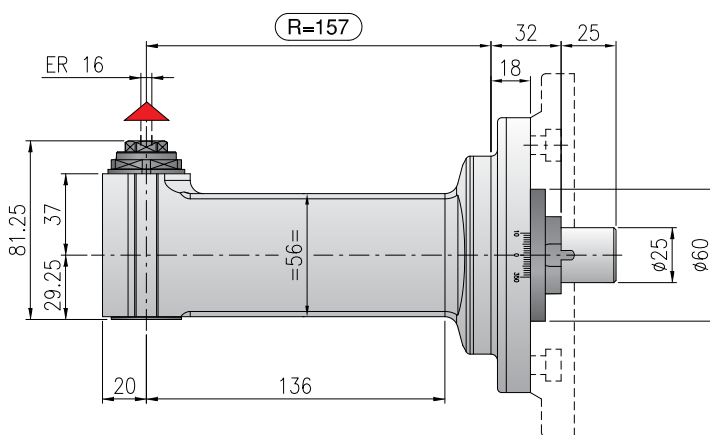
Weight
Peso / Gewicht
5,2 kg



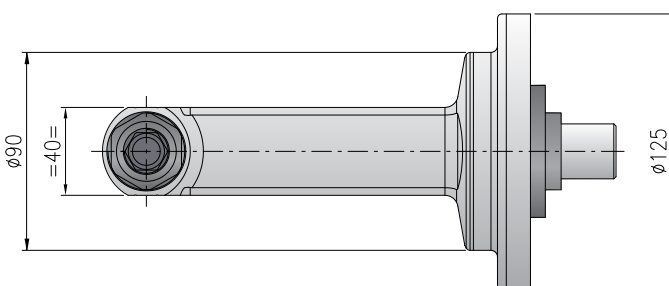
Collet
Pinza / Spannzange
ER-16 Ø 1/10 mm

*** STANDARD EQUIPMENT INCLUDES:**

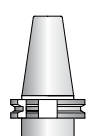
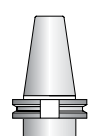
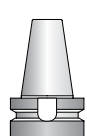
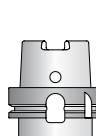
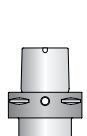
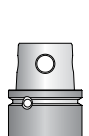
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- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



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

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
10.000

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



Ø mm
13

Arbor output
Porta fresa
Fräseraufnahme



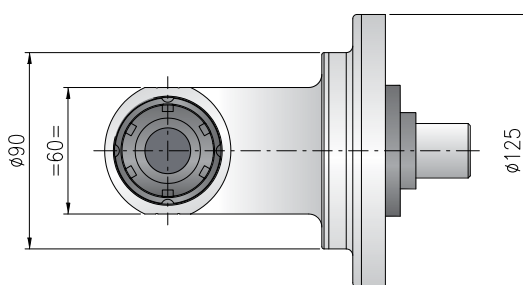
Ø mm max.
10

Weldon output
Weldon
Weldon-Aufnahme



ER-16/ER11

Double output
Doppia uscita
Doppelter Ausgang

[illegible]

- 

Ratio
Rapporto / Verhältnis
1:1
 - 

RPM
Velocità / Drehzahl max.
6.000 min⁻¹
 - 

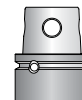
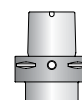
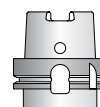
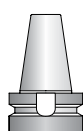
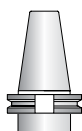
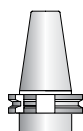
Max. axial load
Max. carico assiale / Max. Axialbelastung
510 N
 - 

Torque
Momento torcente / Drehmoment
30 Nm
 - 

Weight
Peso / Gewicht
5,4 kg
 - 

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

 Direction of rotation same as machine spindle / *senso di rotazione uguale al mandrino* / *Drehrichtung gleich wie Antriebsspindel*



KM



Double output
Doppia uscita
Doppelter Ausgang

T90-2,5L



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



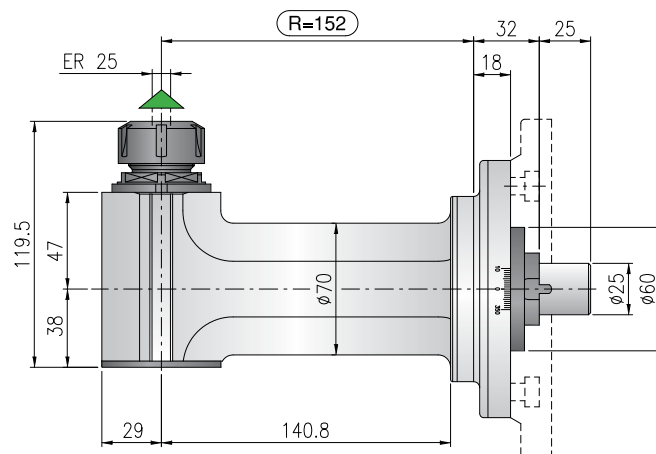
Weight
Peso / Gewicht
6,7 kg



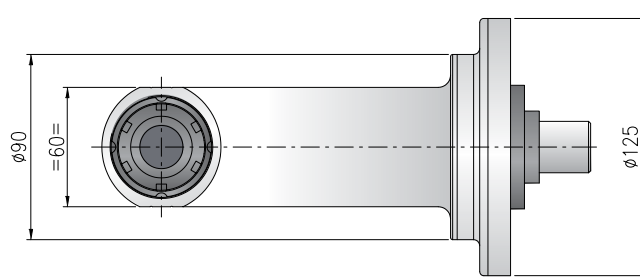
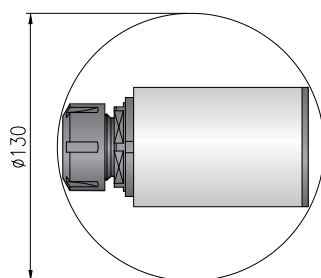
Collet
Pinza / Spannzange
ER-25 Ø 1/16 mm

* STANDARD EQUIPMENT INCLUDES:

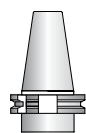
- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



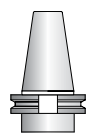
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



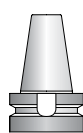
Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



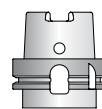
DIN-69871



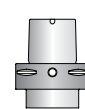
CAT



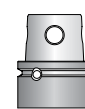
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
8.000

High speed RPM max.
Alta velocità RPM max.
Drehzahl max.



Ø mm
16

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
16

Weldon output
Weldon
Weldon-Aufnahme



HSK-32

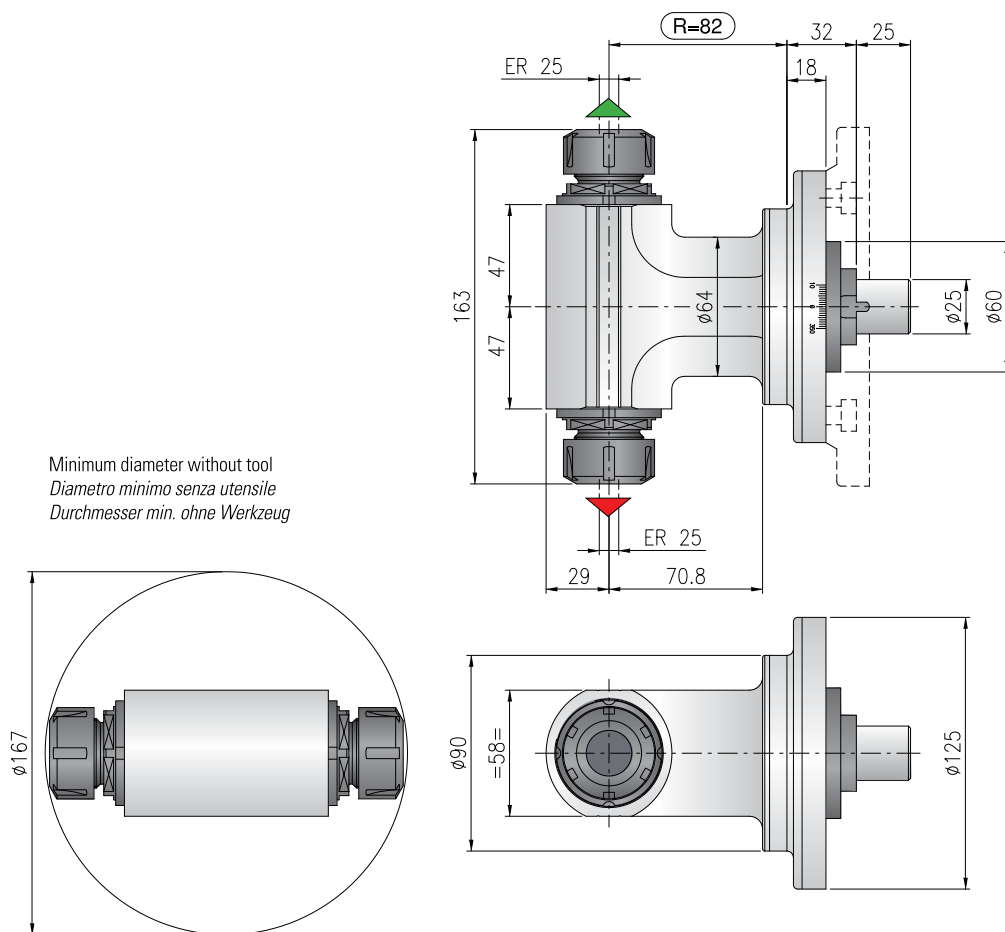
Quick Change
Attacco rapido
Schnellwechsellahme



ER-25/ER-16

Double output
Doppia uscita
Doppelter Ausgang

T90-2,5 2U



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
6,4 kg



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

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



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

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

Option / Opzione / Option



min⁻¹
8.000

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



Ø mm
16

Arbor output
Porta fresa
Fräseaufnahme



Ø mm max.
16

Welding output
Welding
Welding-Aufnahme

TCU-2,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
18 Nm



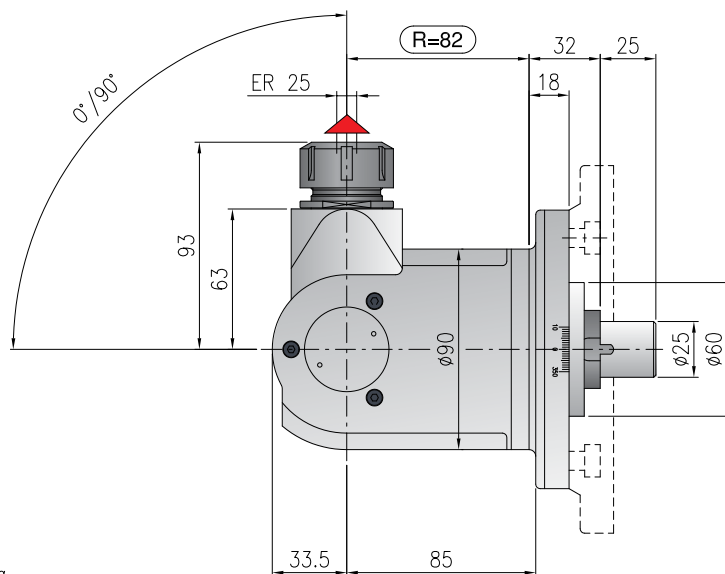
Weight
Peso / Gewicht
7 kg



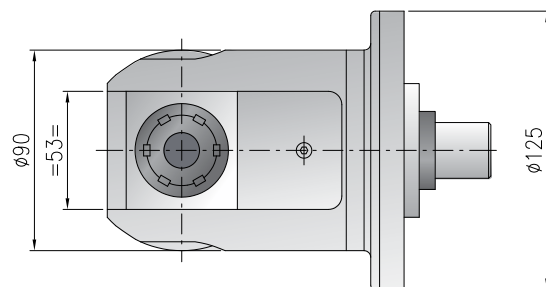
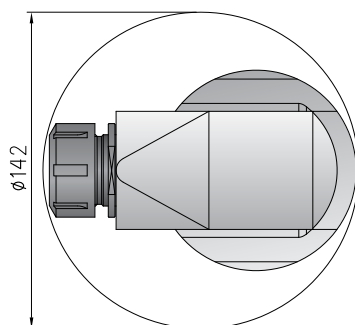
Collet
Pinza / Spannzange
ER-25 Ø 1/16 mm

*** STANDARD EQUIPMENT INCLUDES:**

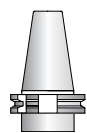
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



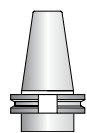
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



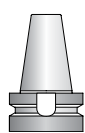
Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegen Antriebsspindel



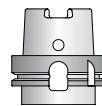
DIN-69871



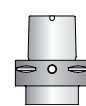
CAT



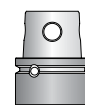
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



min⁻¹
6.000

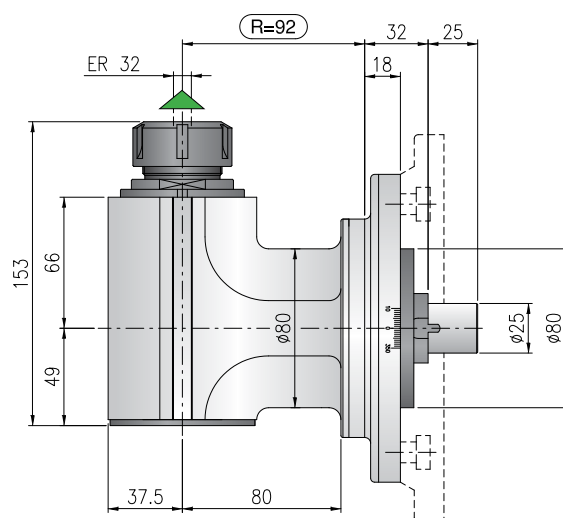
High speed optional RPM max.
Opzione alta velocità RPM max.
Drehzahl max.



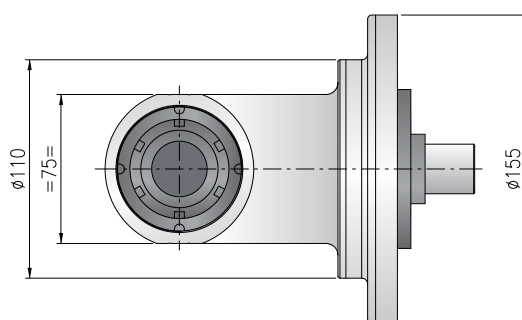
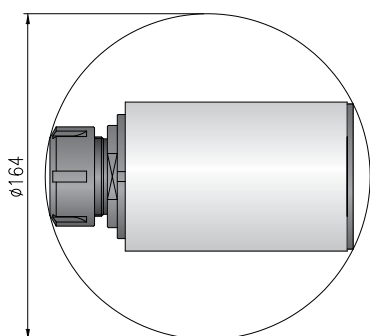
Ø mm max.
16

Weldon output
Weldon
Weldon-Aufnahme

T90-3,5



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



Weight
Peso / Gewicht
11 kg



Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
6.000

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



Ø mm
27

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
20

Weldon output
Weldon
Weldon-Aufnahme



ISO-30 HSK-40

Quick Change
Attacco rapido
Schnellwechselaufnahme



ER-32/ER-20

Double output
Doppia uscita
Doppelter Ausgang

T90-3,5L



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



Weight
Peso / Gewicht
13,2 kg

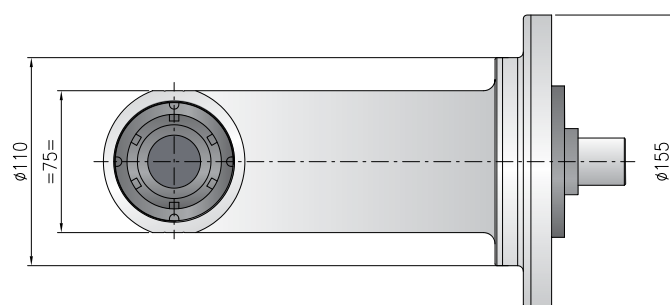
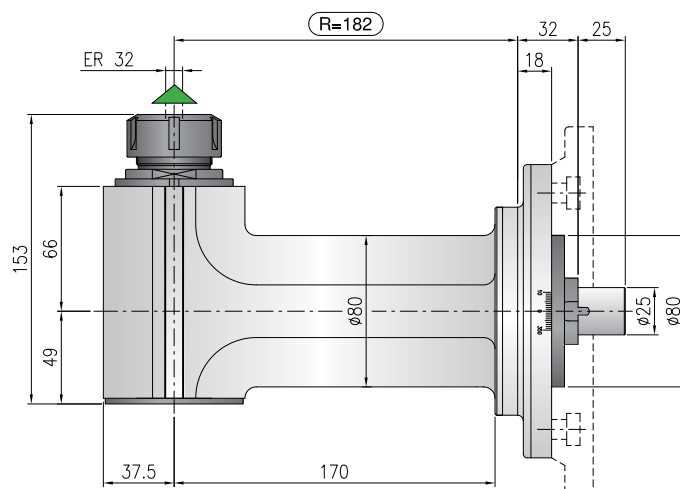
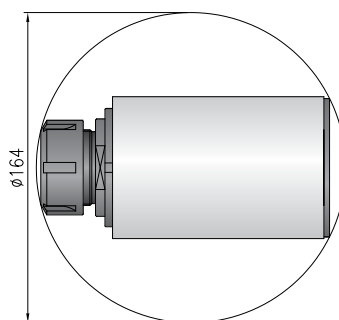


Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

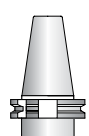
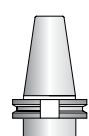
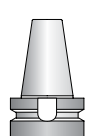
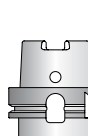
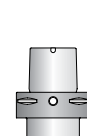
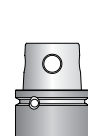
*** STANDARD EQUIPMENT INCLUDES:**

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
6.000

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



Ø mm
27

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
20

Weldon output
Weldon
Weldon-Aufnahme



ISO-30 HSK-40

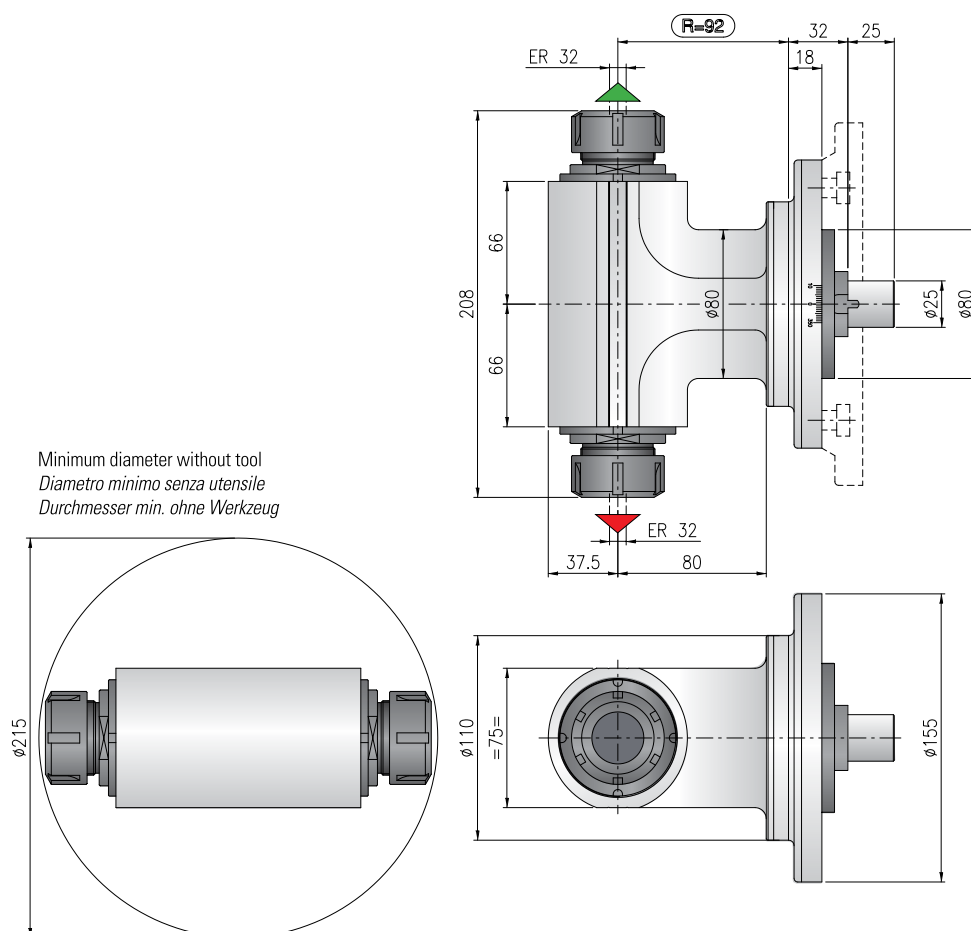
Quick Change
Attacco rapido
Schnellwechselaufnahme



ER-32/ER-20

Double output
Doppia uscita
Doppelter Ausgang

T90-3,5 2U



Ratio
Rapporto / Verhältnis
1.1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



Weight
Peso / Gewicht
12 kg



Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



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

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

Option / Opzione / Option



min⁻¹
6.000

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



Ø mm
27

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
20

Weldon output
Weldon
Weldon-Aufnahme



HSK-40

Quick Change
Attacco rapido
Schnellwechselaufnahme

TCU-3,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
32 Nm



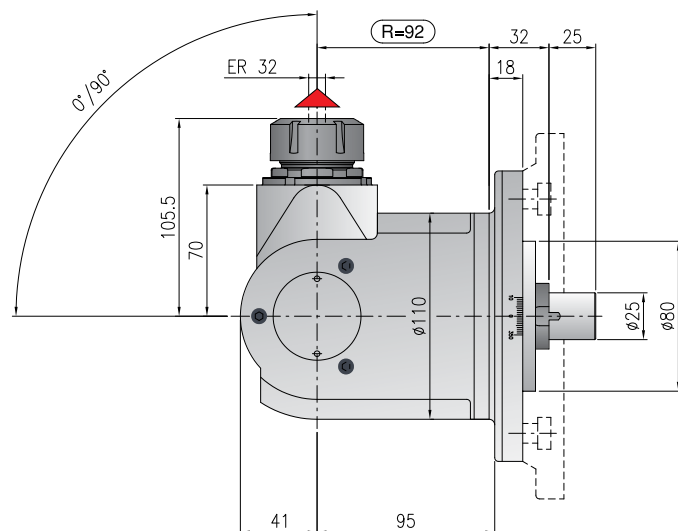
Weight
Peso / Gewicht
13 kg



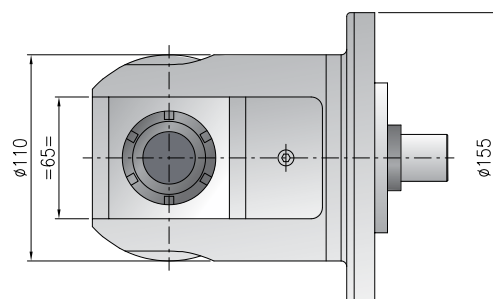
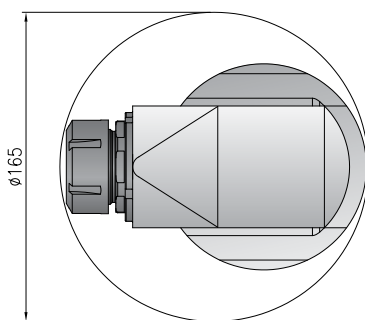
Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

* STANDARD EQUIPMENT INCLUDES:

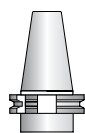
- Wooden case - wrenches - Grease tube - Instruction book
- Cassa - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



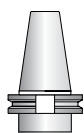
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



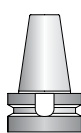
 Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegengesetzt Antriebsspindel



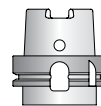
DIN-69871



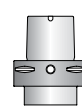
CAT



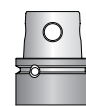
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



min⁻¹
6.000

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

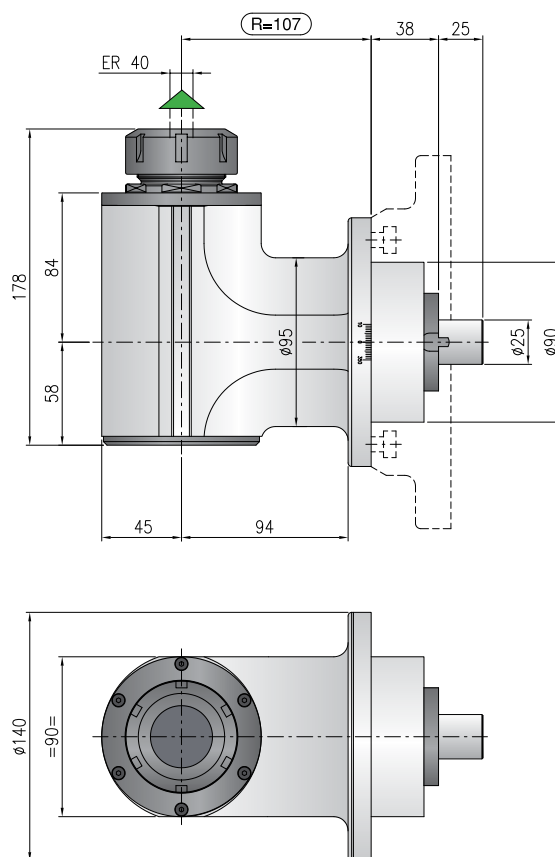
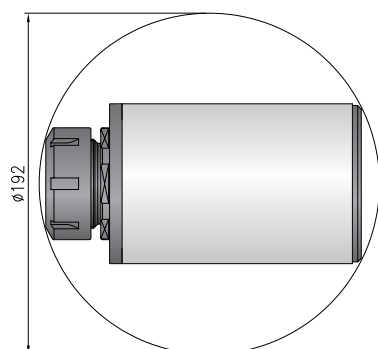


Ø mm max.
20

Weldon output
Weldon
Weldon-Aufnahme

T90-4,5

Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
75 Nm



Weight
Peso / Gewicht
17 kg



Collet
Pinza / Spannzange
ER-40 Ø 3/30 mm

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
6.000

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



Ø mm
27

Arbor output
Porta fresa
Fräseraufnahme



Ø mm max.
25

Weld on output
Weld on
Weld on-Aufnahme



ISO-30
HSK-40

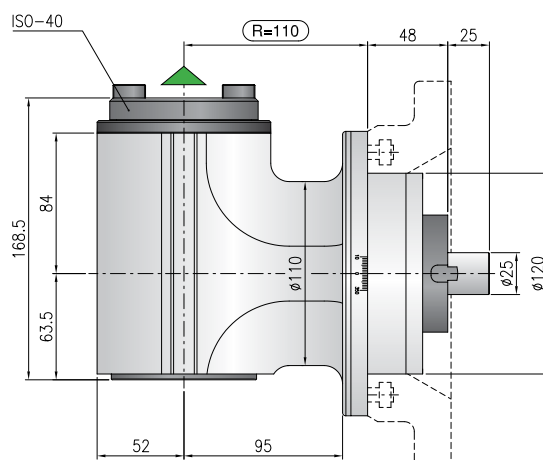
Quick Change
Attacco rapido
Schnellwechselaufnahme



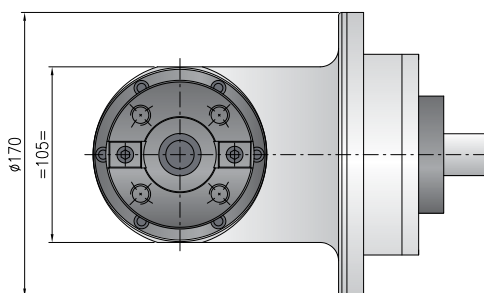
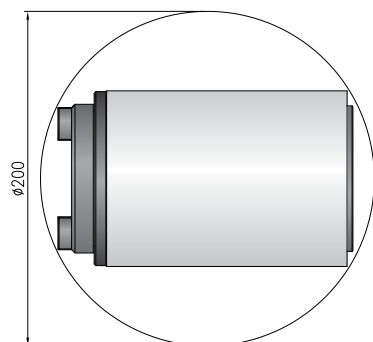
ER-40/ER-25

Double output
Doppia uscita
Doppelter Ausgang

T90-5



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
100 Nm



Weight
Peso / Gewicht
22 kg



Collet
Pinza / Spannzange
ISO/BT50

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
6.000

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



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

T90-5L



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
100 Nm



Weight
Peso / Gewicht
26,2 kg

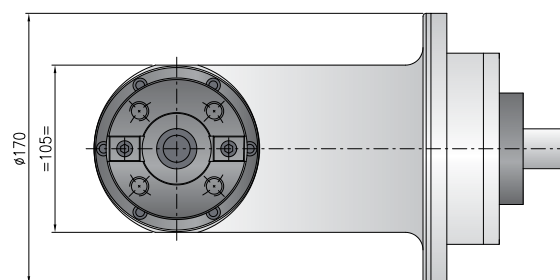
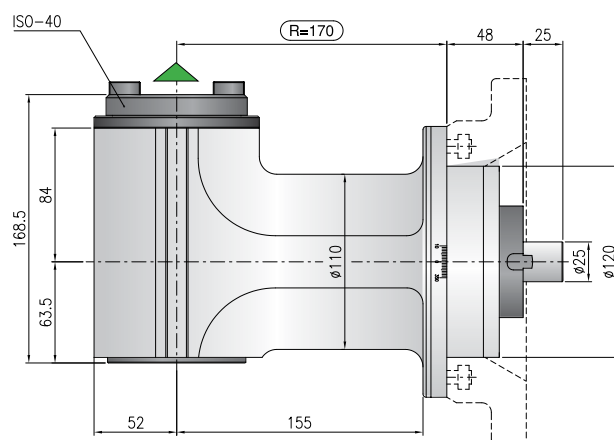
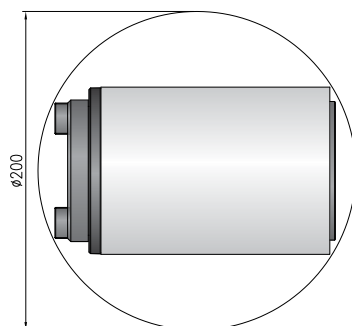


Collet
Pinza / Spannzange
ISO BT 40

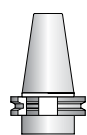
* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

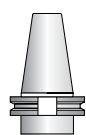
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



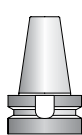
 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



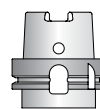
DIN-69871



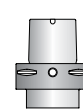
CAT



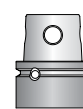
MAS-BT



HSK



CAPTO



KM

Shank / Cono / Aufnahme

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
6.000

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



HSK-63

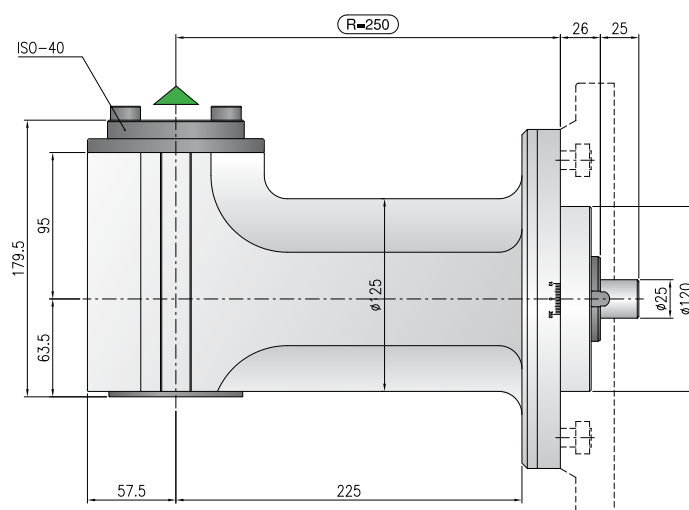
Quick Change
Attacco rapido
Schnellwechselaufnahme



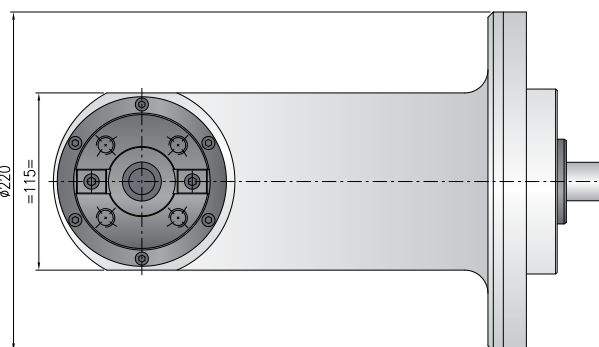
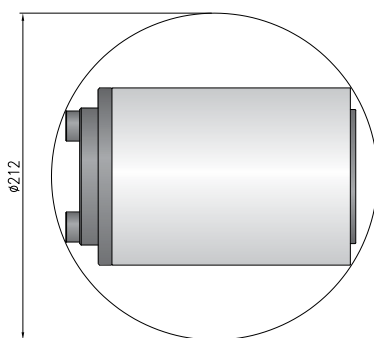
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

T90-8 HS



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
5.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
100 Nm



Weight
Peso / Gewicht
33 kg



ISO/BT40

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



bar max
40

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

T90-8 HP



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
200 Nm



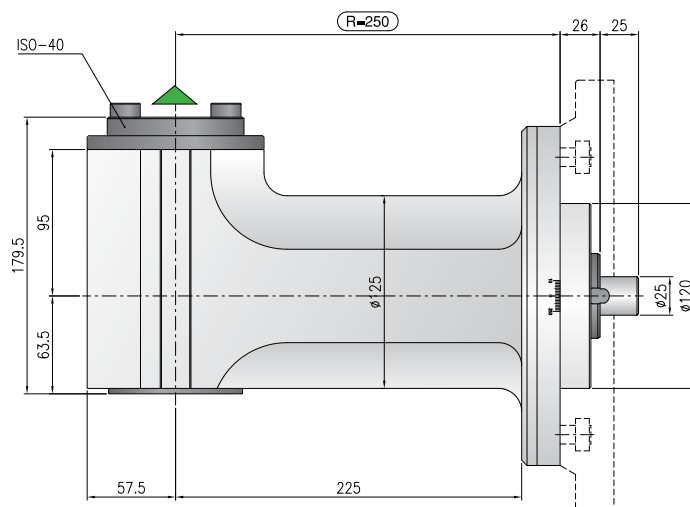
Weight
Peso / Gewicht
33 kg



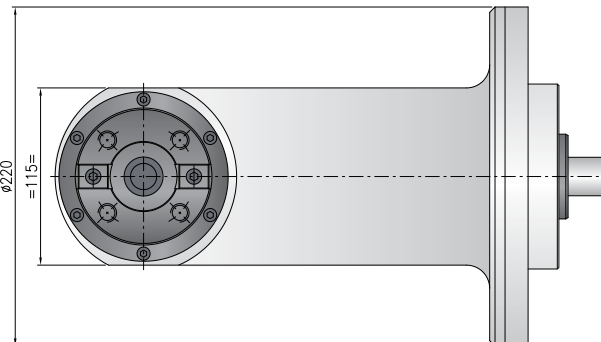
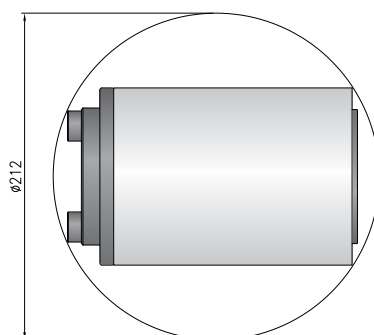
ISO/BT40

*** STANDARD EQUIPMENT INCLUDES:**

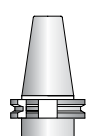
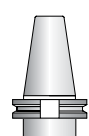
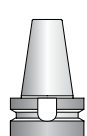
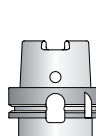
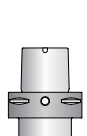
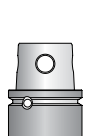
- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



bar max
40

Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



HSK-63

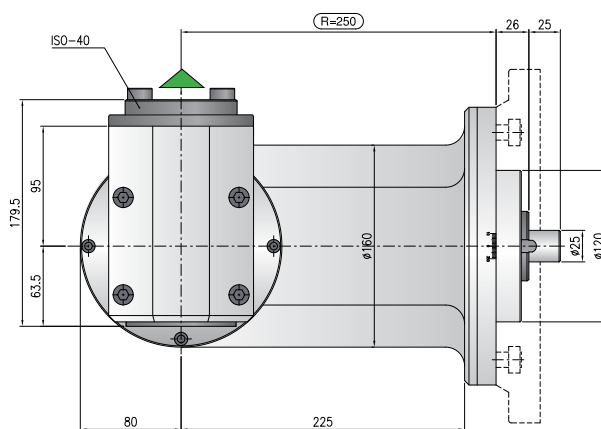
Quick Change
Attacco rapido
Schnellwechselaufnahme



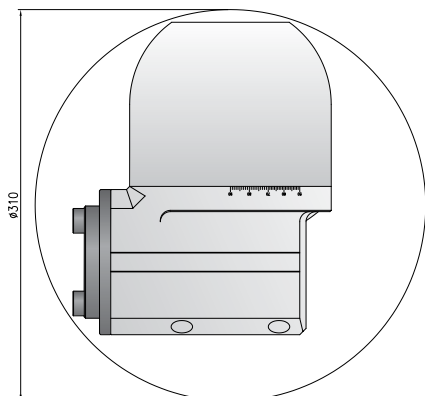
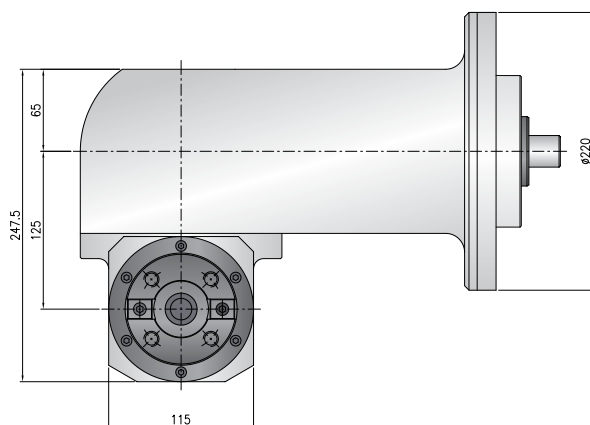
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

TDU-8



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
100 Nm



Weight
Peso / Gewicht
50 kg

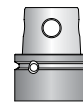
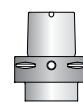
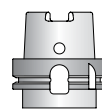
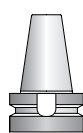
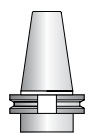
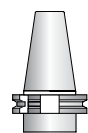


Collet
Pinza / Spannzange
ISO/BT 40

*** STANDARD EQUIPMENT INCLUDES:**

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

 Direction of rotation same as machine spindle / *senso di rotazione uguale al mandrino* / *Drehrichtung gleich wie Antriebsspindel*

Shank/**Cono**/**Aufnahme**

DIN-69871

CAT

MAS-BT

HSK

CAPTO

KM

Option / *Opzione* / *Option*

bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



HSK-63A

Quick Change
Attacco rapido
Schnellwechselaufnahme



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

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



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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

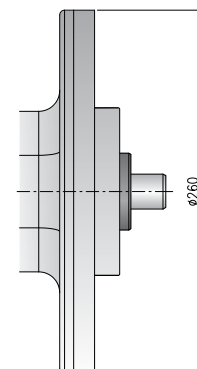
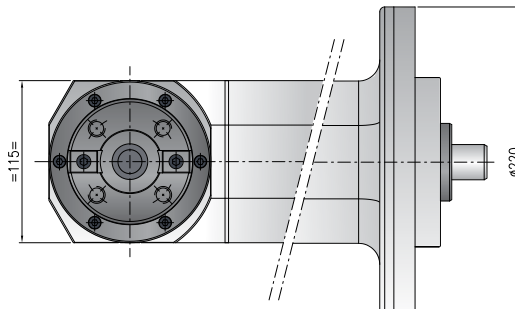
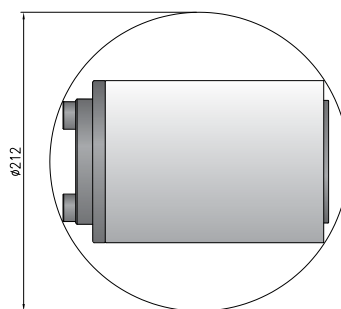


Torque
Momento torcente / Drehmoment
100 Nm



Collet
Pinza / Spannzange
ISO/BT 40

Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



R= 450 / 650

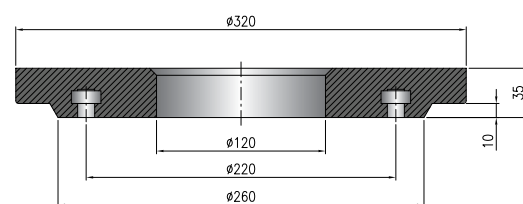
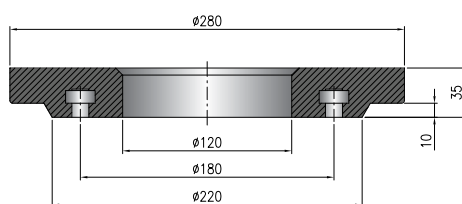
R= 850

R= 450 / 650

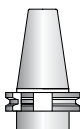
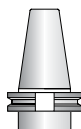
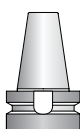
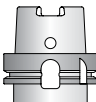
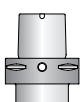
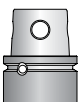
R= 850

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
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▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



bar max
40

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme



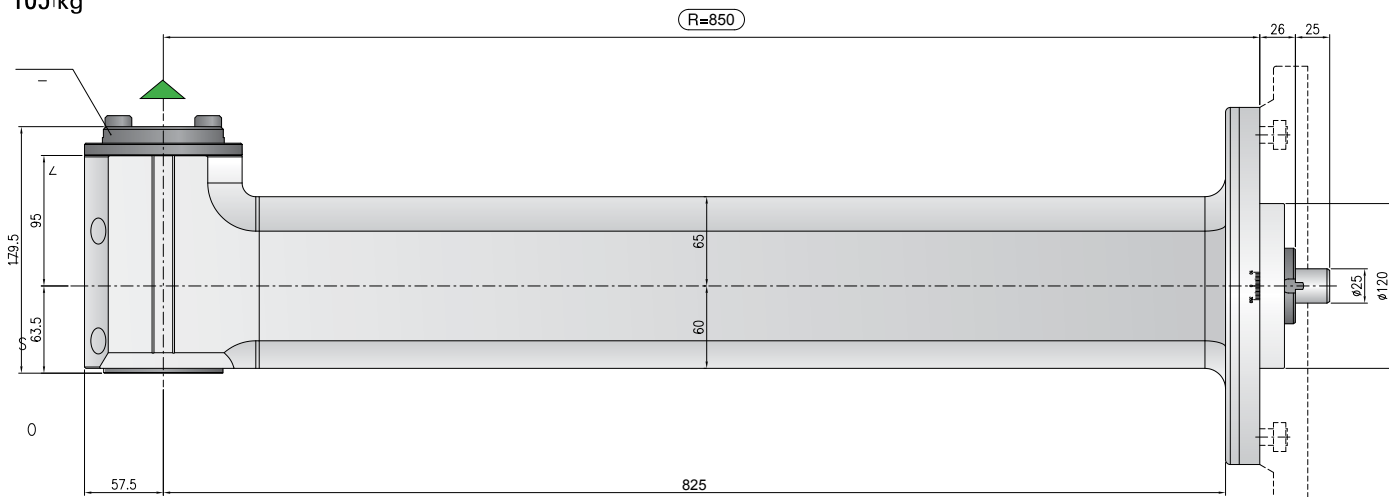
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

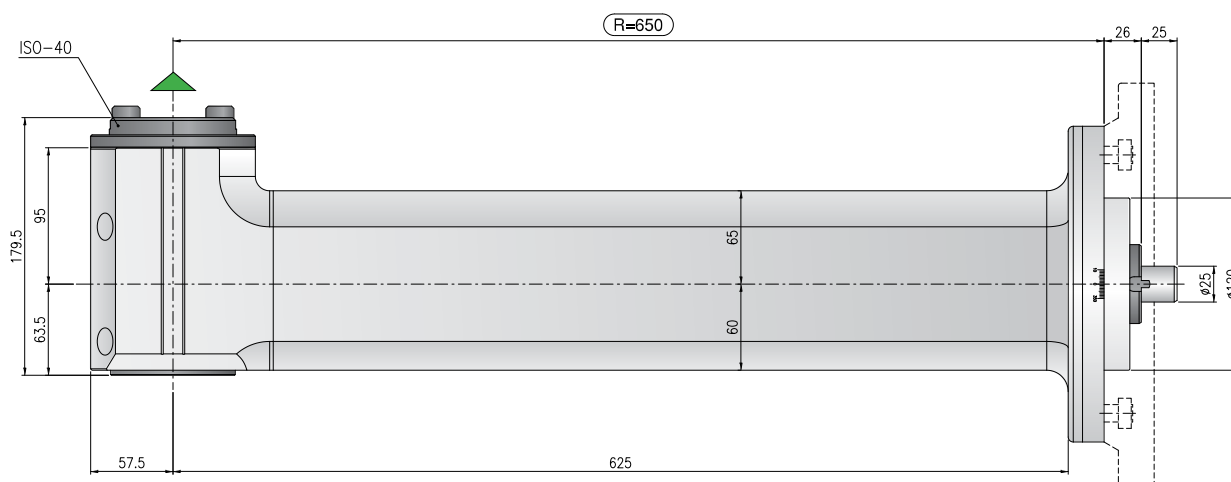
LINEA P-MODULAR



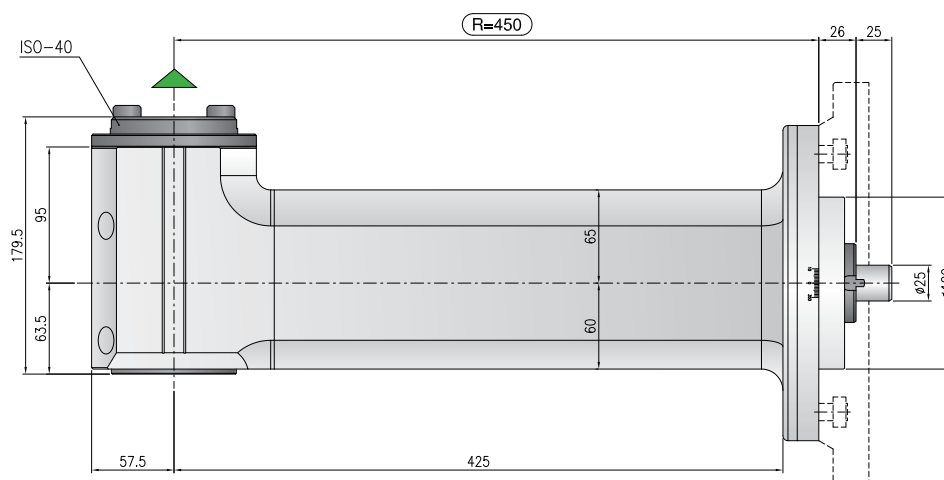
Weight
Peso / Gewicht
105 kg



Weight
Peso / Gewicht
75 kg



Weight
Peso / Gewicht
62 kg



TCU-8 R.I. 15 BAR



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
100 Nm



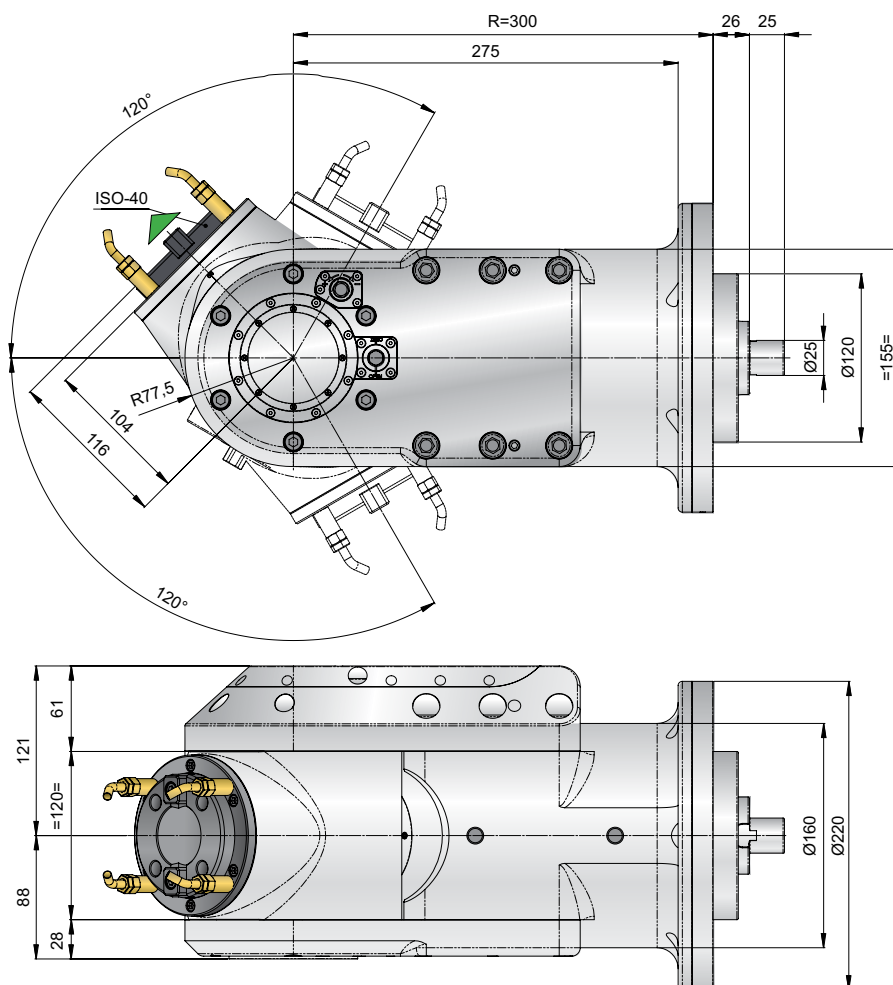
Weight
Peso / Gewicht
72 kg



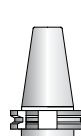
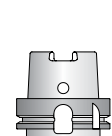
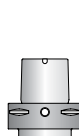
ISO 40

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

						
	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



HSK-63

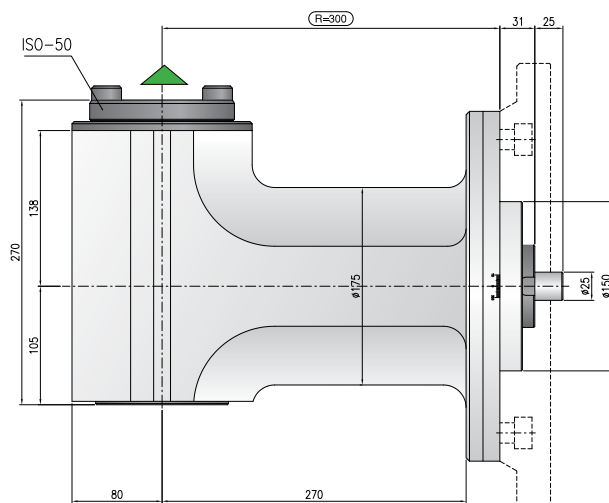
Quick Change
Attacco rapido
Schnellwechselaufnahme



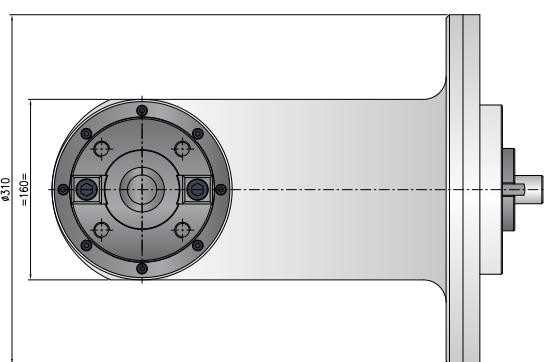
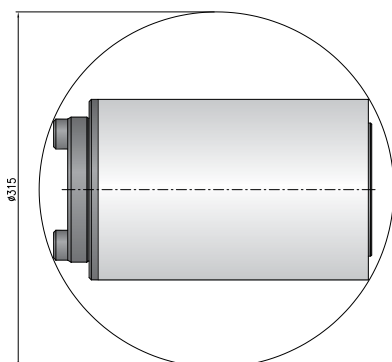
OIL

Oil lubrication
Lubrificazione
Ölschmierung

T90-10



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
250 Nm



Weight
Peso / Gewicht
77 kg



Collet
Pinza / Spannzange
ISO/BT 50

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

TDU-10



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
250 Nm



Weight
Peso / Gewicht
121 kg

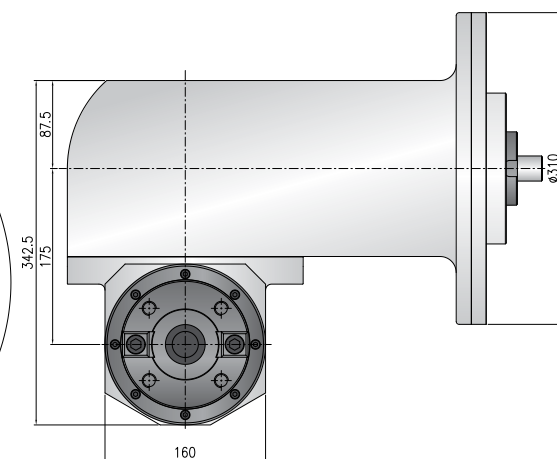
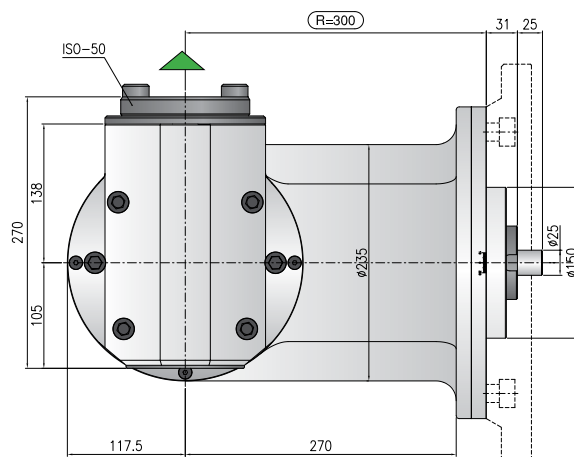
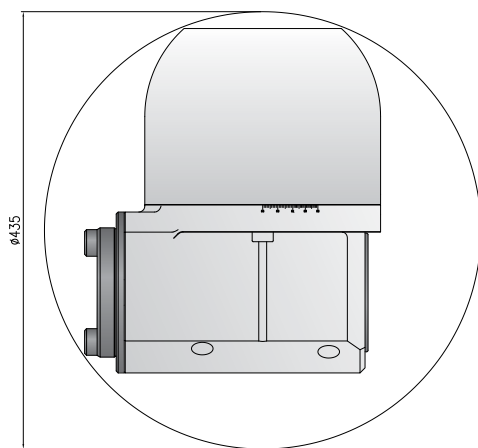


Collet
Pinza / Spannzange
ISO/BT 50

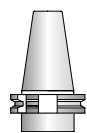
*** STANDARD EQUIPMENT INCLUDES:**

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

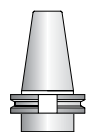
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



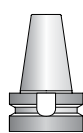
 Direction of rotation same as to machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



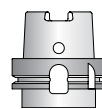
DIN-69871



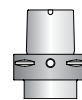
CAT



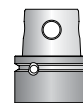
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



HSK-63A

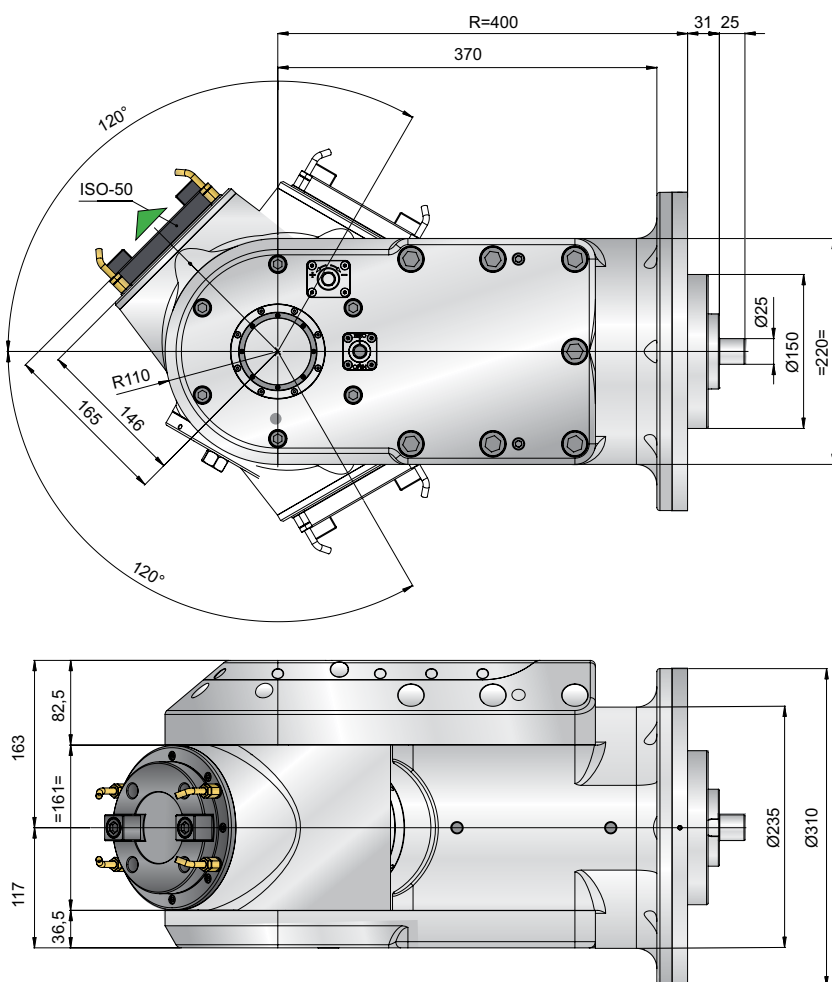
Quick Change
Attacco rapido
Schnellwechselaufnahme



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

TCU-10 R.I. 15 BAR



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
250 Nm



Weight
Peso / Gewicht
194 kg



Collet
Pinza / Spannzange
ISO 50

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme



OIL

Oil lubrication
Lubrificazione
Ölschmierung



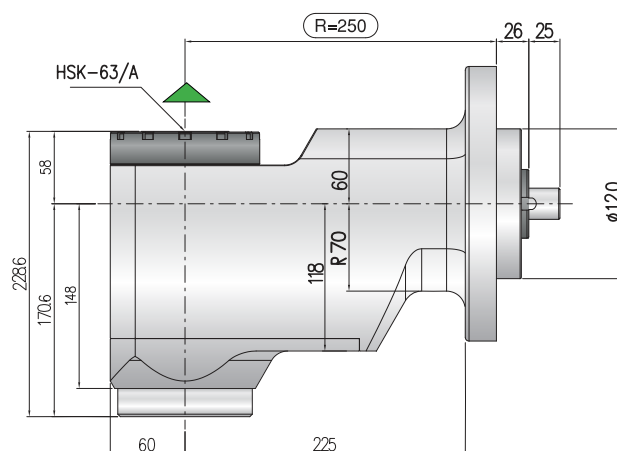
TESTE "AUTO" CON TIRANTE AUTOMATICO

"AUTO" ANGLE HEADS WITH AUTOMATIC CLAMPING TOOL - "AUTO" KÖPFE MIT AUTOMATISCHE WERKZEUGWECHSEL

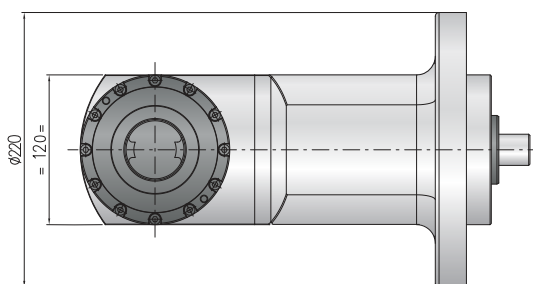
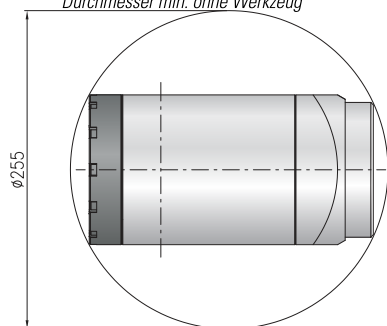
- Cono intercambiabile
Interchangeable shank / Wechselbare Aufnahme
- Flangia di interfaccia realizzata su misura con sistema indeaxaggio cono per ATC
Customized connection flange including taper with indexing system for ATC / Mass angefertigter Adapterflansch mit Aufnahme und Indexierungssystem für ATC
- Refrigerazione interna max. 70 bar
Internal coolant max. 70 bar / Innere Kühlmittelzufuhr max. 70 bar
- Refrigerazione esterna max 20 bar
Low pressure external coolant max. 20 bar / Externe Kühlmittelzufuhr max 20 bar
- Refrigerazione esterna max 100 bar
High pressure external coolant max 100 bar / Externe hoch Druck Kühlmittelzufuhr max 100 bar
- MQL max 10 bar
MQL max 10 bar / MQL max 10 bar
- Pressurizzazione tenuta
Seal pressurization / Luftdruck für Dichtungen
- Aria pulizia cono
Air for spindle cleaning / Luft zur Spindelreinigung
- Lubrificazione aria + olio
Air + oil lubrication / Luft - ölschmierung
- Aspirazione olio in eccesso
Oil vacuum system / Ölabsaugung
- Sensore di controllo cambio utensile
Sensor to detect ATC / Sensor zum Prüfen des automatischen Werkzeugwechslers
- Pick up di stoccaggio unita su misura
Customized pick up station / Mass angefertigte Pick up und Ladestation



TR90-8 AUTO



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



Power
Potenza / Energie
25 kW



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
200 Nm



Weight
Peso / Gewicht
55 kg

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
70

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



bar max
100

External coolant
Adduzione refrigerante esterna
Äußere Kühlmittelzufuhr



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

TR90-15 AUTO



Ratio
Rapporto / Verhältnis
1:1



Power
Potenza / Energie
25 kW



RPM
Velocità / Drehzahl max.
2.500 min⁻¹



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



Torque
Momento torcente / Drehmoment
600 Nm



Weight
Peso / Gewicht
180 kg

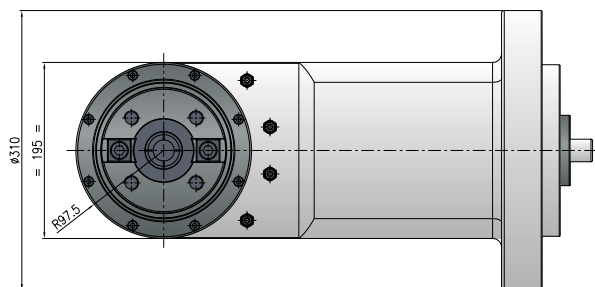
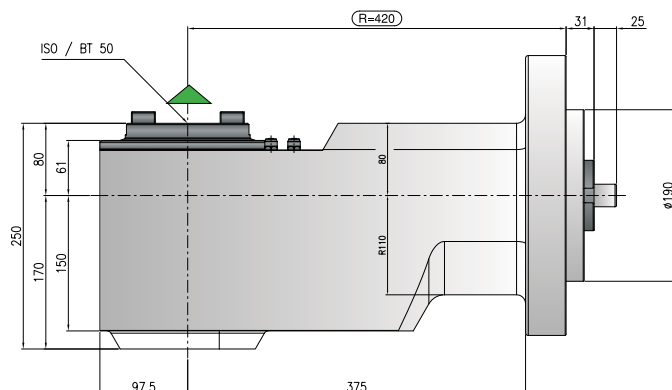
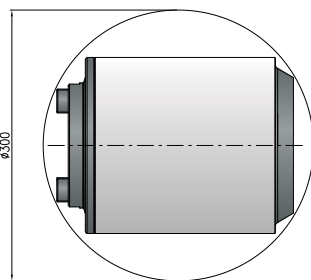


ISO/ BT50

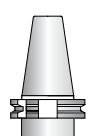
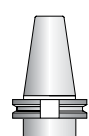
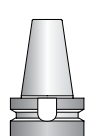
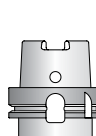
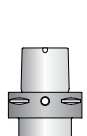
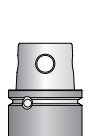
* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



 Direction of rotation same as machine spindle / *senso di rotazione uguale al mandrino* / *Drehrichtung gleich wie Antriebsspindel*

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

Option / *Opzione* / *Option*



bar max
70

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



bar max
100

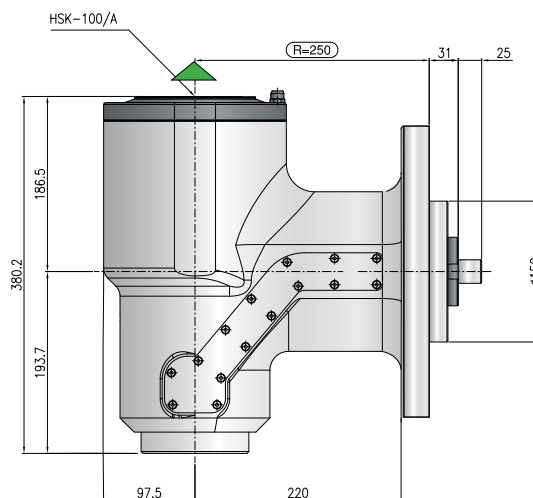
External coolant
Adduzione refrigerante esterna
Äußere Kühlmittelzufuhr



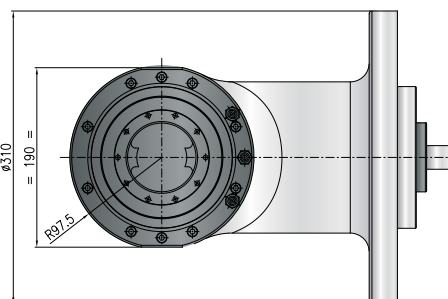
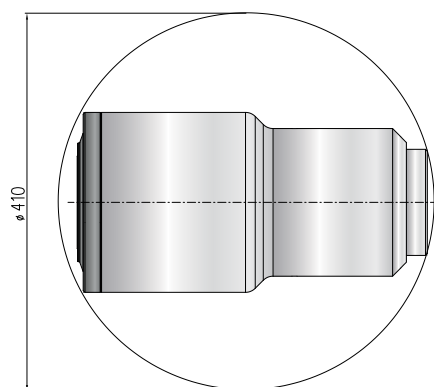
AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

T90-15 AUTO



Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne Werkzeug



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

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

Option / Opzione / Option



bar max
70

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



bar max
100

External coolant
Adduzione refrigerante esterna
Äußere Kühlmittelzufuhr



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung



LINEA HIGH SPEED HIGH SPEED LINE/HIGH SPEED LINIE

MOLTIPLICATORE SPINDLE SPEEDER / SCHNELLAUFSPINDEL

Moltiplicatore meccanico con gruppo epicicloidale interno per aumentare il numero di giri. Completamente scambiabile con cambio utensile, ha dimensioni contenute e la possibilità di refrigerazione interna.

Mechanical spindle speeder with internal planetary gear to increase the RPM on the machine. Designed to be exchanged by ATC it has a compact design and the possibility of internal coolant.

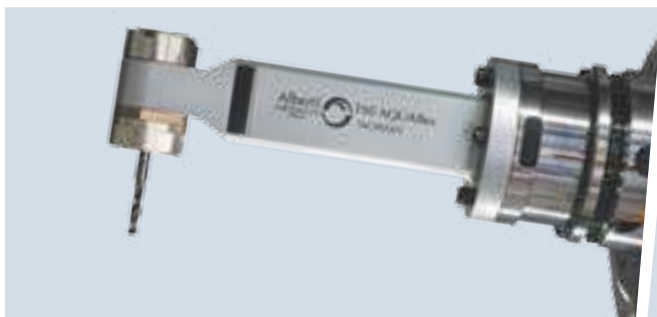
Mechanische Schnellaufspindel mit Planetenrad um die Drehzahl der Maschine zu steigern (erhöhen). Gebildet um by ATC gewechselt zu werden, ER zeigt ein kompaktes Design und die Möglichkeit von Innere Kühlmittelzufuhr.

AQUAFLEX

Moltiplicatore di giri azionato con refrigerante. Grazie alla pressione del refrigerante interno attraverso il cono, è possibile raggiungere una velocità fino a 75.000RPM con pinza massimo 6mm.

High speed coolant driven unit. Thanks to the coolant pressure through spindle it is possible to reach up to 75.000RPM with max collet capacity 6mm.

Kühlmittelangetriebene Schnellaufspindel. Dank der Kühlmitteldruck kann man mit dieser Einheit bis auf 75.000UPM mit 6mm Spannzange erreichen.



LINEA HIGH SPEED

HIGH SPEED LINE/HIGH SPEED LINE

SLIMLINE & TURBOFLEX

Moltiplicatori ad aria. Teste ad alta velocità con motore ad aria fino a 60.000RPM.

Pneumatic speeder. High speed units with integrated air motor up to 60.000 RPM.

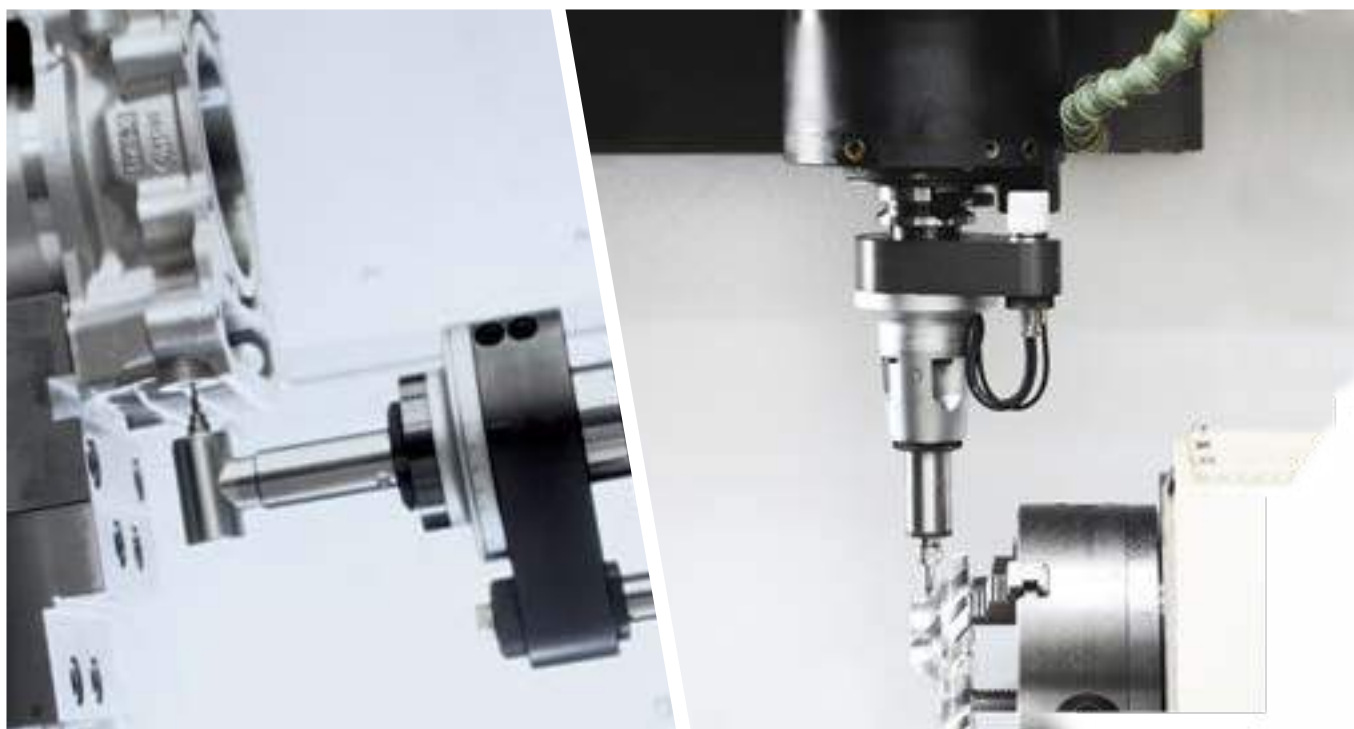
Pneumatischer Schnellaufspindle. Werkzeuge mit innenliegenden Luftmotor, der bis auf 60.000UPM laufen könne.

LEONARDO SYSTEM

Elettromandrino dotato di cambio utensile automatico. Raggiunge una velocità regolabile di 60.000RPM ed è completamente interfacciato con il controllo della macchina tramite centralina.

Electrospindle with automatic tool change. Adjustable speed up to 60.000RPM and completely connected to the machine thanks to a controller unit.

Elektrospindel mit automatische Werkzeugwechsel. Aufstellbare Geschwindigkeit bis auf 60.000UPM und ist an der Maschinensteuerung dank einer Steuereinheit verbunden.



MOLTIPLICATORE SPEEDER / SCHNELLAUFSPINDEL



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
10.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
4 Nm



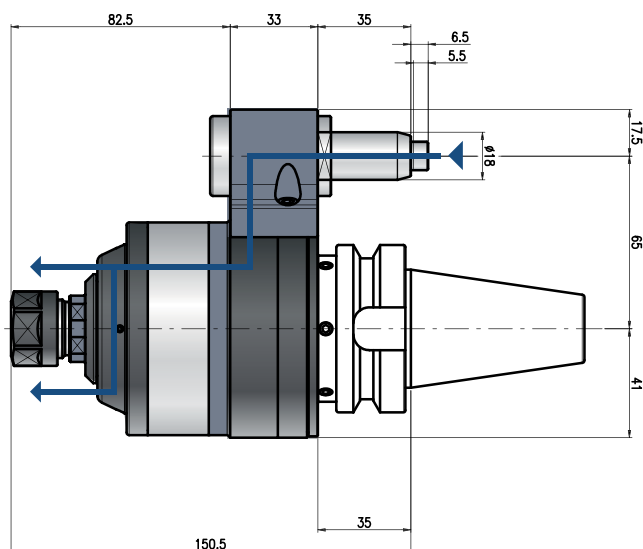
Weight
Peso / Gewicht
4 kg



Collet
Pinza / Spannzange
ER-8 ø 0,5/5 mm

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Corpo principale con sistema di raffreddamento ad aria
Main body with air-water cooling system
Hauptkörper für Luft/Wasser Kühlungssystem

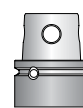
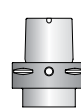
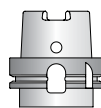
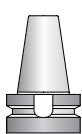
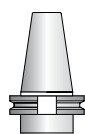
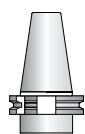
Cono intercambiabile BT40 - BT50
Interchangeable shank: BT40 - BT50
Wechselbarer Kegel BT40 - BT50

Fori per raffreddamento ad aria o acqua
Bores for air-water cooling system
Düsen für Luft / Wasser Kühlungssystem

Entrata aria acqua
Air-coolant input
Aufnahme Luft / Wasser

Pinza ER 16
ER 16 collet
Spannzange ER 16

Gruppo perno modulare
Interchangeable pitchdimension
Wechselbarer Bolzen

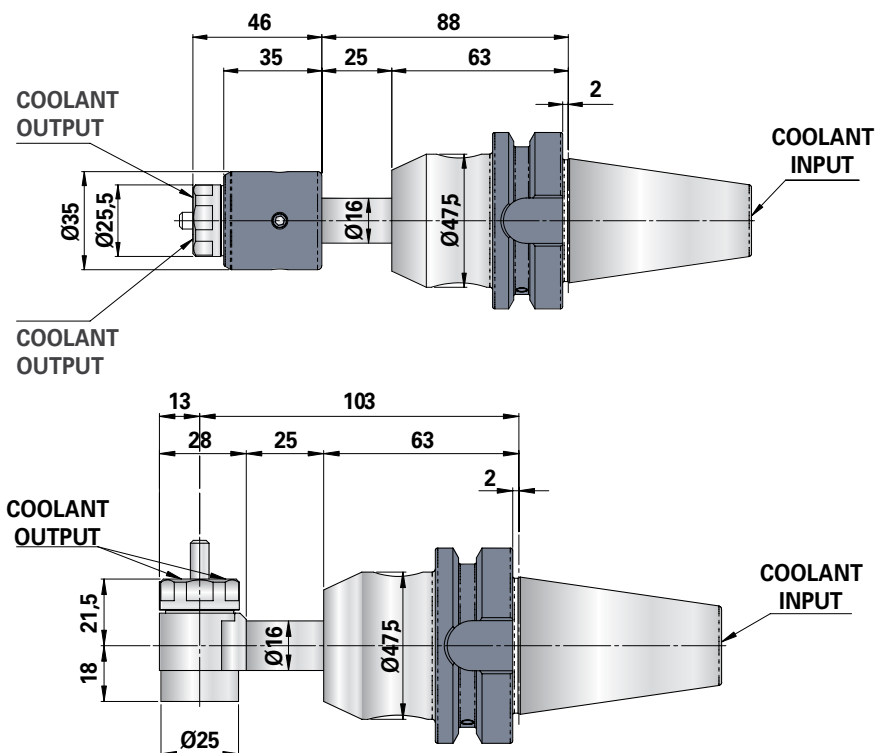


Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK		CAPTO		KM
Size/Grandezza/Größe	50		50	63-80	100	C6	C8	63
I	80-100		80-100	80-100	80-100	80-100	80-100	80-100
S	35		41	42	45	38	40	40
L	160		166	167	170	163	165	165

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

AQUAFLEX



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
75.000 adjustable

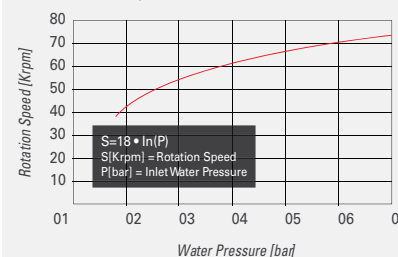


Weight
Peso / Gewicht
4 kg

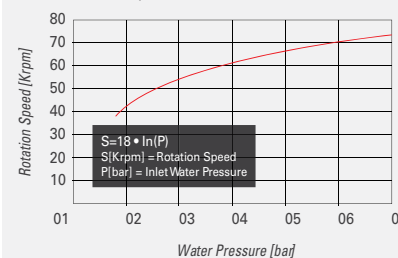


Cutting tool
Utensile / Werkzeug
Ø 3, 4, 6 mm

R-5.5 Velocità vs Rotazione
Rotation Speed Vs. Water Pressure



R-5.5 Velocità vs Rotazione
Rotation Speed Vs. Water Pressure



ACCESSORI ACCESSORIES / ZUBEHÖR



Kit di montaggio utensile (2 cuscinetti + 1 turbina)
Mounting kit for cutting tools (2 bearings + 1 turbine)
Set zur Werkzeugmontage



Attrezzo di montaggio
Assembly device
Werkzeug zur Montage

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

Shank/Cono/Aufnahme	DIN-69871		CAT	MAS-BT	HSK		CAPTO	
Size/Grandezza/Größe	50			50	63-80	100	C6	C8
	80-100			80-100	80-100	80-100	80-100	80-100

*optional

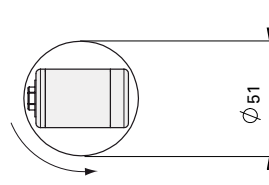
ROTAZIONE CON MANDRINO MACCHINA - SLIMLINE SPINDLE DRIVEN / SPINDEL ANGETRIEBEN

RA-100

Diameter without tool with RA-100
Diametro senza utensile con RA-100
Durchmesser ohne Werkzeug mit RA-100

RPM max. output
Max. Velocità output
Drehzahl max. output

5.620 rpm



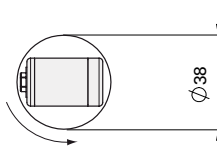
Technical Data / Dati Tecnici / Technische Daten	RA-100
RPM max. input / Max. Velocità input / Drehzahl max. input min ⁻¹	15.000
Rt. reduction / Rt. in riduzione / Rt. Reduktion	1/2,67
Weight / Peso / Gewicht	Kg 3,5

RA-200

Diameter without tool with RA-200
Diametro senza utensile con RA-200
Durchmesser ohne Werkzeug mit RA-200

RPM max. output
Max. Velocità output
Drehzahl max. output

10.000 rpm



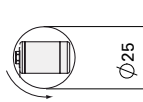
Technical Data / Dati Tecnici / Technische Daten	RA-200
RPM max. input / Max. Velocità input / Drehzahl max. input min ⁻¹	15.000
Rt. reduction / Rt. in riduzione / Rt. Reduktion	1/1,5
Weight / Peso / Gewicht	Kg 3,5

IC-300

Diameter without tool with IC-300
Diametro senza utensile con IC-300
Durchmesser ohne Werkzeug mit IC-300

RPM max. output
Max. Velocità output
Drehzahl max. output

11.250 rpm



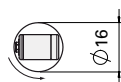
Technical Data / Dati Tecnici / Technische Daten	IC-300
RPM max. input / Max. Velocità input / Drehzahl max. input min ⁻¹	15.000
Rt. reduction / Rt. in riduzione / Rt. Reduktion	3/4
Weight / Peso / Gewicht	Kg 3

MFC-300 S

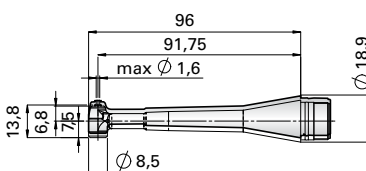
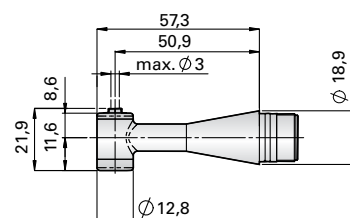
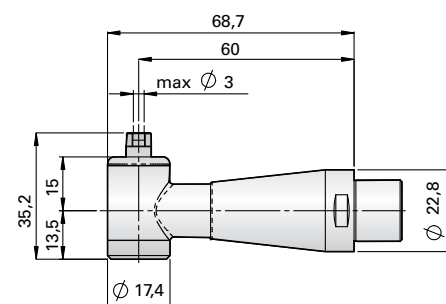
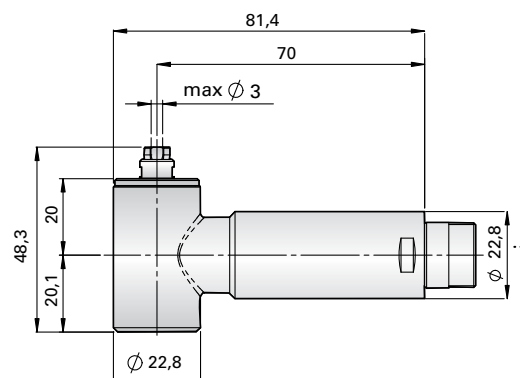
Diameter without tool with MFC-300
Diametro senza utensile con MFC-300
Durchmesser ohne Werkzeug mit MFC-300

RPM max. output
Max. Velocità output
Drehzahl max. output

15.000 rpm



Technical Data / Dati Tecnici / Technische Daten	MFC-300
RPM max. input / Max. Velocità input / Drehzahl max. input min ⁻¹	15.000
Rt. reduction / Rt. in riduzione / Rt. Reduktion	1/1
Weight / Peso / Gewicht	Kg 3



Spindle Runout

Spindle accuracy Precisione del Mandrino Spindelpräzision.	0,002 mm 0,00008 inch.
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Coolant Option

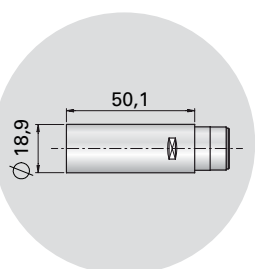
It is possible to use external coolant during the machining.
Consentito usare refrigerante esterno durante la lavorazione.
Extern Kühlmiteileinsatz möglich.



Collet

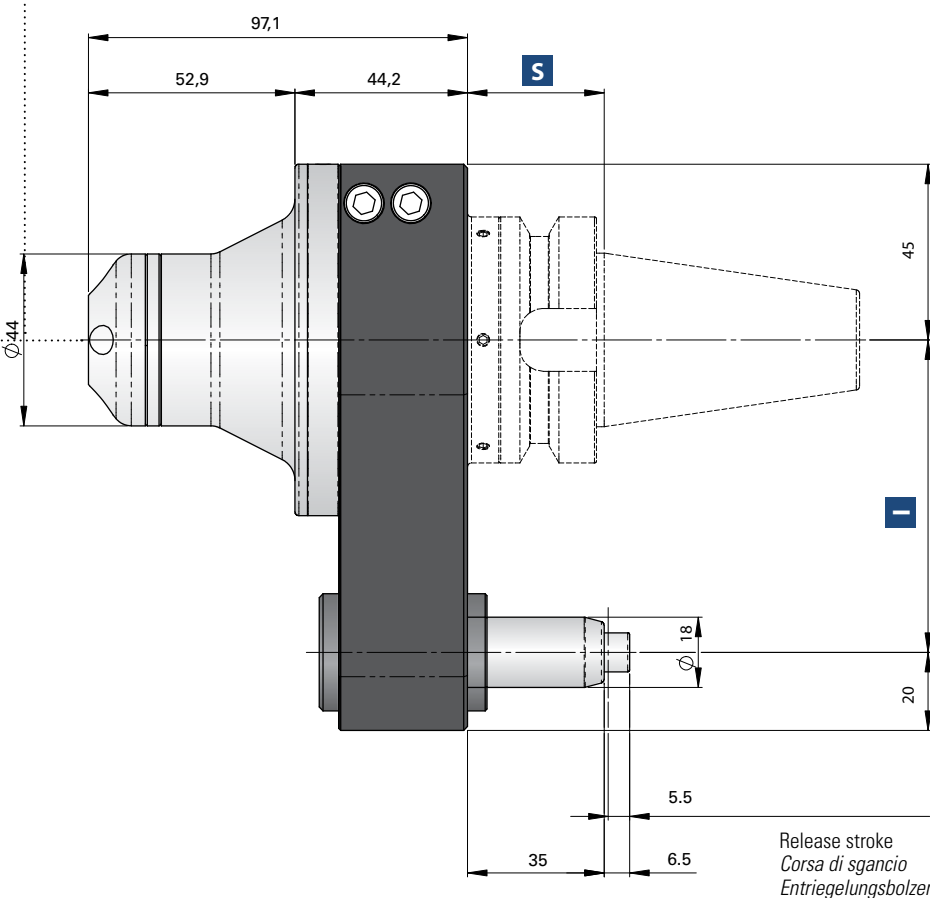
RA-100	mm	CH8: Ø3 mm every 0,1 mm Ø 3mm
RA-200	mm	CHS: Ø3mm, 2,35 every 1,6 and Ø2,35, Ø3,175
IC-300	mm	CHC: Ø3mm, Ø2,35mm, Ø1,6 mm, Ø2,00mm and Ø3,175 mm
MFC-300	mm	K252 Ø1,6mm

CN-01

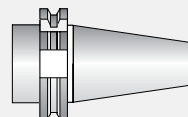


Extension between spindle and heads /
Prolunga da inserire tra il manopolo e la testa
Verlängerung zwischen Spindel und Fräskopf

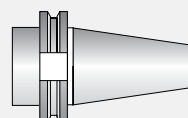
OPTIONAL DRIVE SHANK*
Non interchangeable input drive shank
Coni non intercambiabili
Nicht wechselbare Aufnahme



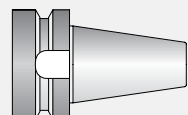
DIN-69871
ISO 40/50



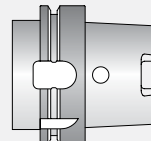
CAT
40/50



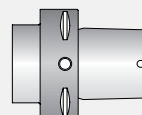
MAS-BT
40/50



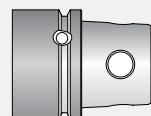
HSK
63/80/100



CAPTO
C5/C6/C8



KM
50/63



Shank/Cono/Aufnahme	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

*optional

Accessories / Accessori / Zubehör	RA-100	RA-200	IC-300	MFC-300
Retaining block / Tassello di ritegno / Stop Block	Ø18 mm	Ø18 mm	Ø18 mm	Ø18 mm
Extension / Prolunga / Verlängerung	CN-01	CN-01	CN-01	CN-01

Retaining block / Tassello di ritegno /
 Stop-Block



NOT INCLUDED
NON INCLUSO
NICHT ENTHALTEN

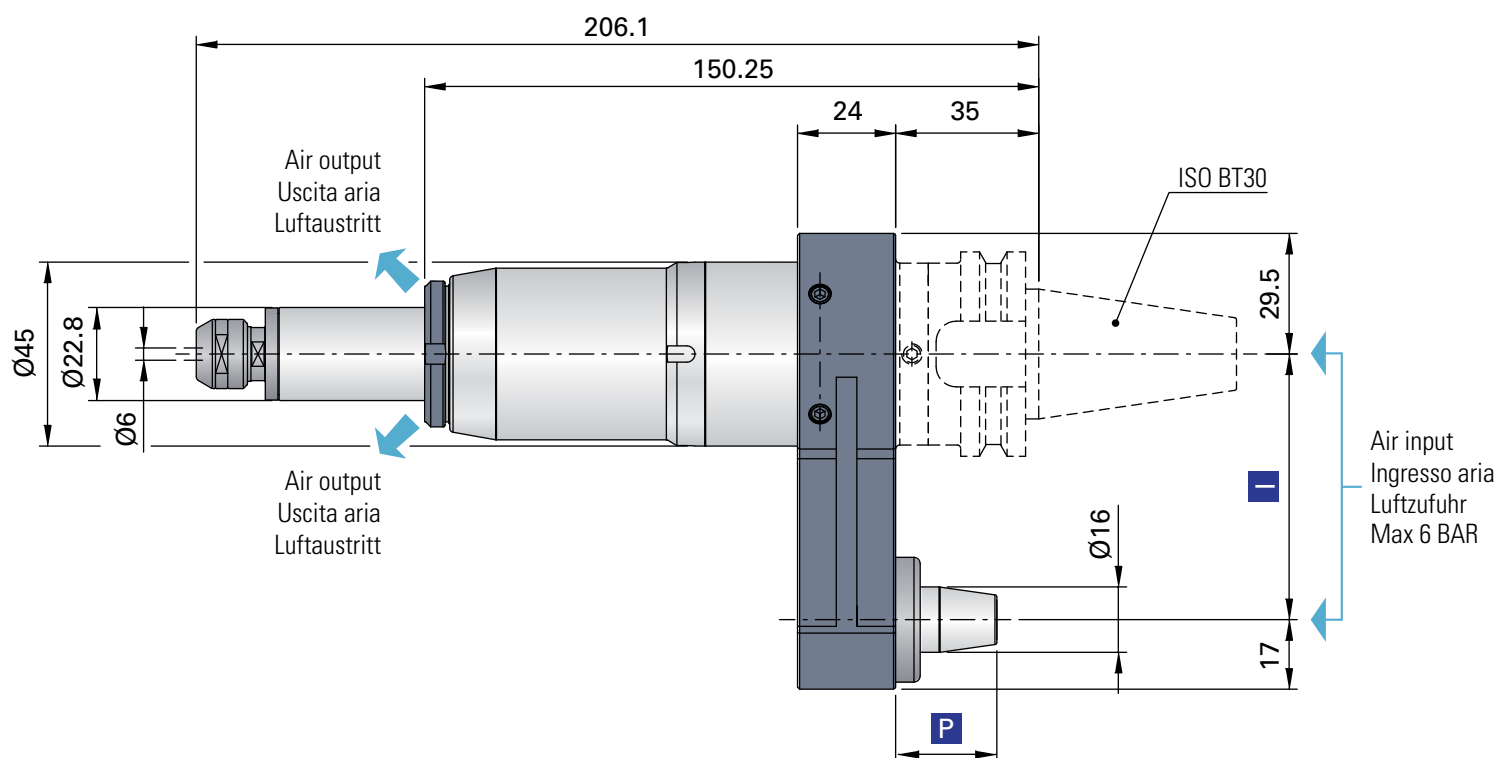
TURBODRILL NR-2351

Driven through air motor / Azionamento con motore ad aria / Durch Luftmotor angetrieben



Machine spindle must not rotate

Il mandrino macchina non deve assolutamente girare / Maschinenspindel darf nicht drehen



Possibility of order TURBODRILL without flange and pin with air through spindle

Possibilità di avere TURBODRILL senza flangia e perno con presa aria / TURBODRILL ohne Flansch auch möglich

Per other applications with air motor with ISO/BT40-50 please refer to Slimline Catalogue

Per le soluzioni ad aria con coni ISO/BT40-50 fare riferimento al catalogo Slimline

Für Anwendungen mit luftangetriebenen Köpfen mit SK/BT40-50 bitte sehen Sie Slimline Katalog

Air line kit / Filtro regolatore aria / Luftsystem



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
- Köpfe / NAKANISHI spindle / Spannzange Ø 3 mm / Schlüssel / Gebrauchsanweisungen / Koffer

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	l/min	160
Weight / Peso	Kg	2



CHK Ø 0,5 - max 6mm

every/ogni/alle 0,1 mm

Collet
Pinza
Spannzange



Coolant option

Refrigerante opzionale/ Kühlmittel optional

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

STOP BLOCK

PER MACCHINE BT-30
FOR BT-30 MACHINES
FÜR BT-30 MASCHINEN

FANUC ROBODRILL



I	65
P	24

BROTHER S2D



I	80
P	24

BROTHER TC-32



I	80
P	30

BROTHER R450X1



I	50
P	24

BROTHER S500 S700 S1000



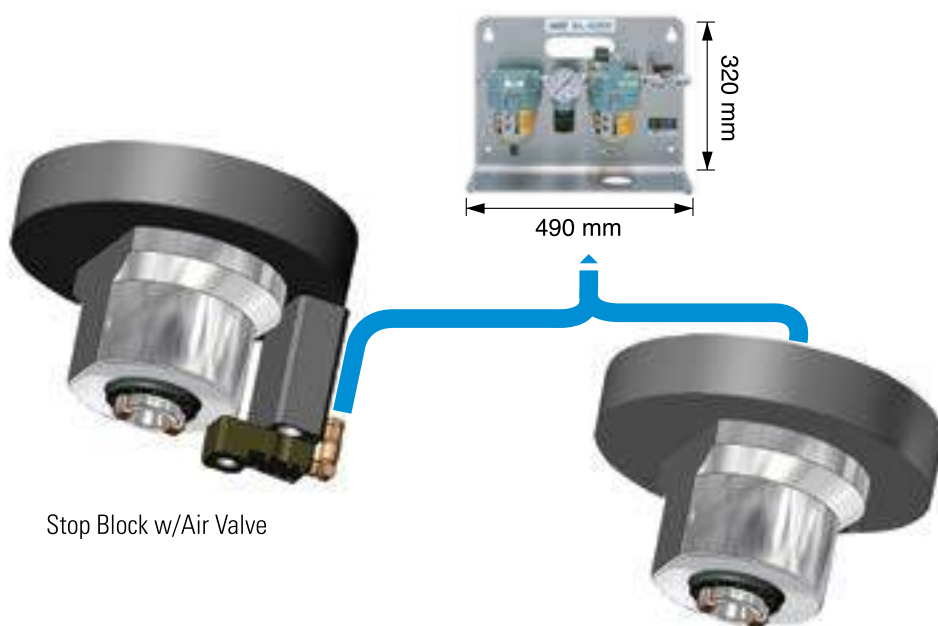
I	80
P	25,75

DMG MORI MILLTAP 700



I	65
P	24

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



Stop Block w/Air Valve

Air Through Spindle
Aria attraverso il mandrino

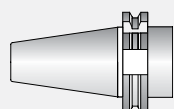


TESTE CON MOTORE AD ARIA

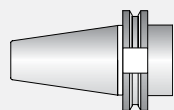
AIR DRIVEN ANGLE HEADS / LUFTANGETRIEBENE WINKELKÖPFE

OPTIONAL DRIVE SHANK*

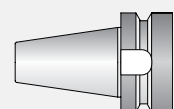
Non interchangeable input drive shank
Coni non intercambiabili
Nicht wechselbare Aufnahme



**DIN-69871
ISO 40/50**



**CAT
40/50**



**MAS-BT
40/50**

Air line kit / Filtro regolatore aria /
Luftsystem

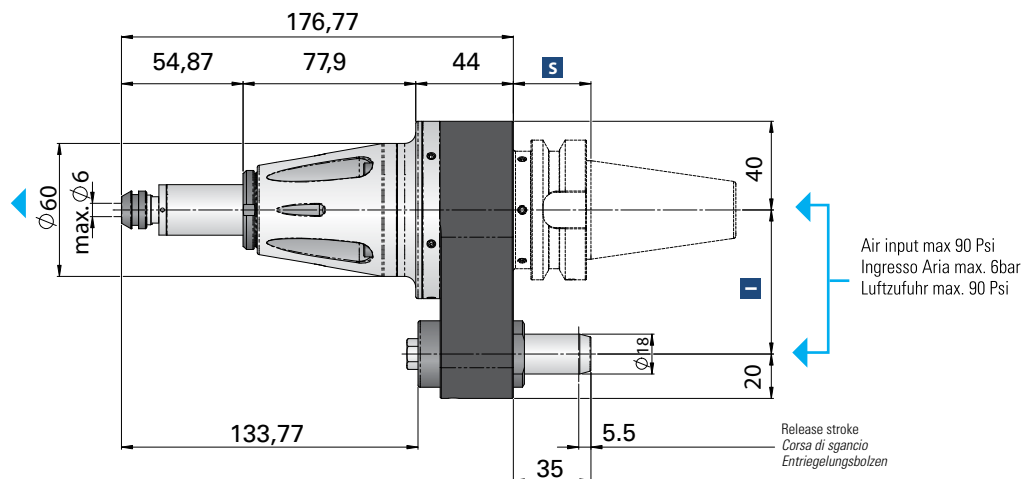


Retaining block /
Tassello di ritegno /
Stop-Block

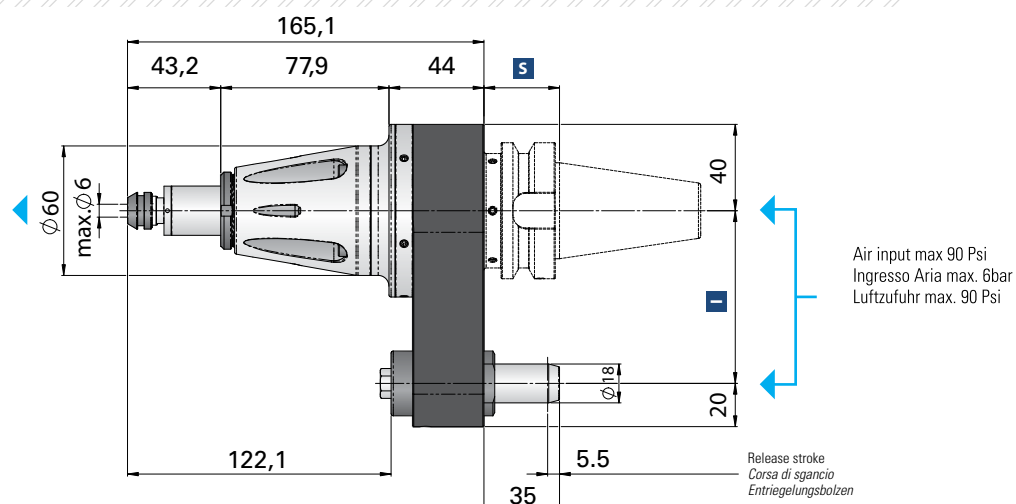


**NOT INCLUDED
NON INCLUSO
NICHT ENTHALTEN**

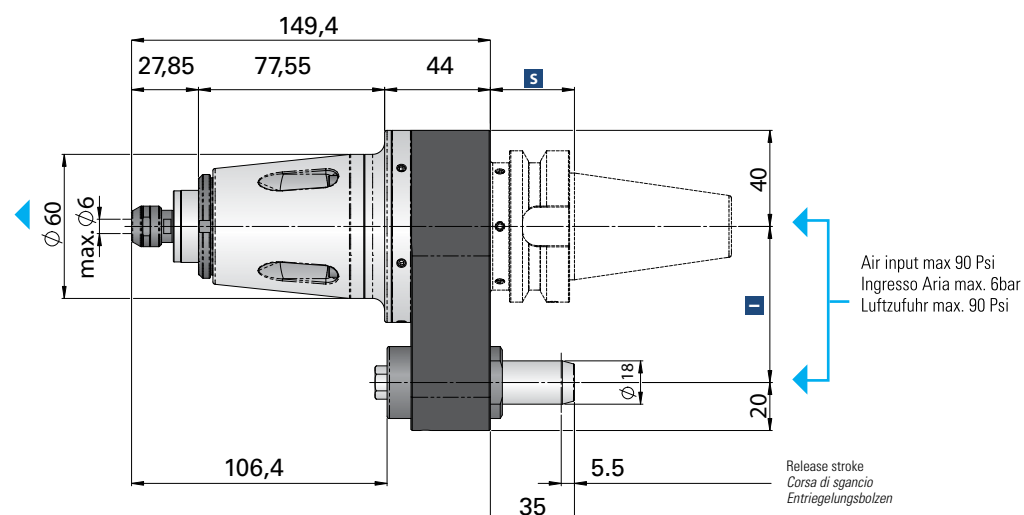
Turboflex 60.000 RPM



Turboflex 30.000 RPM



Turboflex 20.000 RPM



DATI TECNICI TECHNICAL DATA / TECHNISCHE DATEN

Technical Data / Dati Tecnici / Technische Daten			NR-2351	
RPM max. / Max. Velocità / Drehzahl max.	min ⁻¹		60.000 ± 10%	
Type motor / Tipo di motore / Motortyp			AM-600	
Power / Potenza / Leistung	W		76	
Air pressure / Pressione aria / Luftdruck	bar		max. 6 (max. 90 Psi)	
Air consumption / Consumo aria / Luftverbrauch	NI/min		160	
Weight / Peso / Gewicht	Kg		4	

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	
Size/Grandezza/Größe	40	50	40	50
I	65-80-(110*)	80-110	65-80-(110*)	80-110
S	35	35	35	41

*optional

Technical Data / Dati Tecnici / Technische Daten			NR-303	
RPM max. / Max. Velocità / Drehzahl max.	min ⁻¹		30.000 ± 10%	
Type motor / Tipo di motore / Motortyp			AM-310	
Power / Potenza / Leistung	W		108	
Air pressure / Pressione aria / Luftdruck	bar		max. 6 (max. 90 Psi)	
Air consumption / Consumo aria / Luftverbrauch	NI/min		226	
Weight / Peso / Gewicht	Kg		4	

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	
Size/Grandezza/Größe	40	50	40	50
I	65-80-(110*)	80-110	65-80-(110*)	80-110
S	35	35	35	41

*optional

Technical Data / Dati Tecnici / Technische Daten			NR-3060	
RPM max. / Max. Velocità / Drehzahl max.	min ⁻¹		18.000 ± 10%	
Type motor / Tipo di motore / Motortyp			AM-3020	
Power / Potenza / Leistung	W		125	
Air pressure / Pressione aria / Luftdruck	bar		max. 6 (max. 90 Psi)	
Air consumption / Consumo aria / Luftverbrauch	NI/min		178	
Output RPM / N° Giri in uscita / Drehzahlausgang	min ⁻¹		18.000	
Rt. reduction / Rt. in riduzione / Rt. Reduktion			1/1	
Weight / Peso / Gewicht	Kg		4	

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	
Size/Grandezza/Größe	40	50	40	50
I	65-80-(110*)	80-110	65-80-(110*)	80-110
S	35	35	35	41

*optional



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 -
Es ist verboten die maschinenspindel zu drehen da der kopf beschädigt sein könnte.



Collet

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



Coolant Option

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



Spindle Runout

Spindle accuracy.
Precisione del Mandrino.
Spindelpräzision.

0,002 mm
0,00008 inch.



Collet

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



Coolant Option

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



Spindle Runout

Spindle accuracy.
Precisione del Mandrino.
Spindelpräzision.

0,002 mm
0,00008 inch.



Collet

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



Coolant Option

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



Spindle Runout

Spindle accuracy.
Precisione del Mandrino.
Spindelpräzision.

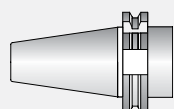
0,002 mm
0,00008 inch.

TESTE CON MOTORE AD ARIA

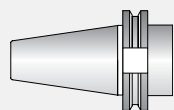
AIR DRIVEN ANGLE HEADS / LUFTANGETRIEBENE WINKELKÖPFE

OPTIONAL DRIVE SHANK*

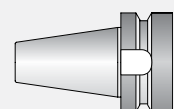
Non interchangeable input drive shank
Coni non intercambiabili
Nicht wechselbare Aufnahme



**DIN-69871
ISO 40/50**



**CAT
40/50**



**MAS-BT
40/50**

Air line kit / Filtro regolatore aria /
Luftsysten

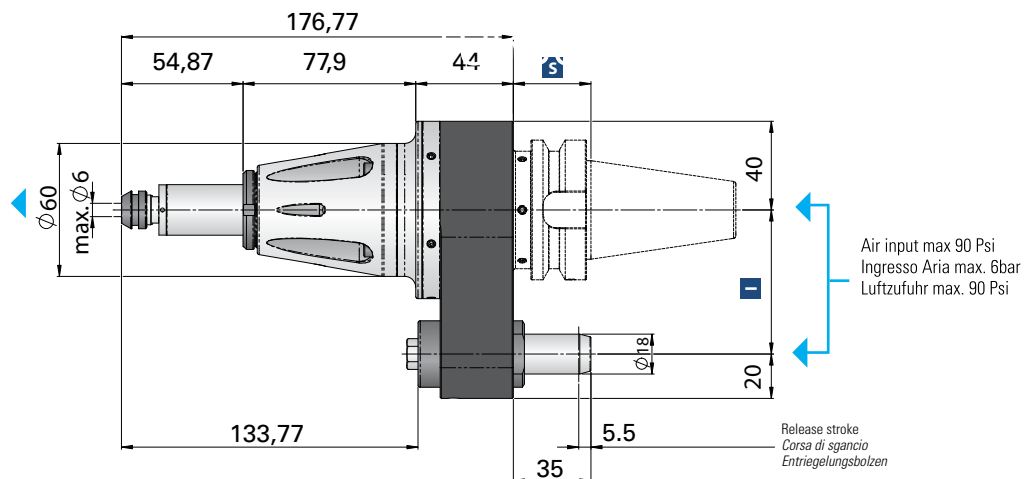


Retaining block /
Tassello di ritegno /
Stop-Block

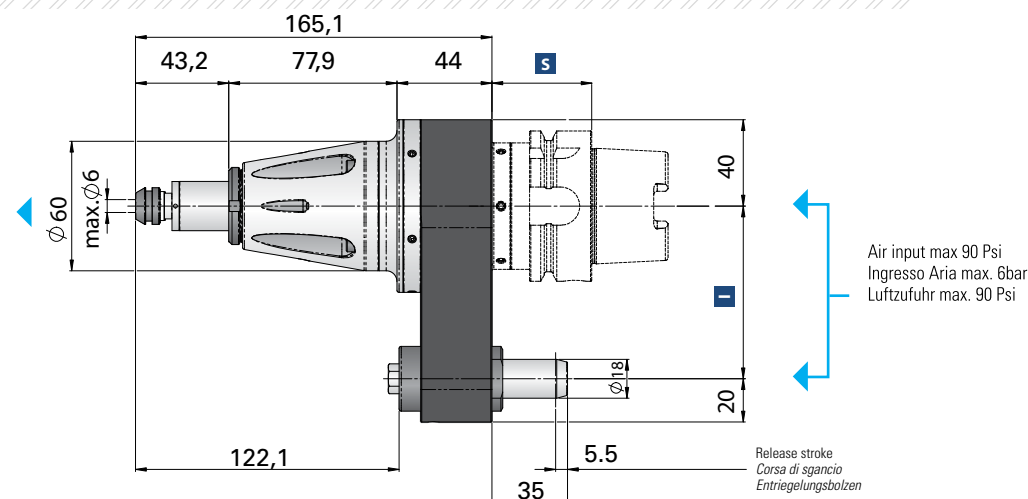


**NOT INCLUDED
NON INCLUSO
NICHT ENTHALTEN**

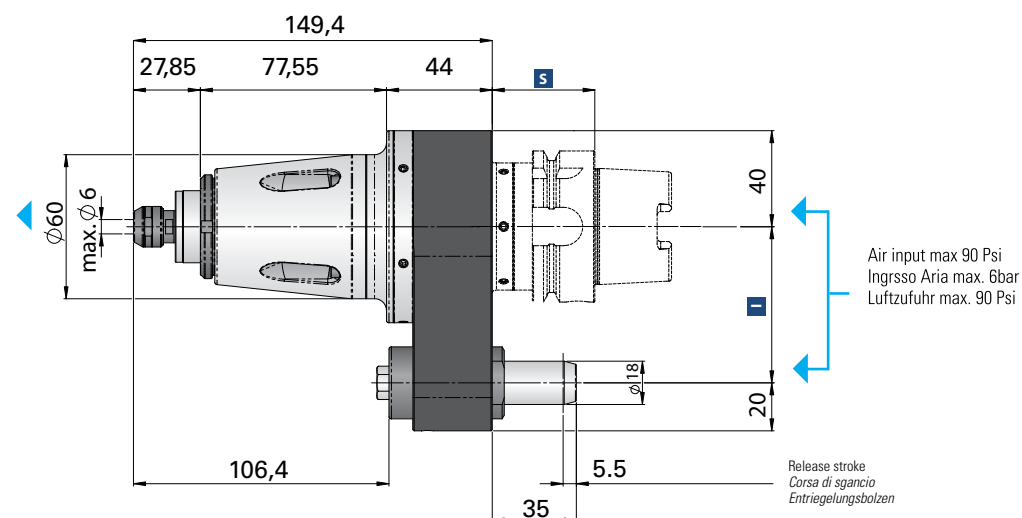
Turboflex 60.000 RPM



Turboflex 30.000 RPM



Turboflex 20.000 RPM



DATI TECNICI TECHNICAL DATA / TECHNISCHE DATEN

Technical Data / Dati Tecnici / Technische Daten		NR-2351
RPM max. / Max. Velocità / Drehzahl max.	min ⁻¹	60.000 ± 10%
Type motor / Tipo di motore / Motortyp		AM-600
Power / Potenza / Leistung	W	76
Air pressure / Pressione aria / Luftdruck	bar	max. 6 (max. 90 Psi)
Air consumption / Consumo aria / Luftverbrauch	NI/min	160
Weight / Peso / Gewicht	Kg	4

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	
Size/Grandezza/Größe	40	50	40	50
I	65-80-(110*)	80-110	65-80-(110*)	80-110
S	35	35	35	41

*optional

Technical Data / Dati Tecnici / Technische Daten		NR-303
RPM max. / Max. Velocità / Drehzahl max.	min ⁻¹	30.000 ± 10%
Type motor / Tipo di motore / Motortyp		AM-310
Power / Potenza / Leistung	W	108
Air pressure / Pressione aria / Luftdruck	bar	max. 6 (max. 90 Psi)
Air consumption / Consumo aria / Luftverbrauch	NI/min	226
Weight / Peso / Gewicht	Kg	4

Shank/Cono/Aufnahme	HSK		CAPTO		KM
Size/Grandezza/Größe	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
S	42	45	38	40	40

*optional

Technical Data / Dati Tecnici / Technische Daten		NR-3060
RPM max. / Max. Velocità / Drehzahl max.	min ⁻¹	18.000 ± 10%
Type motor / Tipo di motore / Motortyp		AM-3020
Power / Potenza / Leistung	W	125
Air pressure / Pressione aria / Luftdruck	bar	max. 6 (max. 90 Psi)
Air consumption / Consumo aria / Luftverbrauch	NI/min	178
Output RPM / N° Giri in uscita / Drehzahlausgang	min ⁻¹	18.000
Rt. reduction / Rt. in riduzione / Rt. Reduktion		1/1
Weight / Peso / Gewicht	Kg	4

Shank/Cono/Aufnahme	HSK		CAPTO		KM
Size/Grandezza/Größe	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
S	42	45	38	40	40

*optional



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 -
Es ist verboten die maschinenspindel zu drehen da der kopf beschädigt sein könnte.



Collet

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



Coolant Option

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



Spindle Runout

Spindle accuracy.
Precisione del Mandrino.
Spindelpräzision.

0,002 mm
0,00008 inch.



Collet

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



Coolant Option

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



Spindle Runout

Spindle accuracy.
Precisione del Mandrino.
Spindelpräzision.

0,002 mm
0,00008 inch.



Collet

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



Coolant Option

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



Spindle Runout

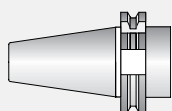
Spindle accuracy.
Precisione del Mandrino.
Spindelpräzision.

0,002 mm
0,00008 inch.

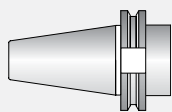
TESTE CON MOTORE AD ARIA AIR DRIVEN ANGLE HEADS / LUFTANGETRIEBENE WINKELKÖPFE

OPTIONAL DRIVE SHANK*

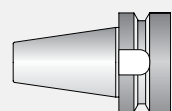
Non interchangeable input drive shank
Coni non intercambiabili
Nicht wechselbare Aufnahme



**DIN-69871
ISO 40/50**



**CAT
40/50**



**MAS-BT
40/50**

Air line kit / Filtro regolatore aria /
Luftsystem



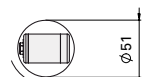
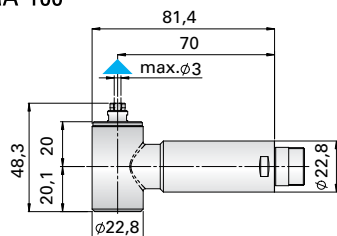
Retaining block /
Tassello di ritegno /
Stop-Block



**NOT INCLUDED
NON INCLUSO
NICHT ENTHALTEN**

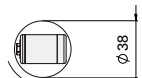
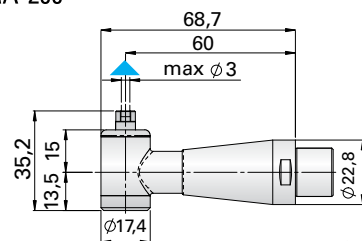
Turboflex 30.000 RPM

RA-100



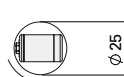
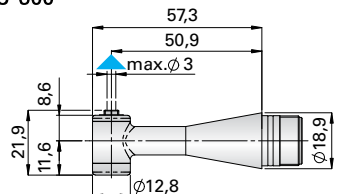
Diameter without tool with RA-100
Diametro senza utensile con RA-100
Durchmesser ohne Werkzeug mit RA-100

RA-200



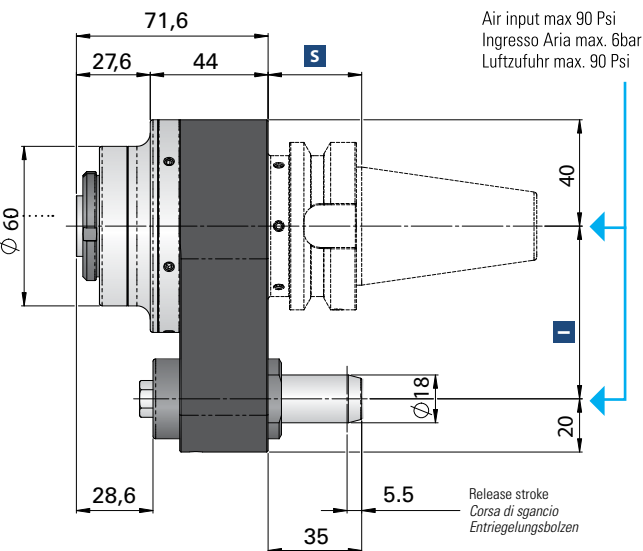
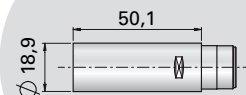
Diameter without tool with RA-200
Diametro senza utensile con RA-200
Durchmesser ohne Werkzeug mit RA-200

IC-300



Diameter without tool with IC-300
Diametro senza utensile con IC-300
Durchmesser ohne Werkzeug mit IC-300

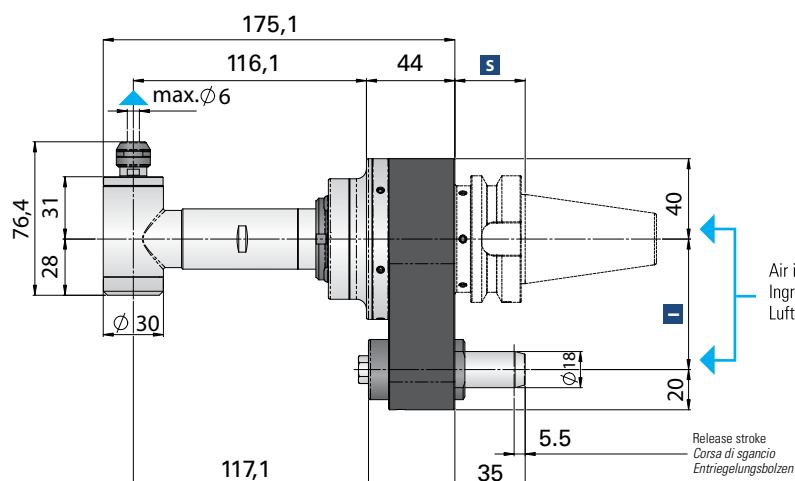
CN-01



Air input max 90 Psi
Ingresso Aria max. 6bar
Luftzufuhr max. 90 Psi

Release stroke
Corsa di sgancio
Entriegelungsbolzen

Turboflex 20.000 RPM



Air input max 90 Psi
Ingresso Aria max. 6bar
Luftzufuhr max. 90 Psi

Release stroke
Corsa di sgancio
Entriegelungsbolzen

DATI TECNICI TECHNICAL DATA / TECHNISCHE DATEN

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

Accessories / Accessori / Zubehör	RA-100	RA-200	IC-300
Air line kit / Filtro regolatore aria / Luftsystem	AL-M1202	AL-M1202	AL-M1202

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT
Size/Grandezza/Größe	40	50	40
I	65-80-(110*)	80-110	65-80-(110*)
S	35	35	41

*optional



Coolant Option

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



Spindle Runout

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



Collet

RA-100	mm	CH8: Ø0,8 - Ø3 every 0,1 and Ø2,35 - Ø3,175
RA-200	mm	CHS: Ø0,8 - Ø3 every 0,1 and Ø2,35 - Ø3,175
IC-300	mm	CHC: Ø0,8 - Ø3 every 0,1 and Ø2,35 - Ø3,175

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

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT
Size/Grandezza/Größe	40	50	40
I	65-80-(110*)	80-110	65-80-(110*)
S	35	35	41

*optional



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 -
Es ist verboten die maschinenspindel zu drehen da der kopf beschädigt sein könnte.



Collet

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



Coolant Option

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



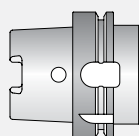
Spindle Runout

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

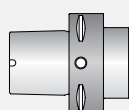
TESTE CON MOTORE AD ARIA
AIR DRIVEN ANGLE HEADS / LUFTANGETRIEBENE WINKELKÖPFE

OPTIONAL DRIVE SHANK*

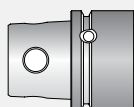
Non interchangeable input drive shank
Coni non intercambiabili
Nicht wechselbare Aufnahme



HSK
63/80/100



CAPTO
C5/C6/C8



KM
50/63

*Air line kit / Filtro regolatore aria /
Luftsystem*



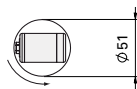
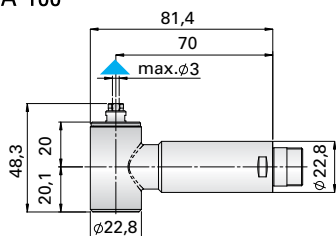
*Retaining block /
Tassello di ritegno /
Stop-Block*



**NOT INCLUDED
NON INCLUSO
NICHT ENTHALTEN**

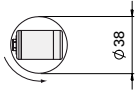
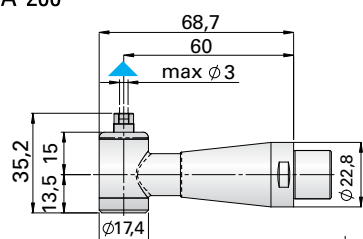
Turboflex 30.000 RPM

RA-100



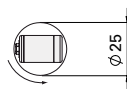
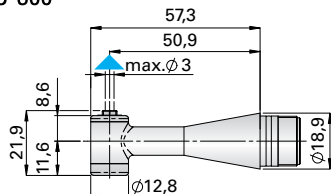
Diameter without tool with RA-100
 Diametro senza utensile con RA-100
 Durchmesser ohne Werkzeug mit RA-100

RA-200

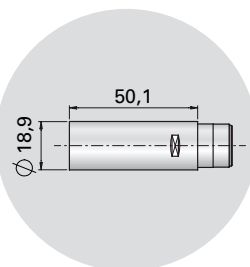


Diameter without tool with RA-200
 Diametro senza utensile con RA-200
 Durchmesser ohne Werkzeug mit RA-200

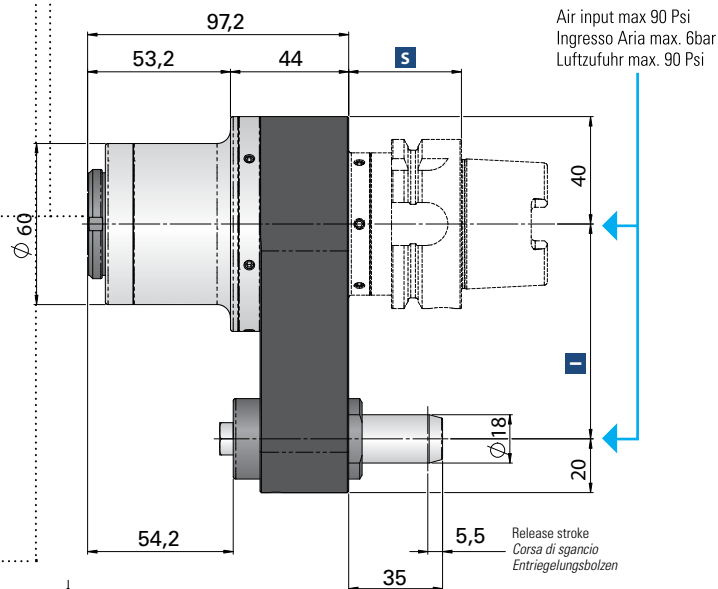
IC-300



Diameter without tool with IC-300
 Diametro senza utensile con IC-300
 Durchmesser ohne Werkzeug mit IC-300



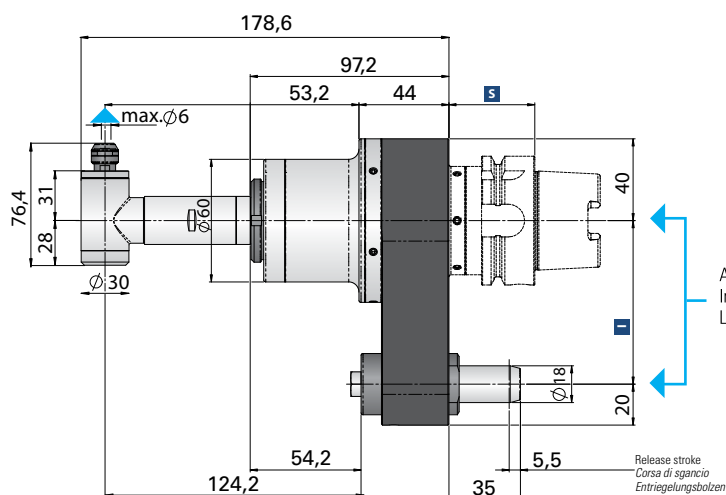
CN-01



Air input max 90 Psi
Ingresso Aria max. 6bar
Luftzufuhr max. 90 Psi

Release stroke
- *Corsa di sgancio*
Entriegelungsbolzen

Turboflex 20.000 RPM



Air input max 90 Psi
Ingresso Aria max. 6bar
Luftzufuhr max. 90 Psi

Release stroke
— *Corsa di sgancio*
Entriegelungsbolzen

DATI TECNICI TECHNICAL DATA / TECHNISCHE DATEN

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

Accessories / Accessori / Zubehör	RA-100	RA-200	IC-300
Air line kit / Filtro regolatore aria / Luftsystem	AL-M1202	AL-M1202	AL-M1202

Shank/Cono/Aufnahme	HSK		CAPTO		KM
Size/Grandezza/Größe	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
S	42	45	38	40	40

*optional



Coolant Option

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



Spindle Runout

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



Collet

RA-100	mm	CH8: Ø0,8 - Ø3 every 0,1 and Ø2,35 - Ø3,175
RA-200	mm	CHS: Ø0,8 - Ø3 every 0,1 and Ø2,35 - Ø3,175
IC-300	mm	CHC: Ø0,8 - Ø3 every 0,1 and Ø2,35 - Ø3,175

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

Shank/Cono/Aufnahme	HSK		CAPTO		KM
Size/Grandezza/Größe	63-80	100	C5-C6	C8	50-63
I	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
S	42	45	38	40	40

*optional



Collet

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



Coolant Option

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



Spindle Runout

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



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 -
Es ist verboten die maschinenspindel zu drehen da der kopf beschädigt sein könnte.

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.

Der Spindel kann über 360° dank der Indexierung der C Achse der Maschine automatisch positioniert werden. Der Luftmotor gewährleistet die Rotation der Spindel.

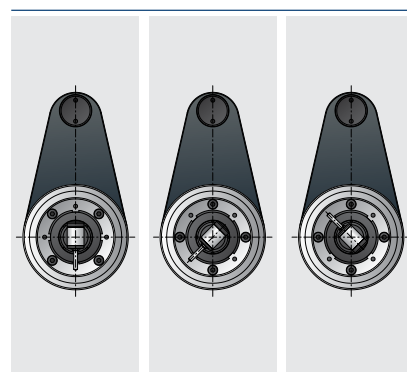
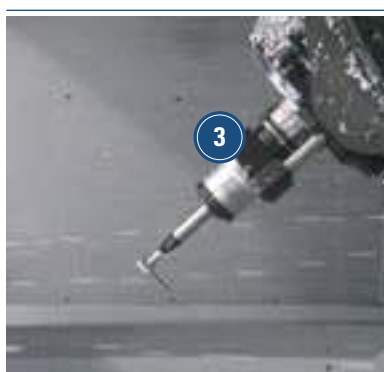
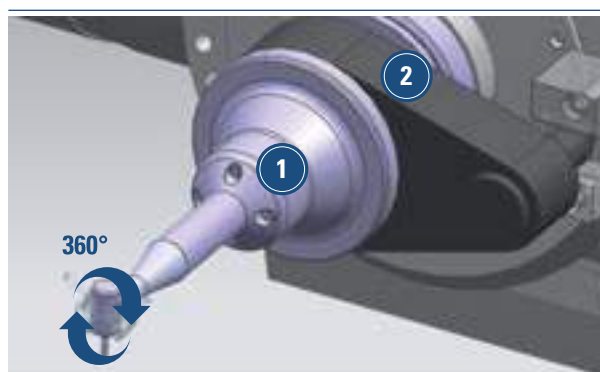
- 1 This portion rotates.
Questa parte ruota. Dieser Teil dreht
- 2 This portion remains fixed.
Questa parte resta ferma. Dieser Teil bleibt fest

- 3 Air input from the machine spindle gives the rotation to the motor inside the body.
L'aria garantisce la rotazione del motore nel corpo.
Luft durch die Spindel oder Referenzbohrung gewährleistet die Rotation.

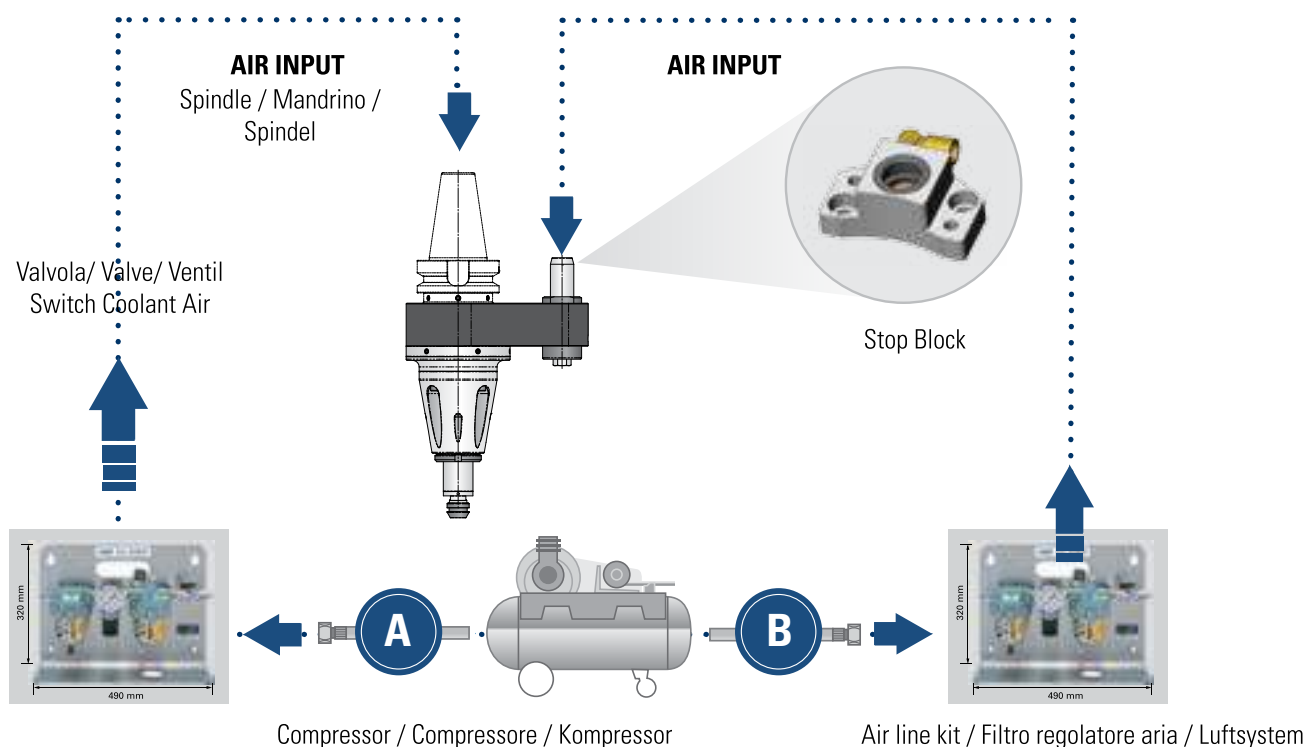
The indexing system allows to self-position the tool without additional positioning.

Il sistema di indexaggio permette il posizionamento del mandrino su 360°.

Das Indexierungssystem erlaubt die Positionierung der Spindel über 360°.



COME FUNZIONA TURBOFLEX HOW IT WORKS / WIE FUNKTIONIERT



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 - Es ist verboten die maschinenspindel zu drehen da der kopf beschädigt sein könnte.



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.

Leonardo System ist ein Elekterspindel mit automatischem Werkzeugwechsel, das auf Maschinenspindel dank einem Stop Block und Referenzbohrung angebaut werden kann. Das System ist durch eine Steuereinheit an der Maschine verbunden und kann einfach in der Werkzeugmagazin ausgewechselt werden. Hauptvorteile sind die Möglichkeit die Drehzahl bis zu 60.000UPM zu regeln und die Verbindung an der Maschine



ELECTROSPINDLE "LEONARDO" SYSTEM



Power
Potenza / Energie
350 Watt



RPM
Velocità / Drehzahl max.
60.000 min⁻¹



Weight
Peso / Gewicht
4,8 kg



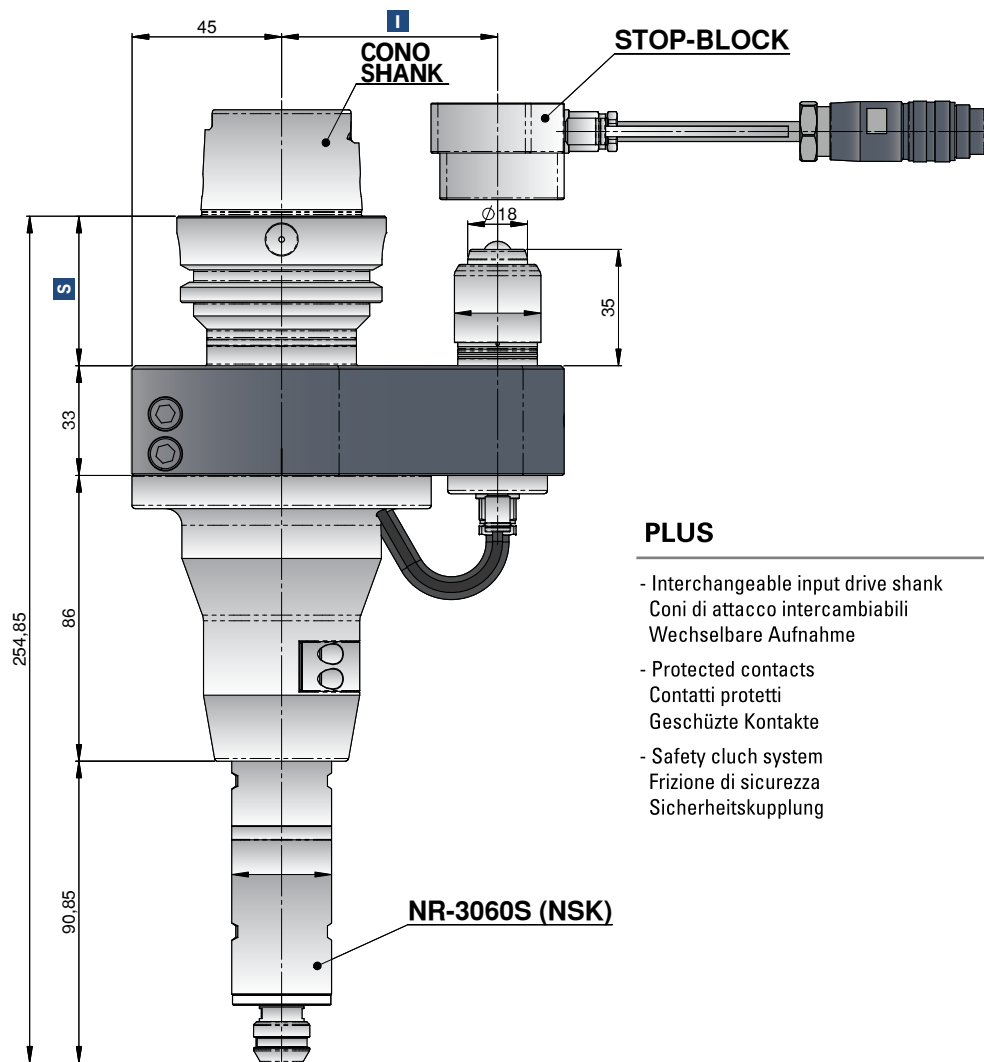
Collet
Pinza / Spannzange
CHK Ø0,8- Ø6 mm



Spindle accuracy
Precisione / Genauigkeit
0,002 mm

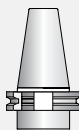
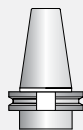
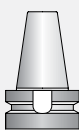
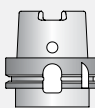
* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Leonardo head - Stop Block - Controller unit - 10 mt cable - Instruction book
- Bauletto - chiavi di servizio - Testa Leonardo - Stop Block - Centralina - 10 m di cavo - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Leonardo kopf - Stop Block - Steuereinheit - 10 m kabel - Bedienungsanleitung



PLUS

- Interchangeable input drive shank
Coni di attacco intercambiabili
Wechselbare Aufnahme
- Protected contacts
Contatti protetti
Geschützte Kontakte
- Safety clutch system
Frizione di sicurezza
Sicherheitskupplung

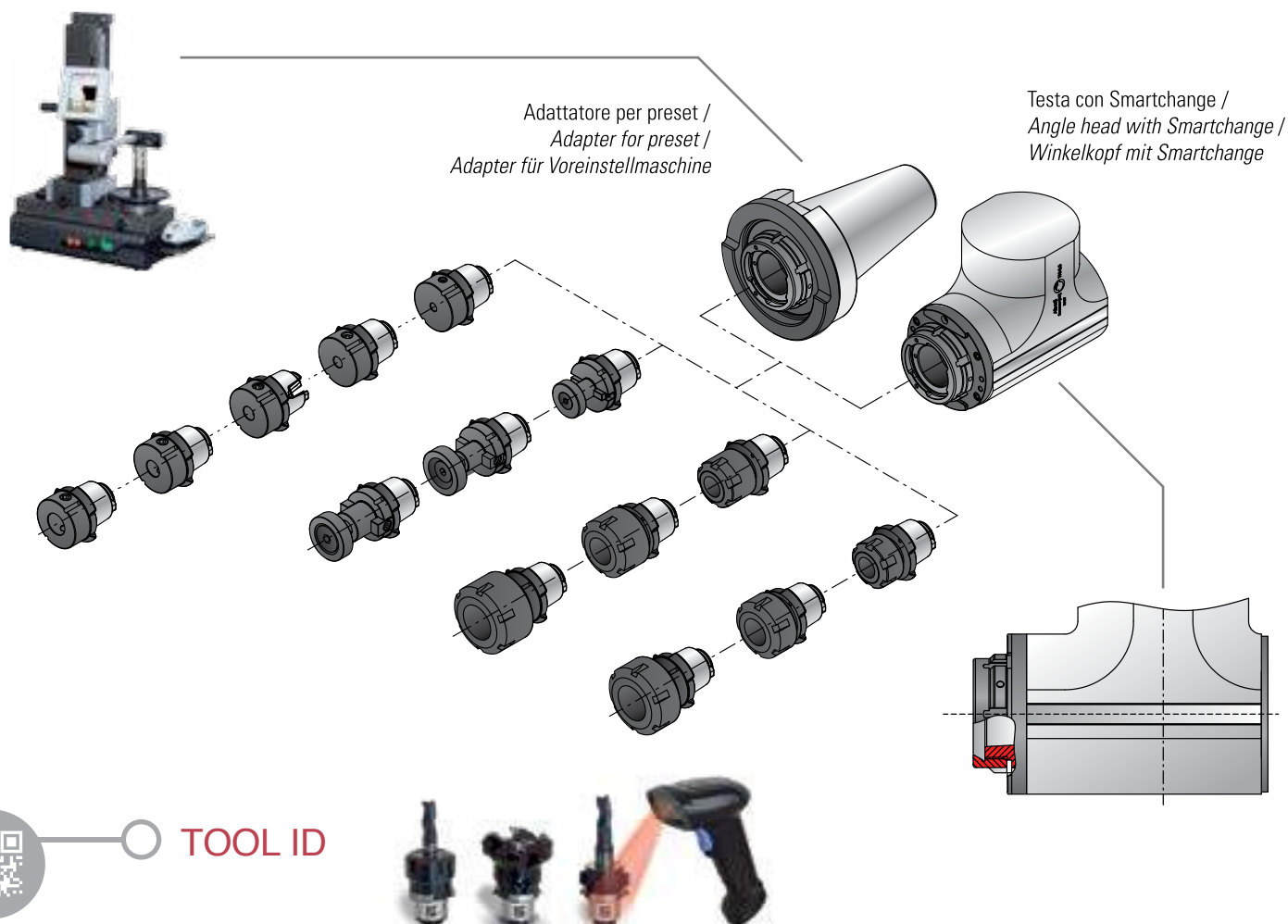
								
Shank/ <i>Cono/Aufnahme</i>	DIN-69871	CAT	MAS-BT	HSK		CAPTO		KM
Size/ <i>Grandezza/Größe</i>	50		50	63-80	100	C6	C8	63
I	80-100		80-100	80-100	80-100	80-100	80-100	80-100
S	35		41	42	45	38	40	40
L	160		166	167	170	163	165	165

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

LINEA SmartChange

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 presetati 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.



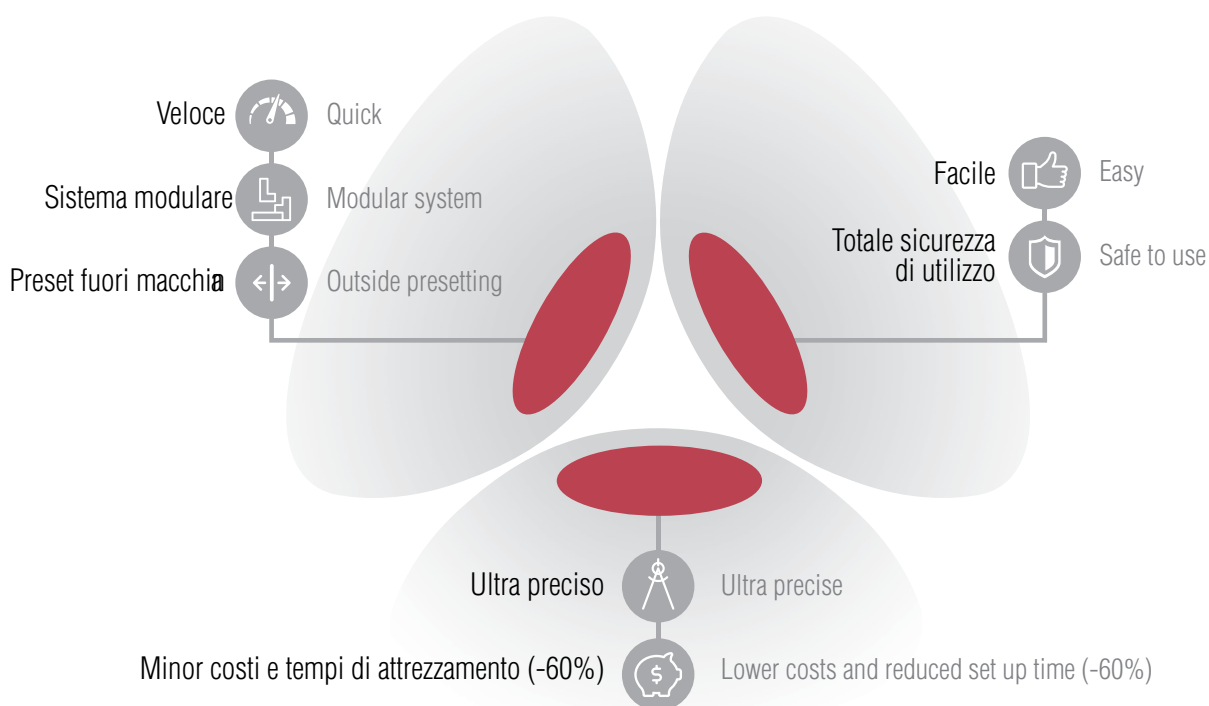
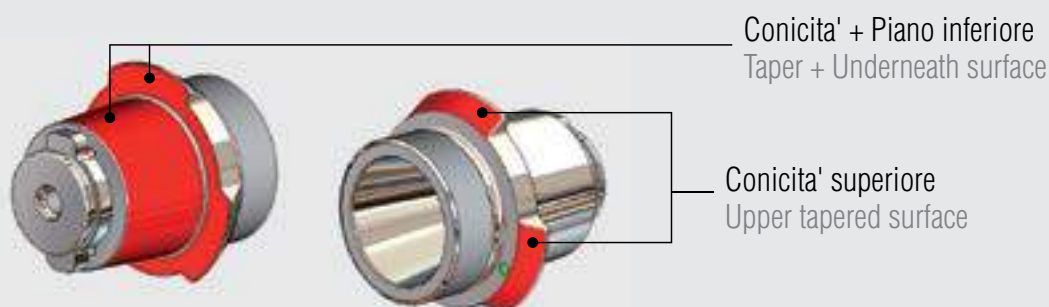
Le cartucce Smart Change sono provviste di DATAMATRIX per l'identificazione e la gestione utensile in modo automatico. Il codice univoco è identificativo della cartuccia con il suo utensile.

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



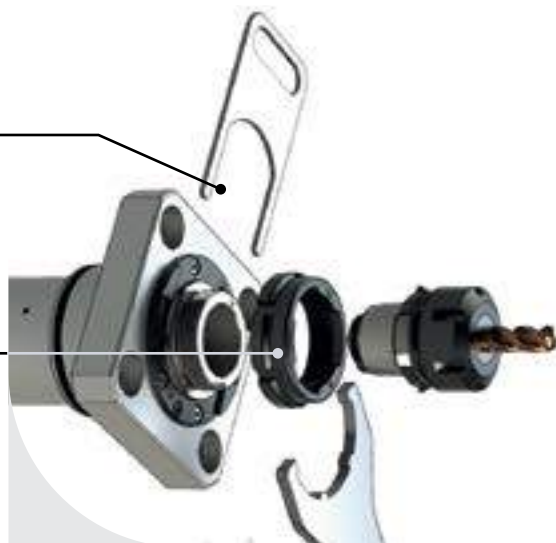
INCREMENTO DELLA PRODUTTIVITÀ
INCREASED PRODUCTIVITY

LINEA SMART CHANGE

COME È FATTO HOW IT IS MADE

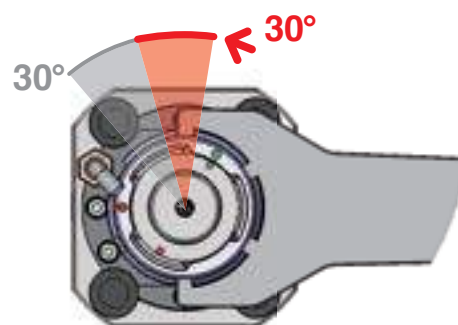
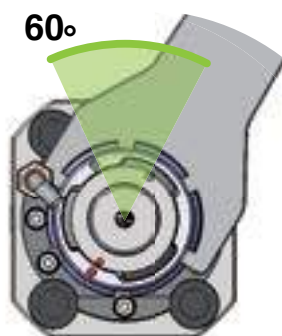
- Chiave di riscontro SmartChange (permette montaggio con una sola mano)
SmartChange Wrench (one-hand handling)

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

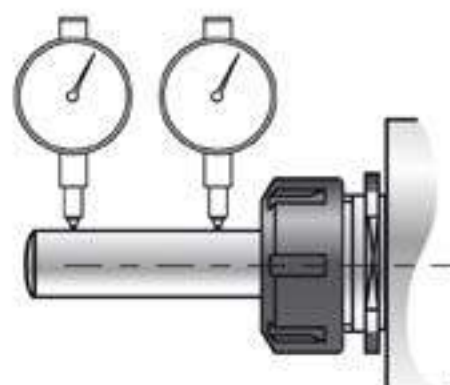


COME FUNZIONA HOW IT WORKS

- 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



T90cn-3,5 Smart Change



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



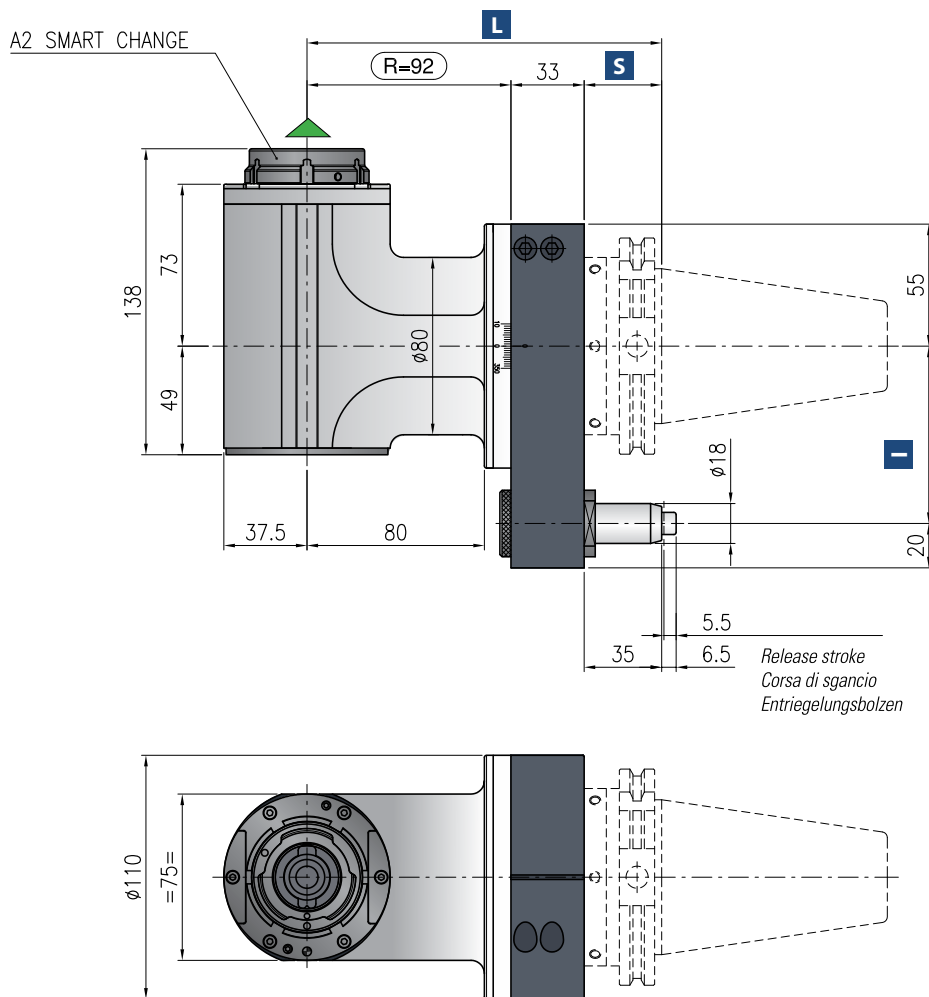
Weight
Peso / Gewicht
11 kg



Collet
Pinza / Spannzange
SmartChange System

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



 Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

Shank/Cono/Aufnahme	DIN-69871	CAT	MAS-BT	HSK	CAPTO	KM
Size/Grandezza/Größe	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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



bar max
12

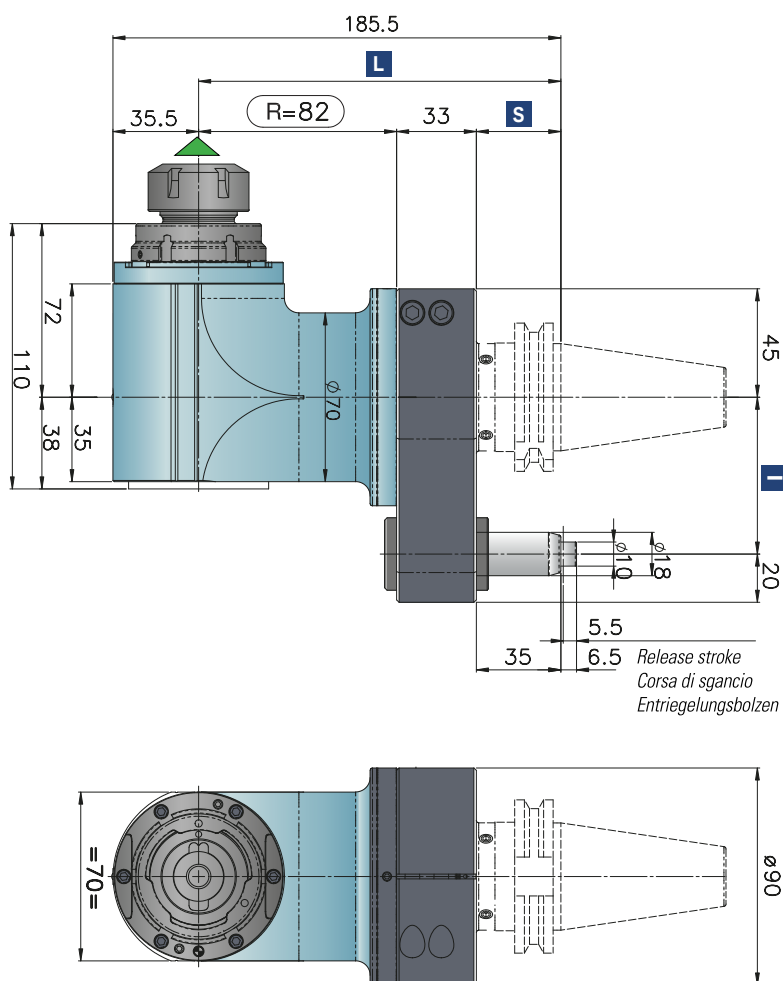
Coolant through pin and spindle
Refrigerante interno attraverso utensile
Kühlmittelzufuhr durch Bolzen und Spindel



min⁻¹
6.000

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

T90cn-3,5 Aluminium Smart Change



- Ratio**
Rapporto / Verhältnis
1:1
- RPM**
Velocità / Drehzahl max.
4000 min⁻¹
- Max. axial load**
Max. carico assiale / Max. Axialbelastung
1.250 N
- Torque**
Momento torcente / Drehmoment
40 Nm
- Weight**
Peso / Gewicht
5,5 kg
- Collet**
Pinza / Spannzange
Smart Change
- Shank**
Cono / Aufnahme
ISO40 DIN-69871/BT-40

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max

40

Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



AIR/OIL

Air / oil lubrication
Lubrificazione aria / olio
Luft / Ölschmierung

TH90cn-3,5 Smart Change



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
8.000



RPM Dry Running
Funz. a secco / Trockenlauf
4.000 min⁻¹



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



Torque
Momento torcente / Drehmoment
50 Nm



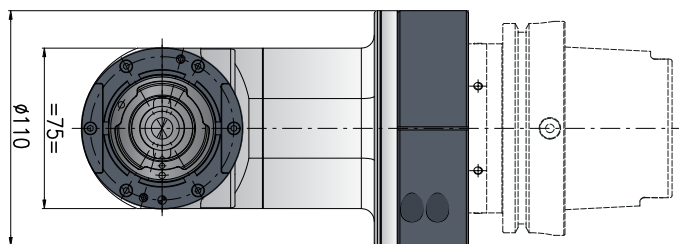
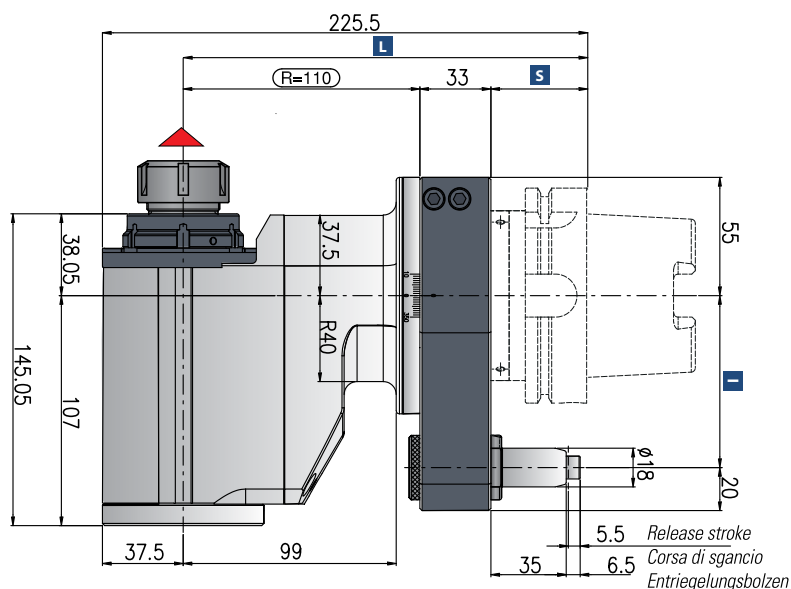
Weight
Peso / Gewicht
12 kg



Collet
Pinza / Spannzange
A2 Smart Change

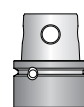
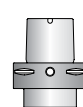
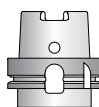
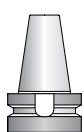
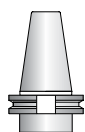
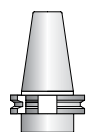
* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Dry running also possible / Rotazione a secco possibile / Trockene Bearbeitung möglich

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



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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option

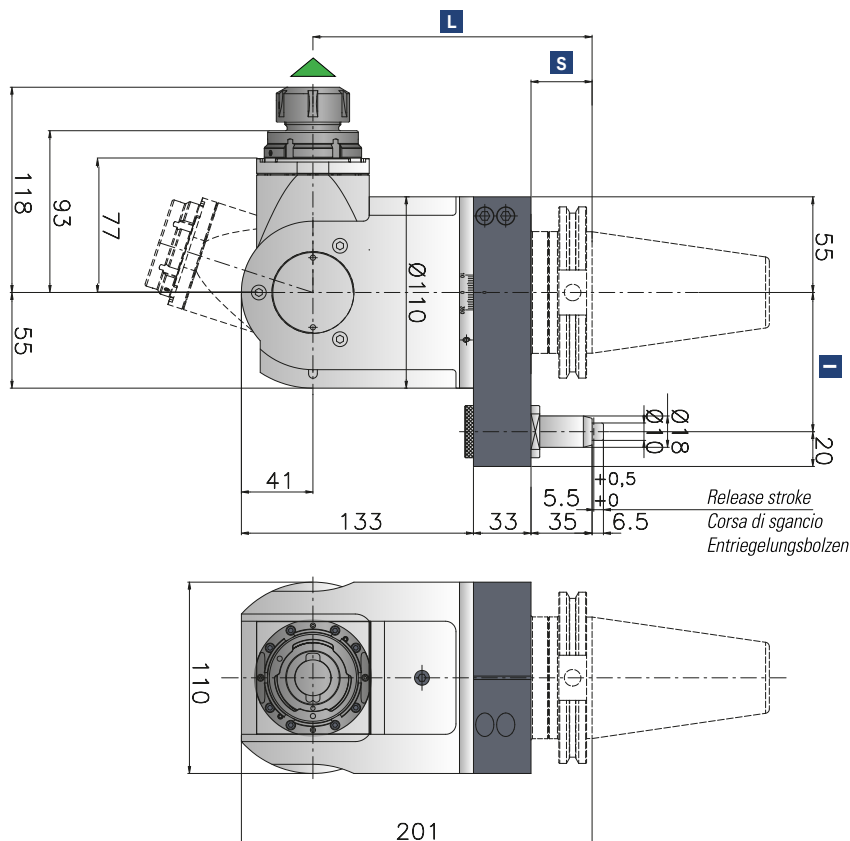


Ø mm max.

20

Weld on output
Weld on
Weld on-Aufnahme

TCUcn-3,5 Smart Change



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4000 min⁻¹



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



Torque
Momento torcente / Drehmoment
32 Nm



Weight
Peso / Gewicht
13 kg

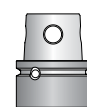
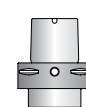
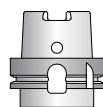
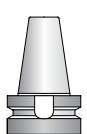
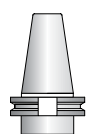
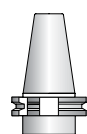


Collet
Pinza / Spannzange
A2 Smart Change

* STANDARD EQUIPMENT INCLUDES:

- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung

Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



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

*optional

Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme

Option / Opzione / Option



bar max
12

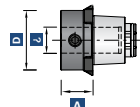
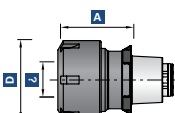
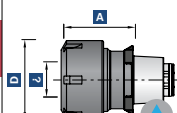
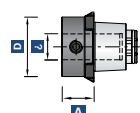
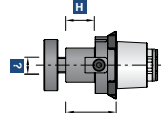
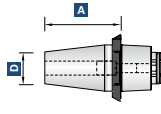
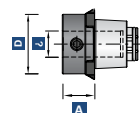
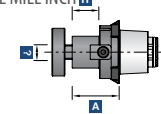
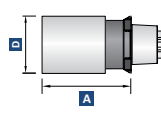
Coolant through pin and spindle
Refrigerante interno
attraverso utensile
Kühlmittelzufuhr durch Bolzen
und Spindel



min⁻¹
6.000

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

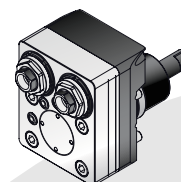
The picture shows the preset of an adjustable angle head: the preset measures the angle, after having identified the right and left points, it calculates automatically the rotations centre of the tool and its diameter.



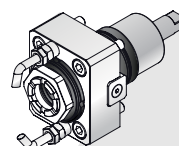
SCEGLI IL MODELLO DI PORTA UTENSILE CHOOSE THE TYPE OF TOOLHOLDER



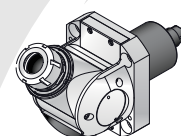
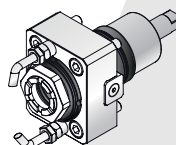
0120
**ASSIALE
2 USCITE**
STRAIGHT DUAL OUTPUT



010C
**ASSIALE
REFRIGERANTE**
STRAIGHT + COOLANT

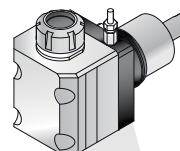


0100
ASSIALE
STRAIGHT

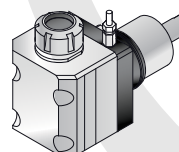


0500
ORIENTABILE
ADJUSTABLE

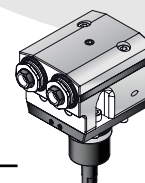
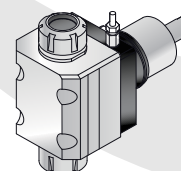
0200
RADIALE
90° TOOL



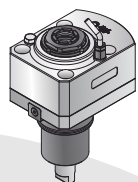
020C
**RADIALE
REFRIGERANTE**
90° TOOL + COOLANT



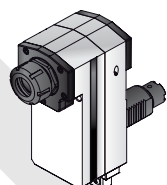
0300
**RADIALE
2 USCITE
CONTRAPPOSTE**
90° TOOL DUAL OPPOSITE OUTPUT



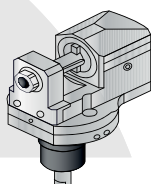
0220
**RADIALE 2 USCITE
FRONTALE**
90° TOOL DUAL FRONT OUTPUT



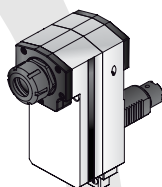
010S
ASSIALE
MULTIPLICATO
STRAIGHT SPEEDER



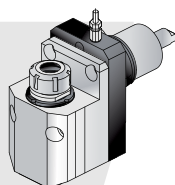
0400
ASSIALE
DISASSATO
STRAIGHT OFFSET



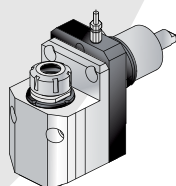
0900
PORTACREATORE
HOBGING HOLDER



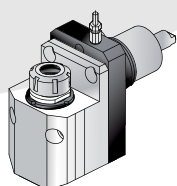
040C
ASSIALE
DISASSATO
REFRIGERANTE
STRAIGHT OFFSET + COOLANT



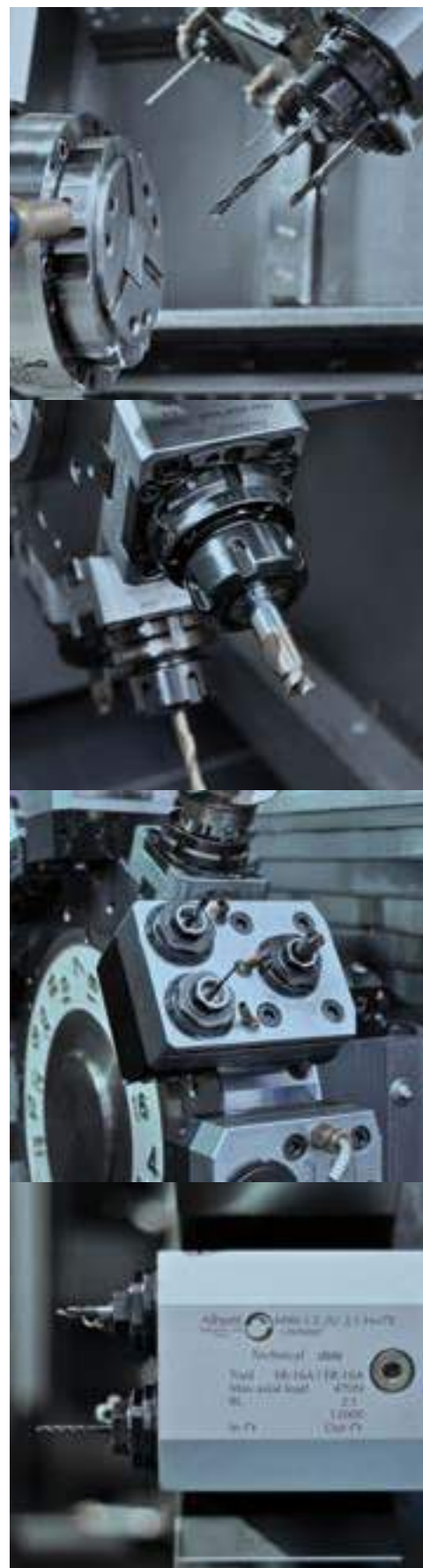
070S
RADIALE
MULTIPLICATO
90° TOOL SPEEDER



070C
RADIALE
ARRETRATO
REFRIGERATO
90° TOOL OFFSET + COOLANT



0700
RADIALE
ARRETRATO
90° TOOL OFFSET



MOTORIZZATI / LIVE TOOLS

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 / TZUBEHÖR



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



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