

Angle Heads

Teste Angolari / Winkelköpfe





CARATTERISTICHE TECNICHE TESTE ALBERTI
TECHNICAL DATA / TECHNISCHE DATEN

pag. 1

PERCHE' SCEGLIERE I PRODOTTI ALBERTI?

WHY CHOOSE ALBERTI PRODUCTS? / WARUM ALBERTI PRODUKTEN AUSWA-

pag. 3

LA TESTA PIU' IDONEA PER OGNI APPLICAZIONE

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

pag. 4

ALTRI PRODOTTI

PRODUCTS / PRODUKTE

pag. 5

LINEA CONTROL

pag. 6

**CONTROL STANDARD
(T90-TCU)**

pag. 7 - 26



LINEA TH

pag. 27 - 29



LINEA TR

pag. 30 - 32



LINEA TA-TDA

pag. 33



LINEA MODULAR

pag. 35

**MODULAR STANDARD
(T90-TCU)**

pag. 36 - 52



LINEA P

pag. 53 - 59



FLANGIE - Moduli
FLANGE - Extension spacer
FLANSCH - Verlängerung

pag. 60



ACCESSORI

ACCESORIES / ZUBEHÖR

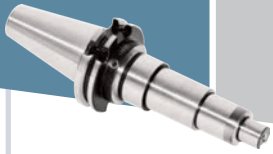
pag. 61

MASCHIATURA - DATI TECNICI

TAPPING - TECHNICAL DATA / GEWINDESCHNEIDEN - TECHNISCHE DATEN

pag. 62

ALBERO CON CONO
SPINDLE W/ARBOR
BOR
ANTRIEBSPIN-



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 rettificate.

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

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 unten 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 SUR-
FACE
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.



CARATTERISTICHE TECNICHE TESTE ALBERTI

CUSCINETTI BEARINGS KUGELLAGER



Cuscinetti a contatto obliquo precaricati in ABEC7-ABEC9. Con le sedi rettificata 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 miscela particolare. Per le alte velocità sono previste tenute senza contatto con sistemi di pressurizzazioni.

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

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.



Macchina di misura tridimensionale Mitutoyo Legex 776.
Three-dimensional measuring machine Mitutoyo Legex 776.

Dreidimensional Messmaschine Mitutoyo Legex 776.



ESPERIENZA EXPERIENCE - ERFAHRUNG



Da 35 anni di esperienza – più di 50 nazioni servite – oltre 50.000 prodotti installati.

Alberti progetta e costruisce teste angolari da quasi 3 generazioni continuando a garantire gli stessi standard di alta qualità e funzionalità.

35 years experience – more than 50 countries served – over 50.000 products installed Alberti designs and manufactures angle heads for over 3 generations by guaranteeing the same high standards of quality and reliability.

35 Jahre Erfahrung – mehr als 50 Länder werden bedient – über 50.000 Produkte wurden installiert. Alberti entwickelt und fertigt Winkelbohrköpfe seit fast 3



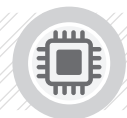
VASTA GAMMA PRODOTTI WIDE RANGE OF PRODUCTS – GROSSE AUSWAHL AN PRODUKTEN



Alberti vanta un'ampia gamma di teste standard, con possibilità di variazioni costruttive e di personalizzazioni per ciascun modello a seconda delle richieste. Tutte le teste Alberti rappresentano al 100% la qualità del vero "made in Italy".

Alberti is proud to offer a wide range of standard heads with any possible manufacturing modifications and customizations according to customer's needs. All Alberti heads represent 100% of the real "made in Italy" quality.

Alberti bietet eine große Auswahl an Standardköpfen mit unterschiedlichen Möglichkeiten an Fabrikationsänderungen je nach Kundenbedarf. Alle Alberti-Köpfe stellen 100% der echten "Made in Italy" -Qualität dar.



TECNOLOGIA TECHNOLOGY - TECHNOLOGIE



Soluzioni tecniche innovative - materiali e trattamenti di eccellenza - più del 5% del fatturato investito in ricerca e sviluppo per assicurare una cura minuziosa in ogni dettaglio.

Innovative technical solutions - high quality materials and top class surface treatment - over 5% of the total turnover is reinvested in research and development to grant that the highest attention is given to the smallest detail.

Innovative technische Lösungen, höchste Qualität an Materialien und spitzenmäßige Oberflächenbehandlung – über 5% des Gesamtumsatzes wird in Forschung und Entwicklung investiert, um immer die größte Aufmerksamkeit den kleinsten Details



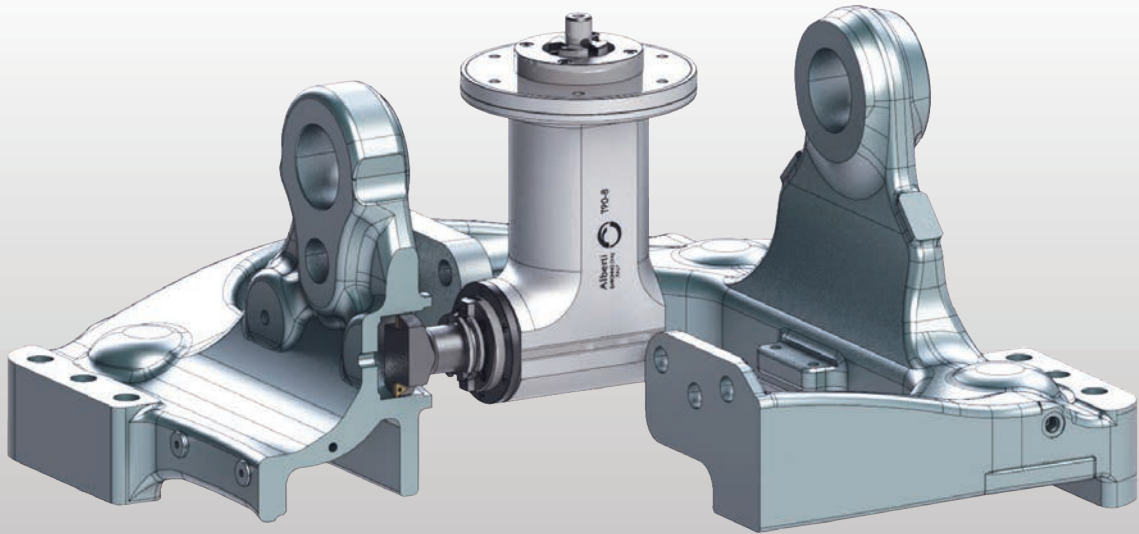
ASSISTENZA ASSISTENCE / UNTERSTÜTZUNG



Team di progettisti e tecnici specializzati per un assistere il cliente. Efficiente servizio di supporto pre e post vendita con un reparto riparazione dei prodotti e assistenza ricambi. Centri di assistenza autorizzati in America e Cina

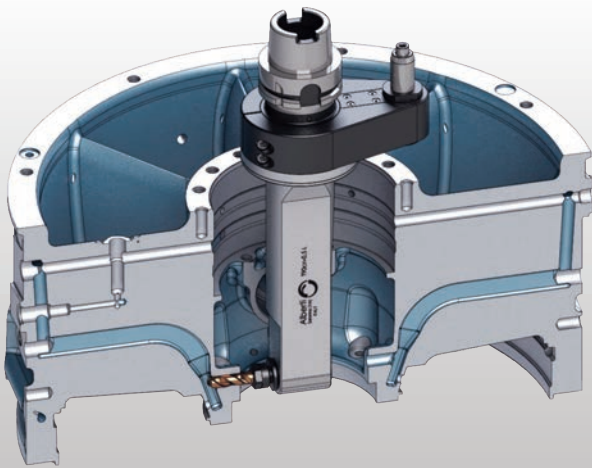
Skilled and experienced engineering team. Complete pre and post sales. Support with an efficient parts and repair service department. Rapid and guaranteed delivery schedules. Repair centres in USA & CHINA

Ein gut ausgebildetes und top-geschultes Team von Ingenieuren bietet komplette Unterstützung vor und nach dem Kauf mit effizienter Beratung und schnellem Reparaturservice. Prompte Reaktions- und Lieferzeiten. Reparaturzentren in USA



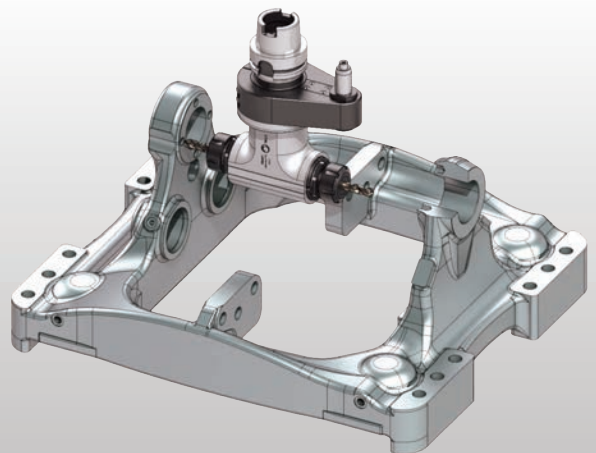
Testa a 90° con o senza flangia per pezzi grossi

90° Head with or without flange for big workpiece / 90° Kopf mit oder ohne Abstutzung für größte Werkstück



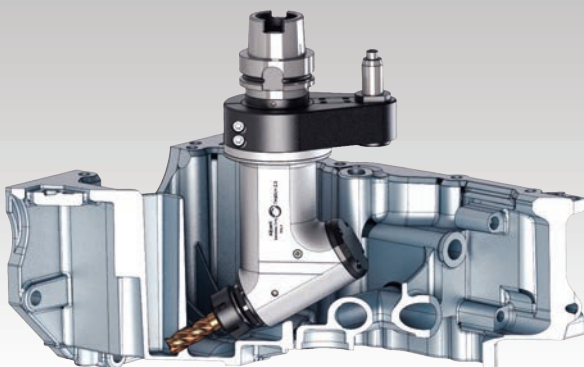
Testa a 90° prolungata

90° head with extended length / 90° Kopf mit verlängerter



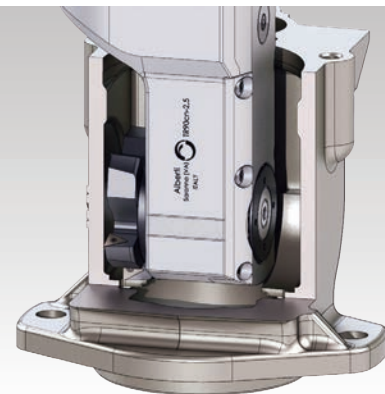
Testa a 2 uscite contrapposte

Head with dual output opposite / Kopf mit zwei gegeneinanderen



Testa fissa ad angolo variabile

Head with variable fixed angle / Kopf mit unterschiedlichen



Testa rinviata per spazi ristretti

Offset head for reduced spaces / Zurückgesetzter Kopf für schmale

La gamma offerta dall'azienda Alberti si è ulteriormente ampliata nel corso degli anni e può offrire soluzioni ad hoc con prodotti innovativi.

The range of Alberti products has broaden over the years and now offers customized solutions with innovative products.

Die Standardreihe von Alberti Produkten, hat sich im Laufe des Jahres noch mehr vergrößert und bietet heute gezielte Lösungen für alle Notwendigkeiten.



TURBOFLEX / TURBODRILL / SLIMLINE

Soluzioni a 20.000/30.000 e 60.000 RPM con motori ad aria e manipoli NSK per cambio utensile automatico. Adatti soprattutto per microlavorazioni o incisioni con utensili da 0,1 a 6 mm, anche per macchine con cono ISO/BT-30.

Solutions for 20.000 – 30.000 and 60.000RPM with integrated air motors for automatic tool change. Suitable for micromachining, engraving, small drilling, milling and polishing operations using tools from 0,1 up to 6mm. Now available also for ISO / BT 30 shanks on tapping machines.

Luftantriebene Köpfe mit Luftmotoren und Spindeln von NSK, die bis zu 20.000 - 30.000 oder 60.000 min⁻¹ erreichen können. Sie sind für automatische Werkzeugwechsel und kleinere Bearbeitungen mit max Werkzeugdurchmesser von 0,1mm bis 6mm geeignet. Jetzt auch für kleinere Zentren mit ISO / BT30-Spindel verfügbar.



MINILINE

Teste angolari in alluminio ultraleggera e soluzioni compatte per macchine con attacco ISO / BT-30.

Ultralight angle heads and special compact solutions suitable for small size machines with ISO / BT 30.

Ultraleichte Köpfe und kompakte Lösungen für kleinere Maschinen mit ISO / BT 30-Spindel.



LIVE TOOLS / MOTORIZZATI / ANGETRIEBENE WERKZEUGE

Portautensili fissi e rotanti per diverse case di torni (Nakamura, Okuma, Mori Seiki e Mazak) con torrette BMT o VDI disponibili anche nella versione Smart Change, ovvero, con un nuovo sistema a cambio rapido per offrire maggiore versatilità.

Static and driven tools suitable for different machines such as Nakamura, Okuma, Mori Seiki, Mazak, etc with BMT or VDI attachment. Now also available with our new quick change system Smart Change, to offer greater flexibility.

Statische und angetriebene Werkzeuge passend für unterschiedliche Drehmaschinen wie z.B. Nakamura, Okuma, Mori Seiki, Mazak, usw. mit BMT- oder VDI-Revolverkopf. Jetzt verfügbar auch mit unserem neuen System SMART CHANGE für einfachen, schnellen und präzisen



APPICAZIONI SPECIALI PER AEREAUTICA / SPECIAL APPLICATION FOR AEROSPACE / SPEZIELLE ANWENDUNG FÜR AEROSPACE

Soluzioni speciali studiate ad hoc per il mercato aeronautico in grado di forare, svasare ed eseguire piccole cave in spazi ridotti e superfici irregolari.

Special solutions properly designed to satisfy the market's requirements in the aerospace sector. Specifically dedicated for drilling and milling operations in unaccessible spaces or in complex geometry parts.

Sonderlösungen für die Luftfahrtindustrie, die für Fräs- bzw. Bohrbearbeitungen an kleinen und schwer erreichbaren Stellen besonders geeignet sind.



MOLTIPLICATORE / SPEEDER / SCHNELLAUFSPINDEL

Moltiplicatore di giri meccanico 1:5 fino a 25.000 RPM max con cono e interasse modulari.

Mechanical spindle speeder 1:5 up to max 25.000 RPM with modular shank and pitch dimension.

Mechanische Schnellaufspindel 1:5 bis auf max 25.000 MIT mit modularen Kegel und Flansch.

LINEA CONTROL

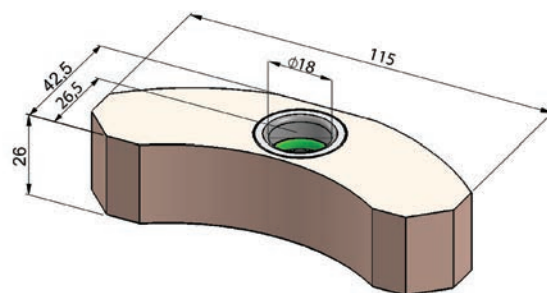


Linea di teste per macchine con cambio utensile automatico possono essere montate nel magazzino utensili ed essere scambiate automaticamente al mandrino macchina. La corretta posizione in macchina è assicurata dalla presenza dello stop block montato sul mandrino che garantisce sia l'antirrotazione della testa che la perfetta stabilità.

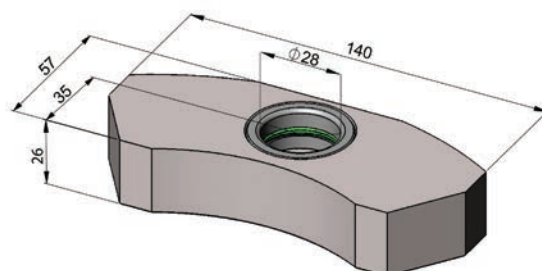
This range of angle heads is designed to be used on machining centres with ATC tool changer and therefore can be mounted in the tool magazine and be automatically exchanged in the machine spindle. The correct positioning of the head is ensured by the stop block mounted on the machine spindle which also prevents the rotation.

Diese Winkelköpfe sind für die NC Bearbeitungszentren mit Werkzeugwechsler geeignet und können von Werkzeugmagazin zur Maschinenspindel automatisch transportiert werden. Der Stop Block, der auf dem Maschinenspindel angeschraubt ist,

Dimensioni STOP BLOCK per teste
 Dimensions STOP BLOCK for heads / Maße von STO BLOCK für Köpfe
 T90cn-0,4 / 0,5 / 1,5 / 2,5 / 3,5 / 4,5



Dimensioni STOP BLOCK per teste
 Dimensions STOP BLOCK for heads / Maße von STO BLOCK für Köpfe
 T90cn-5



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



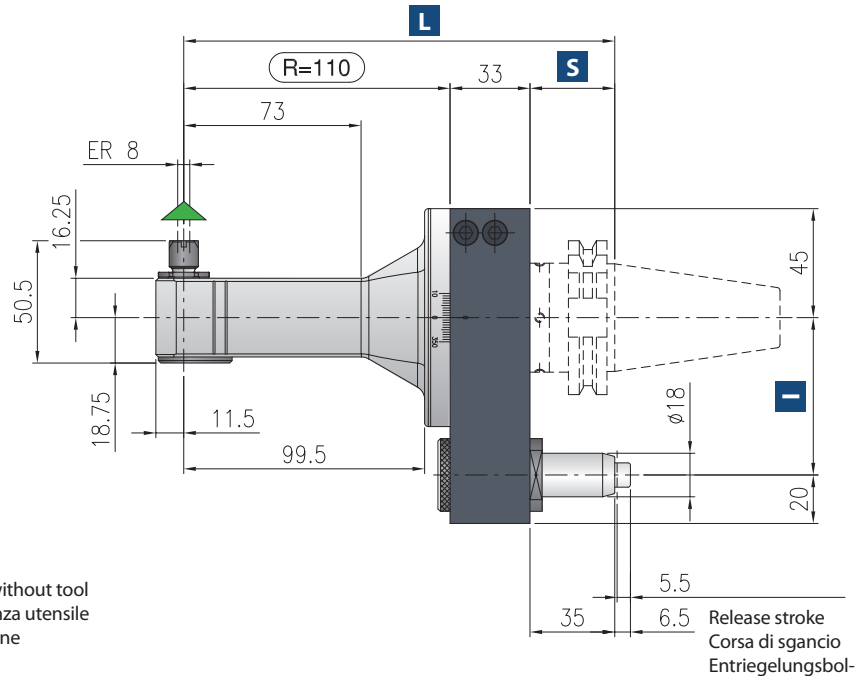
Weight
Peso / Gewicht
4 kg



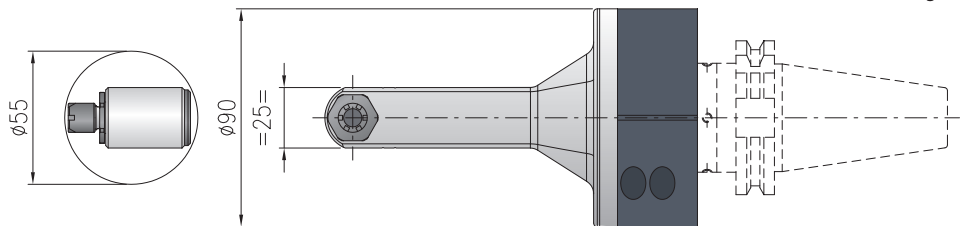
Collet
Pinza / Spannzange
ER-8 ø 0,5/5 mm

*** STANDARD EQUIPMENT INCLUDES:**

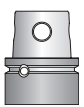
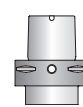
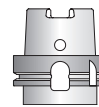
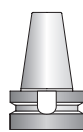
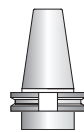
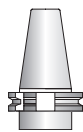
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



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



▲ 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	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-	80-(110*)	65-80-	80-(110*)	65-80-(110*)
S	35	35	35	30	35	41	42	45	38	40	40
L	178	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

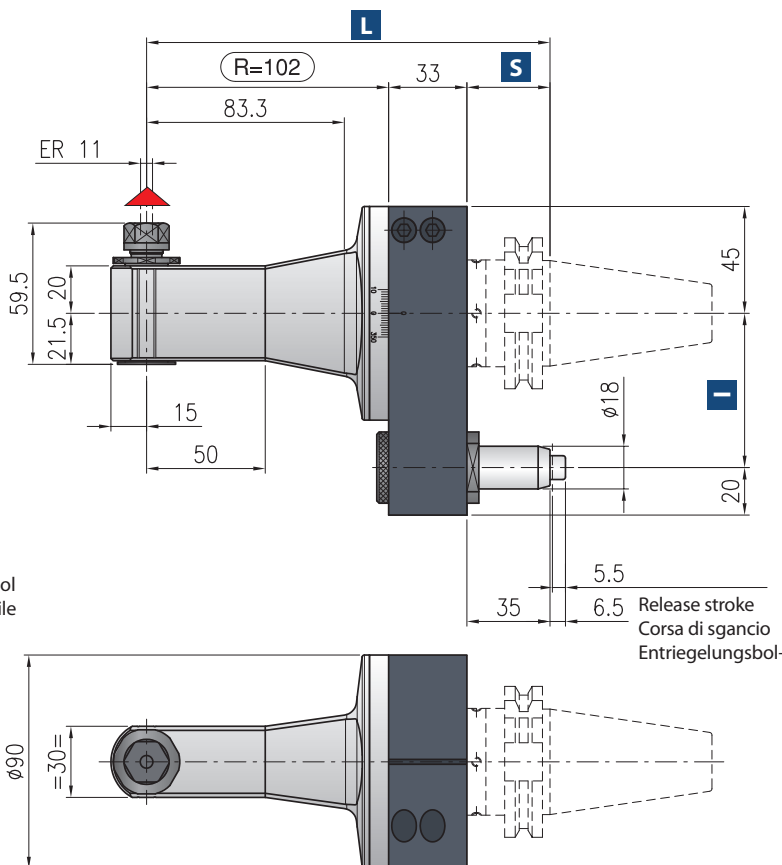
Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



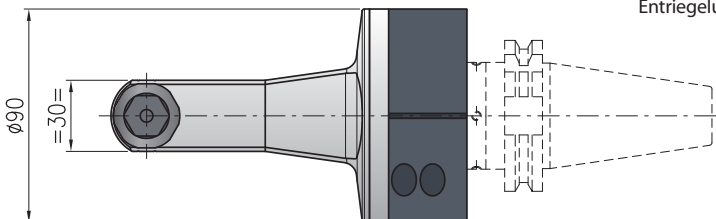
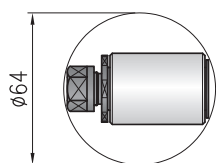
Ø mm max.
6

Weld output
Weldon
Weldon-Aufnahme

T90cn-0,5C



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



Ratio
 Rapporto / Verhältnis
1:1



RPM
 Velocità / Drehzahl max.
10.000 min⁻¹



Max. axial load
 Max. carico assiale / Max. Axialbe-
 lastung
150 N



Torque
 Momento torcente / Drehmo-
 ment
8 Nm



Weight
 Peso / Gewicht
4 kg

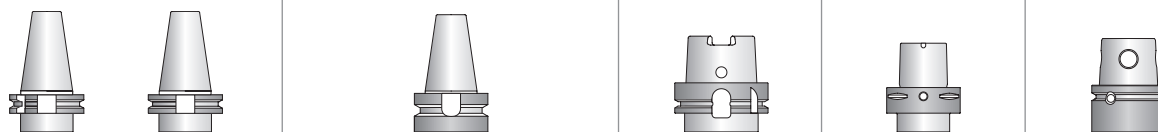


Collet
 Pinza / Spannzange
ER-11 \varnothing 0,5/7 mm

*** 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 entgegeng Antriebsspin-



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



\varnothing mm max.
6

Weldon output
 Weldon
 Weldon-Aufnahme

T90cn-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



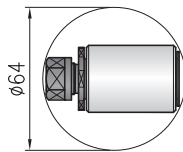
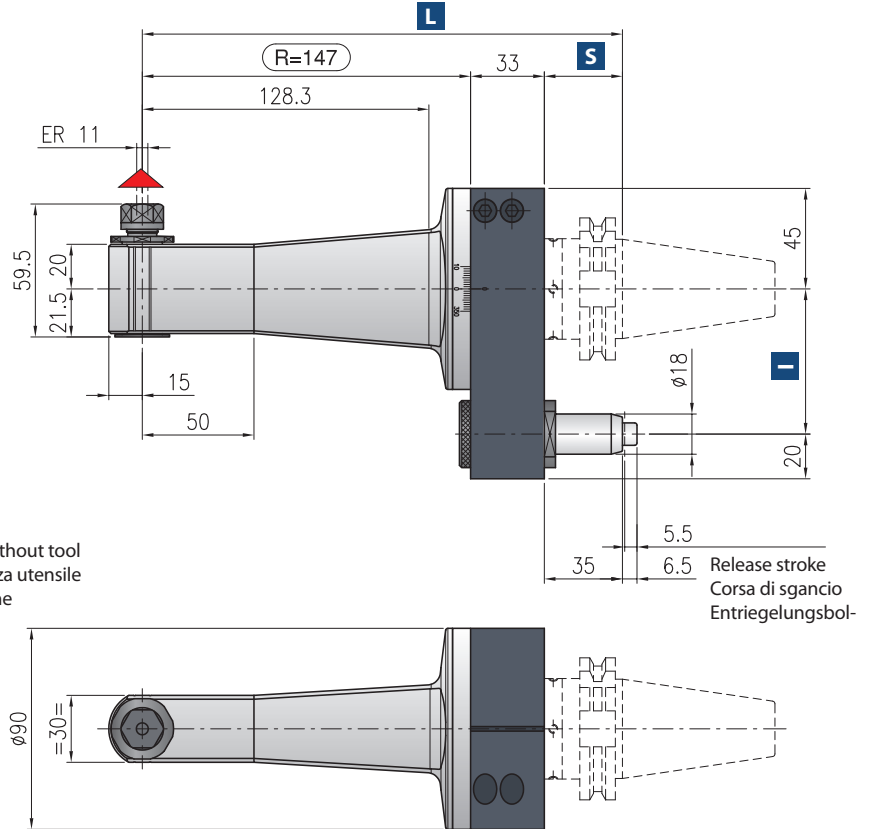
Weight
Peso / Gewicht
4,3 kg



Collet
Pinza / Spannzange
ER-11 \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 entgegengesetzt Antriebsspindel

Shank/Cono/Aufnahme	DIN-69871		CAT	MAS-BT			HSK		CAPTO		KM
	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-	80-(110*)	65-80-	80-(110*)	65-80-(110*)
S	35	35	35	30	35	41	42	45	38	40	40
L	215	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

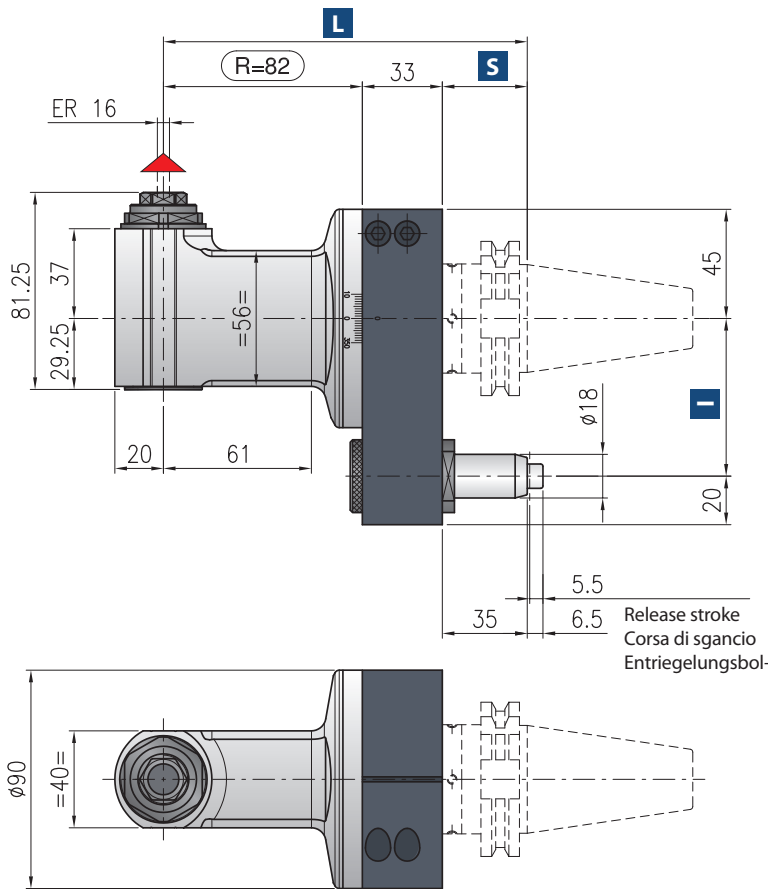
Coolant through pin
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



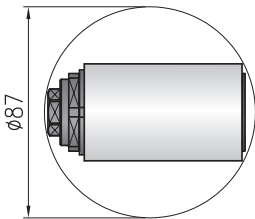
\varnothing mm max.
6

Weld output
Weldon
Weldon-Aufnahme

T90cn-1,5



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



- 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 \varnothing 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 entgegengesetzt Antriebsspindel

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



\varnothing mm
13

Arbor output
Porta fresa
Fräseraufnahme



\varnothing mm max.
10

Weldon output
Weldon
Weldon-Aufnahme



ER-16/ER-11

Double output
Doppia uscita
Doppelter Ausgang

T90cn-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



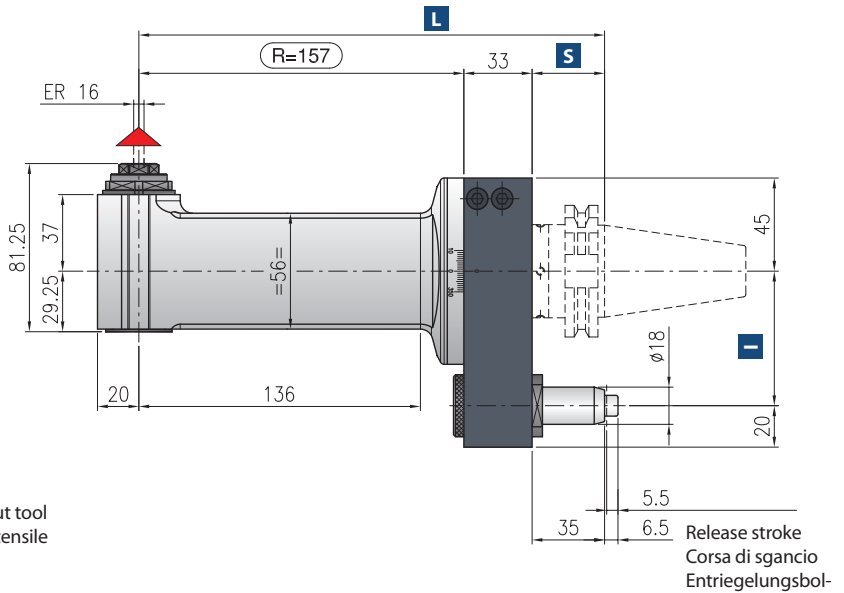
Weight
Peso / Gewicht
5,2 kg



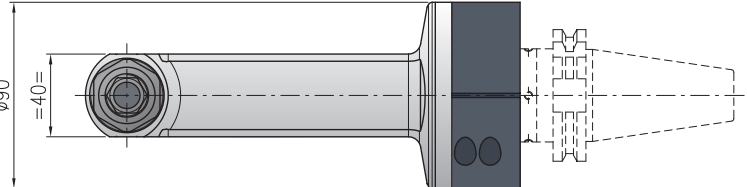
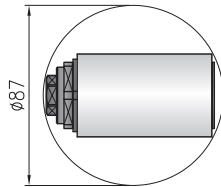
Collet
Pinza / Spannzange
ER-16 Ø 1/10 mm

*** STANDARD EQUIPMENT INCLUDES:**

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

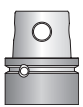
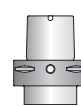
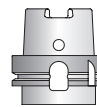
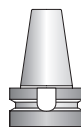
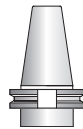
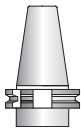


Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzuführ - Max.

▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entegen Antriebsspin-



Shank/Cono/Aufnahme	DIN-69871		CAT	MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-	80-(110*)	65-80-	80-(110*)	65-80-(110*)
S	35	35	35	30	35	41	42	45	38	40	40
L	225	225	225	220	225	231	232	235	228	230	230

*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



Ø mm
13

Arbor output
Porta fresa
Fräseraufnahme



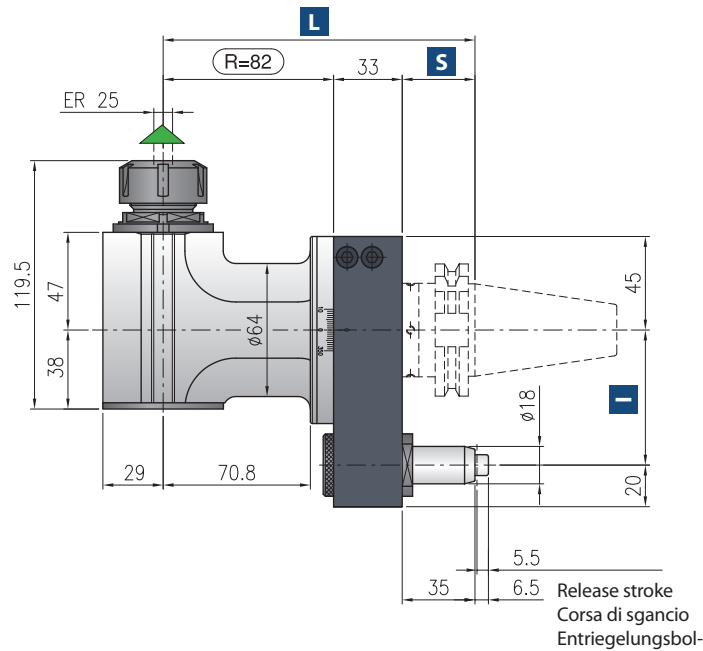
Ø mm max.
10

Welding output
Welding
Welding-Aufnahme

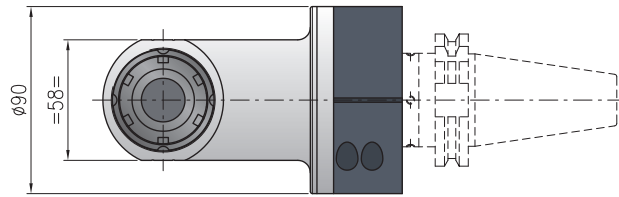
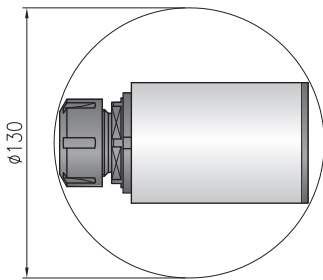


ER-16/ER-11
Double output
Doppia uscita
Doppelter Ausgang

T90cn-2,5



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



- 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*)	65-80-	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



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
Schnellwechsellafnahme



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



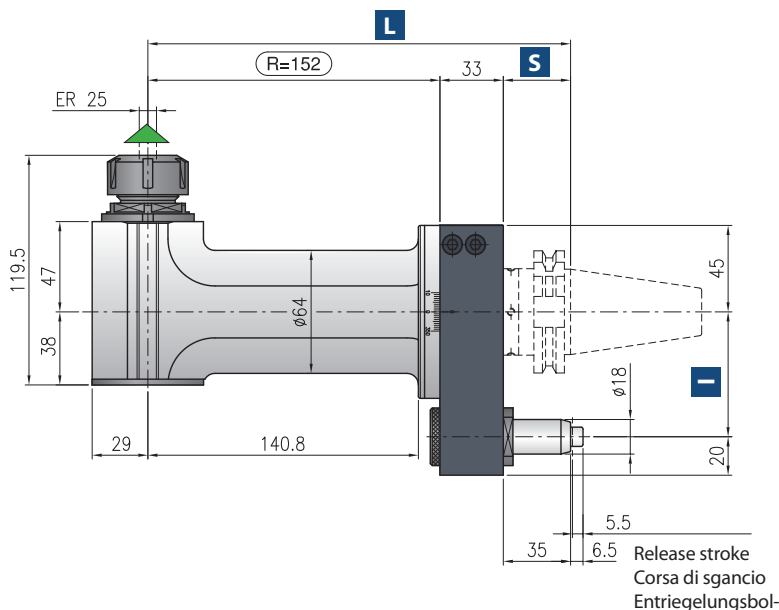
Weight
Peso / Gewicht
6,7 kg



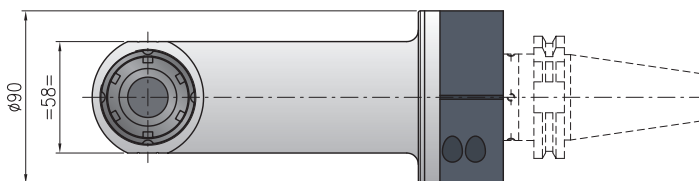
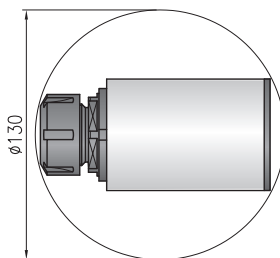
Collet
Pinza / Spannzange
ER-25 Ø 1/16 mm

*** STANDARD EQUIPMENT INCLUDES:**

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

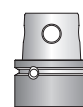
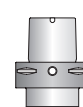
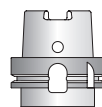
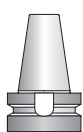
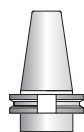
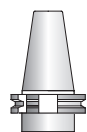


Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max.

▲ 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*)	65-80-	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



bar max
12

Coolant through pin
Refrigerante attraverso il
perno
Kühlmittelzufuhr durch



bar max
12

Coolant through pin and
spindle
Refrigerante interno
attraverso utensile
Kühlmittelzufuhr durch



min⁻¹
8.000

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



Ø mm
16

Arbor output
Porta fresa
Fräseaufnahme



Ø mm max.
16

Welding output
Welding
Welding-Aufnahme



HSK-32

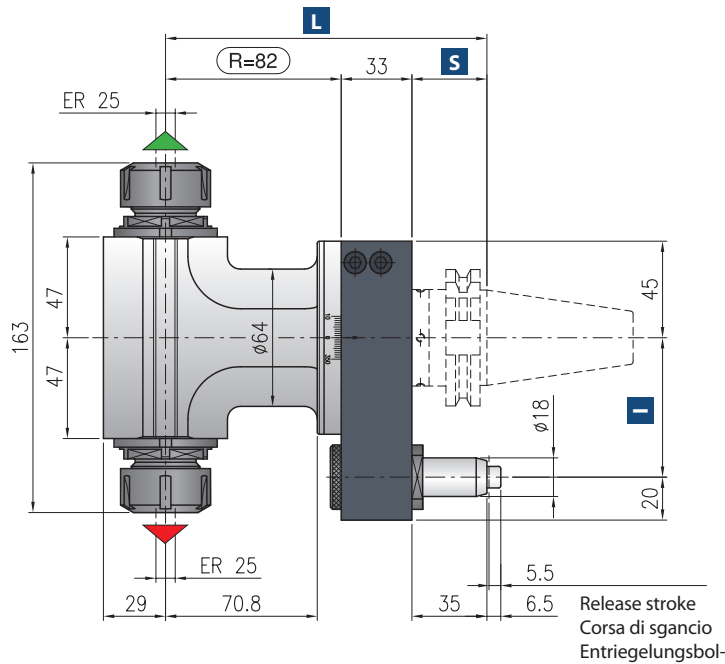
Quick Change
Attacco rapido
Schnellwechsellaufnahme



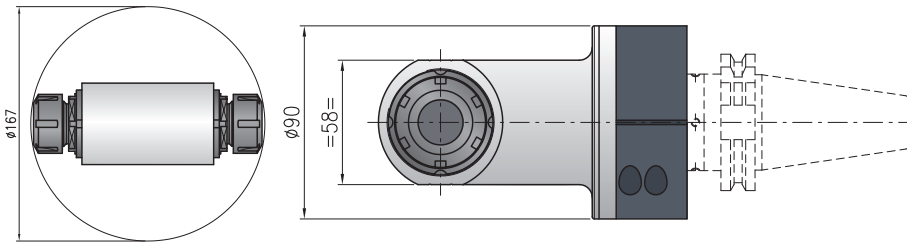
ER-25/ER-16

Double output
Doppia uscita
Doppelter Ausgang

T90cn-2,5 2U



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



- 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 \varnothing 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 entgegengesetzt Antriebsspindel



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



\varnothing mm
16

Arbor output
 Porta fresa
 Fräseraufnahme



\varnothing mm max.
16

Weld on output
 Weldon
 Weldon-Aufnahme

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



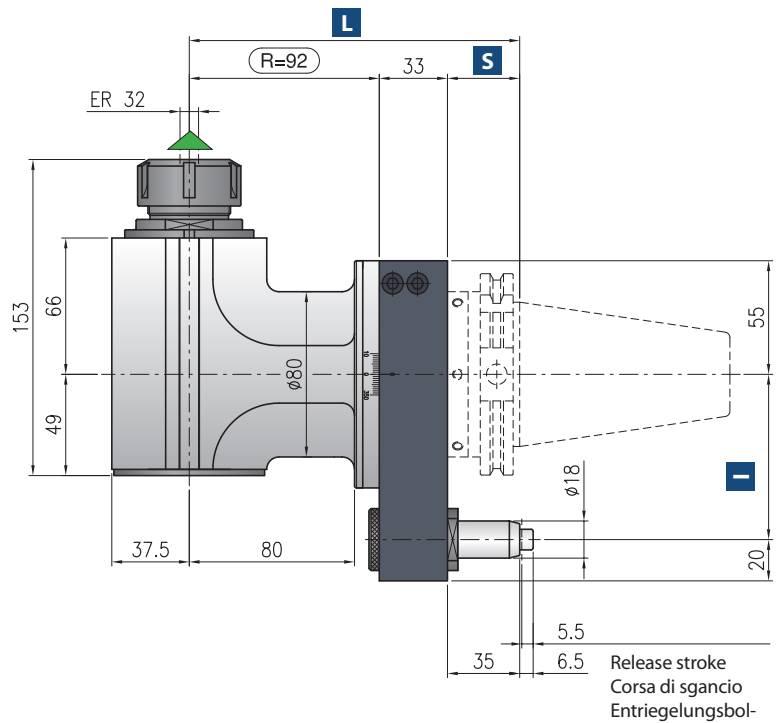
Weight
Peso / Gewicht
11 kg



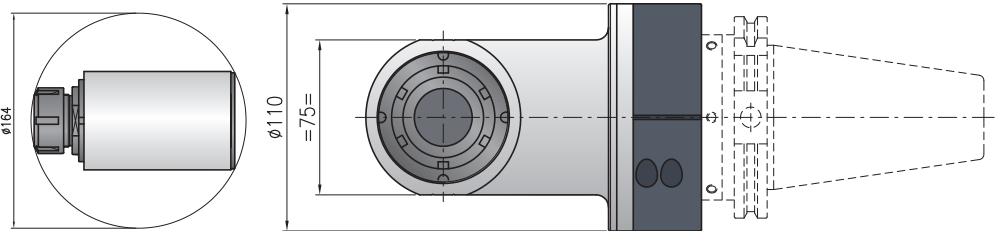
Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

*** STANDARD EQUIPMENT INCLUDES:**

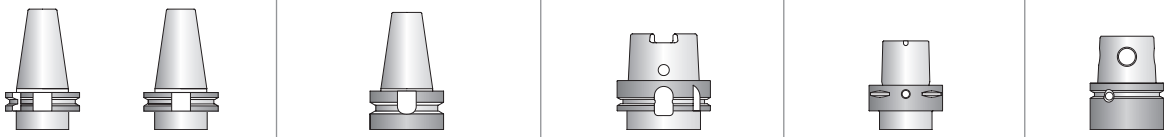
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



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



▲ 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	100	C6	C8	63
I	80-110		80-110	80-110	80-110	80-110	80-110	80-110
S	35		41	42	45	38	40	40
L	160		166	167	170	163	165	165

*optional

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

Option / Opzione / Option



bar max
12

Coolant through pin
Refrigerante attraverso il
perno
Kühlmittelzufuhr durch



bar max
12

Coolant through pin and
spindle
Refrigerante interno
attraverso utensile
Kühlmittelzufuhr durch



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

Weldon output
Weldon
Weldon-Aufnahme



ISO-30 HSK-40

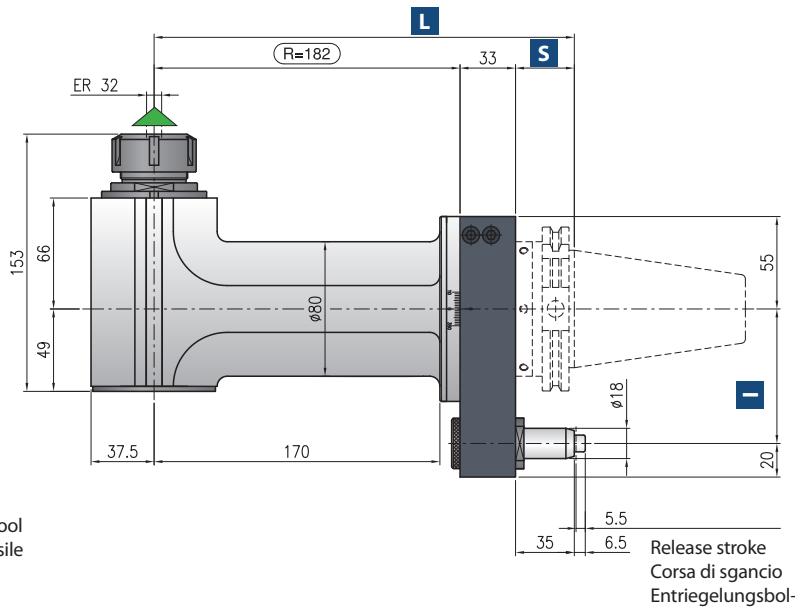
Quick Change
Attacco rapido
Schnellwechsellaufnahme



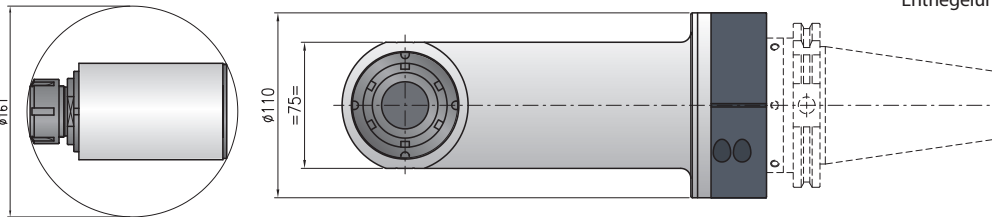
ER-32/ER-20

Double output
Doppia uscita
Doppelter Ausgang

T90cn-3,5 L



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



- 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 ϕ 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

Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max.

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	100	63
I	80-110	80-110	80-110	80-110	80-110	80-110
S	35	41	42	45	38	40
L	250	256	257	260	253	255

*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	ϕ mm 27	ϕ mm max. 20	ISO-30 HSK-40	ER-32/ER-20
Coolant through pin Refrigerante attraverso il perno Kühlmittelzufuhr durch	Coolant through pin and spindle Refrigerante interno attraverso utensile Kühlmittelzufuhr durch Bolzen und Spindel	High speed RPM max. Alta velocità RPM max. Drehzahl max.	Arbor output Porta fresa Fräseaufnahme	Weldon output Weldon Weldon-Aufnahme	Quick Change Attacco rapido Schnellwechsellaufnahme	Double output Doppia uscita Doppelter Ausgang

T90cn-3,5 Smart Change

NEW



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



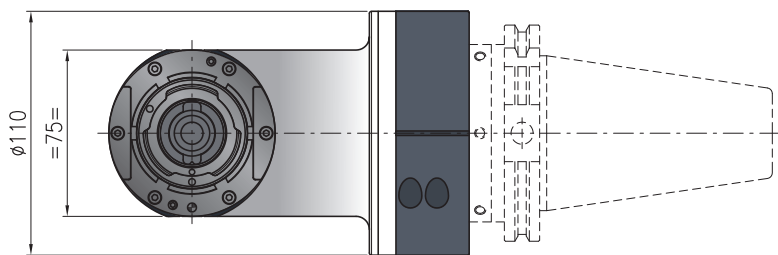
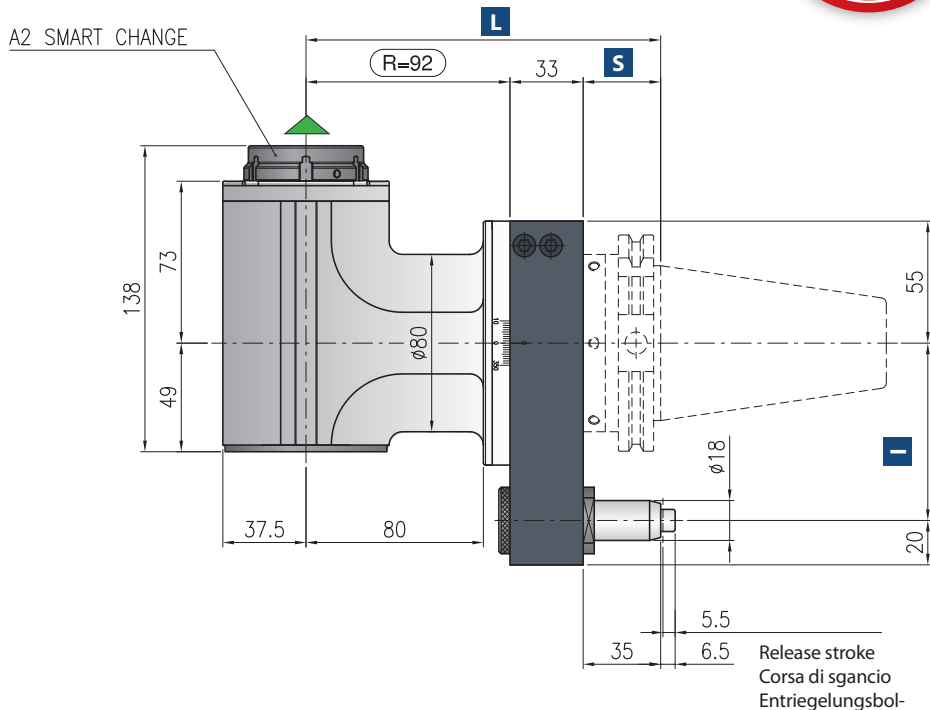
Weight
Peso / Gewicht
11 kg



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	63-80 100	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



bar max
12

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



min⁻¹
6.000

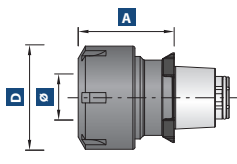
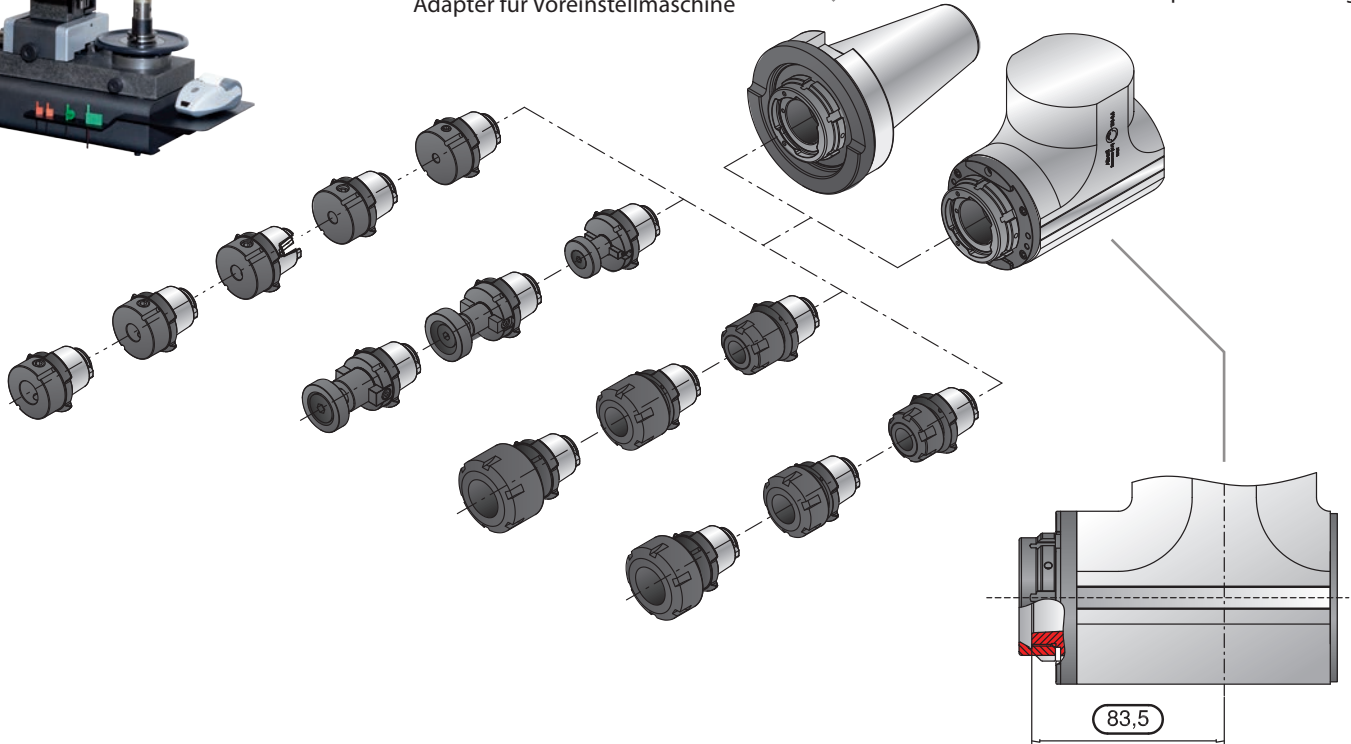
High speed optional RPM max.
Opzione alta velocità RPM max.
Drehzahl max.

T90cn-3,5 Cartucce / Adapters / Schnittstelle

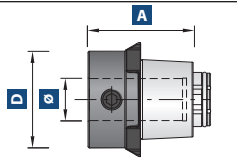


Adattatore per preset /
Adapter for preset /
Adapter für Voreinstellmaschine

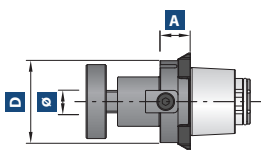
Testa con Smartchange /
Angle head with Smartchange /
Winkelkopf mit Smartchange



ER-20 (Ø 1/13 mm)	ER-25 (Ø 1/17 mm)	ER-32 (Ø 2/22 mm)	ERC-20 (Ø 1/13 mm)	ERC-25 (Ø 1/17 mm)	ERC-32 (Ø 2/22 mm)												
Ø	A	D	Ø	A	D	Ø	A	D	Ø	A	D	Ø	A	D			
1/13	28.5	34	1/17	30.5.5	42	2/22	41.5.5	50	1/17	33.5	34	1/17	35.5	42	2/22	46.5	50



WELDON (Ø 6)	WELDON (Ø 8)	WELDON (Ø 10)	WELDON (Ø 12)	WELDON (Ø 16)										
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



P. FRESA/ shell mill holder/ Fräsaufahme (Ø 13 mm)	P. FRESA/ shell mill holder/ Fräsaufahme (Ø 16 mm)	P. FRESA/ shell mill holder/ Fräsaufahme (Ø 22 mm)						
Ø	A	D	Ø	A	D	Ø	A	D
13	24.5	13	16	30.5	17	22	32.5	19

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

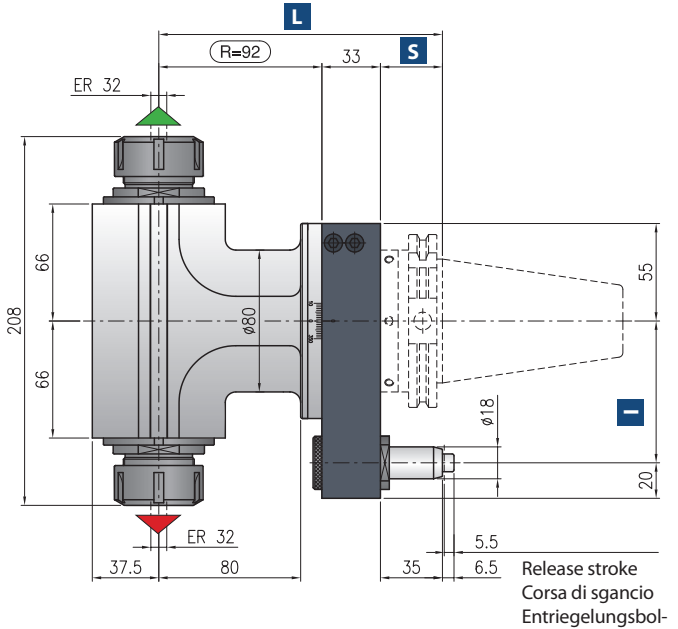
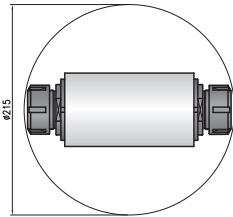


Collet
Pinza / Spannzange
ER-32 \varnothing 2/20 mm

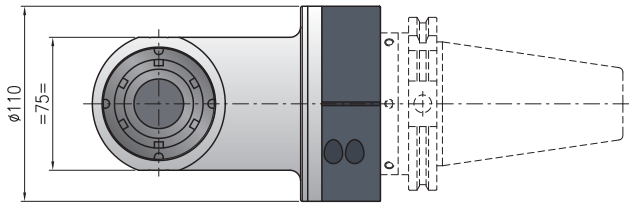
* STANDARD EQUIPMENT INCLUDES:

- 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



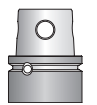
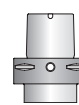
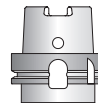
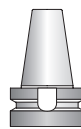
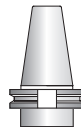
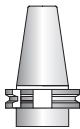
Release stroke
Corsa di sgancio
Entriegelungsbol



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 entegen 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	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
Refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen



min⁻¹
6.000

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



\varnothing mm
27

Arbor output
Porta fresa
Fräseraufnahme



\varnothing mm max.
20

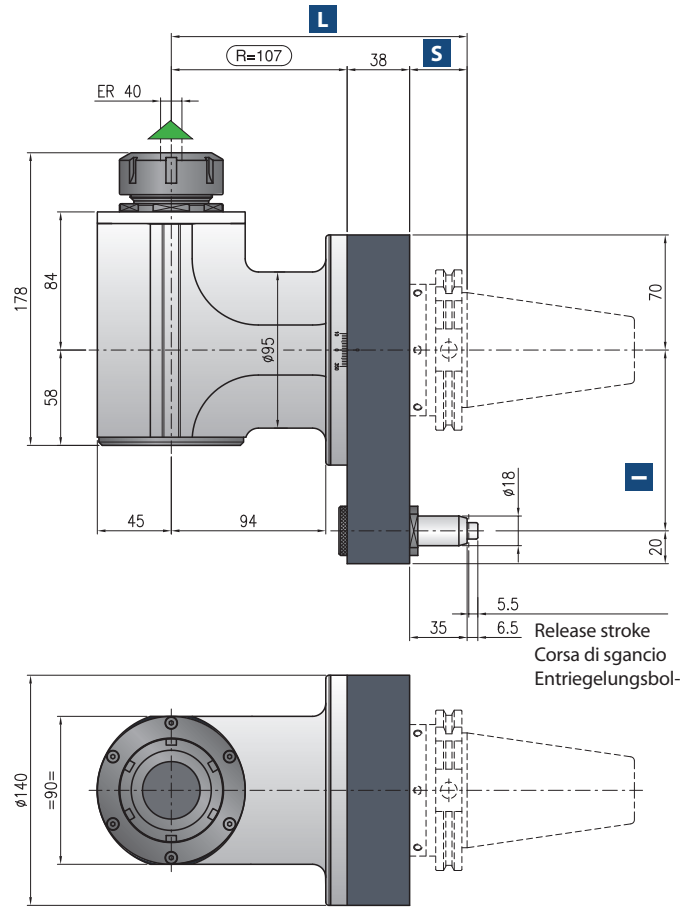
Welding output
Welding
Weldon-Aufnahme



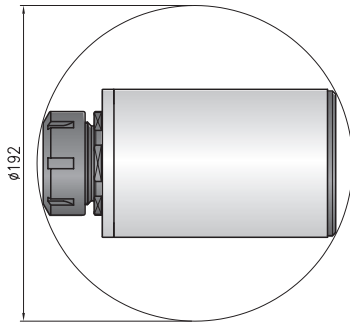
HSK-40

Quick Change
Attacco rapido
Schnellwechsellaufnahme

T90cn-4,5



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



- 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

Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max.

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	180		186	187 190	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



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.



Ø mm
27

Arbor output
Porta fresa
Fräsaufnahme



Ø mm max.
25

Weldon output
Weldon
Weldon-Aufnahme



HSK-40

Quick Change
Attacco rapido
Schnellwechsellaufnahme



ER-40/ER-25

Double output
Doppia uscita
Doppelter Ausgang

T90cn-4,5 L

NEW



Ratio
Rapporto / Verhältnis



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



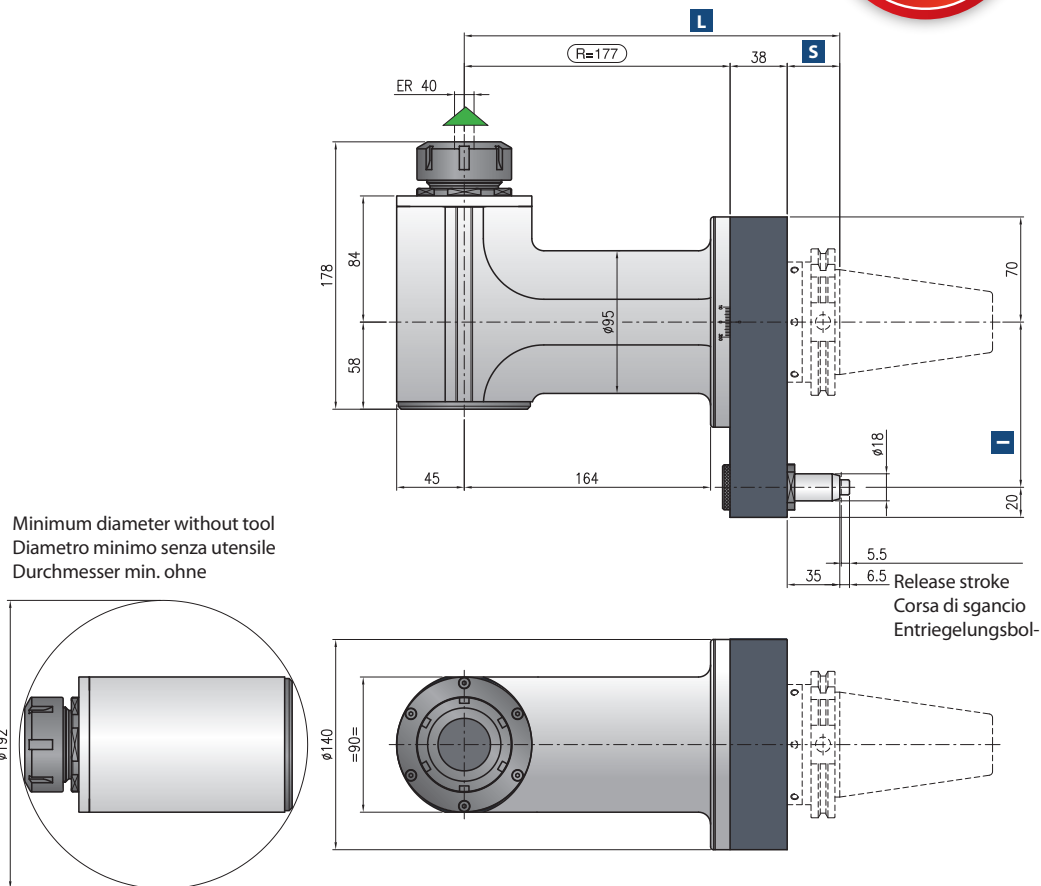
Weight
Peso / Gewicht
20 kg



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

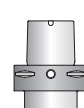
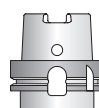
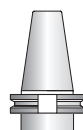
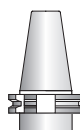


Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max.

▲ 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



bar max
12

Coolant through pin and
spindle
Refrigerante interno
attraverso utensile
Kühlmittelzufuhr durch



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.
25

Weldon output
Weldon
Weldon-Aufnahme



HSK-40

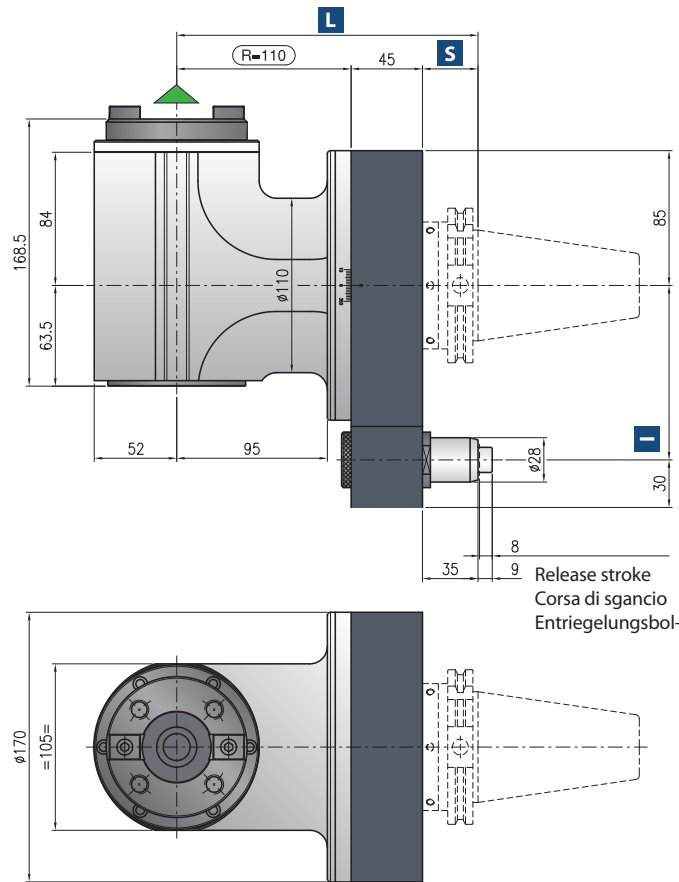
Quick Change
Attacco rapido
Schnellwechsellaufnahme



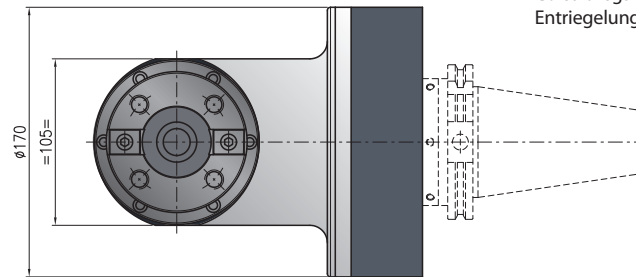
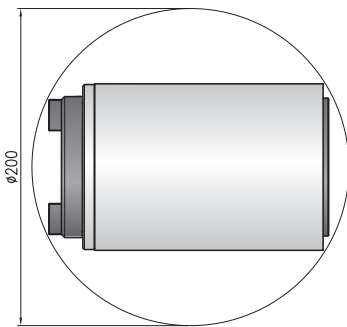
ER-40/ER-25

Double output
Doppia uscita
Doppelter Ausgang

T90cn-5



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



- 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

Possibilità refrigerante / Internal coolant / Innere Kühlmittelzufuhr - Max.

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		110	110	110	80-110
S	35		41	42	45	40
L	190		196	197	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
 Schnellwechsellaufnahme

T90cn-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

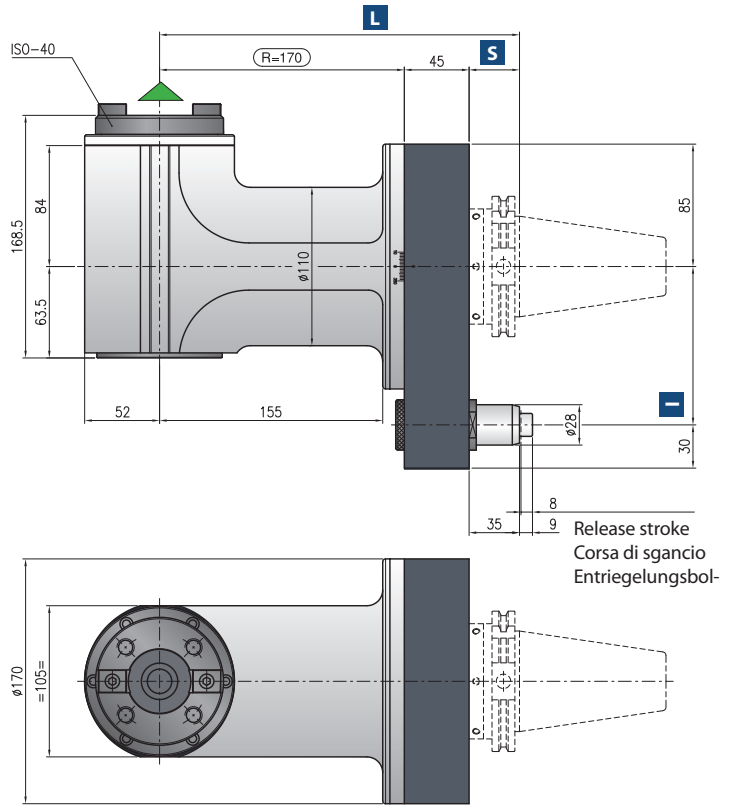
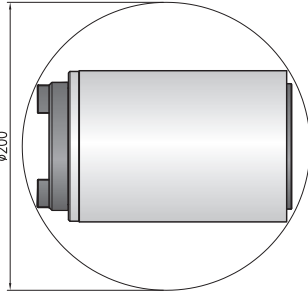


Collet
Pinza / Spannzange
ISO 40

*** 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

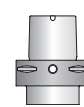
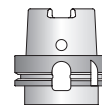
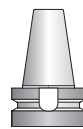
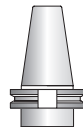


Release stroke
Corsa di sgancio
Entriegelungsbol-



Possibilità refrigerante / Internal coolant / Innere Kühlmittelzuführ - Max.

▲ 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		110	110	110	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

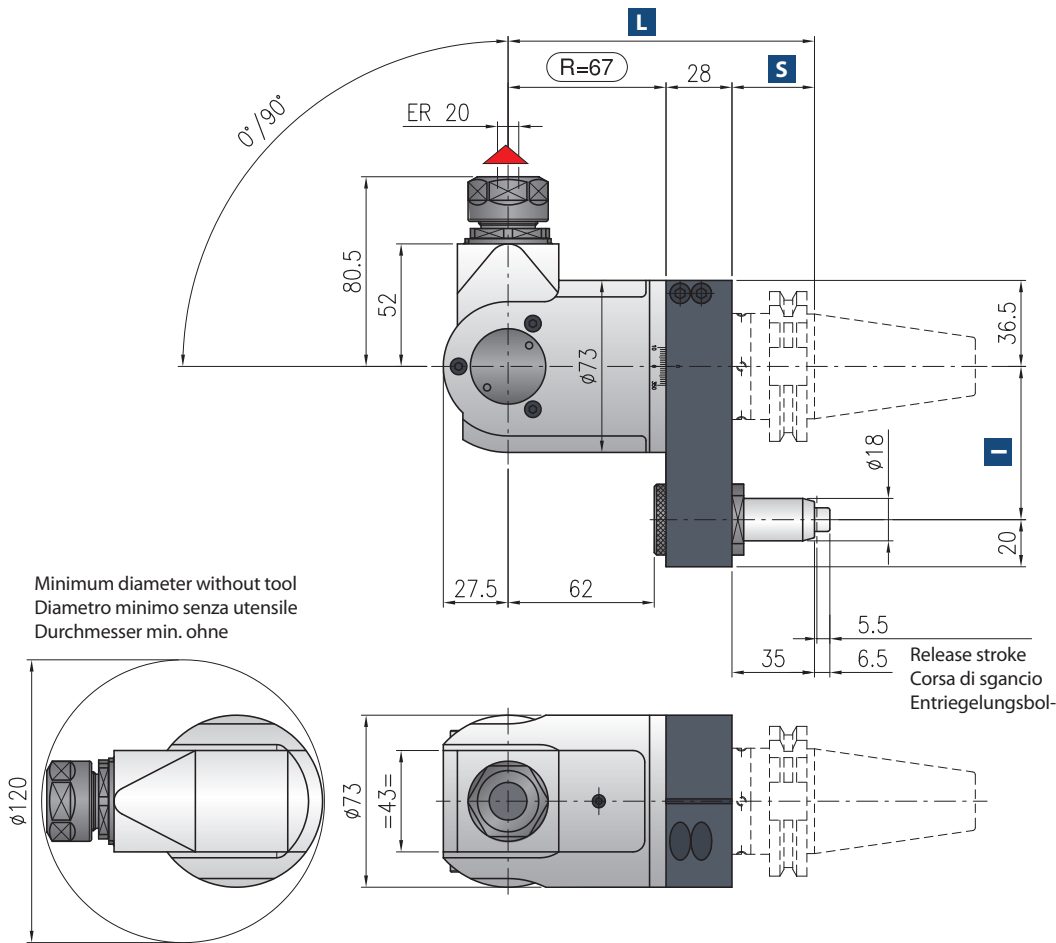
High speed optional RPM max.
Opzione alta velocità RPM max
Drehzahl max.



HSK-63

Quick Change
Attacco rapido
Schnellwechselaufnahme

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 / Spannzange
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 entgegeng Antriebsspin-

Shank/Cono/Aufnahme	DIN-69871		CAT	MAS-BT			HSK		CAPTO		KM
	30	40		30	40	50	63-80	100	C5-C6	C8	
I	65-80	65-80-(110*)	80-(110*)	65-80	65-80-	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)	80-(110*)	65-80-(110*)
S	35	35	35	30	35	41	42	45	42	40	40
L	130	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

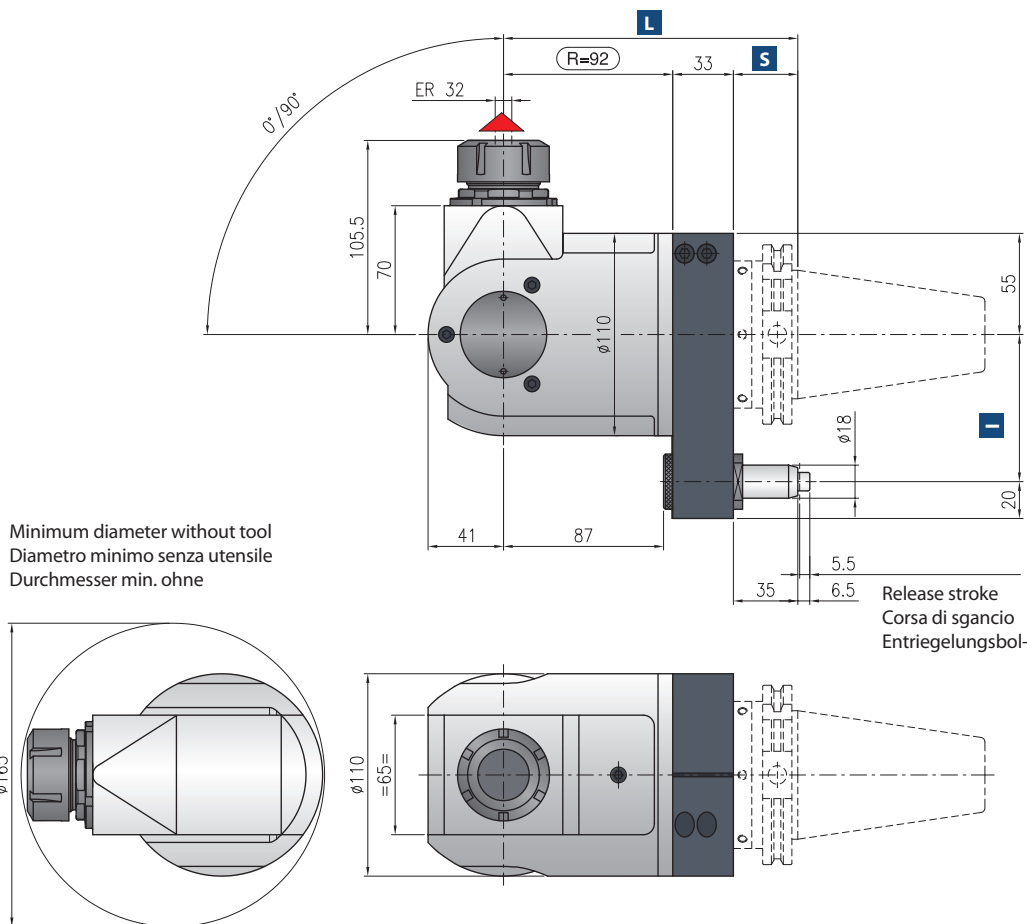
High speed optional RPM max.
 Opzione alta velocità RPM max.
 Drehzahl max.



Ø mm max.
10

Weld on output
 Weldon
 Weldon-Aufnahme

TCUcn-3,5



- Ratio**
Rapporto / Verhältnis
1:1
- RPM**
Velocità / Drehzahl max.
4.000 min⁻¹
- Max. axial load**
Max. carico assiale / Max. Axialbe-
lastung
715 N
- Torque**
Momento torcente / Drehmo-
ment
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 entegen Antriebsspin-

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*)
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

THcn-1,5 100 bar

NEW



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



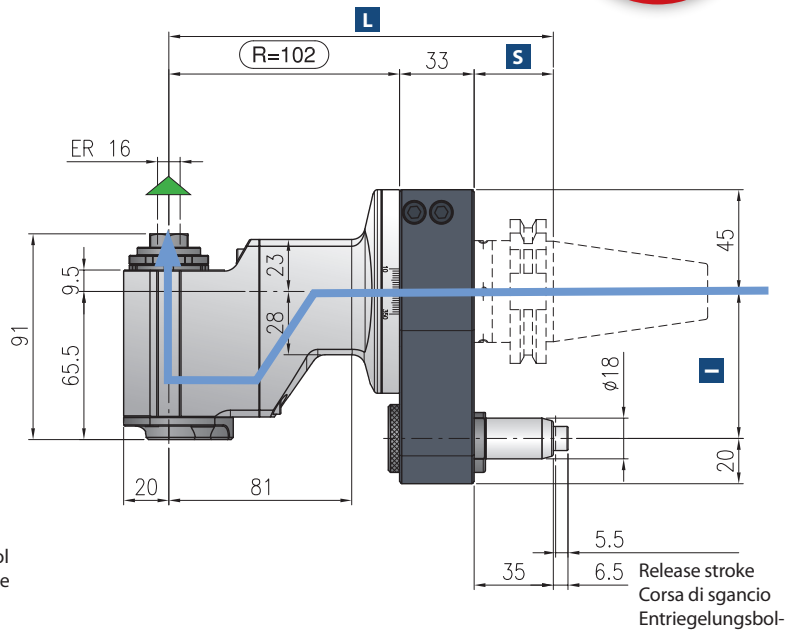
Weight
Peso / Gewicht
4,5 kg



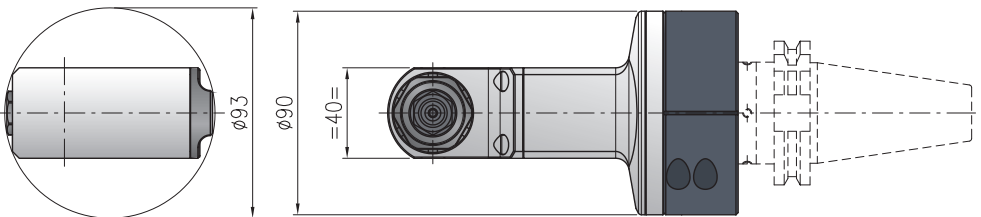
Collet
Pinza / Spannzange
ER-16 Ø 1/10 mm

*** 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

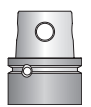
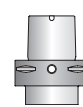
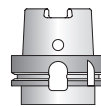
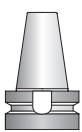
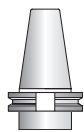
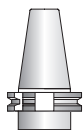


Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



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

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	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63	
I	65-80	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-	80-(110*)	65-80-	80-(110*)	65-80-(110*)	
S	35	35	35	30	35	41	42	45	38	40	40	
L	170	170	170	165	170	176	177	180	173	175	175	

*optional

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

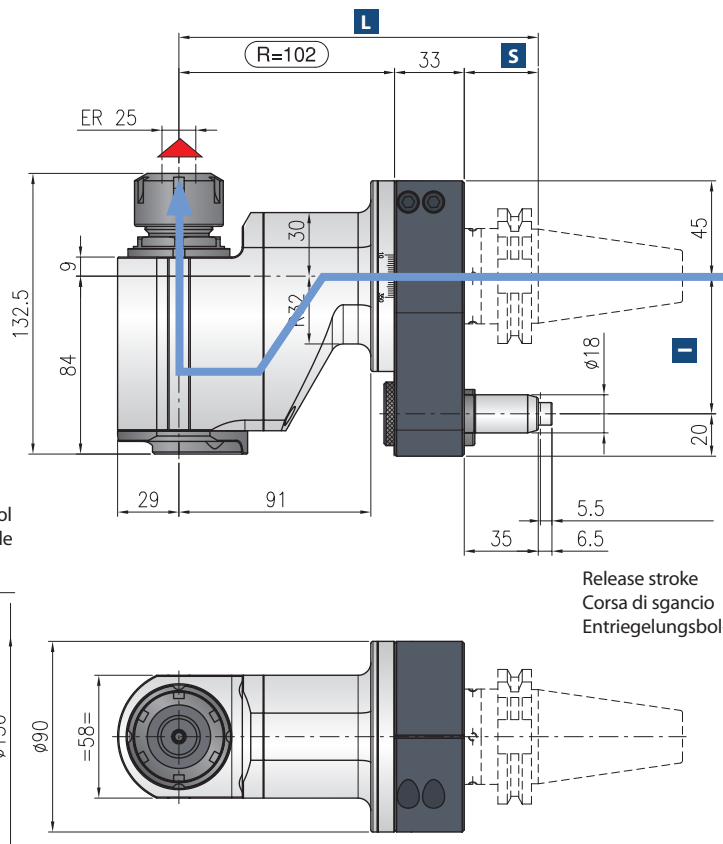
Option / Opzione / Option



Ø mm max.
10

Weldon output
Weldon
Weldon-Aufnahme

THcn-2,5 100 bar

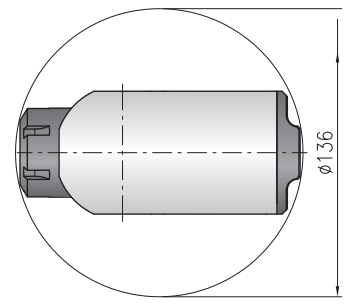


- Ratio
Rapporto / Verhältnis
1:1
- RPM
Velocità / Drehzahl max.
9.000 min⁻¹
- RPM Dry running
Velocità a secco / Drehzahl max.
6.000 min⁻¹
- Max. axial load
Max. carico assiale / Max. Axialbelastung
510 N
- Torque
Momento torcente / Drehmoment
30 Nm
- Weight
Peso / Gewicht
6,5 kg
- Collet
Pinza / Spannzange
ER-25 \varnothing 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



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

Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entegen Antriebsspi...



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*)	65-80-	80-(110*)	65-80-(110*)		
S	35	35	35	41	42	45	38	40	40		
L	170	170	170	176	177	180	173	175	175		

*optional

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

Option / Opzione / Option



\varnothing mm max.
16

Weld on output
Weld on
Weld on-Aufnahme

THcn-3,5 100 bar



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
8.000 min⁻¹



RPM Dry running
Velocità a secco / 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

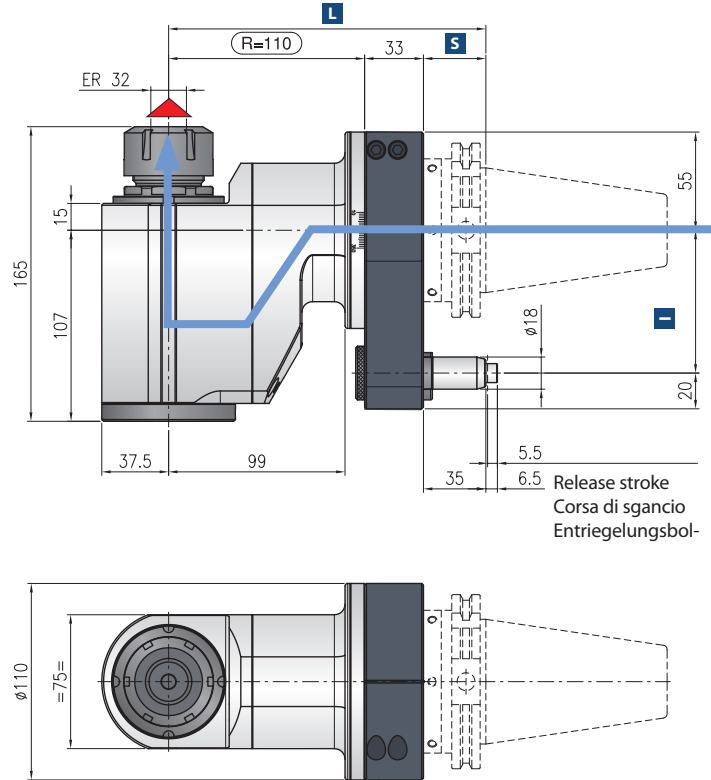
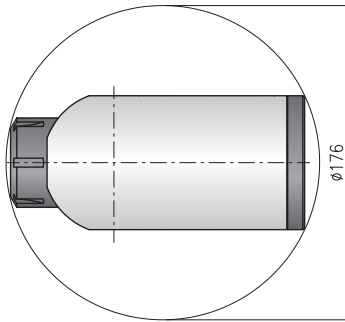


Collet
Pinza / Spannzange
ER-32 Ø 2/20 mm

*** STANDARD EQUIPMENT INCLUDES:**

- 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



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

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

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*)
S	35		41	42 45	38 40	40
L	178		184	185 188	181 183	183

*optional

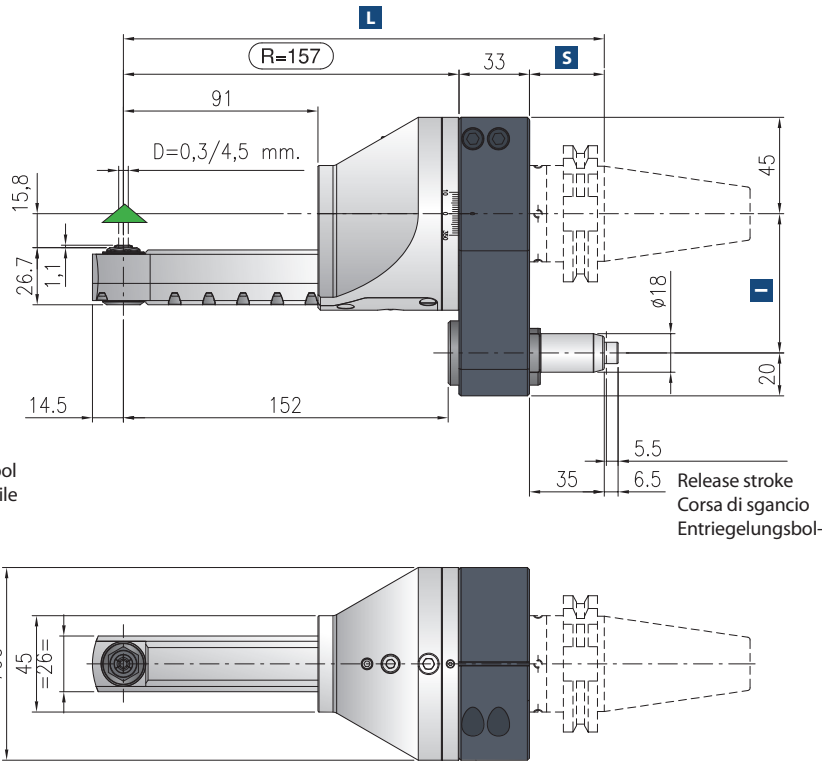
Non interchangeable input drive shank/ Coni di attacco non intercambiabili/ Nicht wechselbare Aufnahme



Ø mm max.
20

Welding output
Welding
Welding-Aufnahme

TR90cn-0,5



- 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/Cono/Aufnahme Size/Grandezza/Größe	DIN-69871		CAT	MAS-BT			HSK		CAPTO		KM
	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
I	65-80	65-80-(110*)	80-(110*)	65-80	65-80-(110*)	80-(110*)	65-	80-(110*)	65-80-	80-(110*)	65-80-(110*)
S	35	35	35	30	35	41	42	45	38	40	40
L	225	225	225	220	225	231	232	235	228	230	230

*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

TR90cn-1,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.500 min⁻¹



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



Torque
Momento torcente / Drehmoment
8 Nm



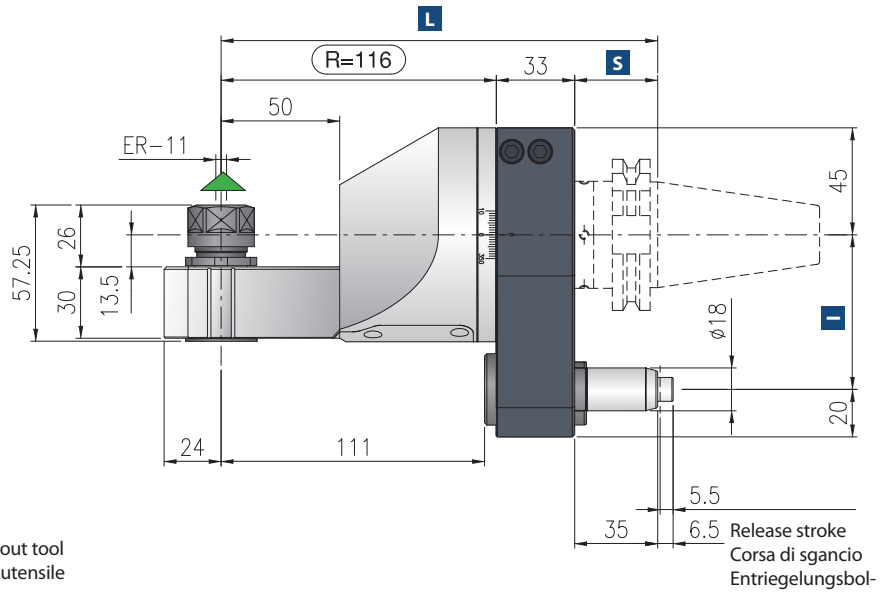
Weight
Peso / Gewicht
6,5 kg



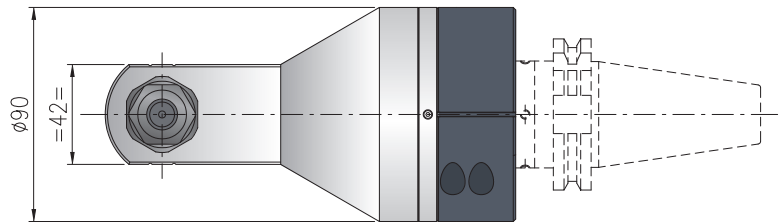
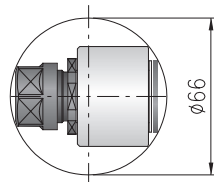
Collet
Pinza / Spannzange
ER-16 Ø 1/10 mm

*** STANDARD EQUIPMENT INCLUDES:**

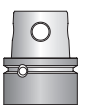
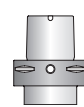
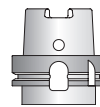
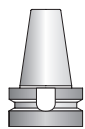
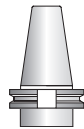
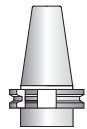
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



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



▲ 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	50-63		
I	65-80 - (110*)	80-(110*)	65-80-(110*)	80-(110*)	65-	80-(110*)	65-80-	80-(110*)	65-80-(110*)		
S	35	35	35	41	42	45	38	40	40		
L	184	184	184	190	191	194	187	189	189		

*optional

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

Option / Opzione / Option

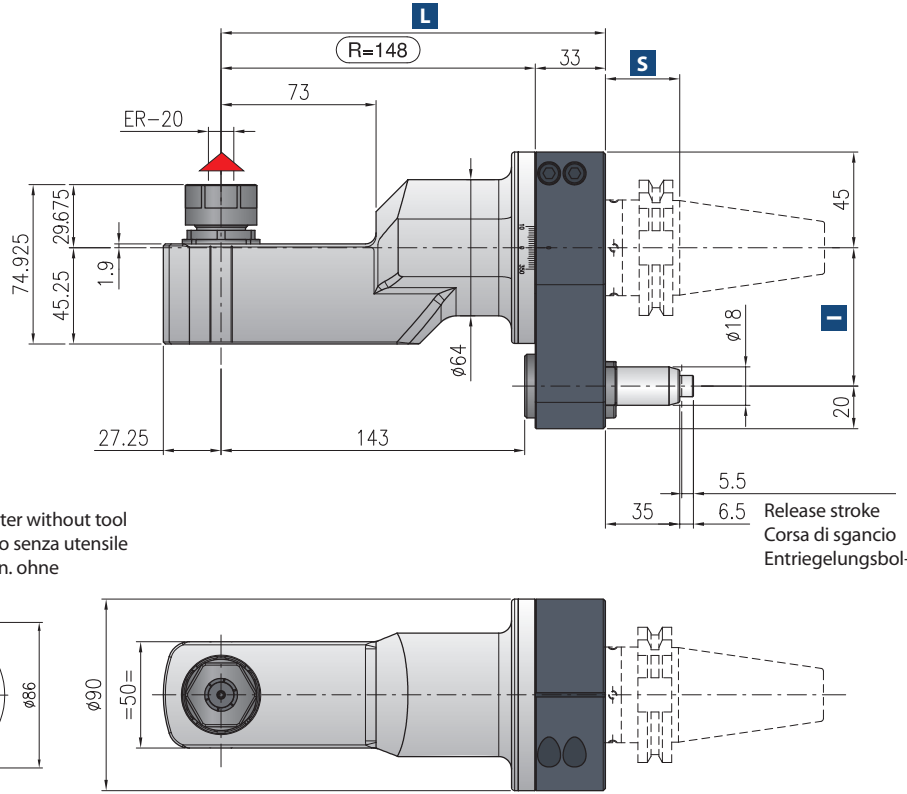


bar max

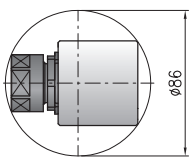
12

Coolant through pin
Adduzione refrigerante attraverso il perno
Kühlmittelzufuhr durch Bolzen

TR90cn-2,5



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

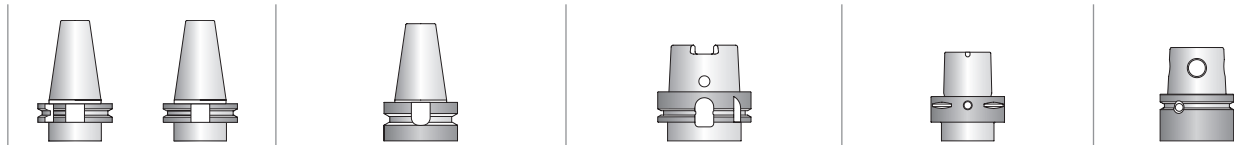


- Ratio**
Rapporto / Verhältnis
1:1,18
- RPM**
Velocità / Drehzahl max.
4000 min⁻¹
- Max. axial load**
Max. carico assiale / Max. Axialbelastung
620 N
- Torque**
Momento torcente / Drehmoment
20 Nm
- Weight**
Peso / Gewicht
6.5 kg
- Collet**
Pinza / Spannzange
ER-20

*** 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 Antriebsspin-



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	216	216	216	222	223	226	219	221	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

TDA per angoli fino 15° for angles up to 15° - Für Winkel bis 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°



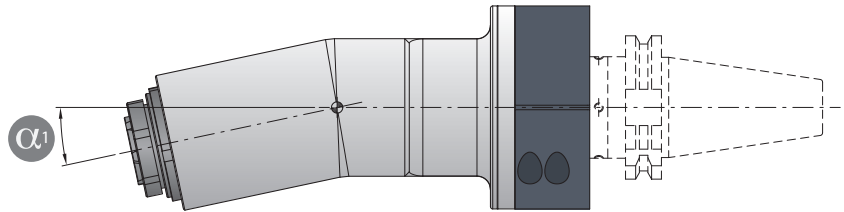
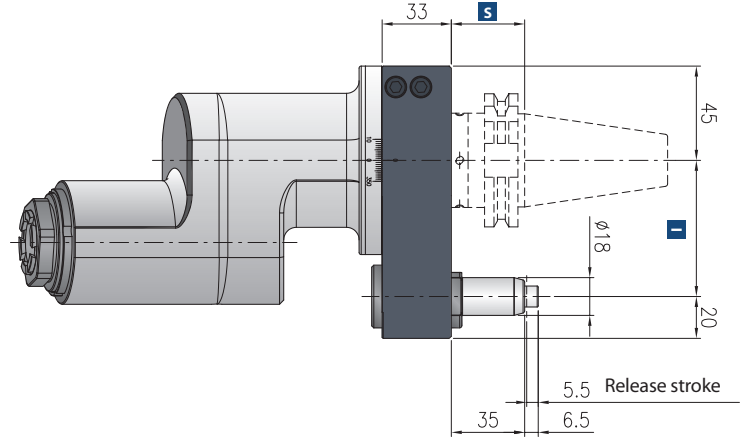
Size
Grandezza / Größe
A richiesta
On request / Nach Wunsch



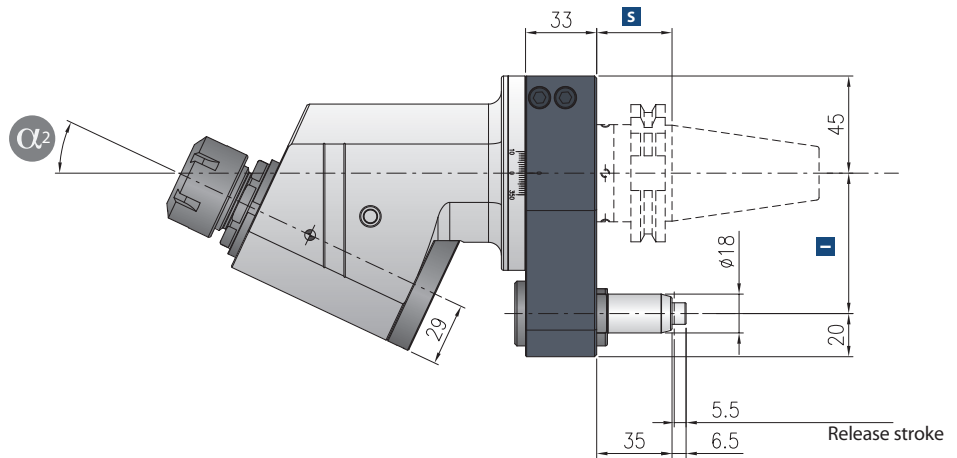
Collet
Pinza / Spannzange
ER-16 \varnothing 1/10 mm
ER-25 \varnothing 2/16 mm
ER-32 \varnothing 3/20 mm



Shank
Cono / Kegel
DIN 69871
BT
CAT
HSK
CAPTO



TA per angoli da 15° for angles from 15° - Für Winkel von 15°



* 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



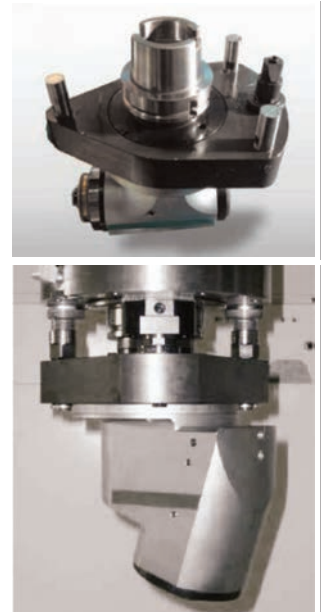
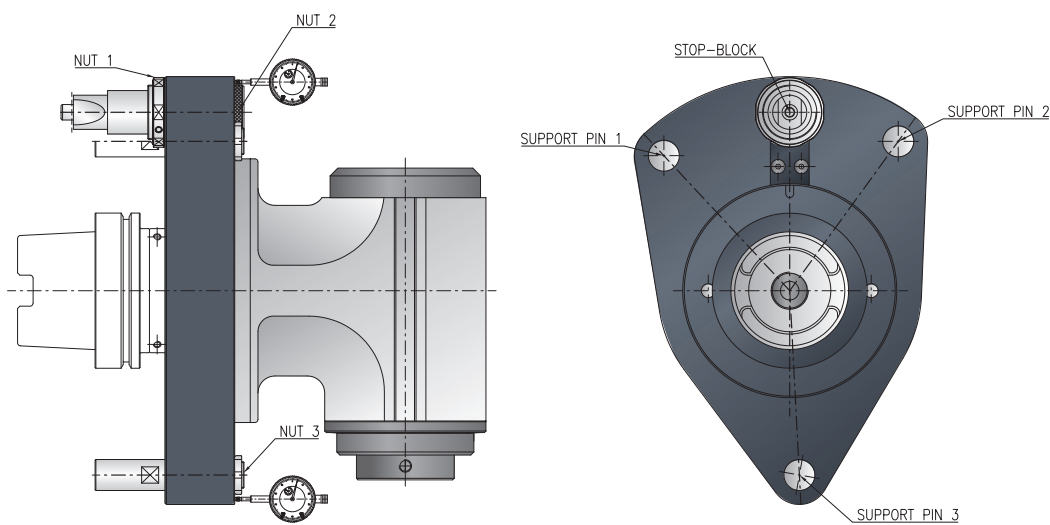
Fino a 45° possibilità refrigerante / Up to 45° internal coolant / Bis 45° innere Kühlmittelzufuhr
Da 45° a 89° possibilità refrigerante / From 45° to 89° internal coolant / Von 45° bis 89° innere Kühlmittelzu-

Supporto 3 punti 3 point support - 3-Punkte Abstützung

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

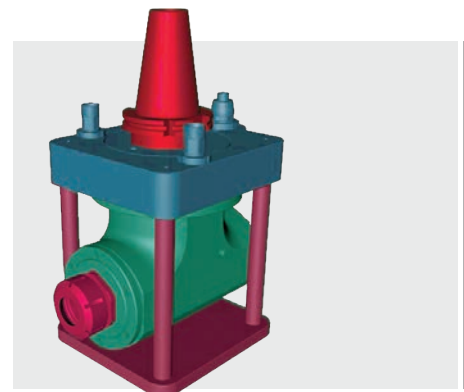
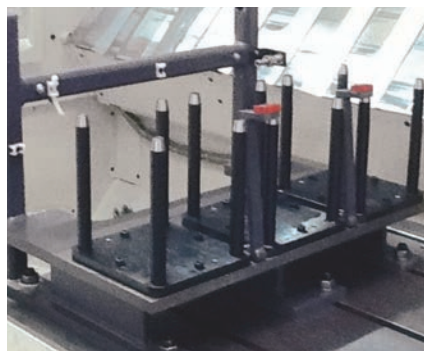
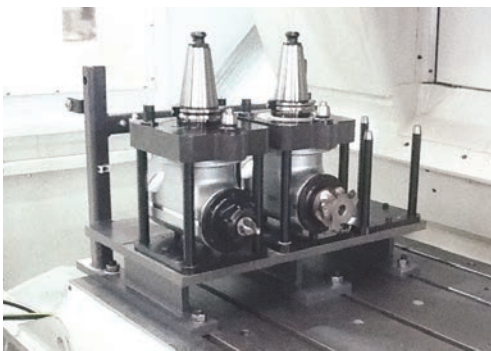


PICK UP E SUPPORTI PER TESTE GROSSE PICK UP AND SUPPORTS FOR BIG HEADS - PICK UP UND UNTERSTÜTZUNG FÜR GRÖßE

In caso di teste molto grosse e ingombranti Alberti può studiare un semplice pick up esterno da montare sulla tavola per alloggiare tutte quelle teste che non possono essere montate in cambio utensile standard.

In case of big and heavy heads Alberti can study a simple pick up station to be placed on the table.

Im Fall von großen und schweren Köpfen kann Alberti eine einfache Pick Up Station entwickeln welche auf der Maschinentische separat gestellt werden kann.



LINEA MODULAR

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

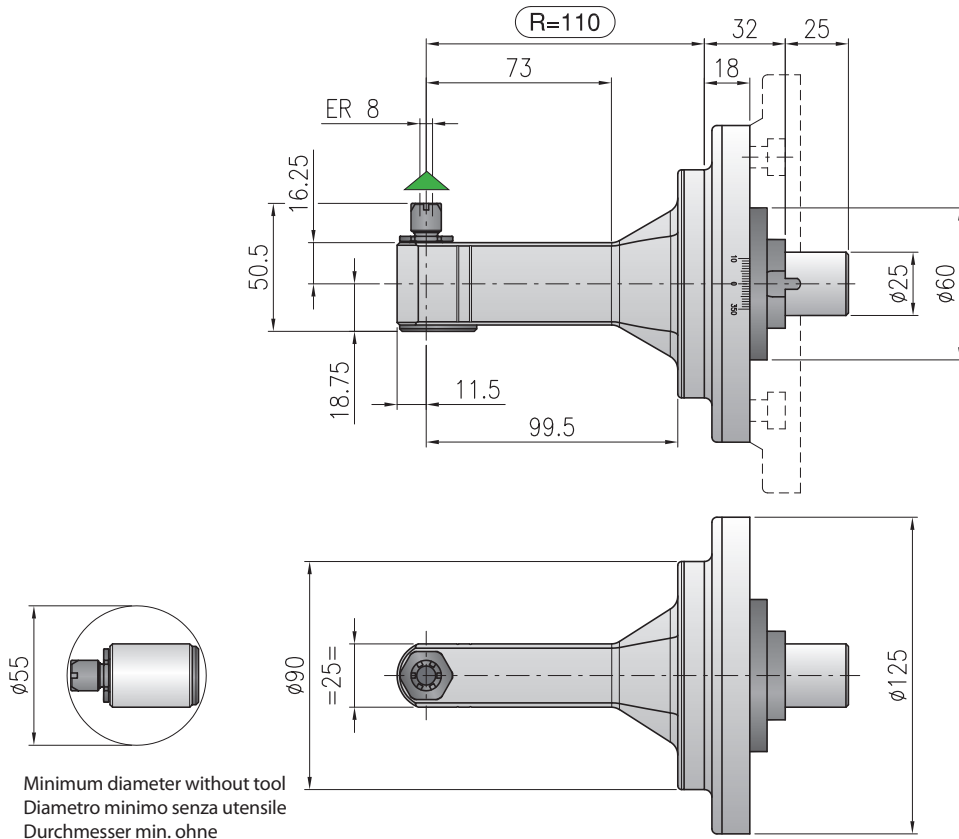
Angle heads of the MODULAR line are suitable to be mounted on traditional machine tools and are attached to the spindle through a flange. They are sold together with an interchangeable shank and a universal flange and they can extend the total length thanks to extension spacers. For a correct mounting,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

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



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

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 ϕ 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

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



ϕ mm max.
6

Weld on output
Weld on
Weld on-Aufnahme

T90-0,5C



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



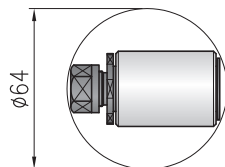
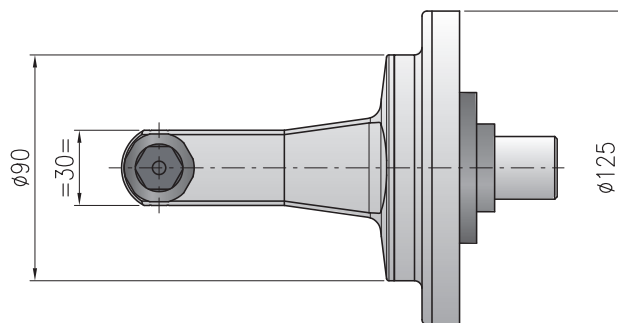
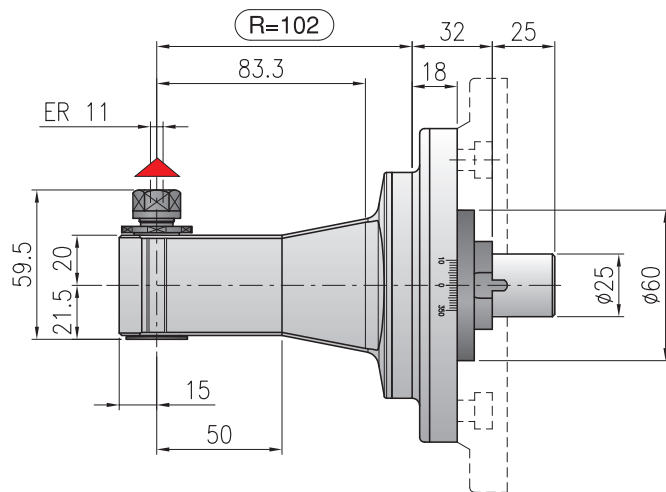
Weight
Peso / Gewicht
4 kg



Collet
Pinza / Spannzange
ER-11 \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



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

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

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

Option / Opzione / Option



bar max
12

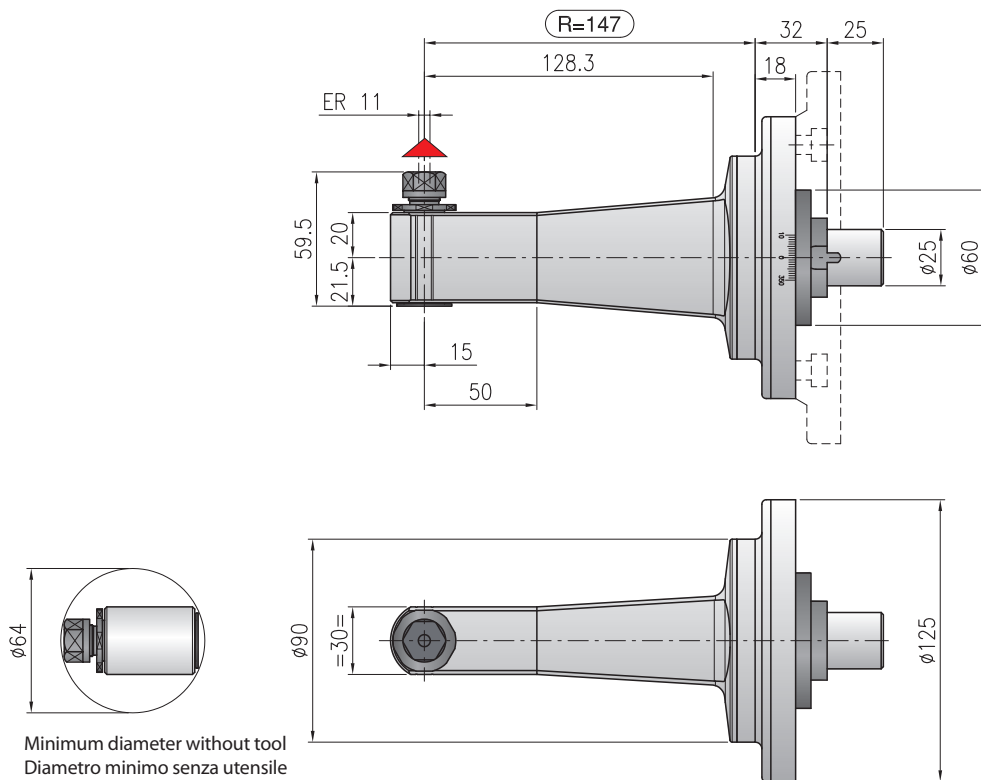
Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



\varnothing 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 \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 entgegengesetzt 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



\varnothing 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



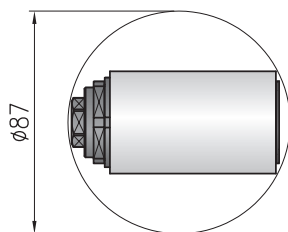
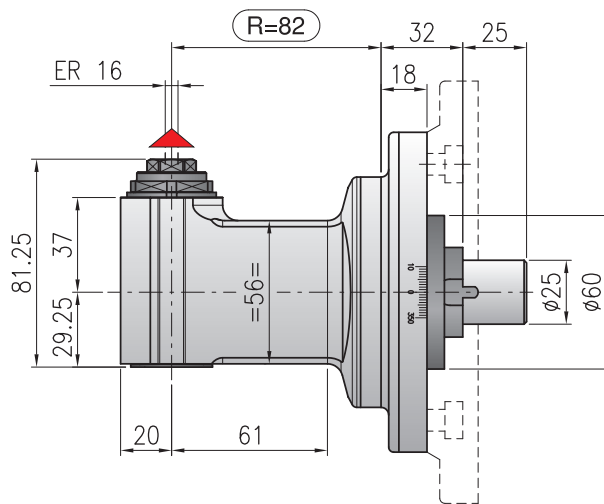
Weight
Peso / Gewicht
4,3 kg



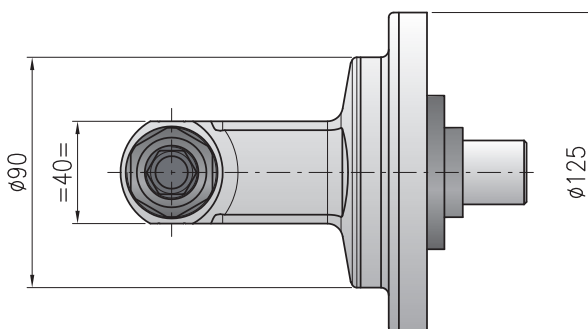
Collet
Pinza / Spannzange
ER-16 \varnothing 1/10 mm

*** STANDARD EQUIPMENT INCLUDES:**

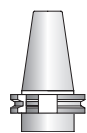
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



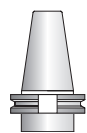
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



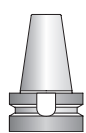
▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegen Antriebsspin-



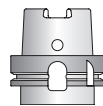
DIN-69871



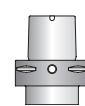
CAT



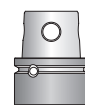
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



bar max
12

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
10.000

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



\varnothing mm
13

Arbor output
Porta fresa
Fräseraufnahme



\varnothing mm max.
10

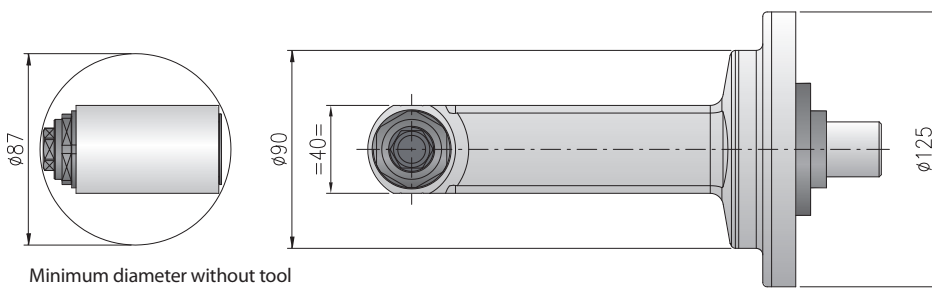
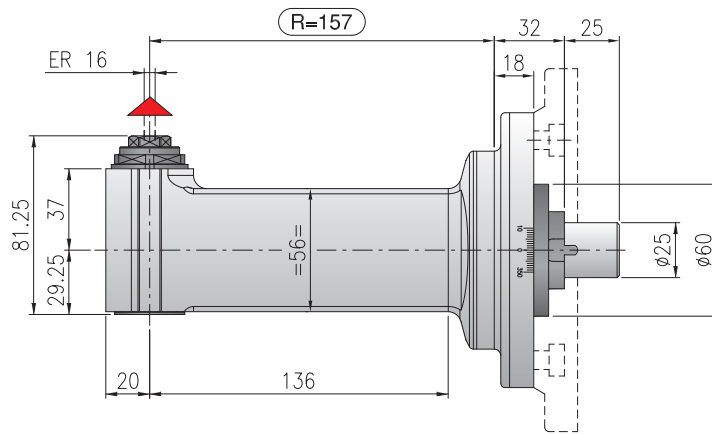
Weldon output
Weldon
Weldon-Aufnahme



ER-16/ER11

Double output
Doppia uscita
Doppelter Ausgang

T90-1,5L



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



Ratio
 Rapporto / Verhältnis
1:1



RPM
 Velocità / Drehzahl max.
8.000 min⁻¹



Max. axial load
 Max. carico assiale / Max. Axialbe-
 lastung
250 N



Torque
 Momento torcente / Drehmo-
 ment
15 Nm



Weight
 Peso / Gewicht
5,2 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 entgegeng Antriebsspin-

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

T90-2,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
6.000 min⁻¹



Max. axial load
Max. carico assiale / Max. Axialbe-
lastung
510 N



Torque
Momento torcente / Drehmo-
ment
30 Nm



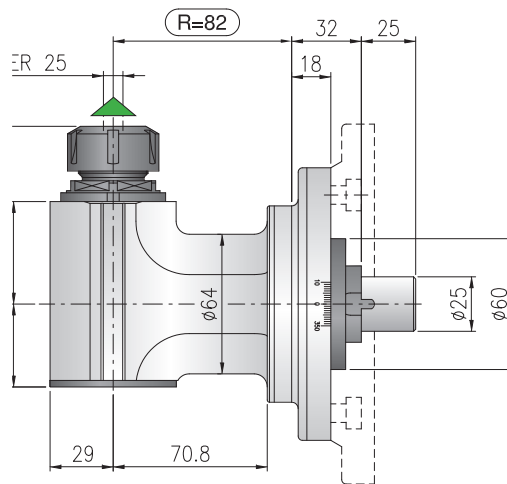
Weight
Peso / Gewicht
5,4 kg



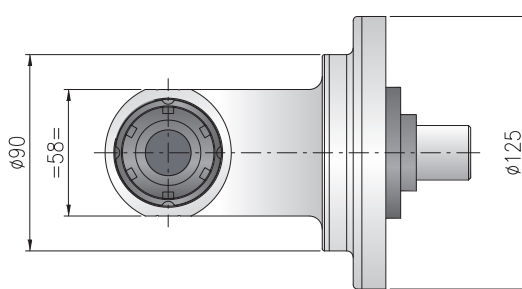
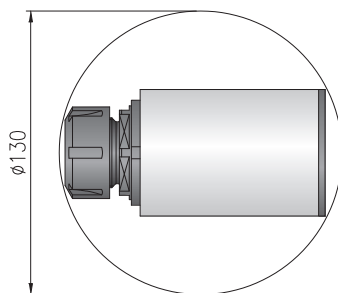
Collet
Pinza / Spannzange
ER-25 Ø 1/16 mm

*** 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



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



▲ 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
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

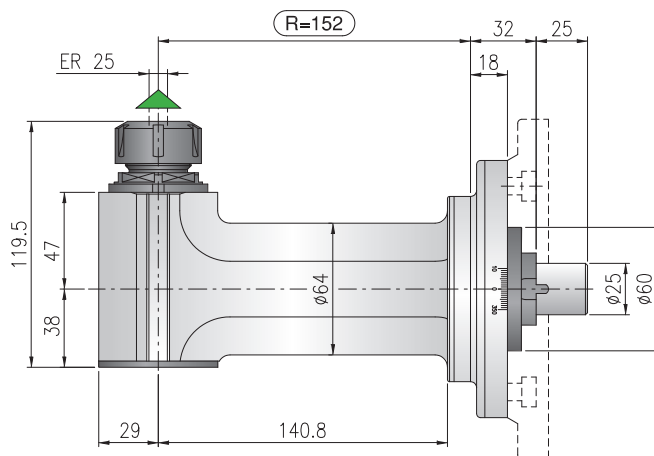
Quick Change
Attacco rapido
Schnellwechsellafnahme



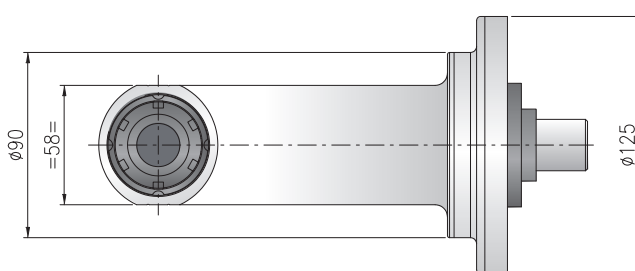
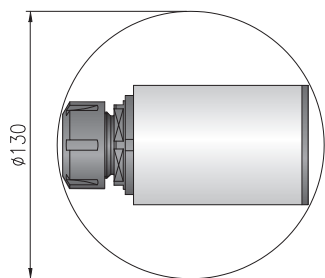
ER-25/ER-16

Double output
Doppia uscita
Doppelter Ausgang

T90-2,5L



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



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:**

- 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

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
 Schnellwechselfaufnahme



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



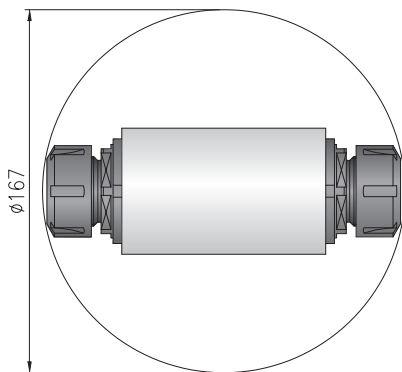
Weight
Peso / Gewicht
6,4 kg



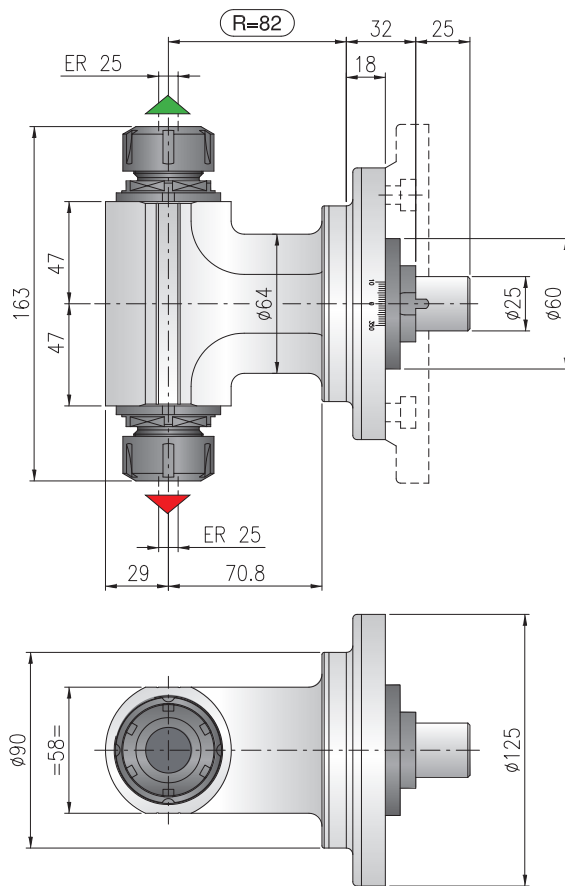
Collet
Pinza / Spannzange
ER-25 Ø 1/16 mm

*** 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



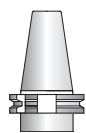
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



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



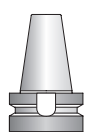
Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entegen Antriebsspindel



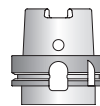
DIN-69871



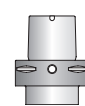
CAT



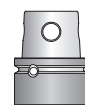
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



min⁻¹
8.000

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



Ø mm
16

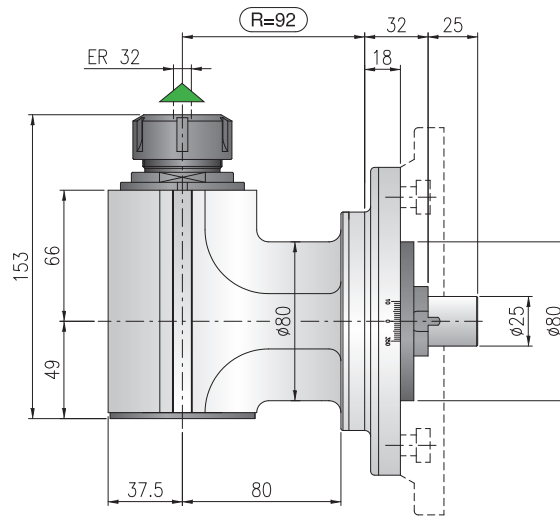
Arbor output
Porta fresa
Fräseraufnahme



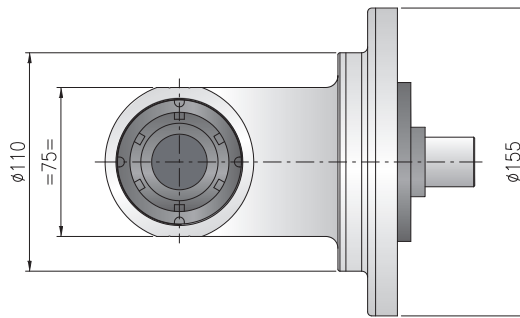
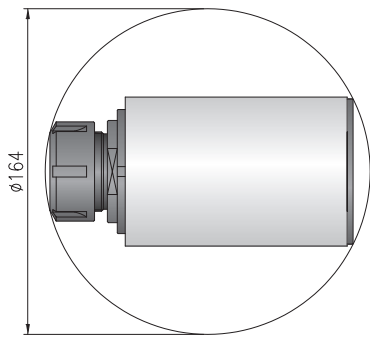
Ø mm max.
16

Weldon output
Weldon
Weldon-Aufnahme

T90-3,5



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



- 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 \varnothing 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 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	min ⁻¹ 6.000	\varnothing mm 27	\varnothing mm max. 20	ISO-30 HSK-40	ER-32/ER-20
Coolant through spindle Adduzione refrigerante interna Kühlmittelzufuhr durch Spindel	High speed optional RPM max. Opzione alta velocità RPM max. Drehzahl max.	Arbor output Porta fresa Fräseraufnahme	Welding output Weldon Weldon-Aufnahme	Quick Change Attacco rapido Schnellwechselaufnahme	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



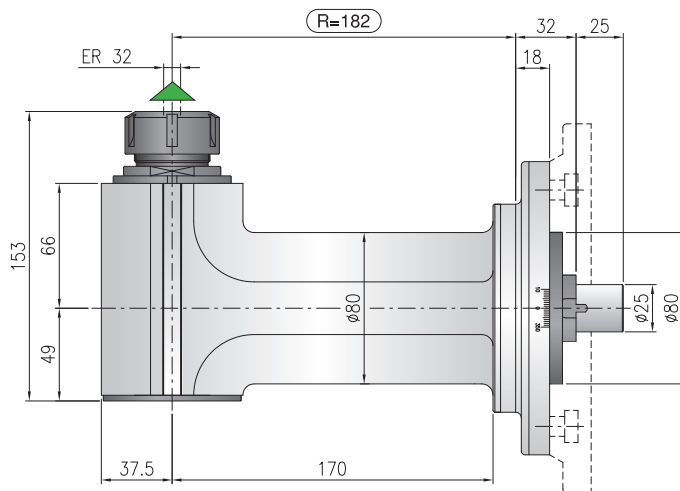
Weight
Peso / Gewicht
13,2 kg



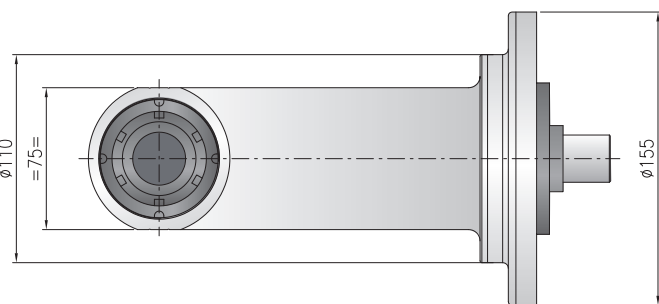
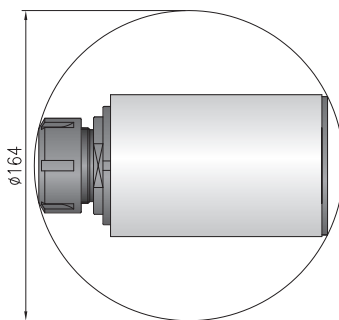
Collet
Pinza / Spannzange
ER-32 \varnothing 2/20 mm

*** 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



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.



\varnothing mm
27

Arbor output
Porta fresa
Fräseraufnahme



\varnothing mm max.
20

Welding output
Weldon
Weldon-Aufnahme



ISO-30 HSK-40

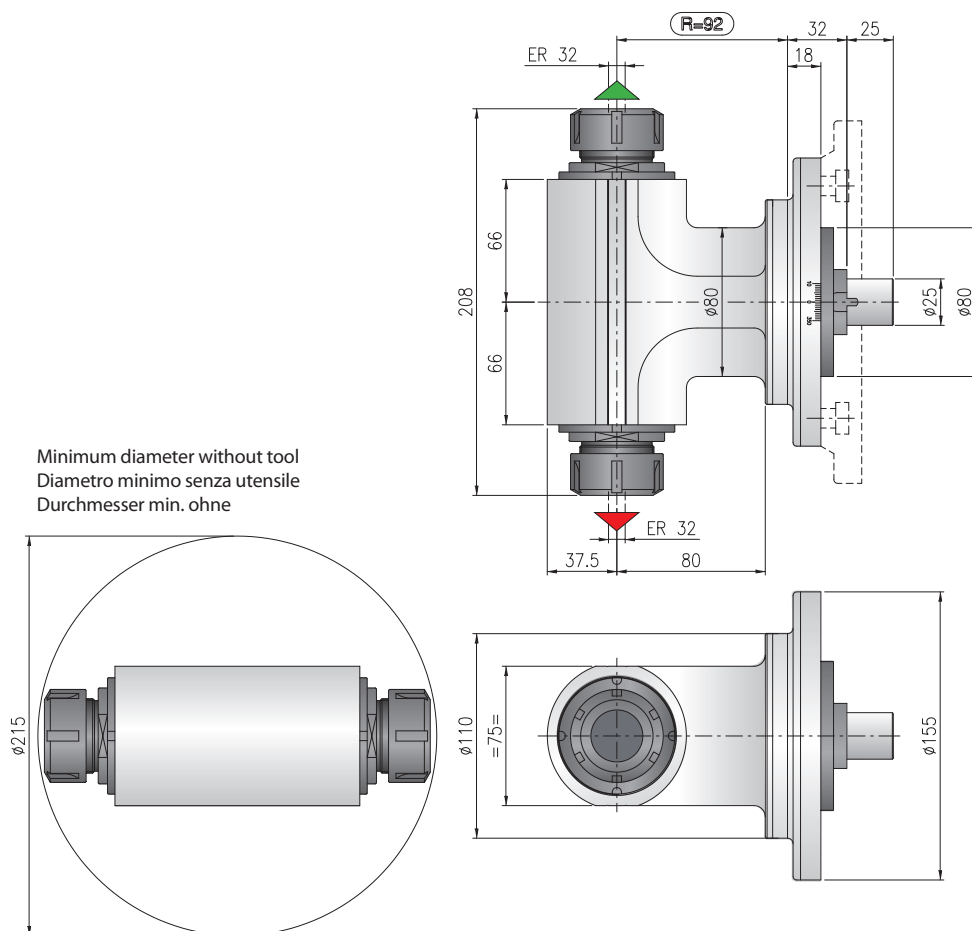
Quick Change
Attacco rapido
Schnellwechsellaufnahme



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:**

- 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 entegen 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

T90-4,5



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

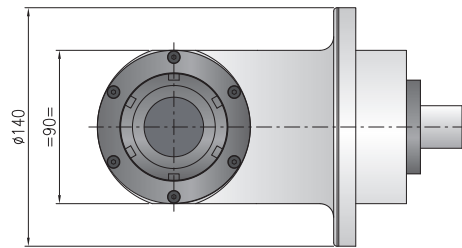
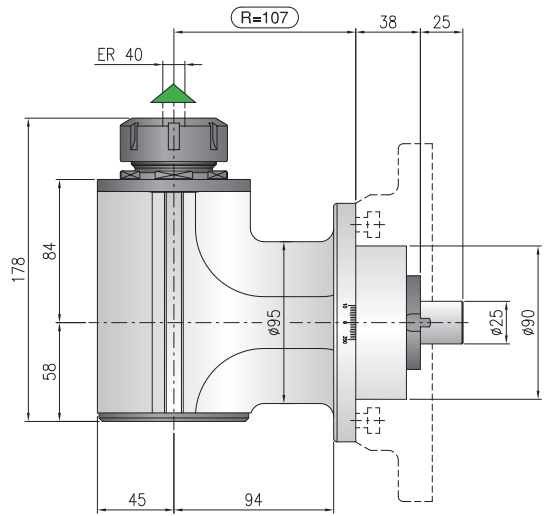
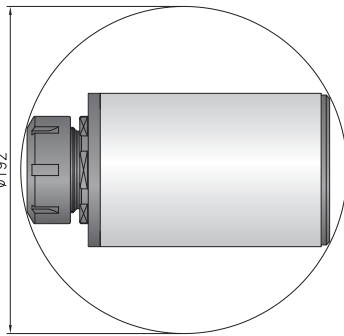


Collet
Pinza / Spannzange
ER-40 Ø 3/30 mm

*** 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

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



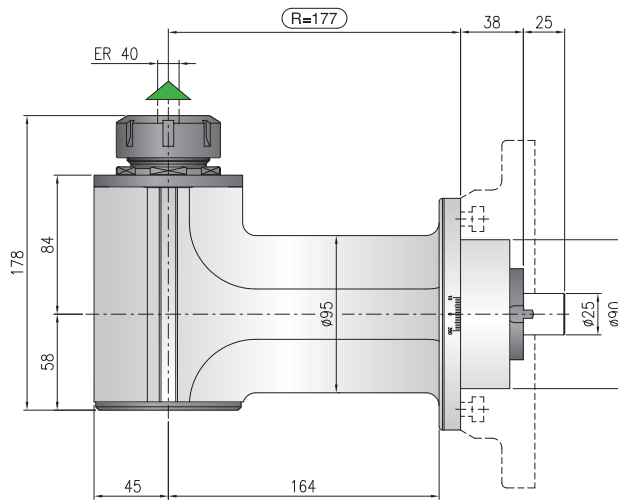
▲ Direction of rotation same as machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel

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

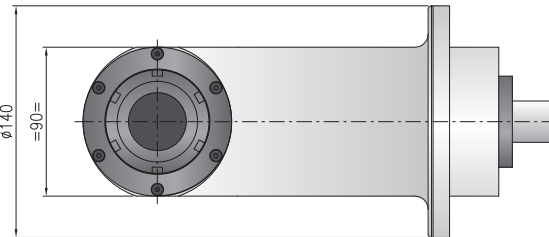
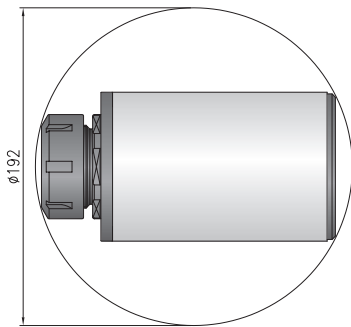
Option / Opzione / Option

bar max 12	min ⁻¹ 6.000	Ø mm 27	Ø mm max. 25	HSK-40	ER-40/ER-25
Coolant through spindle Adduzione refrigerante interna Kühlmittelzufuhr durch Spindel	High speed optional RPM max. Opzione alta velocità RPM max. Drehzahl max.	Arbor output Porta fresa Fräseraufnahme	Weldon output Weldon Weldon-Aufnahme	Quick Change Attacco rapido Schnellwechelaufnahme	Double output Doppia uscita Doppelter Ausgang

T90-4,5L



Minimum diameter without tool



- 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

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

Option / Opzione / Option

bar max 12	min ⁻¹ 6.000	Ø mm 27	Ø mm max. 25	HSK-40	ER-40/ER-25
Coolant through spindle Adduzione refrigerante interna Kühlmittelzufuhr durch Spindel	High speed optional RPM max. Opzione alta velocità RPM max. Drehzahl max.	Arbor output Porta fresa Fräseraufnahme	Weldon output Weldon Weldon-Aufnahme	Quick Change Attacco rapido Schnellwechselaufnahme	Double output Doppia uscita Doppelter Ausgang

T90-5



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



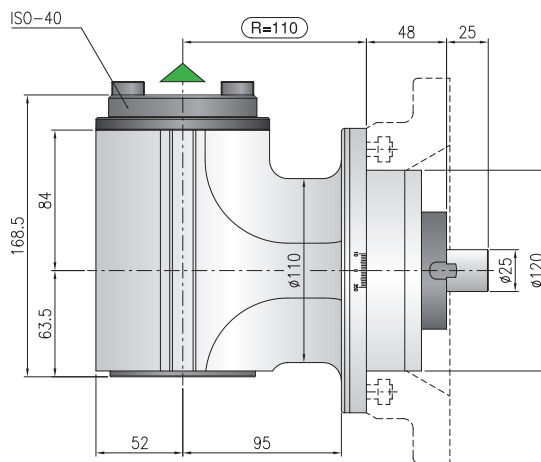
Weight
Peso / Gewicht
22 kg



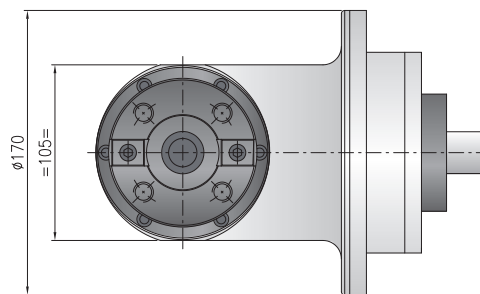
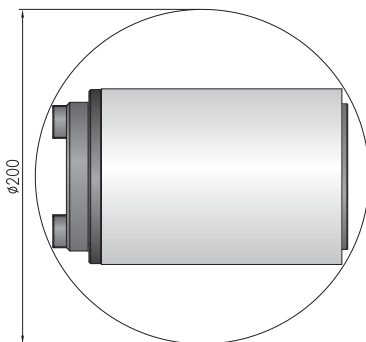
Collet
Pinza / Spannzange
ISO 40

*** 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



▲ 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
Addizione refrigerante interna
Kühlmittelzufuhr durch Spindel



min⁻¹
6.000

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



HSK-63

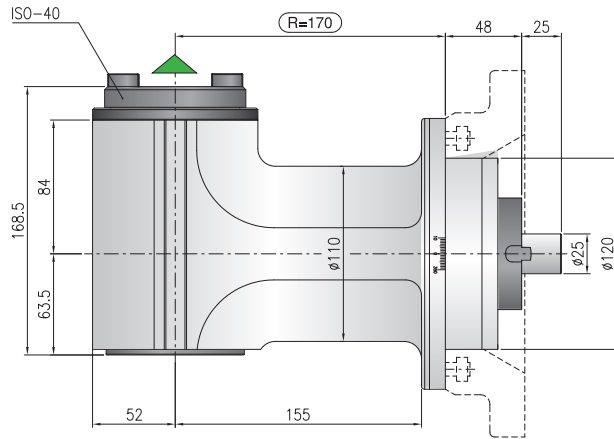
Quick Change
Attacco rapido
Schnellwechselfaufnahme



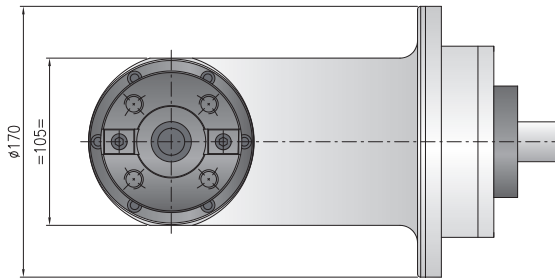
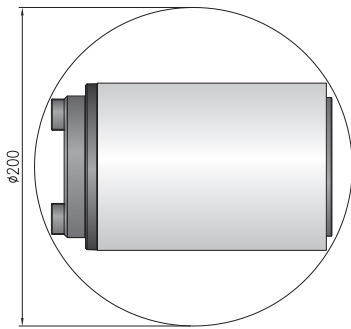
OIL

Oil lubrication
Lubrificazione
Ölschmierung

T90-5L



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



Ratio
 Rapporto / Verhältnis
1:1



RPM
 Velocità / Drehzahl max.
3.000 min⁻¹



Max. axial load
 Max. carico assiale / Max. Axialbe-
 lastung
1.800 N



Torque
 Momento torcente / Drehmo-
 ment
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

▲ 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
 Addizione 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
 Schnellwechselladung



OIL

Oil lubrication
 Lubrificazione
 Ölschmierung

TCU 2,5



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
4.000 min⁻¹



Max. axial load
Max. carico assiale / Max. Axialbe-
lastung
480 N



Torque
Momento torcente / Drehmo-
ment
18 Nm



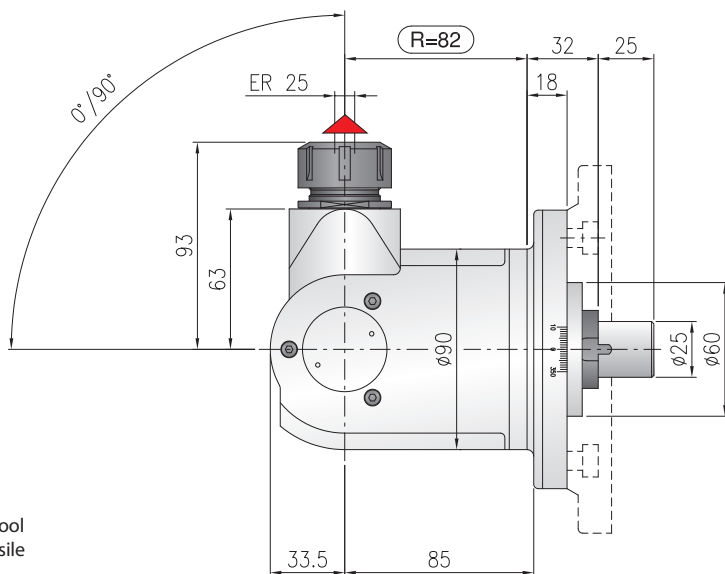
Weight
Peso / Gewicht
7 kg



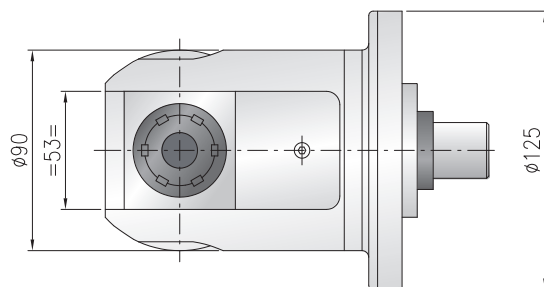
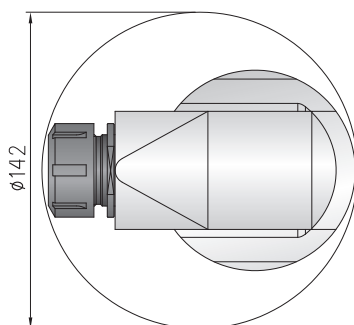
Collet
Pinza / Spannzange
ER-25 Ø 1/16 mm

*** STANDARD EQUIPMENT INCLUDES:**

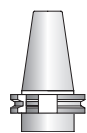
- Special bag - wrenches - Grease tube - Instruction book
- Bauletto - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Spezialtasche - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



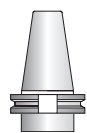
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



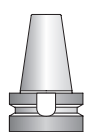
▲ Direction of rotation opposite to machine spindle / senso di rotazione contrario al mandrino / Drehrichtung entgegen Antriebsspin-



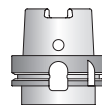
DIN-69871



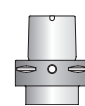
CAT



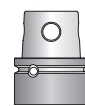
MAS-BT



HSK



CAPTO



KM

Shank/Cono/Aufnahme

Option / Opzione / Option



min⁻¹
6.000

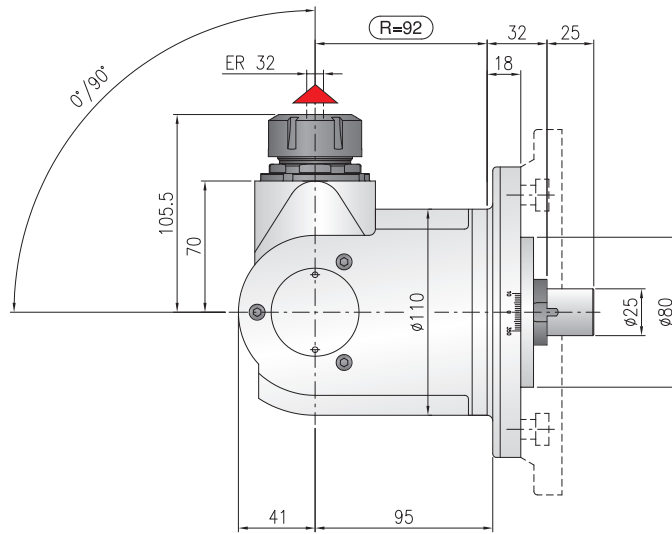
High speed optional RPM max.
Opzione alta velocità RPM max.
Drehzahl max.



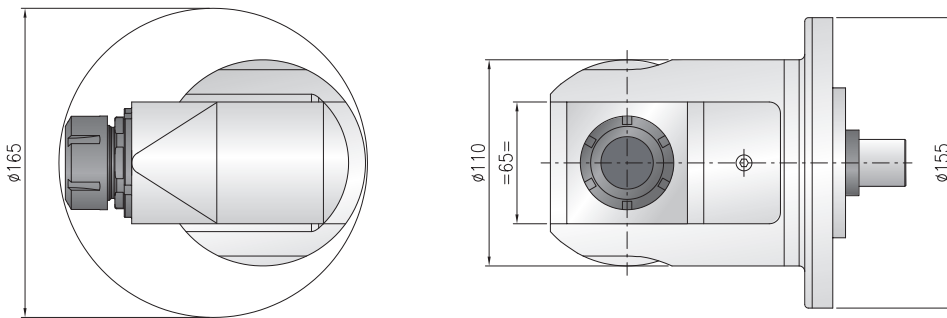
Ø mm max.
16

Weldon output
Weldon
Weldon-Aufnahme

TCU 3,5



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



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 entgegengesetzt Antriebsspin-

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 max.
20

Weldon output
 Weldon
 Weldon-Aufnahme

T90-8 HS

NEW



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



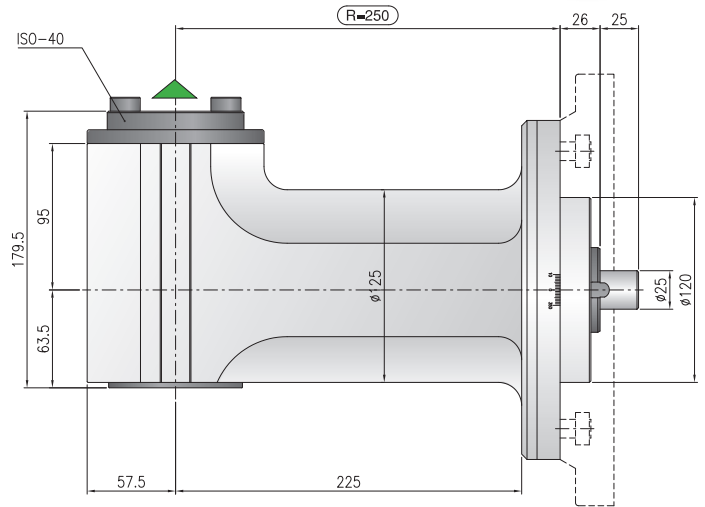
Weight
Peso / Gewicht
33 kg



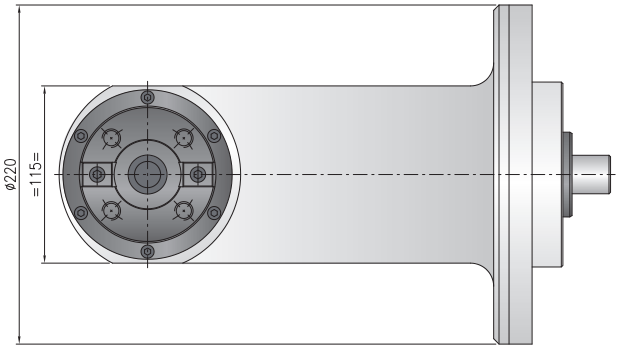
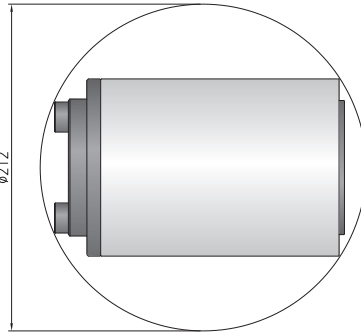
ISO 40

*** STANDARD EQUIPMENT INCLUDES:**

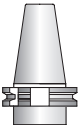
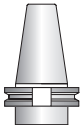
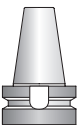
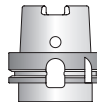


- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



Minimum diameter without tool



▲ Direction of rotation same as machine spindle

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

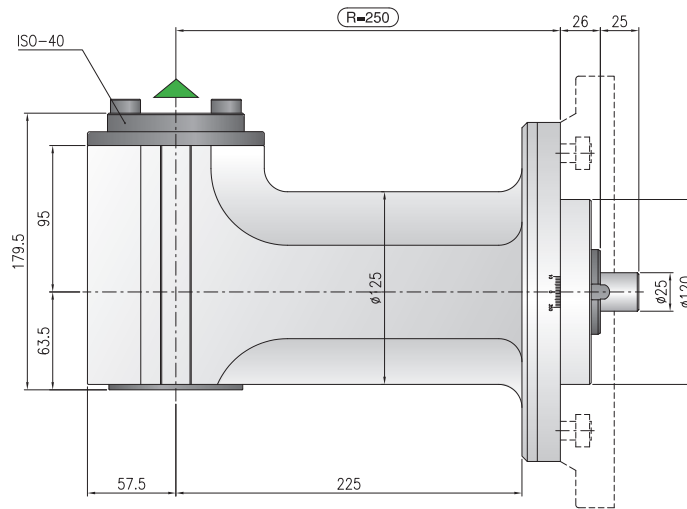
Quick Change
Attacco rapido
Schnellwechselaufnahme



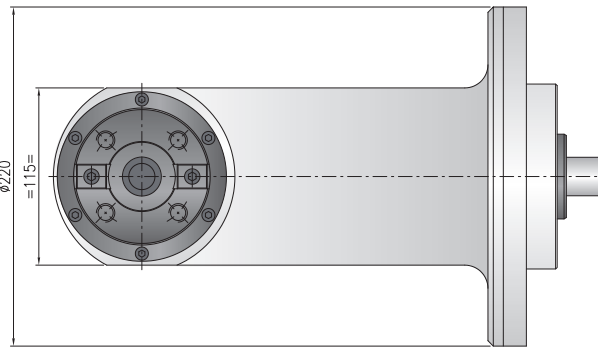
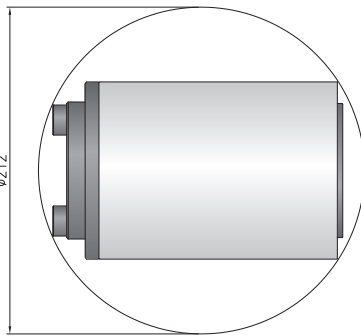
OIL

Oil lubrication
Lubrificazione
Ölschmierung

T90-8 HP



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



- 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 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



bar max
40

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



HSK-63

Quick Change
 Attacco rapido
 Schnellwechselaufnahme



OIL

Oil lubrication
 Lubrificazione
 Ölschmierung

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



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



Max. axial load
Max. carico assiale / Max. Axialbe-
lastung
2.400 N



Torque
Momento torcente / Drehmo-
ment
100 Nm

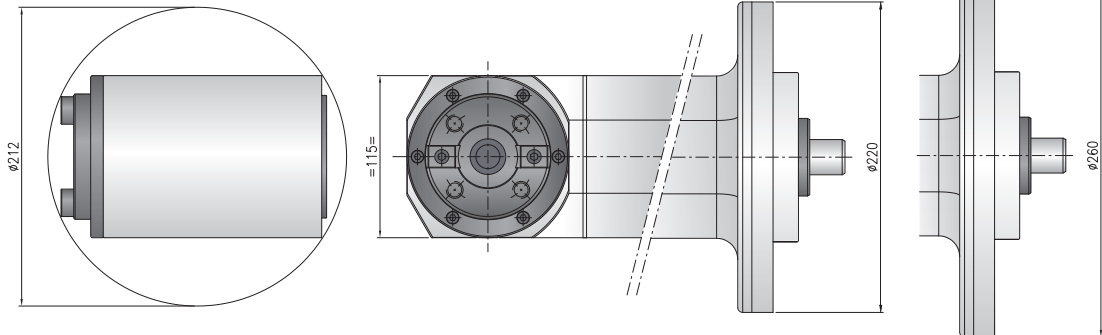


Collet
Pinza / Spannzange
ISO/BT 40

R= 450 / 650

R= 850

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

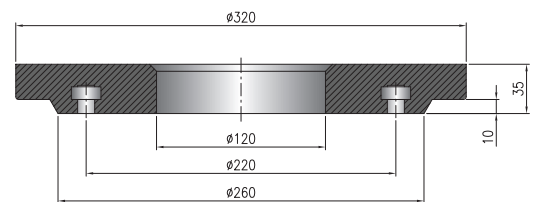
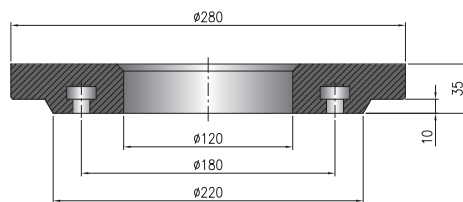


R= 450 / 650

R= 850

* STANDARD EQUIPMENT INCLUDES:

- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- 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



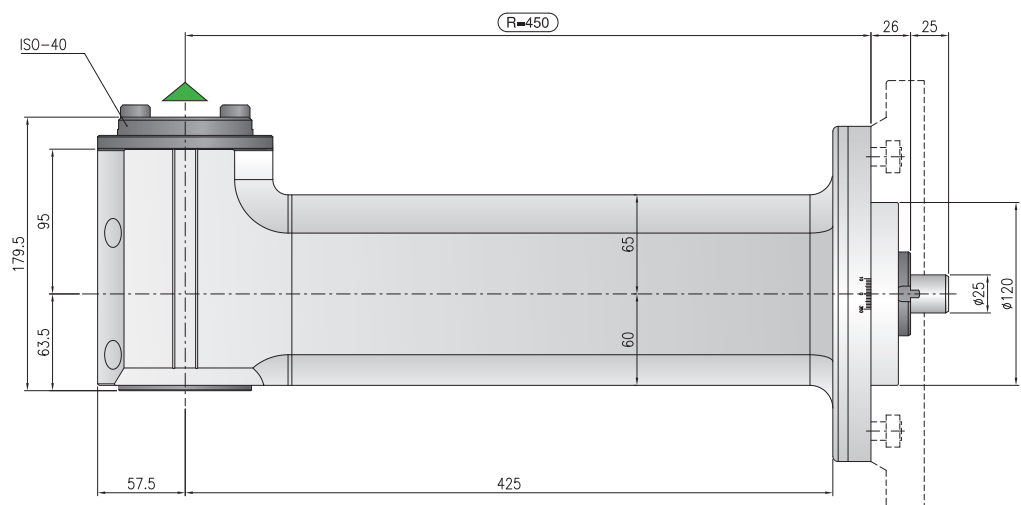
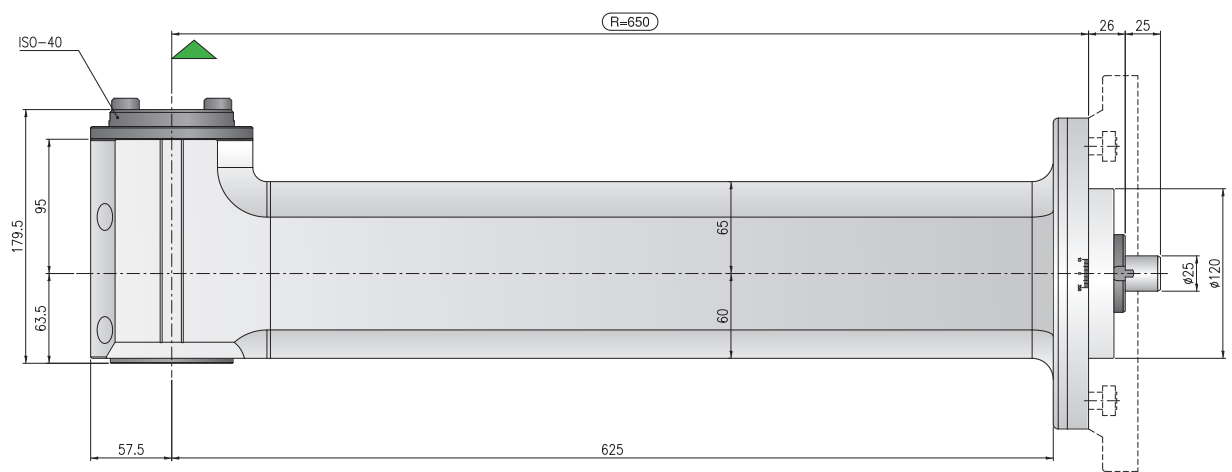
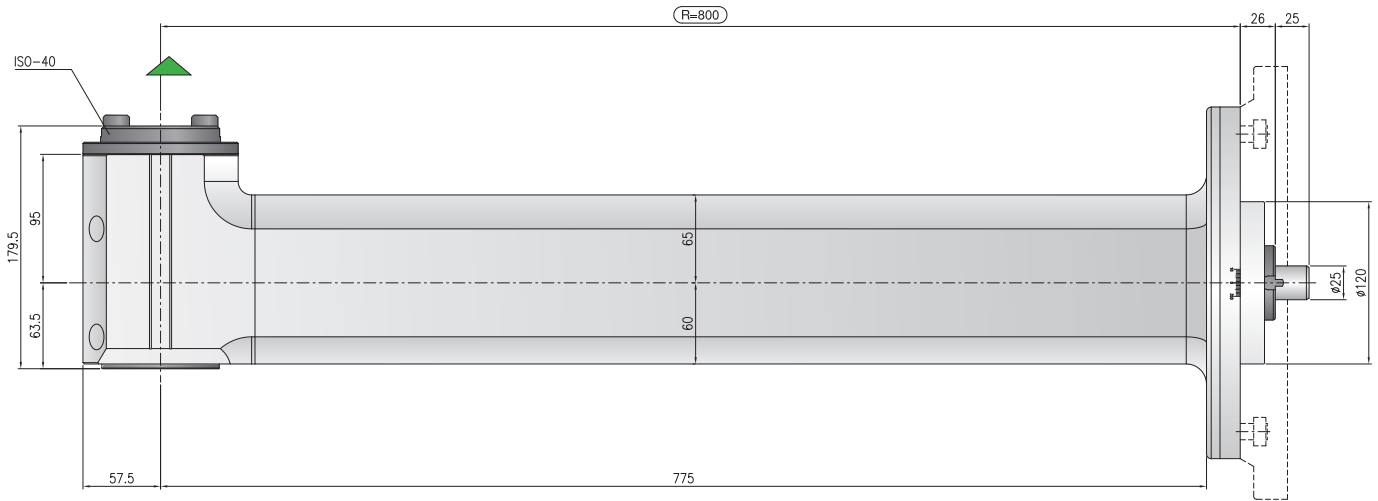
bar max
40

Coolant through spindle
Adduzione refrigerante interna
Kühlmittelzufuhr durch Spindel



HSK-63

Quick Change
Attacco rapido
Schnellwechsellafnahme



T90-10



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



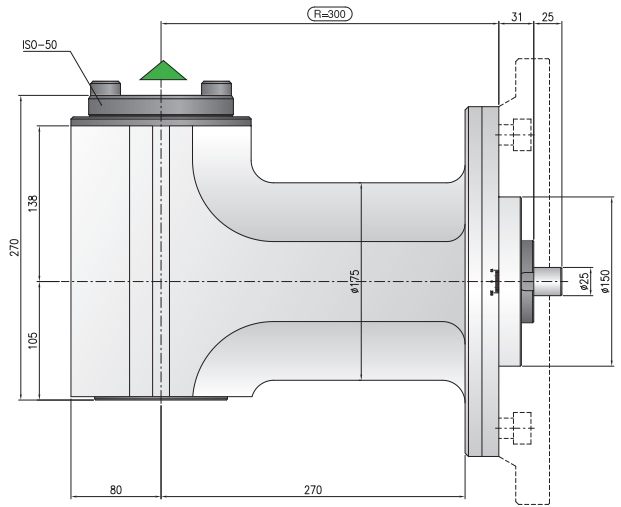
Weight
Peso / Gewicht
77 kg



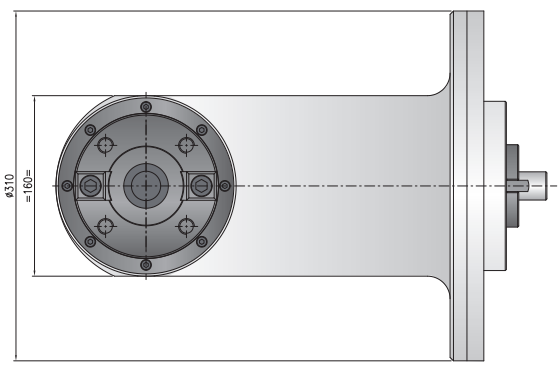
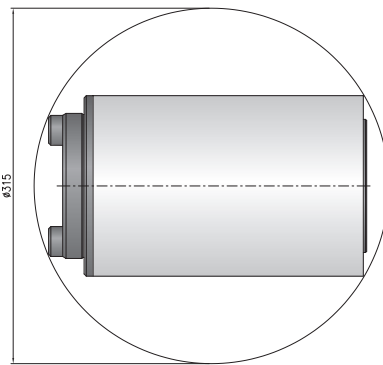
Collet
Pinza / Spannzange
ISO/BT 50

*** 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



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



▲ 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

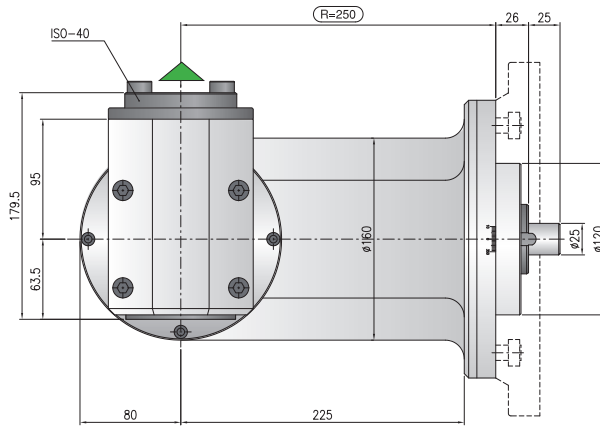
Quick Change
Attacco rapido
Schnellwechsellaufnahme



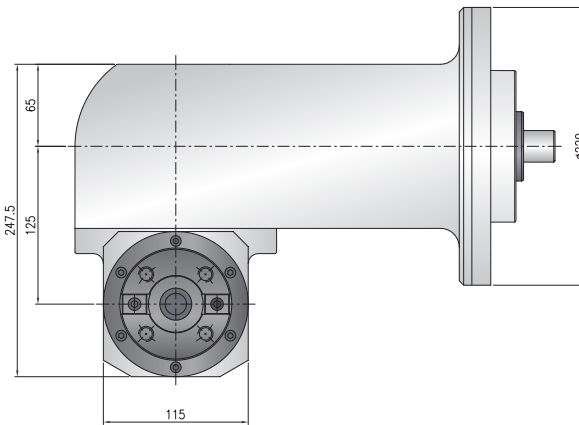
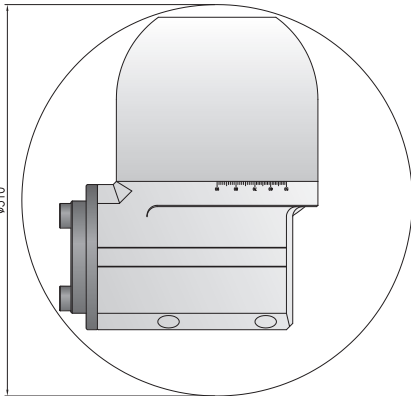
OIL

Oil lubrication
Lubrificazione
Ölschmierung

TDU-8



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



- 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



OIL

Oil lubrication
 Lubrificazione
 Ölschmierung

TDU-10



Ratio
Rapporto / Verhältnis
1:1



RPM
Velocità / Drehzahl max.
3.000 min⁻¹



Max. axial load
Max. carico assiale / Max. Axialbe-
lastung
3.300 N



Torque
Momento torcente / Drehmo-
ment
250 Nm



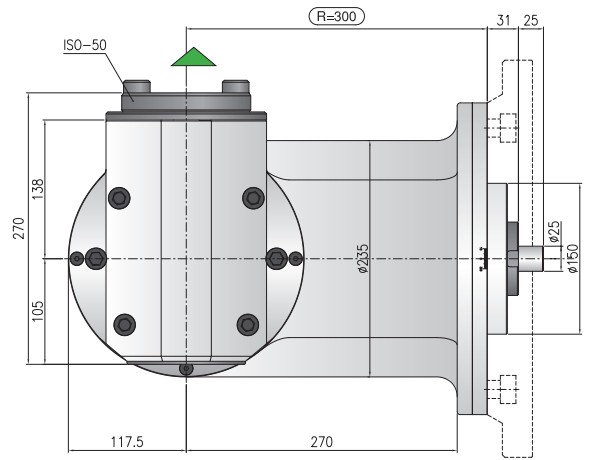
Weight
Peso / Gewicht
121 kg



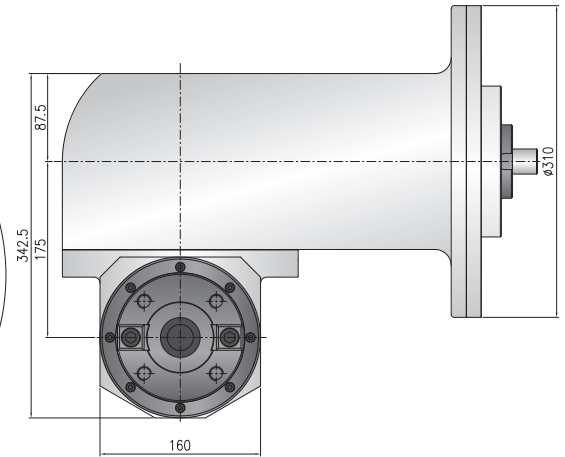
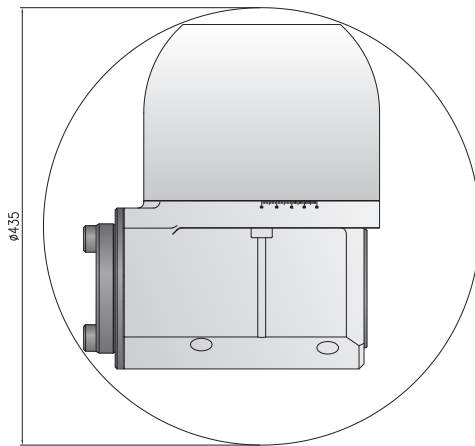
Collet
Pinza / Spannzange
ISO/BT 50

*** STANDARD EQUIPMENT INCLUDES:**

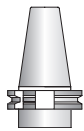
- Wooden case - wrenches - Grease tube - Instruction book
- Cassa legno - Ghiera ER chiavi di servizio - Tubetto di grasso - Libro istruzioni
- Holzkiste - Schraubenschlüssel - Tube mit Fett - Bedienungsanleitung



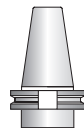
Minimum diameter without tool
Diametro minimo senza utensile
Durchmesser min. ohne



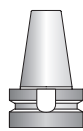
▲ Direction of rotation same as to machine spindle / senso di rotazione uguale al mandrino / Drehrichtung gleich wie Antriebsspindel



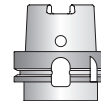
DIN-69871



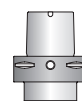
CAT



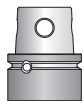
MAS-BT



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
Schnellwechselladung



OIL

Oil lubrication
Lubrificazione
Ölschmierung

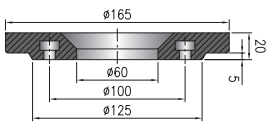
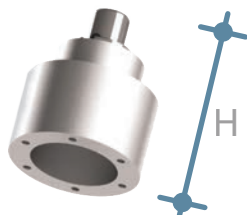
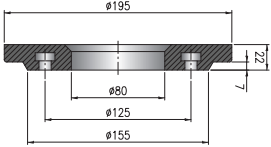
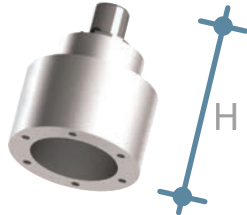
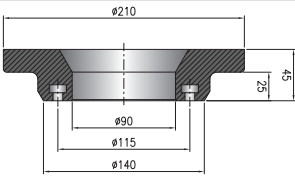
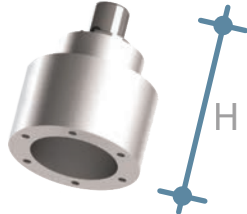
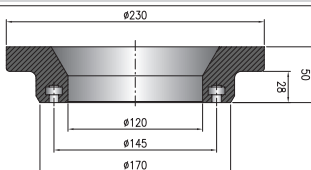
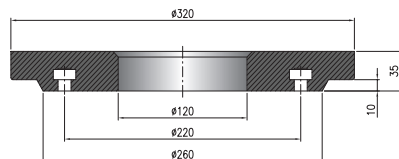
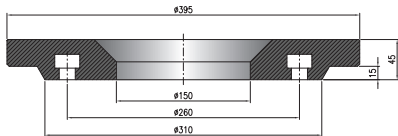
LINEA MODULAR

La serie di teste MODULAR permette di variare la lunghezza utile del corpo tramite l'aggiunta di moduli di prolunga. E' possibile utilizzare fino a 2 moduli consecutivi da montare come indicato.

With MODULAR Series of heads there is the possibility of extending the total length of the body by adding extension spacers.

We suggest to use no more than 2 extensions together.

Das Modularsystem der MODULAR-Serie-Köpfe ermöglicht es, die Gesamtlänge durch Anwenden von Verlängerungsmodulen zu erweitern.

	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	 <p>54206000</p>		55 mm	90006010
			110 mm	90006A11
			150 mm	90006A15
			250 mm	90006A25
T90-3,5	 <p>54208000</p>		55 mm	90008010
			110 mm	90008A11
			150 mm	90008A15
			250 mm	90008A25
			360 mm	90008A36
450 mm	90008A45			
T90-4,5	 <p>54209001</p>		110 mm	90009000
			150 mm	90009050
	T90-5	T90-8 / TDU-8	T90-10 / TDU-10	
	 <p>54212004</p>	 <p>542120000</p>	 <p>54215000</p>	

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



ACCESSORI / ACCESORIES / ZUBEHÖR


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						

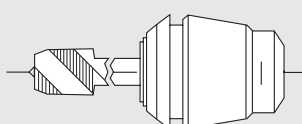
MASCHIATURA / TAPPING / GEWINDESCHNEIDEN

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.

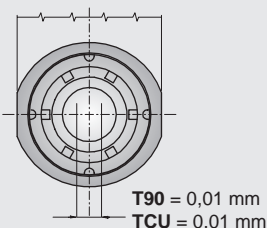
For tapping operations, all standard heads can be equipped with axially-compensating collets. These collets are fully interchangeable with the normal collets and allow the tap to move axially thereby compensating for any feed error and facilitating reversal of direction of rotation. A single head can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

Alle Standardköpfe können für das Gewindeschneiden mit axialausgleichenden Spannzangen ausgerüstet werden. Diese Spannzangen sind mit den normalen Spannzangen voll kompatibel und ermöglichen dem Gewindeschneidewerkzeug sich axial zu bewegen und damit etwaige Einspeisungsfehler auszugleichen und die Richtungsumkehr der Rotation zu erleichtern. Ein einzelner Kopf kann somit

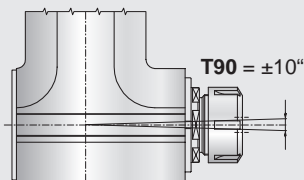
Head / Tipo testa / Kopf	Collet / Tipo Pinza / Spannzange	Capacity / Capacità / Durchmesser	Shift / Corsa / Weg
 T90-1,5	ET-1-16	M1-M6	7 mm
T90/TCU-2,5	ET-1-25	M1-M12	8 mm
T90/TCU-3,5	ET-1-32	M4-M16	10 mm
T90-4,5	ET-1-40	M6-M20	13 mm

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.

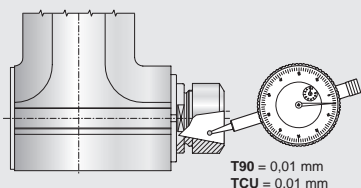
DATI TECNICI / TECHNICAL DATA / TECHNISCHE DA-



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



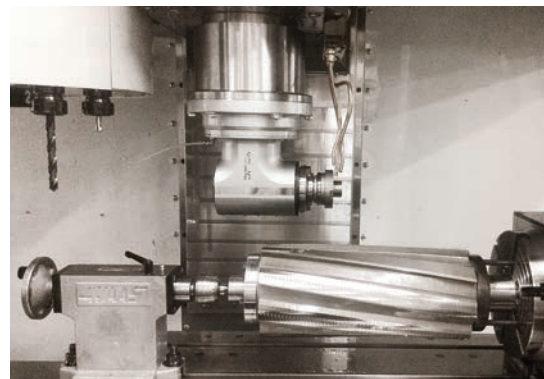
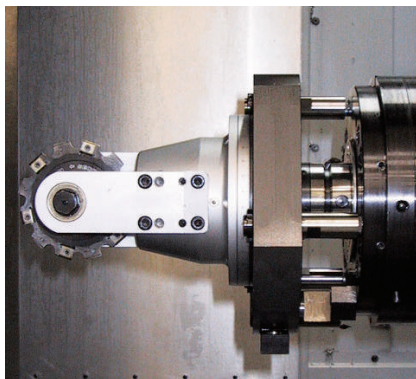
Tool spindle angular variation relative to 90° (theoretical value)
Errore angolare del mandrino portautensile rispetto al 90° teorici
Winkelabweichung relativ zu 90° (theoretisch)



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

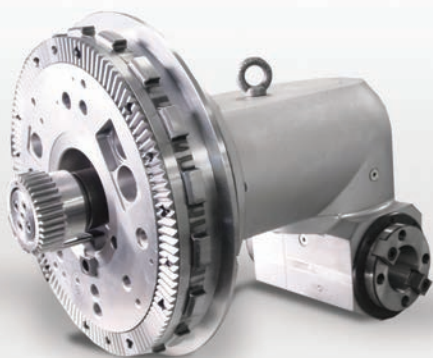
APPLICAZIONI SPECIALI

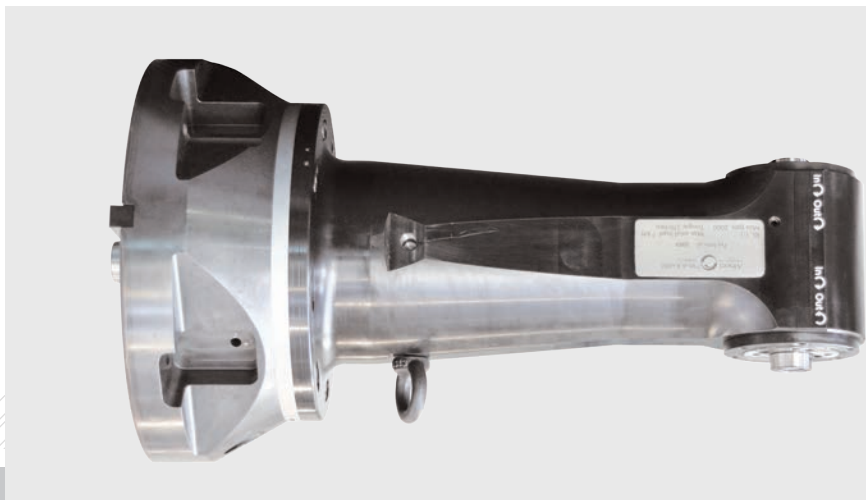
SPECIAL APPLICATIONS / SONDERANWENDUNGEN



Per le realizzazioni speciali, il nostro staff tecnico e' a disposizione per consigliarvi la soluzione piu' idonea alle vostre esigenze.

For any special production need, our technical department is at your disposal to study new applications and customized solutions.





Le caratteristiche tecniche indicate in questo catalogo non sono impegnative e possono essere modificate senza preavviso.

The technical data contained herein are given for information only and are subject to change without notice.

Die angegebenen technischen Daten sind unverbindlich und können jederzeit verändert werden.



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