TESTE MULTIPLE MD®

Made in Italy

FH *Facing Heads* · **BAH** *Big Angle Heads* · **TA.CP** *Angle Heads* · **TA** *Angle Heads* · **MOx** *Spindle Speeders* · **HT** *Turret Heads* · **VH** *Variable axis heads* · **TSI/TSX** *Twin spindle milling heads* · **T** *Adjustable joint multi spindle heads* · **MT-TC-TC3** *Fixed multi spindle heads*

L'AZIENDA

Una realtà imprenditoriale caratterizzata da elevata esperienza, una forte attenzione verso nuove tecnologie e la continua ricerca di soluzioni sempre più avanzate: questi, in sintesi, i punti di forza di O.M.G. Srl, azienda che nasce negli anni '60 come laboratorio di piccole dimensioni e cresce fino a diventare oggi un'affermata realtà industriale a livello nazionale e internazionale.

Forte grazie alla vasta gamma di Teste ad Angolo in continua crescita, ma con la volontà di affrontare nuove sfide, allarga la propria produzione con l'introduzione di un nuovo prodotto: le Teste a Sfacciare. Prodotti sempre più innovativi che offrono soluzioni sempre più avanzate e personalizzate ad hoc, progettati e costruiti con quel know how tecnologico e culturale accumulato dall'azienda nel corso degli anni.

O.M.G. Srl

THE COMPANY

An enterprising culture, characterized by long experience, a strong focus on new technologies, and a continuous search for more and more advanced solutions. These are the strengths of O.M.G. Srl, a company that was founded in the 1960s as a small workshop and has grown to become a well established industrial presence at a national and international level.

Thanks to our vast, continuously growing range of Angle Heads, and our desire to face new challenges, our production capabilities have expanded with the introduction of a new product: the Facing Heads. New innovative products that offer increasingly advanced and customized solutions, designed and built with the technological and cultural know-how accumulated by O.M.G. Srl over many years.

O.M.G. Srl

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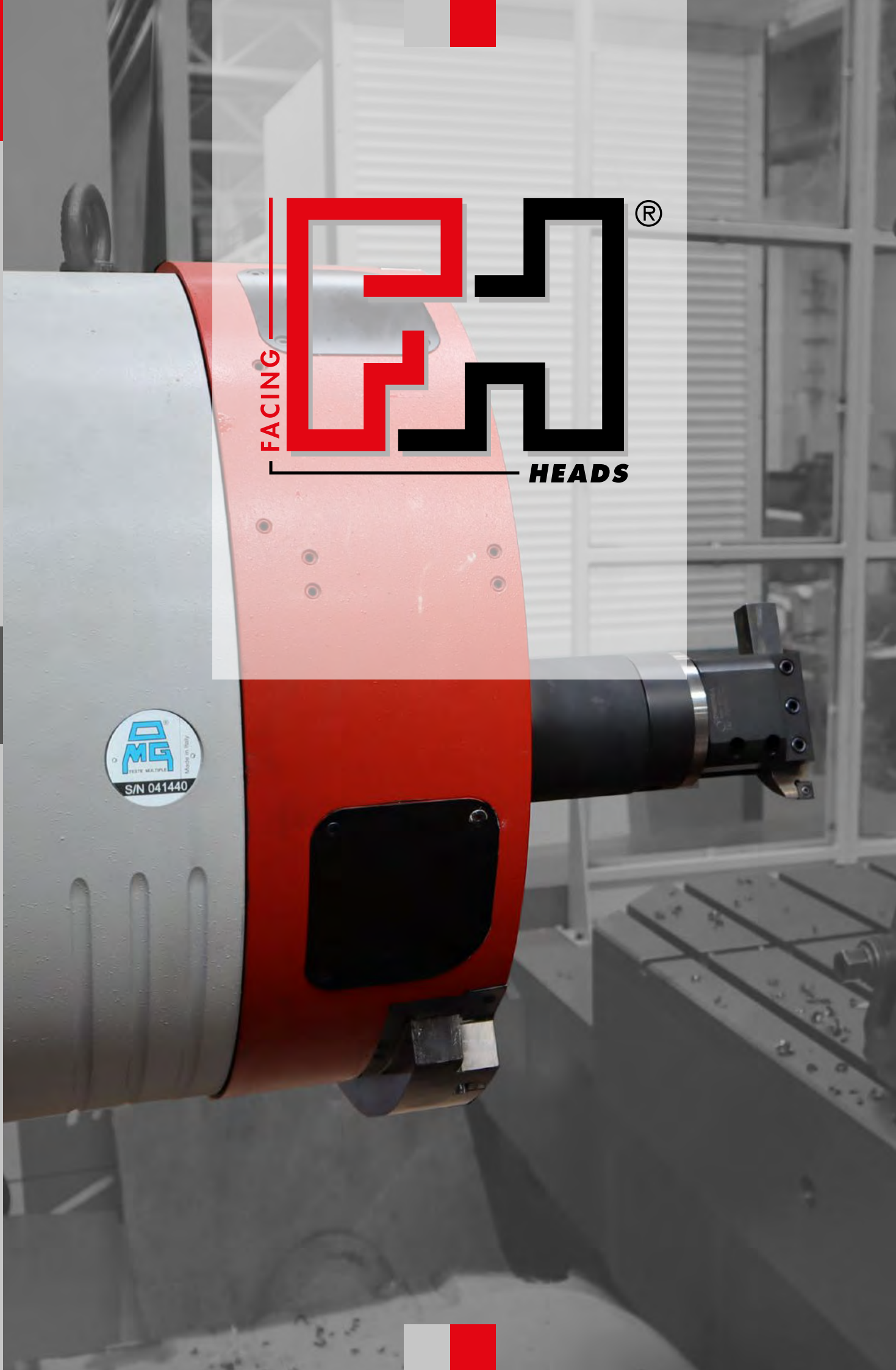
FACING HEADS



Le teste a sfacciare serie FH possono essere applicate sia manualmente che automaticamente alle macchine utensili quali alesatrici, centri di lavoro o macchine speciali.
Le teste a sfacciare serie FH nascono con il preciso obiettivo di superare i limiti di coppia, precisione e manutenzione delle attuali soluzioni presenti sul mercato.

Grazie ad un'architettura brevettata ed all'esperienza e qualità che contraddistingue la OMG nella progettazione e produzione di teste accessorie, le teste a sfacciare serie FH permettono di eseguire le lavorazioni meccaniche richieste con assoluta precisione ed affidabilità.

La soluzione OMG si contraddistingue per 4 caratteristiche fondamentali:

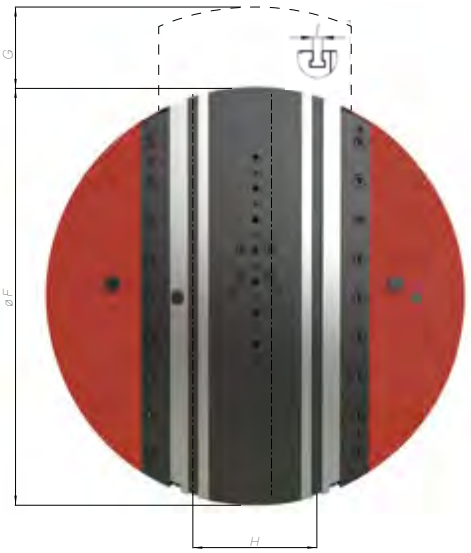
- Rapporto di riduzione 3:1, 4:1 o 6:1 che consente un aumento importante della coppia di uscita
- Sistema di azionamento della slitta montato direttamente sulla parte rotante per la massima rigidità di trasmissione e l'assenza di giochi
- Sistema di misura diretto per la lettura della posizione dell'asse U che permette lavorazioni di estrema precisione
- Bloccaggio idraulico della slitta per la massima rigidità e precisione nelle operazioni di barenatura

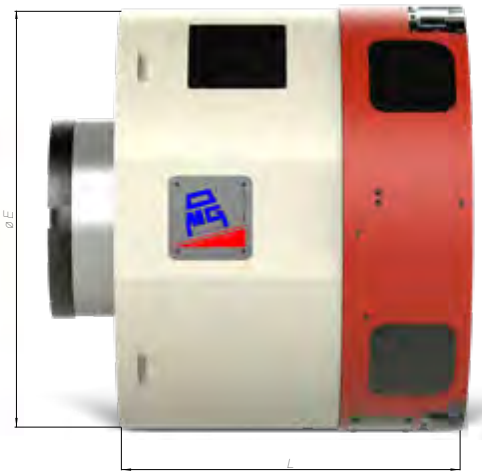
The FH Facing Heads can be applied manually or automatically to the machine tool spindle of boring machines, machining centers and special machines.
The FH series heads are designed to overcome the torque, precision and maintenance limits of the current solutions available on the market.

Thanks to a patented design and the experience and quality that characterize OMG in the design and production of Heads, the FH series Facing Heads allow you to perform the required machining operations with absolute precision and reliability.

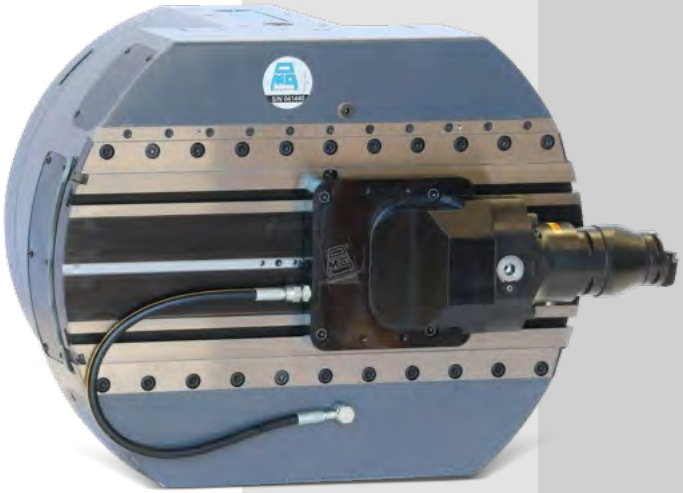
O.M.G.'s solution stands out for 4 main features:

- *Gear reduction ratios 3:1, 4:1 or 6:1 allow applications on machine tools with relatively low spindle torque*
- *The radial positioning system of the slide is directly mounted to the rotating area of the head for maximum rigidity and no backlash*
- *A direct measurement system for reading the position of the U axis allows extremely precise machining*
- *Hydraulic clamping of the slide for extreme rigidity and precision during boring operations*





			FH400 SERIES	FH540 SERIES			FH640 SERIES			FH800 SERIES	
CARATTERISTICHE TECNICHE *TECHNICAL DATA*			400	540/540	540/640	540/800	640/640	640/800	640/1000	800/800	800/1000
DIAMETRO BASE *BASE DIAMETER*	E	mm	460	540			640			800	
DIAMETRO *DIAMETER*	F	mm	400	540	640	800	640	800	1000	800	1000
RAPPORTO DI RIDUZIONE *RATIO*			3:1	4:1						4/6:1	
CORSA RADIALE *RADIAL STROKE*	G	mm	115	160	205	290	205	290	390	290	390
DISTANZA CAVE A T *T SLOT DISTANCE*	H	mm	125	160						200	
CAVA T *T SLOT*	I	mm	10	12						14	
ALTEZZA *HEIGHT*	L	mm	380	420						538	
VELOCITÀ MASSIMA IN USCITA *MAXIMUN OUTPUT SPEED*		RPM	500	300	280	260	280	260	200	200	170
VELOCITÀ IN TRASLAZIONE *RADIAL SPEED*		mm/ min		400							
MASSIMA COPPIA IN USCITA *MAXIMUN OUTPUT TORQUEE*		Nm	4000	6000			8000			10000	
MASSIMA FORZA RADIALE *MAXIMUN RADIAL FORCE*		N	15000	20000			25000			30000	
MASSIMA SEZIONE DI TRUCIOLO *MAXIMUN CHIP REMOVAL*		mm^2	5	9			10			15	
PRECIAIONE POSIZIONAMENTO *POSITION ACCURACY*		µm		2							
RIPETIBILITÀ DI POSIZIONAMENTO *REPEATABILITY*		µm		2							
DIREZIONE POSIZIONAMENTO *POSITIONING DIRECTION*				BIDIREZIONALE/*BIDIRECTIONAL*							
PESO *WEIGHT*		kg	280	480	490	510	560	660	740	1300	1400
DIAMETRO MASSIMO DI TORNITURA *MAX. TURNING DIAMETER*		mm	640	870	1060	1390	1060	1390	1750	1390	1790
DIAMETRO MASSIMO DI SFACCIATURA *MAX. FACING DIAMETER*		mm	910	1200	1400	1740	1400	1740	2140	1740	2140



FH GALLERY

BAH

BIG ANGLE HEADS

Le teste ad angolo qui esposte, sono state progettate e costruite per soddisfare le esigenze di equipaggiamento di macchine utensili di grandi dimensioni utilizzate in diversi settori:
Trasporto Pesante, Aeronautico, Navale, Militare, Ferroviario, Energetico, Stampi, Automotive.

La tecnologia applicata, i materiali, i componenti, il montaggio sono ai massimi livelli ed i collaudi statici e dinamici certificati garantiscono nel tempo le migliori performance.
Le caratteristiche principali di questi prodotti, si possono così sinteticamente riassumere:

- corpo ricavato dal pieno per ottenere la massima precisione e stabilità
- la trasmissione del moto è con ingranaggi Gleason ad evolvente rettificato. Normalmente il rapporto di trasmissione è 1:1, ma può essere sia in moltiplica che in riduzione a seconda delle esigenze di trasmissione di coppia
- attacchi portautensili standard: DIN69871 - DIN 2080 - BT - HSK - Coromant Capto o altri a richiesta
- il bloccaggio del portautensile sul mandrino può essere di due tipologie: manuale o automatico
- la adduzione del refrigerante può essere per il centro del portautensile. La pressione oggi raggiungibile è di 100 Bar ed è prevista la pulizia del portautensile tramite aria. In ogni caso, attorno al mandrino, vi sono sempre alcuni ugelli direzionabili. Inoltre il mandrino è sempre pressurizzato
- cuscinetti mandrino lubrificati con grasso long life
- ingranaggi normalmente lubrificati a grasso, separato dal grasso cuscinetti. In caso di alte velocità la lubrificazione è a circolazione di olio
- i controlli elettrici sono interni alla testa e con accesso facilitato

The angle heads exhibited here are designed and built to satisfy the tooling requirements of very large machines used in a variety of industries:
Heavy goods vehicles, Aeronautics, Shipping, Military, Railroad, Energy, Moulds and Automotive.

The applied technology, the materials, the parts and assembly all ensure top levels; the certified static and dynamic tests guarantee the best possible performance over time.
The main features of these products may be summarised as follows:

- *body made of cast iron to ensure maximum precision and stability*
- *motion transmitted by means of Gleason ground involute gears. The transmission ratio is normally 1:1, but it may be in both multiplication and in reduction based on torque transmission requirements*
- *standard tool-holder couplings: DIN69871 - DIN 2080 - BT - HSK - Coromant Capto or others on request*
- *the tool holder can be locked on the spindle in two ways: manually or automatically.*
- *the coolant may be supplied in the centre of the tool holder. The pressure currently reached is 100 Bar and the tool holder is cleaned with air. Whatever the case, there are always some turning nozzles around the spindle. Furthermore, the spindle is always pressurised*
- *spindle oblique contact precision bearings lubricated with long life grease*
- *gears normally lubricated with grease. For high speeds, the lubrication system is oil circulation*
- *all the electrical control devices are inside the head and are easily accessed*

SERIE BAH

TIPOLOGIE DI TESTE • *HEADS TYPE*

FA
FORK AUTOMATIC

OH
ORTOGONAL WITH HIRTH

TWA
TWIN AUTOMATIC

YA
Y-AXIS

SE
SPINDLE EXTENSION WITH ATC BY MACHINE SPINDLE

SEH
SPINDLE EXTENSION WITH HYDRAULIC ATC

FA

YA

FT

OH

SE

TWA

SEH

SERIE BAH

TIPOLOGIE DI TESTE · *HEADS TYPE*

OC

EXA

FM

EXM

FA

RA

OC
ORTOGONAL CONTINUOUS

EXA
EXTENDED AUTOMATIC

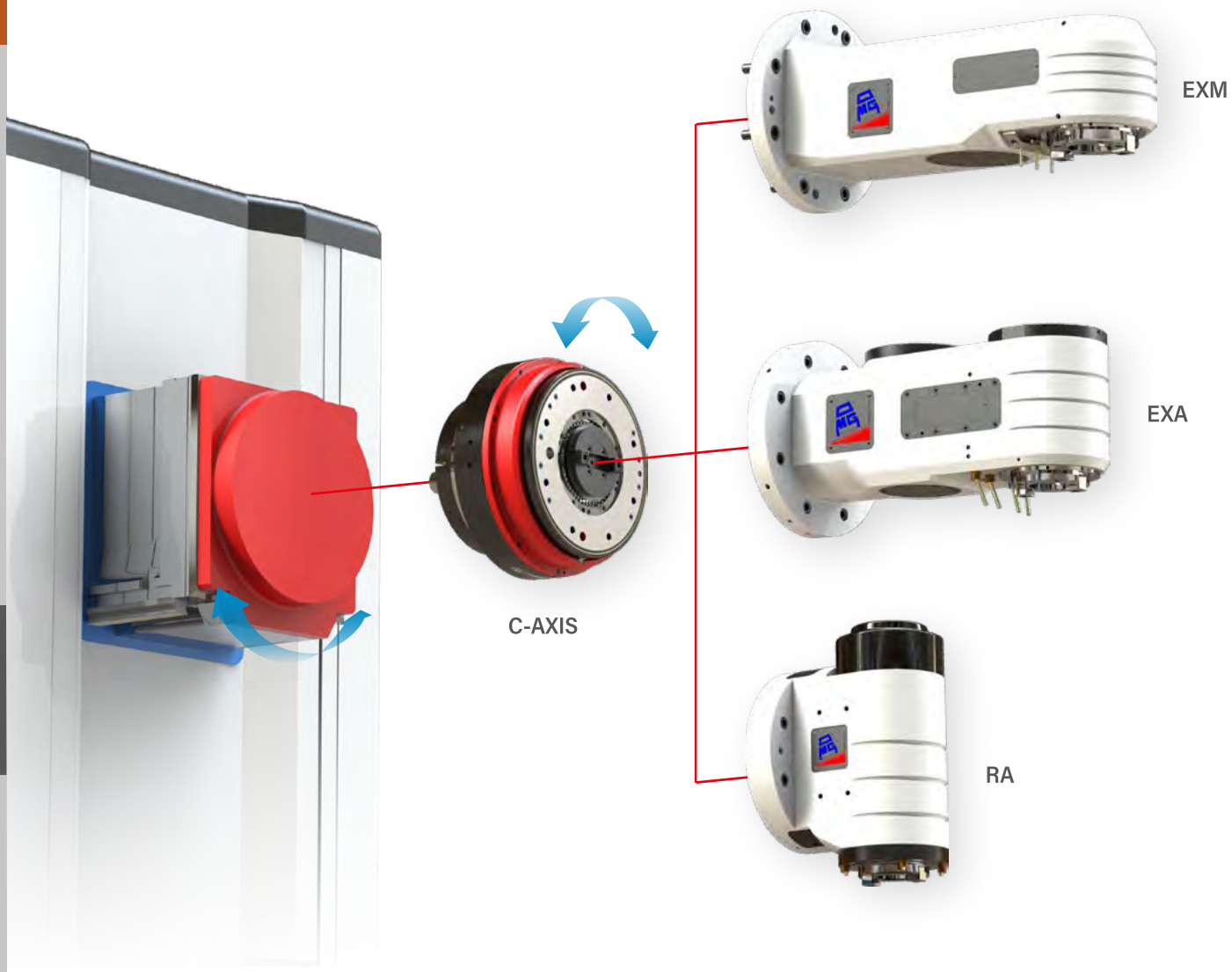
FM
FORK MANUAL

EXM
EXTENDED MANUAL

FA
FORK AUTOMATIC

RA
RIGHT ANGLE HEAD

SISTEMA MODULARE PER APPLICAZIONI FLESSIBILI
MODULAR SYSTEM FOR FLEXIBLE APPLICATION



Con il sistema modulare si possono eseguire varie combinazioni, scegliendo di conseguenza tra varie opzioni:

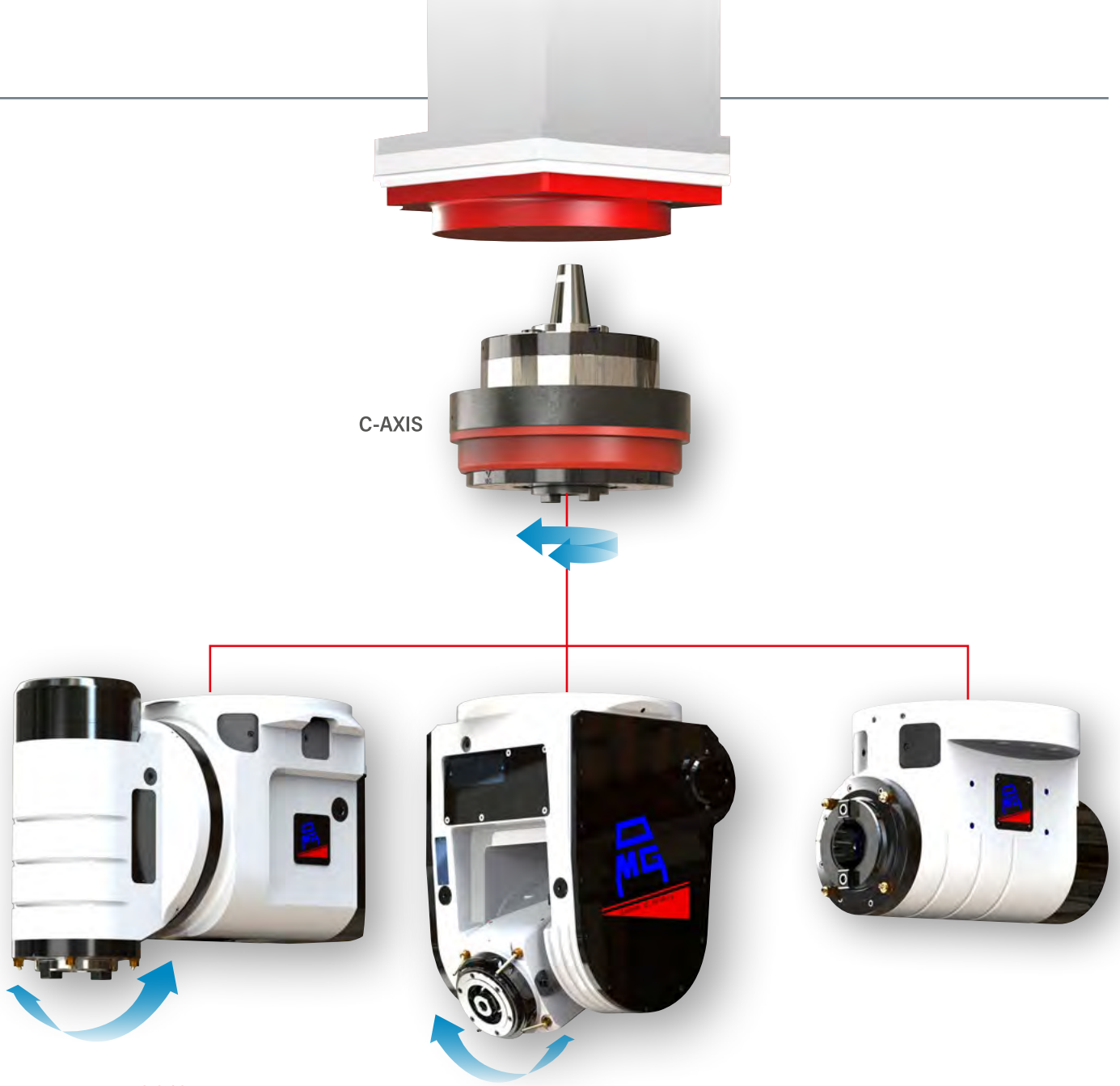
Asse C: con corona Hirth o con vite senza fine di alta precisione
EXM: Testa ad Angolo slim design con cambio utensile manuale
EXA: Testa ad Angolo slim design con cambio utensile automatico
RA: Testa ad Angolo con cambio utensile automatico

La posizione di lavoro può essere sia orizzontale che verticale. I vari componenti possono essere riutilizzati sia in altre applicazioni che su macchine diverse.

With the modular system different combinations are possible:

C Axis: *Manual, with Hirth crown or with high precision worm screw*
EXM: *slim design Angle Head with manual tool change*
EXA: *slim design Angle Head with automatic tool change*
RA: *Angle Head with automatic tool change*

The working position can be both horizontal and vertical. The components can be reused both in other applications and on different machines.



Con il sistema modulare si possono eseguire varie combinazioni, scegliendo di conseguenza tra varie opzioni:

Asse C: con corona Hirth o con vite senza fine di alta precisione
OC/OH: Testa ad angolo Tilting Automatic con cambio utensile automatico e rotazione asse mandrino
FA/FM: Testa ad angolo Fork Automatic con cambio utensile automatico e rotazione asse mandrino
RA: Testa ad Angolo con cambio utensile automatico

La posizione di lavoro può essere sia orizzontale che verticale. I vari componenti possono essere riutilizzati sia in altre applicazioni che su macchine diverse.

With the modular system different combinations are possible:

C Axis: *Manual, with Hirth crown or with high precision worm screw*
OC/OH: *Tilting Automatic Angle Head, automatic tool change and spindle axis rotation*
FA/FM: *Fork Automatic Angle Head, automatic tool change and spindle axis rotation*
RA: *Angle Head with automatic tool change*

The working position can be both horizontal and vertical. The components can be reused both in other applications and on different machines.

SERIE

TA.CP

LIGHT DUTY

Teste ad Angolo innovative, nate per tutte le macchine utensili, anche di piccole dimensioni e dagli ingombri contenuti, dove si richiedono performances elevate nonostante la capacità di peso limitata sul cambio utensile. Quindi Teste ad Angolo più leggere ma con qualità e affidabilità tipiche dei nostri prodotti.

L'obiettivo di contenere il peso è stato raggiunto costruendo il corpo in lega di alluminio aeronautico e adottando un sistema antirotante semplificato e alleggerito, pur rimanendo inalterata la modularità dei coni di attacco tipica della serie Heavy Duty.
La caratteristica principale di questa nuova generazione è di potere eseguire forature, maschiature e lamature su quelle macchine utensili dove il peso del cambio utensile ha forti limitazioni o quando i costi di produzione devono essere estremamente competitivi.

Caratteristiche comuni della Teste ad Angolo serie CP sono:
- perno antirotante conico che, al contrario dei perni cilindrici, elimina i giochi angolari
- possibilità di utilizzo su macchine dove già presente Stop-Block della serie Heavy Duty per una perfetta compatibilità di tutta la gamma
- sistema di orientamento testa ad angolo in macchina ottimizzato, per una più facile e rapida registrazione
- ingranaggi Gleason con evolvente rettificato
- lubrificazione long life
- peso estremamente ridotto per Teste ad Angolo con queste capacità di lavoro
- utilizzo su centri di lavoro di piccole dimensioni
- versioni anche prolungate per una maggiore flessibilità di gamma
- coni disponibili: DIN69871, BT, BBT, HSK, CAT.

These angle heads introduce an innovative line targeting all the small machine-tools with restrained size, but with high performances despite limited weight on tool changer.
Therefore TA.CP angle heads are lighter but with both quality and reliability typical of our products.

Highlight of this line is the head body in aeronautical aluminium alloy combined with a simplified and lightened torque-arm system, allowing to maintain unchanged the back-end shank modularity characteristic of our Heavy Duty range.
The major feature of this new generation of angle heads is to be able to perform drilling, tapping and reaming operations on machine-tools with high limitations on tool changer weight, or when production costs must be extremely competitive.

The major specifications of the new TA.CP range are:
- *conical (V-shape) torque-arm pin which eliminates any angular backlashes, unlike cylindrical type of pins*
- *possibility of using them on machines which are already equipped with a Stop-Block of the Heavy Duty range, getting them fully compatible with our complete range*
- *optimized indexing set-up for an easier and faster adjustment on machine-tools*
- *lubricated-for-life*
- *ground involute Gleason type gears*
- *extremely reduced weight in comparison to the capabilities and performances of this new range of angle heads*
- *usable on small size machining centres*
- *extended length versions available further completing this new range*
- *DIN69871, BT, BBT, HSK and CAT back-end shanks available*

TA07.CP

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

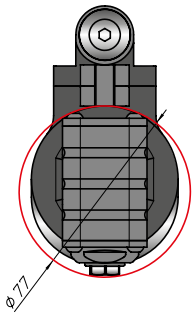
30 — 2,1 KG
40 — 2,5 KG

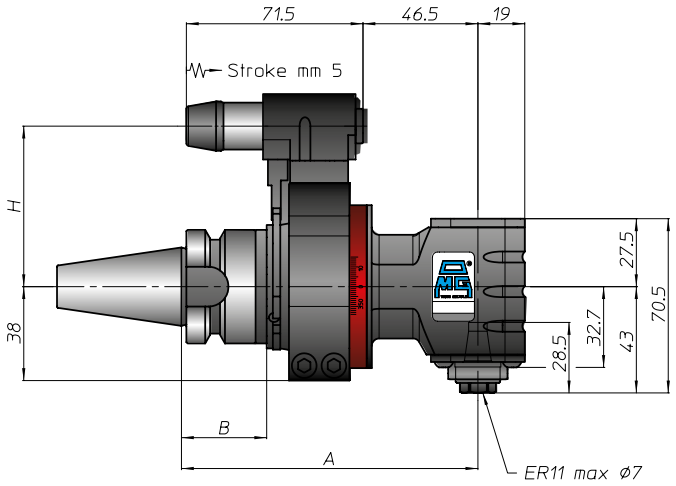
ROTAZIONE *ROTATION*

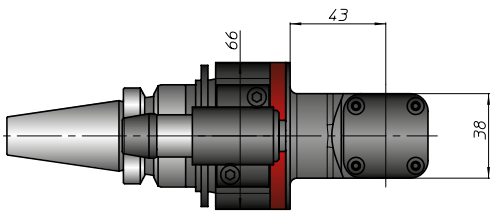
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø7	M6	150 N	1-1	8000	5,6
				RPM	Nm







CONO *SHANK*		DIN69871	CAT ANSIB5.50	BT		HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	30	40	40	30	40	63				
A	120		120	120		129				
B	35		35	35		44				
H STANDARD	65		65	65		65				
H OPTIONAL										

TA10.CP

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

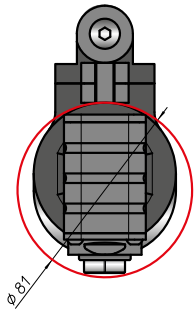
30 — 2,2 KG
40 — 2,5 KG

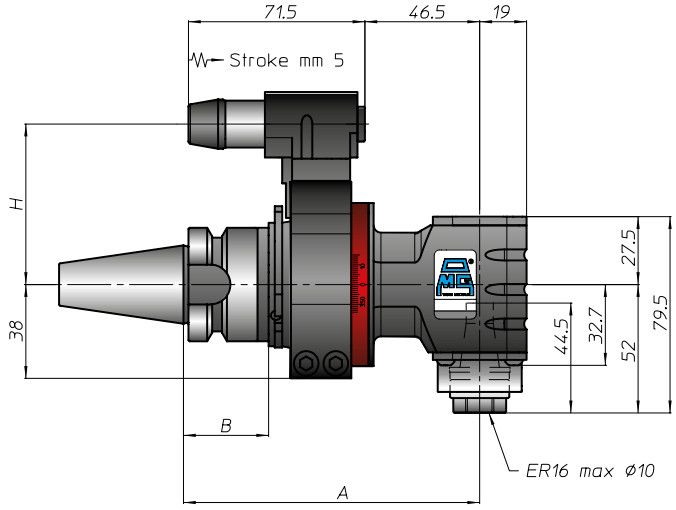
ROTAZIONE
ROTATION

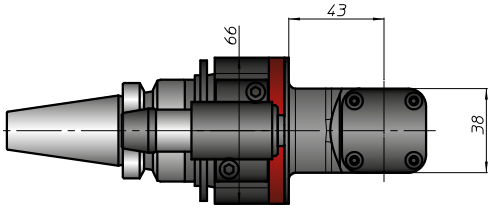
IN — INPUT → OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø10	M8	200 N	1-1	7000	8
				RPM	Nm







CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT		HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	30	40	40	30	40	63				
A	120		120	120		129				
B	35		35	35		44				
H STANDARD	65		65	65		65				
H OPTIONAL										

TA13.CP

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

30	40
5 KG	7,5 KG

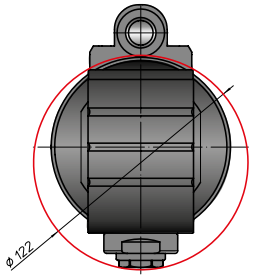
ROTAZIONE *ROTATION*

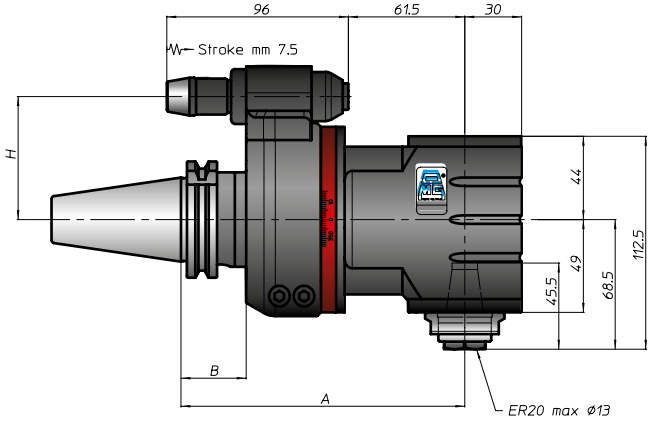
IN → OUT

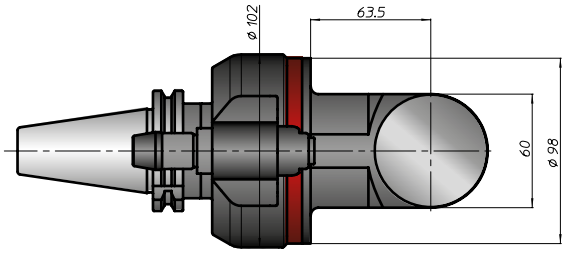
INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø13	M10	560 N	1-1	6000	19
				RPM	Nm







CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	30	40	45	50	40	50	40	50	63	80	100				
A	150				150		150	158	159						
B	35				35		35	45	44	46					
H STANDARD	65		80		65	80	65	80	65	80					
H OPTIONAL															

TA13.CPL

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

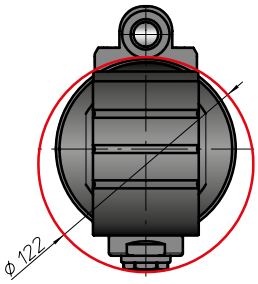
30 — 5,7 KG
40 — 8 KG

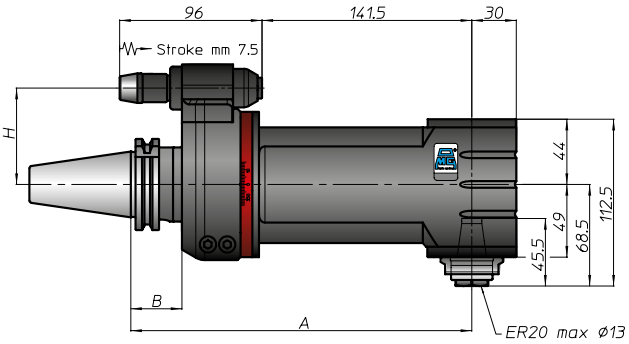
ROTAZIONE *ROTATION*

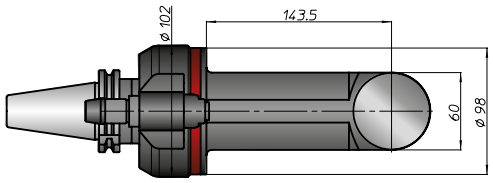
IN — INPUT → OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø13	M10	560 N	1-1	6000 RPM	19 Nm







CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	30	40	45	50	40	50	40	50	63	80	100				
A	230				230		230	238	239						
B	35				35		35	45	44	46					
H STANDARD	65	80			65	80	65	80	65	80					
H OPTIONAL															

TA16.CP

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

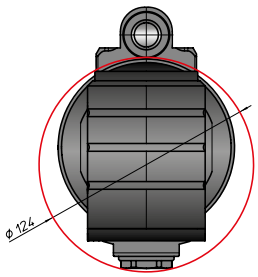
30 5 KG — 40 7,5 KG

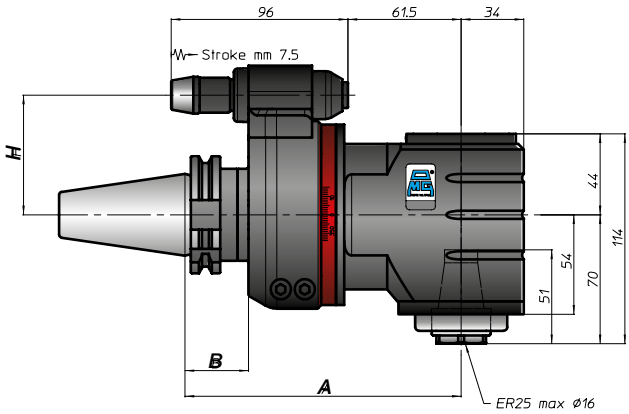
ROTAZIONE *ROTATION*

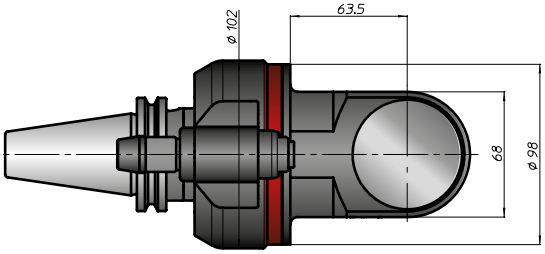
IN INPUT → OUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø16	M12	850 N	1-1	4000 RPM	30 Nm







CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	40	45	50	40	50	40	50	63	80	100				
A	150			150		150	158	159						
B	35			35		35	45	44	46					
H STANDARD	65	80		65	80	65	80	65	80					
H OPTIONAL														

TA16.CPL

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

30 — 6,5 KG
40 — 8,5 KG

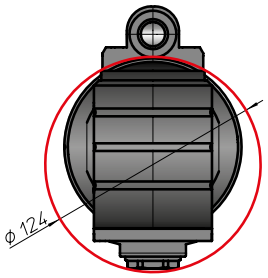
ROTAZIONE *ROTATION*

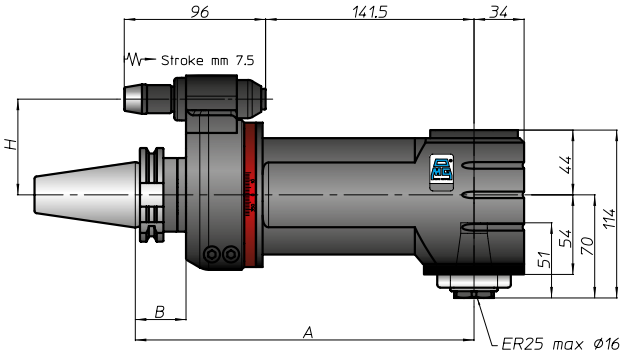
IN → OUT

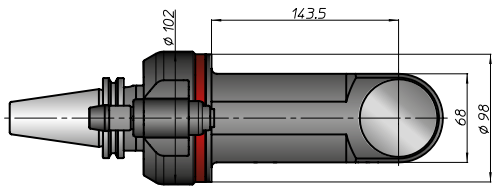
INPUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø16	M12	850 N	1-1	4000	30
				RPM	Nm







CONO *SHANK*		CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623	KM		NMTB ANSIB5.18
SIZE	40 45 50	40	50	40	50	63	80	100			DIN2080	
A	230	230		230	238	239						
B	35	35		35	45	44	46					
H STANDARD	65 80	65	80	65	80	65	80					
H OPTIONAL												

TAV07.CP

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

30	40
2,2 KG	2,6 KG

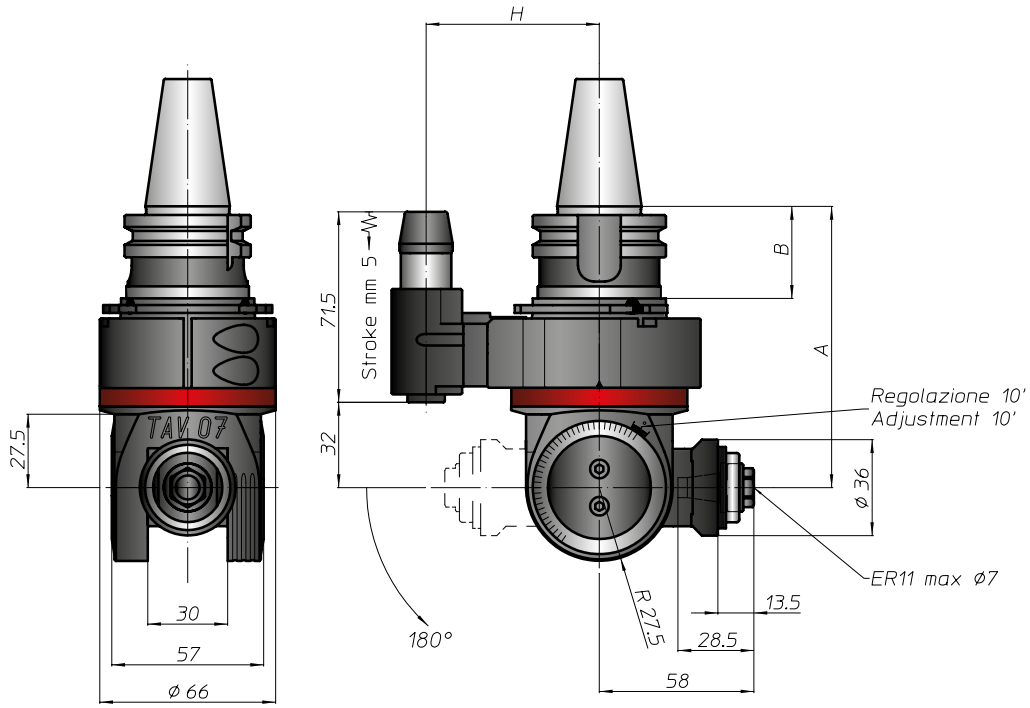
ROTAZIONE *ROTATION*

IN → OUT

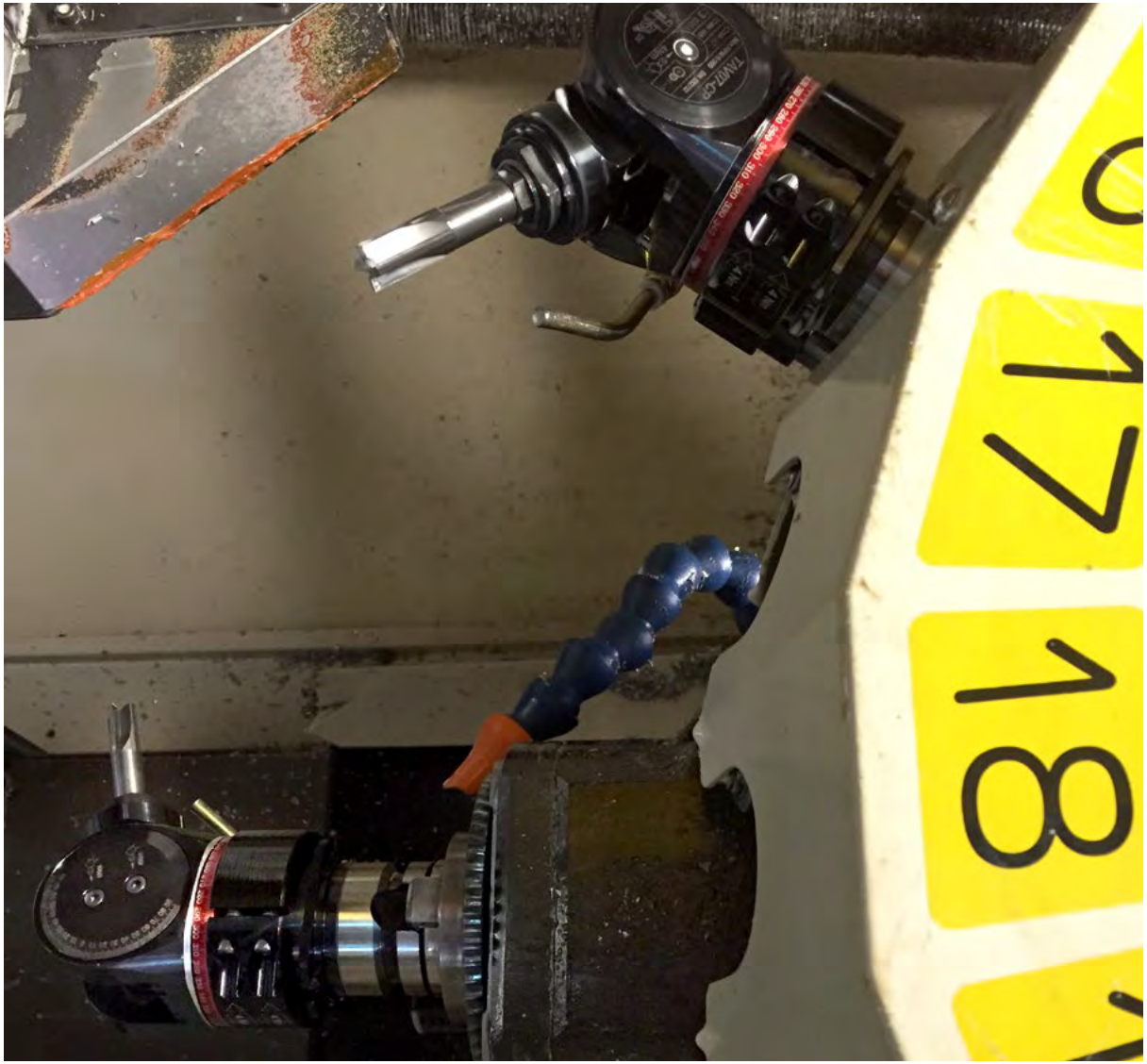
INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø7	M6	85 N	1-1	8000	5,6
				RPM	Nm



CONO *SHANK*		DIN69871	CAT ANSIB5.50	BT	HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	30	40	40	30	40	63				
A	105,5		105,5	105,5		114,5				
B	35		35	35		44				
H STANDARD	65		65	65		65				
H OPTIONAL										



TA.CP

GALLERY

ANTIROTANTE
TORQUE ARM

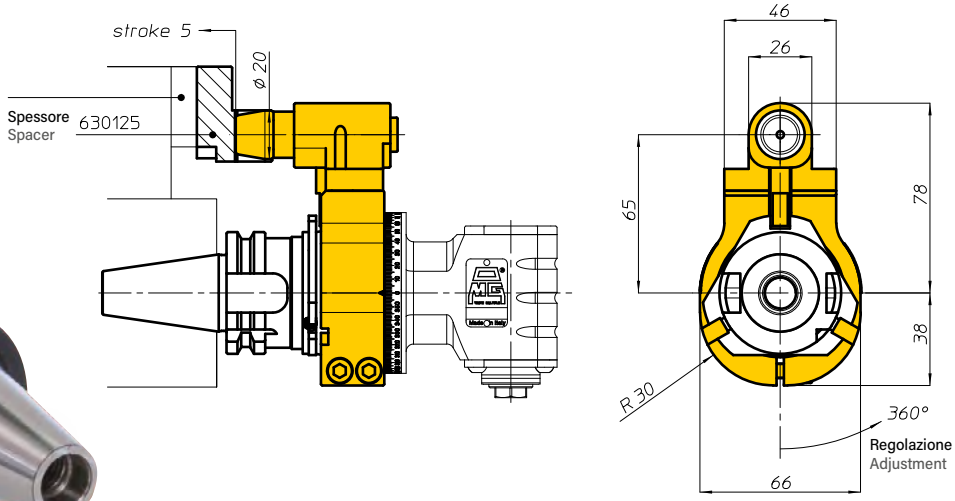
Il gruppo antirotante ricopre una funzione di fondamentale importanza nella qualità di lavorazione della testa ad angolo. Per questo motivo i tecnici della OMG hanno studiato e messo a punto un antirotante di nuova concezione i cui punti salienti sono:

- il perno conico
- registrazione flangia di fasatura semplice, veloce e precisa.

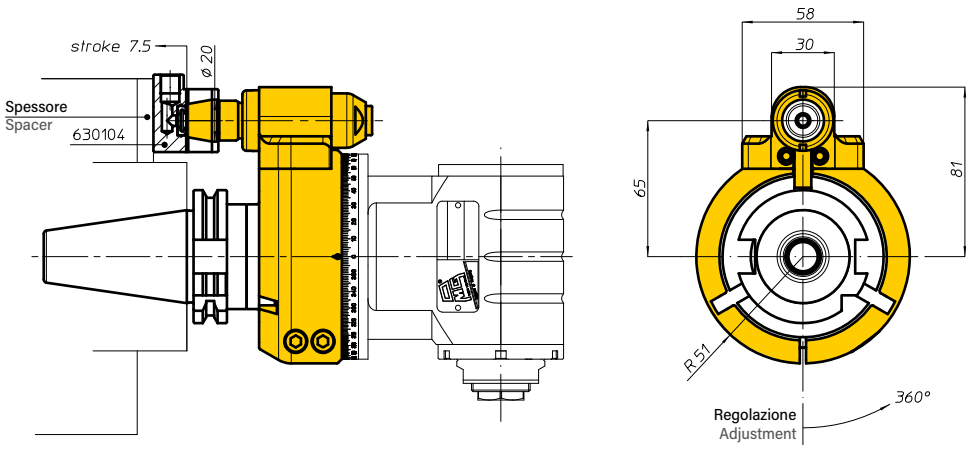
Il perno conico permette una maggiore rigidità del sistema antirotante rispetto ai tradizionali, dotati di perni di Ø18 mm, perché si eliminano i giochi. Conseguenza un miglioramento della rigidità sia angolare che assiale.
Il perno conico è forato e perciò predisposto per il passaggio del liquido refrigerante ad un max di 10 bar. Qualora il cliente volesse portare il liquido vicino all'utensile, occorre semplicemente installare un piccolo tubo.

Quando possibile, nella Vostra applicazione, posizionate il perno conico dalla parte opposta al mandrino della testa ad angolo.

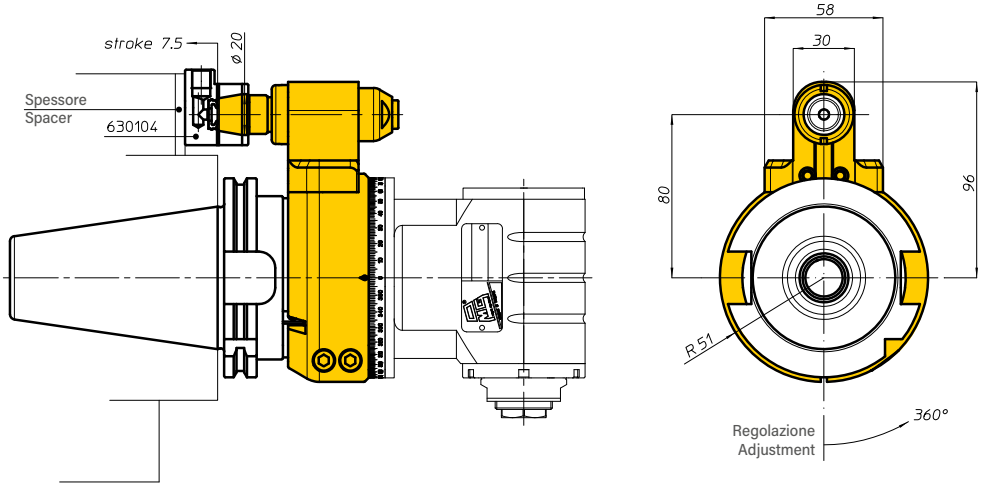
TESTE AD ANGOLO TA07.CP, TAV07.CP
ANGLE HEADS TA07.CP, TAV07.CP



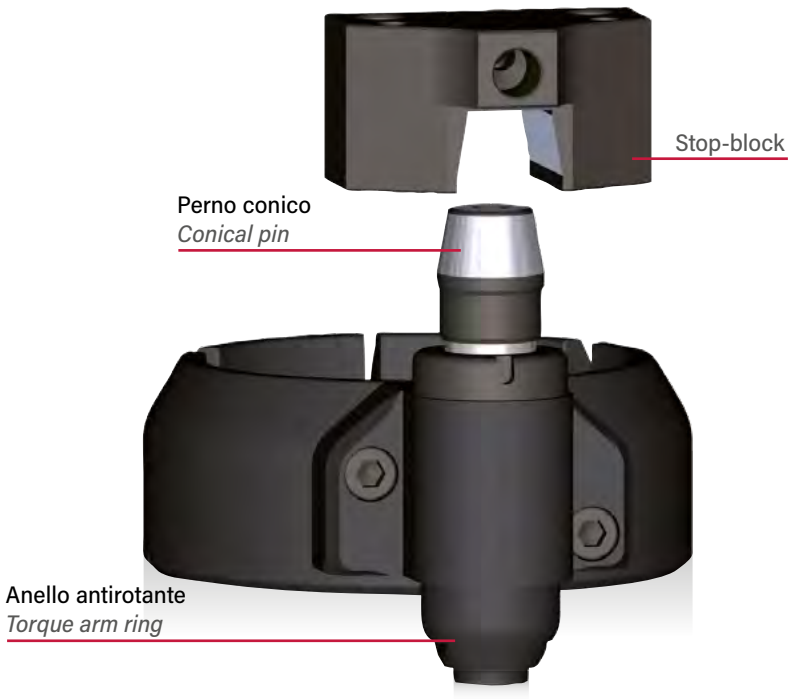
TESTE AD ANGOLO TA13.CP, TA16.CP CON INTERASSE H=65
ANGLE HEADS TA13.CP, TA16.CP WITH CENTRE DISTANCE H=65



TESTE AD ANGOLO TA13.CP, TA16.CP CON INTERASSE H=80
ANGLE HEADS TA13.CP, TA16.CP WITH CENTRE DISTANCE H=80



STOP-BLOCK

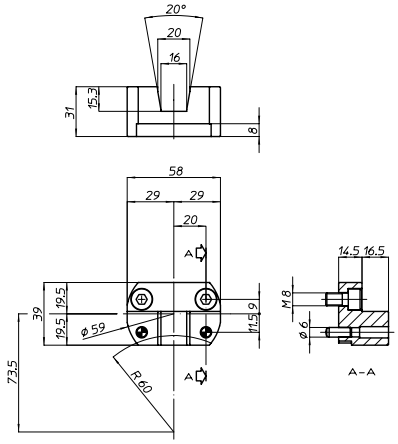


The torque-arm system is fundamental to achieve high quality machining results.
This is why the OMG technicians have engineered and fine tuned a new generation torque-arm system with following characteristics:

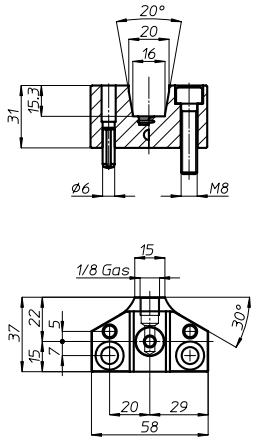
- *conical (V-shape) timing pin*
- *simple, fast and precise timing pin adjustment*

The conical (V-shaped) pin ensures a higher rigidity to the torque-arm system (than the traditional ones equipped with ø18 mm pins) because cancelling backlashes. The result is the enhancement of both angular and axial rigidity.
The conical timing pin is equipped with a hole and therefore prepared to let coolant through it up to max 10 bar. When customer needs coolant close to the tool, he can install just a small pipe.

STOP-BLOCK (COD. 630125)



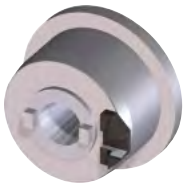
STOP-BLOCK (COD. 630104)



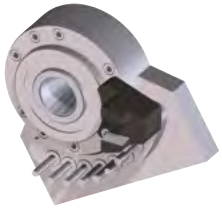
Stop-block preparati per

Stop-block made for

HAAS



DMG Milltap



Mectron

Brother

Fanuc Robodrill

Position the conical pin on the opposite side of the angle head spindle when possible in your application.

SERIE TA

HEAVY DUTY

O.M.G. propone una vasta gamma di Teste ad Angolo. Con più di 110 modelli e quasi 4000 se si contano le varianti, quella di O.M.G. è la più ampia attualmente presente sul mercato. Le Teste ad Angolo sono studiate per consentire una riduzione di tempi e costi nelle lavorazioni meccaniche evitando ulteriori piazzamenti del pezzo. Applicate su macchine tradizionali, centri di lavoro con cambio automatico dell'utensile, oppure centri di tornitura con torretta motorizzata, sono particolarmente curate in ogni particolare, dal cinematismo trattato termicamente, alle coppie coniche Gleason fino ai cuscinetti di precisione per ottenere e garantire un'ottima rigidità e la massima precisione nelle lavorazioni. Fra le tante, queste le due caratteristiche fondamentali per identificare un prodotto moderno che risponde alle attuali esigenze: il gruppo antirotante di nuova concezione che permette alla testa di non avere giochi angolari, le velocità fino a 10.000 rpm (prestazioni che non hanno eguali nei modelli equivalenti della concorrenza). Le teste ad angolo serie TA sono state studiate e definite avvalendosi di sistemi computerizzati all'avanguardia a supporto di conoscenze acquisite dalla O.M.G. in sessant'anni di esperienza nel settore. Tutto ciò ha permesso di fare scelte innovative nei materiali da costruzione, nei trattamenti termici e nelle lavorazioni meccaniche così da ottenere precisione, robustezza, rigidità e finitura al "top".

È così disponibile un'offerta unica per qualità e quantità di modelli atti a soddisfare le esigenze sempre più mirate dell'utilizzatore finale, per qualsiasi macchina utensile: teste monomandrino a 90°, bimandrino a 90° , teste ad angolo variabile da +90° a -90°, teste ad angolo fisso, anche con adduzione refrigerante centro utensile e, dove non è possibile utilizzare teste di serie, teste angolari speciali.

O.M.G. offers a wide range of Angle Heads. With more than 110 models and almost 4000 if we consider all the possible options, what O.M.G. has is the widest range on the market today. The Angle Heads are designed to allow a reduction in time and costs in mechanical processing by reducing the management of the pieces to be machined. Applied on traditional machines, machining centers with automatic tool change, or turning centers with motorized turret, they are extremely meticulous in details, from the heat-treated kinematics to the Gleason bevel gear pairs up to the precision bearings to obtain and guarantee excellent rigidity and maximum precision in machining. Among many, these are the two fundamental characteristics to identify a modern product that responds to current needs: the newly designed anti-rotating group which allows the head to have no angular backlash, the speeds up to 10,000 rpm (performances which have no equal in the models competitive equivalents). The TA series angle heads have been studied and defined using cutting-edge computerized systems to support knowledge acquired by O.M.G. in sixty years of experience. All this has allowed us to make innovative choices in construction materials, heat treatments and mechanical processes so as to obtain precision, robustness, rigidity and "top" finishing.

A unique offer is thus available in terms of quality and quantity of models designed to satisfy the increasingly targeted needs of the end user, for any machine tool: 90° single-spindle heads, 90° double-spindle heads, +90 variable angle heads ° to -90°, fixed angle heads, also with tool center coolant supply and, where it is not possible to use standard heads, special angular heads.

PANORAMICA PRODOTTI
PRODUCT OWERVIEW

Pagina • *Page:* 4-11

TAR

Piccole per piccoli spazi.

Tiny for narrow spaces.

TA

Pagina • *Page:* 4-23

Lavorazione singola di foratura e fresatura.

Drilling and milling machining.

Pagina • *Page:* 4-49

TA... 2P

Due mandrini contrapposti di 180°.

180° two opposed spindles.

TA... D

Pagina • *Page:* 4-55

Input refrigerante attraverso lo stop-block e uscita attraverso il centro utensile.

Input coolant from stop-block, and output through tool spindle.

Pagina • *Page:* 4-75

TAV

Mandrino variabile ±90°.

±90° adjustable spindle.

TAF

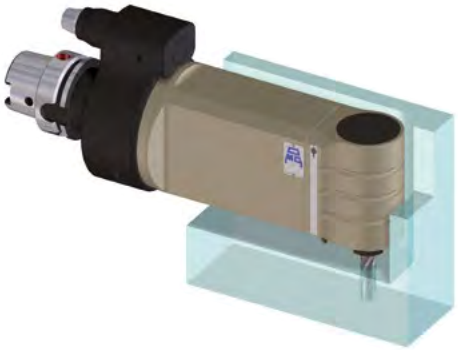
Pagina • *Page:* 4-95

Mandrino fisso, angolo su richiesta del cliente.

Fixed spindle with custom angle.

PANORAMICA PRODOTTI
PRODUCT OWERVIEW

Pagina ▪ *Page:* 4-24



TA...L

Versione allungata per lavorazioni singole di foratura e fresatura.

Length stretched version for drilling and milling single machining operations.

TAL

Pagina ▪ *Page:* 4-39

Versione leggera per lavorazioni singole di foratura e fresatura.

Ligth version for drilling and milling single machining operations.

Pagina ▪ *Page:* 4-65

TAO

Mandrino offset, lavorazione in spazi ristretti ed ottima performance in fresatura.

Offset spindle, machining in narrow spaces, and excellent results in milling operations.

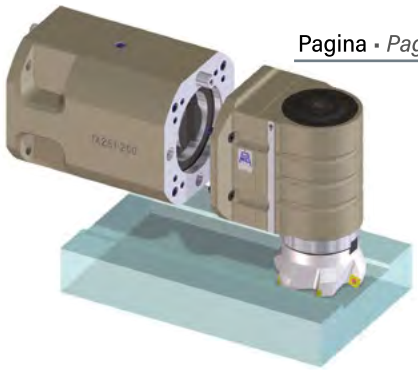
TAO... PD

Pagina ▪ *Page:* 4-66

Mandrino offset, input refrigerante attraverso il centro cono, uscita attraverso centro utensili con pressione 70 bar.

Offset spindle, input coolant through machine taper, output through tool spindle at 70 bar pressure.

Pagina ▪ *Page:* 4-101



TA... T

Connessione alla macchina tramite flangia.

To be connected to the machine by flange.

SIMBOLI
ICONS

- **RAPPORTO ENTRATA/USCITA** *RATIO INPUT/OUTPUT*
- **CAPACITÀ DI FORATURA** *DRILLING CAPACITY*
- **MASCHIATURA** *TAPPING*
- **PESO** *WEIGHT*
- **N° MAX GIRI IN USCITA** *MAX OUTPUT RPM*
- **PRESSIONE** *PRESSURE*
- **CARICO ASSIALE** *AXIAL LOAD*
- **PESO CON CONO 40** *WEIGHT WITH SIZE 40 SHANK*
- **PESO CON CONO 50** *WEIGHT WITH SIZE 50 SHANK*
- **ROTAZIONE IN INGRESSO** *INPUT ROTATION*
- **ROTAZIONE IN USCITA** *OUTPUT ROTATION*
- **DUAL CONTACT**
- **ACCURACY**
- **COPPIA** *TORQUE*

SISTEMA MODULARE PER APPLICAZIONI FLESSIBILI

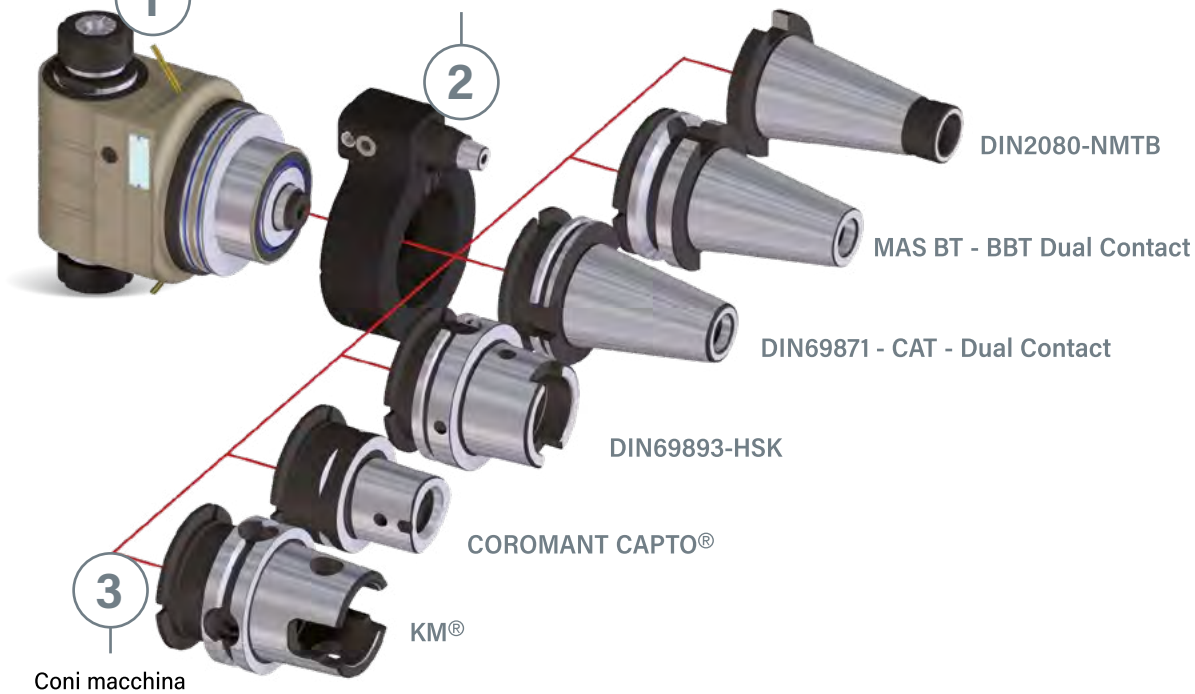
MODULAR SYSTEM FOR FLEXIBLE APPLICATION

Testa ad angolo con presa utensile ER standard, oppure vedi tipi Mandrino.

Angle Head with standard ER tool connection, or check other spindle types.

Antirotante standard "senza gioco", oppure su specifico design per la vostra macchina utensile.

No backlash standard torque arm, or under specific design for your machine tool.



Coni macchina standard o speciali su richiesta.

Standard or on-demand machine tapers.

MODULARITÀ CONI

Sono disponibili tutti i tipi di coni macchina, da sostituire tramite un esclusivo accoppiamento di precisione che crea un sistema rigido pari ai coni integrali, ma con i pregi dell'intercambiabilità.

MODULARITÀ ANTIROTANTI

esistono fondamentalmente tre dimensioni unificate di interasse tra il centro cono ed il centro perno antirotante: 65 mm per i cono grandezza 40, 80 mm per i coni grandezza 50 ed in alcuni casi anche 110 mm. Sono disponibili tutte le dimensioni e sostituire il gruppo antirotante è una operazione banale.

TAPER MODULARITY

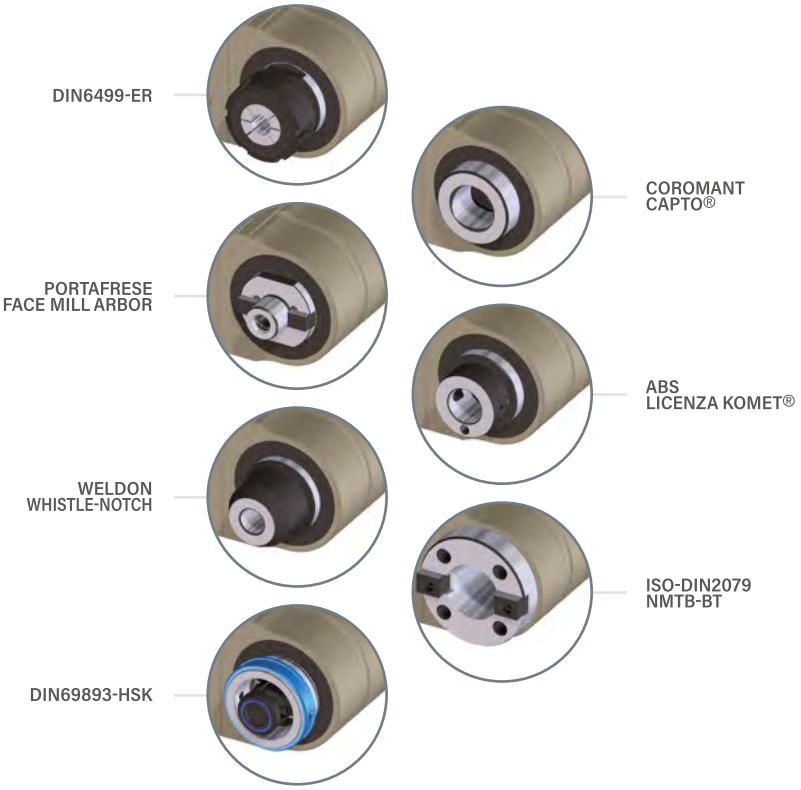
All the different machine tapers are available, and can be replaced with an exclusive precision coupling system generating a rigid system equal to integral tapers, but with additional interchangeability quality.

TORQUE ARM MODULARITY

Essentially three unified dimensions between taper and torque-arm centers exist: 65 mm for the taper size 40, 80 mm for the taper size 50 and also 110 mm in some cases. All sizes are available and torque-arm replacement is very simple.

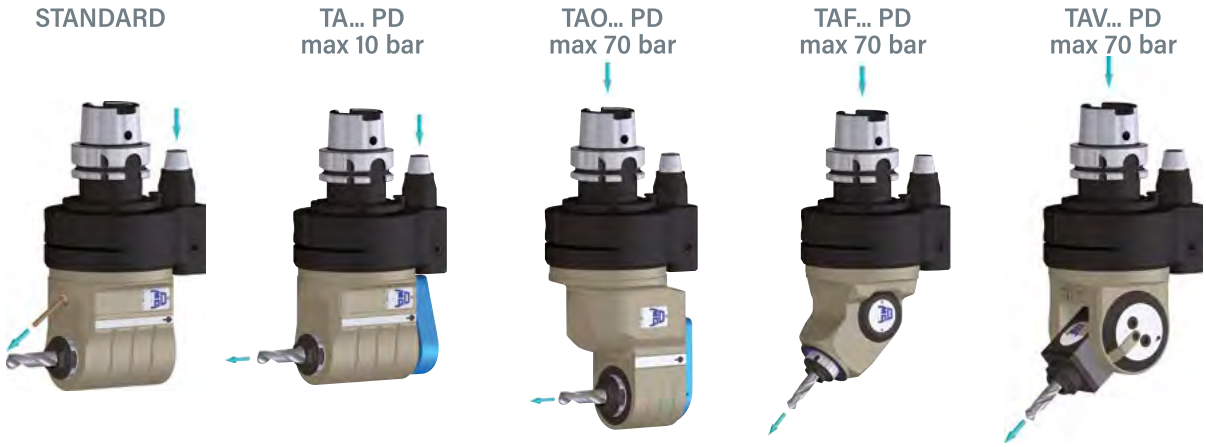
PRESE UTENSILI - TIPI MANDRINO

CLAMPING SYSTEMS AND SPINDLE TYPES



REFRIGERANTE UTENSILE

COOLANT TOOL



IL CIRCUITO REFRIGERANTE È STANDARD

Tutte le teste sono provviste di canalizzazione interna, che parte dal perno dell'antirotante e termina sull'ugello vicino all'utensile, senza alcun costo aggiuntivo.

REFRIGERANTEDA CONO MACCHINA

La costruzione offset delle Teste ad Angolo serie TAO consente il montaggio di tenute ad alta pressione affidabili nel tempo ed isolate dalle parti vitali della Testa ad Angolo, per un sicuro utilizzo di utensili con passaggio refrigerante interno.

COOLANT SYSTEM IS STANDARD

All our Angle Heads are supplied with an internal channel system, which starts from the torque-arm pin and ends on the nozzles next to the tool, without additional cost.

COOLANT SYSTEM FROM MACHINE TAPER

The offset construction of the TAO Angle Head series allows to fit high pressure seals which are time reliable and isolated from the vital parts of the Angle Heads, for a safe usage of tools with internal coolant transit.

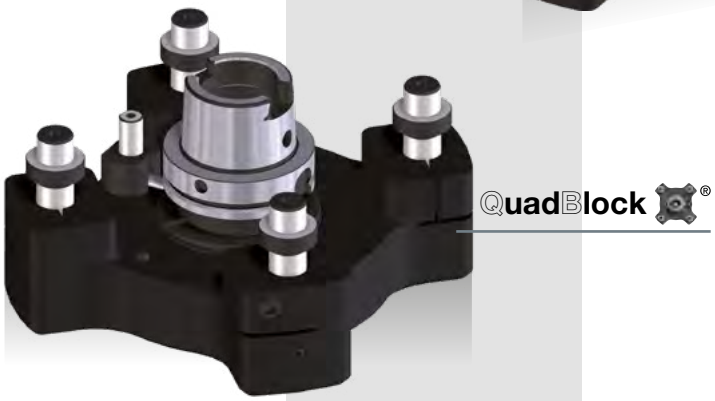
ANTIROTANTE
TORQUE ARM

PRESTAZIONI SUPERIORI

L'antirotante standard permette di cambiare la testa in automatico. Il sistema di accoppiamento fra perno conico regolabile assialmente e lo stop-block con sede a "V", permette di annullare la tolleranza tra le parti creando un sistema rigido, senza giochi. Evidenti sono i vantaggi: maggiore durata degli utensili, maggiore durata dei cuscinetti, risparmi in termini di manutenzione con conseguente riduzione dei costi.

MASSIMA STABILITÀ

I sistemi antirotanti **TriBlock** e **QuadBlock** di O.M.G. con perni regolabili permettono di contrastare al meglio le spinte radiali e assiali con la possibilità di affrontare in sicurezza lavorazioni di fresatura o finitura fino a ora mai effettuate con le teste ad angolo, destinate inizialmente a diversi piazzamenti pezzo.



Studiato e realizzato su specifica richiesta.

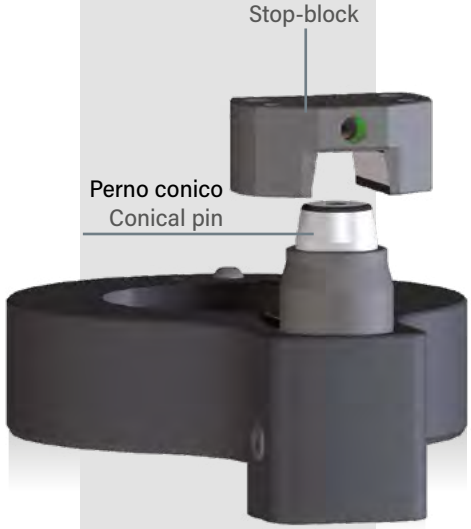
Customized design according to your application.

HIGHER PERFORMANCES

The standard torque arm allows an automatic change of the head. The coupling system between the conical pin, which can be axial adjusted, and the "V"-housing of the stop-block, allows to cancel any tolerance between those parts generating a rigid and backlash free system. The advantages are evident: longer life of tools, longer life of bearings, maintenance savings with consequent cost reductions.

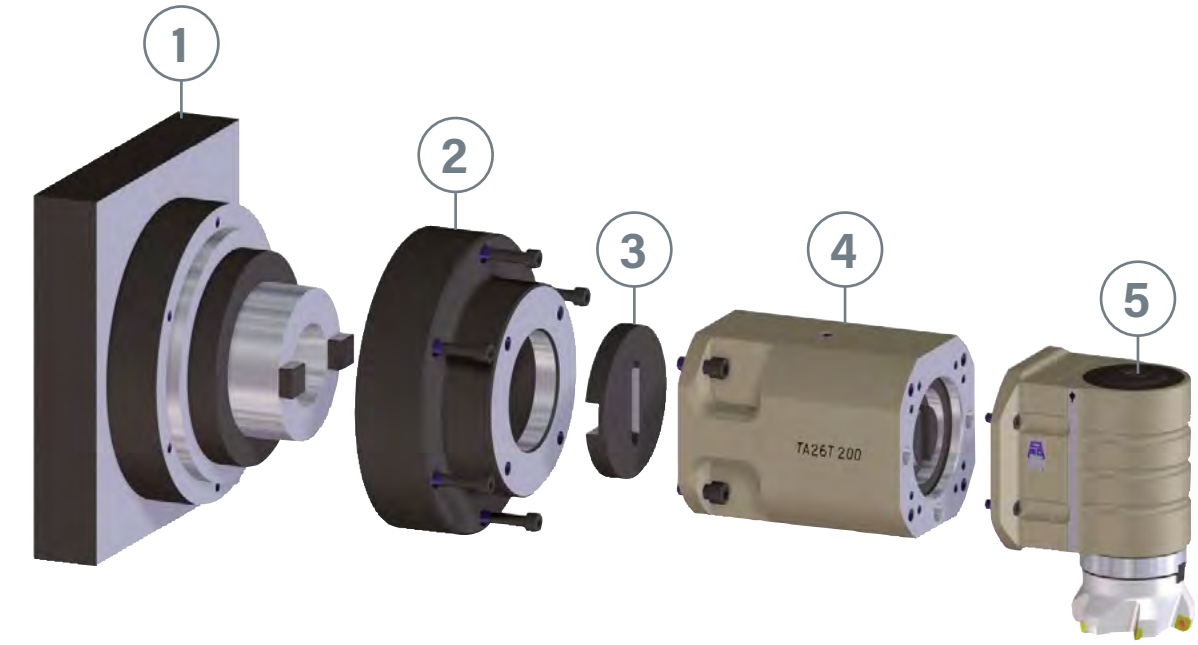
MAXIMUM STABILITY

The O.M.G. **TriBlock** *and* **TriBlock** *torque arm systems with adjustable pin allow to oppose both radial and axial thrusts at their best, with the possibility of milling or finishing with total security, which was not possible until nowadays because requiring several changes of placement of the piece to be machined.*



CONNESSIONE ALLA MACCHINA TRAMITE FLANGIA
MACHINE CONNECTION BY FLANGE

1. MACCHINA
   MACHINE
2. FLANGIA DI CONNESSIONE
   CONNECTION FLANGE
3. GIUNTO ISO 40/50
   DRIVING JOINT ISO 40/50
4. ESTENSIONE
   EXTENSION
5. TESTA AD ANGOLO TA... T
   ANGLE HEAD TA... T



QUALITÀ DEI COMPONENTI
QUALITY OF COMPONENTS

CORPO · *BODY*
Corpo testa in acciaio: massima rigidità e minima dilatazione termica.

Heady body in steel: maximum rigidity and minimum thermal expansion.

CUSCINETTI *BEARINGS*
Cuscinetti obliqui in classe di precisione ABEC7/9.

Angular contact ball bearings of precision class ABEC7/9

INGRANAGGI *GEARS*
Ingranaggi Gleason con evolvente rettificato: massime performances e minori vibrazioni.

Gleason rectified gearings: maximum performances and minimum vibration.

DESIGN
Design compatto, che insieme alle specifiche sopra descritte, consente: alte performances, elevate velocità, lunga durata degli utensili.

Compact design that, along with above mentioned described specifications, allows: high performances, high speeds, long life of tools.

MATERIALI

Tutte le teste ad angolo standard sono in acciaio ricavate dal pieno per fresatura a pareti sottili, minimo ingombro e minor peso. Hanno il corpo trattato con niploy, trattamento anticorrosione, che garantisce alta protezione contro la ruggine, lubrorefrigeranti aggressivi e acidi.

COMPONENTI

Tutte le teste montano cuscinetti di precisione, oppure conici nelle versioni per grandi asportazioni. Si utilizzano solo cinematismi trattati termicamente e coppie coniche Gleason con dentatura rettificata. Lubrificazione con grasso long-life.

MATERIALS

All our standard Angle Heads are made from solid steel for thin wall milling, resulting with the minimum possible size and less weight. Body is niploy treated and anti-corrosion coated giving the guarantee of high protection against rust as well as acid and aggressive lubricant-coolants.

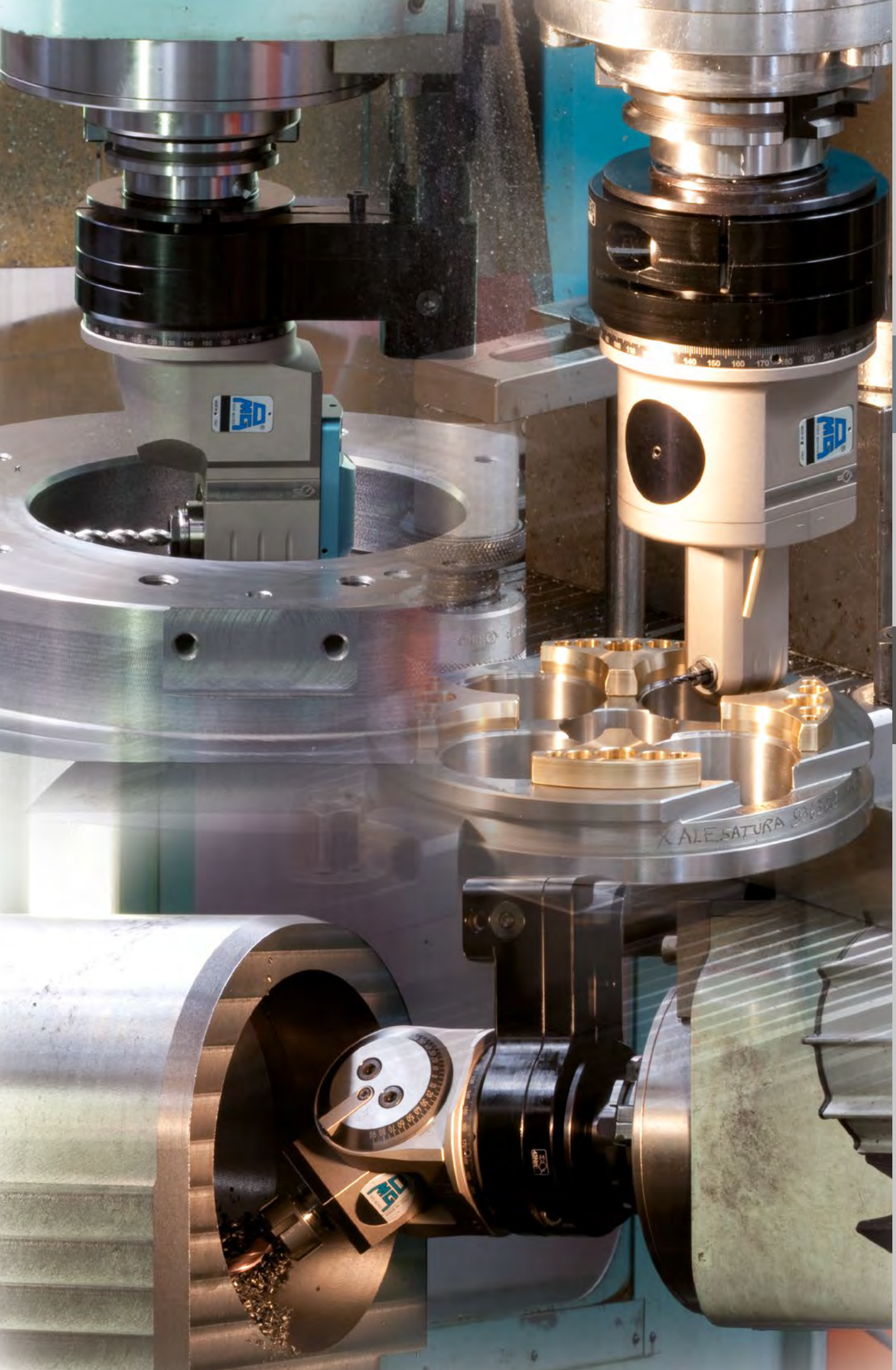
COMPONENTS

All our Angle Heads integrate precision bearings, or tapered roller bearings when models are for big removal machining. We only use thermal treated cinematic components and Gleason bevel gears with rectified teeth. Lubrication is with long-life grease.

PACKAGING

Le Teste ad Angolo sono racchiuse in robusta valigetta di materiale termoplastico e corredate di una completa dotazione di accessori:
- Stop-block standard con passaggio refrigerante
- Confezione di chiavi per messa in funzione e manutenzione
- Grasso di mantenimento
- Manuale istruzioni dettagliato per messa in funzione e manutenzione

The Angle Heads are packed in a strong thermoplastic case together with a complete set of accessories:
- *Standard stop-block with coolant way*
- *Set of keys for operation and maintenance*
- *Grease tube*
- *Operation and maintenance manual*



TAR02.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

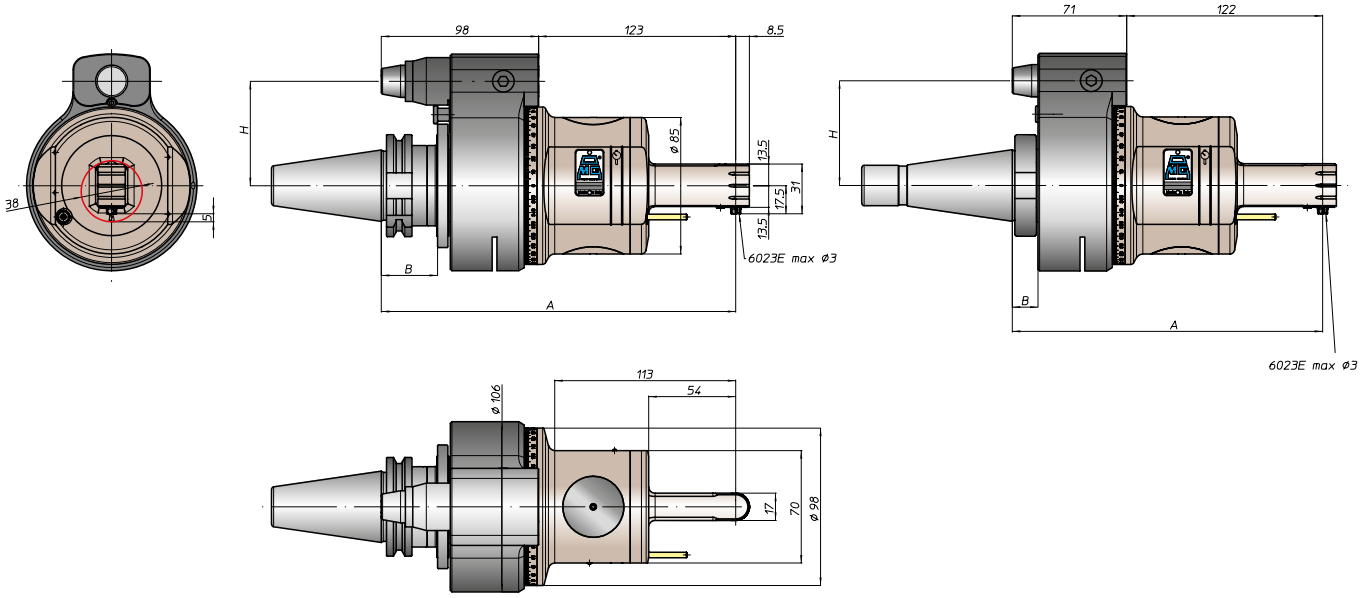
40 — 6,6 KG
50 — 9 KG

ROTAZIONE *ROTATION*

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø2	M2	40 N	1-1.333	8000	2,5



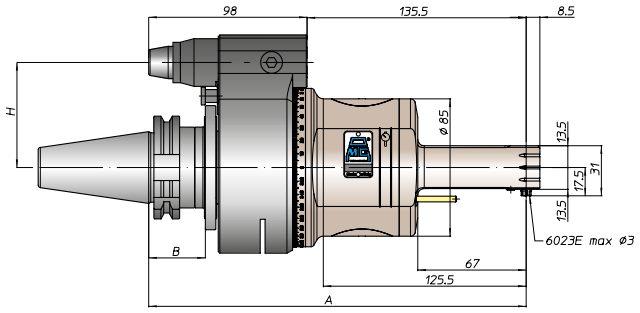
CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	221				221		221	229	230			225			221			191	194	191	194
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL			110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAR02.P-L67

ROTAZIONE
ROTATION

INPUT OUTPUT

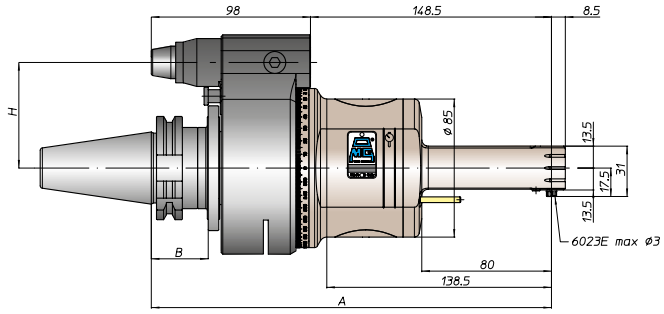


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	233,5				233,5		233,5	241,5	242,5			237,5			233,5			203,5	206,5	203,5	206,5

TAR02.P-L80

ROTAZIONE
ROTATION

INPUT OUTPUT

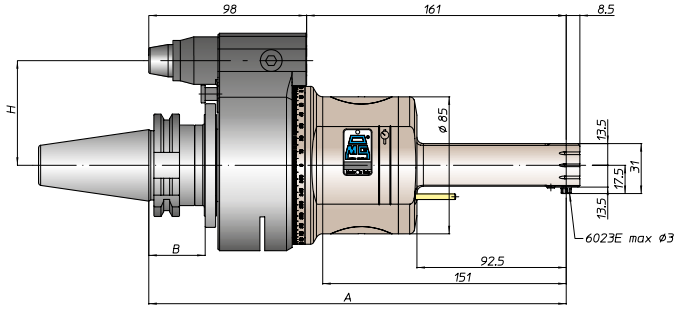


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	246,5				246,5		246,5	254,5	255,5			250,5			246,5			276,5	273,5	276,5	273,5

TAR02.P-L92

ROTAZIONE
ROTATION

INPUT OUTPUT

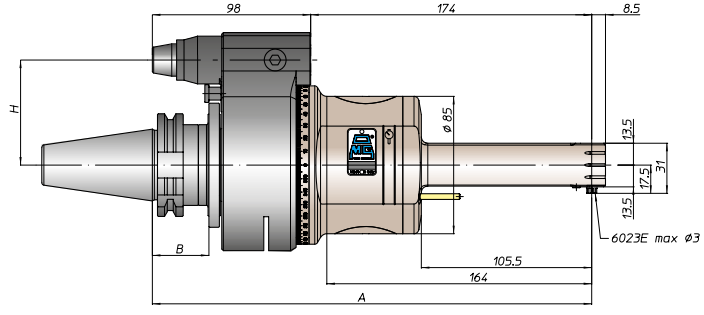


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	259				259		259	267	268			263			259			289	286	289	286

TAR02.P-L105

ROTAZIONE
ROTATION

INPUT OUTPUT



CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	272				272		272	280	281			276			272			302	299	302	299

TAR03.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

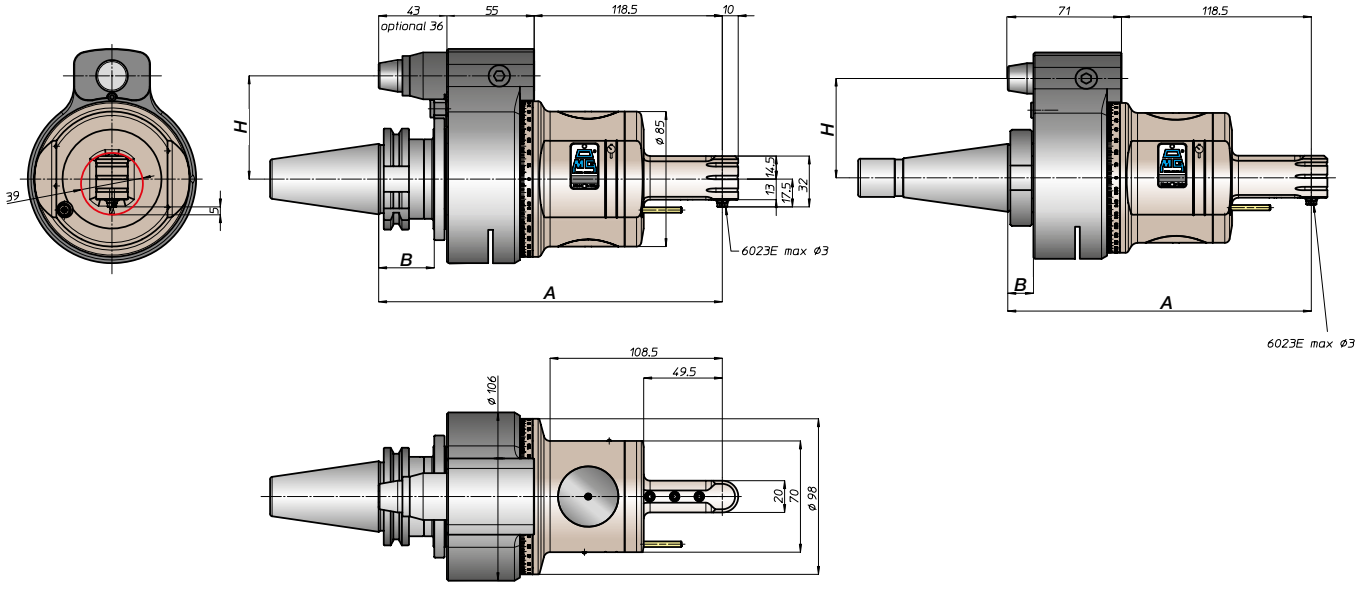
40 — 6,7 KG
50 — 9,1 KG

ROTAZIONE *ROTATION*

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø3	M3	70 N	1-1.2308	8000	3,5
				RPM	Nm



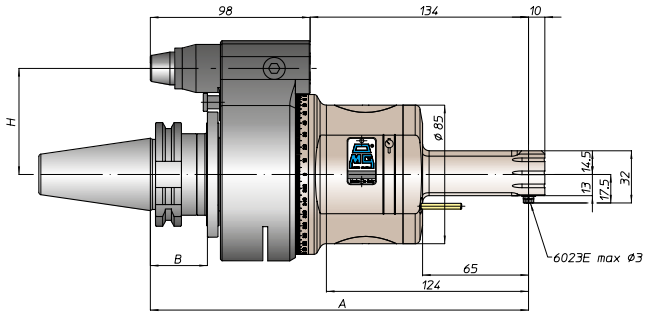
CONO *SHANK*	DIN69871				ANSIB5.50		CAT BT			HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50	
A	216,5				216,5		216,5	224,5	225,5			220,5			216,5			186,5	189,5	188,5	191,5	
B	35				35		35	45	44	46			39	41				13	16	13	16	
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80	
H OPTIONAL			110			110		110		110				110		110			110		110	

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAR03.P-L65

ROTAZIONE
ROTATION

INPUT OUTPUT

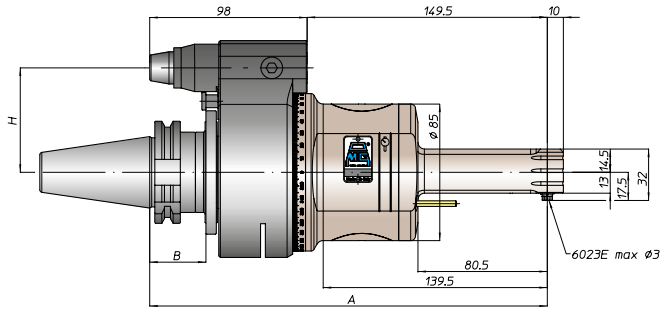


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	232				232		232	240	241			236			232			202	205	202	205

TAR03.P-L80

ROTAZIONE
ROTATION

INPUT OUTPUT

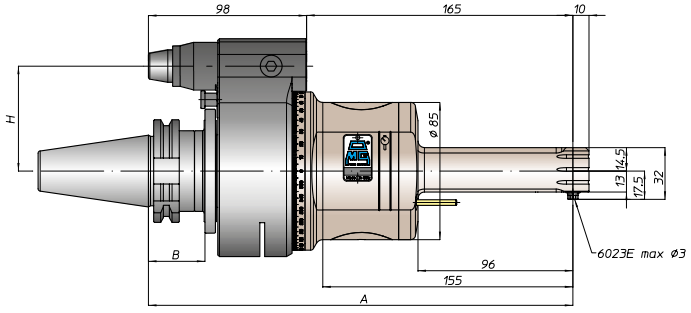


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	247				247		247	255	256			251			247			217	220	217	220

TAR03.P-L96

ROTAZIONE
ROTATION

INPUT OUTPUT

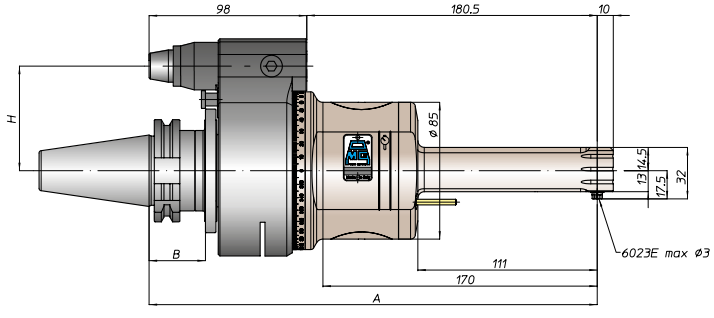


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	263				293		293	271	272			267			263			233	236	233	236

TAR03.P-L111

ROTAZIONE
ROTATION

INPUT OUTPUT



CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	278				278		278	286	287			282			278			248	251	248	251

TAR04.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

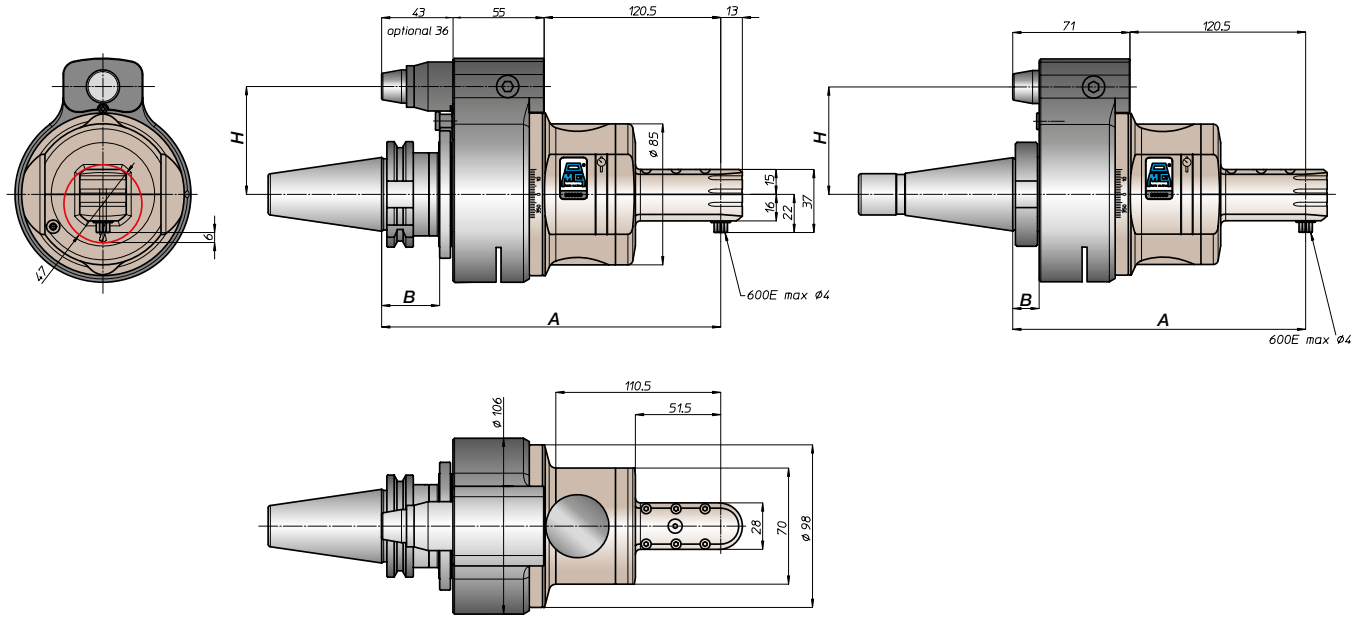
40 — 7 KG
50 — 9,4 KG

ROTAZIONE *ROTATION*

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø4	M3	120 N	1-1	8000	6



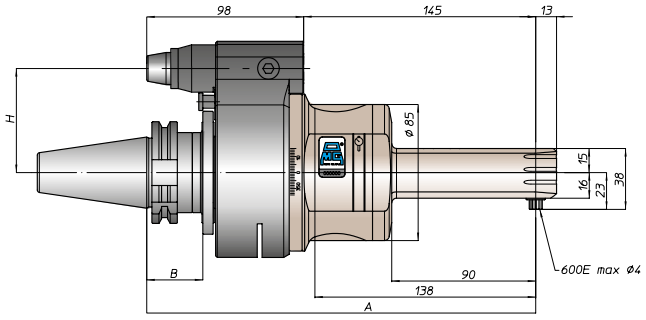
CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	218,5				218,5		218,5	226,5	227,5			222,5			218,5			188,5	191,5	188,5	191,5
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL			110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAR04.P-L90

ROTAZIONE
ROTATION

INPUT OUTPUT

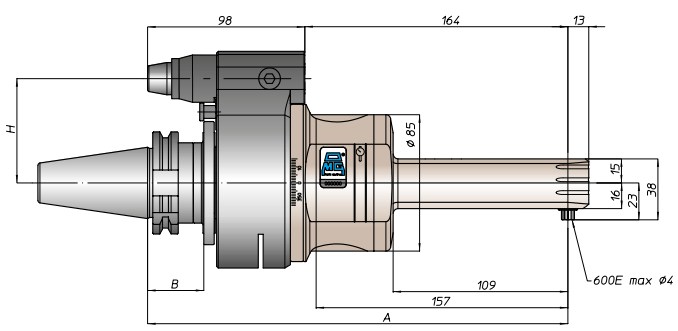


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	257				257		257	265	266			261			257			227	230	227	230

TAR04.P-L109

ROTAZIONE
ROTATION

INPUT OUTPUT

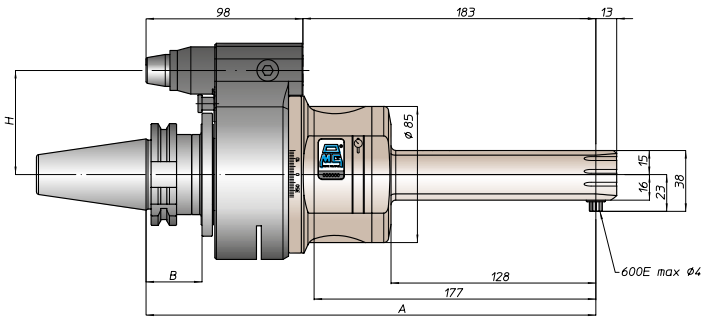


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	276				276		276	284	285			280			276			246	249	246	249

TAR04.P-L128

ROTAZIONE
ROTATION

INPUT OUTPUT

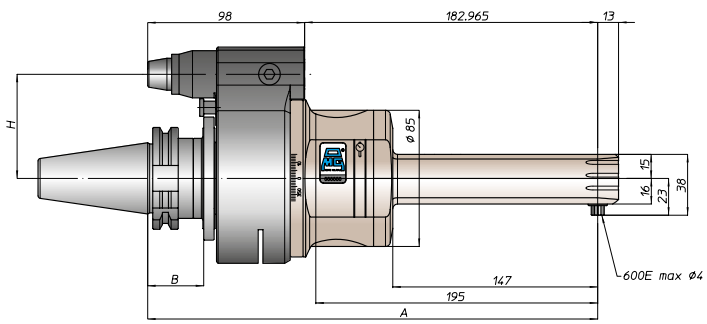


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	295				295		295	303	304			299			295			265	268	265	268

TAR04.P-L147

ROTAZIONE
ROTATION

INPUT OUTPUT



CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	314				314		314	322	323			318			314			284	287	284	287

TAR06.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 7,2 KG
50 — 9,6 KG

ROTAZIONE *ROTATION*

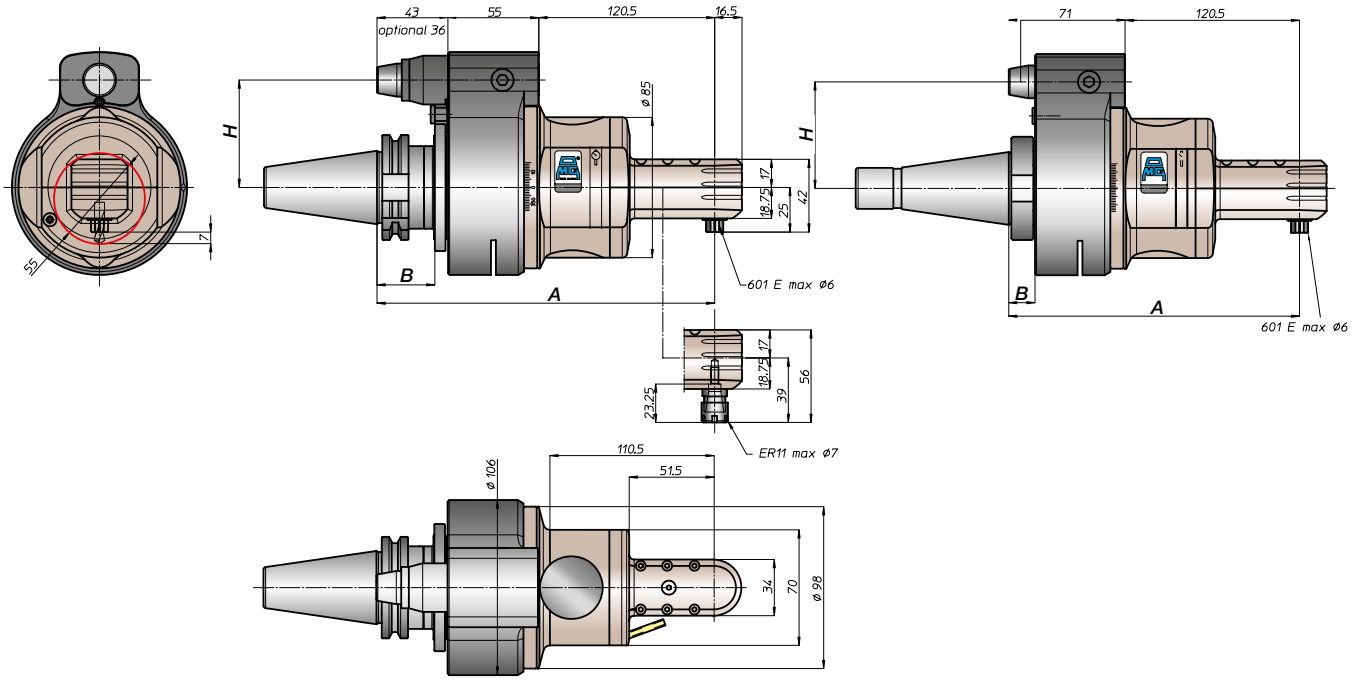
INPUT — OUT
OUTPUT — OUT

CARATTERISTICHE *FEATURES*

Ø6	M5	150 N	1-1	8000	Nm
Ø6	M5	150 N	1-1	8000	8

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø6 WELDON WHISTLE-NOTCH

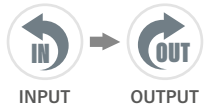


		CAT	BT	HSK	CAPTO	KM		NMTB	
CONO *SHANK*	DIN69871	ANSIB5.50		DIN69893	ISO26623		DIN2080	ANSIB5.18	
SIZE	30 40 45 50	40 50	40 50	63 80 100	C5 C6 C8	63 80 100	40 50	40	50
A	218,5	218,5	218,5 226,5	227,5	222,5	218,5	188,5 191,5	188,5	191,5
B	35	35	35 45	44 46	39 41		13 16	13	16
H STANDARD	65 80	65 80	65 80	65 80	65 80	65 80	65 80	65	80
H OPTIONAL	110	110	110	110	110	110	110		110

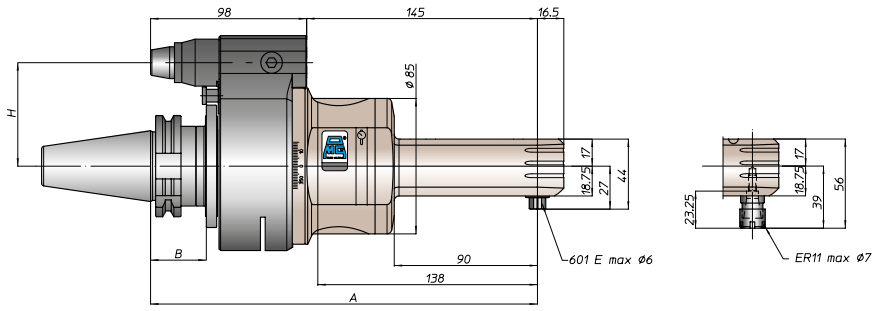
For DIN69871, ANSIB5.50 and BT, dual contact as option

TAR06.P-L90

ROTAZIONE
ROTATION



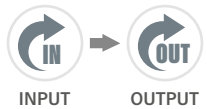
INPUT OUTPUT



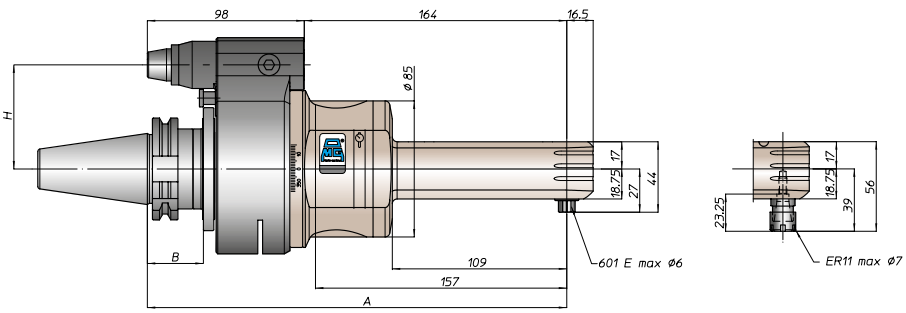
CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	257				257		257	265	266			261			257			227	230	227	230

TAR06.P-L109

ROTAZIONE
ROTATION



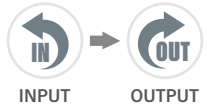
INPUT OUTPUT



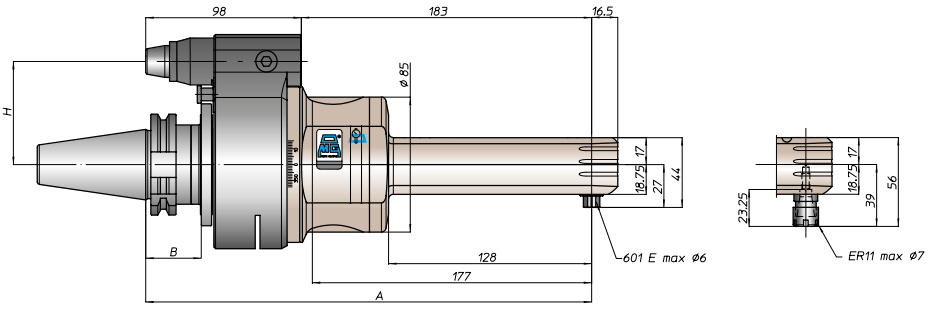
CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	276				276		276	284	285			280			276			246	249	246	249

TAR06.P-L128

ROTAZIONE
ROTATION



INPUT OUTPUT

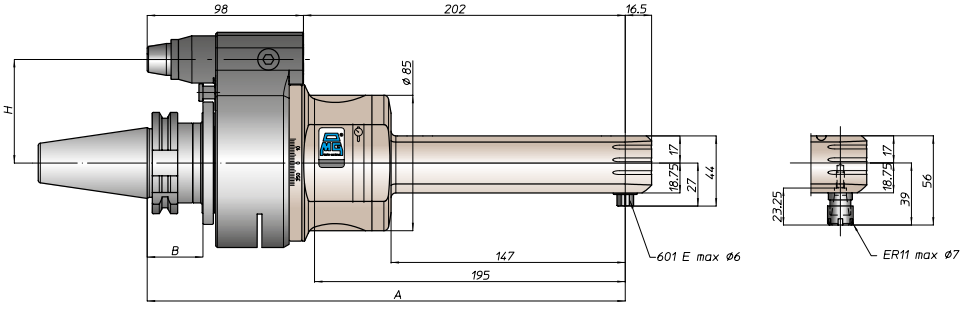


CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	295				295		295	303	304			299			295			265	268	265	268

TAR06.P-L147

ROTAZIONE
ROTATION

INPUT OUTPUT



CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	314				314		314	322	323			318			314			284	287	284	287

TAR10.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 7 KG
50 — 9 KG

ROTAZIONE *ROTATION*

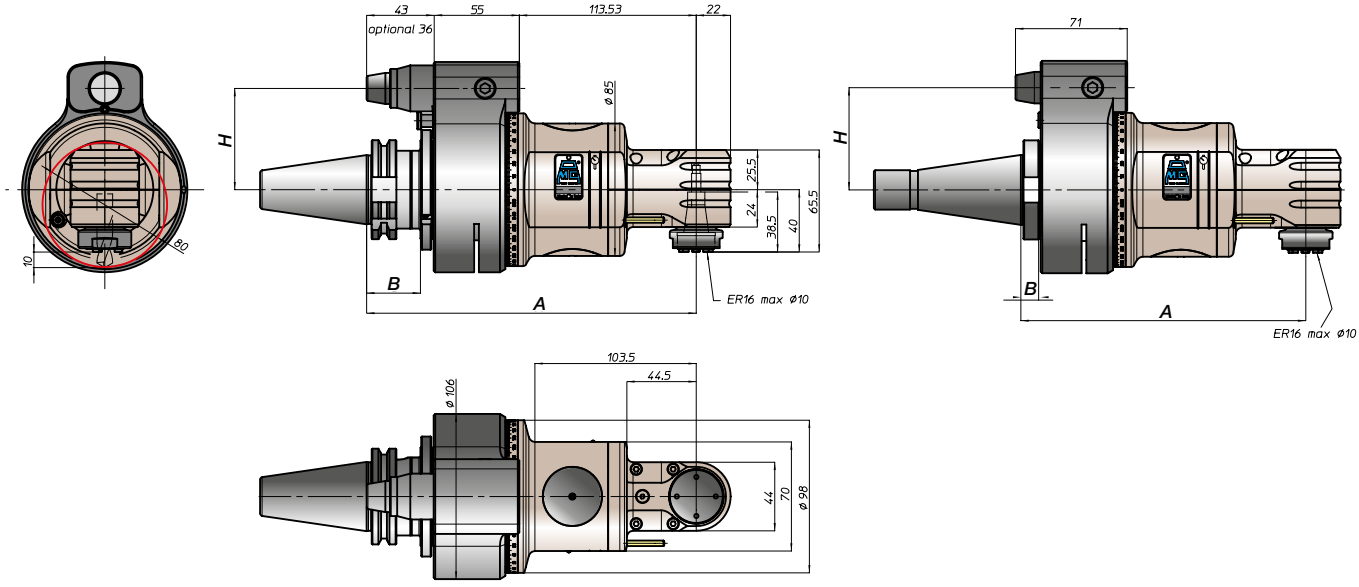
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø10	M8	430 N	1-1	6000	11
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø12 WELDON WHISTLE-NOTCH



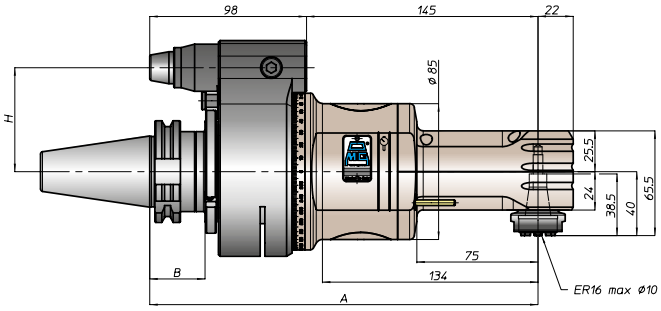
CONO *SHANK*	CAT			BT		HSK			CAPTO			KM			NMTB			
	DIN69871			ANSIB5.50			DIN69893			ISO26623					DIN2080		ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	211,5			211,5		211,5	219,5	220,5			215,5			211,5			181,5	184,5	181,5	184,5
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAR10.P-L75

ROTAZIONE
ROTATION

INPUT OUTPUT

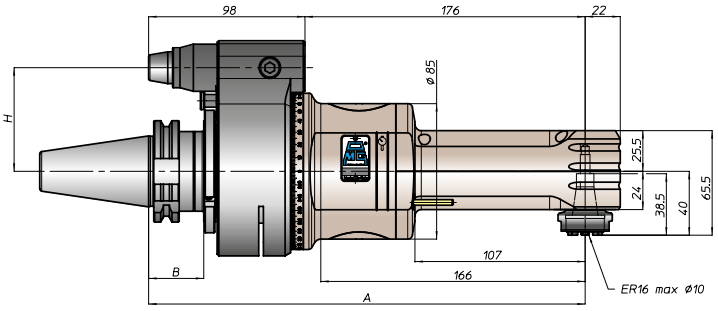


CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	242,78			242,78		242,78	250,78	251,78			246,78			242,78			212,78	215,78	212,78	215,78

TAR10.P-L107

ROTAZIONE
ROTATION

INPUT OUTPUT

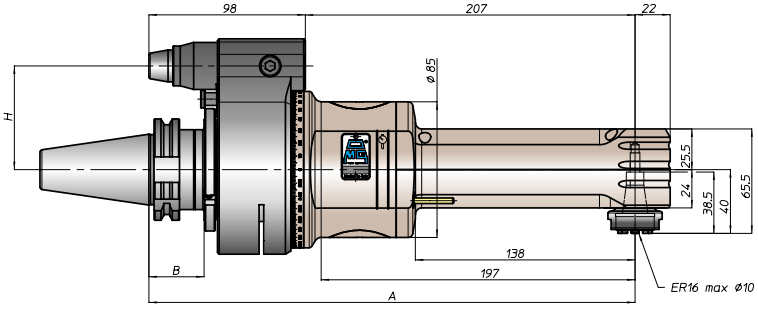


CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	274,06			274,06		274,06	282,06	283,06			278,06			274,06			244,06	247,06	244,06	247,06

TAR10.P-L138

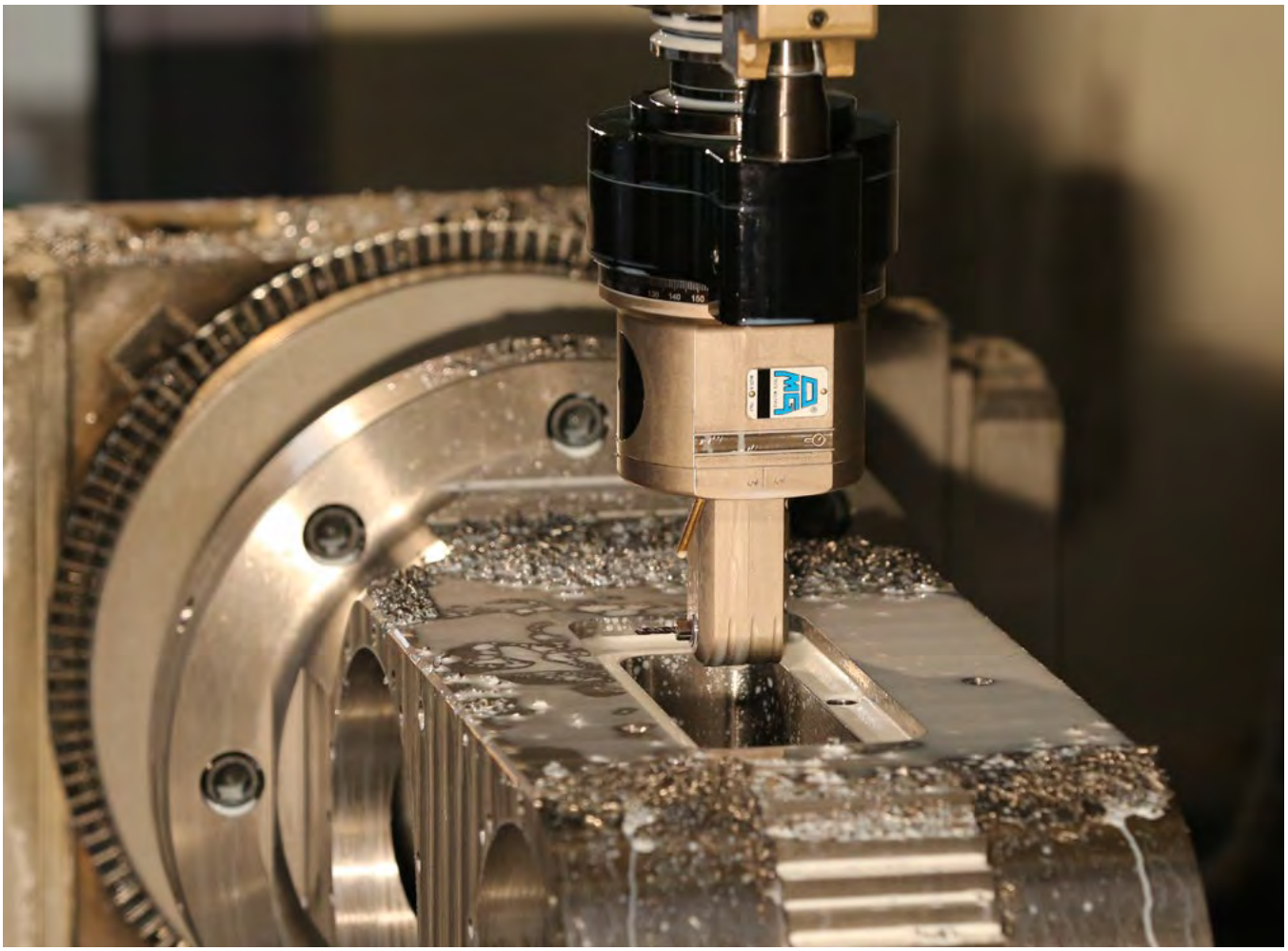
ROTAZIONE
ROTATION

INPUT OUTPUT



CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	305,35			305,35		305,35	313,35	314,35			309,35			205,35			275,35	278,35	275,35	278,35

TAR GALLERY



TA07.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 5,5 KG
50 — 7,5 KG

ROTAZIONE *ROTATION*

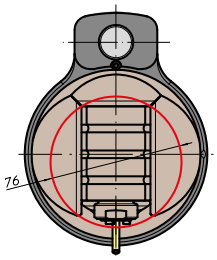
IN — INPUT
OUT — OUTPUT

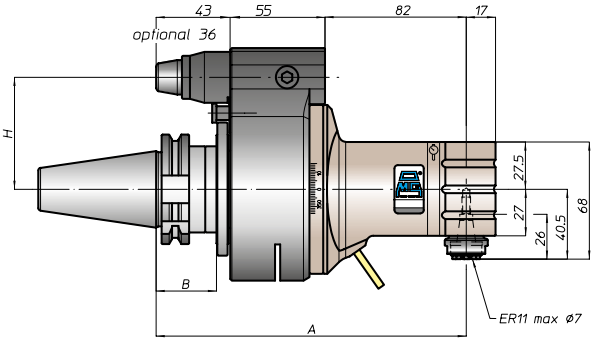
CARATTERISTICHE *FEATURES*

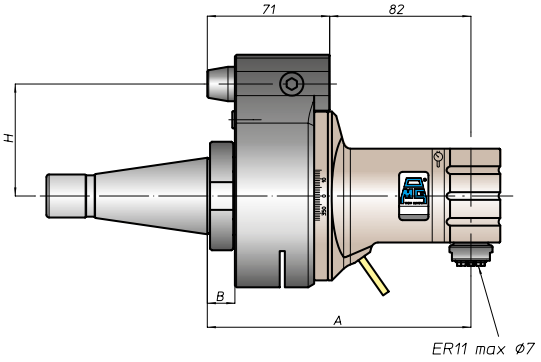
Ø7	M6	180 N	1-1	10000 RPM	11 Nm

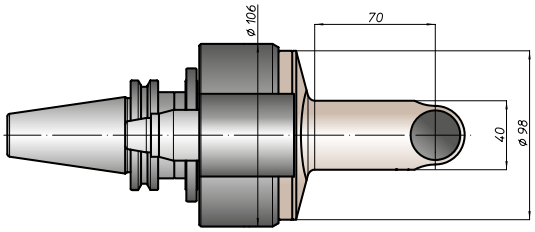
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø8-Ø10 WELDON WHISTLE-NOTCH









	DIN69871				ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
CONO *SHANK*																					
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	180				180		180	188	189			184			180			150	153	150	153
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80			65	80	65	80	65	80		65	80		65	80		65	80	65	80
H OPTIONAL		110				110		110		110			110			110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA07.PL

TESTA AD ANGOLO • *ANGLE HEAD*

PESO *WEIGHT*

40 — 6,5 KG
50 — 8,8 KG

ROTAZIONE *ROTATION*

IN → OUT

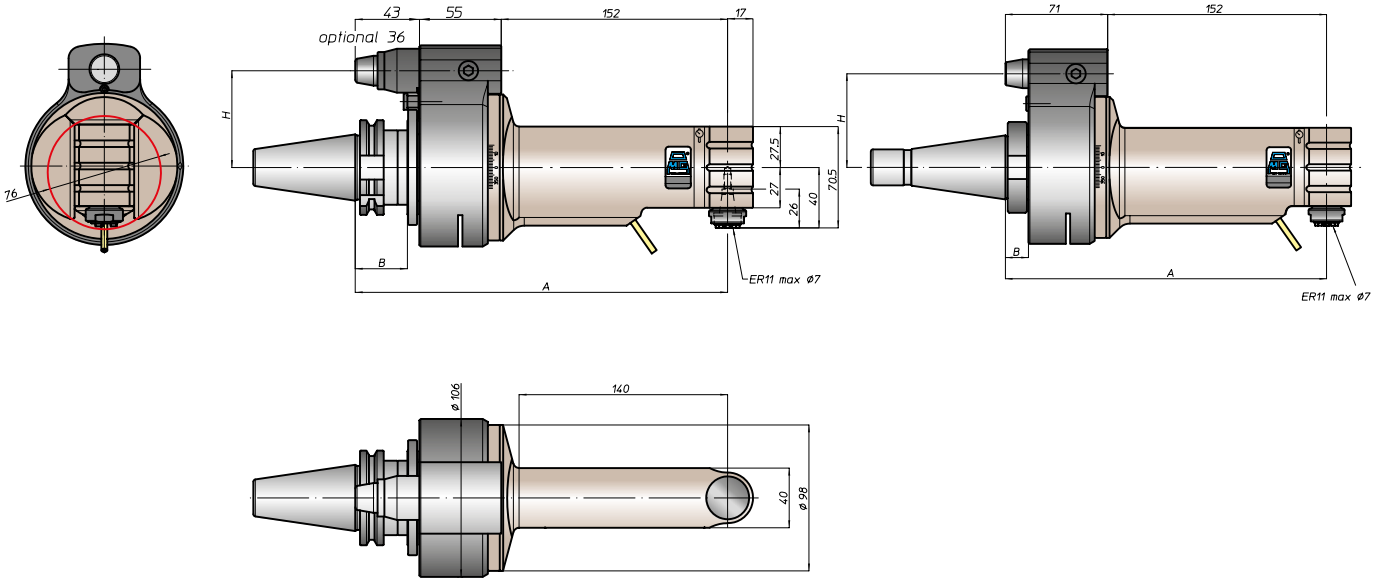
INPUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø7	M6	180 N	1-1	10000 RPM	11 Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø8-Ø10 WELDON WHISTLE-NOTCH



CONO *SHANK*				CAT ANSIB5.50			BT			HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50		40	50		63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	250			250			250	258		259			254			250			220	223	220	223
B	35			35			35	45		44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80		65	80		65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110			110			110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA10.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 5,8 KG
50 — 8 KG

ROTAZIONE *ROTATION*

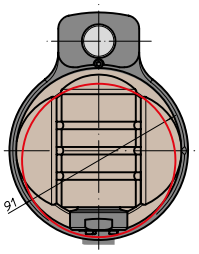
IN — INPUT
OUT — OUTPUT

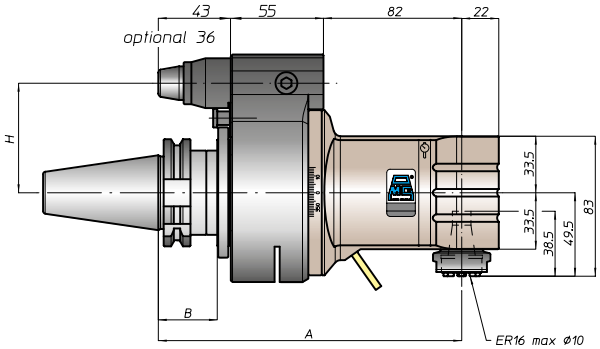
CARATTERISTICHE *FEATURES*

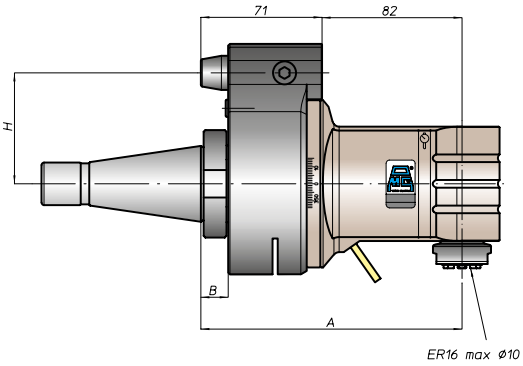
Ø10	M8	400 N	1-1	10000	14
				RPM	Nm

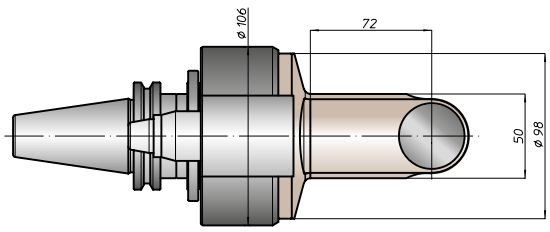
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER20 DIN6499-ER
- Ø16 PORTAFRESE *FACE MILL ARBOR*
- Ø8-Ø10 Ø12 WELDON WHISTLE-NOTCH









CONO *SHANK*	DIN69871				ANSIB5.50		BT		DIN69893			ISO26623			KM			DIN2080		NMTB	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	180				180		180	188	189			184			180			150	153	150	153
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL			110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA10.PL

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 7,5 KG
50 — 9,8 KG

ROTAZIONE *ROTATION*

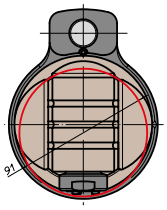
IN — INPUT → OUT — OUTPUT

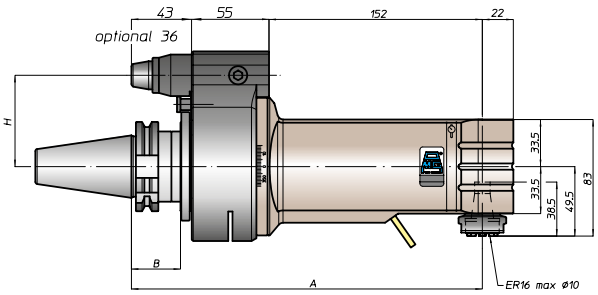
CARATTERISTICHE *FEATURES*

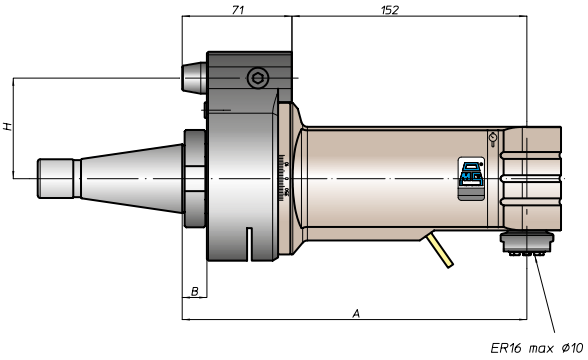
Ø10	M8	400 N	1-1	10000 RPM	14 Nm

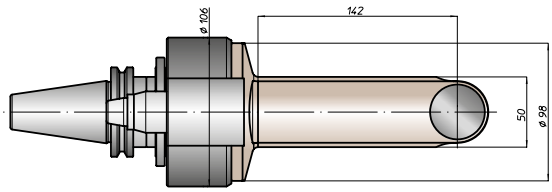
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER20 DIN6499-ER
- Ø16 PORTAFRESE FACE MILL ARBOR
- Ø8-Ø10-Ø12 WELDON WHISTLE-NOTCH









CONO *SHANK*	DIN69871			ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	250			250		250	258	259			254			250			220	223	220	223
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA13.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 6,5 KG
50 — 9 KG

ROTAZIONE *ROTATION*

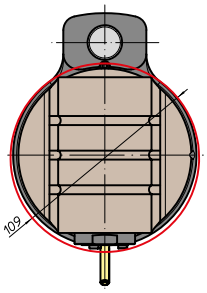
IN — INPUT
OUT — OUTPUT

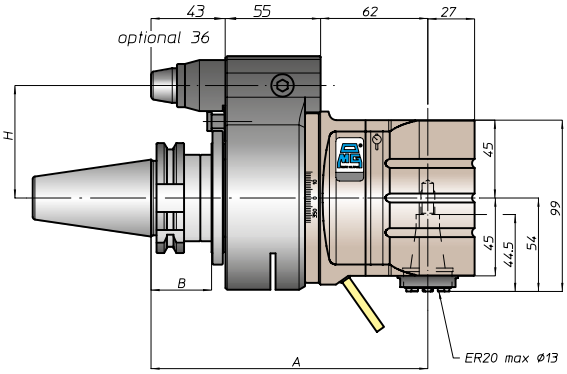
CARATTERISTICHE *FEATURES*

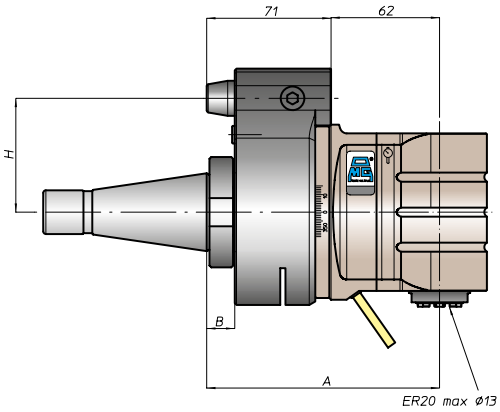
Ø13	M10	810 N	1-1	8000	38
				RPM	Nm

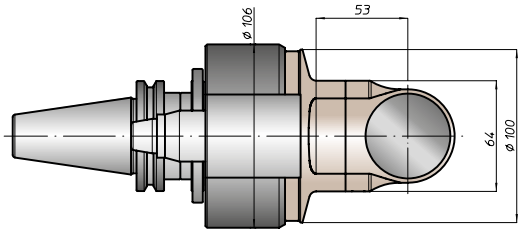
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER25 DIN6499-ER
- Ø16-Ø22 PORTAFRESE FACE MILL ARBOR
- Ø16 WELDON WHISTLE NOTCH
- ABS25 LICENZA KOMET® KOMET LICENCE®









CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	160			160		160	168	169			164			160			130	133	130	133
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65	80		65	80		65	80	65	80
H OPTIONAL		110			110		110		110			110			110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA13.PL

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 9,5 KG
50 — 12 KG

ROTAZIONE *ROTATION*

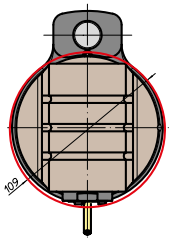
IN — INPUT
OUT — OUTPUT

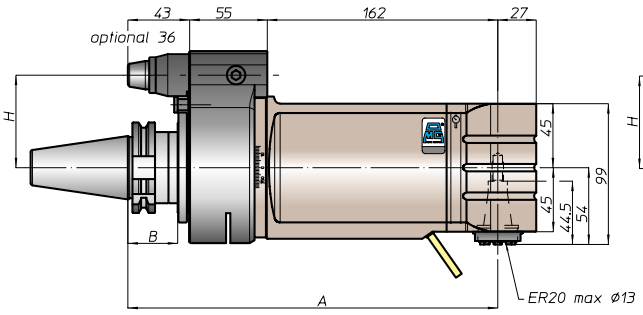
CARATTERISTICHE *FEATURES*

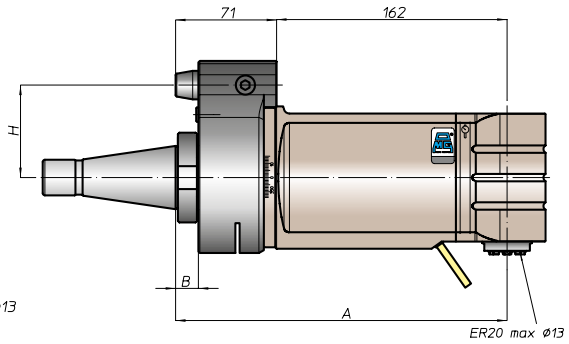
Ø13 | M10 | 810 N | 1-1 | 8000 RPM | 38 Nm

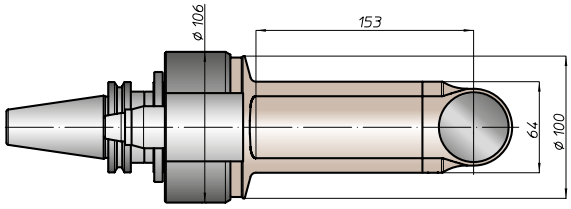
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER25 DIN6499-ER
- Ø16-Ø22 PORTAFRESE / FACE MILL ARBOR
- Ø16 WELDON WHISTLE-NOTCH
- ABS25 LICENZA KOMET® / KOMET LICENCE®









CONO *SHANK*	DIN69871			ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	260			260		260	268	269			264			260			230	233	230	233
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA16.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 7,7 KG
50 — 11,7 KG

ROTAZIONE *ROTATION*

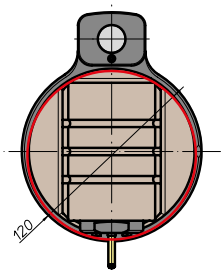
IN — INPUT
OUT — OUTPUT

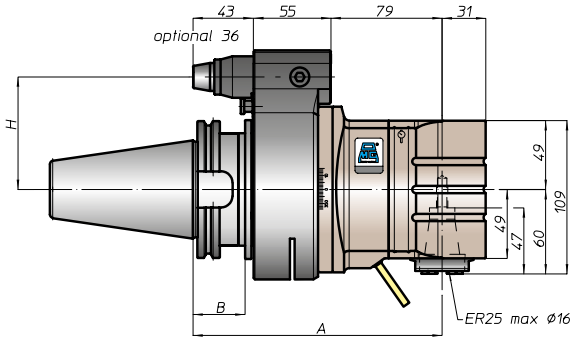
CARATTERISTICHE *FEATURES*

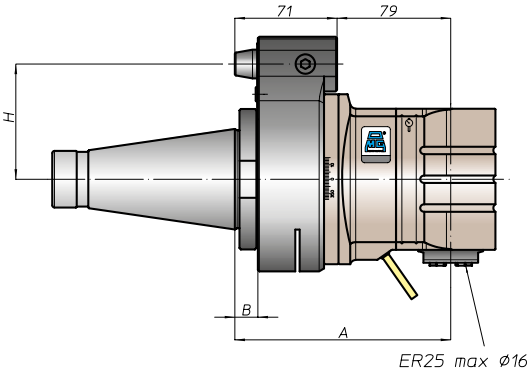
Ø16	M12	1040 N	1-1	5000 RPM	55 Nm

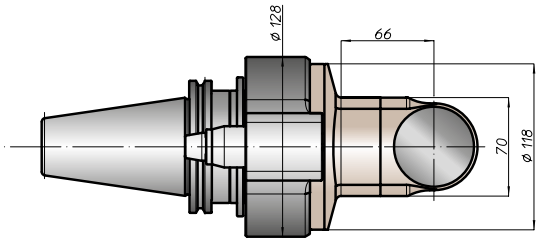
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER32 DIN6499-ER
- Ø16-Ø22-Ø27-Ø32 PORTAFRESE FACE MILL ARBOR
- Ø20 WELDON WHISTLE-NOTCH
- HSK32 DIN69893-HSK
- C3 COROMANT CAPTO®
- ABS32 LICENZA KOMET® KOMET LICENCE®









CONO *SHANK*	DIN69871			ANSIB5.50		BT		DIN69893			ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	172	177		172	177	172	185	181	186		176		181	172	177		147	150	142	150
B	35	37		35	37	35	45	44	46			39	41	35	37		13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA16.PL

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

15,5 KG

ROTAZIONE
ROTATION

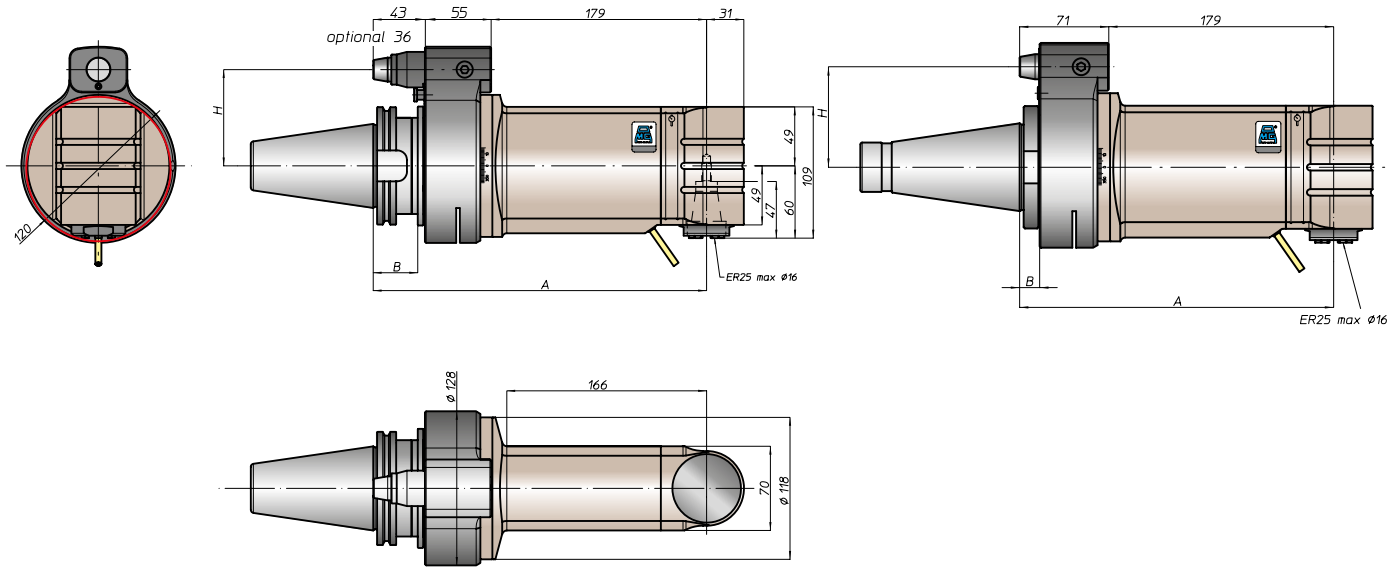
INPUT OUTPUT

CARATTERISTICHE
FEATURES

Ø16	M12	1040 N	1-1	5000	55

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

- ER32 DIN6499-ER
- Ø16-Ø22-Ø27-Ø32 PORTAFRESE / FACE MILL ARBOR
- Ø20 WELDON WHISTLE-NOTCH
- HSK32 DIN69893-HSK
- C3 COROMANT CAPTO®
- ABS32 LICENZA KOMET® / KOMET LICENCE®



CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893		CAPTO ISO26623		KM		DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C6	C8	80	100	50	50
A	277		277	285	286		281		277		250	250
B	35		35	45	46		39	41			16	16
H STANDARD	80		80	80	80		80		80		80	80
H OPTIONAL	110		110	110	110		110		110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA20.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

14,5 KG

ROTAZIONE *ROTATION*

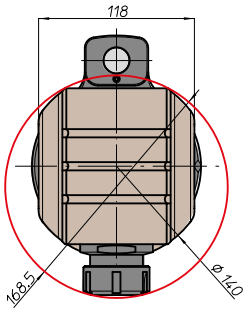
INPUT OUTPUT

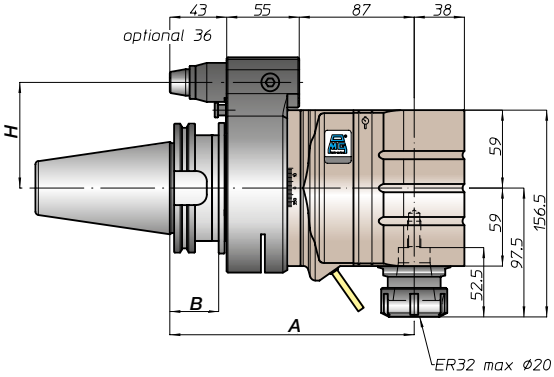
CARATTERISTICHE *FEATURES*

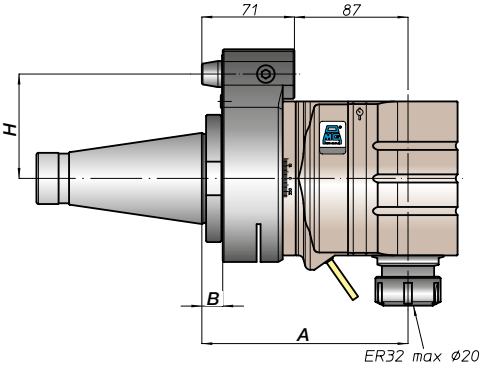
Ø20 | M14 | 1460 N | 1-1 | 3500 | 90 Nm

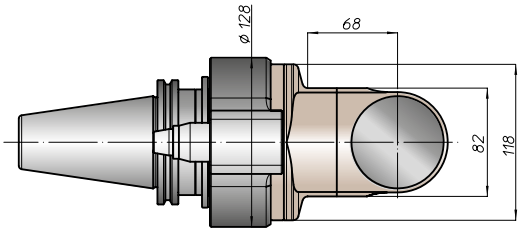
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER40 DIN6499-ER
Ø22-Ø27-032 PORTAFRESE FACE MILL ARBOR
Ø20-Ø25-032 WELDON WHISTLE-NOTCH
HSK40 DIN69893-HSK
C4 COROMANT CAPTO®
ABS40 LICENZA KOMET® KOMET LICENCE®









	CONO *SHANK*	DIN69871		ANSIB5.50	BT	HSK		CAPTO	KM		DIN2080	ANSIB5.18
	SIZE	45	50	50	50	80	100	C8	80	100	50	50
	A	185		185	193	194		189	185		158	158
	B	35		35	45	46		41			16	16
	H STANDARD	80		80	80	80		80	80		80	80
	H OPTIONAL	110		110	110	110		110	110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA20.PL

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

19 KG

ROTAZIONE
ROTATION

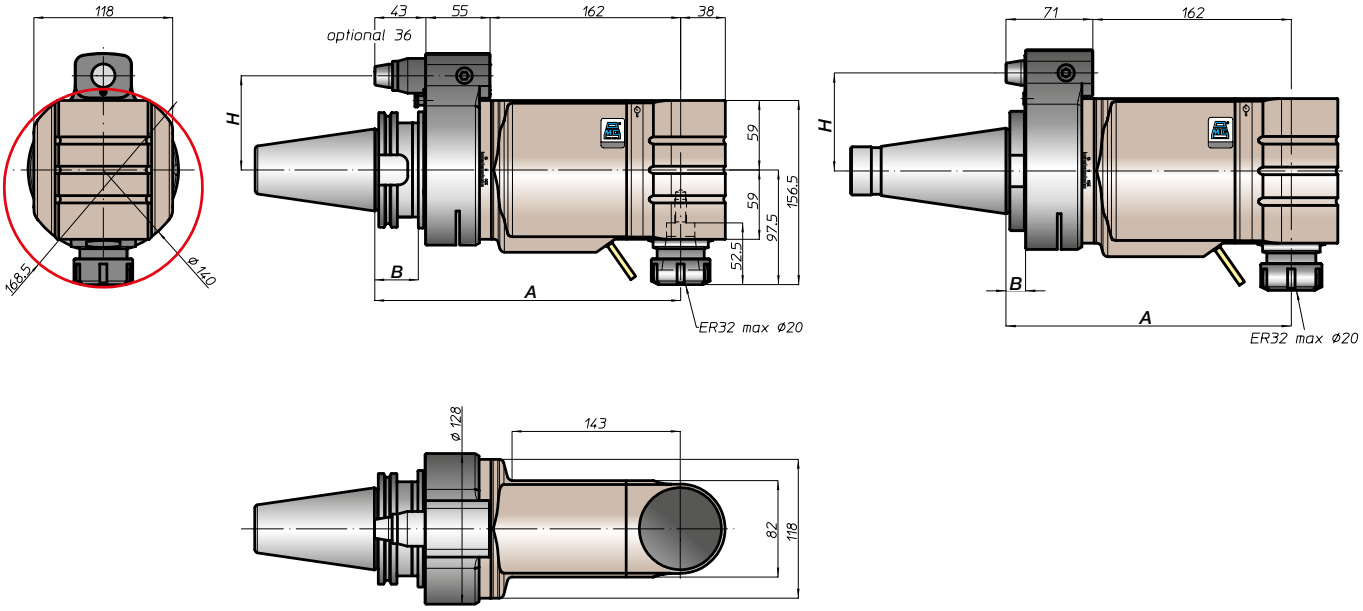
INPUT OUTPUT

CARATTERISTICHE
FEATURES

Ø20	M14	1460 N	1-1	3500	90
				RPM	Nm

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

- **ER40** DIN6499-ER
- **Ø22-Ø27-Ø32** PORTAFRESE FACE MILL ARBOR
- **Ø20-Ø25-Ø32** WELDON WHISTLE-NOTCH
- **HSK40** DIN69893-HSK
- **C4** COROMANT CAPTO®
- **ABS40** LICENZA KOMET® KOMET LICENCE®

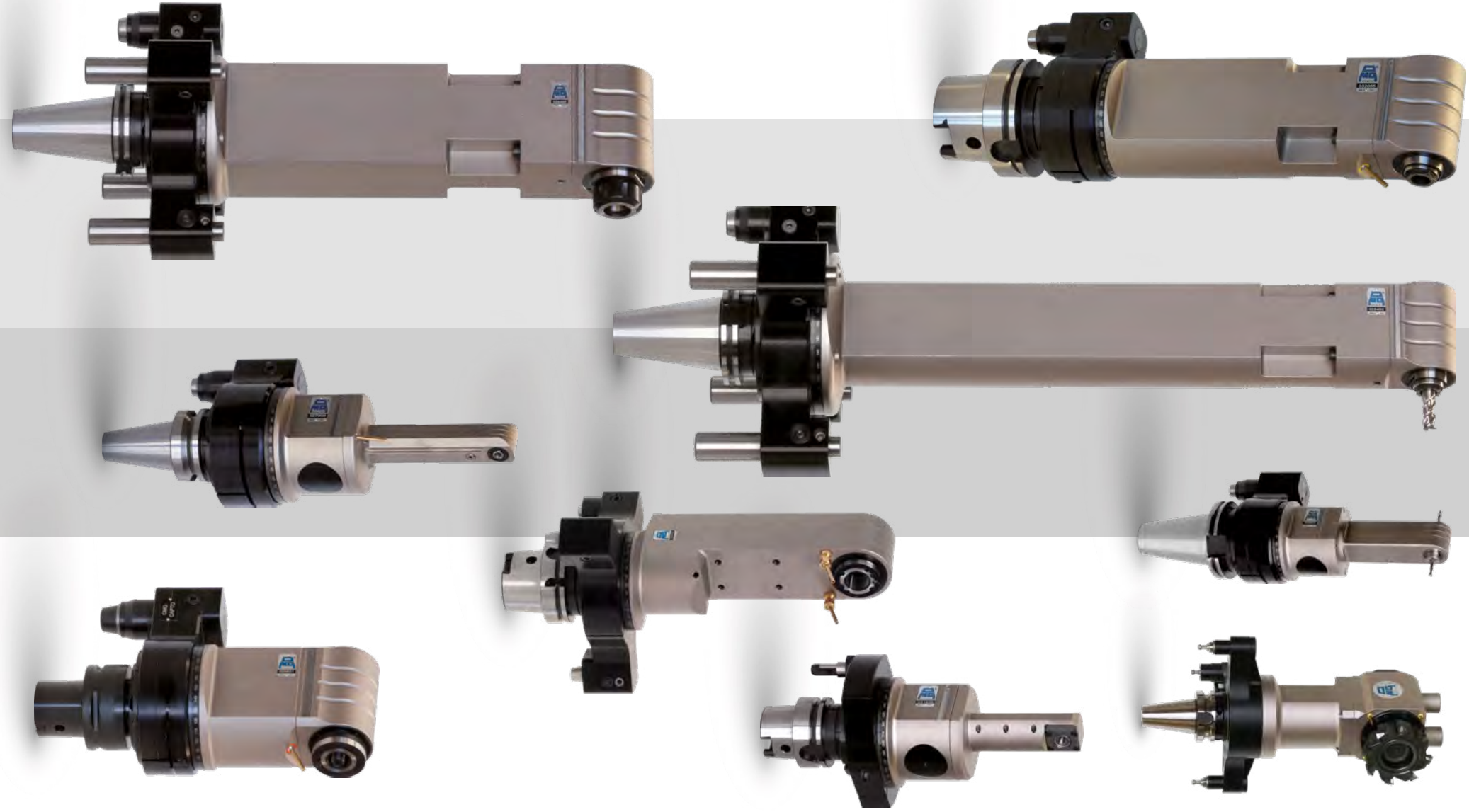


CONO *SHANK*	DIN69871		ANSIB5.50	BT	HSK		CAPTO	KM		DIN2080	ANSIB5.18
SIZE	45	50	50	50	80	100	C8	80	100	50	50
A	260		260	268	269		264	260		233	233
B	35		35	45	46		41			16	16
H STANDARD	80		80	80	80		80	80		80	80
H OPTIONAL	110		110	110	110		110	110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA

EXTANDEDE GALLERY



TA20-30

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

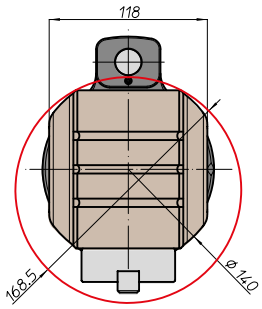
14,7 KG

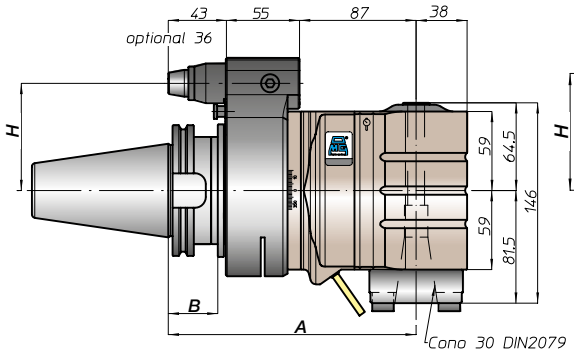
ROTAZIONE *ROTATION*

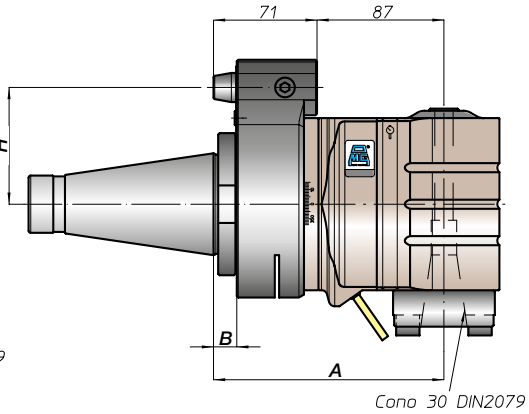
INPUT OUTPUT

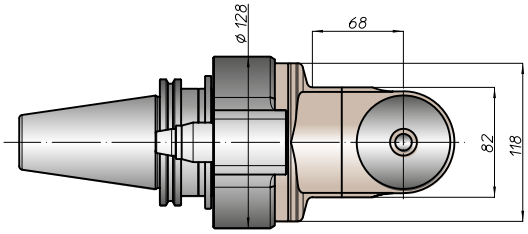
CARATTERISTICHE *FEATURES*

Ø20 M14 1460 N 1-1 3500 90









Nota

nel mandrino DIN2079 si possono utilizzare coni DIN2080-30, DIN69871-A30,MAS403-BT30

Note

on the spindle DIN2079 you can use shank DIN2080-30, DIN69871-A30, MAS403-BT30

CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK		CAPTO ISO26623	KM		DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C8	80	100	50	50
A	185		185	193	194		189	185		158	158
B	35		35	45	46		41			16	16
H STANDARD	80		80	80	80		80	80		80	80
H OPTIONAL	110		110	110	110		110	110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA26.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

22 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø26 M20 3020 N 1-1 2500 165

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER50 DIN6499-ER

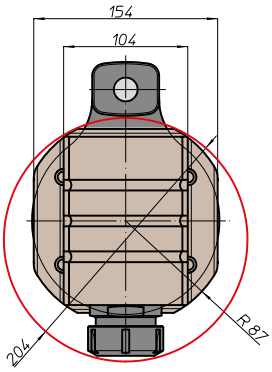
Ø16 -Ø27-Ø32-Ø40 PORTAFRESE FACE MILL ARBOR

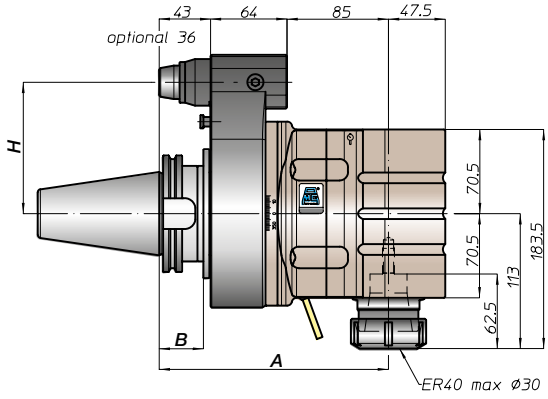
Ø32 WELDON WHISTLE-NOTCH

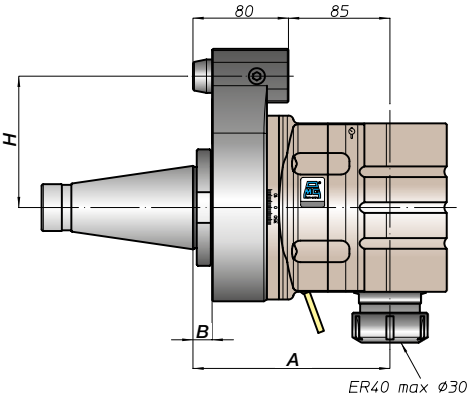
HSK63 DIN69893-HSK

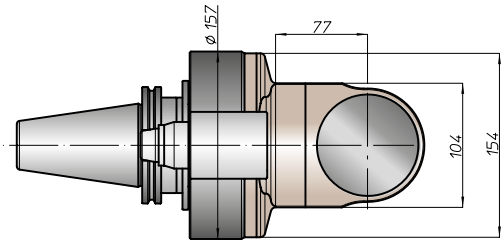
C4-C5-C6 COROMANT CAPTO®

ABS50 LICENZA KOMET® KOMET LICENCE®









		CAT	BT	HSK	CAPTO	KM		NMTB
CONO *SHANK*	DIN69871	ANSIB5.50			ISO26623		DIN2080	ANSIB5.18
SIZE	45 50	50	50	80 100	C8	100	50	50
A	192	192	200	201	196	192	165	165
B	37	37	45	46	41		16	16
H STANDARD	110	110	110	110	110	110	110	110
H OPTIONAL								

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA26.40

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

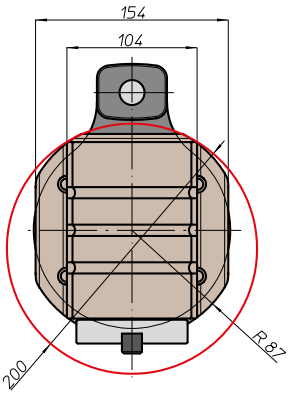
22 KG

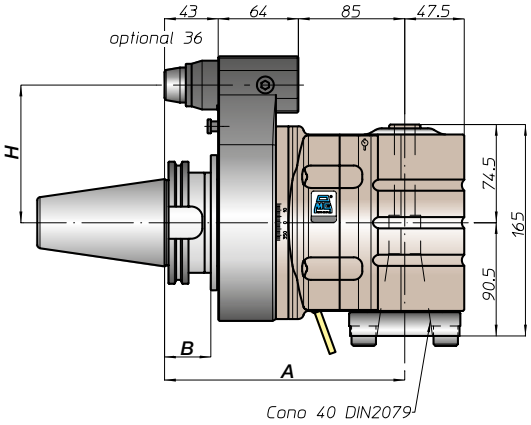
ROTAZIONE *ROTATION*

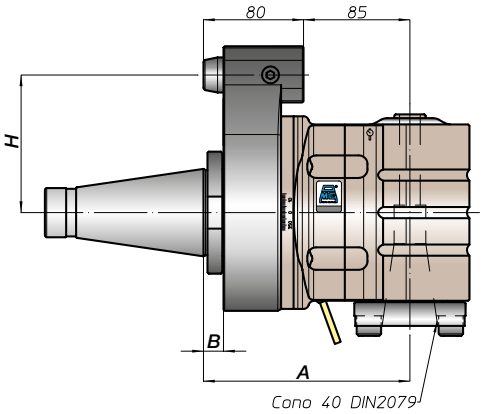
INPUT OUTPUT

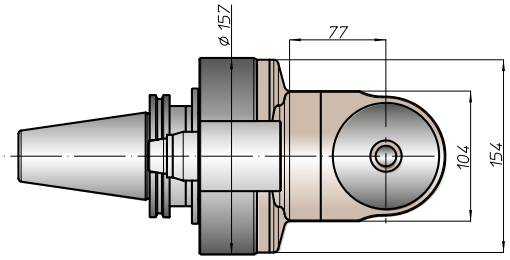
CARATTERISTICHE *FEATURES*

Ø26 | M20 | 3020 N | 1-1 | 2500 RPM | 165 Nm









Nota

nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

Note

on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40

CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK		CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C8	100	50	50
A	192		192	200	201		196	192	165	165
B	37		37	45	46		41		16	16
H STANDARD	110		110	110	110		110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA30.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

24 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø30 M24 3500 N 1-1 2500 205

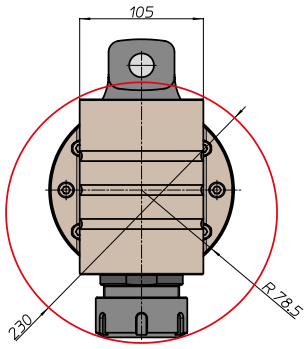
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

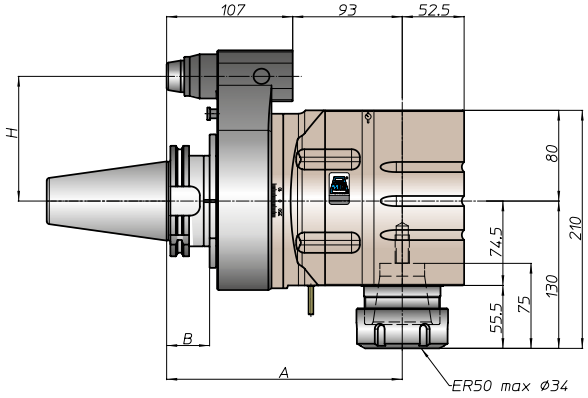
Ø27-Ø32-Ø40 PORTAFRESE FACE MILL ARBOR

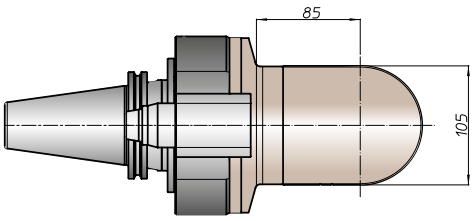
Ø32 WELDON WHISTLE-NOTCH

HSK63 DIN69893-HSK

C6 COROMANT CAPTO®







CONO *SHANK*	DIN69871	CAT ANSIB5.50	BT	HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	50	50	50	100	C8			
A	200	200	208	209	204			
B	36,5	36,5	45	46	41			
H STANDARD	110	110	110	110	110			
H OPTIONAL								

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA30.40

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

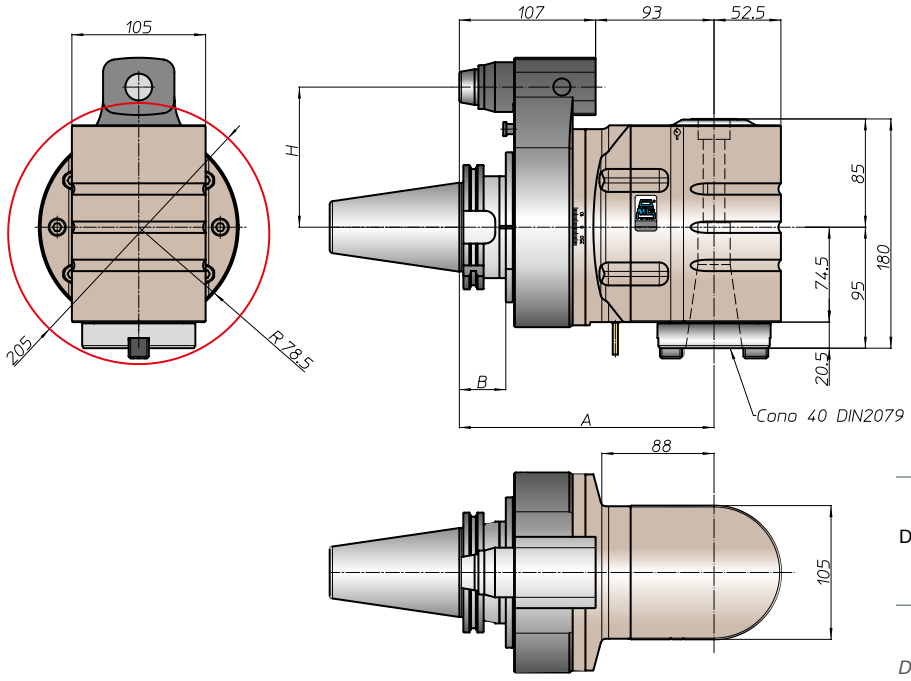
24 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø30	M24	3500 N	1-1	2500	205
				RPM	Nm



Nota

nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

Note

on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40

CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893		CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C8	100	50	50
A	200		200	208	209		204	200	200	200
B	35		35	45	46		41		16	16
H STANDARD	110		110	110	110		110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option


SERIE
TA
LIGHT

Nuove Teste ad Angolo, quando la leggerezza è una priorità.

Le nuove Teste ad Angolo della serie TAL sono state realizzate con l'obiettivo di ottenere un prodotto leggero, che potesse essere applicato su macchine ATC dove il peso dell'utensile è considerato una limitazione. Un prodotto più leggero quindi, che non vede limiti nelle possibili lavorazioni le quali rimango le stesse di una normale Testa ad Angolo O.M.G. Anche questa gamma si contraddistingue per la qualità con cui le teste vengono realizzate, che rimane sempre alta, come tutti i prodotti O.M.G.

Disponibili in diversi modelli, queste teste ad angolo vanno dalla piccola TAL07 alla grande TAL26.

New Angle Heads, when lightness is a priority.

The goal was to develop a product series that could be applied on machines with ATC where the weight of the head represents a limitation. A lighter weight product therefore, that does not limit the possible machining operations, with the same performance to our standard O.M.G. Angle Heads. This range also stands out for the high quality our customers have come to appreciate for all O.M.G. products.

Available in different models, these heads start from the small TAL07 to our large TAL26.

TAL07

TESTA AD ANGOLO • *ANGLE HEAD*

PESO *WEIGHT*

40 — 4,5 KG
50 — 6,5 KG

ROTAZIONE *ROTATION*

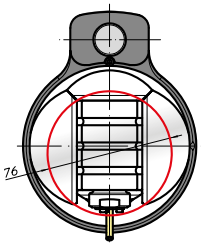
IN — INPUT
OUT — OUTPUT

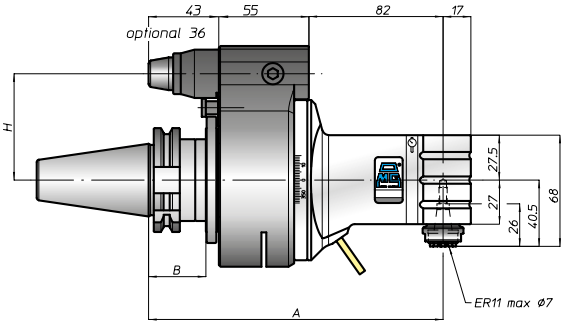
CARATTERISTICHE *FEATURES*

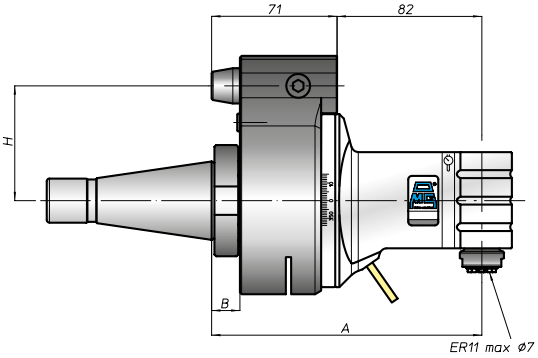
Ø7	M6	180 N	1-1	10000	11
				RPM	Nm

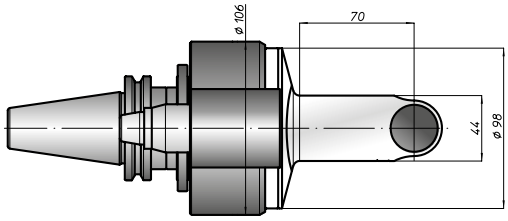
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø8-Ø10 WELDON WHISTLE-NOTCH









		DIN69871				ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
CONO *SHANK*																						
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	180				180		180	188	189			184			180			150	153	150	153
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL			110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAL10

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 4,5 KG
50 — 6,7 KG

ROTAZIONE *ROTATION*

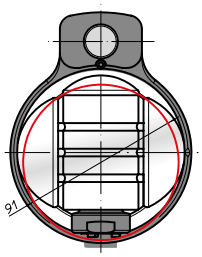
IN — INPUT
OUT — OUTPUT

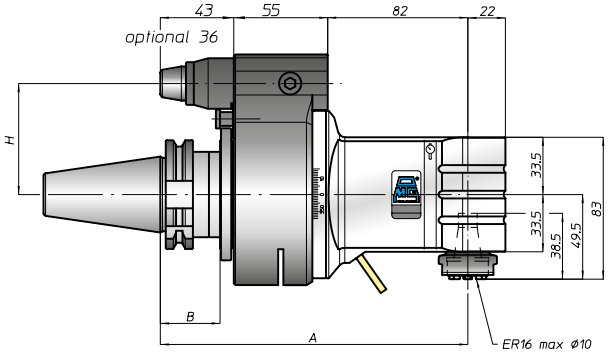
CARATTERISTICHE *FEATURES*

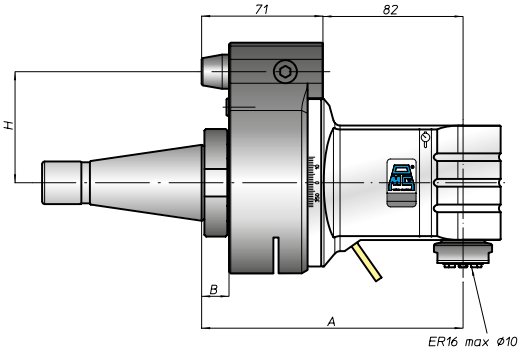
Ø10	M8	400 N	1-1	10000	14

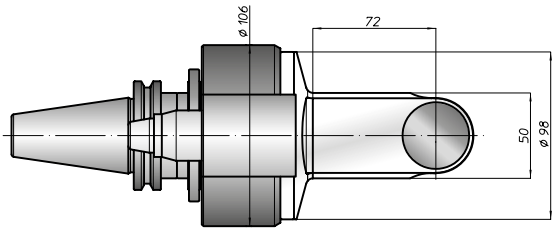
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER20 DIN6499-ER
- Ø16 PORTAFRESE FACE MILL ARBOR
- Ø8-Ø10-Ø12 WELDON WHISTLE-NOTCH









CONO *SHANK*	DIN69871				ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	180				180		180	188	189			184			180			150	153	150	153
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80			65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110				110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAL13

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 5 KG
50 — 7,5 KG

ROTAZIONE *ROTATION*

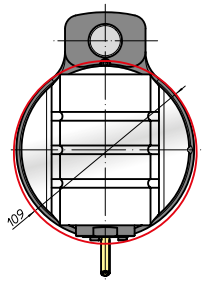
IN — INPUT
OUT — OUTPUT

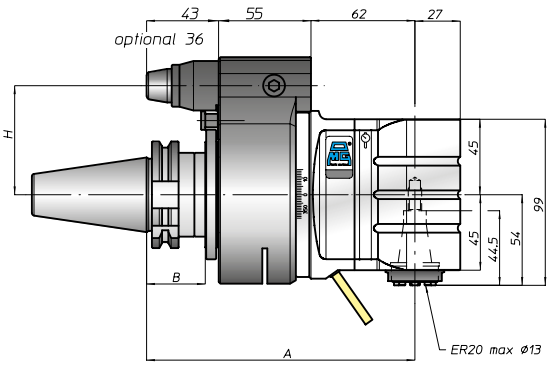
CARATTERISTICHE *FEATURES*

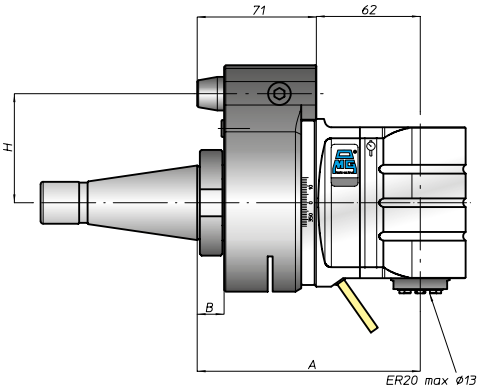
Ø13	M10	810 N	1-1	8000	38
				RPM	Nm

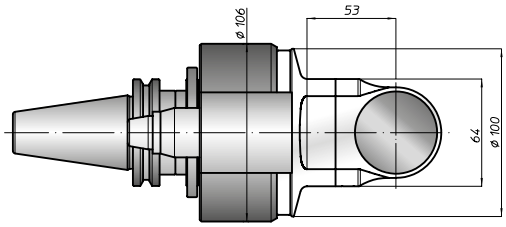
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER25 DIN6499-ER
- Ø16-Ø22 PORTAFRESE FACE MILL ARBOR
- Ø16 WELDON WHISTLE-NOTCH
- ABS25 LICENZA KOMET® KOMET LICENCE®









CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	160			160		160	168	169			164			160			130	133	130	133
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65	80		65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAL16

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 5,8 KG
50 — 9,7 KG

ROTAZIONE *ROTATION*

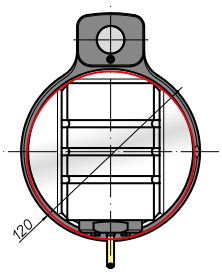
IN — INPUT → OUT — OUTPUT

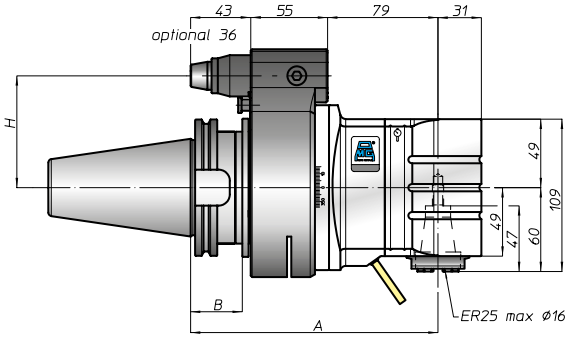
CARATTERISTICHE *FEATURES*

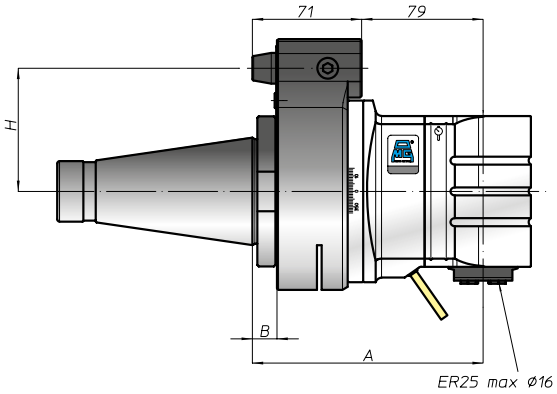
Ø16	M12	1040 N	1-1	5000 RPM	55 Nm

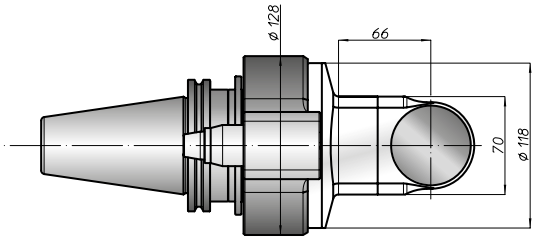
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- **ER32** DIN6499-ER
- **Ø16-Ø22-Ø27-Ø32** PORTAFRESE / FACE MILL ARBOR
- **Ø20** WELDON WHISTLE-NOTCH
- **HSK32** DIN69893-HSK
- **C3** COROMANT CAPTO®
- **ABS32** LICENZA KOMET® / KOMET LICENCE®









CONO *SHANK*				CAT ANSIB5.50			BT			HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40		50	40		50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	172	177		172	177		172		185	181	186		176	181		172	177		147	150	142	150
B	35			35			35		45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80		65		80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110				110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAL20

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

11,5 KG

ROTAZIONE *ROTATION*

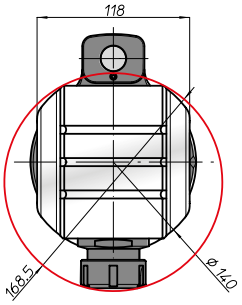
INPUT OUTPUT

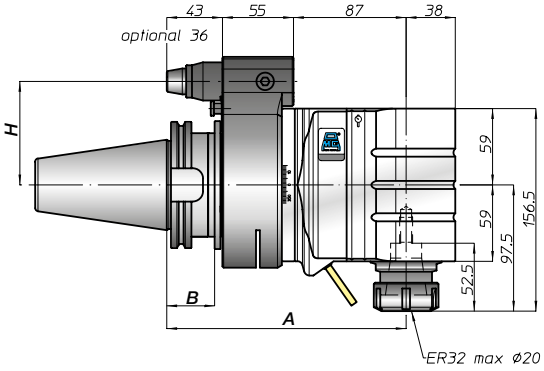
CARATTERISTICHE *FEATURES*

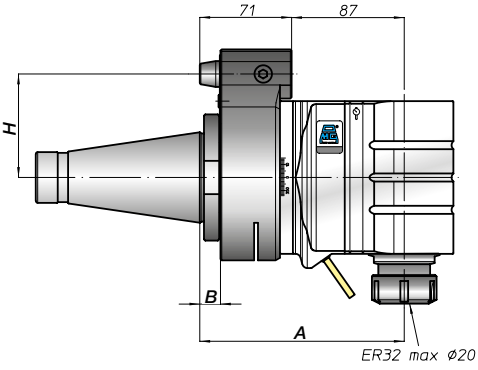
Ø20	M14	1460 N	1-1	3500	90
				RPM	Nm

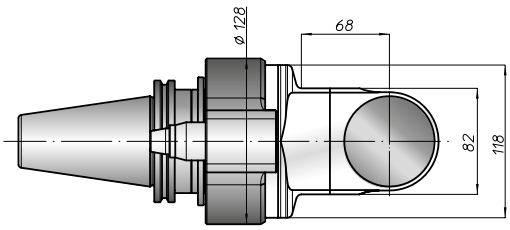
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER40 DIN6499-ER
- Ø22-Ø27-Ø32 PORTAFRESE FACE MILL ARBOR
- Ø20-Ø25-Ø32 WELDON WHISTLE-NOTCH
- HSK40 DIN69893-HSK
- C4 COROMANT CAPTO®
- ABS40 LICENZA KOMET® KOMET LICENCE®









CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK		CAPTO ISO26623	KM		DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C8	80	100	50	50
A	185		185	193	194		189	185		158	158
B	35		35	45	46		41			16	16
H STANDARD	80		80	80	80		80	80		80	80
H OPTIONAL	110		110	110	110		110	110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAL26

TESTA AD ANGOLO • *ANGLE HEAD*

PESO *WEIGHT*

19 KG

ROTAZIONE *ROTATION*

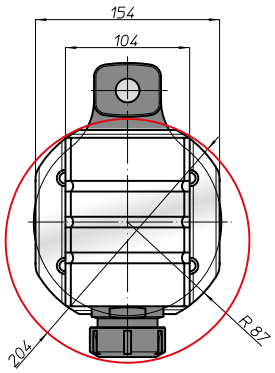
INPUT OUTPUT

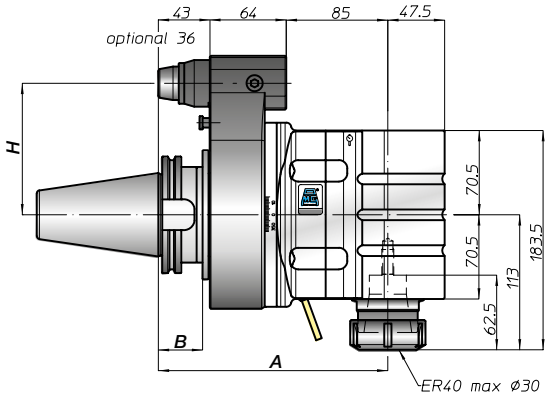
CARATTERISTICHE *FEATURES*

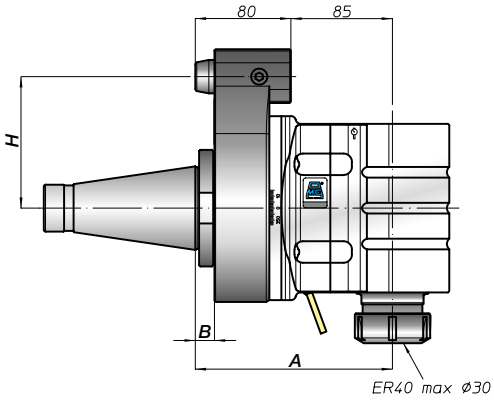
Ø26	M20	3020 N	1-1	2500	165
				RPM	Nm

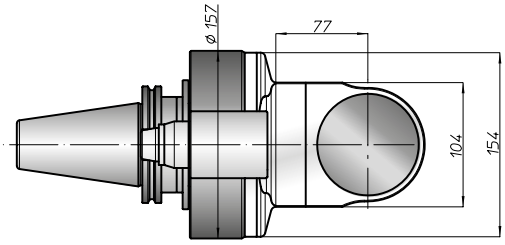
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- **ER50** DIN6499-ER
- **Ø16-Ø27-Ø32-Ø40** PORTAFRESE FACE MILL ARBOR
- **Ø32** WELDON WHISTLE-NOTCH
- **HSK63** DIN69893-HSK
- **C4-C5-C6** COROMANT CAPTO®
- **ABS50** LICENZA KOMET® KOMET LICENCE®









CONO *SHANK*	DIN69871		ANSIB5.50	BT	HSK		ISO26623	KM	DIN2080	ANSIB5.18
SIZE	45	50	50	50	80	100	C8	100	50	50
A	192		192	200	201		196	192	165	165
B	37		37	45	46		41		16	16
H STANDARD	110		110	110	110		110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAL26.40

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

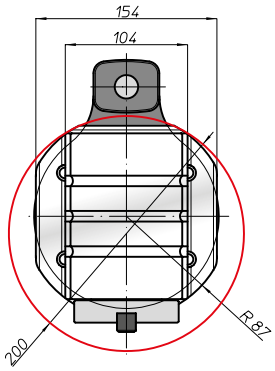
19 KG

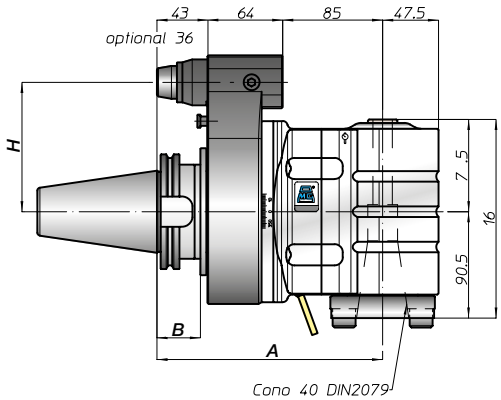
ROTAZIONE *ROTATION*

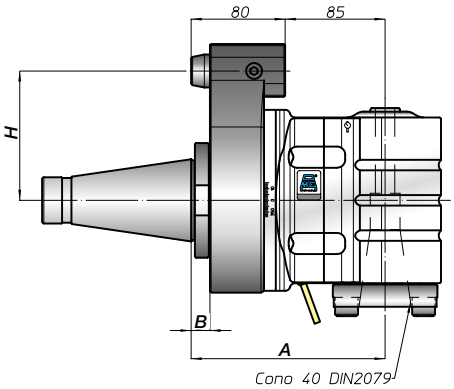
INPUT OUTPUT

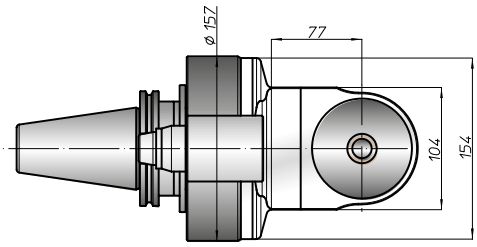
CARATTERISTICHE *FEATURES*

Ø26 M20 3020 N 1-1 2500 165









Nota

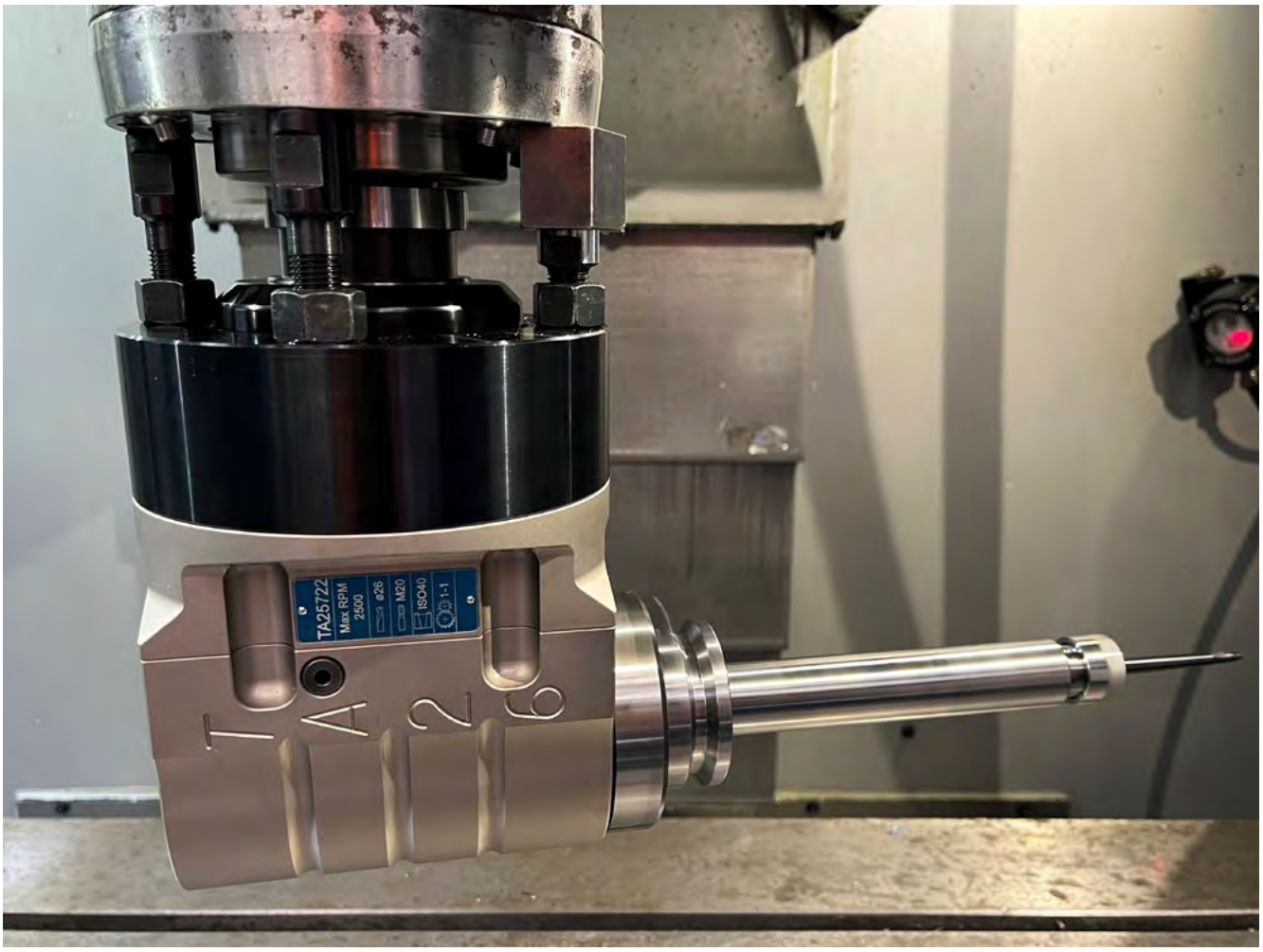
nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

Note

on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40

CONO *SHANK*	DIN69871		ANSIB5.50	BT	HSK		CAPTO	KM	DIN2080	ANSIB5.18
SIZE	45	50	50	50	80	100	C8	100	50	50
A	192		192	200	201		196	192	165	165
B	37		37	45	46		41		16	16
H STANDARD	110		110	110	110		110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option


TA25722
Max RPM
2500
ø26
M20
ISO40
1-1
T A 2 6


6000 RPM 12C


TA026

TA07.2P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 5 KG
50 — 7 KG

ROTAZIONE *ROTATION*

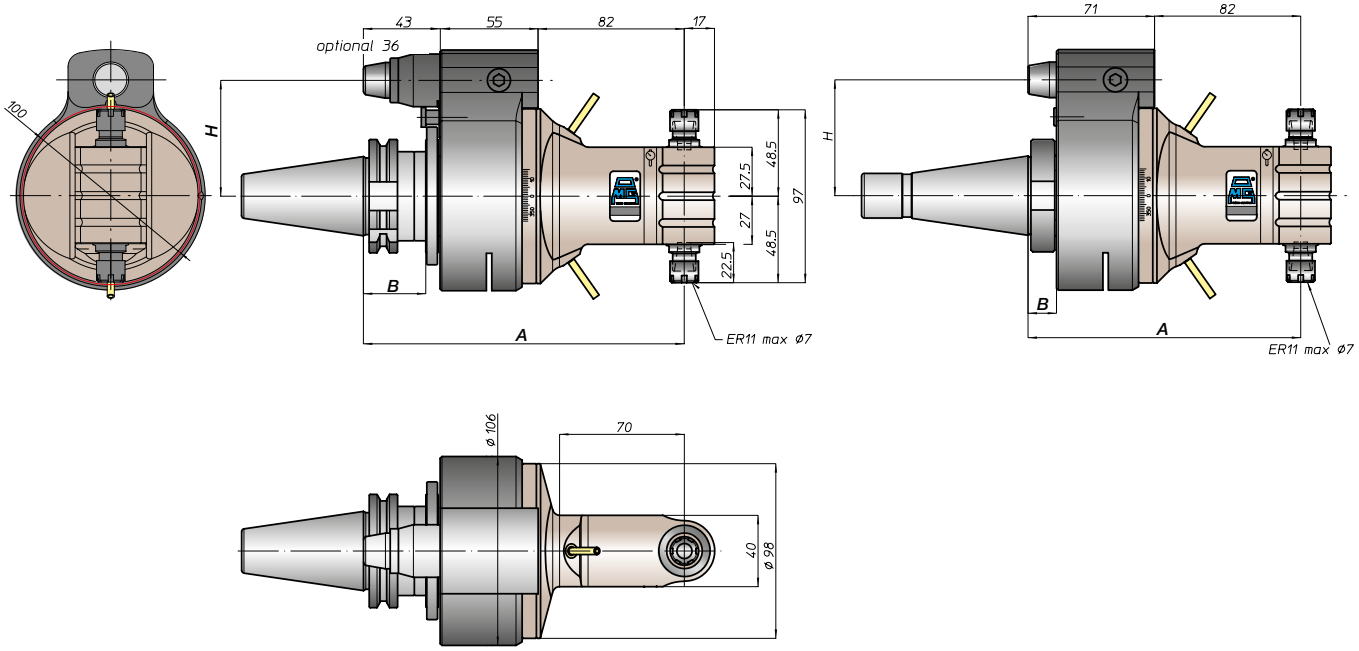
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø7	M6	180 N	1-1	10000	11
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø10 WELDON WHISTLE-NOTCH



CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	180				180		180	188	189			184			180			150	153	150	153
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL			110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA10.2P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

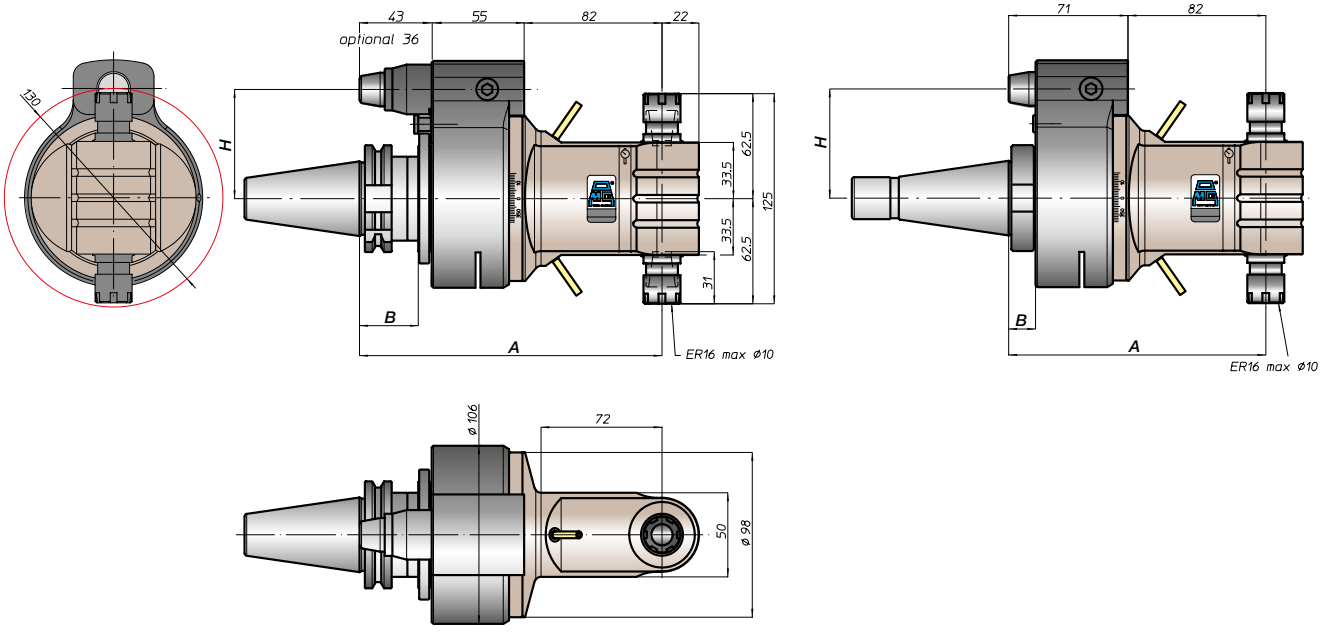
40 — 6,1 KG
50 — 7,5 KG

ROTAZIONE *ROTATION*

IN — INPUT → OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø10 | M8 | 400 N | 1-1 | 10000 RPM | 14 Nm



CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	180				180		180	188	189			184			180			150	153	150	153
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80			65	80	65	80	65	80		65	80		65	80		65	80	65	80
H OPTIONAL		110				110		110		110			110			110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA13.2P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 6,5 KG
50 — 9 KG

ROTAZIONE *ROTATION*

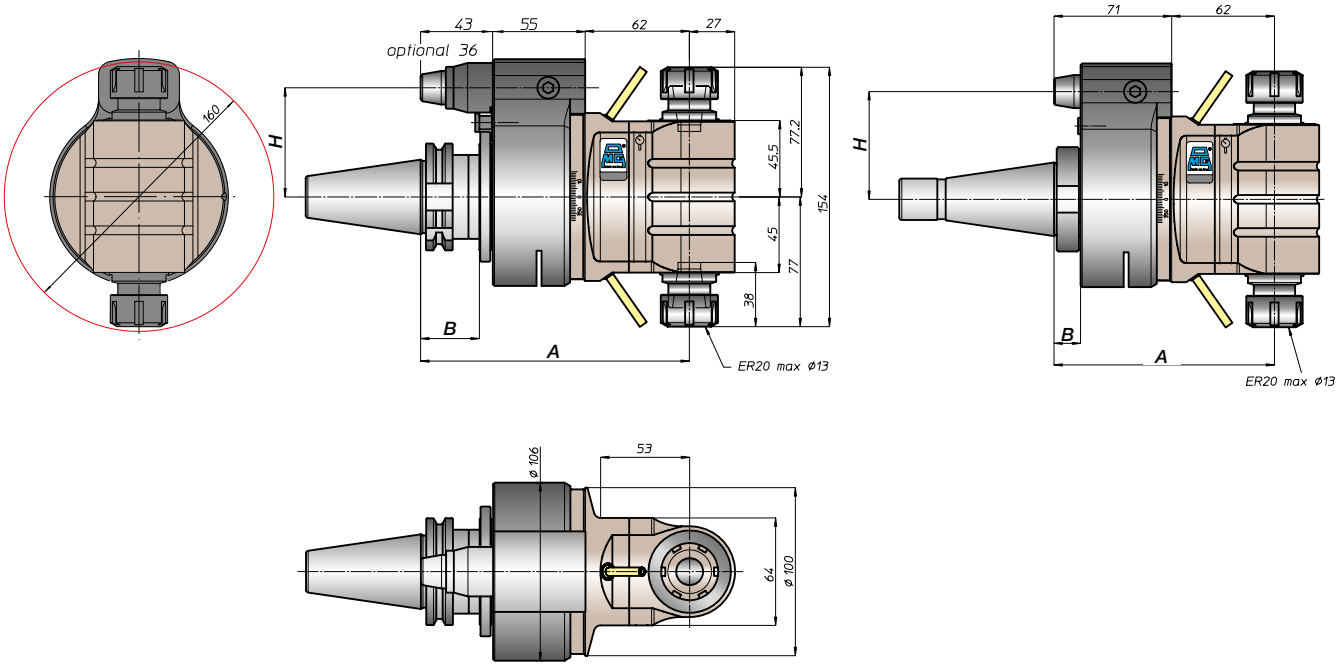
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø13	M10	810 N	1-1	8000	38
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER25 DIN6499-ER



CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	160			160		160	168	169			164			160			130	133	130	133
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA16.2P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

40 — 7,7 KG
50 — 12,2 KG

ROTAZIONE
ROTATION

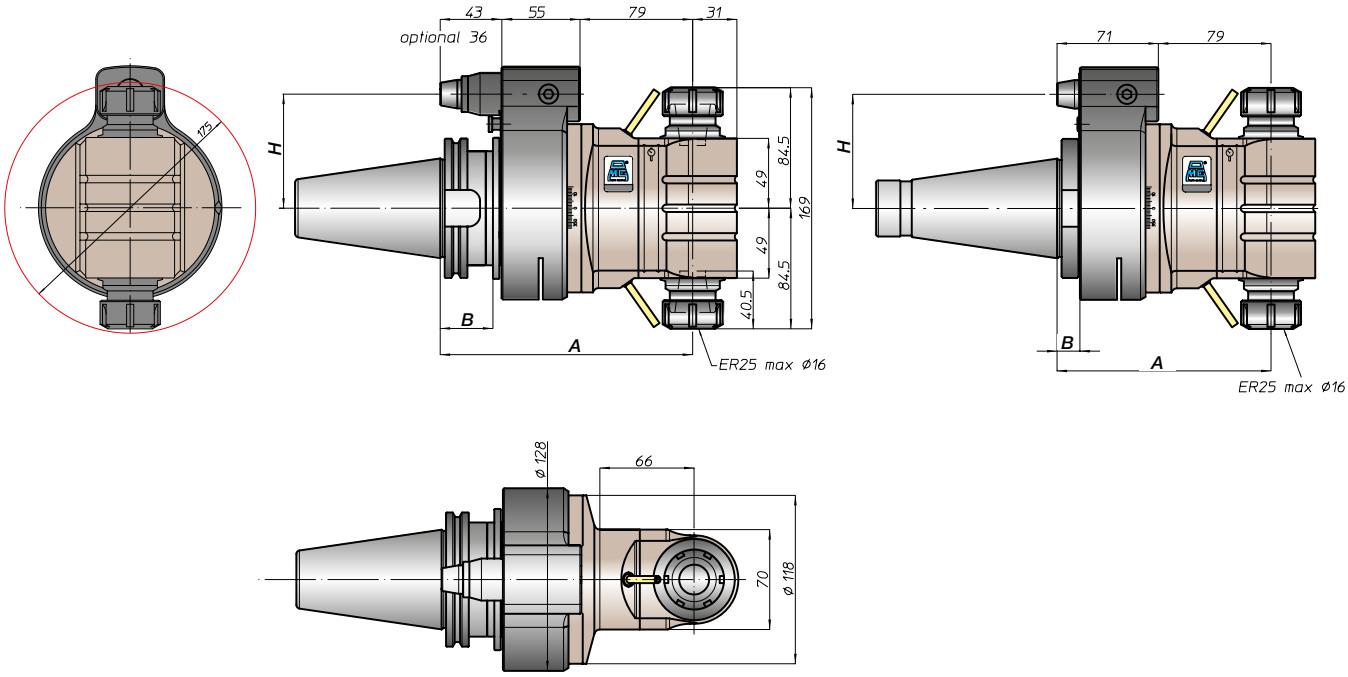
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø16 | M12 | 1040 N | 1-1 | RPM 5000 | Nm 55

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

ER32
DIN6499-ER



CONO *SHANK*				CAT ANSIB5.50			BT			HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40		50	40		50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	172	177		172	177		172		185	181	186		176	181		172	177		147	150	142	150
B	35			35			35		45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80		65		80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110				110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA20.2P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

15 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

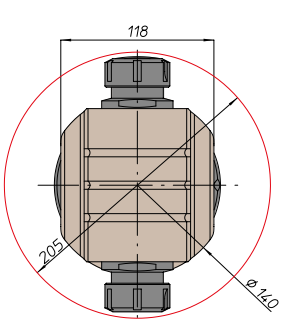
CARATTERISTICHE *FEATURES*

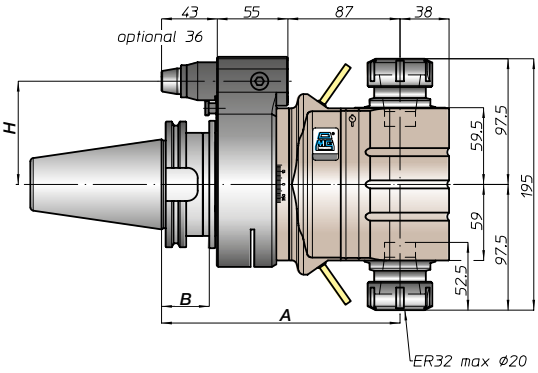
Ø20	M14	1460 N	1-1	3500	90

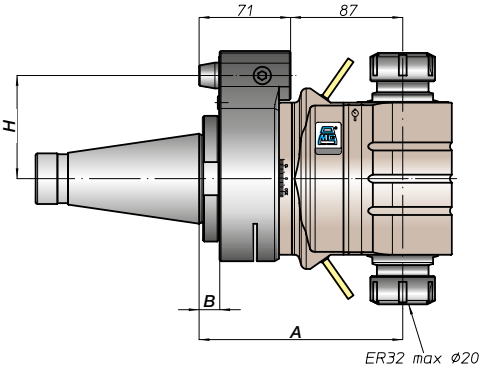
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

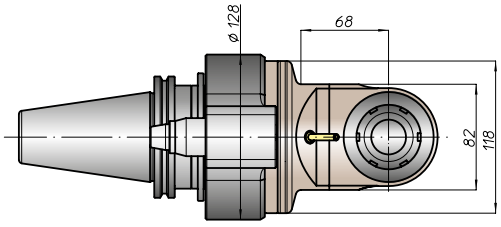
Ø27-Ø32 PORTAFRESE FACE MILL ARBOR

Ø20 WELDON WHISTLE-NOTCH









CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK		CAPTO ISO26623	KM		DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C8	80	100	50	50
A	185		185	193	194		189	185		158	158
B	35		35	45	46		41			16	16
H STANDARD	80		80	80	80		80	80		80	80
H OPTIONAL	110		110	110	110		110	110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA26.2P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

22,5 KG

ROTAZIONE
ROTATION

INPUT OUTPUT

CARATTERISTICHE
FEATURES

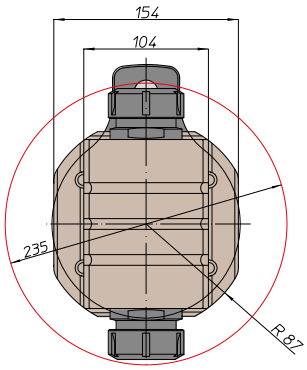
Ø26 | M20 | 3020 N | 1-1 | 2500 RPM | 165 Nm

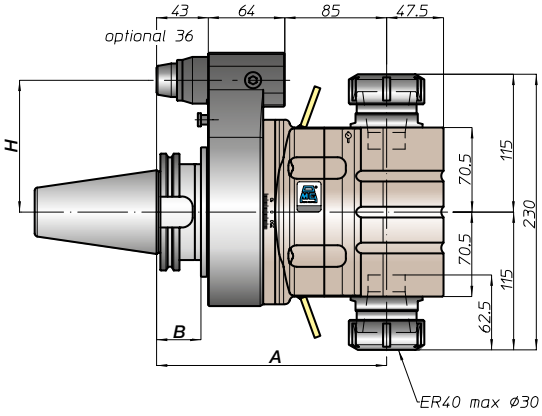
MANDRINI DISPONIBILI
AVAILABLE SPINDLES

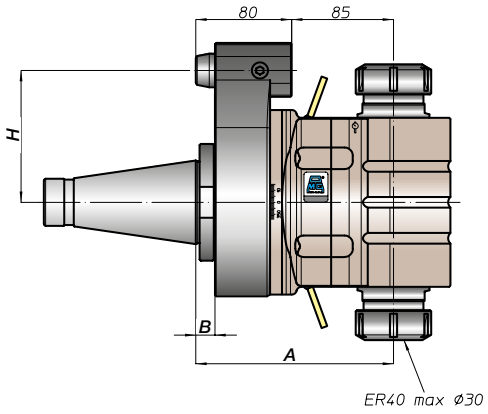
Ø16-Ø27-Ø32 PORTAFRESE / FACE MILL ARBOR

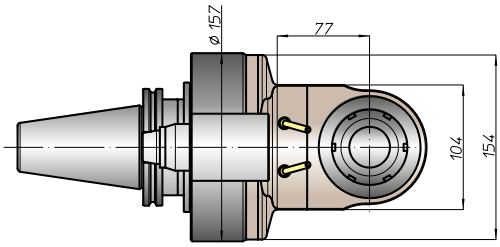
Ø32 WELDON WHISTLE-NOTCH

ABS50 LICENZA KOMET® / KOMET LICENCE®









CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK		CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C8	100	50	50
A	192		192	200	201		196	192	165	165
B	37		37	45	46		41		16	16
H STANDARD	110		110	110	110		110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA07.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

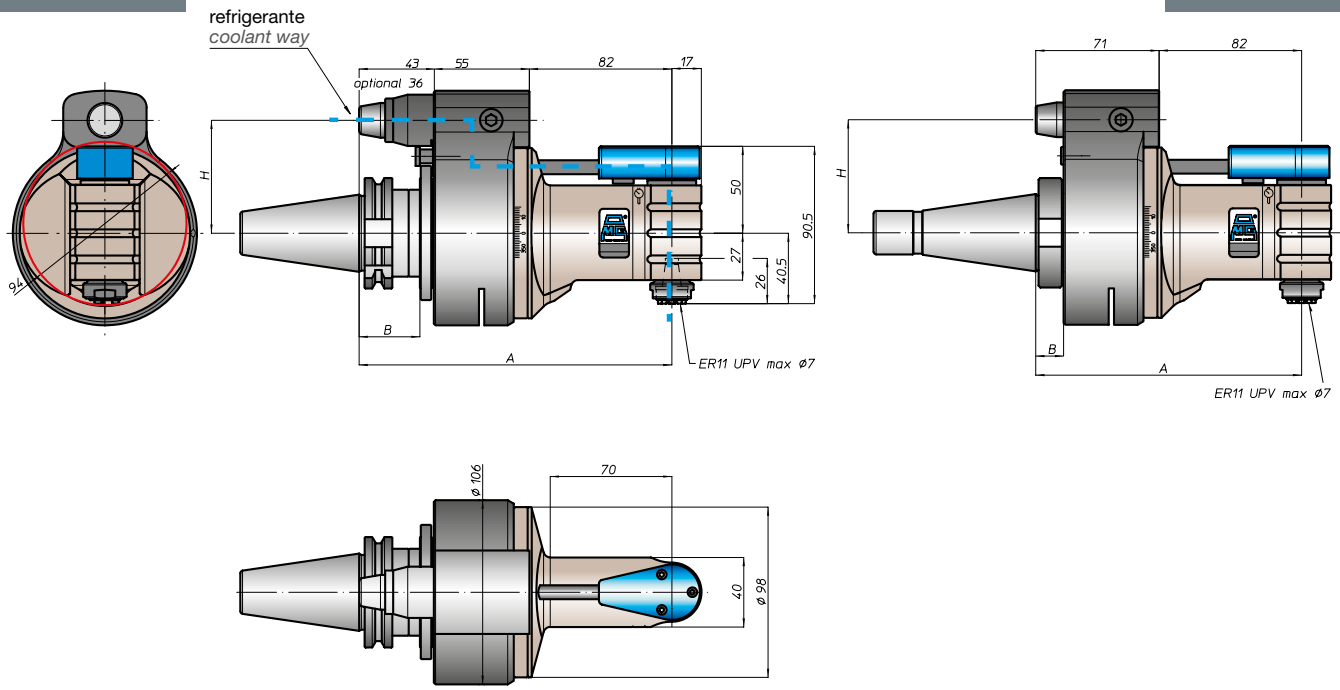
40 — 5 KG
50 — 7 KG

ROTAZIONE *ROTATION*

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø7 | M6 | 180 N | 1-1 | 10000 RPM | 11 Nm | 10 BAR



CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	150				150		150	158	159			154			150			120	123	120	123
B	35				35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL			110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA07.PDL

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

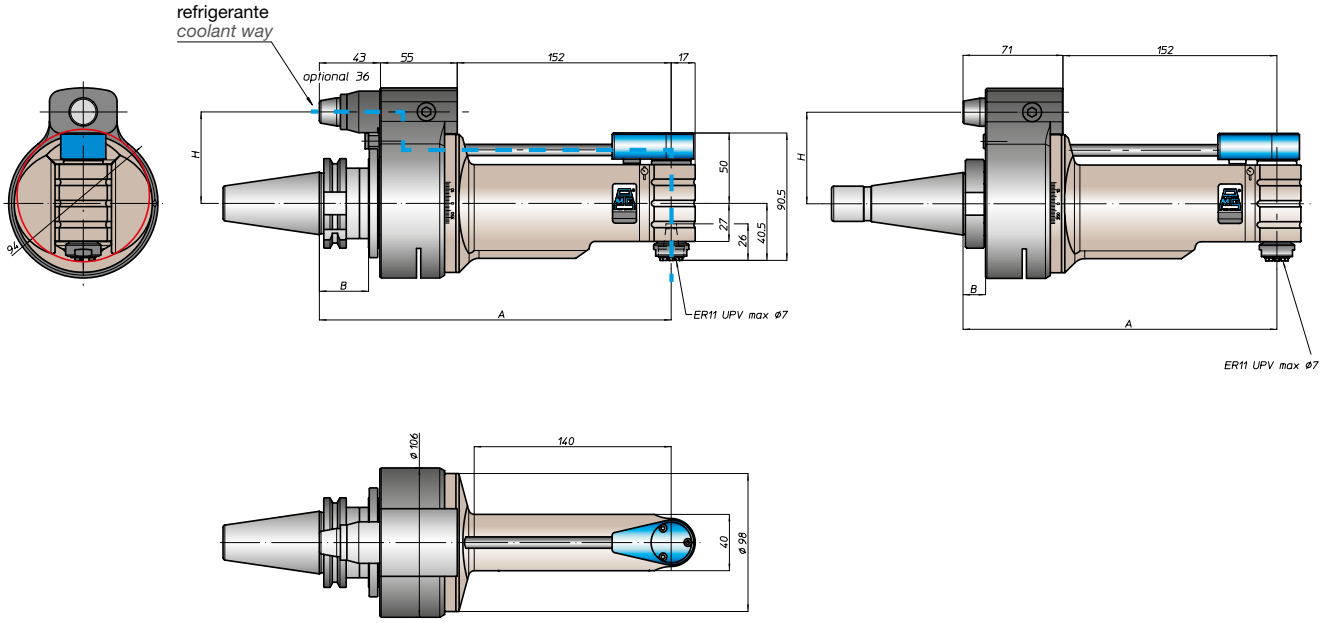
40 — 6,7 KG
50 — 9 KG

ROTAZIONE
ROTATION

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø7	M6	180 N	1-1	10000	11	10 BAR



CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	250			250		250	258	259			254			250			220	223	220	223
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA10.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

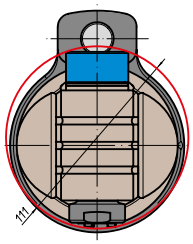
40 — 5,8 KG
50 — 8 KG

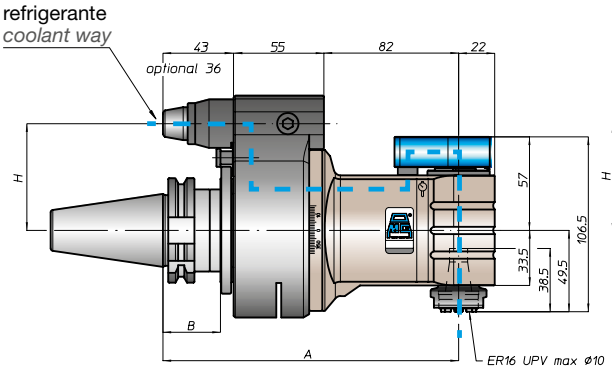
ROTAZIONE *ROTATION*

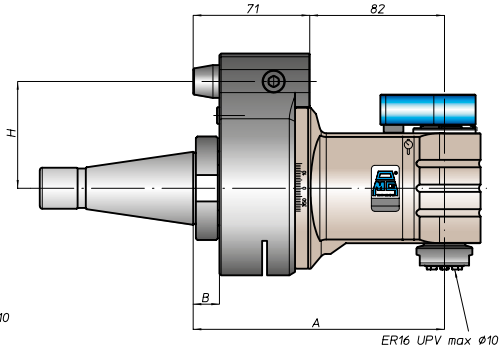
IN — INPUT
OUT — OUTPUT

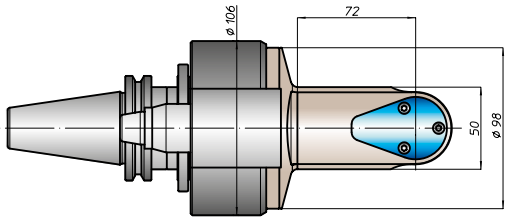
CARATTERISTICHE *FEATURES*

Ø10 | M8 | 400 N | 1-1 | 10000 RPM | 14 Nm | 10 BAR









CONO *SHANK*	DIN69871				ANSIB5.50		CAT		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50		
A	180				180		180	188	189			184			180			150	153	150	153		
B	35				35		35	45	44	46			39	41				13	16	13	16		
H STANDARD	65		80		65	80	65	80	65	80		65		80	65	80		65	80	65	80		
H OPTIONAL			110			110		110		110				110		110			110		110		

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA10.PDL

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

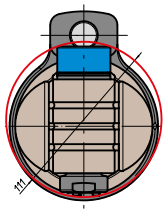
40 — 7,7 KG
50 — 10 KG

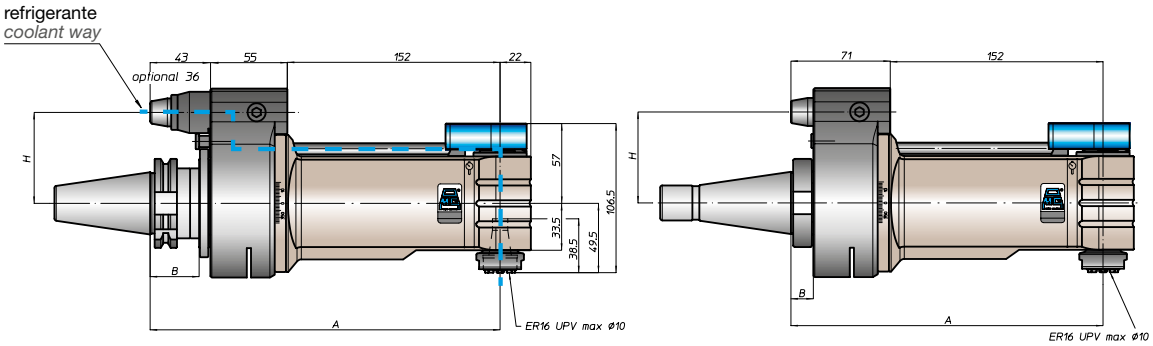
ROTAZIONE *ROTATION*

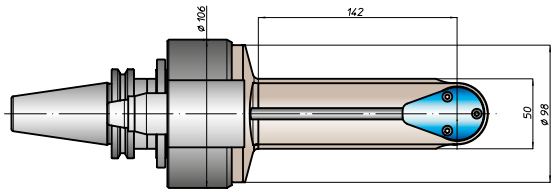
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø10 | M8 | 400 N | 1-1 | 10000 RPM | 14 Nm | 10 BAR







				CAT		BT		HSK			CAPTO			KM					NMTB	
CONO *SHANK*				ANSIB5.50				DIN69893			ISO26623						DIN2080		ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	250			250		250	258	259			284			250			220	223	220	223
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA13.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

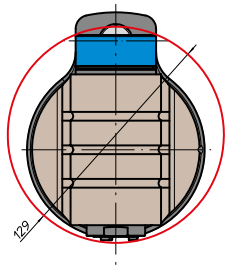
40 — 6,5 KG
50 — 9 KG

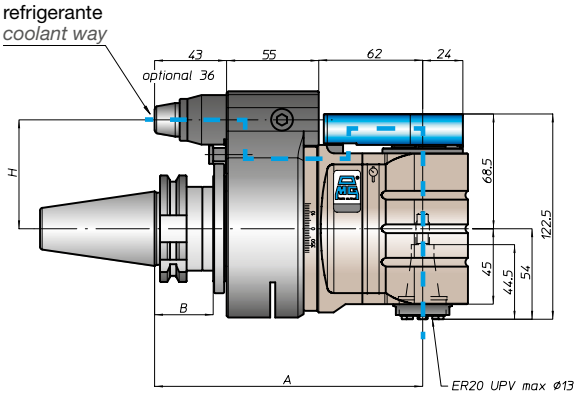
ROTAZIONE *ROTATION*

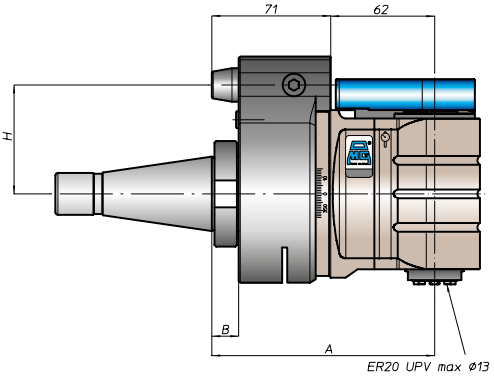
IN — INPUT
OUT — OUTPUT

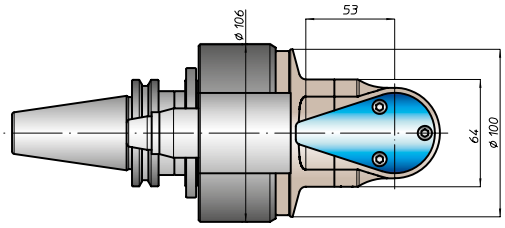
CARATTERISTICHE *FEATURES*

Ø13	M10	810 N	1-1	8000	38	10 BAR
				RPM	Nm	BAR









CONO *SHANK*	DIN69871			ANSIB5.50		CAT		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50		
A	160			160		160	168	169			164			160			130	133	130	133		
B	35			35		35	45	44	46			39	41				13	16	13	16		
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80		
H OPTIONAL		110			110		110		110				110		110			110		110		

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA16.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

7,7 KG — 12 KG

ROTAZIONE *ROTATION*

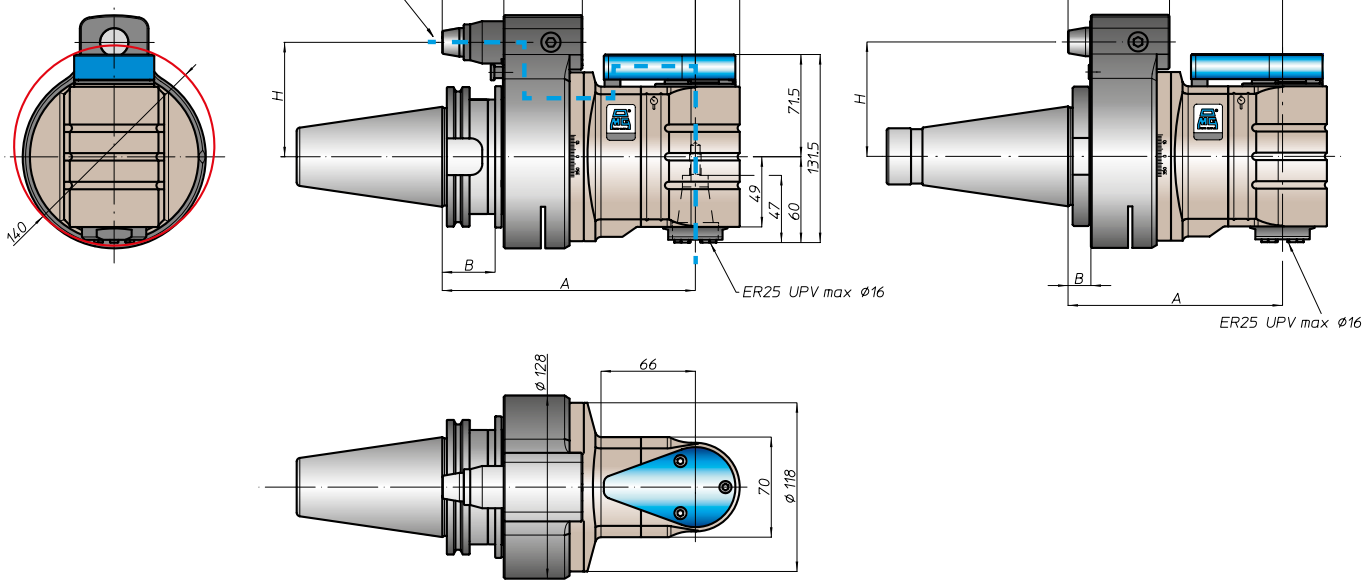
INPUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø16 — M12 — 1040 N — 1-1 — 5000 RPM — 55 Nm — 10 BAR

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER32 DIN6499-ER



CONO *SHANK*				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	172	177		172	177	172	185	181	186		176	181		172	177		147	150	142	150
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA20.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

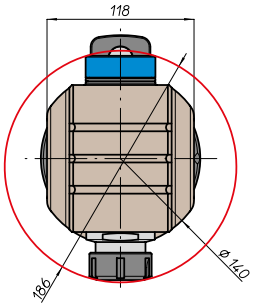
14,5 KG

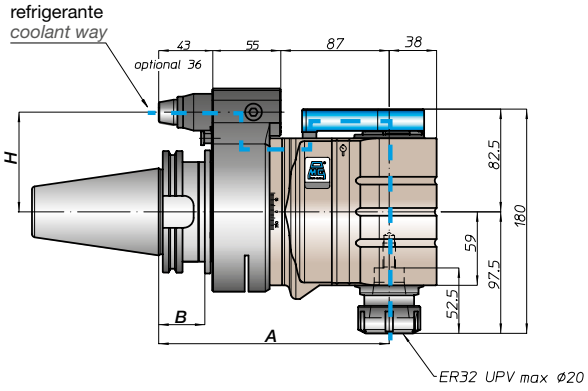
ROTAZIONE *ROTATION*

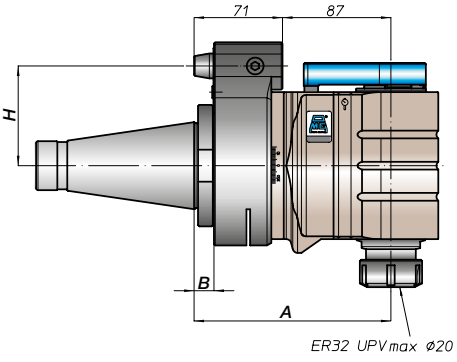
INPUT OUTPUT

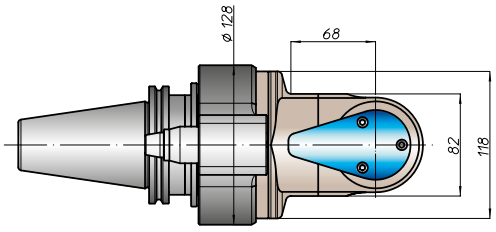
CARATTERISTICHE *FEATURES*

Ø20 | M14 | 1460 N | 1-1 | 3500 RPM | 90 Nm | 10 BAR









CONO *SHANK*	DIN69871	CAT ANSIB5.50	BT	HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	45 / 50	50	50	80 / 100	C8	80 / 100	50	50
A	185	185	193	194	189	185	158	158
B	35	35	45	46	41		16	16
H STANDARD	80	80	80	80	80	80	80	80
H OPTIONAL	110	110	110	110	110	110	110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA26.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

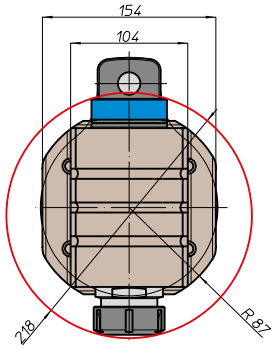
22 KG

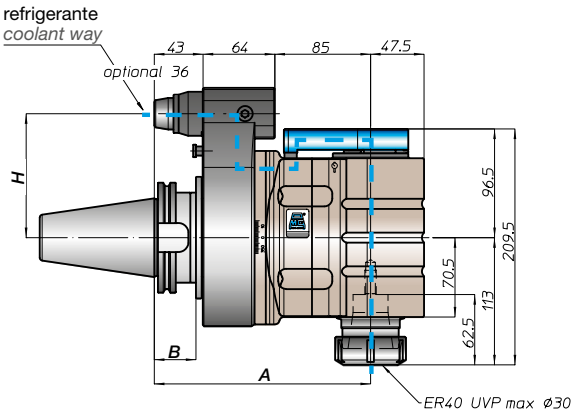
ROTAZIONE *ROTATION*

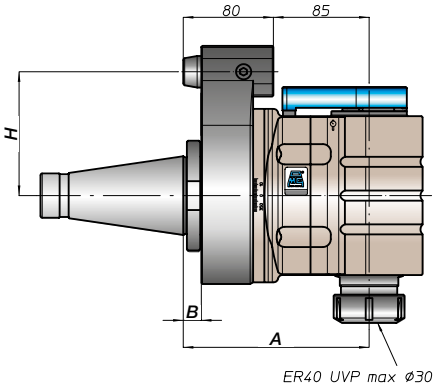
INPUT OUTPUT

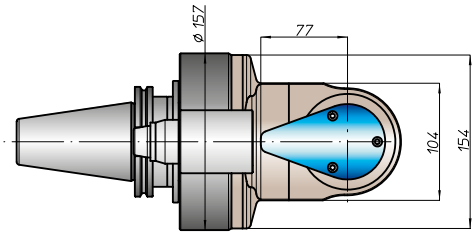
CARATTERISTICHE *FEATURES*

Ø26 | M20 | 3020 N | 1-1 | 2500 | 165 | 10 BAR









	CAT		BT	HSK	CAPTO	KM		NMTB
CONO *SHANK*	DIN69871		ANSIB5.50		DIN69893	ISO26623		DIN2080	ANSIB5.18
SIZE	45	50	50	50	80	100	C8	100	50	50
A	192		192	200	201		196	192	165	165
B	37		37	45	46		41		16	16
H STANDARD	110		110	110	110		110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA26.40.D

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

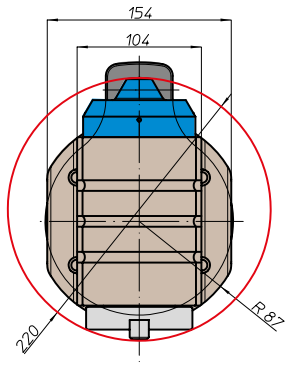
22 KG

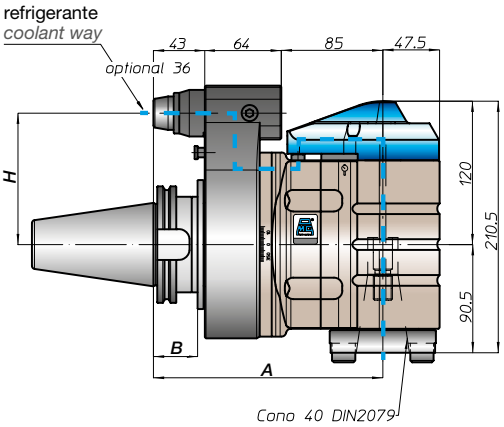
ROTAZIONE *ROTATION*

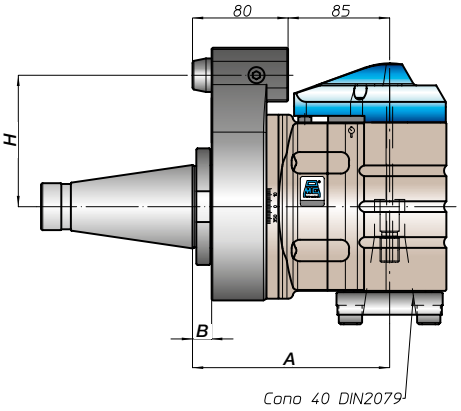
INPUT OUTPUT

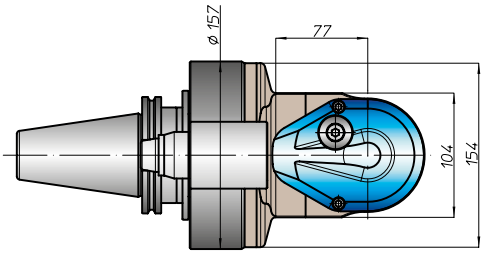
CARATTERISTICHE *FEATURES*

Ø26 | M20 | 3020 N | 1-1 | 2500 | 165 | 40 BAR









CONO *SHANK*	DIN69871	CAT ANSIB5.50	BT	HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	45 / 50	50	50	80 / 100	C8	100	50	50
A	192	192	200	201	196	192	165	165
B	37	37	45	46	41		16	16
H STANDARD	110	110	110	110	110	110	110	110
H OPTIONAL								

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA010.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 6,2 KG
50 — 8,7 KG

ROTAZIONE *ROTATION*

IN — INPUT
OUT — OUTPUT

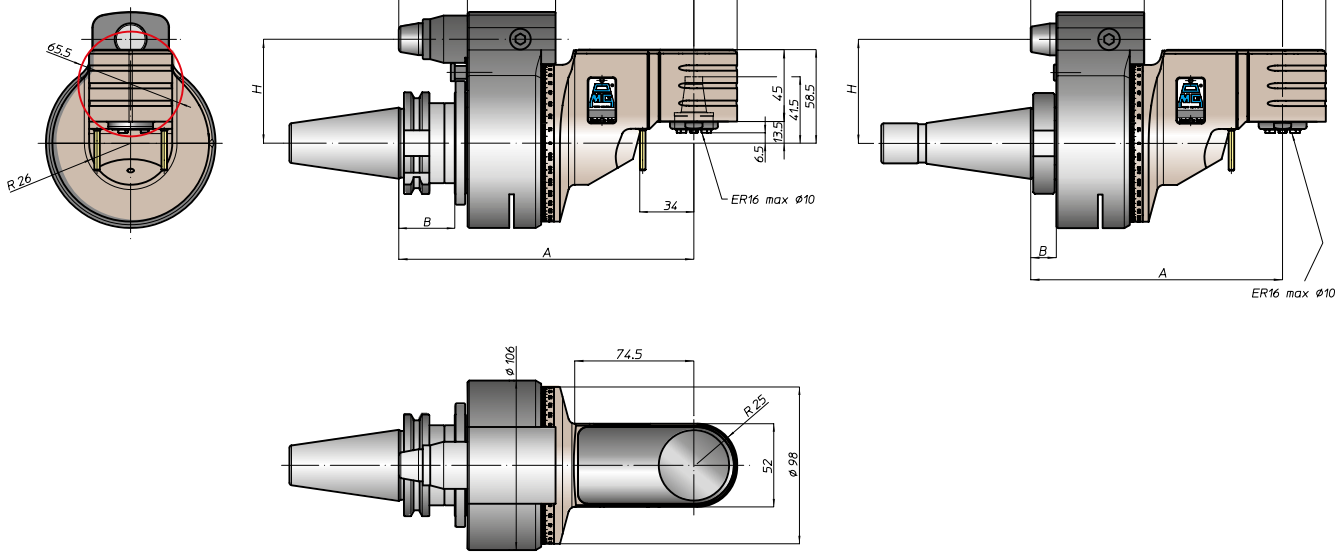
CARATTERISTICHE *FEATURES*

Ø10	M8	500 N	1-1	6000	25
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø16 PORTAFRESE FACE MILL ARBOR

HSK25 DIN69893-HSK



CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	184,5			184,5		184,5	192,5	193,5			188,5			184,5			157,5	160,5	157,5	160,5
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA010.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

40 — 6,2 KG
50 — 8,7 KG

ROTAZIONE
ROTATION

IN — INPUT
OUT — OUTPUT

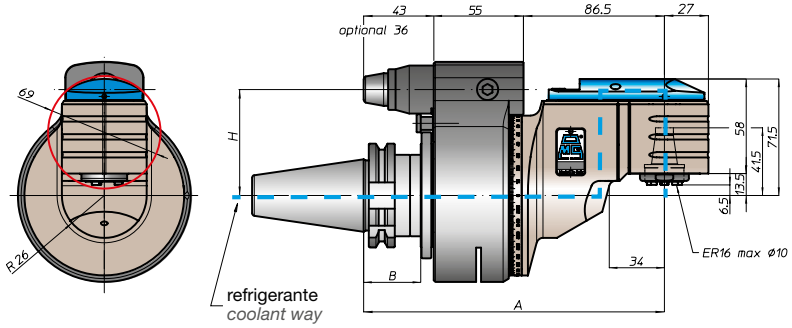
CARATTERISTICHE
FEATURES

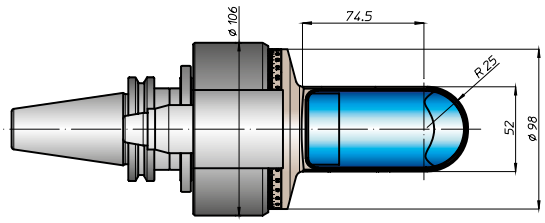
Ø10 | M8 | 500 N | 1-1 | 6000 RPM | 25 Nm | 70 BAR

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

Ø16 PORTAFRESE
FACE MILL ARBOR

HSK25 DIN69893-HSK





	DIN69871			ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080	ANSIB5.18
CONO *SHANK*																		
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100		
A	184,5			184,5		184,5	192,5	193,5			188,5			184,5				
B	35			35		35	45	44	46			39	41					
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80			
H OPTIONAL		110			110		110		110				110		110			

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA013.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 7,5 KG
50 — 10,5 KG

ROTAZIONE *ROTATION*

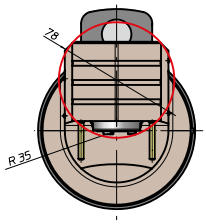
IN — INPUT
OUT — OUTPUT

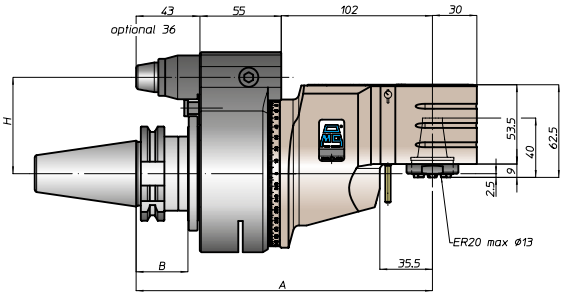
CARATTERISTICHE *FEATURES*

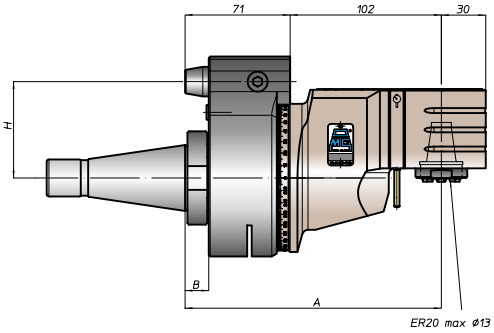
Ø13	M10	570 N	1-1	4500	45

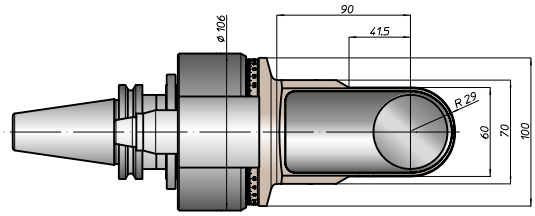
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- Ø16 PORTAFRESE FACE MILL ARBOR
- Ø12 WELDON WHISTLE-NOTCH
- HSK32 DIN69893-HSK









CONO *SHANK*	DIN69871			ANSIB5.50		CAT / BT			HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50		63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	200			200		200	208		209			204			200			170	176	173	176
B	35			35		35	45		44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80		65	80		65	80		65	80		65	80	65	80
H OPTIONAL		110			110		110			110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA013.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

40 — 7,5 KG
50 — 10,5 KG

ROTAZIONE
ROTATION

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

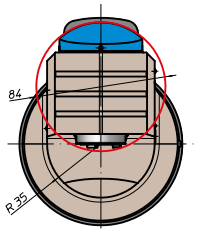
Ø13 | M10 | 570 N | 1-1 | 4500 RPM | 45 Nm | 70 BAR

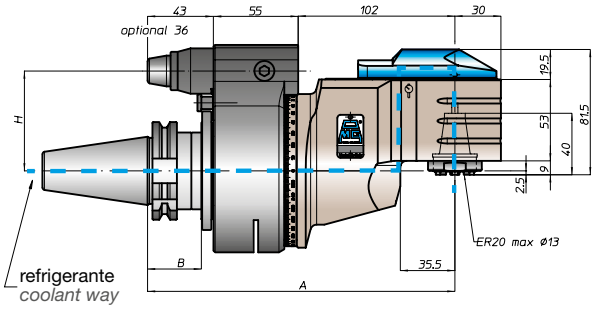
MANDRINI DISPONIBILI
AVAILABLE SPINDLES

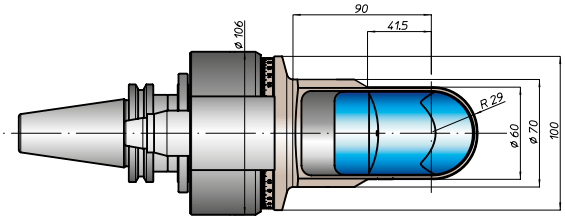
Ø16 PORTAFRESE
FACE MILL ARBOR

Ø12 WELDON
WHISTLE-NOTCH

HSK32 DIN69893-HSK







CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080	NMTB ANSIB5.18
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100		
A	200			200		200	208	209			204			200				
B	35			35		35	45	44	46			39	41					
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80			
H OPTIONAL		110			110		110		110				110		110			

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA016.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

14 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

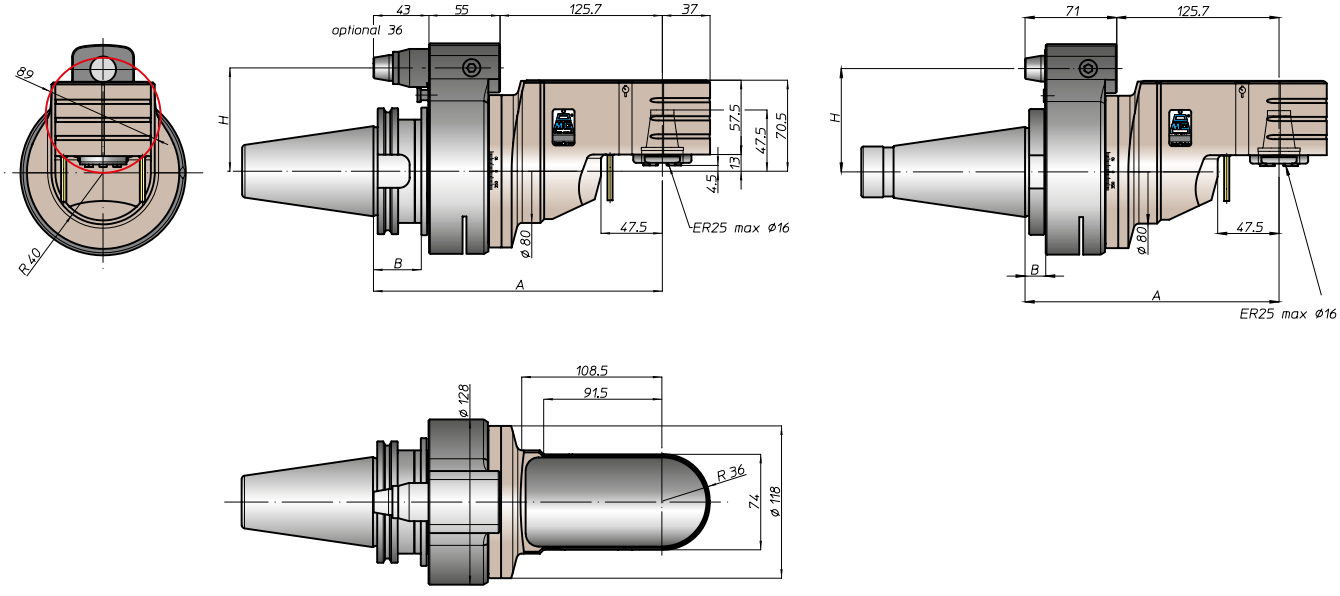
Ø16 | M12 | 810 N | 1-1 | 4000 | 90

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø16-Ø22-Ø27 PORTAFRESE FACE MILL ARBOR

Ø16 WELDON WHISTLE-NOTCH

HSK40 DIN69893-HSK



CONO *SHANK*	DIN69871		ANSIB5.50	BT	DIN69893		ISO26623	KM		DIN2080	ANSIB5.18
SIZE	45	50	50	50	80	100	C8	80	100	50	50
A	223,5		223,5	231,5	232,5		227,5	223,5		199,5	199,5
B	35		35	45	46		41			16	16
H STANDARD	80		80	80	80		80	80		80	80
H OPTIONAL	110		110	110	110		110	110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA016.PD
TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

14 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

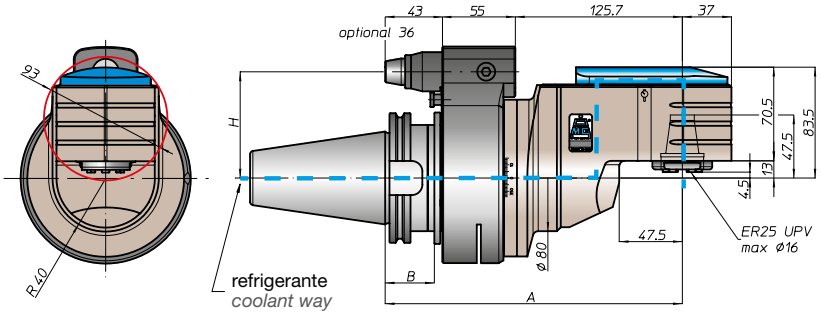
Ø16 | M12 | 810 N | 1-1 | 4000 RPM | 90 Nm | 70 BAR

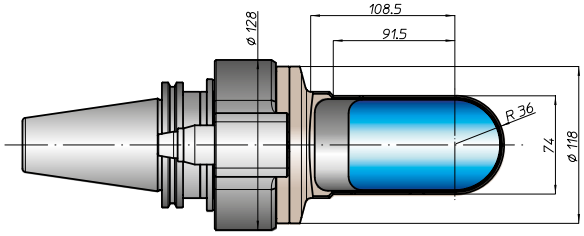
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø16-Ø22-Ø27 PORTAFRESE FACE MILL ARBOR

Ø16 WELDON WHISTLE-NOTCH

HSK40 DIN69893-HSK





	DIN69871		ANSIB5.50	BT	HSK		CAPTO	KM		DIN2080	ANSIB5.18
CONO *SHANK*			CAT				ISO26623	DIN69893			NMTB
SIZE	45	50	50	50	80	100	C8	80	100		
A	223,5		223,5	231,5	232,5		227,5	223,5			
B	35		35	45	46		41				
H STANDARD	80		80	80	80		80	80			
H OPTIONAL	110		110	110	110		110	110			

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA020.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

15 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

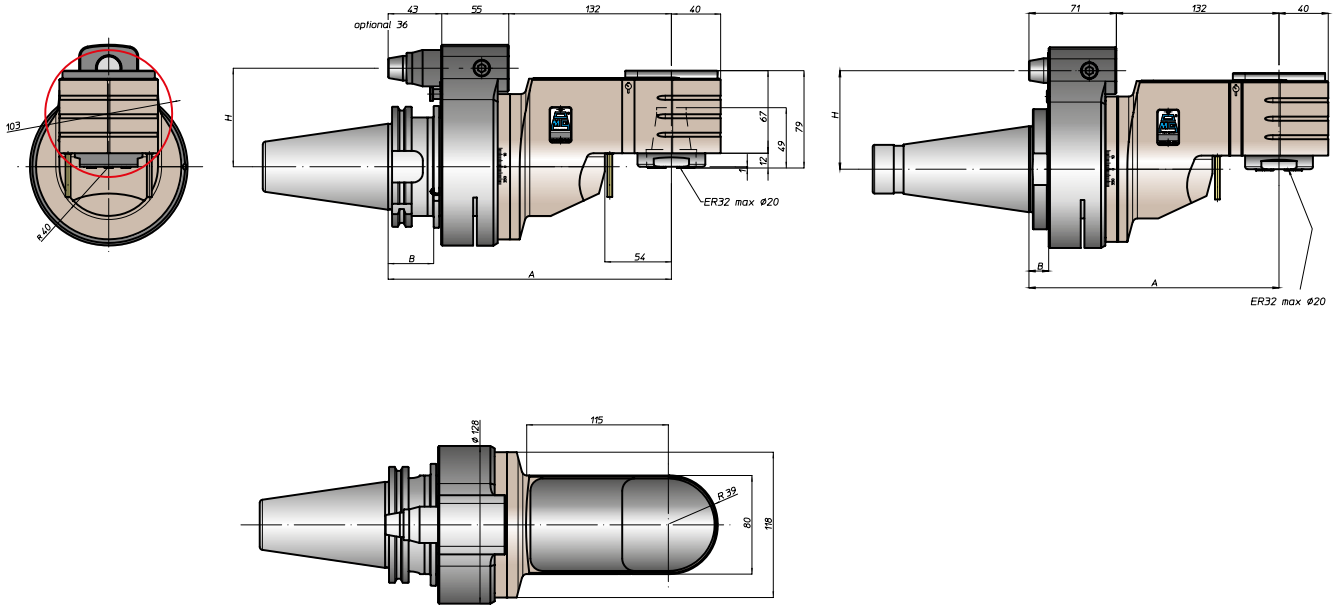
Ø20	M14	1150 N	1-1	3500	95

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø22-Ø27-Ø32 PORTAFRESE FACE MILL ARBOR

Ø16-Ø20 WELDON WHISTLE-NOTCH

HSK50 DIN69893-HSK



	CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893		CAPTO ISO26623	KM		DIN2080	NMTB ANSIB5.18
SIZE		45	50	50	50	80	100	C8	80	100	50	50
A		230		230	238	239		234	230		203	203
B		35		35	45	46		41			16	16
H STANDARD		80		80	80	80		80	80		80	80
H OPTIONAL		110		110	110	110		110	110		110	110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAO20.PD

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

15 KG

ROTAZIONE
ROTATION

INPUT OUTPUT

CARATTERISTICHE
FEATURES

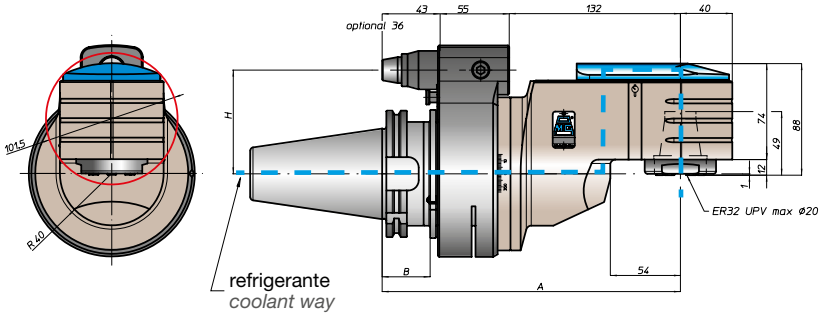
Ø20 | M14 | 1150 N | 1-1 | 3500 RPM | 95 Nm | 70 BAR

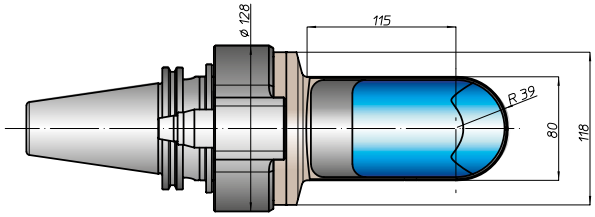
MANDRINI DISPONIBILI
AVAILABLE SPINDLES

Ø22-Ø27-Ø32 PORTAFRESE / FACE MILL ARBOR

Ø16-Ø20 WELDON / WHISTLE-NOTCH

HSK50 DIN69893-HSK





CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893		CAPTO ISO26623	KM		DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C8	80	100		
A	230		230	238	239		234	230			
B	35		35	45	46		41				
H STANDARD	80		80	80	80		80	80			
H OPTIONAL	110		110	110	110		110	110			

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA026.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

24 KG

ROTAZIONE *ROTATION*

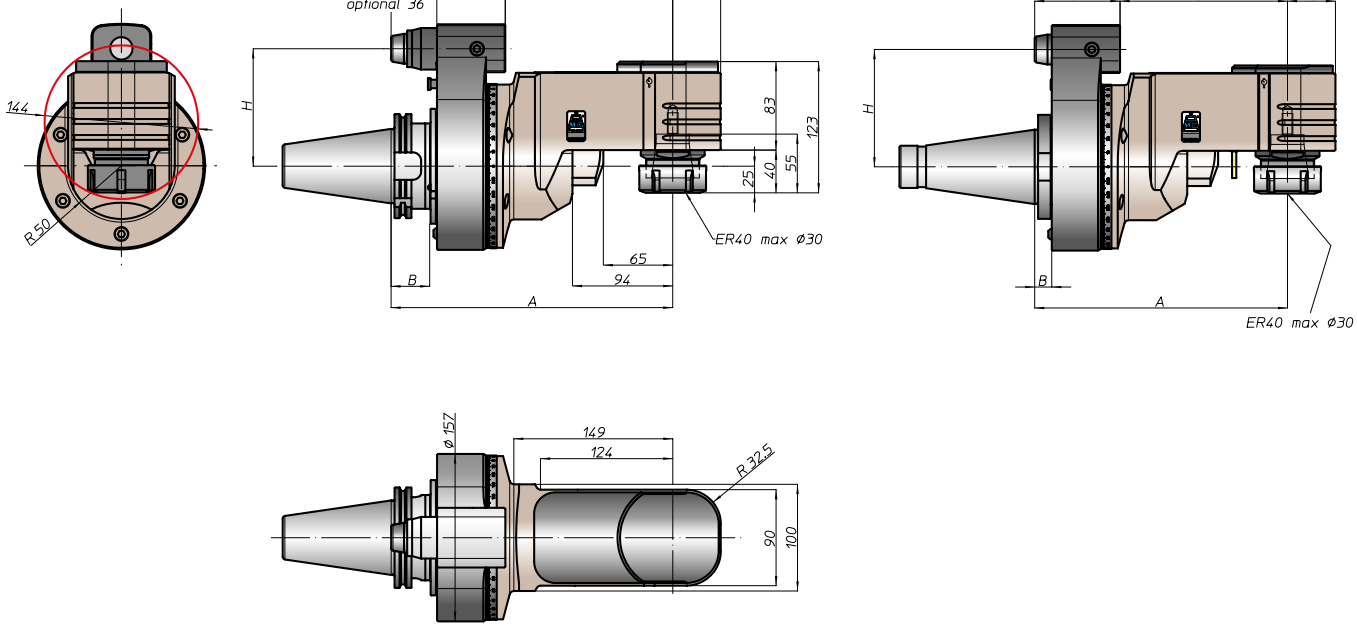
INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø26 | M20 | 1590 N | 1-1 | 3000 | 150

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

Ø27-Ø32 PORTAFRESE FACE MILL ARBOR
Ø25-Ø32 WELDON WHISTLE-NOTCH
HSK63 DIN69893-HSK
C4 COROMANT CAPTO®
ABS63 LICENZA KOMET® KOMET LICENCE®
30-40 ISO-DIN2079 NMTB-BT



	CONO *SHANK*	DIN69871	CAT ANSIB5.50	BT	HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE		50	50	50	100	C8	100	50	50
A		264	264	272	273	264	270	243	243
B		36,5	36,5	44,5	45,5	41		16	16
H STANDARD		110	110	110	110	110	110	110	110
H OPTIONAL									

For DIN69871, ANSIB5.50 and BT, dual contact as option

TA026.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

24 KG

ROTAZIONE
ROTATION

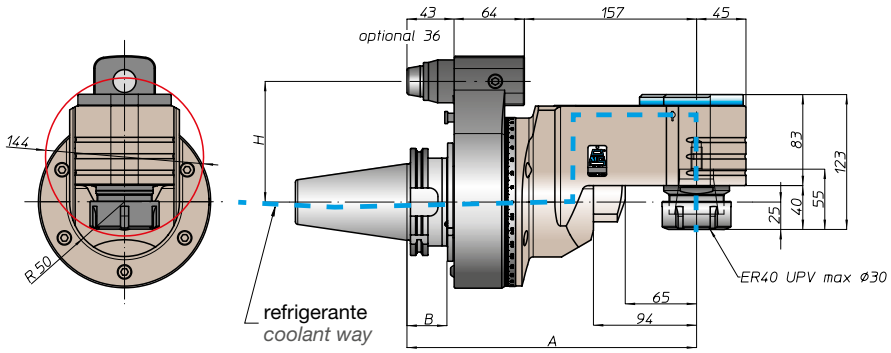
INPUT OUTPUT

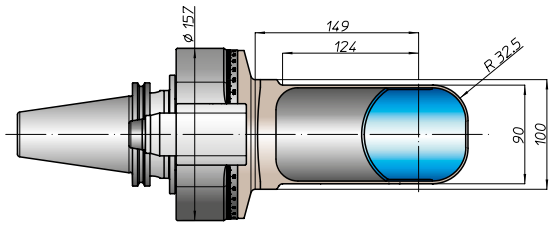
CARATTERISTICHE
FEATURES

Ø26 | M20 | 1590 N | 1-1 | 3000 RPM | 150 Nm | 70 BAR

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

- Ø27-Ø32 PORTAFRESE / FACE MILL ARBOR
- Ø25-Ø32 WELDON WHISTLE-NOTCH
- HSK63 DIN69893-HSK
- C4 COROMANT CAPTO®
- ABS63 LICENZA KOMET® / KOMET LICENCE®





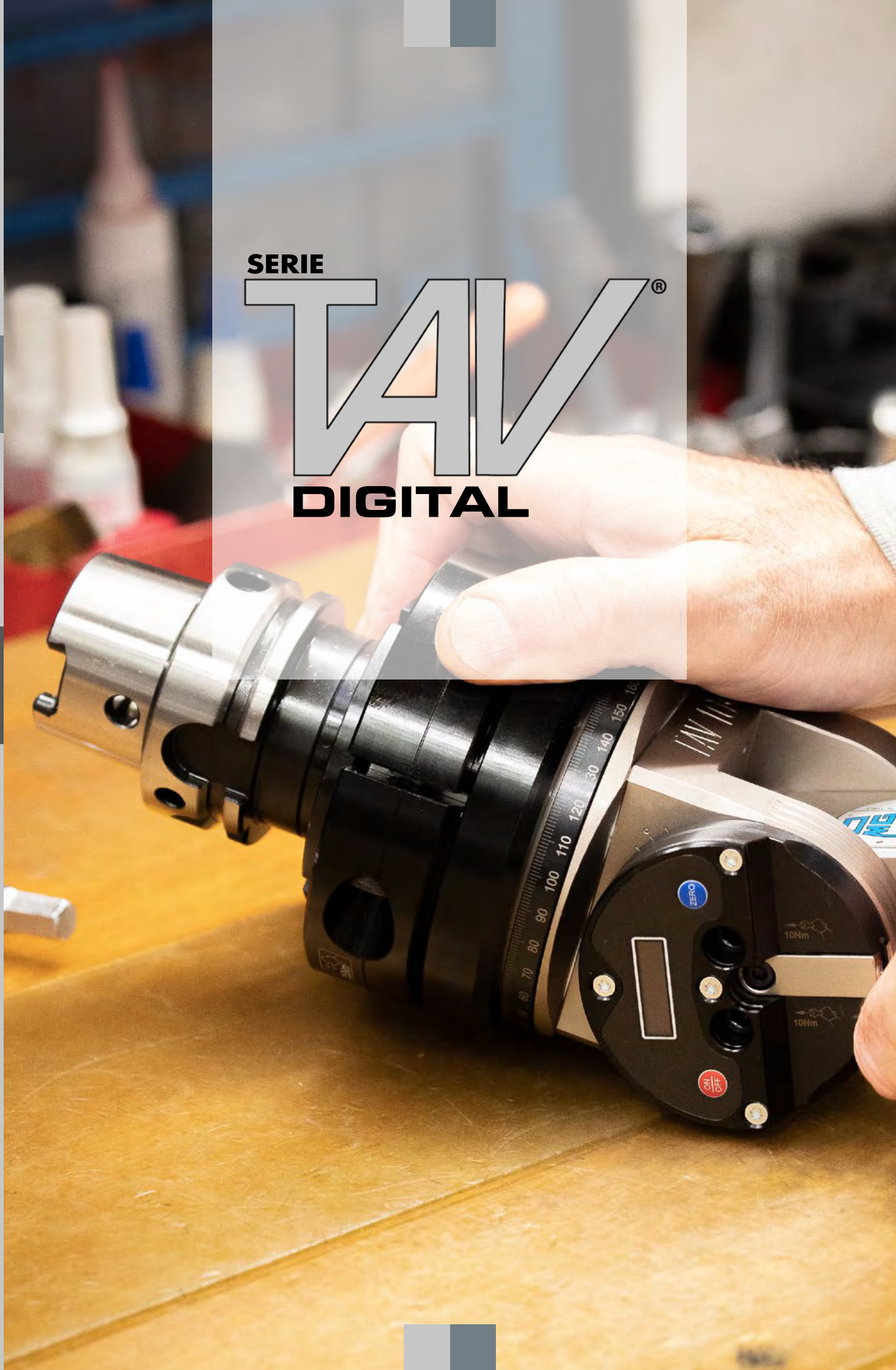
CONO *SHANK*	DIN69871	ANSIB5.50	BT	DIN69893	ISO26623	KM	DIN2080	ANSIB5.18
	CAT	CAT		HSK	CAPTO			NMTB
SIZE	50	50	50	100	C8	100		
A	264	264	272	273	264	270		
B	36,5	36,5	44,5	45,5	36,5			
H STANDARD	110	110	110	110	110	110		
H OPTIONAL								

For DIN69871, ANSIB5.50 and BT, dual contact as option

SERIE

TAV®

DIGITAL



Nuovo standard nelle teste ad angolo variabile.

La serie TAV si propone ora con un display per la visualizzazione dell'inclinazione del mandrino. La facilità di utilizzo, la precisione del sistema, l'ingombro estremamente ridotto consentirà agli utenti di registrare direttamente in macchina l'angolo della lavorazione che la Testa ad Angolo Variabile deve eseguire sul pezzo in modo semplice ed efficace.

Oggi sono disponibili i tre principali modelli di Teste ad Angolo Variabile: TAV10, TAV13 e TAV20.

Lo sviluppo di questa soluzione verrà presto trasportata a tutta la famiglia delle Teste ad Angolo della serie TAV.

New standard system on TAV adjustable angle heads.

The TAV series is now being enhanced with a display to check the spindle angle inclination. Both the user-friendliness and the precision, as well as the extremely reduced footprint of this new system, will allow the users to easily and effectively set the adjustable angle head directly on the machine prepared to machine pieces.

Nowadays the three major adjustable angle head models are available:

TAV10, TA13 and TAV20.

And this new solution will be soon available on the whole range of TAV angle heads.

TAV10.P

TESTA AD ANGOLO · *ANGLE HEAD*

TAV DIGITAL

PESO *WEIGHT*

40	50
6,4 KG	8,5 KG

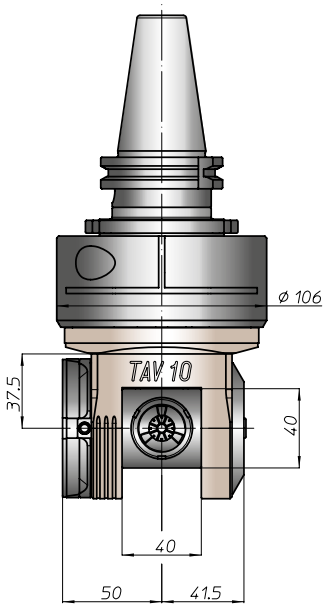
ROTAZIONE *ROTATION*

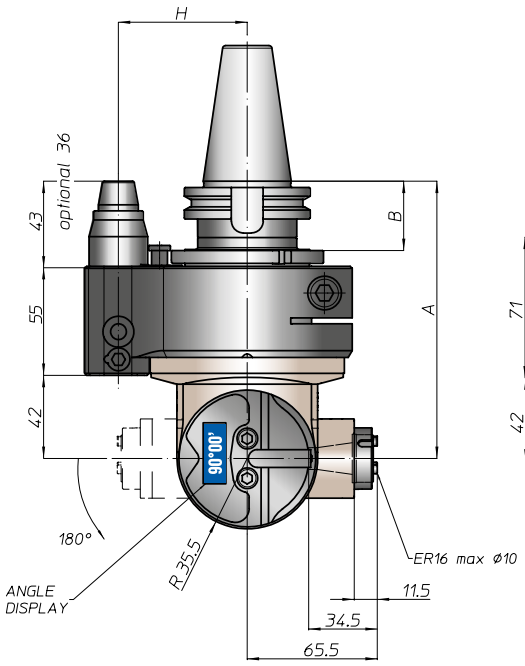
IN → OUT

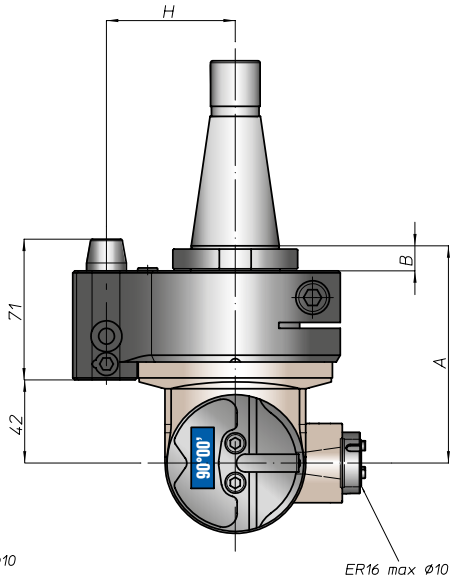
INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø10	M8	550 N	1-1	8000	12	±0,05
				RPM	Nm	ACCURACY







CONO *SHANK*	DIN69871			ANSIB5.50		CAT		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50		
A	140			140		140	148	149			144			140			113	116	113	116		
B	35			35		35	45	44	46			39	41				13	16	13	16		
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80		
H OPTIONAL		110			110		110		110				110		110			110		110		

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV10.PD

TESTA AD ANGOLO • *ANGLE HEAD*

TAV DIGITAL

PESO *WEIGHT*

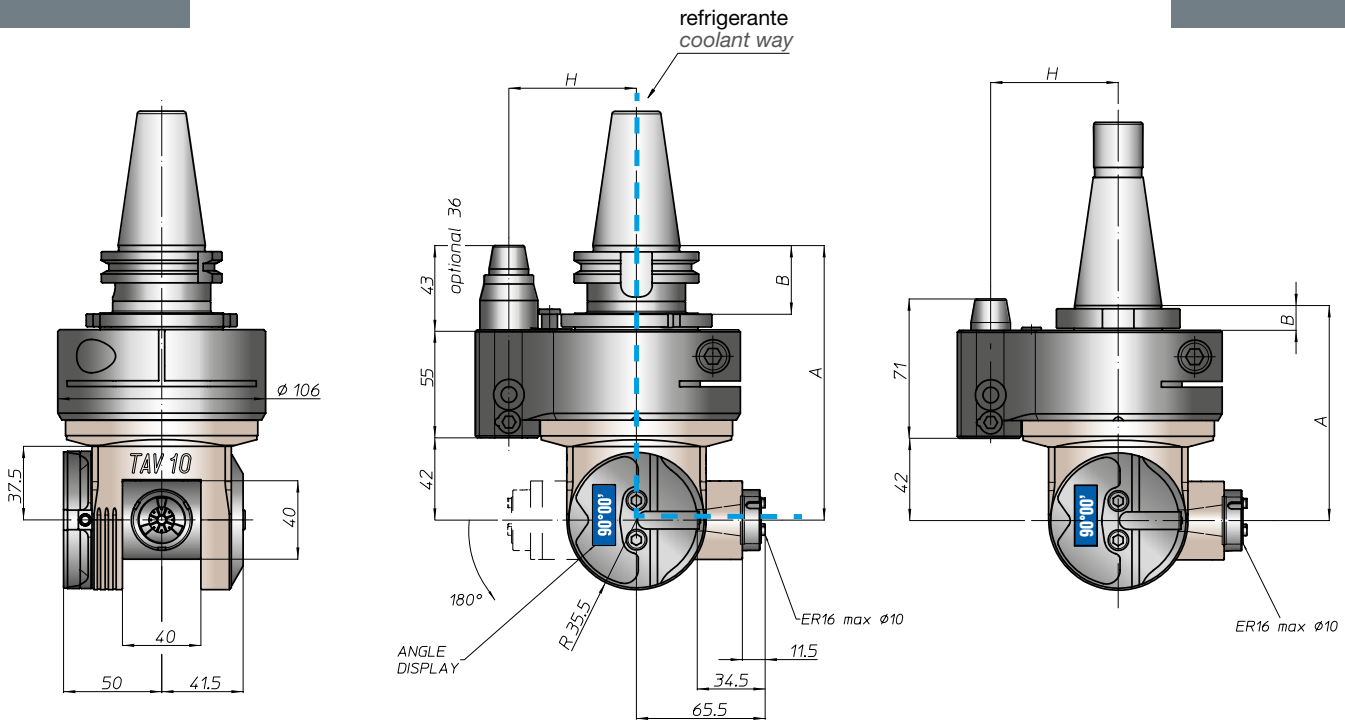
40 — 6,4 KG
50 — 8,5 KG

ROTAZIONE *ROTATION*

IN — INPUT → OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø10	M8	550 N	1-1	8000	12	±0,05	70 BAR
				RPM	Nm	ACCURACY	BAR



CONO *SHANK*																					
	DIN69871			ANSIB5.50		CAT		BT		HSK			CAPTO			KM			DIN2080		ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50	
A	140			140		140	148	149			144			140			113	116	113	116	
B	35			35		35	45	44	46			39	41				13	16	13	16	
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80	
H OPTIONAL		110			110		110		110				110		110			110		110	

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV13.P

TESTA AD ANGOLO · *ANGLE HEAD*

TAV DIGITAL

PESO *WEIGHT*

40 — 7,8 KG
50 — 10,5 KG

ROTAZIONE *ROTATION*

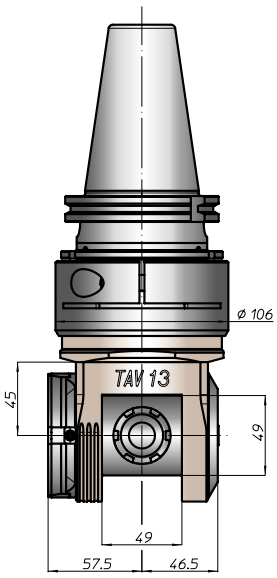
IN — INPUT
OUT — OUTPUT

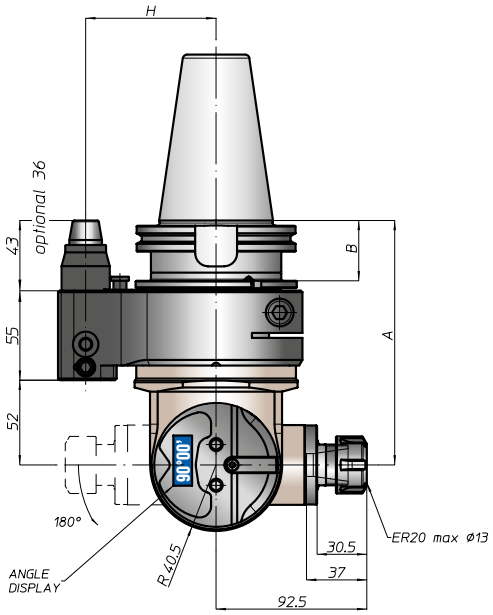
CARATTERISTICHE *FEATURES*

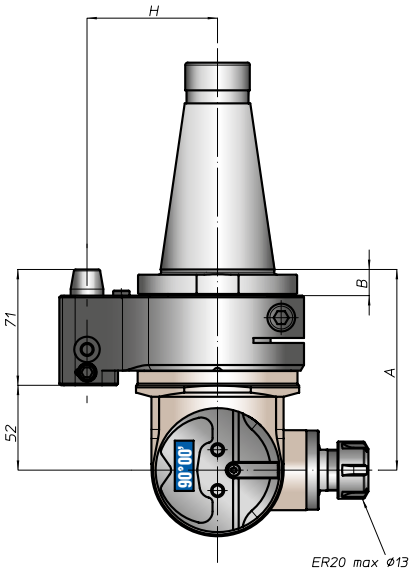
Ø13	M10	630 N	1-1	6000	18	±0,05
				RPM	Nm	ACCURACY

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER25 DIN6499-ER
Ø16 WELDON WHISTLE-NOTCH







CONO *SHANK*	DIN69871			ANSIB5.50		CAT		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50		
A	150			150		150	158	159			154			150			120	123	120	123		
B	35			35		35	45	44	46			39	41				13	16	13	16		
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80		
H OPTIONAL		110			110		110		110				110		110			110		110		

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV13.PD

TESTA AD ANGOLO · *ANGLE HEAD*

TAV DIGITAL

PESO *WEIGHT*

40 — 7,8 KG
50 — 10,5 KG

ROTAZIONE *ROTATION*

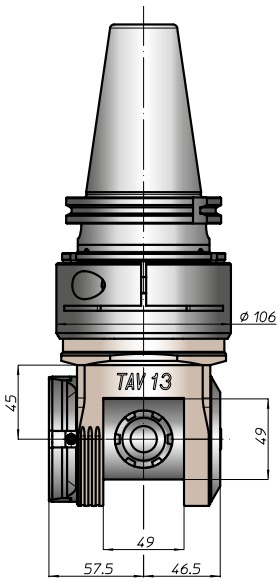
IN — INPUT → OUT — OUTPUT

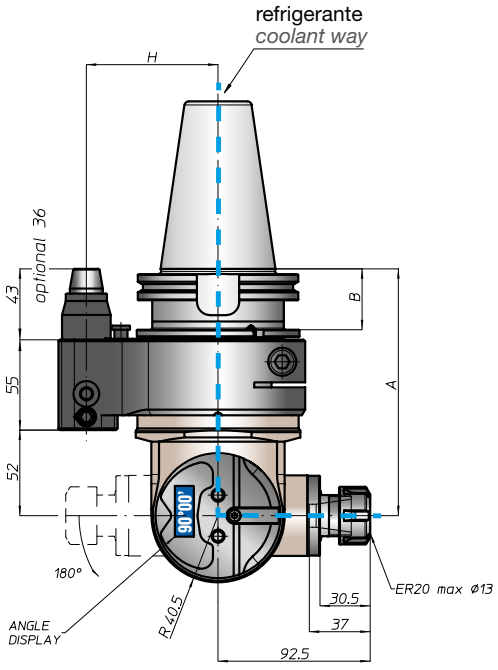
CARATTERISTICHE *FEATURES*

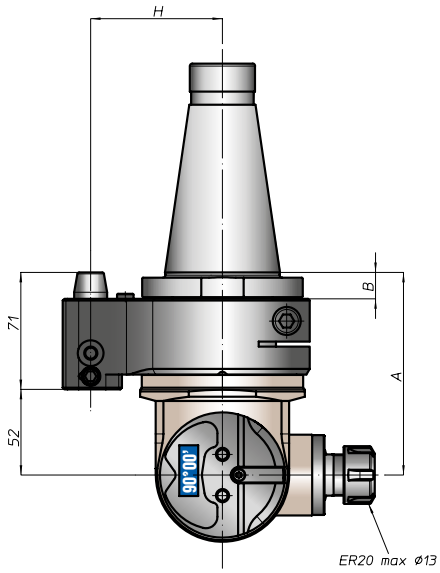
Ø13	M10	630 N	1-1	6000 RPM	18 Nm	±0,05 ACCURACY	70 BAR

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER25 DIN6499-ER
- Ø16 WELDON WHISTLE-NOTCH







CONO *SHANK*	DIN69871			ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	150			150		150	158	159			154			150			120	123	120	123
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV20.P

TESTA AD ANGOLO · *ANGLE HEAD*

TAV DIGITAL

PESO *WEIGHT*

50 22 KG

ROTAZIONE *ROTATION*

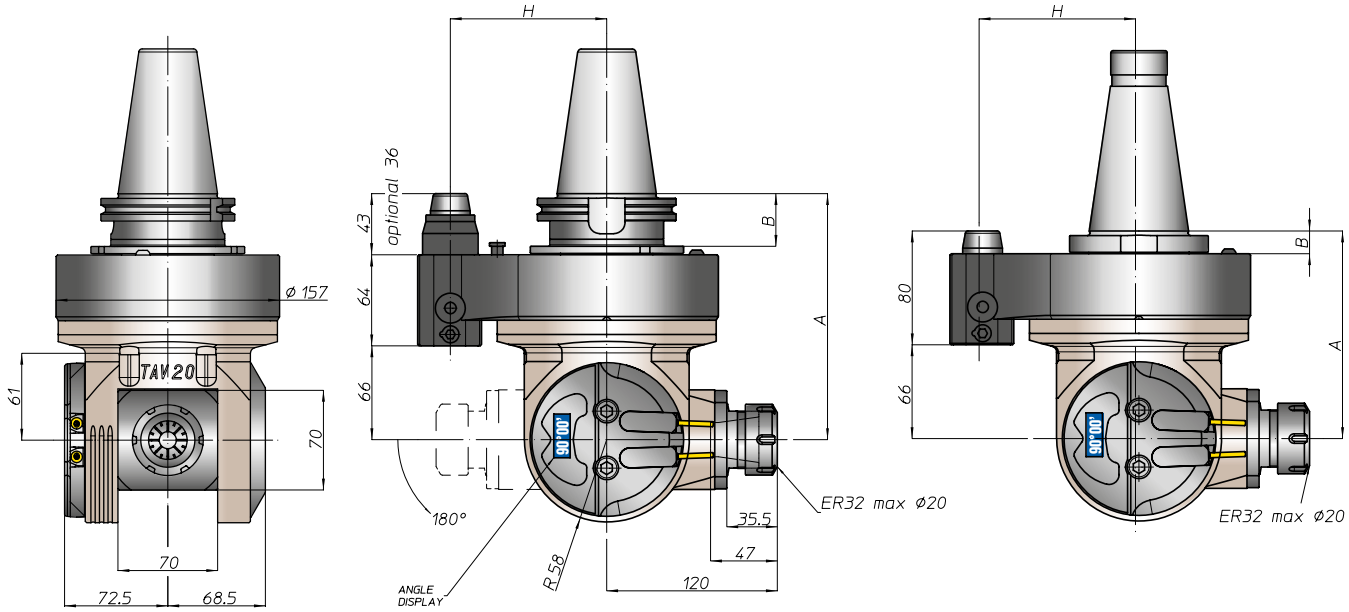
IN INPUT → OUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø20	M16	1740 N	1-1	4000 RPM	60 Nm	±0,05 ACCURACY

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER40 DIN6499-ER
- Ø32 PORTAFRESE FACE MILL ARBOR
- Ø20-Ø25 WELDON WHISTLE-NOTCH
- HSK50 DIN69893-HSK
- ABS50 LICENZA KOMET® KOMET LICENCE®



	DIN69871	ANSIB5.50	CAT	BT	HSK		CAPTO	KM	DIN2080	NMTB ANSIB5.18
CONO *SHANK*										
SIZE	50	50	50	50	80	100	C8	100	50	50
A	173	173	181	182			177	173	149	149
B	35	35	45	46			41		16	16
H STANDARD	110	110	110	110			110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV20.PD

TESTA AD ANGOLO • *ANGLE HEAD*

PESO *WEIGHT*

22 KG

ROTAZIONE *ROTATION*

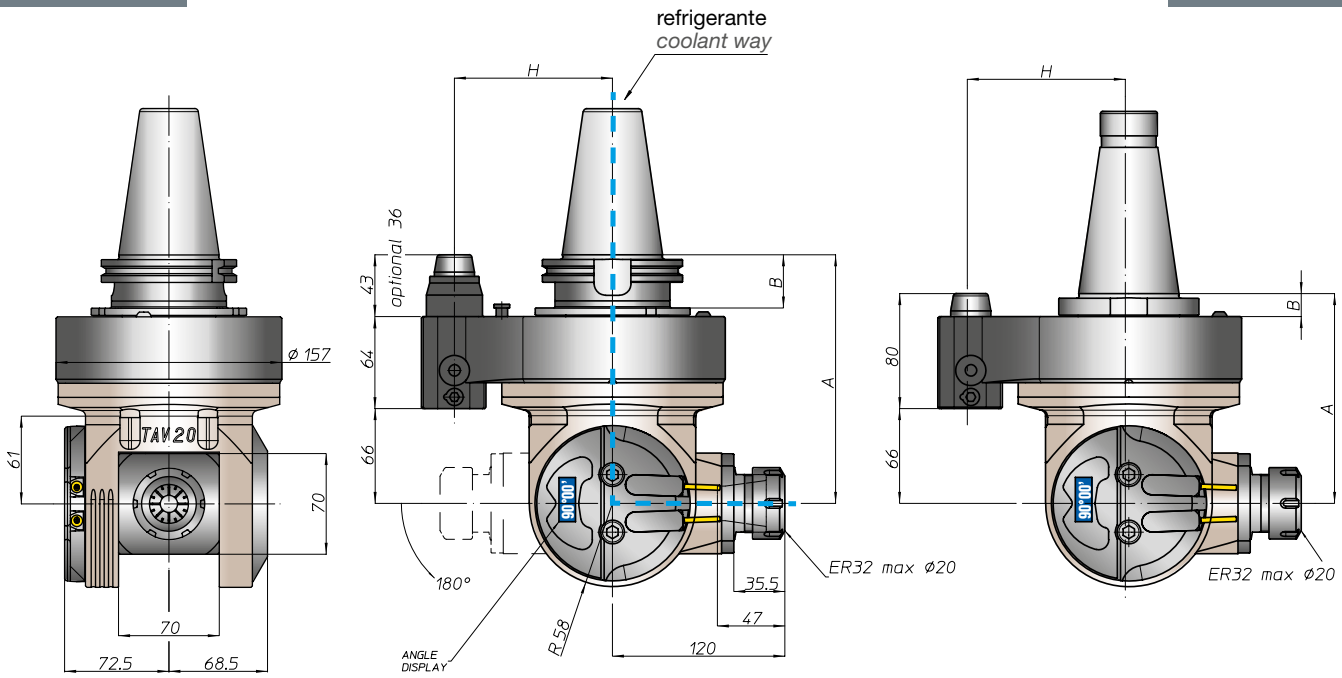
INPUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø20	M16	1740 N	1-1	4000	60	±0,05	70 BAR

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER40 DIN6499-ER
- Ø32 PORTAFRESE / FACE MILL ARBOR
- Ø20-Ø25 WELDON WHISTLE-NOTCH
- HSK50 DIN69893-HSK
- ABS50 LICENZA KOMET® / KOMET LICENCE®



CONO *SHANK*	DIN69871	ANSIB5.50		BT	HSK		CAPTO	KM	DIN2080	NMTB
		CAT					ISO26623			ANSIB5.18
SIZE	50	50		50	80	100	C8	100	50	50
A	173	173		181	182		177	173	149	149
B	35	35		45	46		41		16	16
H STANDARD	110	110		110	110		110	110	110	110
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV40.T

TESTA AD ANGOLO · *ANGLE HEAD*

TAV DIGITAL

PESO *WEIGHT*

70 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

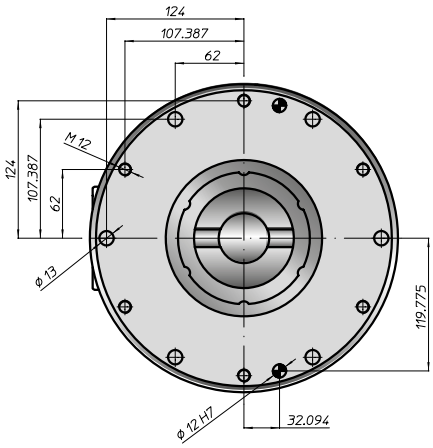
CARATTERISTICHE *FEATURES*

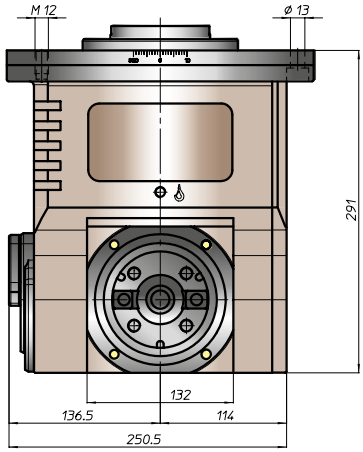
Ø32	M26	2610 N	1-2	5000	230	±0,014
				RPM	Nm	ACCURACY

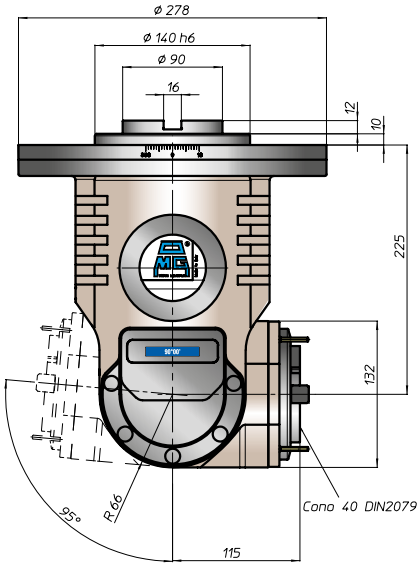
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

HSK63 DIN69893-HSK

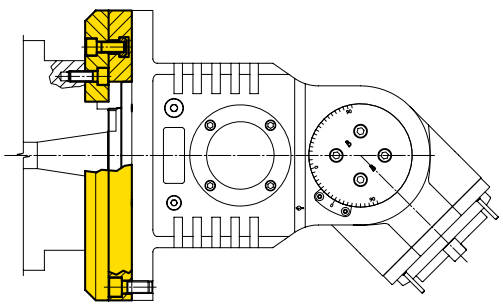
C5 COROMANT CAPTO®







Esempio di collegamento / *Connection example*



Equipaggiamento standard:

- pressurizzazione mandrinio
- n. 4 ugelli orientabili vicino al mandrino
- regolazione angolare mandrino libera
- nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

Standard equipment:

- *spindle front pressurization*
- *nr. 4 adjustable nozzle near the spindle*
- *free angle spindle adjustment*
- *on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40*

TAV50.T

TESTA AD ANGOLO · *ANGLE HEAD*

TAV DIGITAL

PESO
WEIGHT

145 KG

ROTAZIONE
ROTATION

INPUT OUTPUT

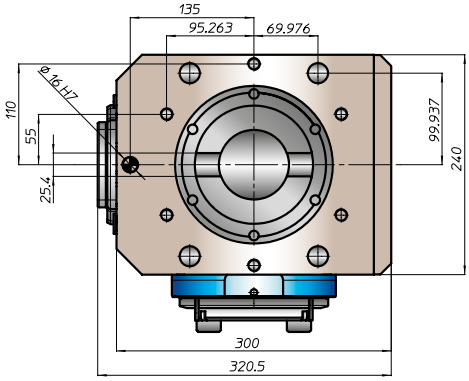
CARATTERISTICHE
FEATURES

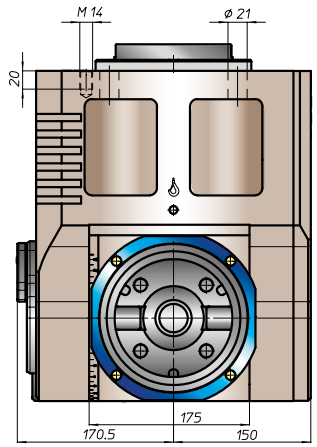
Ø45	M36	6180 N	1-2	4000	290	±0,014

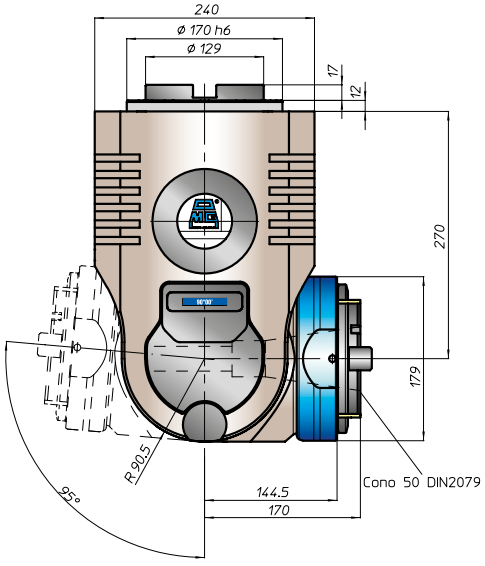
MANDRINI
DISPONIBILI
AVAILABLE
SPINDLES

HSKA100 DIN69893-HSK

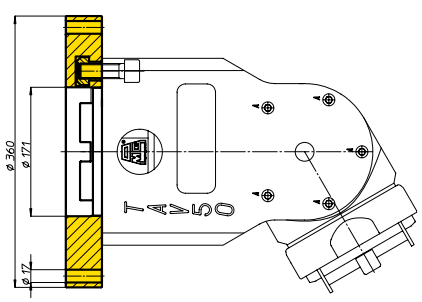
C8 COROMANT CAPTO®

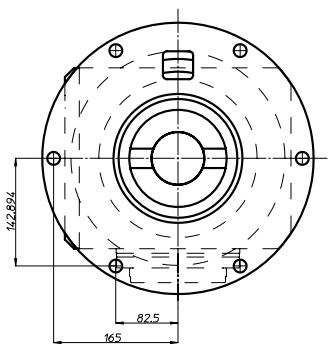






Esempio di collegamento / *Connection example*





Equipaggiamento standard:

- pressurizzazione mandrinio
- n. 4 ugelli orientabili vicino al mandrino
- regolazione angolare mandrino libera o posizionabile ogni 15°
- nel mandrino DIN2079 si possono utilizzare coni DIN69871-A50, MAS403-BT50

Standard equipment:

- *spindle front pressurization*
- *nr. 4 adjustable nozzle near the spindle*
- *free angle spindle adjustment or by pin each 15°*
- *on the spindle DIN2079 you can use shank DIN69871-A50, MAS403-BT50*

TAV10.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

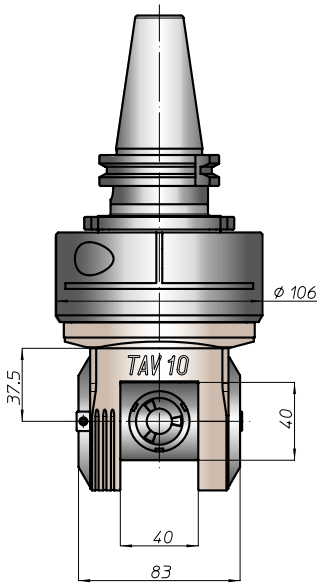
40 — 6,4 KG
50 — 8,5 KG

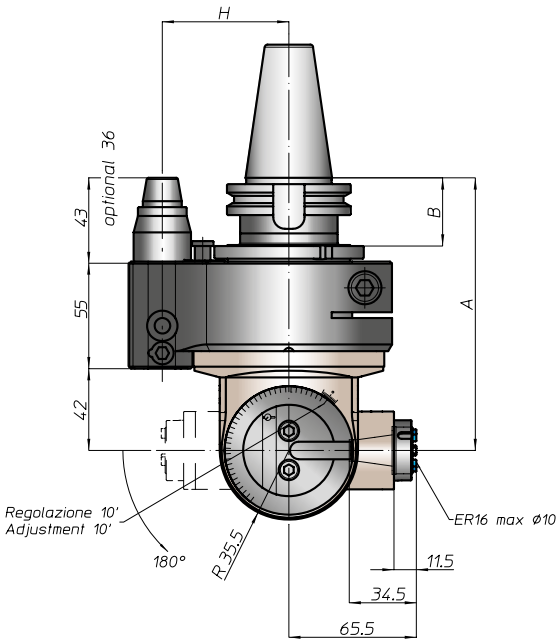
ROTAZIONE *ROTATION*

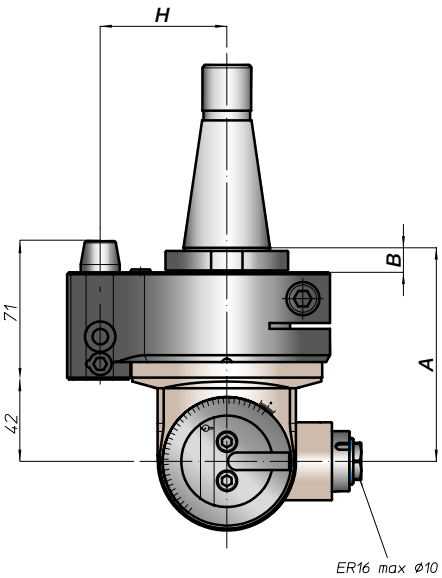
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø10	M8	550 N	1-1	8000	12
				RPM	Nm







CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	140			140		140	148	149			144			140			113	116	113	116
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV10.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

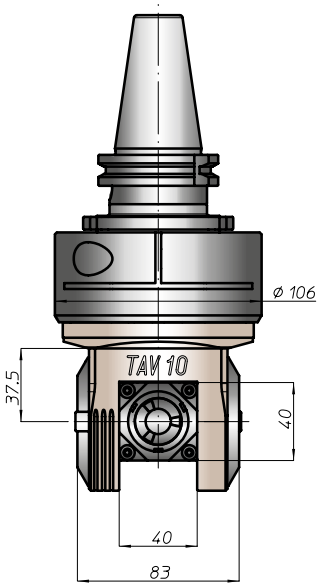
40 — 6,4 KG
50 — 8,5 KG

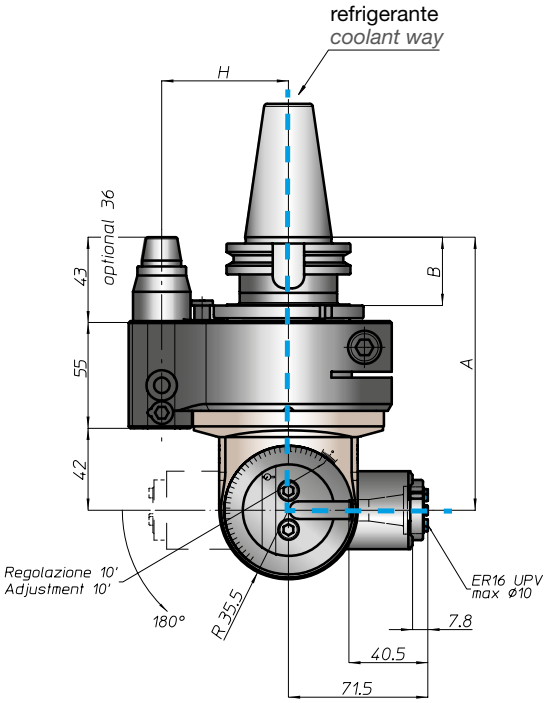
ROTAZIONE
ROTATION

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø10	M8	550 N	1-1	7000	12	70 BAR
				RPM	Nm	BAR





CONO *SHANK*	DIN69871			ANSIB5.50		BT		DIN69893			ISO26623			KM			DIN2080	ANSIB5.18
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100		
A	140			140		140	148	149			144			140				
B	35			35		35	45	44	46			39	41					
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80			
H OPTIONAL		110			110		110		110				110		110			

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV13.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 7,8 KG
50 — 10,5 KG

ROTAZIONE *ROTATION*

IN — INPUT
OUT — OUTPUT

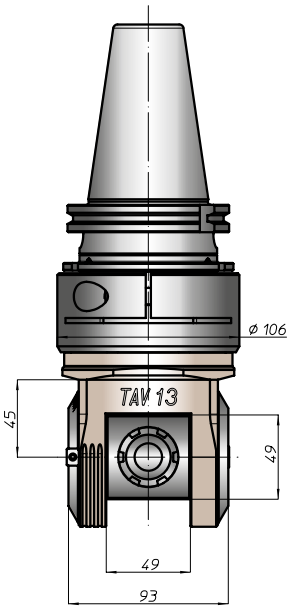
CARATTERISTICHE *FEATURES*

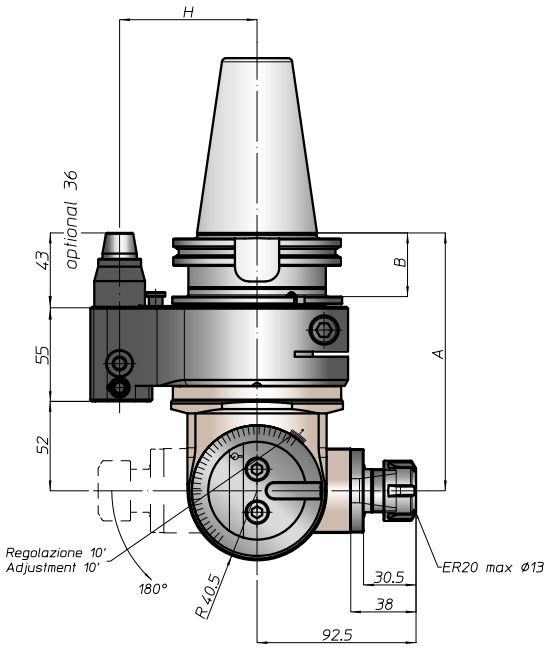
Ø13	M10	630 N	1-1	6000	18
				RPM	Nm

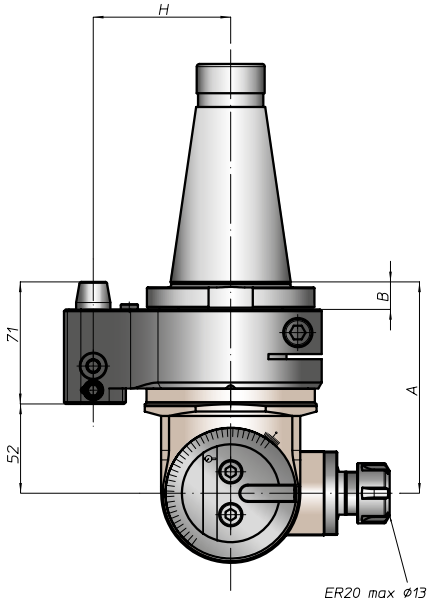
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER25 DIN6499-ER

Ø16 WELDON WHISTLE-NOTCH







CONO *SHANK*	DIN69871			CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	150			150		150	158	159			154			150			120	123	120	123
B	35			35		35	45	44	46			39	41				13	16	13	16
H STANDARD	65	80		65	80	65	80	65	80		65	80		65	80		65	80	65	80
H OPTIONAL		110			110		110		110				110		110			110		110

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV13.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 7,8 KG
50 — 10,5 KG

ROTAZIONE *ROTATION*

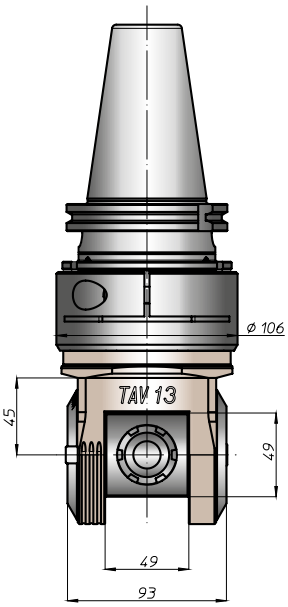
IN — INPUT → OUT — OUTPUT

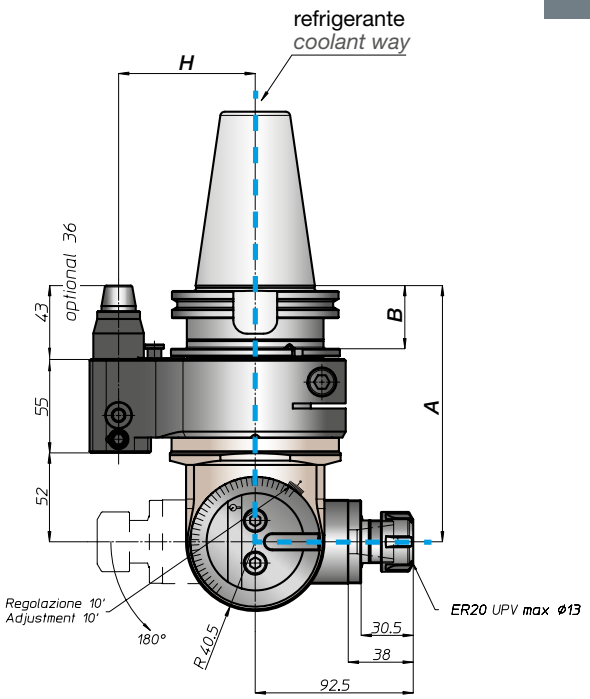
CARATTERISTICHE *FEATURES*

Ø13 · M10 · 630 N · 1-1 · RPM 5500 · Nm 18 · BAR 70 BAR

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER25 DIN6499-ER
Ø16 WELDON WHISTLE-NOTCH





CONO *SHANK*	DIN69871			ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080	NMTB ANSIB5.18
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	
A	150			150		150	158	159			154			150			120	
B	35			35		35	45	44	46			39	41				13	
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80		65	
H OPTIONAL		110			110		110		110				110		110			

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV20.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

22 KG

ROTAZIONE *ROTATION*

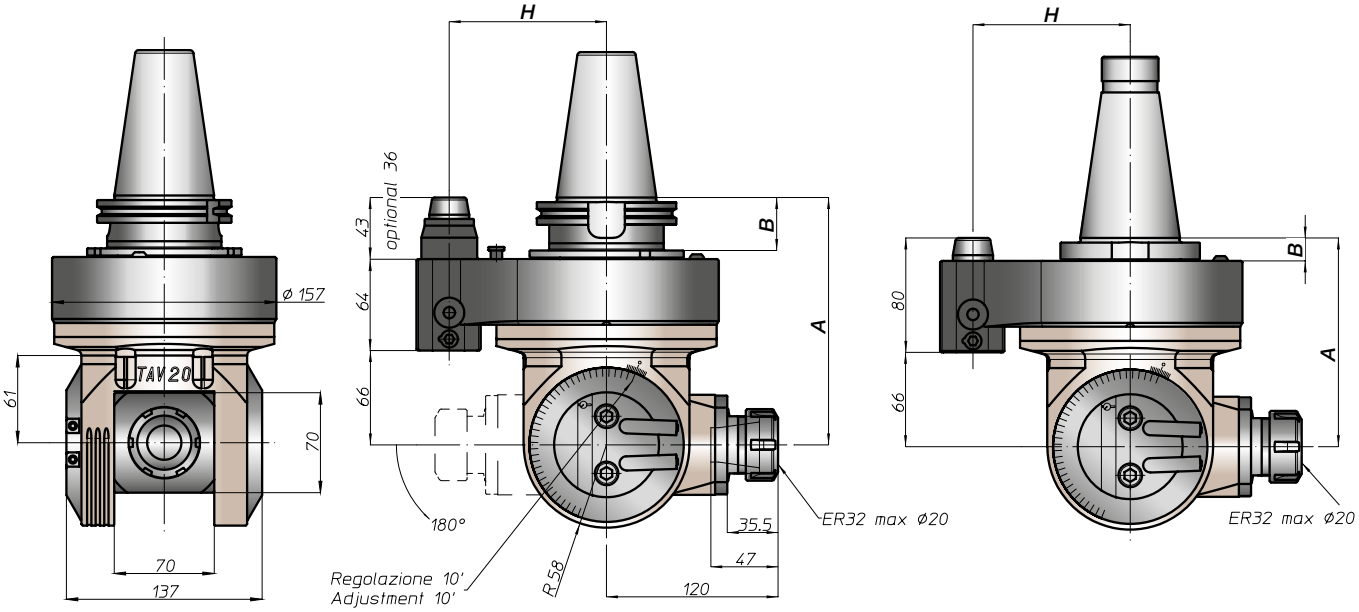
INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø20 | M16 | 1740 N | 1-1 | 4000 | 60

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER40 DIN6499-ER
- Ø32 PORTAFRESE FACE MILL ARBOR
- Ø20-Ø25 WELDON WHISTLE-NOTCH
- HSK50 DIN69893-HSK
- ABS50 LICENZA KOMET® KOMET LICENCE®



	DIN69871	ANSIB5.50	BT	HSK		CAPTO	KM	DIN2080	ANSIB5.18
CONO *SHANK*		CAT							NMTB
SIZE	50	50	50	80	100	C8	100	50	50
A	173	173	181	182		177	173	149	149
B	35	35	45	46		41		16	16
H STANDARD	110	110	110	110		110	110	110	110
H OPTIONAL									

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV20.PD

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

22 KG

ROTAZIONE
ROTATION

INPUT OUTPUT

CARATTERISTICHE
FEATURES

Ø20 | M16 | 1740 N | 1-1 | 4000 RPM | 60 Nm | 70 BAR

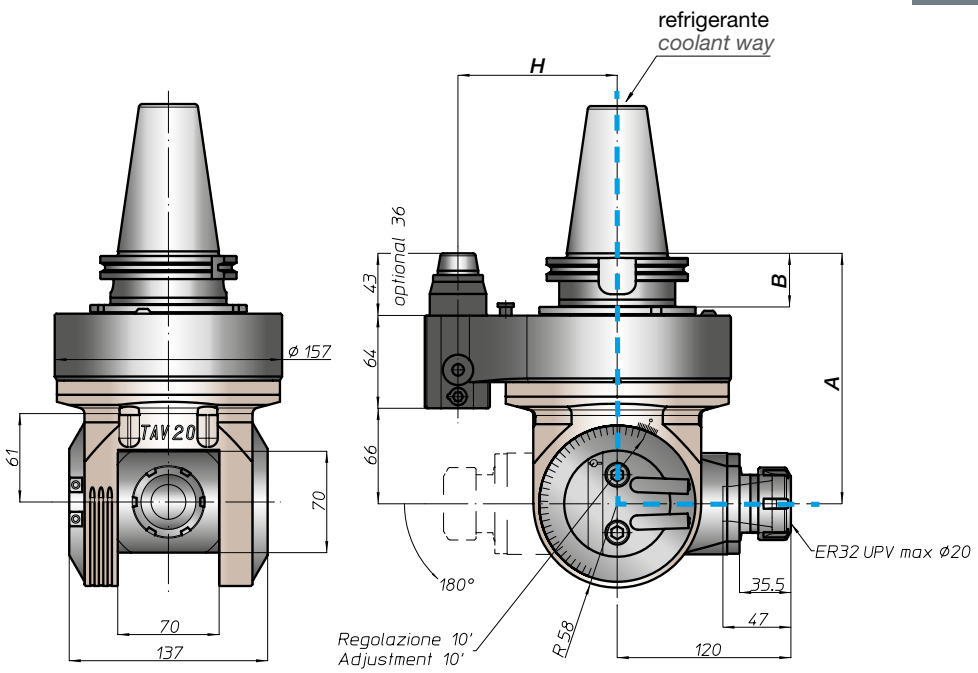
MANDRINI DISPONIBILI
AVAILABLE SPINDLES

ER40 DIN6499-ER

Ø20-Ø25 WELDON WHISTLE-NOTCH

HSK50 DIN69893-HSK

ABS50 LICENZA KOMET® KOMET LICENCE®



CONO *SHANK*	DIN69871	ANSIB5.50	CAT	BT	HSK		CAPTO	KM	DIN2080	NMTB ANSIB5.18
SIZE	50	50	50	50	80	100	C8	100		
A	173	173	181	182			177	173		
B	35	35	45	46			41			
H STANDARD	110	110	110	110			110	110		
H OPTIONAL										

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV30.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

42 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø30 M24 2740 N 1-1 2500 130

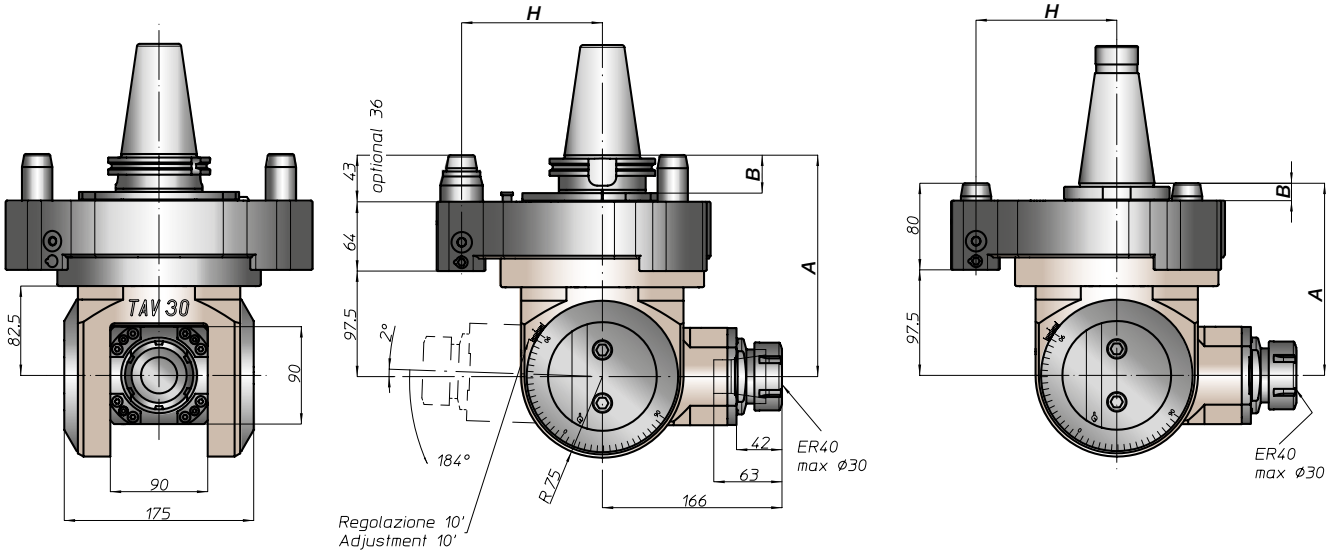
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER50 DIN6499-ER

Ø32-Ø40 PORTAFRESE FACE MILL ARBOR

HSK63 DIN69893-HSK

ABS63 LICENZA KOMET® KOMET LICENCE®



	CONO *SHANK*	DIN69871	CAT ANSIB5.50	BT	HSK	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE		50	50	50	100	C8	100	50	50
A		204,5	204,5	212,5	213,5	208,5	204,5	177,5	177,5
B		35	35	45	46	41		16	16
H STANDARD		130	130	130	130	130	130	130	130
H OPTIONAL									

For DIN69871, ANSIB5.50 and BT, dual contact as option

TAV40T
TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

70 KG

ROTAZIONE
ROTATION

INPUT OUTPUT

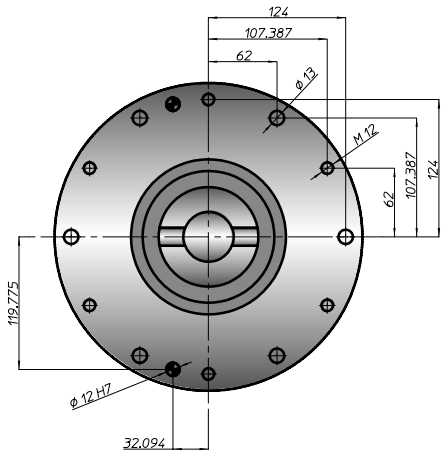
CARATTERISTICHE
FEATURES

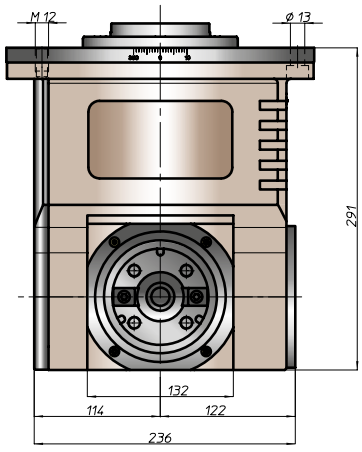
Ø32	M26	2610 N	1-2	5000 OUTPUT	230

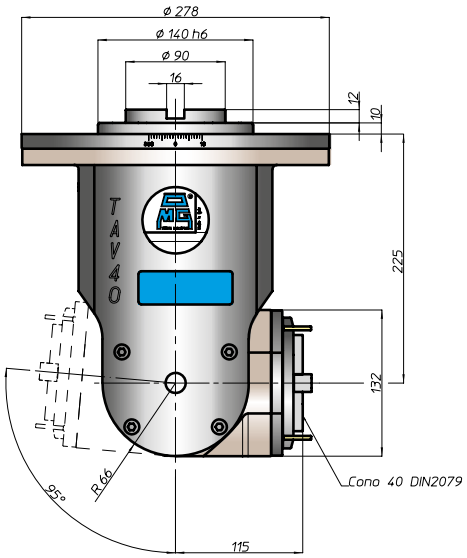
MANDRINI DISPONIBILI
AVAILABLE SPINDLES

HSK63 DIN69893-HSK

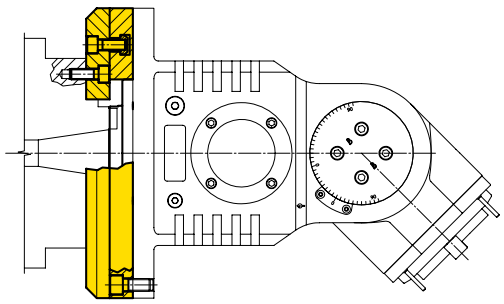
C5 COROMANT CAPTO®







Esempio di collegamento / *Connection example*



Equipaggiamento standard:

- pressurizzazione mandrinio
- n. 4 ugelli orientabili vicino al mandrino
- regolazione angolare mandrino libera
- nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

Standard equipment:

- spindle front pressurization
- nr. 4 adjustable nozzle near the spindle
- free angle spindle adjustment
- on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40

TAV50.T

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

145 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

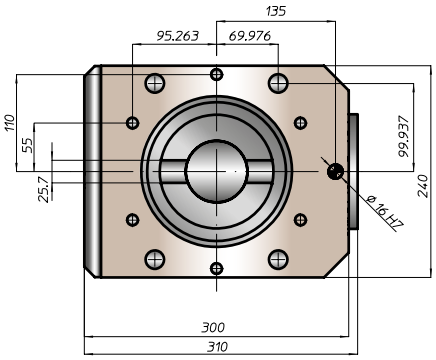
CARATTERISTICHE *FEATURES*

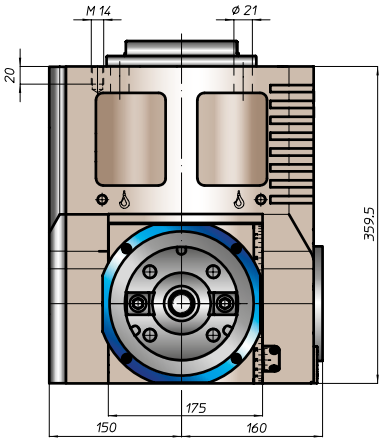
Ø45	M36	6180 N	1-2	4000 OUTPUT	290

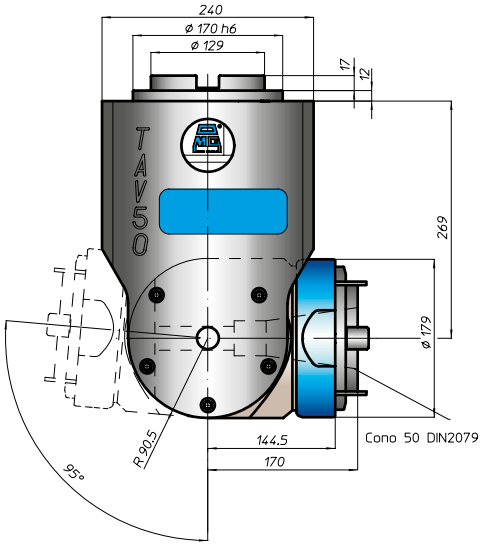
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

HSK A100 DIN69893-HSK

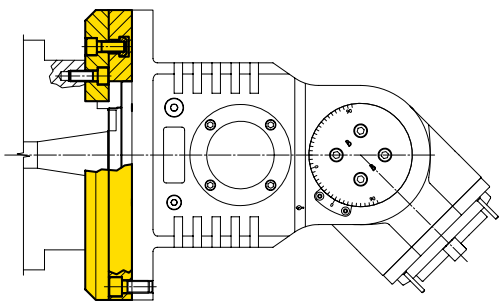
C8 COROMANT CAPTO®







Esempio di collegamento / *Connection example*



Equipaggiamento standard:

- pressurizzazione mandrinio
- n. 4 ugelli orientabili vicino al mandrino
- regolazione angolare mandrino libera o posizionabile ogni 15°
- nel mandrino DIN2079 si possono utilizzare coni DIN69871-A50, MAS403-BT50

Standard equipment:

- *spindle front pressurization*
- *nr. 4 adjustable nozzle near the spindle*
- *free angle spindle adjustment or by pin each 15°*
- *on the spindle DIN2079 you can use shank DIN69871-A50, MAS403-BT50*

TAV GALLERY

TAF

GALLERY

TAF10.P

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

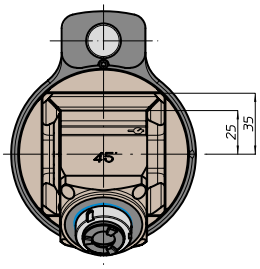
40 — 5,5 KG
50 — 7 KG

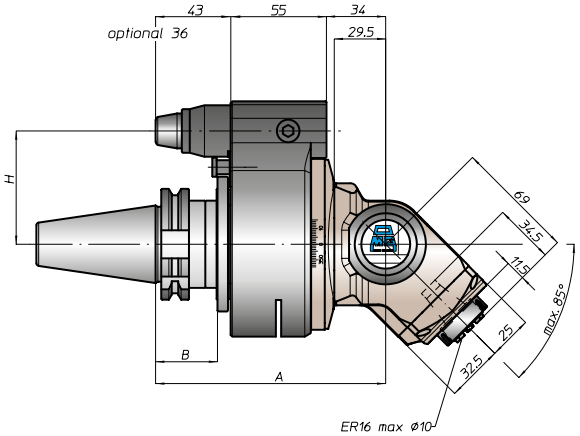
ROTAZIONE
ROTATION

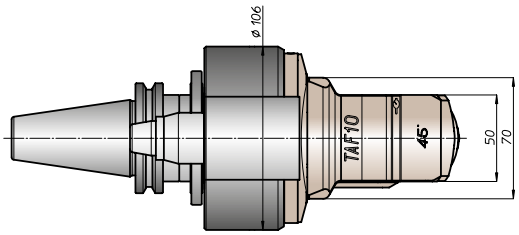
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø10	M8	510 N	1-1	5000	21
				RPM	Nm







	DIN69871				ANSIB5.50				BT				HSK DIN69893				CAPTO ISO26623				KM				DIN2080	ANSIB5.18
CONO *SHANK*																										
SIZE	30	40	45	50	40	50			40	50			63	80	100		C5	C6	C8		63	80	100			
A	132				132				132	140			141				136				132					
B	35				35				35	45			44	46				39	41							
H STANDARD	65	80			65	80			65	80			65	80			65	80			65	80				
H OPTIONAL		110				110				110				110				110				110				

TAF13.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

40 — 6,5 KG
50 — 8,5 KG

ROTAZIONE *ROTATION*

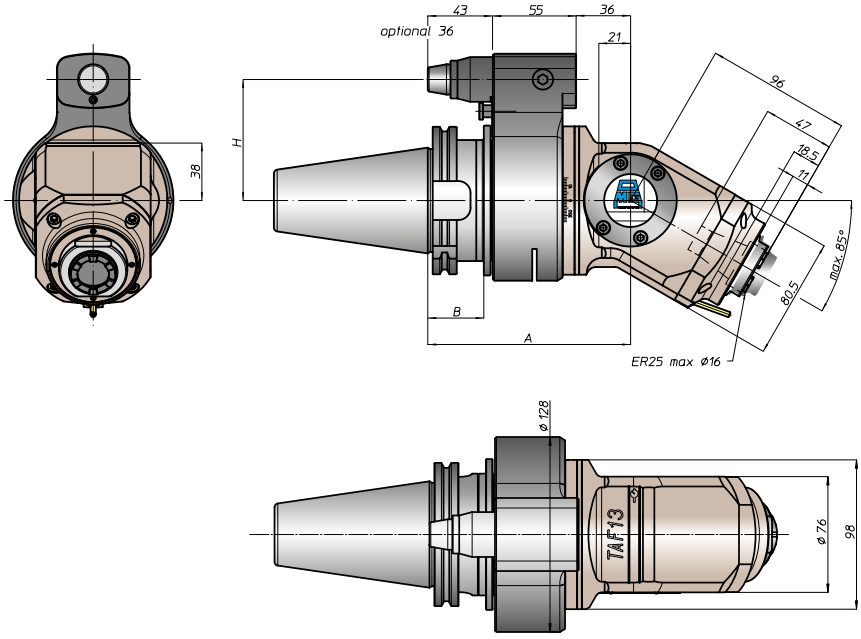
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

Ø13	M10	900 N	1-1	4000	35
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

HSK32
DIN69893-HSK



CONO *SHANK*	DIN69871			ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080	ANSIB5.18
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100		
A	134			134		134	142	143			138			134				
B	35			35		35	45	44	46			39	41					
H STANDARD	65	80		65	80	65	80	65	80		65		80	65	80			
H OPTIONAL		110			110		110		110				110		110			

TAF13.PD

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

40 — 6,5 KG
50 — 8,5 KG

ROTAZIONE
ROTATION

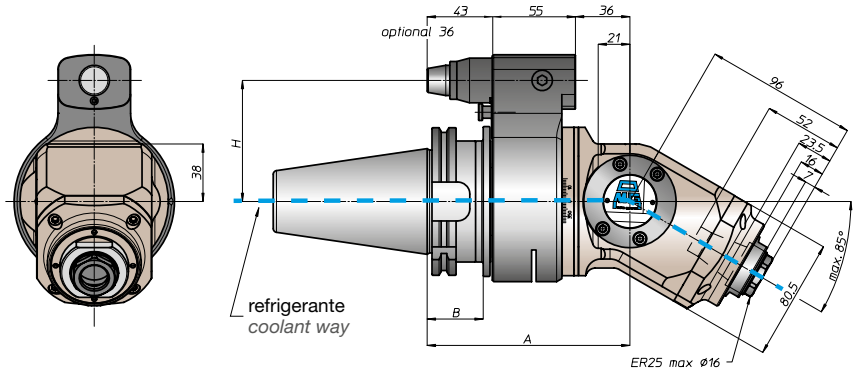
IN — INPUT
OUT — OUTPUT

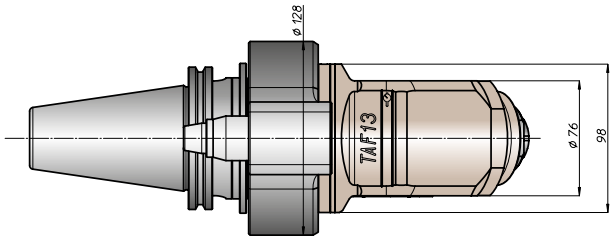
CARATTERISTICHE
FEATURES

Ø13 | M10 | 900 N | 1-1 | RPM 4000 | Nm 35 | BAR 70 BAR

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

HSK32 DIN69893-HSK





CONO *SHANK*	DIN69871			CAT ANSIB5.50			BT			HSK DIN69893			CAPTO ISO26623			KM			DIN2080			NMTB ANSIB5.18		
SIZE	40	45	50	40		50	40		50	63	80	100	C5	C6	C8	63	80	100						
A	134			134			134		142	143			138			134								
B	35			35			35		45	44	46			39	41									
H STANDARD	65	80		65	80		65	80		65	80		65		80	65	80							
H OPTIONAL		110			110			110			110				110		110							

TAF20.P

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

13,5 KG

ROTAZIONE *ROTATION*

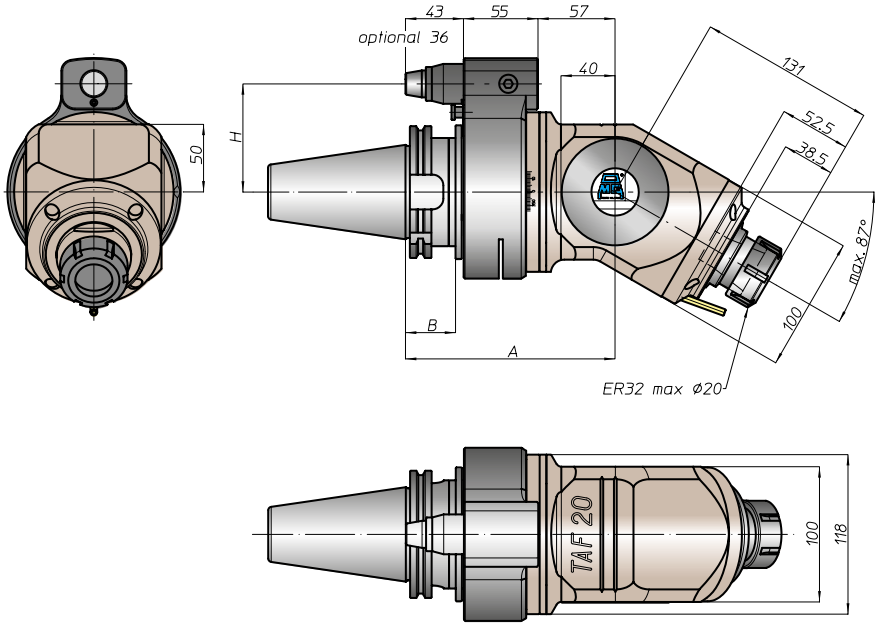
INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø20	M26	1610 N	1-1	3000	79
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER40 DIN6499-ER
- Ø32 PORTAFRESE FACE MILL ARBOR
- Ø20 WELDON WHISTLE-NOTCH
- HSK50 DIN69893-HSK
- ABS50 LICENZA KOMET® KOMET LICENCE®



	CONO *SHANK*	DIN69871		ANSIB5.50	BT	DIN69893		ISO26623				DIN2080	ANSIB5.18
		CAT		CAT	BT	HSK		CAPTO		KM		NMTB	
	SIZE	45	50	50	50	80	100	C6	C8	80	100		
	A	155		155	163	164		159		155			
	B	35		35	45	46			41				
	H STANDARD	80		80	80	80		80		80			
	H OPTIONAL	110		110	110	110		110		110			

TAF20.PD

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

13,5 KG

ROTAZIONE
ROTATION

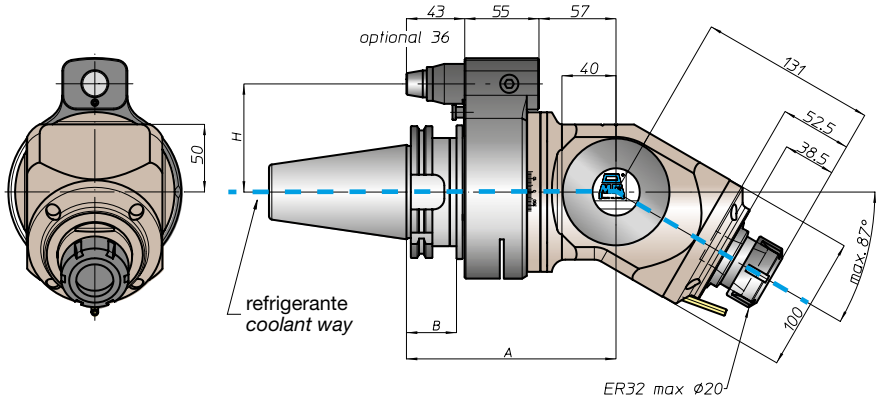
INPUT — OUTPUT

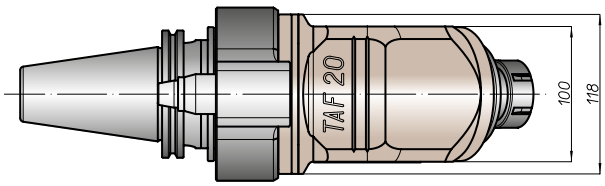
CARATTERISTICHE
FEATURES

Ø20	M16	1610 N	1-1	3000	79	70 BAR

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

- ER40 DIN6499-ER
- Ø20 WELDON WHISTLE-NOTCH
- HSK50 DIN69893-HSK
- ABS50 LICENZA KOMET® KOMET LICENCE®





CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893		CAPTO ISO26623		KM		DIN2080	NMTB ANSIB5.18
SIZE	45	50	50	50	80	100	C6	C8	80	100		
A	155		155	163	164		159		155			
B	35		35	45	46			41				
H STANDARD	80		80	80	80		80		80			
H OPTIONAL	110		110	110	110		110		110			

TA07PT

TESTA AD ANGOLO · *ANGLE HEAD*

HEAD EXTENSION

1,5 KG L 100=2,2 KG
L 200=3,6 KG

PESO
WEIGHT

INPUT OUTPUT

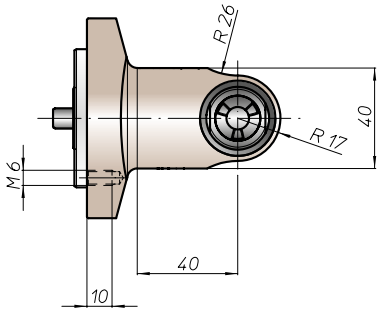
ROTAZIONE
ROTATION

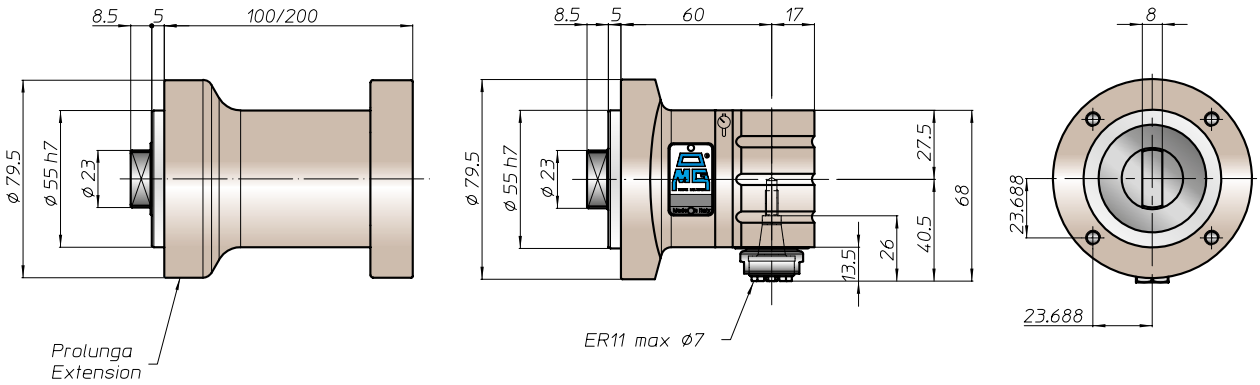
Ø7 M6 180 N 1-1 10000 11

CARATTERISTICHE
FEATURES

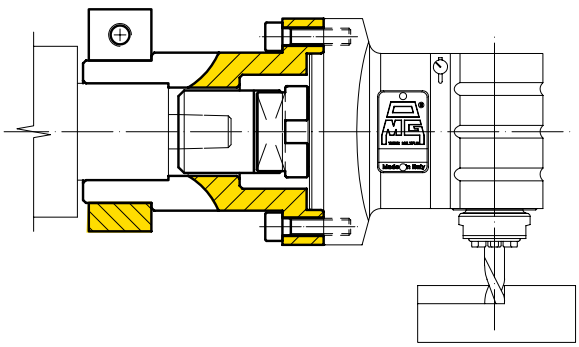
Ø8-Ø10
WELDON
WHISTLE-NOTCH

MANDRINI
DISPONIBILI
AVAILABLE
SPINDLES





Esempio di collegamento / *Connection example*



TA10PT

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

HEAD: 2,7 KG

EXTENSION: L 100=2,2 KG
L 200=3,6 KG

ROTAZIONE
ROTATION

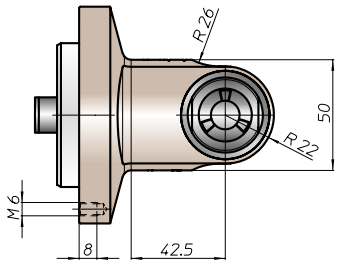
INPUT — OUTPUT

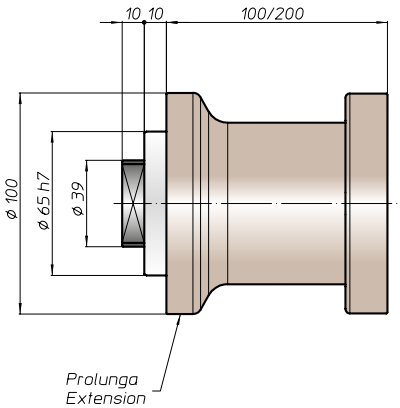
CARATTERISTICHE
FEATURES

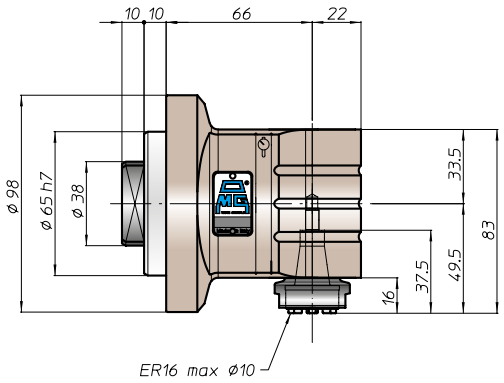
Ø10	M8	400 N	1-1	10000 RPM	14 Nm

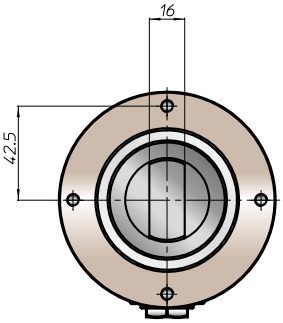
MANDRINI DISPONIBILI
AVAILABLE SPINDLES

- ER20 DIN6499-ER
- Ø16 PORTAFRESE / FACE MILL ARBOR
- Ø10 WELDON WHISTLE-NOTCH

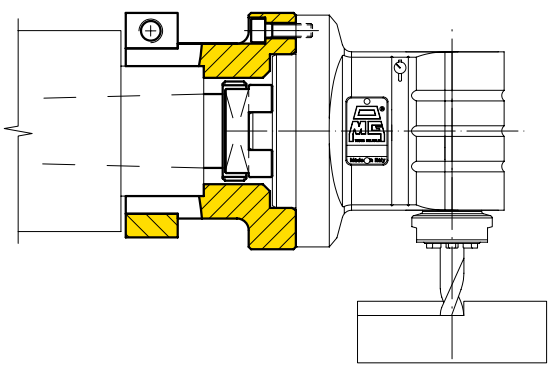








Esempio di collegamento / *Connection example*



TA13PT

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

3,5 KG

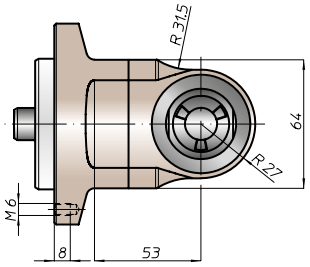
ROTAZIONE *ROTATION*

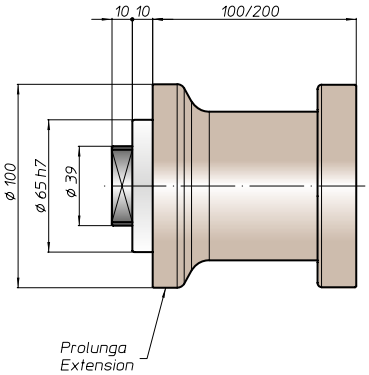
INPUT OUTPUT

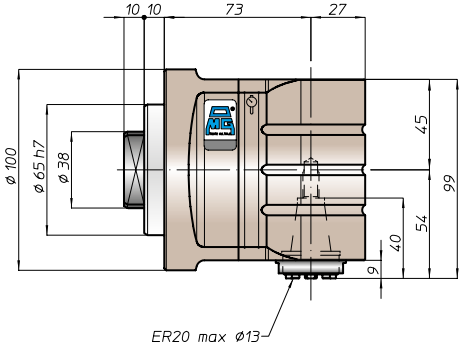
CARATTERISTICHE *FEATURES*

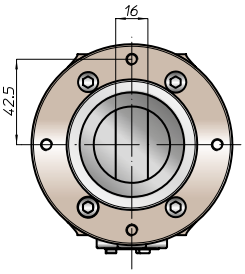
Ø13	M10	810 N	1-1	8000	38
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

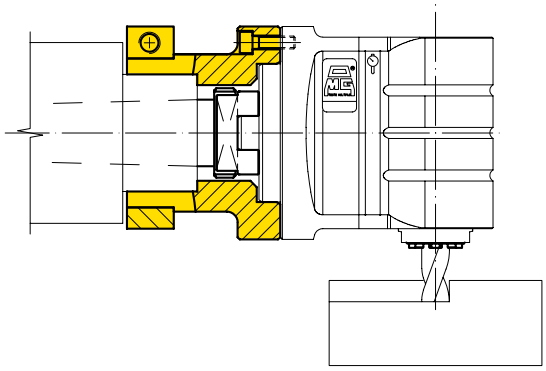








Esempio di collegamento / *Connection example*



TA16PT

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

HEAD: 5 KG

EXTENSION: L 100=5 KG
L 200=8,5 KG

ROTAZIONE
ROTATION

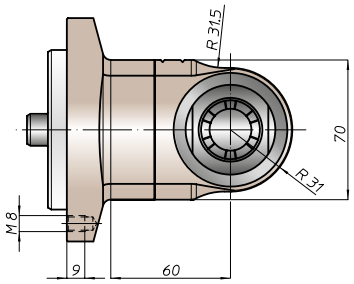
INPUT — OUTPUT

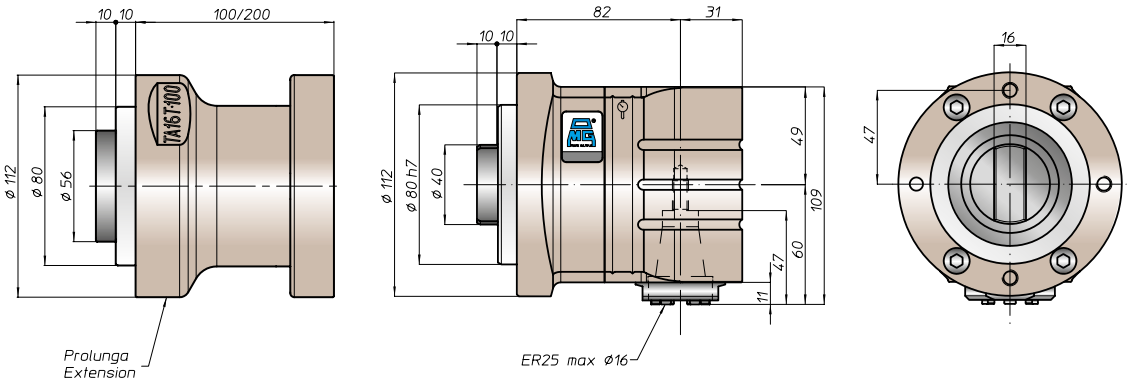
CARATTERISTICHE
FEATURES

Ø16	M12	1040 N	1-1	5000 RPM	55 Nm

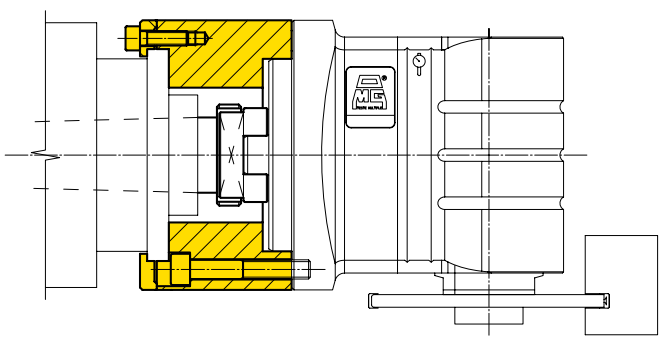
MANDRINI DISPONIBILI
AVAILABLE SPINDLES

- ER32 DIN6499-ER
- Ø16-Ø22-Ø27-Ø32 PORTAFRESE / FACE MILL ARBOR
- Ø20 WELDON WHISTLE-NOTCH
- HSK32 DIN69893-HSK
- C3 COROMANT CAPTO®
- ABS32 LICENZA KOMET® / KOMET LICENCE®





Esempio di collegamento / *Connection example*



TA20.PT

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

HEAD: 7,5 KG
EXTENSION: L 100=7,5 KG, L 200=15 KG

ROTAZIONE *ROTATION*

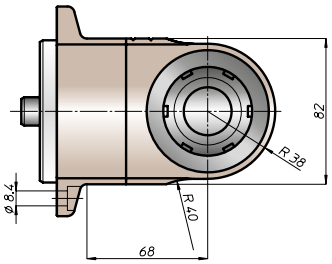
INPUT — OUTPUT

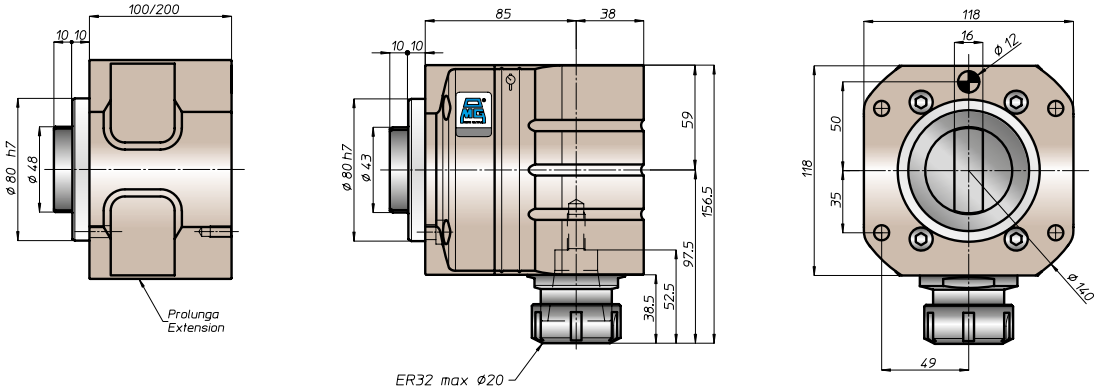
CARATTERISTICHE *FEATURES*

Ø20	M14	1460 N	1-1	3500	90
				RPM	Nm

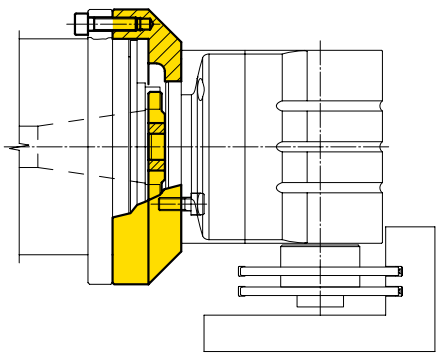
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- ER40 DIN6499-ER
- Ø22-Ø27-Ø32 PORTAFRESE FACE MILL ARBOR
- Ø20-Ø25 WELDON WHISTLE-NOTCH
- HSK40 DIN69893-HSK
- C4 COROMANT CAPTO®
- ABS40 LICENZA KOMET® KOMET LICENCE®





Esempio di collegamento / *Connection example*



TA20.30.T

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

HEAD EXTENSION

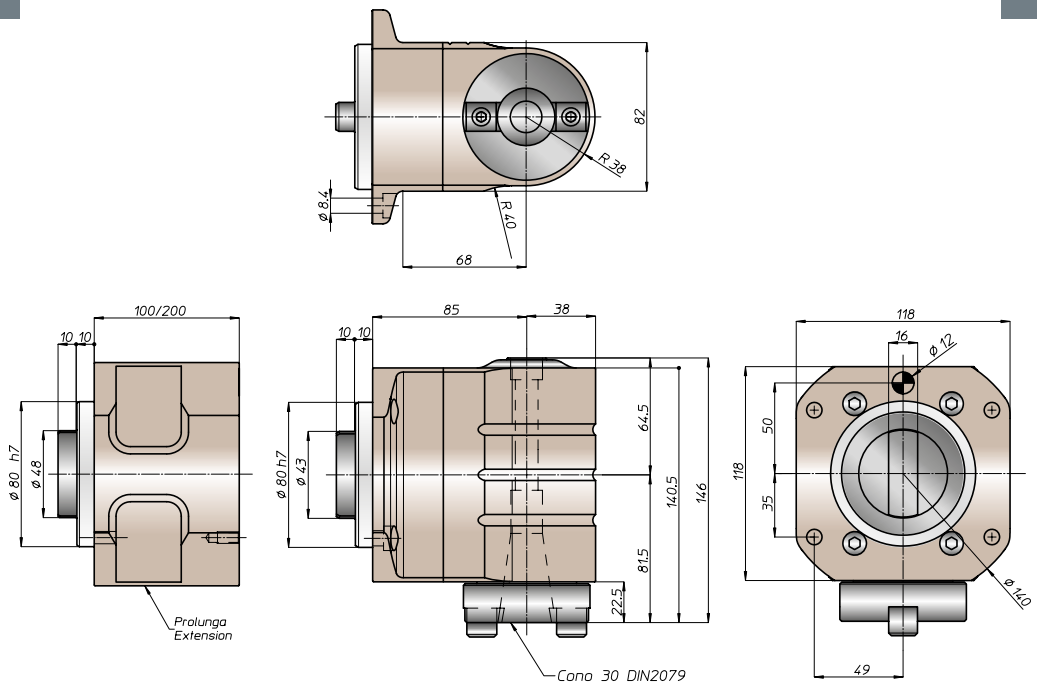
7,5 KG L 100=7,5 KG
L 200=15 KG

ROTAZIONE
ROTATION

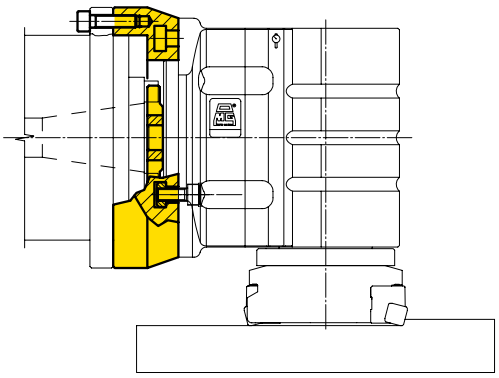
INPUT OUTPUT

CARATTERISTICHE
FEATURES

Ø20	M14	1460 N	1-1	3500	90



Esempio di collegamento / *Connection example*



Nota

nel mandrino DIN2079 si possono utilizzare coni DIN2080-30, DIN69871-A30,MAS403-BT30

Note

on the spindle DIN2079 you can use shank DIN2080-30, DIN69871-A30, MAS403-BT30

TA26.PT

TESTA AD ANGOLO · *ANGLE HEAD*

HEAD / EXTENSION

PESO *WEIGHT*

13,5 KG — L 100=12,5 KG, L 200=24 KG

ROTAZIONE *ROTATION*

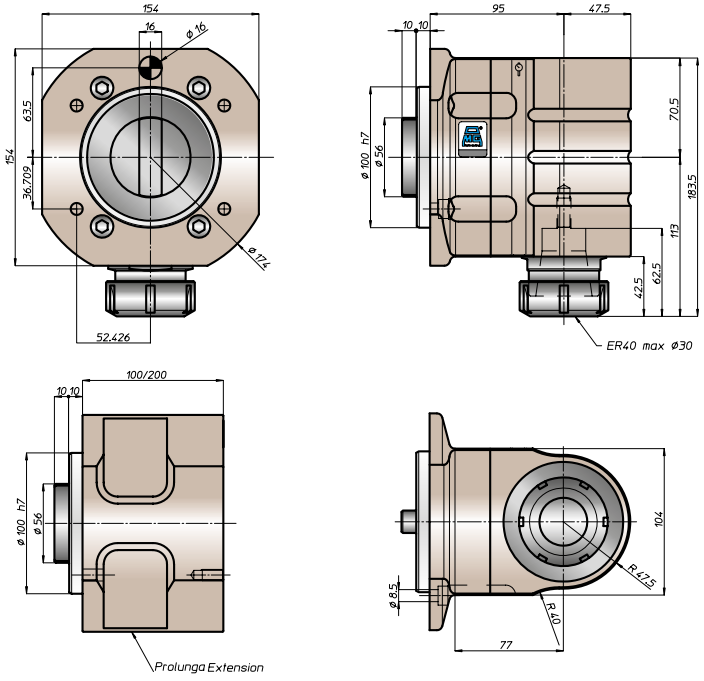
INPUT — OUTPUT

CARATTERISTICHE *FEATURES*

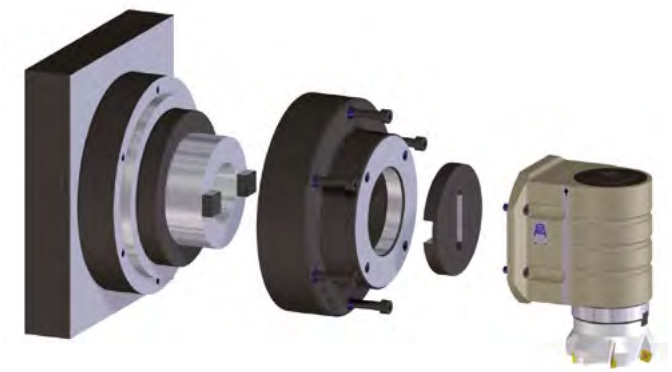
Ø26	M20	3020 N	1-1	2500	165
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

- Ø16-Ø27-Ø32 PORTAFRESE / FACE MILL ARBOR
- Ø32 WELDON WHISTLE-NOTCH
- HSK63 DIN69893-HSK
- C4 COROMANT CAPTO®
- ABS50 LICENZA KOMET® / KOMET LICENCE®



Esempio di collegamento / *Connection example*



TA26.40.T

TESTA AD ANGOLO · *ANGLE HEAD*

PESO
WEIGHT

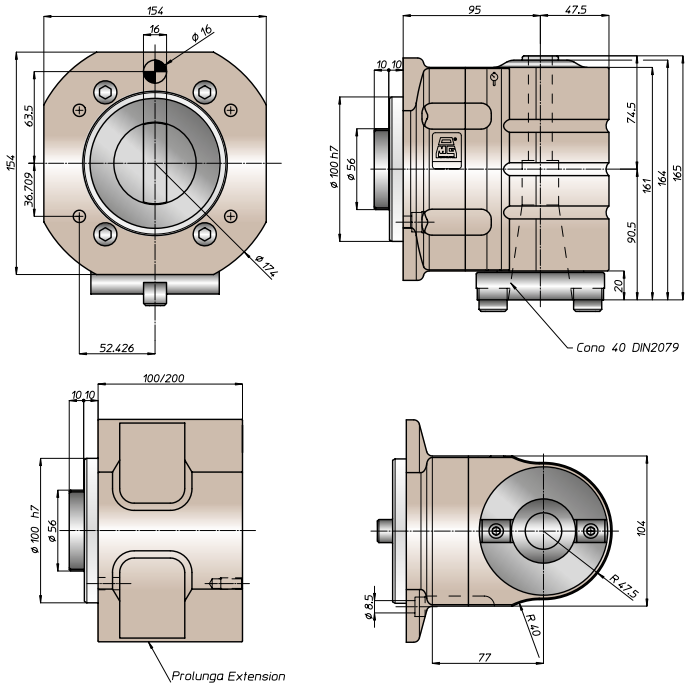
HEAD: 40 — 13,5 KG
EXTENSION: 50 — L 100=12,5 KG, L 200=24 KG

ROTAZIONE
ROTATION

IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø26	M20	3020 N	1-1	2500	165
				RPM	Nm



Nota

nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

Note

on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40

Esempio di collegamento / *Connection example*

TA40.T

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

HEAD	EXTENSION
33 KG	L 200=26,5 KG

ROTAZIONE *ROTATION*

INPUT	OUTPUT

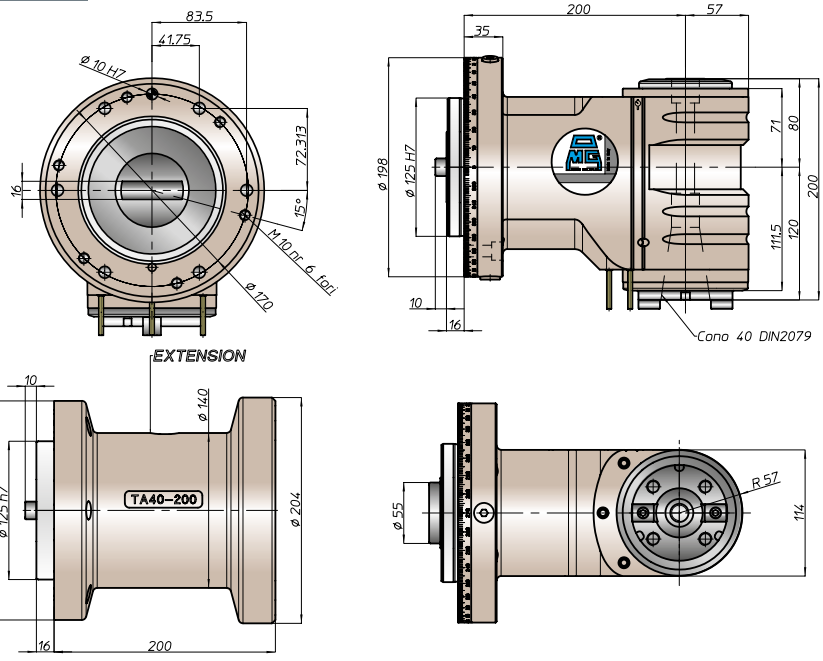
CARATTERISTICHE *FEATURES*

Ø32	M26	2000 N	1-1	5000	230
				RPM	Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

HSK63 DIN69893-HSK

C5 COROMANT CAPTO®



Equipaggiamento standard:

- pressurizzazione mandrino
- n. 3 ugelli orientabili vicino al mandrino
- nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

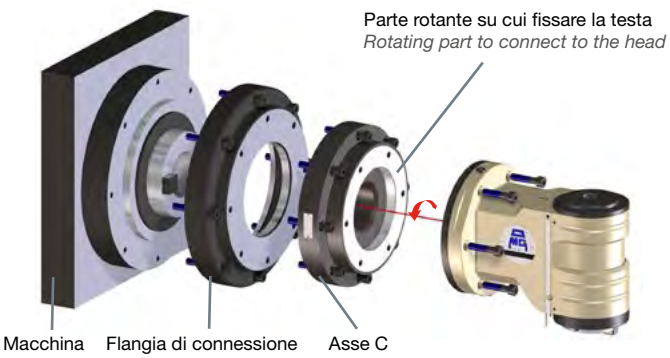
Standard equipment:

- *spindle front pressurization*
- *nr. 3 adjustable nozzle near the spindle*
- *on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40*

Utilizzo su asse C manuale / *Manual C axis*

- Nuovo Asse C a rotazione manuale
- Compatto, semplice e preciso
- Bloccaggio rotazione su cava a T
- Rotazione libera su cuscinetto a rulli incrociati
- Facilità di posizionamento

- *New C Axis with manual rotation*
- *Space-saving, user friendly and precise*
- *Rotation lock on T slot*
- *Free rotation on crossed roller bearings*
- *Easy set up*



TA40TD

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

HEAD 40 — 33 KG
EXTENSION 50 — L 200=26,5 KG

ROTAZIONE
ROTATION

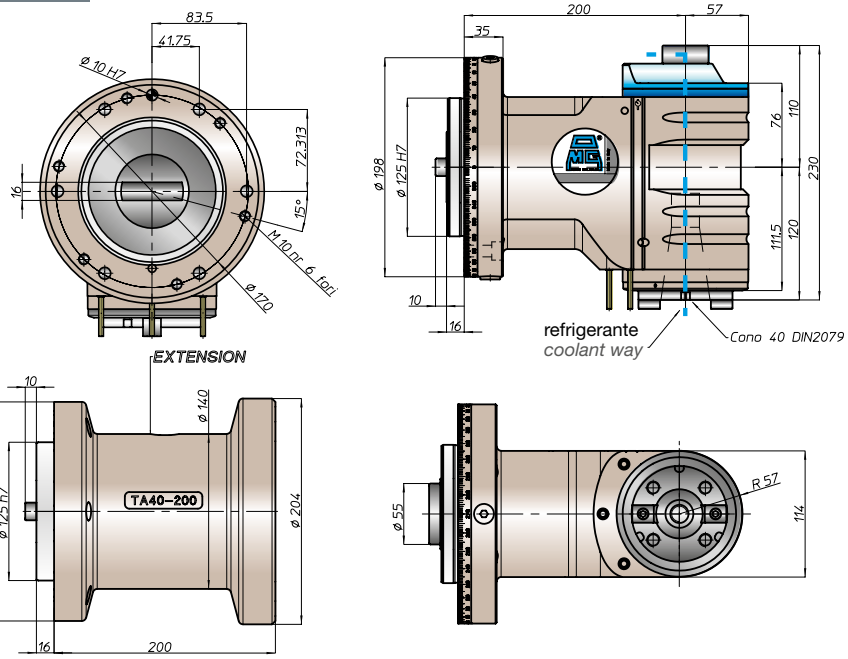
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø32 | M26 | 2000 N | 1-1 | RPM 5000 | Nm 230 | BAR 70 BAR

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

HSK63 DIN69893-HSK
C5 COROMANT CAPTO®



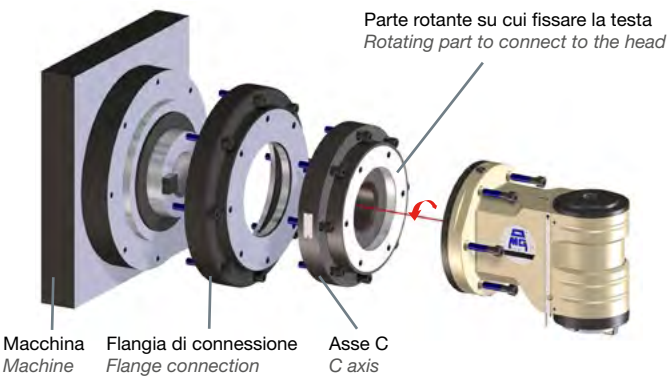
Equipaggiamento standard:

• pressurizzazione mandrino
• n. 3 ugelli orientabili vicino al mandrino
• nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

Standard equipment:

• spindle front pressurization
• nr. 3 adjustable nozzle near the spindle
• on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40

Esempio di collegamento / *Connection example*



TA50.T

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

HEAD	EXTENSION
108 KG	L 300=110 KG

ROTAZIONE *ROTATION*

INPUT	OUTPUT
IN	OUT

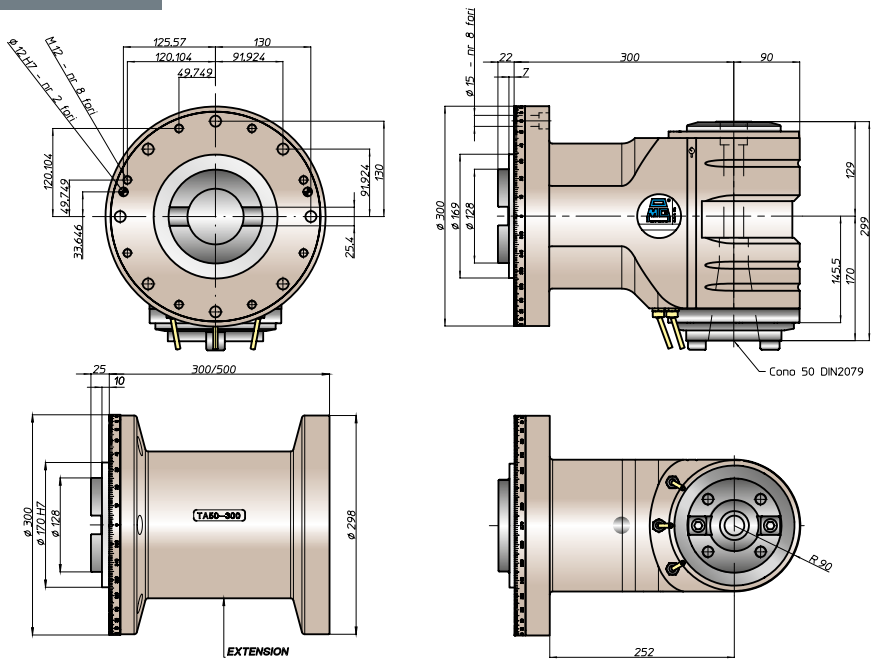
CARATTERISTICHE *FEATURES*

Ø45	M36	5800 N	1-1	4000 RPM	700 Nm

MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

HSK100 DIN69893-HSK

C8 COROMANT CAPTO®



Equipaggiamento standard:

- pressurizzazione mandrino
- n. 3 ugelli orientabili vicino al mandrino
- nel mandrino DIN2079 si possono utilizzare coni DIN2080-40, DIN69871-A40, MAS403-BT40

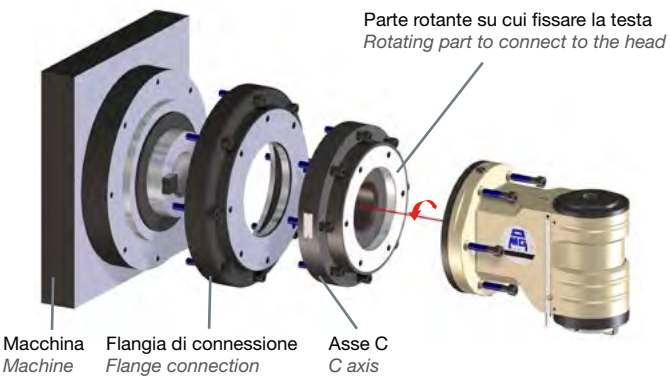
Standard equipment:

- *spindle front pressurization*
- *nr. 3 adjustable nozzle near the spindle*
- *on the spindle DIN2079 you can use shank DIN2080-40, DIN69871-A40, MAS403-BT40*

Utilizzo su asse C manuale / *Example with manual C axis*

- Nuovo Asse C a rotazione manuale
- Compatto, semplice e preciso
- Bloccaggio rotazione su cava a T
- Rotazione libera su cuscinetto a rulli incrociati
- Facilità di posizionamento

- *New C Axis with manual rotation*
- *Space-saving, user friendly and precise*
- *Rotation lock on T slot*
- *Free rotation on crossed roller bearings*
- *Easy set up*



TA50.TD
TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

HEAD: 40 — 112 KG
EXTENSION: 50 — L 300=110 KG

ROTAZIONE
ROTATION

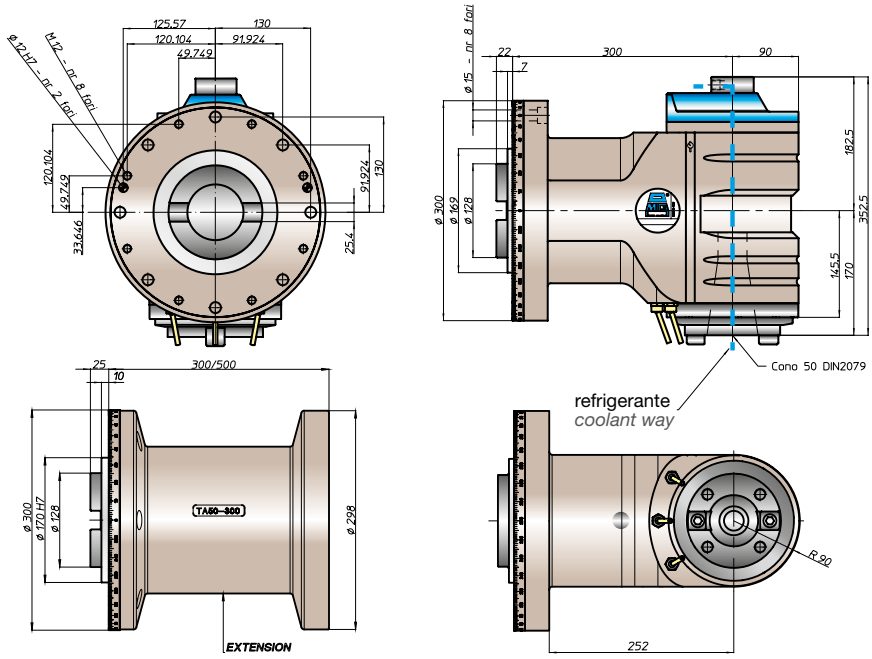
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE
FEATURES

Ø45 | M36 | 5800 N | 1-1 | RPM 4000 | Nm 700 | BAR 70BAR

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

HSK100 DIN69893-HSK
C8 COROMANT CAPTO®



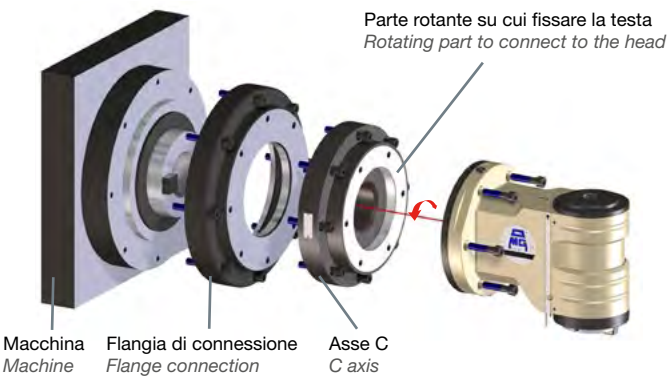
Equipaggiamento standard:

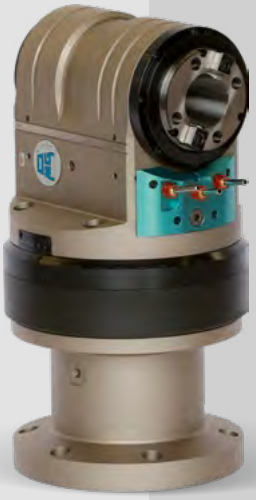
- pressurizzazione mandrino
- n. 3 ugelli orientabili vicino al mandrino
- nel mandrino DIN2079 si possono utilizzare coni DIN69871-A50, MAS403-BT50

Standard equipment:

- *spindle front pressurization*
- *nr. 3 adjustable nozzle near the spindle*
- *on the spindle DIN2079 you can use shank DIN69871-A50, MAS403-BT50*

Esempio di collegamento / *Connection example*





TA.T

EXTENDED GALLERY

TA13.PVDI

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

4,5 KG

ROTAZIONE *ROTATION*

INPUT OUTPUT

CARATTERISTICHE *FEATURES*

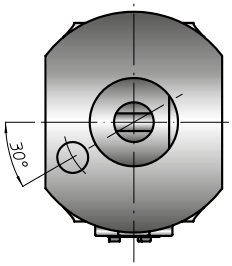
Ø13 | M10 | 810 N | 1-1 | 8000 | 38

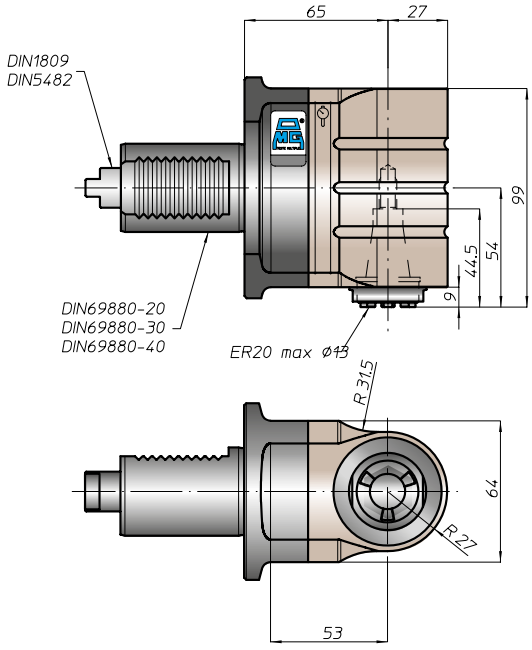
MANDRINI DISPONIBILI *AVAILABLE SPINDLES*

ER25 DIN6499-ER

Ø16-Ø22 PORTAFRESE FACE MILL ARBOR

Ø16 WELDON WHISTLE-NOTCH





Soluzioni speciali / *Special solutions*

TA16.PVDI

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

6,5 KG

ROTAZIONE
ROTATION

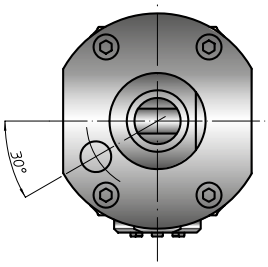
INPUT OUTPUT

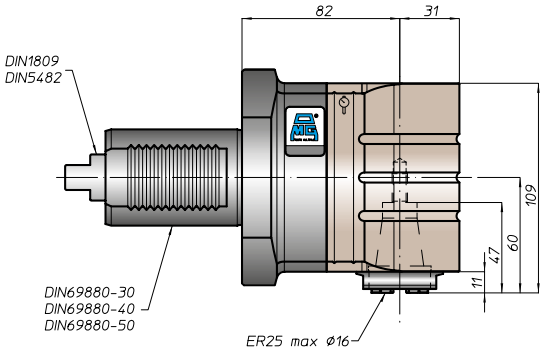
CARATTERISTICHE
FEATURES

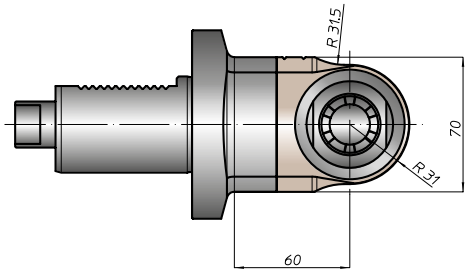
Ø16 | M12 | 1040 N | 1-1 | 5000 | 55

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

- ER32 DIN6499-ER
- Ø16-Ø27-Ø32 PORTAFRESE FACE MILL ARBOR
- Ø20 WELDON WHISTLE-NOTCH
- HSK32 DIN69893-HSK
- C3 COROMANT CAPTO®
- ABS32 LICENZA KOMET® KOMET LICENCE®







Soluzioni speciali / *Special solutions*

TAV10.PVDI

TESTA AD ANGOLO · *ANGLE HEAD*

PESO *WEIGHT*

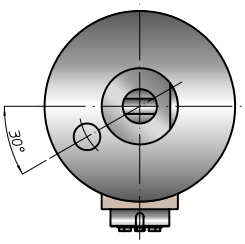
3,5 KG

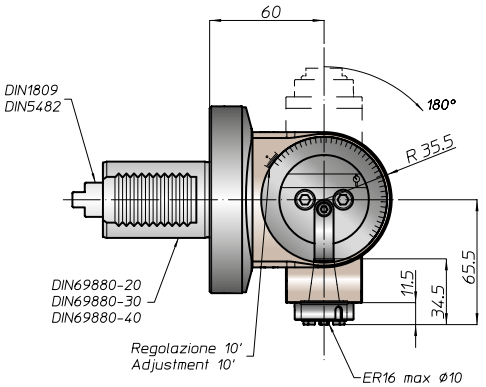
ROTAZIONE *ROTATION*

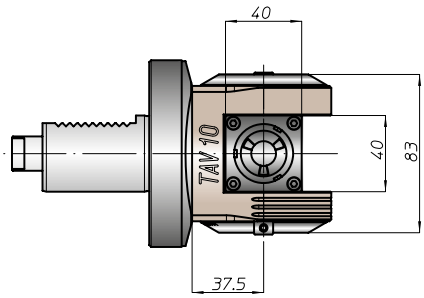
INPUT OUTPUT

CARATTERISTICHE *FEATURES*

Ø10	M8	550 N	1-1	4000	12







Soluzioni speciali / *Special solutions*

TAV13.PVDI

TESTA AD ANGOLO • *ANGLE HEAD*

PESO
WEIGHT

5,5 KG

ROTAZIONE
ROTATION

INPUT OUTPUT

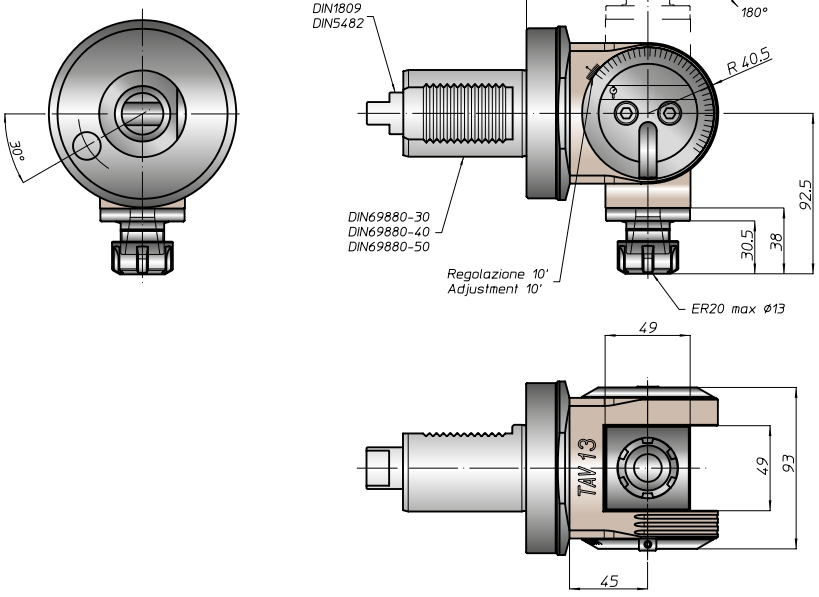
CARATTERISTICHE
FEATURES

Ø13 M10 630 N 1-1 3000 18

MANDRINI DISPONIBILI
AVAILABLE SPINDLES

ER25 DIN6499-ER

Ø16 WELDON WHISTLE-NOTCH



Soluzioni speciali / *Special solutions*

ANTIROTANTE
TORQUE ARM

Il gruppo antirotante ricopre una funzione di fondamentale importanza nella qualità di lavorazione della testa ad angolo. Per questo motivo i tecnici della OMG hanno studiato e messo a punto un antirotante di nuova concezione i cui punti salienti sono:

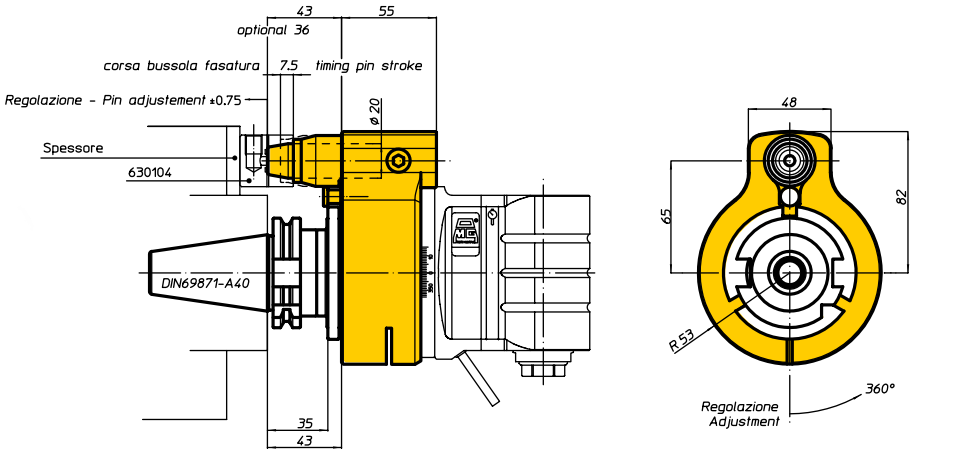
- Il perno conico
- La registrazione assiale del perno
- Adduzione del liquido passante per il corpo testa

Il perno conico e la propria registrazione assiale di mm 1.5 permettono una maggiore rigidità del sistema antirotante rispetto ai tradizionali, dotati di perni di Ø18 mm perché si eliminano i giochi con conseguente miglioramento della rigidità sia angolare che assiale.
L'adduzione del liquido passante per il corpo testa, la cui uscita avviene tramite un ugello direzionabile, offre il vantaggio di non avere tubi "volanti" che possono muoversi durante le lavorazioni.

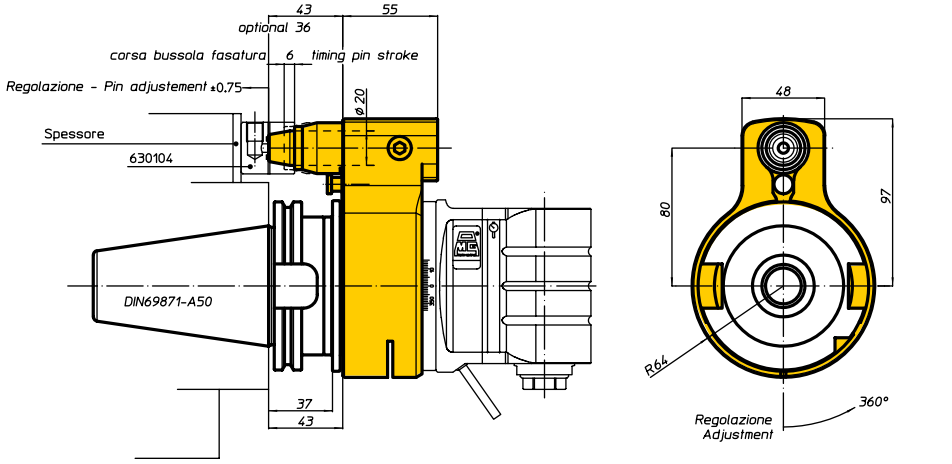
Scannerizza il codice per vedere il video di montaggio delle Teste ad Angolo

Quando possibile, nella Vostra applicazione, posizionate il perno conico dalla parte opposta al mandrino della testa ad angolo.

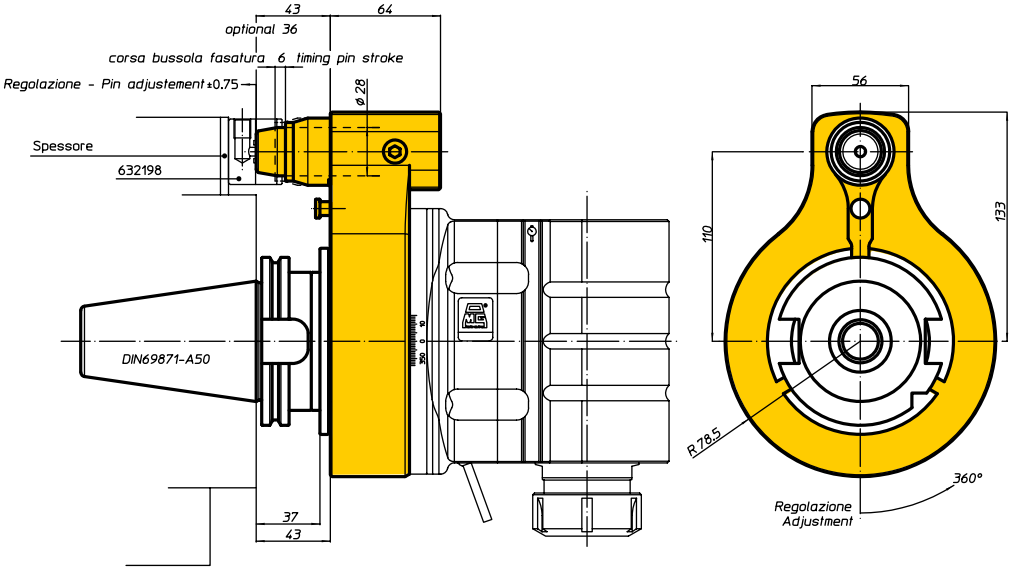
TESTE AD ANGOLO CON INTERASSE H=65
ANGLE HEADS WITH CENTRE DISTANCE H=65



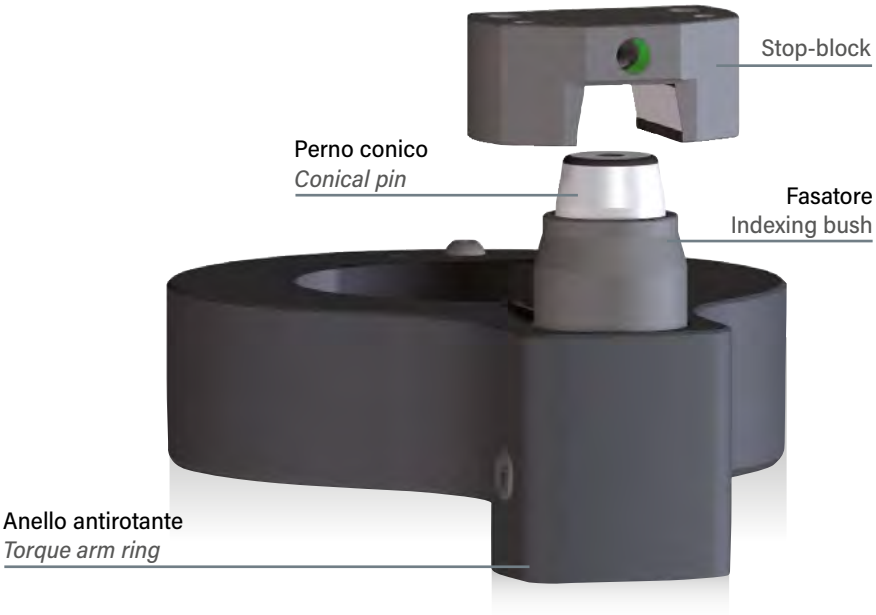
TESTE AD ANGOLO CON INTERASSE H=80
ANGLE HEADS WITH CENTRE DISTANCE H=80



TESTE AD ANGOLO CON INTERASSE H=110
ANGLE HEADS WITH CENTRE DISTANCE H=110



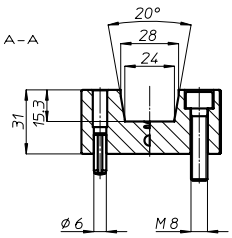
STOP-BLOCK

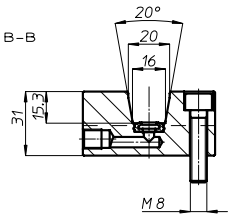


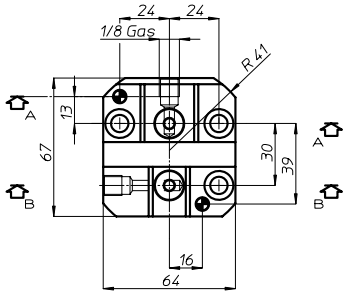
The torque arm system is crucial as far as angle-head machining quality is concerned. For this reason OMG technicians have designed and developed a new system with the following characteristics:
- *conical pin*
- *axial pin adjustment*
- *coolant through the head body*

The conical pin and its 1.5 mm axial adjustment ensure upgraded antirotation system strength compared to traditional systems, featuring Ø 18 mm pin, because play is eliminated, thereby improving both angular and axial strength.
By the pin the coolant through the head, thanks to an adjustable nozzle, the added advantage is achieved of eliminating "free" pipes that could move during machining operations.

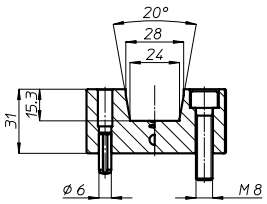
DOUBLE STOP-BLOCK (COD. 635354)

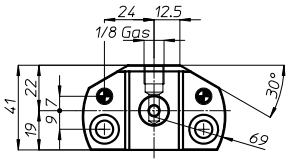






STOP-BLOCK (COD. 635353)





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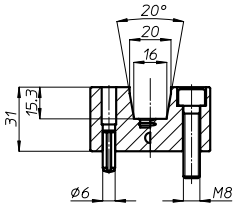
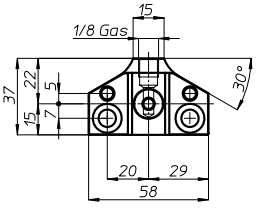




Scan the QR code and watch the video on how to install the Angle Heads

Position the conical pin on the opposite side of the angle head spindle when possible in your application.

ANTIROTANTE
TORQUE ARM

TriBlock®

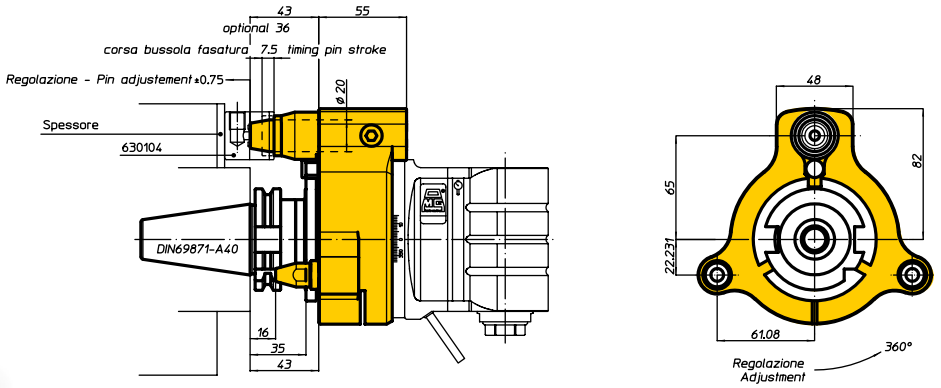
Il gruppo antirotante **TriBlock** ricopre una funzione di fondamentale importanza quando alla testa ad angolo è richiesto di:

- eseguire una lavorazione più pesante
- essere più lunga dello standard
- finitura superficiale eccellente

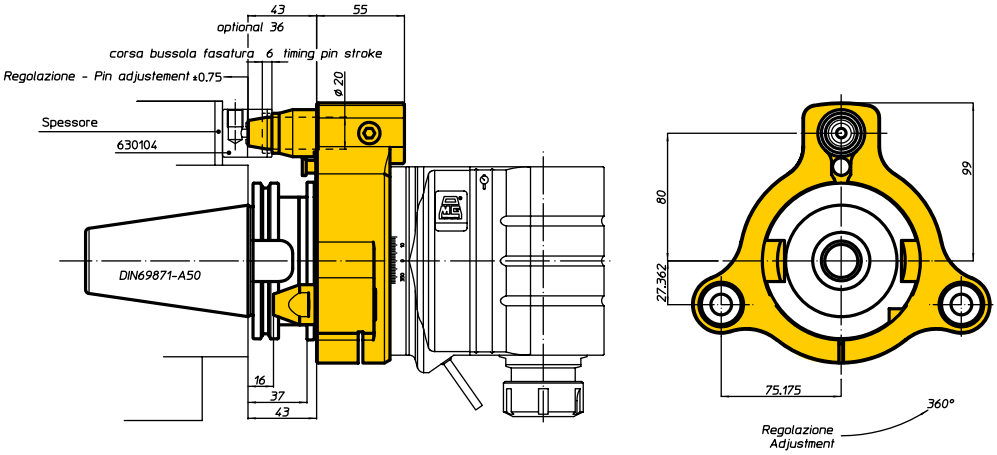
Il **TriBlock** è dotato di tre punti di appoggio di cui uno è lo standard come nei precedenti e due supplementari da registrare tramite un rasamento. Questi tre punti, allargando l'appoggio di base della testa ad angolo, consentono di ottenere una rigidità superiore allo standard.

Quando poi si richiede alla testa di essere immagazzinata su di un supporto esterno al magazzeno standard, ecco che il TriBlock utilizza i propri tre punti per posizionare la testa.

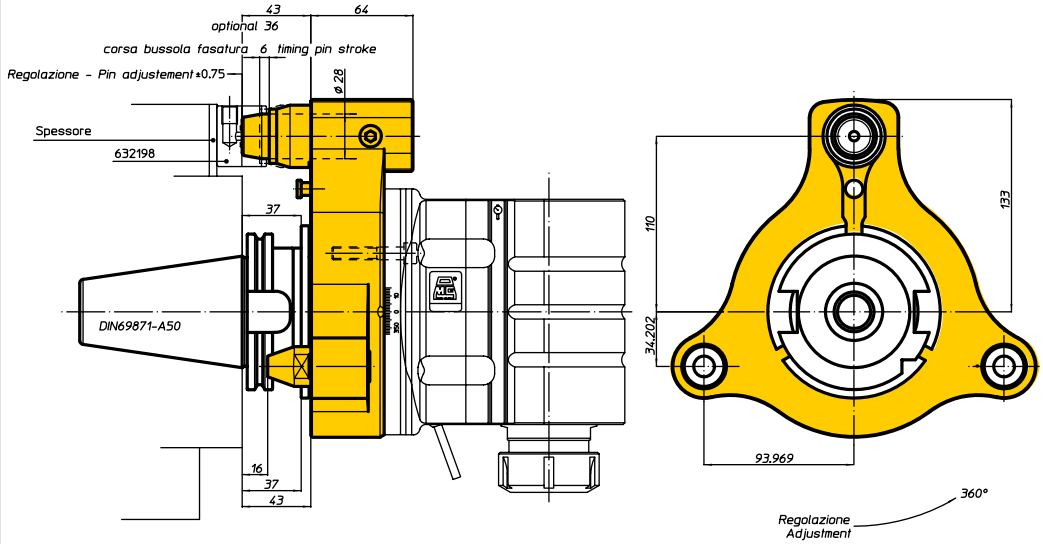
TESTE AD ANGOLO CON INTERASSE H=65
ANGLE HEADS WITH CENTRE DISTANCE H=65



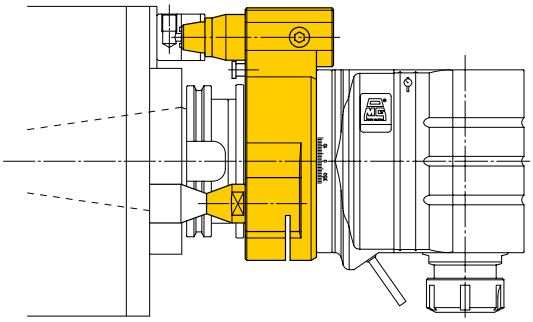
TESTE AD ANGOLO CON INTERASSE H=80
ANGLE HEADS WITH CENTRE DISTANCE H=80



TESTE AD ANGOLO CON INTERASSE H=110
ANGLE HEADS WITH CENTRE DISTANCE H=110



Sul mandrino macchina
On spindle machine



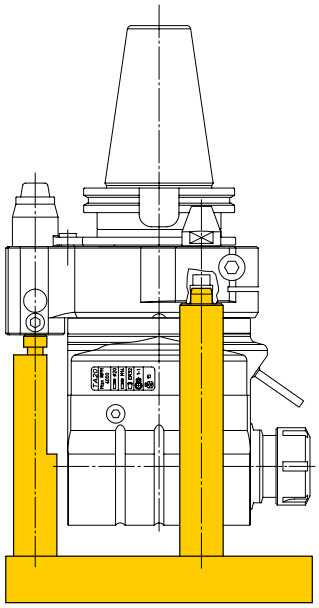
TFS 19907

Testa ad angolo per fresatura componente motore a reazione.
Peso Kg 45,5
Milling angle head for jet engine.
Weight Kg 45,5

TFS 39195

Testa bimandrino di fresatura
n° 2 frese Ø 100 peso Kg 33
Twin milling head,
nr. 2 milling cutter
Ø 100 weight Kg 33

Sul supporto da tavola
On rack table



The **TriBlock** *system is of crucial importance when it comes to:*
- *doing difficult jobs*
- *having a head that is longer than standard*
- *achieving an excellent surface finish*

The **TriBlock** *system features three supporting points, one of which is standard, as in the previous version, plus two additional ones that need adjusting by means of a spacer. These three points, by extending the angle-head supporting base, provide above-average standards of strength.*

When the head has to be stored on a rack table outside the standard magazine, the TriBlock system uses the three points to storage the angle heads.

ANTIROTANTE
TORQUE ARM

Il sistema antirotante **QuadBlock** è un sistema all'avanguardia per equipaggiare Teste ad Angolo dove si richiede alta asportazione e alta rigidità dell'insieme "testa ad angolo-macchina". Utilizzabile nel montaggio manuale, esso consiste in un anello antirotante completo di quattro perni di contrasto suddivisi equamente sui 360°. Tale disposizione consente di poter ruotare la Testa ad Angolo in automatico con un semplice movimento della macchina, se questa ne ha le capacità. Il vantaggio di poter lavorare quattro facce del pezzo senza sostituire la Testa ad Angolo si concretizza con la riduzione dei costi previsti per gli utensili.
L'evoluzione del sistema **QuadBlock** per le macchine con cambio automatico, consente di utilizzare la Testa ad Angolo come un prolungamento del mandrino macchina ruotato dei gradi richiesti dal cliente. È possibile inoltre sostituire il portautensile in automatico ed ampliare infinitamente la versatilità della macchina utensile avendo a disposizione quei servizi normalmente presenti sul mandrino macchina:

- Aria pulizia del portautensile
- Liquido refrigerante centro utensile alta pressione
- Liquido refrigerante esterno utensile
- Liquido bloccaggio-sbloccaggio utensile
- Controllo presenza utensile

Tutto ciò per consentire l'utilizzo di portautensili tipo Capto, HSK, DIN69871. Mettiamo a disposizione il nostro ufficio tecnico e la nostra esperienza per personalizzare al meglio il Vostro sistema.

TAS13609

Fresatura su corpo in fusione di ghisa. Peso kg 36.
Milling on cast iron pump's body. Weight 36 kg.

TAS13209

Lavorazione di finitura interna culle motore idraulico. Peso kg 36.
Internal finishing work for hydraulic motor's body. Weight 21 kg.

TAS16209

Linee di servizio per il mandrino HSK63F con cambio automatico dell'utensile, sensore presenza utensile in radiofrequenza. Peso kg 28.
Utility line for HSK63F spindle with automatic tool change, radio-frequency switch to verify tool presence. Weight 28 kg.

ANTIROTANTE
TORQUE ARM

QuadBlock®

TAS24408

Lavorazione di fresatura interna corpo pinza freno in ghisa. Peso Kg 28.
Triblock with automatic locking. Cast iron brake housing internal milling work. Weight 28 kg.

TA12907

Lavorazione di fresatura generica struttura elettrosaldata di acciaio. Peso Kg 48.
Special Quadblock with automatic locking. General milling work on electro-welded steel structure. Weight 48 kg.

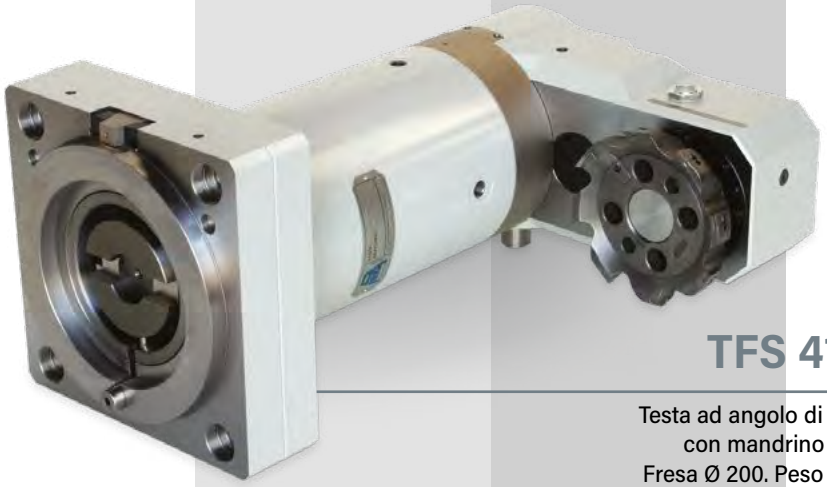
TAS08606

Servizi per mandrino CAPTO C4 con cambio automatico dell'utensile. Peso kg 36.
Spindle with utility line for CAPTO C4 with automatic tool change. Weight kg 36.

The **QuadBlock** *torque arm is a forefront system to equip Angle Heads which are requested with a high removal machining capacity and with extremely high rigidity in coupling with the machine tool. It can be used with a manual tool change and is made by a torque arm ring complete with four counterposed pins with same distance each other on the 360°. Such a layout allows an automatic rotation of the Angle Head with a simple movement of the machine if featured to do it. The possibility of machining four faces of the piece without replacing the Angle Head is giving the advantage of reducing costs of tools equipment.*
The evolution of the **QuadBlock** *system on automatic tool change machines allows to use the Angle Head like an extension of the machine spindle with the degree rotations required by the customer. It is also possible to automatically change the tool holder and to infinitely widen the versatility of the machine tool getting those utilities normally available on the machine spindle:*

- *tool-holder cleaning air*
- *through-tool high pressure coolant*
- *side-tool coolant*
- *tool locking-unlocking liquid*
- *tool presence control*

All these to allow using tool-holders like Capto, HSK, DIN69871. Our R&D department is at your disposal with his experience to customize your system at its best.



TFS 41304

Testa ad angolo di fresatura con mandrino ribaltato. Fresa Ø 200. Peso Kg 327,5.

Milling angle head with reverse spindle. Milling tool Ø 200. Weight Kg 327,5.

TFS 05303

Testa ad angolo di fresatura con fresa diam. 7 Peso Kg 8

Milling angle head with milling cutter diam. 7 weight Kg 8

TAS 15505

Testa ad angolo di foratura e fresatusa, attacco utensile CAPTO C4 automatico. Peso Kg 130.

Drilling and milling angle head, automatic tools changer CAPTO C4. Weight Kg 130.

TFS 23301

Testa ad angolo di foratura a tre mandrini peso kg 5,9

Drilling angle head with three spindles weight kg 5,9

TFS 39998

Testa ad angolo universale. Presa utensili ISO50, peso kg 580

Angle head with tool shank ISO50, weight kg 580

TFS 36699

Testa ad angolo bimandrino registrabile, peso kg 29

Adjustable twin angle head, weight kg 29

TFS 34004

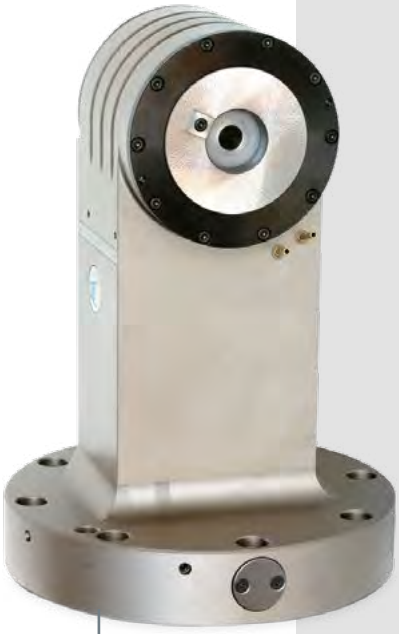
Testa ad angolo di foratura a 3 mandrini a 120°.

Drilling angle head, n 3 spindles at 120°. Weight Kg 18.

TFS 37503

Doppia testa ad angolo di foratura.

Twin drilling angle head.



TFS 09063

Testa ad angolo di alesatura con utensile Ø 160 peso Kg 77

Boring angle head with tools Ø 160 weight Kg 77

TFS 08993

Testa ad angolo speciale con doppia coppia di mandrini contrapposti peso kg 18

Angle head with two opposite twin spindles weight kg 18

TFS 06003

Testa ad angolo di fresatura con fresa Ø 110 peso Kg 210

Milling angle head with milling cutter Ø 110 weight Kg 210

TFS 33206

Testa bimandrino di fresatura per frese Ø 160, peso kg 63

Twin milling head with milling cutter Ø 160 weight kg 63

TFS 21701

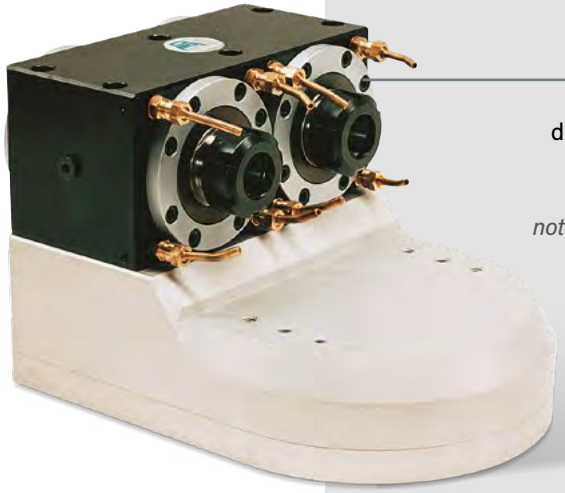
Testa di fresaturaa due mandrini paralleli, peso kg 14

Milling angle head with two parallel spindles, weight kg 14

TFS 34495

Testa bimandrino di fresatura n. 2 frese Ø 130, peso kg 290

Twin milling head, nr. 2 milling cutter Ø 130, weight kg 290



TFS 16696

Doppia testa ad angolo disassata rispetto all'asse macchina, peso kg 24

Twin spindle angle head not in line with the machine spindle, weight kg 24

TFS 36994

Testa bimandrino di fresatura n. 2 frese Ø 60, peso kg 15,5

Twin milling head, nr. 2 milling cutter Ø 60, weight kg 15,5

TFS 12101

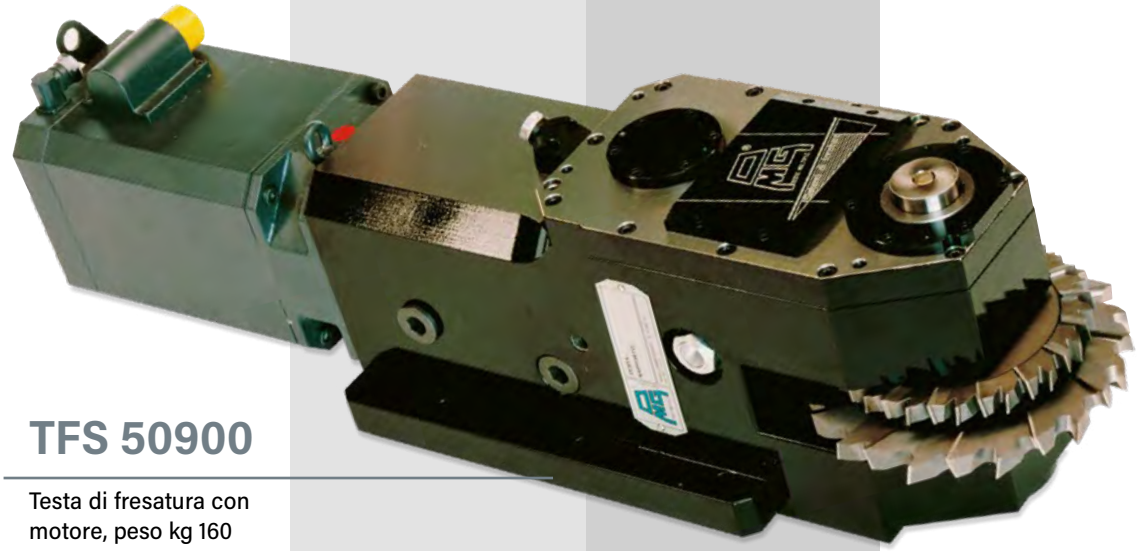
Testa di fresatura con cono ISO30, peso kg 16

Milling angle head with ISO30, weight kg 16

TFS 13094

Testa ad angolo disassata rispetto all'asse macchina peso kg 17

Angle head not in line with the machine spindle weight kg 17



TFS 50900

Testa di fresatura con motore, peso kg 160

Milling angle head with brushless motor weight kg 160

TFS 09400

Testa di fresatura con n. 2 frese Ø 125 peso kg 20

Milling angle head with nr. 2 milling cutter Ø 125 weight kg 20

TFS 24196

Testa ad angolo bimandrino per fresatura su scatola del cambio, peso kg 70

Twin milling spindle angle head on gear box, weight kg 70

TFS 41504

Testa ad angolo mandrino di fresatura. Peso Kg 338.

Twin milling angle head. Weight Kg 338.

TFS 35698

Testa ad angolo di fresatura con fresa Ø 100, peso Kg 34

Milling angle head, with milling cutter Ø 100, weight Kg 34

TFS 28603

Testa di fresatura con n. 4 frese a disco Ø 125. Peso Kg 218.

Milling head, nr. 4 milling disc cutter Ø 125. Weight Kg 218.

TFS 12005

Testa ad angolo disassata per fresature Ø 150. Peso Kg 48.

Shift spindle angle head, milling tools Ø 150. Weight Kg 48.

TFS 33303

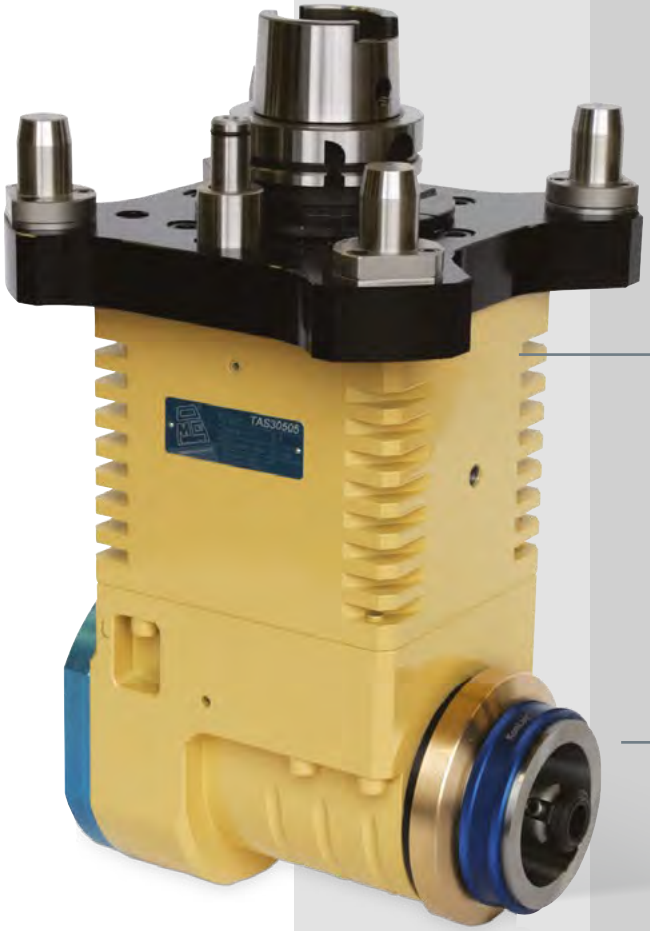
Testa ad angolo disassata per foratura. Peso Kg 9,4.

Angle head with shift drilling spendle. Weight Kg 9,4.

TFS 12095

Testa ad angolo di foratura, peso kg 5

Drilling angle head weight Kg 5



TAS 30505

Testa ad angolo di foratura HSK100 entrata e uscita. Peso Kg 50.

Drilling angle head, HSK 100 input-output. Weight Kg 50

TFS 13198

Testa ad angolo disassata per foratura, peso kg 5

Angle head with shift spindle, weight kg 5

TFS 33503

Testa ad angolo di lucidatura con doppia rotazione, sia corpo che utensile. Peso kg 6,5.

Polish angle head with duble rotation: body and tools. Weight Kg 6,5.

TFS 39997

Testa ad angolo speciale bimandrino per foratura e maschiatura peso kg 16

Twin angle head for drilling and tapping weight kg 16

TAS 13806

Testa bimandrino Capto C5 manuale, peso kg 33

Twin angle head with Capto C5 manual clamping tool weight kg 33

TAS 39806

Testa di foratura a due mandrini con refrigerante attraverso il centro utensile a 50 Bar, peso kg 21

Twin drilling angle head with coolant through the centre tool at 50 Bar, weight kg 21

TFS 40601

Testa ad angolo bimandrino, angolo tra i due mandrini 176°, peso Kg 13

Twin angle head, angle 176° between spindles, weight Kg 13

TAS 08606

Testa fresatura conica su acciaio, peso kg 23

Milling angle head with conical tool, weight kg 23

TFS 20298

Testa bimandrino di fresatura n°2 frese Ø 120 peso kg 25

Twin milling angle head, nr.2 milling cutter Ø 120 weight kg 25

TA 05500

Testa ad angolo di fresatura con fresa Ø125 peso kg 17

Milling angle head with milling cutter Ø 125, weight kg 17

TA 34397

Testa ad angolo di fresatura con cono ISO20, peso kg 0,9

Milling angle head with hank ISO20, weight kg 0,9

TAS 39706

Testa di fresatura per supporto motore frese Ø160/180 peso kg 31

Milling head for engine's bracket milling cutter Ø160/180 weight kg 31

TAS 20706

Testa per fresatura interna pinza freno, peso Kg 23

Angle milling head for brake housing, weight Kg 23

TFS 39999

Testa ad angolo speciale fresatura su plastica peso kg 4

Milling angle head for plastic weight kg 4

TA 17292

Testa ad angolo di fresatura n. 2 frese per legno peso kg 3

Twin angle head with nr. 2 milling cutter for wood, weight kg 3

TAS 37806

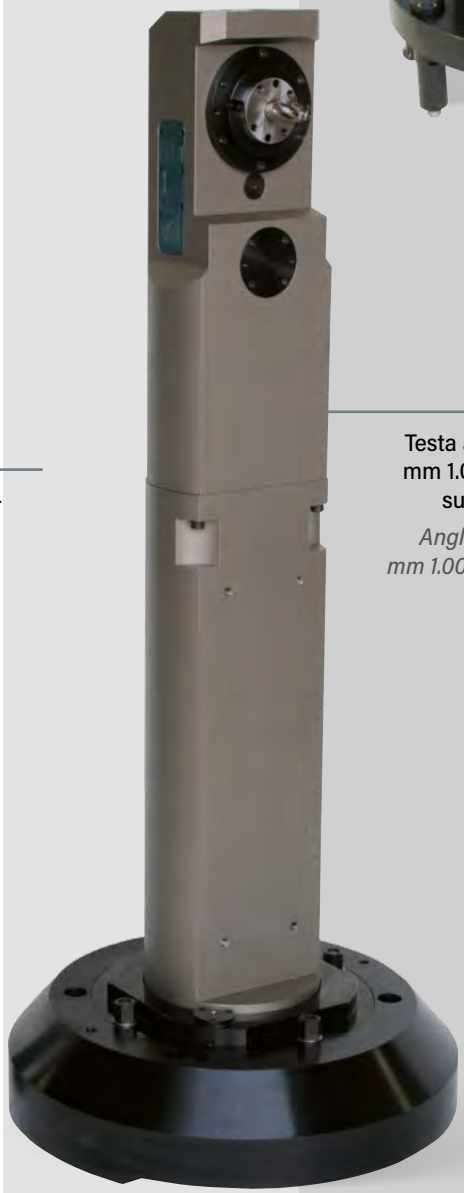
Testa ad Angolo di fresatura componente aeronautico, materiale Inconel. Peso Kg 40

Milling Angle Head for aeronautic piece, Inconel alloy material. Weight Kg 40

TFS 23910

Testa ad Angolo bimandrino, fresatura di componente in ghisa. Peso Kg 50

Twin Angle Head, milling cast iron pieces. Weight Kg 50



TAS 10708

Testa ad Angolo lunghezza mm 1.000, fresatura di cave su acciaio. Peso Kg 216

Angle Head overall lenght mm 1.000, milling key-way on steel. Weight Kg 216

TFS 31110

Testa ad Angolo di foratura con mandrino HSK50 ribaltato. Peso Kg 31

Drilling Angle Head with HSK50 reverse spindle. Weight Kg 31

TAS 13910

Testa ad Angolo di foratura con mandrino ER25. Peso Kg 31

Drilling Angle Head with ER25 spindle. Weight Kg 31

TAS 08411

Testa ad Angolo con tre mandrini di foratura con avanzamento idraulico. Peso Kg 17,5

Drilling Angle Head with three spindles, hydraulic spindles feed. Weight Kg 17,5

TFS 05609

Testa ad Angolo di fresatura per tornio verticale. Peso Kg 286

Milling Angle Head for vertical lathe. Weight Kg 286

TAS 19610

Testa ad Angolo di fresatura per macchina transfer. Peso Kg 35

Milling Angle Head for transfer machine. Weight Kg 35

TFS 26908

Testa ad Angolo bimandrino di foratura per macchina transfer. Peso Kg 9,5

Twin drilling Angle Head for transfer machine. Weight Kg 9,5

TAS 28010

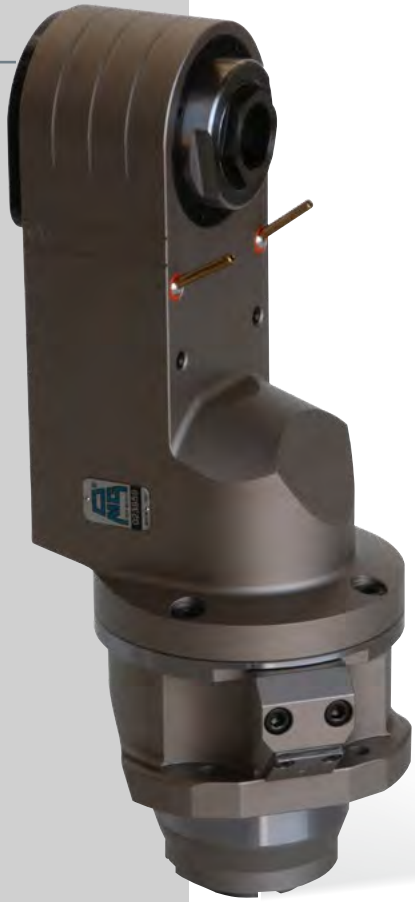
Testa ad Angolo con tre assi a regolazione manuale. Peso Kg 590

Angle Head with three manual movement axis. Weight Kg 590

TAS 26810

Testa ad Angolo TAO20, utilizzata in fresatura su torretta a revolver HT250. Peso Kg 14

Milling Angle Head TA 20, assembled on HT250 turret head. Weight Kg 14



TAS 19010

Testa ad Angolo di foratura per macchina transfer. Max RPM 20.000. Peso Kg 5

Drilling Angle Head for transfer machine. Max RPM 20.000. Weight Kg 5

TFS 06906

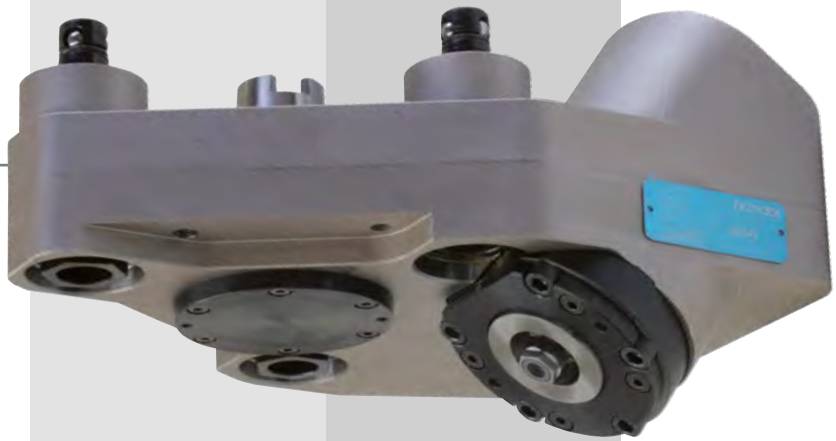
Testa ad Angolo di foratura scatola sterzo. Peso Kg 10

Drilling Angle Head for steering body. Weight Kg 10

TAS 09407

Testa ad Angolo per fresatura canna di fucile. Peso Kg 6,5

Milling Angle Head for rile barrel. Weight Kg 6,5



TAS 16308

Testa ad Angolo di foratura con mandrino HSK32 a cambio automatico utensile. Peso Kg 13,5

Drilling Angle Head with spindle HSK32 with automatic tool changer. Weight Kg 13,5

TAS 24508

Testa ad Angolo di fresatura pinza freno. Peso Kg 29

Milling Angle Head for brake truck body. Weight Kg 29

TAS 07309

Testa ad Angolo di fresatura, basamento motore 12 cilindri. Peso Kg 60

Milling Angle Head, 12 cylinder engine block. Weight Kg 60

TAS 24010

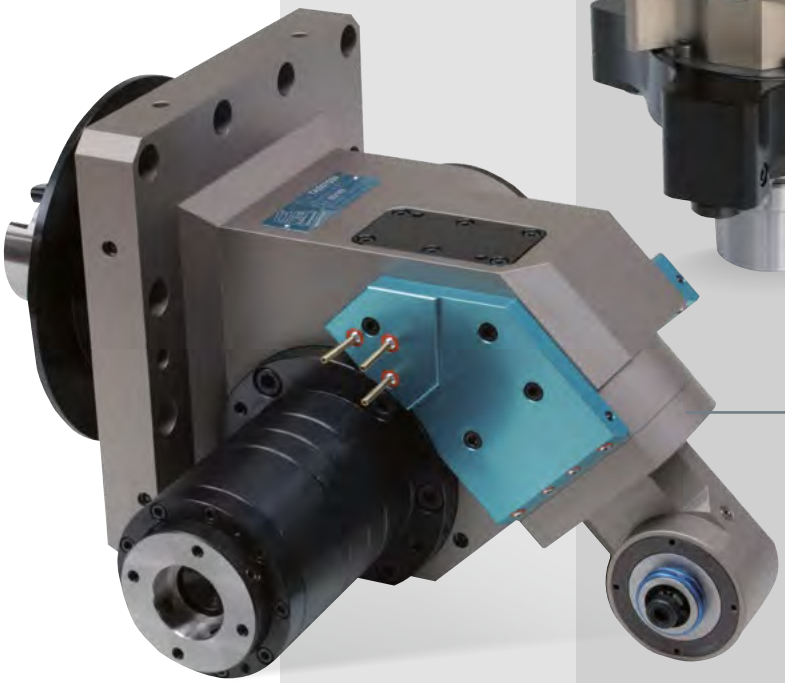
Testa ad Angolo di foratura componente aeronautico in alluminio. Peso Kg 13,5

Drilling Angle Head for aluminium aeronautic component. Weight Kg 13,5

TAS 28606

Testa ad Angolo di foratura componente aeronautico con mandrino HSK50, materiale Inconel. Peso Kg 27

Drilling Angle Head with HSK50 spindle for aeronautic piece, Inconel alloy material. Weight Kg 27



TAS 07509

Testa ad Angolo bimandrino di alesatura, motore 12 cilindri. Peso Kg 63

Twin spindle boring Angle Head, 12 cylinder engine block. Weight Kg 63

SERIE

MOx

I moltiplicatori di giri serie "MOx" sono stati studiati e definiti con l'intento di offrire un prodotto che possa assicurare la massima affidabilità e precisione nelle operazioni di fresatura e foratura.
Dalla progettazione al controllo statico e dinamico del prodotto finito, i nostri moltiplicatori di giri sfruttano le più avanzate conoscenze tecniche e tecnologiche. La costruzione compatta, i componenti in acciaio trattato termicamente, gli ingranaggi rettificati sull'evolvente permettono la trasmissione di potenze elevate con ottimi livelli di silenziosità. Il mandrino è supportato da cuscinetti a sfere di precisione a contatto obliquo precaricati che gli conferiscono un'elevata rigidità e precisione di rotazione.

I moltiplicatori della serie MOx vedono infatti le seguenti caratteristiche:

- Equilibratura di tutti i componenti in rotazione
- Semplice set up nelle macchine con cambio utensile automatico
- Ingranaggi progettati per ridurre il rumore e le vibrazioni dell'utensile
- Liquido refrigerante ad alta pressione su tutta la gamma
- Poca generazione di calore e maggiore stabilità termica grazie a nuovi cuscinetti
- Giri max 35.000
- Utilizzati specialmente in operazioni di finitura
- Possibilità di montaggio manuale o automatico
- Consentono alla macchina di ruotare a bassi regimi di giri
- Possibilità di utilizzare utensili in metallo duro

The "MOx" series spindle speeders have been designed and developed to offer maximum reliability and precision in milling and drilling. From design to static and dynamic testing of the finished product, our spindle speeders rely on the most advanced technical know-how. The compact construction, the heat-treated steel parts, and the ground gears on the involute, guarantee transmission of high power ratings with amazingly low noise levels. The spindle is supported by a set of preloaded precision ball bearings with oblique contact that ensure greater strength and rotation precision.

Our MOx series includes the following features:

- *Balancing of all the rotating components*
- *Greater speed*
- *More stability thanks to an advanced bearing layout*
- *A new system making set up easier for automatic tool change*
- *A new bearing layout that reduces noise and vibration of the tool*
- *Greater load capacity*
- *Low heat generation and more thermal stability thanks to the advanced bearing layout*
- *Max 35.000 rpm*
- *Mainly used for finishing operations*
- *Manual or automatic tool change options*
- *Allows the machine to rotate at low rpm*
- *Allows the use of carbide cutting tools*

MOX10-HS

MOLTIPLICATORE DI GIRI • *SPINDLE SPEEDERS*

PESO *WEIGHT*

40 5,8 KG
50 8 KG

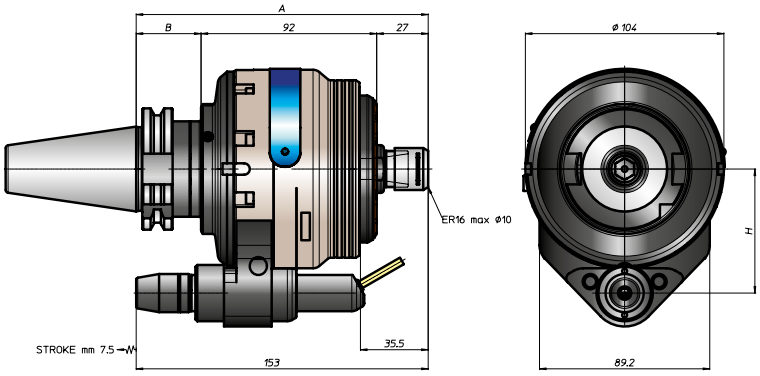
ROTAZIONE *ROTATION*

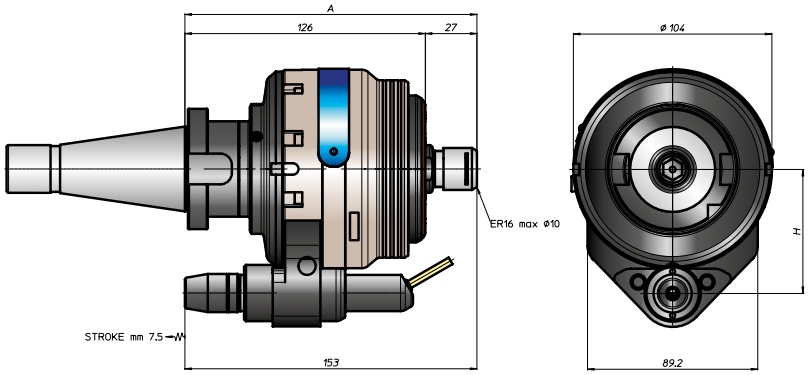
IN INPUT
OUT OUTPUT

CARATTERISTICHE *FEATURES*

OPTIONAL

ER16	10 BAR	MAX 242 N	1-8	36000	70 BAR	8
				RPM		Nm





CONO *SHANK*	DIN69871				CAT ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	154				154		154	162	163			163	158		154			154		154	
B	34		42		34	42	35	50	42		51							34	42	34	42
H STANDARD	65		80		65	80	65	80	65		80	65		80	65		80	65	80	65	80
H OPTIONAL	80	110		110	80	110	80	110	80	110		110	80	110		110	80	110		110	80	110

MOX10

MOLTIPLICATORE DI GIRI • *SPINDLE SPEEDERS*

PESO *WEIGHT*

40 — 5,4 KG
50 — 8 KG

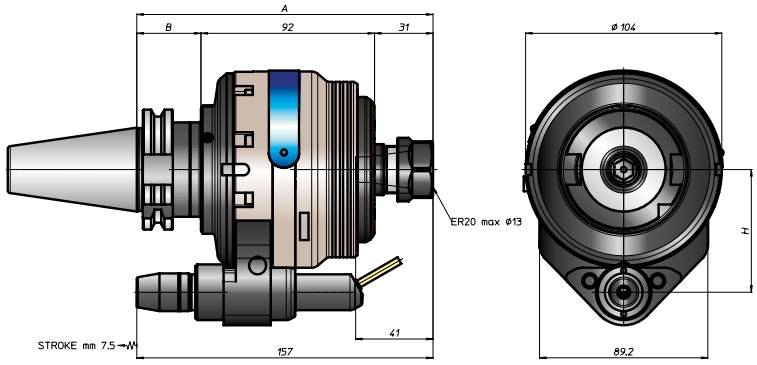
ROTAZIONE *ROTATION*

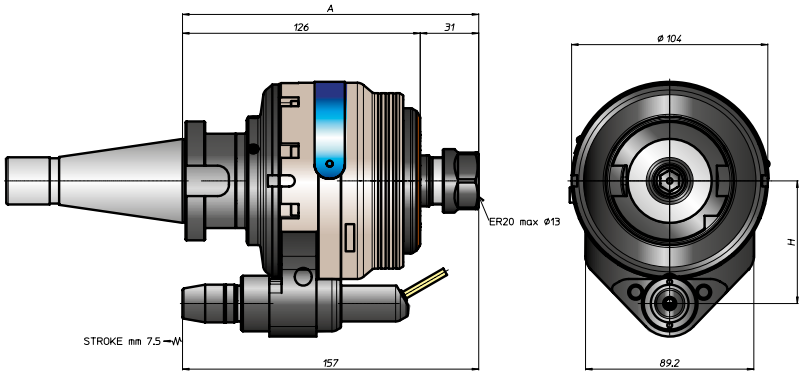
IN → OUT

INPUT — OUTPUT

CARATTERISTICHE *FEATURES*

ER20	10 BAR	MAX 276 N	1-8	24000	OPTIONAL 70 BAR	Nm 8





CONO *SHANK*	DIN69871				ANSIB5.50		BT		DIN69893			CAPTO			KM			DIN2080		ANSIB5.18	
SIZE	30	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	157				157		157	165	166			166	161		157			157		157	
B	34		42		34	42	35	50	42		51							34	42	34	42
H STANDARD	65		80		65	80	65	80	65		80	65		80	65		80	65	80	65	80
H OPTIONAL	80	110		110	80	110	110	80	110		110	80	110	110	80	110	110	80	110	110	80	110

MOX13

MOLTIPLICATORE DI GIRI • *SPINDLE SPEEDERS*

PESO *WEIGHT*

40 — 6,5 KG
50 — 9 KG

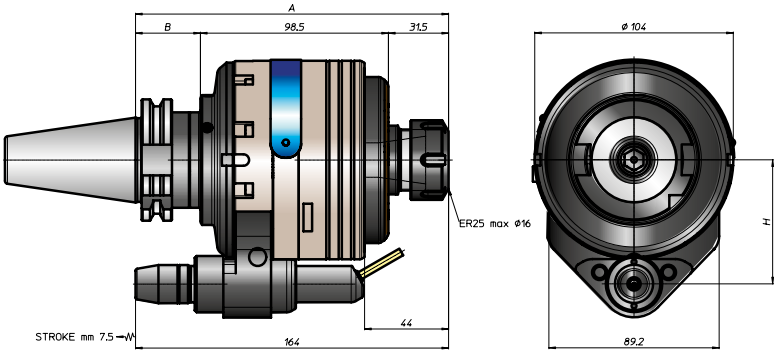
ROTAZIONE *ROTATION*

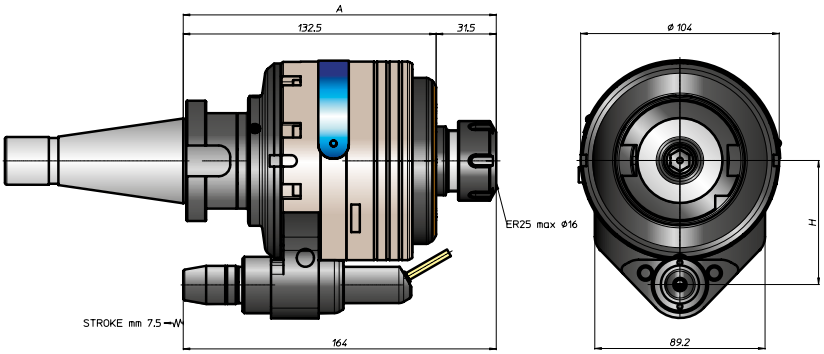
IN — INPUT
OUT — OUTPUT

CARATTERISTICHE *FEATURES*

OPTIONAL

ER25	10 BAR	MAX 460 N	1-6	20000	70 BAR	Nm
				RPM		16





CONO *SHANK*	DIN69871			ANSIB5.50		BT		HSK DIN69893			CAPTO ISO26623			KM			DIN2080		NMTB ANSIB5.18	
SIZE	40	45	50	40	50	40	50	63	80	100	C5	C6	C8	63	80	100	40	50	40	50
A	164			164		164	172	173		172,5	168			163,5			164		164	
B	34	42		34	42	35	50	42		51							34	42	34	42
H STANDARD	65	80		65	80	65	80	65	80		65	80		65	80		65	80	65	80
H OPTIONAL	80	110	110	80	110	80	110	80	110	110	80	110	110	80	110	110	80	110	80	110	110

MOX16

MOLTIPLICATORE DI GIRI • *SPINDLE SPEEDERS*

PESO
WEIGHT

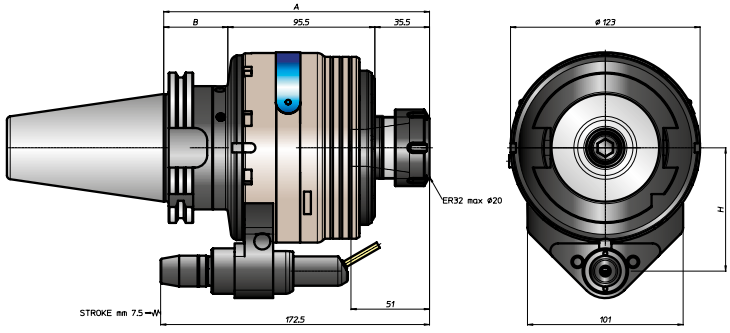
9 KG | 11 KG

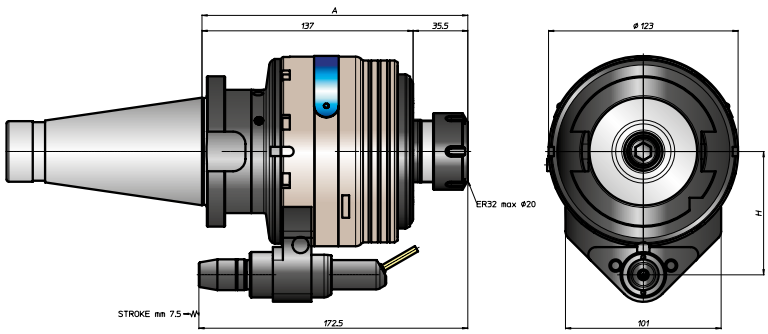
ROTAZIONE
ROTATION

INPUT | OUTPUT

CARATTERISTICHE
FEATURES

ER32	10 BAR	MAX 630 N	1-6	16000	OPTIONAL 70 BAR	23
				RPM		Nm





CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893		CAPTO ISO26623		KM		DIN2080		NMTB ANSIB5.18	
SIZE	40	50	50	50	80	100	C6	C8	80	100	40	50	40	50
A	172,5		172,5	180,5	181,5		176,5		172,5		172,5		172,5	
B	34	42	35	50	42	51					34	42	34	42
H STANDARD	80		80	80	80		80		80		80		80	
H OPTIONAL	110		110	110	110		110		110		110	110	110	

MOX26

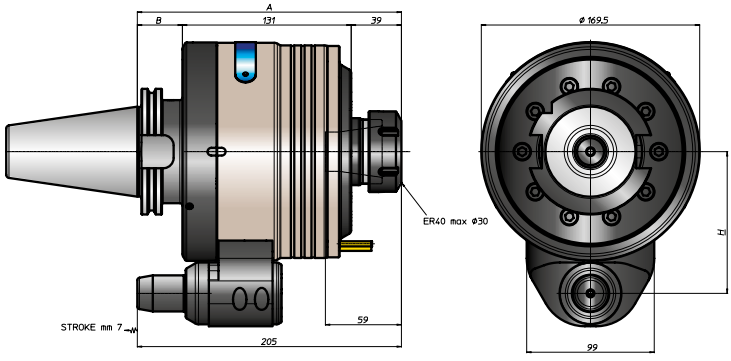
MOLTIPLICATORE DI GIRI • *SPINDLE SPEEDERS*

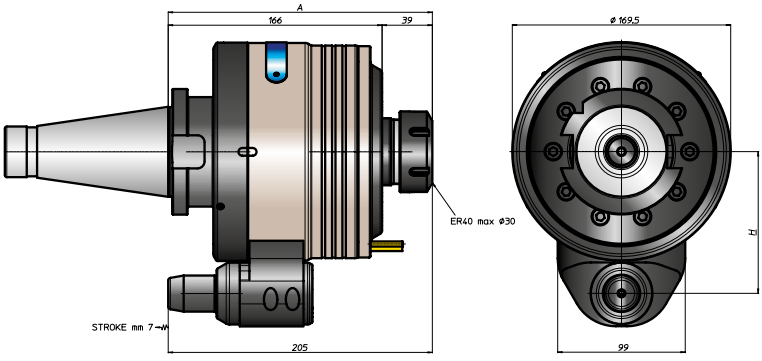
PESO *WEIGHT*
21 KG

ROTAZIONE *ROTATION*
INPUT OUTPUT

OPTIONAL

CARATTERISTICHE *FEATURES*
ER40 | 10 BAR | MAX 1325 N | 1-4,2 | 12000 | 70 BAR | 47





CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	50	60	50	50	100	C8	100	50	50
A	205	221	221	221	223,5	213	209	205	205
B	35	51	35	51	53				
H STANDARD	110		110	110	110	110	110	110	110
H OPTIONAL									

MOX34

MOLTIPLICATORE DI GIRI • *SPINDLE SPEEDERS*

PESO
WEIGHT

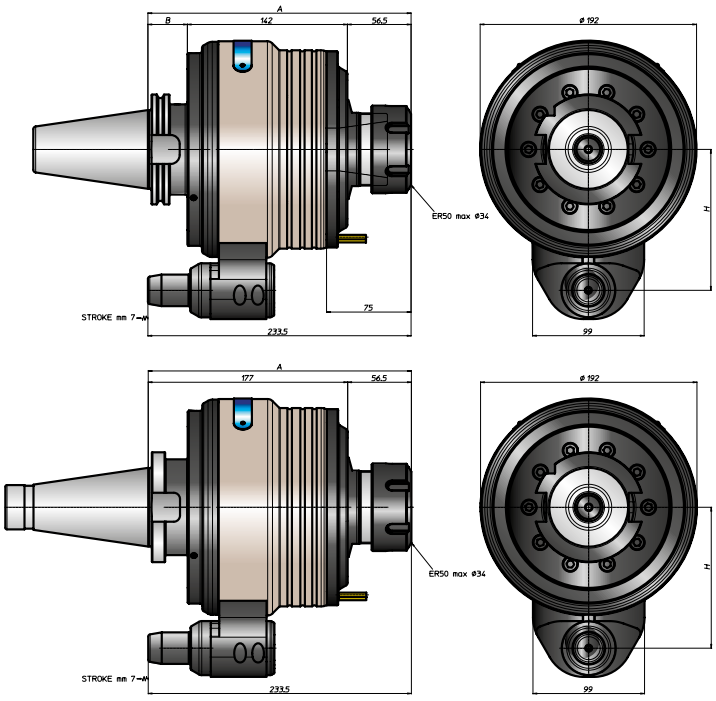
27 KG

ROTAZIONE
ROTATION

INPUT OUTPUT

CARATTERISTICHE
FEATURES

ER50	10 BAR	MAX 1470 N	1-4	10000	OPTIONAL 70 BAR	Nm 180



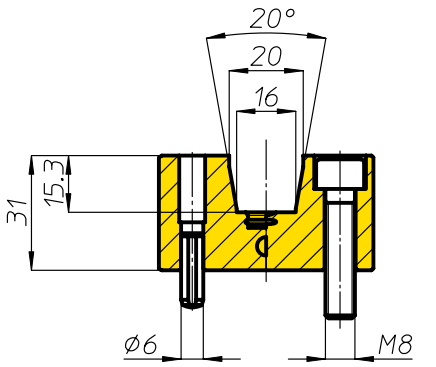
CONO *SHANK*	DIN69871		CAT ANSIB5.50	BT	HSK DIN69893	CAPTO ISO26623	KM	DIN2080	NMTB ANSIB5.18
SIZE	50	60	50	50	100	C8	100	50	50
A	233,5	249,5	249,5	249,5	252	241,5	237,5	233,5	233,5
B	35	51	35	51	53				
H STANDARD	125		125	125	125	125	125	125	125
H OPTIONAL									

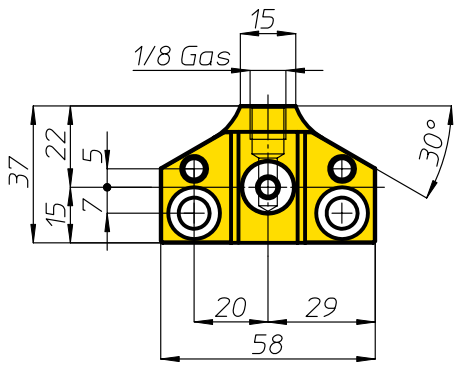
STOP-BLOCK

INCLUDED

STOP-BLOCK (COD. 630104)

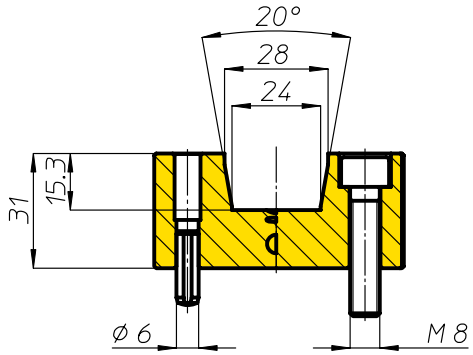
MOX CON H=65/80
MOX WITH H=65/80

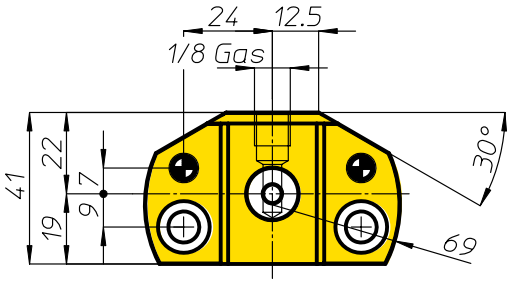




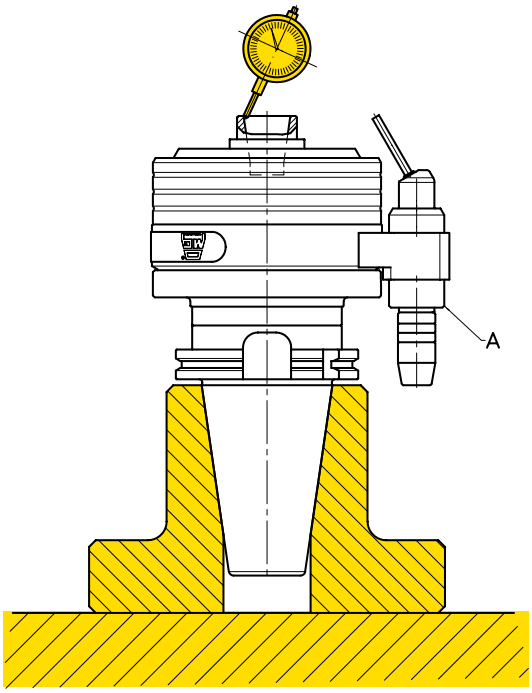
STOP-BLOCK (COD. 632198)

MOX CON H=110/125
MOX WITH H=110/125





COLLAUDO
TEST



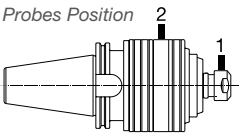
COLLAUDO
Ogni moltiplicatore di giri ha allegato il proprio certificato di collaudo dove sono riportate le proprie caratteristiche tecniche, il numero di matricola, i risultati ottenuti dai test eseguiti sul nostro banco prova BP03, il valore della concentricità tra il cono e la sede pinza il cui valore massimo è mm 0.01. Per verificare il valore della concentricità occorre disporre il moltiplicatore come in fig. 1, fermare il perno A e ruotare il cono. Il valore letto sul comparatore millesimale è la concenticità tra l'asse del cono e l'asse del mandrino.

TEST
Every spindle speeder has his test certificate in which there are the technical characteristics, the serial number, the results of the tests made on our BP03 testing bench, the concentricity value between the shank and the collet (max. value 0,01 mm). To verify the concentricity value it is necessary to have the spindle speeder as from picture N°. 1, stopping the pin "A" and rotating the shank. The value on the dial indicator is the concentricity between the shank axe and the spindle axe.

CERTIFICATO DI COLLAUDO / *TEST REPORT*

Banco prova BP03 / *Testing bench BP03*
Data prova / *Test date*: 10/07/2011
Articolo / *Item*: MO10
Matricola / *SN*: 1315

Posizione Sonde
Probes Position



N° Max Giri Uscita / *Max Output RPM*: 22.000
Rapporto Entrata-Uscita / *Ratio Input-Output* : 1:6
N° Giri Uscita = N° Giri Entrata * Rapporto / *Output RPM = Input RPM * Ratio*

Prova *Test*	**N° Giri Entrata** *Input RPM*	**Temp.(°C) Sonda 1** *Probe 1*	**Temp.(°C) Sonda 2** *Probe 2*	**Temp. Ambiente** *Enviroment Temp.*
1	1000	45,40	43,20	24,60
2	1500	40,80	36,80	24,60
3	2000	44,20	42,00	24,80
4	2500	48,80	42,00	24,80
5	3000	49,20	38,60	25,00

Concentricità Max Cono - Mandrino / *Max Runout between Shank and Spindle* : 0,006

MO 26310

Riduttore di giri, rapporto 6-1, input max 15.000 RPM, attacco HSK63, mandrino ER20

Spindle reducer, ratio 6-1, input max 15.000 RPM, shank HSK63, ER20 spindle

MO 28910

MO16 con attacco CAPTO C8 e mandrino ER25 prolungato

MO16 with CAPTO C8 shank and extended ER25 spindle

MO 12110

Rapporto/*Ratio* 1-4
RPM max 4.500
Torque 1.150 Nm
Output DIN69871-A50
Peso/*Weight* Kg 240

TFS 09011

Riduttore di giri per maschiatura con compensazione assiale mandrino, corsa compensazione ±7 mm, rapporto 6-1, input max 10.000 RPM, attacco HSK-F63, mandrino per bussola porta maschio grandezza 1

Tapping spindle reducer with axial compensation, stroke ±7 mm, ratio 6-1, input max 10.000 RPM, shank HSK-F63, spindle for tapping bush size 1

VDI 16610

MO13 rinviato di 90° con attacco VDI30

MO13 with VDI30 shank at 90°

MO 26

MO26 con cono DIN69871-A60, mandrino Weldon Ø25 e liquido refrigerante utensile passante dal centro stop-block/centro mandrino

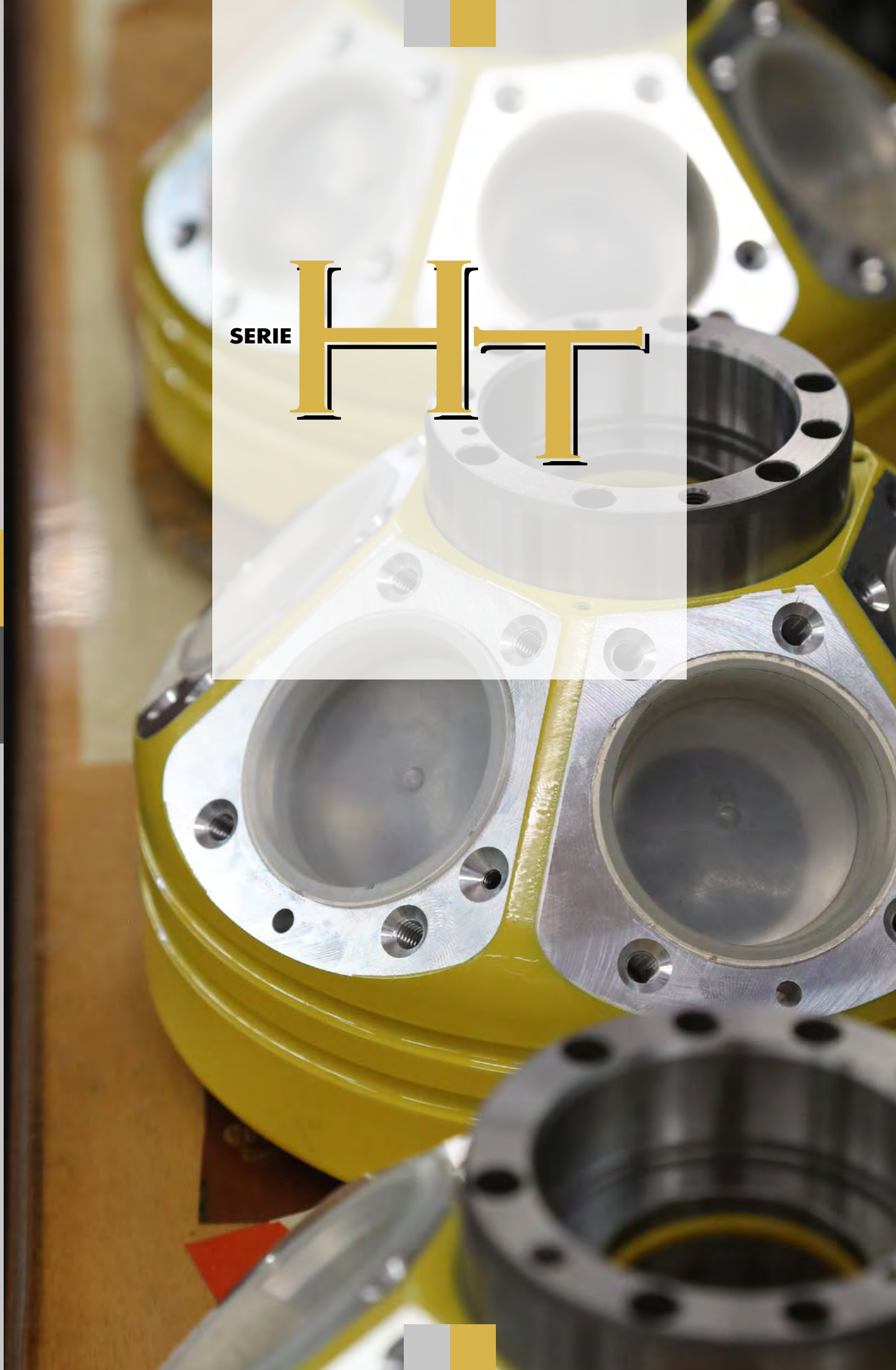
MO26 with DIN69871-A60 shank, output spindle Weldon Ø25, coolant trough the stop-block/spindle centre

MO 16210

MO13 con attacco VDI40

MO13 with VDI40 shank

SERIE HT



Le torrette a revolver serie **HT** sono nate dall'esigenza di aumentare la flessibilità delle macchine utensili e possono eseguire lavorazioni di foratura, filettatura, alesatura, fresatura. Trovano collocazione direttamente sul mandrino della macchina o, con motorizzazione propria, montate su slitte a uno o più assi di movimento.
Hanno la possibilità di montare teste multiple, teste ad angolo e moltiplicatori di giri per aumentare la velocità dell'utensile. Tutte le versioni utilizzano un sistema di posizionamento tramite corona Hirth; questa soluzione costruttiva permette grande precisione, grande rigidità nelle lavorazioni di fresatura e alesatura di finitura, grande ripetitività.

- Costruzione torretta in acciaio e ghisa.
- Mandrini montati su cuscinetti di precisione.
- Mandrini con diverso attacco utensile (DIN55058, Komet, HSK, ecc) intercambiabili sulla stessa torretta.
- Mandrini in presa diretta con la presa di forza per sfruttare appieno la potenza
- Sistema idraulico di bloccaggio-sbloccaggio corona Hirth.
- La stessa motorizzazione permette la rotazione della torretta e la rotazione dei mandrini.
- Rotazione torretta bidirezionale per ricercare più velocemente il mandrino necessario alla lavorazione da eseguire.
- Refrigerante indipendente per ogni mandrino.
- Possibilità del refrigerante di passare attraverso il centro del mandrino.
- Lubrificazione effettuata a grasso o con miscela olio-aria.
- Pressurizzazione torretta
- Connettore unico per l'interscambio dati tra la torretta ed il cnc.

*The **HT** series of turret heads are inspired by the need to increase the flexibility of machine tools and they are able to perform drilling, tapping, boring and milling. They can be installed directly on the machine spindle or, with their own drive, mounted on slides with one or more movement axes.*
They can be fitted with multispindle heads, angle heads and multipliers for greater tool velocity.
All versions use a positioning system based on a Hirth crown gear, providing utmost precision, excellent strength in milling and finishing boring and outstanding repeatability.

- *Turret made of steel and cast iron*
- *Spindles mounted on precision bearings*
- *Spindles with different tool connections (HSK, Komet, DIN55058, etc.) which can be interchanged on the same turret*
- *Spindles directly engaged with p.t.o. to exploit power to the full*
- *Hydraulic Hirth crown gear locking-release system*
- *Single drive rotates both turret and spindles*
- *Two-way turret rotation for quicker retrieval of the spindle needed for the next process*
- *Separate coolant for each spindle*
- *Coolant through the spindle centre*
- *Lubrication with grease or oil-air mixture*
- *Pressurised turret*
- *Single connector for data exchange between turret and cnc.*

HT 160

CIRCUITO OLIO PER BLOCCAGGIO-SBLOCCAGGIO TORRETTA
OIL CIRCUIT FOR TURRETLOCKING-RELEASE — F1

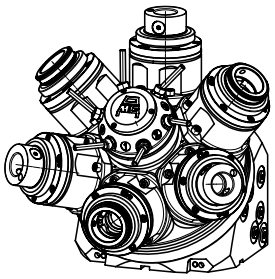
ENTRATA REFRIGERANTE UTENSILI
COOLANT TOOLS — F2

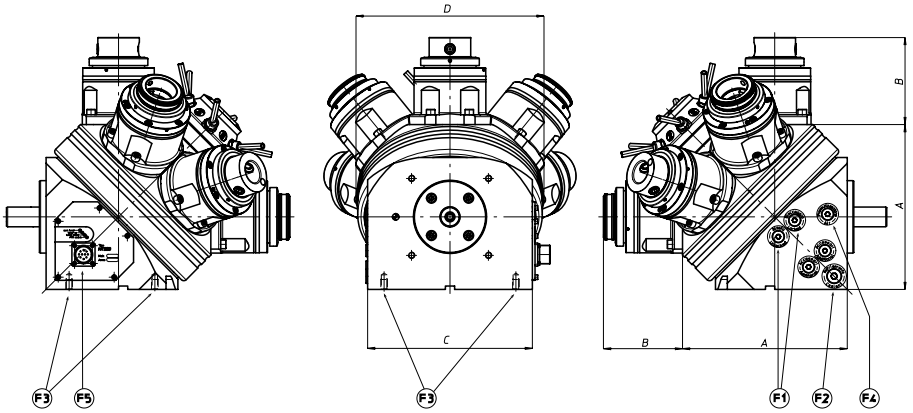
FORI FISSAGGIO TORRETTA
TURRET FIXING HOLES — F3

ENTRATA OLIO-ARIA
INPUT OIL-AIR — F4

CONNETTORE ELETTRICO
ELECTRIC CONNECTOR — F5

HT 200

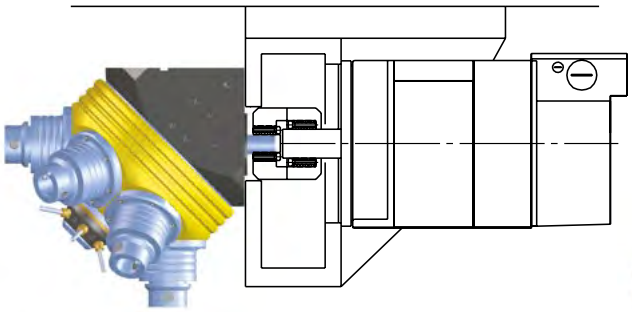


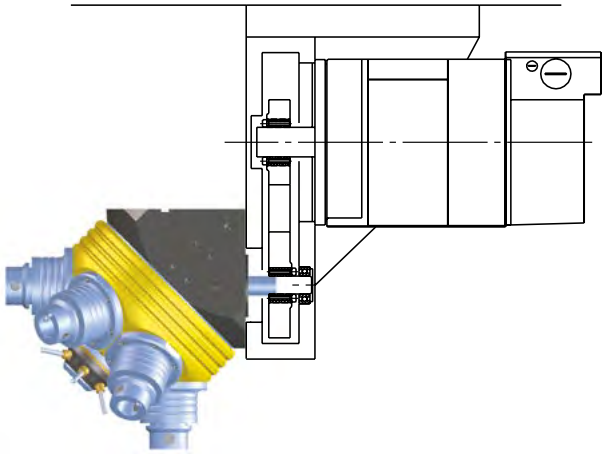


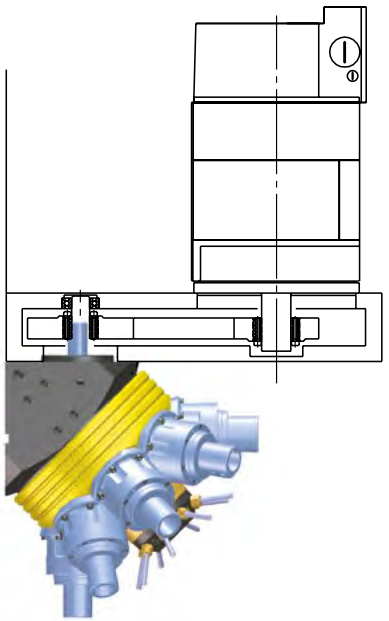
HT 250

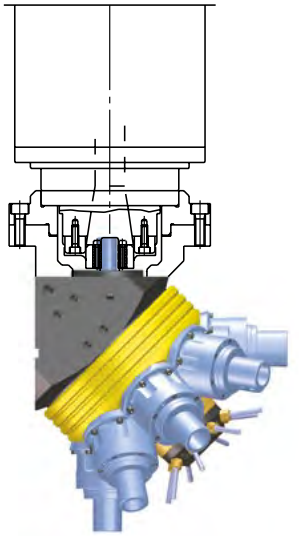
HT 360

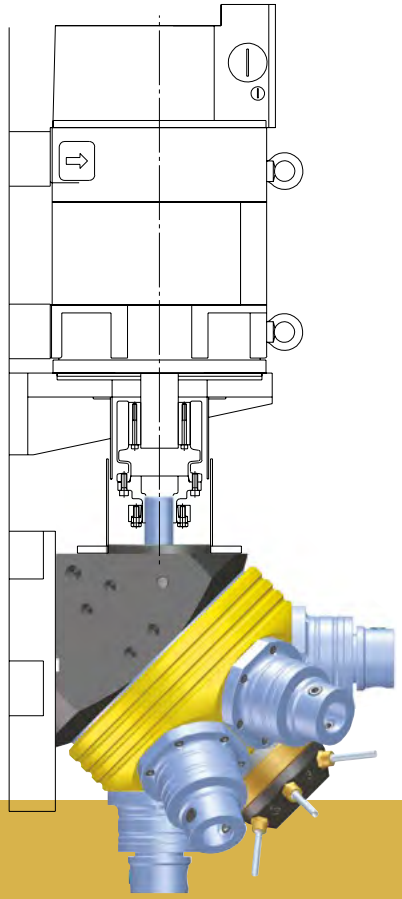
		HT 160	HT 200	HT 250	HT 360
N° DI POSIZIONI MAX *MAX NR. OF POSITION*		6	6	6•8	6•8•12
COPPIA TRASMISSIBILE AL MANDRINO *TRANSMITTING TORQUE BY SPINDLE*	Nm	80	200	300	800
N° GIRI MAX MANDRINO *MAX RPM SPINDLE*		12.000	10.000	10.000	8.000
PRECISIONE DI POSIZIONE MANDRINI *PRECISION OF SPINDLES POSITIONING*		± 3"	± 3"	± 3"	± 3"
POTENZA MOTORE *MOTOR POWER*	approx Kw	4	5	6,5	16
TEMPO DI ROTAZIONE (1/6 DI GIRO) *INDEXING TIME 1/6 OF ROTATION*	sec	0,9	1	1,1	1,5
DIAMETRO CORONA HIRTH *DIMENSION RINGS HIRTH*	mm	160	200	250	350
A		160	200	250	360
B DIPENDE DAL TIPO DI MANDRINO *TO DEPEND ON THE SPINDLE TYPE*	approx mm	70/80	100/150	100/150	120/170
C		160	200	250	350
D		180	228	290	400
TIPI DI MANDRINI DISPONIBILI *TYPE OF SPINDLE*		ABS, HSK, ER, DIN 55058			
PESO *WEIGHT*	kg	35	60	140	300











HT

APPLICAZIONI · *APPLICATIONS*

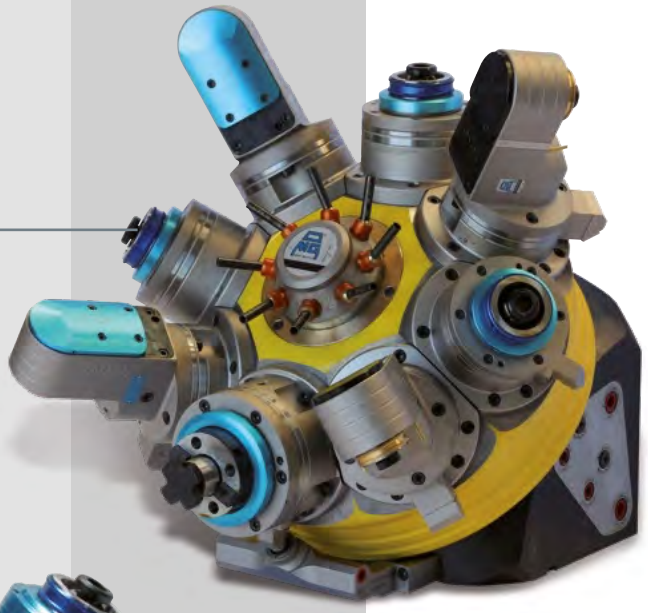
HT 05007

HT 05209

HT 31808

HT 08509

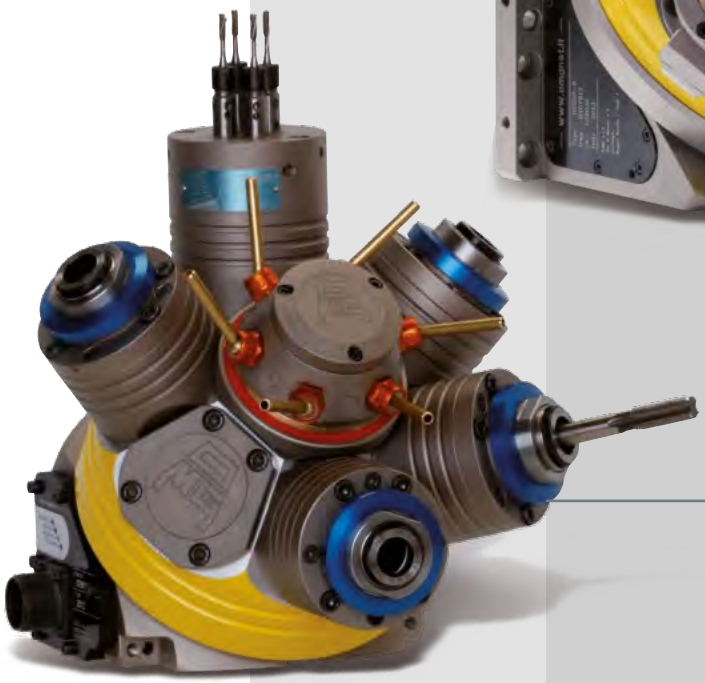
HT 08718



HT 35907

HT 07813

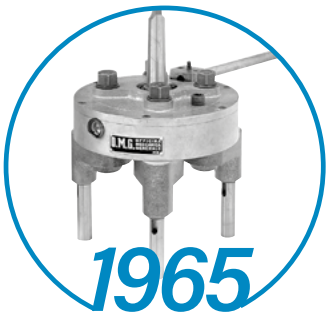
HT 27206



SERIE

VH

Le teste multiple ad assi variabili raggiungono velocità di 4000 rpm, forando fino a 25 mm e maschiando M20. Il corpo testa è in lega di alluminio, ingranaggi e mandrini in acciaio trattati termicamente e rettificati per una maggiore precisione e resistenza all'usura. Disponibili in 31 differenti modelli, a 2,3,4 mandrini o con 1 solo mandrino decentrato, coprono interassi variabili da un minimo di 12 mm ad un massimo di 300 mm. Soluzioni personalizzate sono comunque sempre possibili anche in questa fascia di teste standard. L'utilizzo principale è su macchine o unità foratrici e maschiatrici, raramente su macchine CNC.

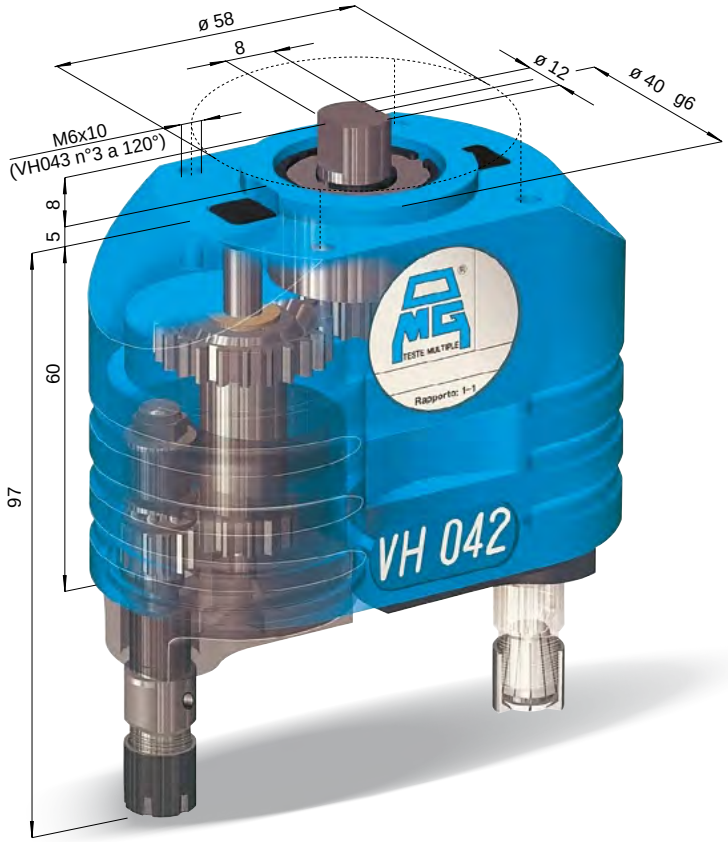


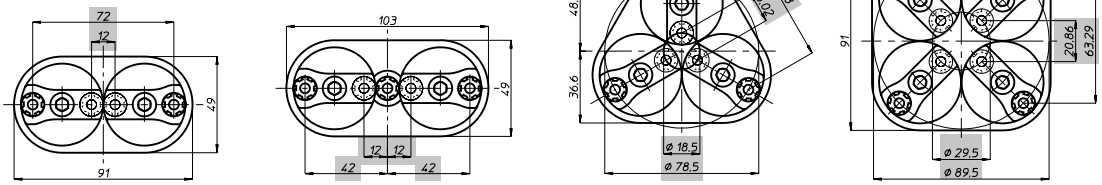
The variable axis multispindle heads are able to achieve a speed of 4000 rpm, drilling up to 25 mm and tapping M20. The head body is made of aluminium alloy, the gears and spindles are made of steel which has undergone heat treatment and has been ground for greater precision and wear resistance. Available in 31 different models, with 2,3,4 spindles or just one decentralised spindle, they cover a range of centre distances from minimum 12 mm to maximum 300 mm. Customised solutions are in any case also available within this range of standard heads. They are mainly used on drilling and tapping units, but rarely on CNC machines.

VH04

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

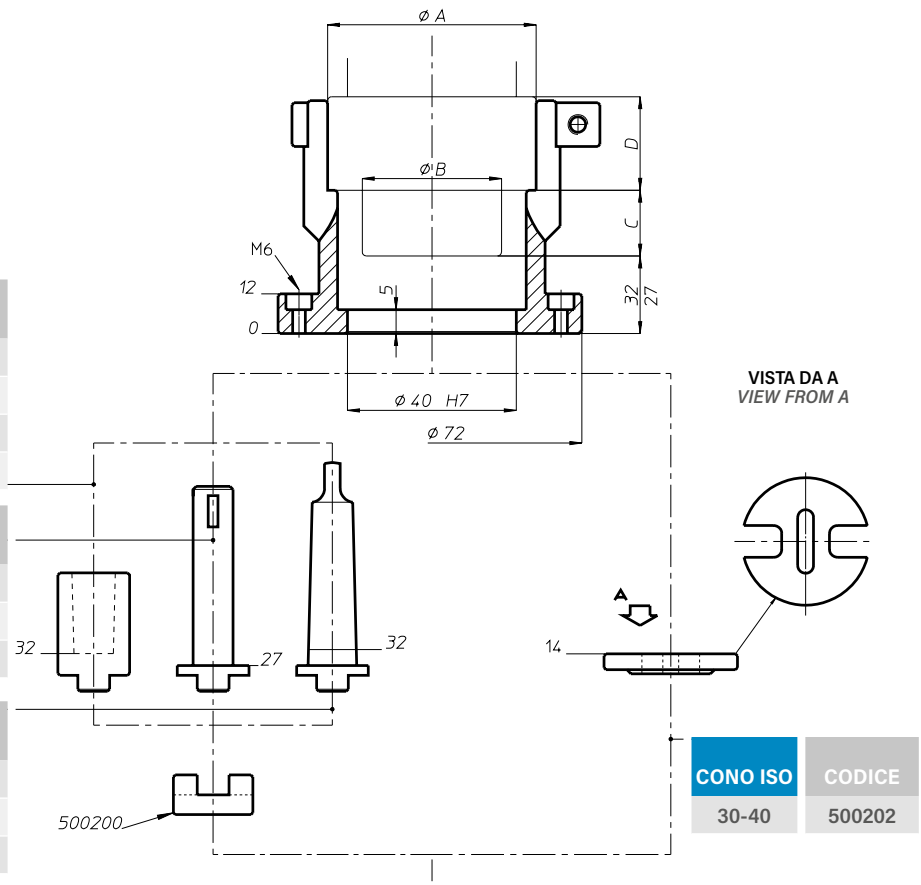
Ø5 CAPACITÀ FORATURA
DRILLING CAPACITY





TESTA MODELLO *HEAD TYPE*	VH 042	VH 043 L	VH 043	VH 044
ARTICOLO *ITEM*	VH 042 P	VH 043 LP	VH 043 P	VH 044 P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 8 - max ø 5			
ARTICOLO *ITEM*				
ATTACCO UTENSILE *SPINDLE TYPE*				
N. MANDRINI *SPINDLES NR.*	2	3	3	4
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	12	12+12	ø 18,5	ø 29,5
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	72	42+42	ø 78,5	ø 89,5
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 4 | **GHISA**/*CAST IRON* GG25 - ø 5			
MASCHIATURA *TAPPING*	M 3			
RAPPORTO *RATIO*	1 - 1			
VELOCITÀ *RPM*	4.000			
PESO *WEIGHT*	0,95 kg	1,05 kg	1,4 kg	1,9 kg

NOTA: NOTE: A.B.C.D. DATI MACCHINA / *A.B.C.D. MACHINE FEATURES*



DIN 238	CODICE
B 10	011277
B 12	011278
B 16	011279
B 18	011280

DIN 55058	CODICE
16	525405
20	525406
28	525407

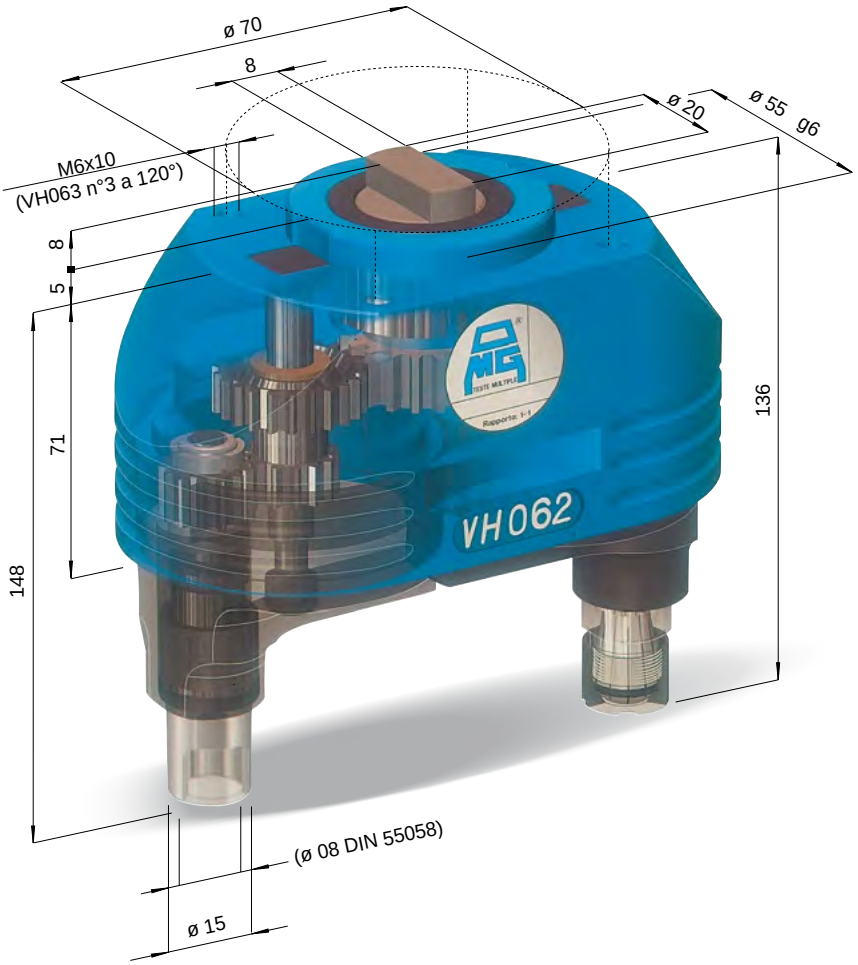
DIN 228	CODICE
cm 1	011115
cm 2	011120
cm 3	011125

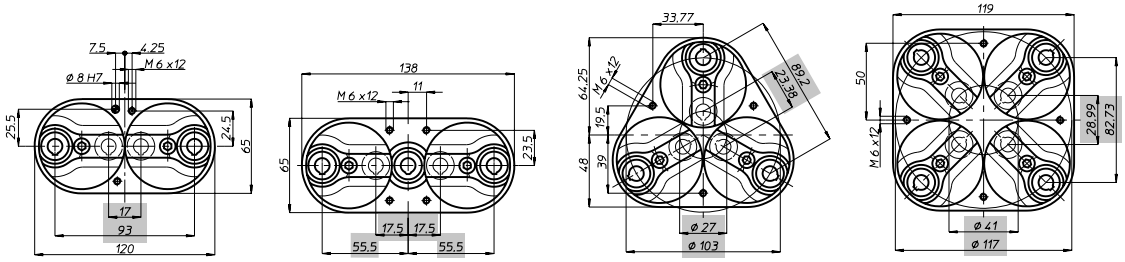
CONO ISO	CODICE
30-40	500202

VH06

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

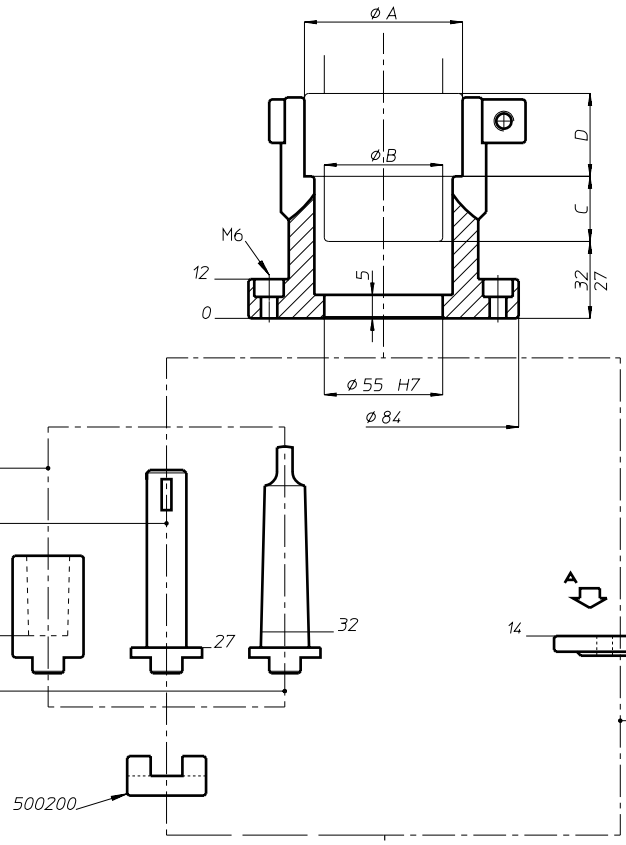
ø7 CAPACITÀ FORATURA
DRILLING CAPACITY





TESTA MODELLO *HEAD TYPE*	VH 062	VH 063 L	VH 063	VH 064
ARTICOLO *ITEM*	VH 062 P	VH 063 LP	VH 063 P	VH 064 P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 11 - max ø 7			
ARTICOLO *ITEM*	VH 062 D	VH 063 LD	VH 063 D	VH 064 D
ATTACCO UTENSILE *SPINDLE TYPE*	DIN55058 - ø 8			
N. MANDRINI *SPINDLES NR.*	2	3	3	4
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	17	17,5 + 17,5	ø 27	ø 41
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	93	55,5 + 55,5	ø 103	ø 117
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 6 | **GHISA**/*CAST IRON* GG25 - ø 7			
MASCHIATURA *TAPPING*	M 5			
RAPPORTO *RATIO*	1 - 1			
VELOCITÀ *RPM*	4.000			
PESO *WEIGHT*	1,65 kg	1,95 kg	2,3 kg	3,1 kg

NOTA: NOTE: A.B.C.D. DATI MACCHINA
A.B.C.D. MACHINE FEATURES

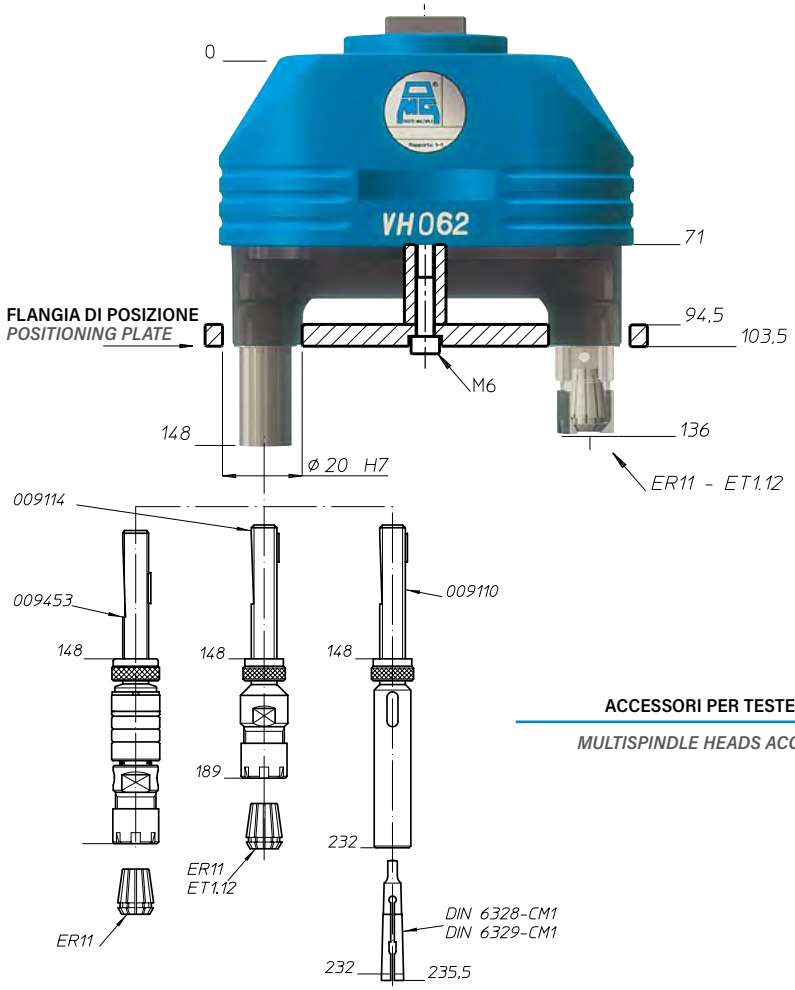


DIN 238	CODICE
B 10	011277
B 12	011278
B 16	011279
B 18	011280
B 22	011281
B 24	011282

DIN 55058	CODICE
16	525405
20	525406
28	525407
36	525408

DIN 228	CODICE
cm 1	011115
cm 2	011120
cm 3	011125
cm 4	011130
cm 5	011135

CONO ISO	CODICE
30-40	500202

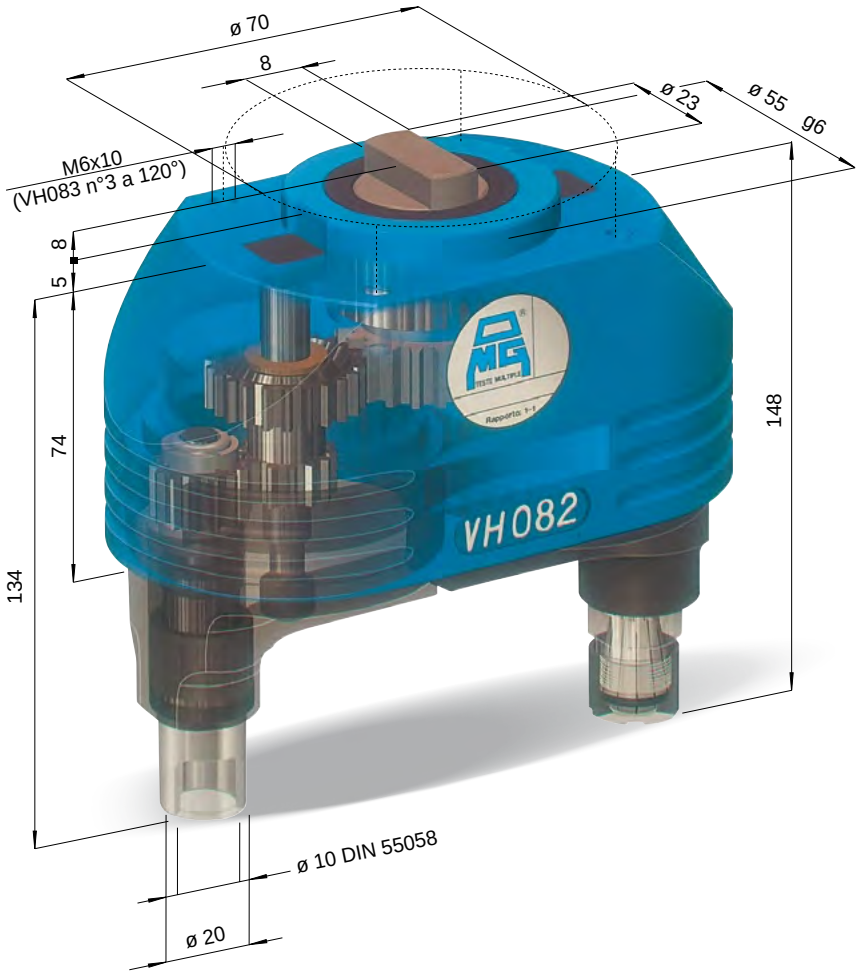


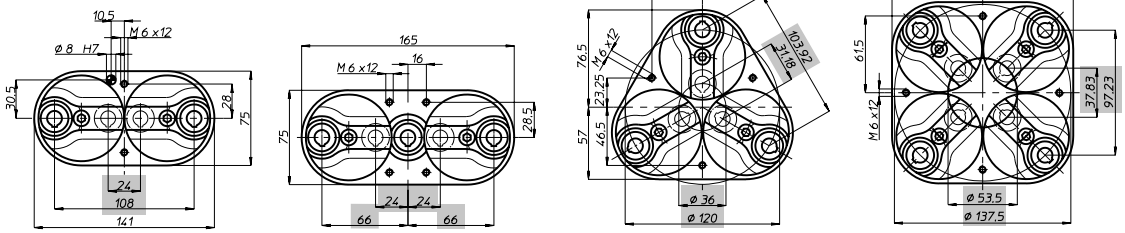
ACCESSORI PER TESTE MULTIPLE
MULTISPINDLE HEADS ACCESSORIES

VH08

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

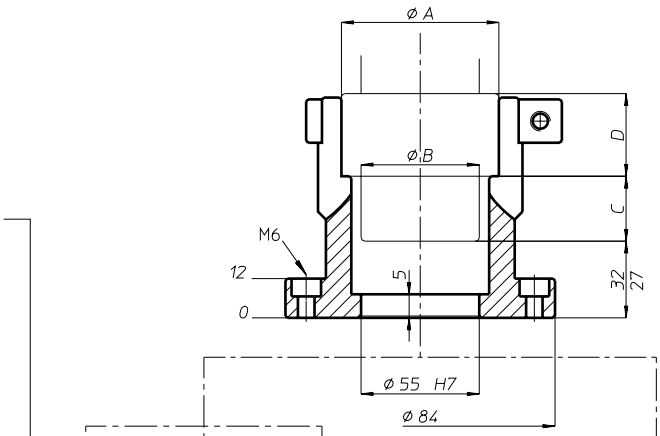
ø10 CAPACITÀ FORATURA
DRILLING CAPACITY



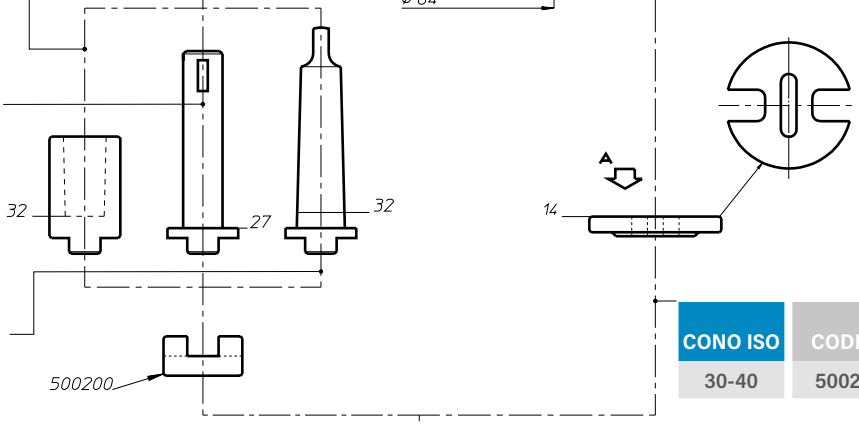


TESTA MODELLO *HEAD TYPE*	VH 082	VH 083 L	VH 083	VH 084
ARTICOLO *ITEM*	VH 082 P	VH 083 LP	VH 083 P	VH 84 P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 16 - max ø 10			
ARTICOLO *ITEM*	VH 082 D	VH 083 LD	VH 083 D	VH 84 D
ATTACCO UTENSILE *SPINDLE TYPE*	DIN55058 - ø 10			
N. MANDRINI *SPINDLES NR.*	2	3	3	4
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	24	24 + 24	ø 36	ø 53,5
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	108	66 + 66	ø 120	ø 137,5
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 8 | **GHISA**/*CAST IRON* GG25 - ø 10			
MASCHIATURA *TAPPING*	M 6			
RAPPORTO *RATIO*	1 - 1			
VELOCITÀ *RPM*	4.000			
PESO *WEIGHT*	2,2 kg	2,9 kg	3,4 kg	4,6 kg

NOTA: NOTE: A.B.C.D. DATI MACCHINA
A.B.C.D. MACHINE FEATURES



VISTA DA A
VIEW FROM A

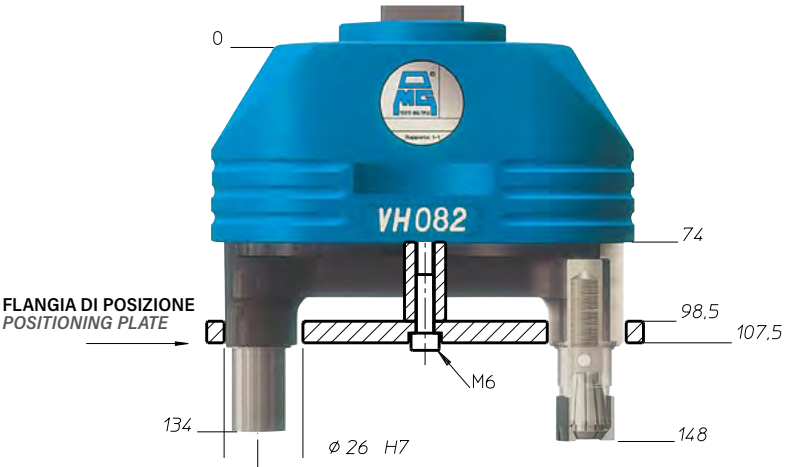


DIN 238	CODICE
B 10	011277
B 12	011278
B 16	011279
B 18	011280
B 22	011281
B 24	011282

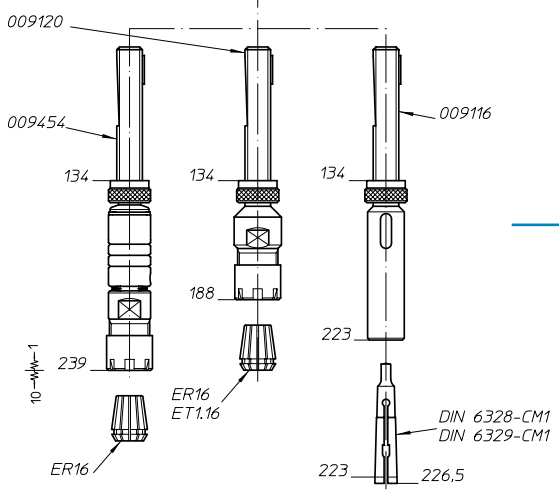
DIN 55058	CODICE
16	525405
20	525406
28	525407
36	525408

DIN 228	CODICE
cm 1	011115
cm 2	011120
cm 3	011125
cm 4	011130
cm 5	011135

CONO ISO	CODICE
30-40	500202



FLANGIA DI POSIZIONE
POSITIONING PLATE

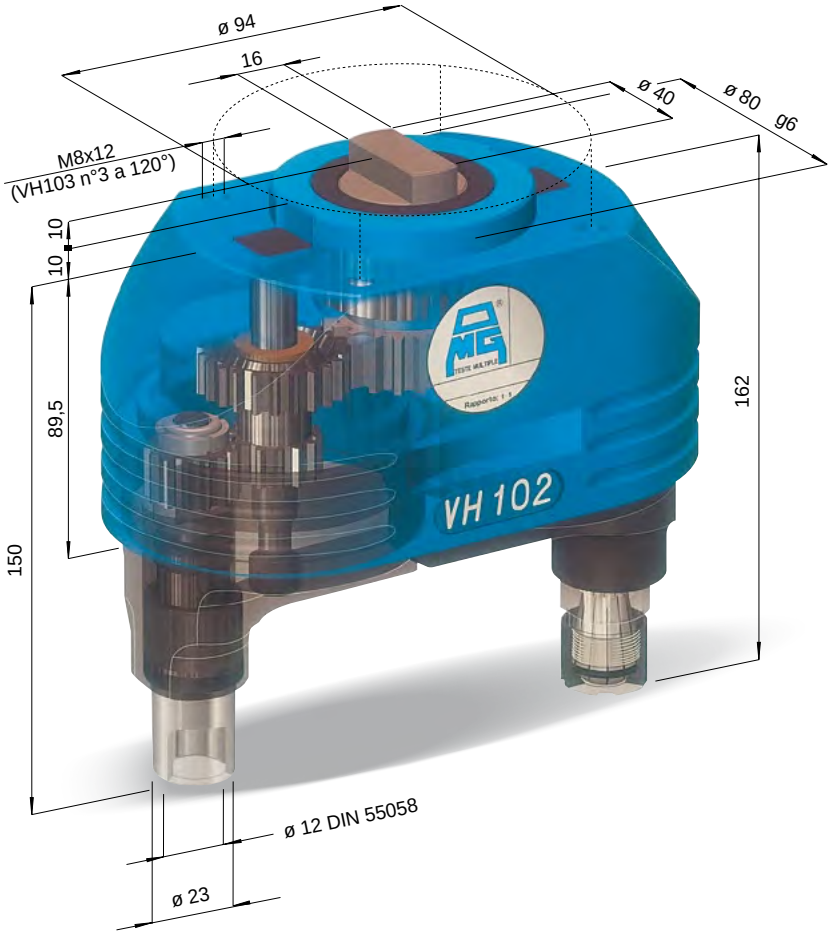


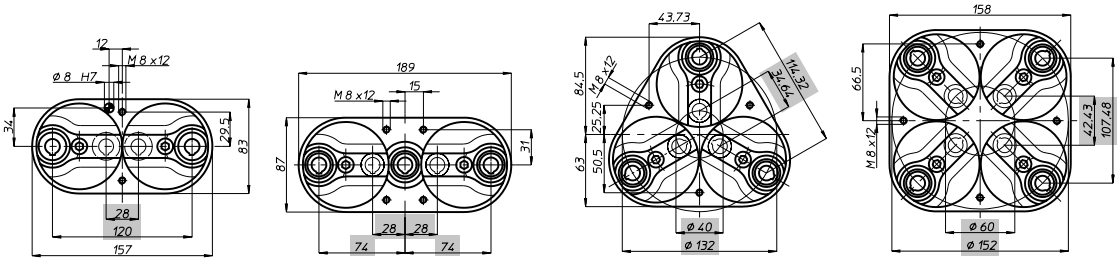
ACCESSORI PER TESTE MULTIPLE
MULTISPINDLE HEADS ACCESSORIES

VH10

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

ø12 CAPACITÀ FORATURA
DRILLING CAPACITY





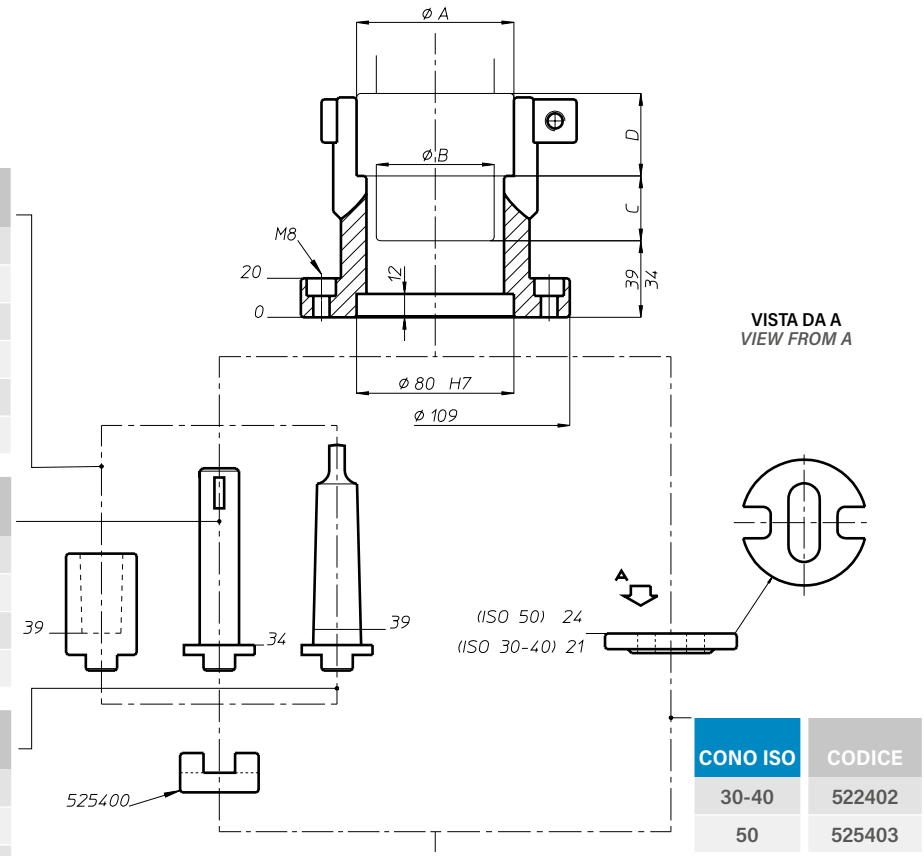
TESTA MODELLO *HEAD TYPE*	VH 102	VH 103 L	VH 103	VH 104
ARTICOLO *ITEM*	VH 102 P	VH 103 LP	VH 103 P	VH 104 P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 16 - max ø 10			
ARTICOLO *ITEM*	VH 102 D	VH 103 LD	VH 103 D	VH 104 D
ATTACCO UTENSILE *SPINDLE TYPE*	DIN55058 - ø 12			
N. MANDRINI *SPINDLES NR.*	2	3	3	4
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	28	28 + 28	ø 40	ø 60
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	120	74 + 74	ø 132	ø 152
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 10 | **GHISA**/*CAST IRON* GG25 - ø 12			
MASCHIATURA *TAPPING*	M 8			
RAPPORTO *RATIO*	1 - 1			
VELOCITÀ *RPM*	3.500			
PESO *WEIGHT*	3,5 kg	4,9 kg	4,9 kg	7,2 kg

NOTA: NOTE: A.B.C.D. DATI MACCHINA / *A.B.C.D. MACHINE FEATURES*

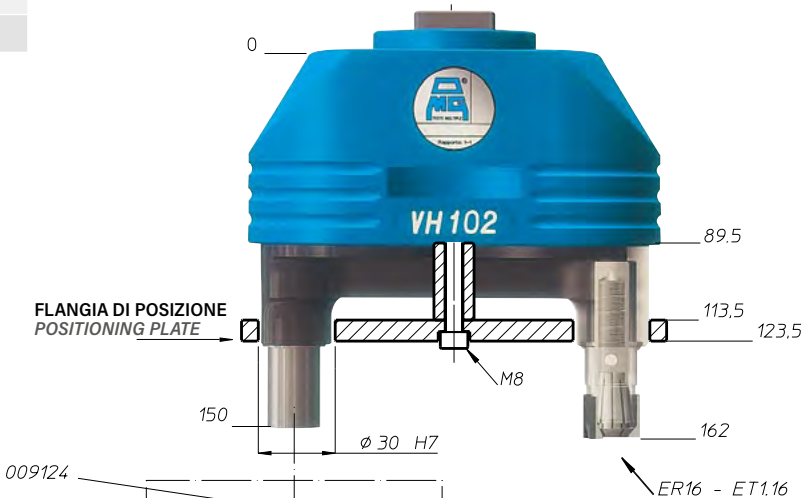
DIN 238	CODICE
B 10	011277
B 12	011278
B 16	011279
B 18	011280
B 22	011281
B 24	011282

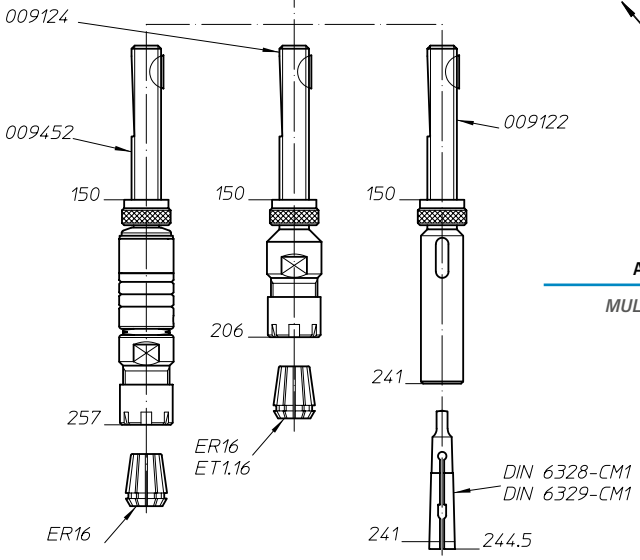
DIN 55058	CODICE
16	525405
20	525406
28	525407
36	525408

DIN 228	CODICE
cm 1	011115
cm 2	011120
cm 3	011125
cm 4	011130
cm 5	011135



CONO ISO	CODICE
30-40	522402
50	525403





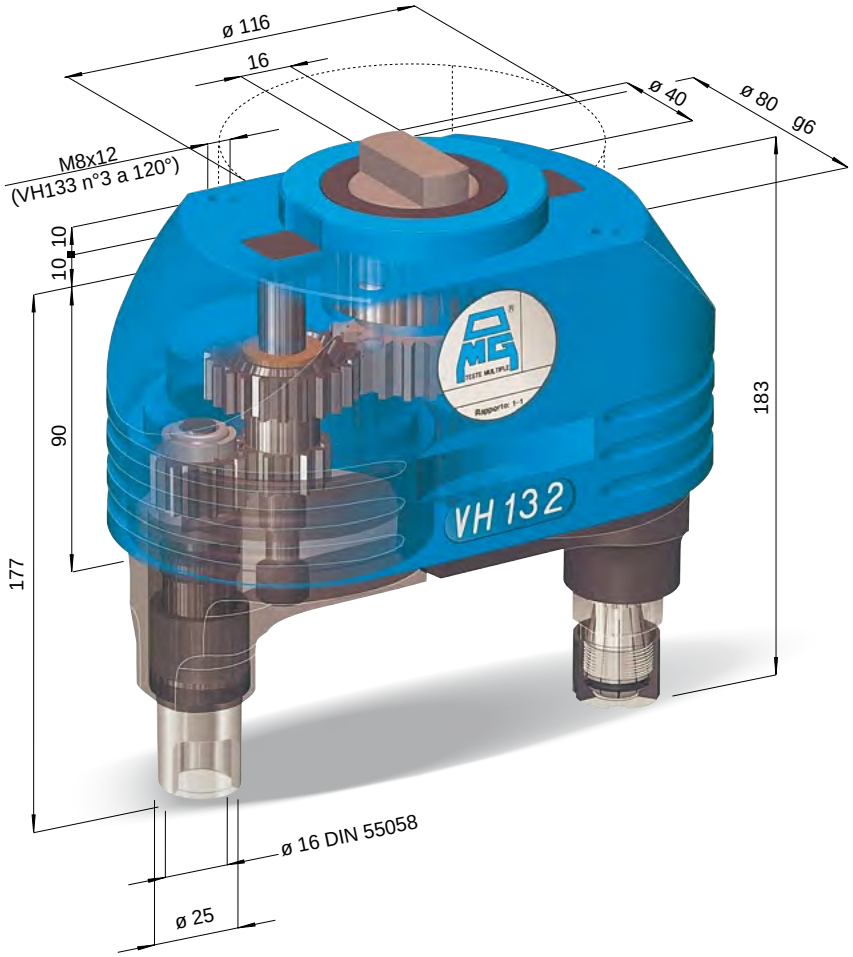
ACCESSORI PER TESTE MULTIPLE

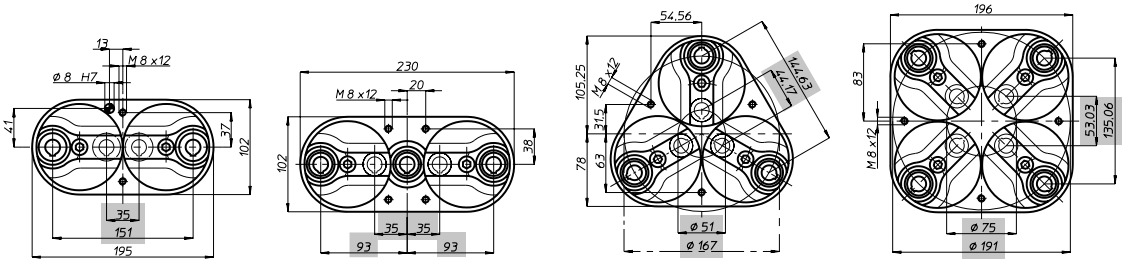
MULTISPINDLE HEADS ACCESSORIES

VH13

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

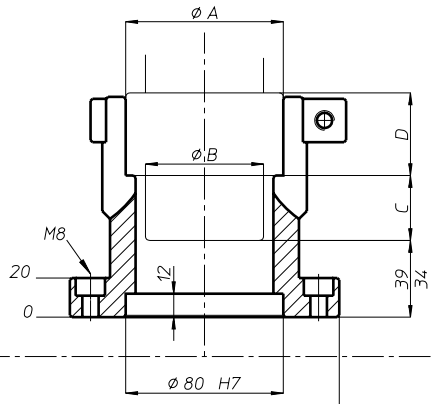
ø14 CAPACITÀ FORATURA
DRILLING CAPACITY



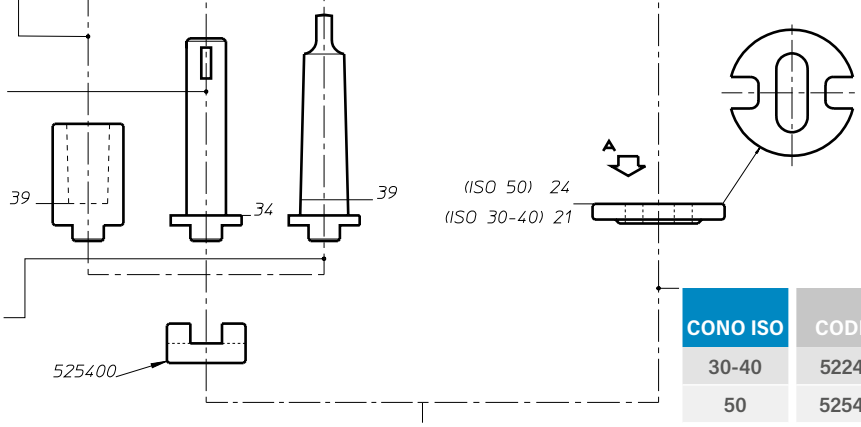


TESTA MODELLO *HEAD TYPE*	VH 132	VH 133 L	VH 133	VH 134
ARTICOLO *ITEM*	VH 132 P	VH 133 LP	VH 133 P	VH 134 P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 20 - max ø 13			
ARTICOLO *ITEM*	VH 132 D	VH 133 LD	VH 133 D	VH 134 D
ATTACCO UTENSILE *SPINDLE TYPE*	DIN55058 - ø 16			
N. MANDRINI *SPINDLES NR.*	2	3	3	4
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	35	35 + 35	ø 51	ø 75
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	151	93 + 93	ø 167	ø 191
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 13 | **GHISA**/*CAST IRON* GG25 - ø 14			
MASCHIATURA *TAPPING*	M 12			
RAPPORTO *RATIO*	1 - 1			
VELOCITÀ *RPM*	3.000			
PESO *WEIGHT*	5,3 kg	7,2 kg	7 kg	10,8 kg

NOTA: / NOTE: A.B.C.D. DATI MACCHINA / *A.B.C.D. MACHINE FEATURES*



VISTA DA A
VIEW FROM A

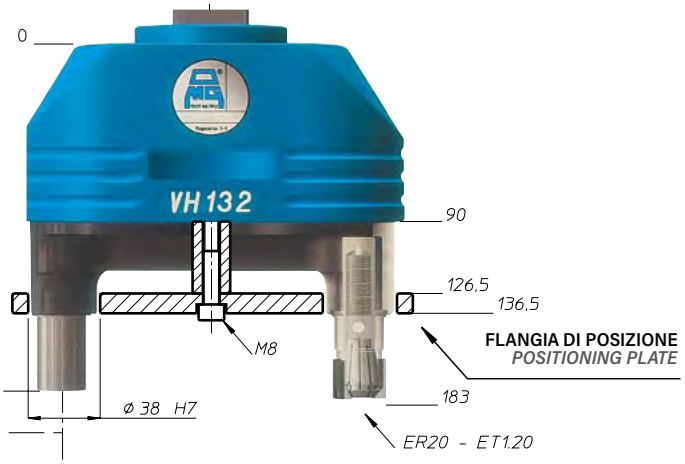


DIN 238	CODICE
B 16	011279
B 18	011280
B 22	011281
B 24	011282

DIN 55058	CODICE
16	525405
20	525406
28	525407
36	525408

DIN 228	CODICE
cm 2	011120
cm 3	011125
cm 4	011130
cm 5	011135

CONO ISO	CODICE
30-40	522402
50	525403



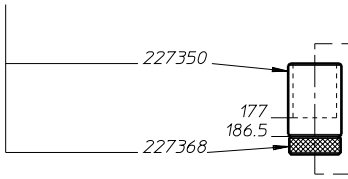
FLANGIA DI POSIZIONE
POSITIONING PLATE

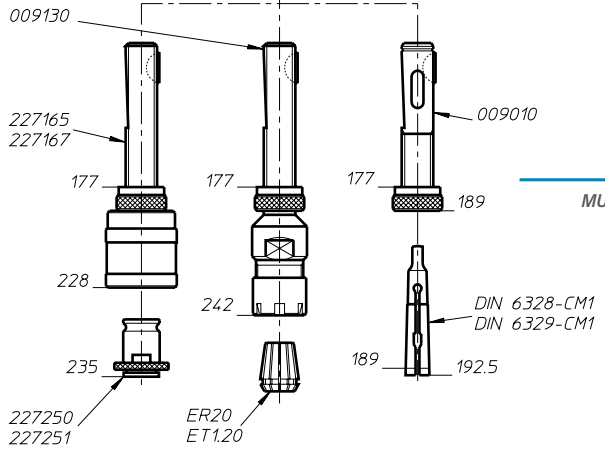
Nota:

L'utilizzo di questo accessorio richiede il mandrino preposto. La lunghezza degli accessori,comprensivi di manicotto attaccorapido, aumenta di mm 9,5.

Note:

The use of this accessory requires prearranged spindle. The length of this accessories whit quick connection sleeve increases of mm 9,5.



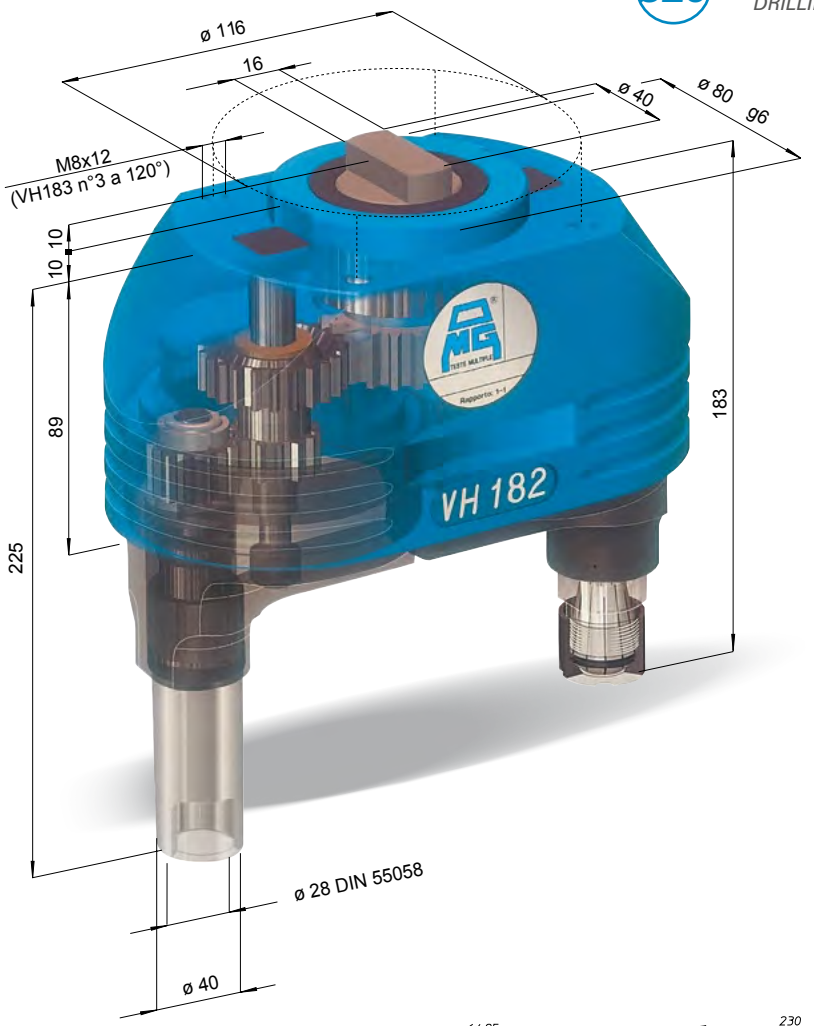


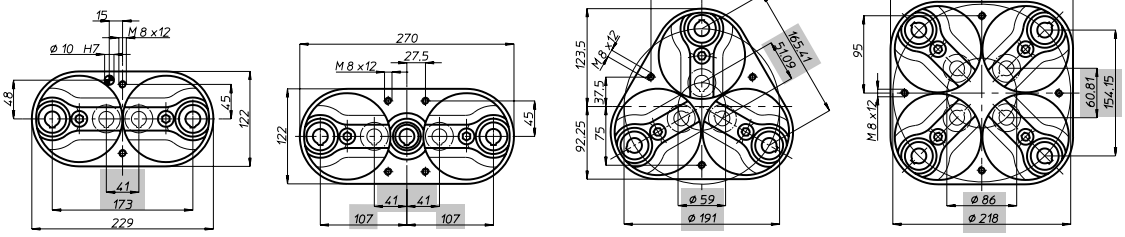
ACCESSORI PER TESTE MULTIPLE
MULTISPINDLE HEADS ACCESSORIES

VH18

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

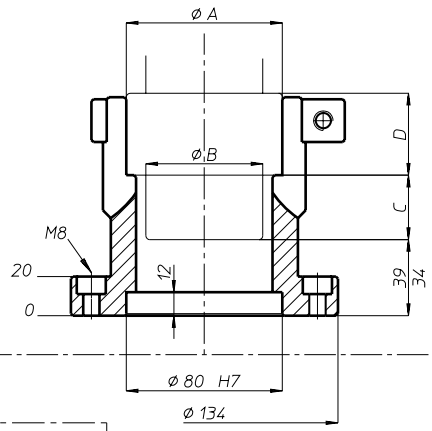
ø20 CAPACITÀ FORATURA
DRILLING CAPACITY



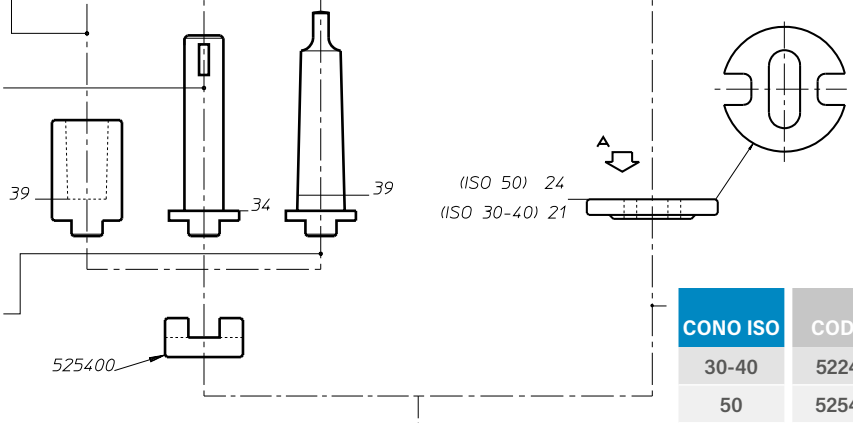


TESTA MODELLO *HEAD TYPE*	VH 182	VH 183 L	VH 183	VH 184
ARTICOLO *ITEM*	VH 182 P	VH 183 LP	VH 183 P	VH 184 P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 25 - max ø 16			
ARTICOLO *ITEM*	VH 182 D	VH 183 LD	VH 183 D	VH 184 D
ATTACCO UTENSILE *SPINDLE TYPE*	DIN55058 - ø 28			
N. MANDRINI *SPINDLES NR.*	2	3	3	4
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	41	41 + 41	ø 59	ø 86
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	173	107 + 107	ø 191	ø 218
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 18 | **GHISA**/*CAST IRON* GG25 - ø 20			
MASCHIATURA *TAPPING*	M 14			
RAPPORTO *RATIO*	1 - 1			
VELOCITÀ *RPM*	2.500			
PESO *WEIGHT*	8,3 kg	10,75 kg	12 kg	15,75 kg

NOTA: / NOTE: A.B.C.D. DATI MACCHINA / *A.B.C.D. MACHINE FEATURES*



VISTA DA A / *VIEW FROM A*



DIN 238	CODICE
B 16	011279
B 18	011280
B 22	011281
B 24	011282

DIN 55058	CODICE
16	525405
20	525406
28	525407
36	525408

DIN 228	CODICE
cm 3	011125
cm 4	011130
cm 5	011135

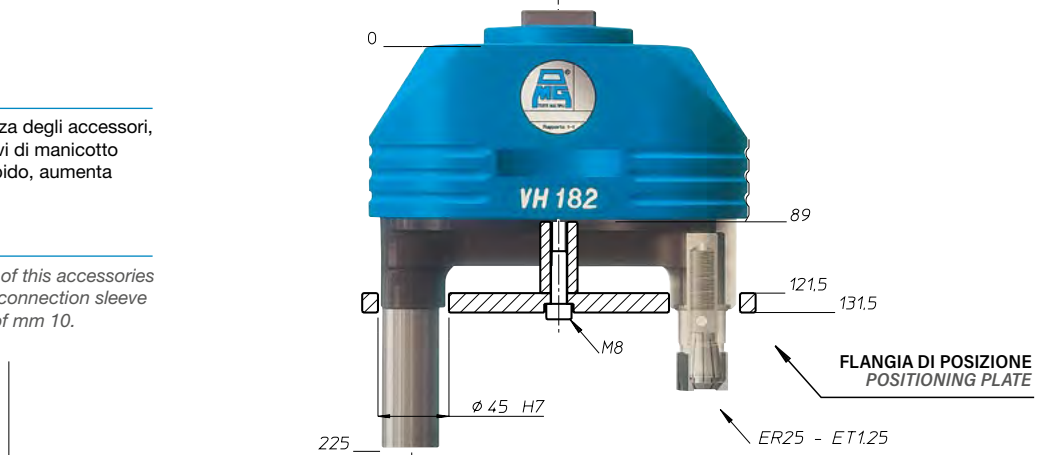
CONO ISO	CODICE
30-40	522402
50	525403

Nota:

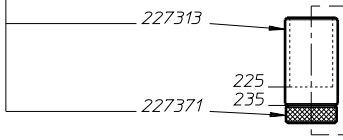
La lunghezza degli accessori, comprensivi di manicotto attacco rapido, aumenta di mm 10.

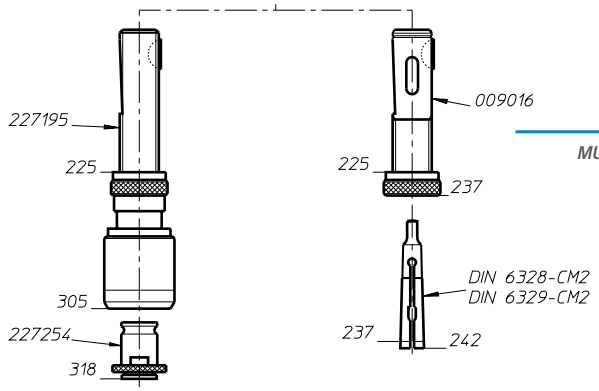
Note:

The length of this accessories whit quick connection sleeve increases of mm 10.



FLANGIA DI POSIZIONE / *POSITIONING PLATE*



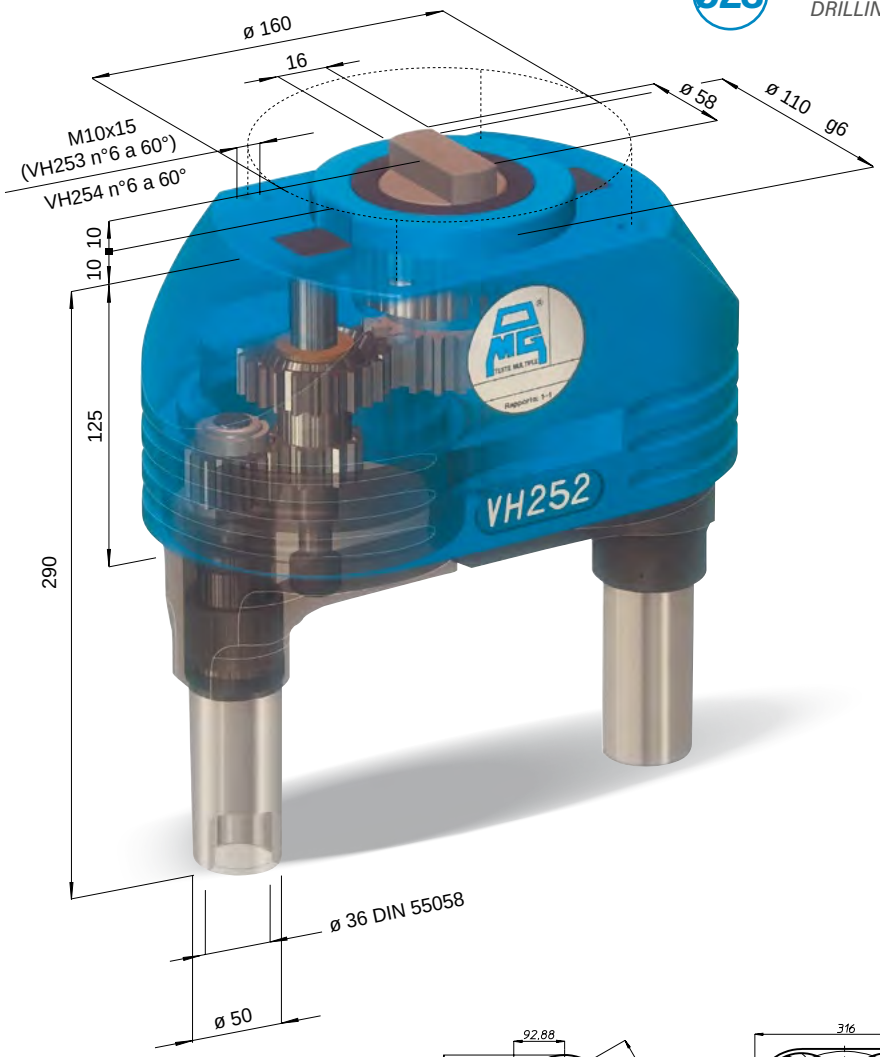


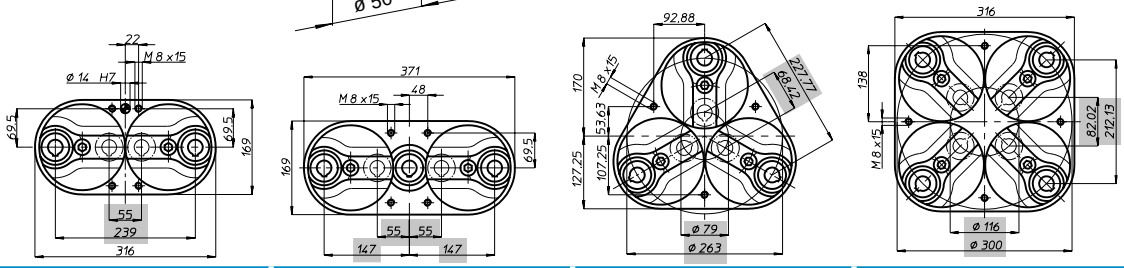
ACCESSORI PER TESTE MULTIPLE / *MULTISPINDLE HEADS ACCESSORIES*

VH25

TESTE MULTIPLE AD ASSI VARIABILI · *VARIABLE AXIS HEADS*

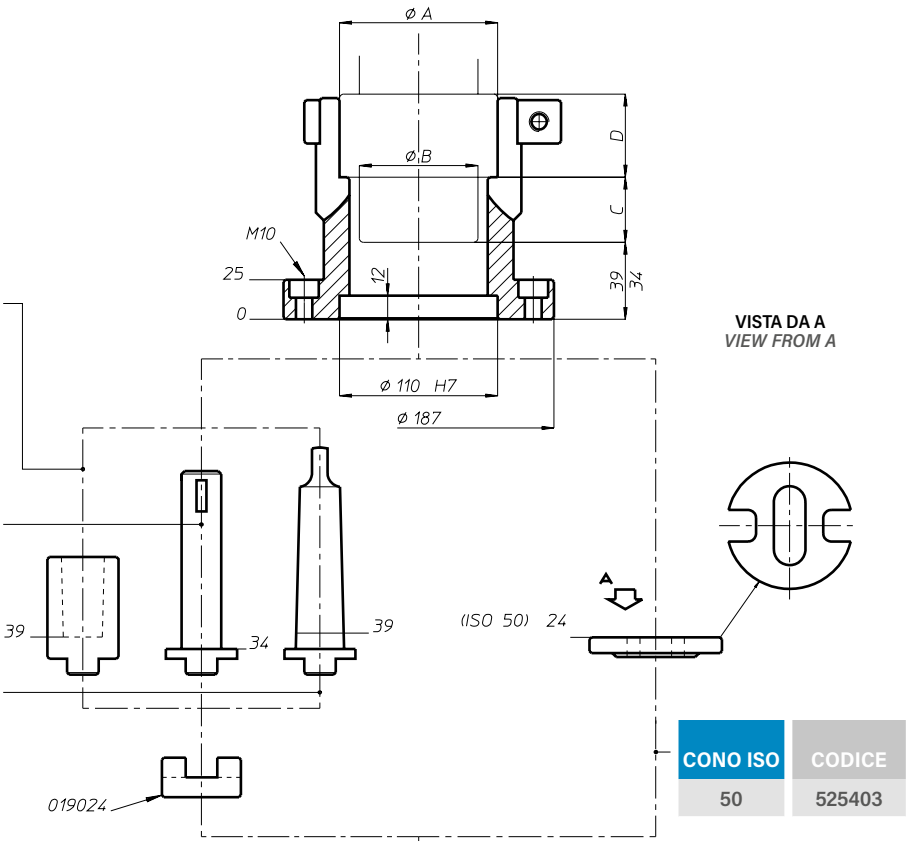
ø28 CAPACITÀ FORATURA
DRILLING CAPACITY





TESTA MODELLO *HEAD TYPE*	VH 252	VH 253 L	VH 253	VH 254
ARTICOLO *ITEM*				
ATTACCO UTENSILE *SPINDLE TYPE*				
ARTICOLO *ITEM*	VH 252 D	VH 253 LD	VH 253 D	VH 254 D
ATTACCO UTENSILE *SPINDLE TYPE*	DIN55058 - ø 36			
N. MANDRINI *SPINDLES NR.*	2	3	3	4
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	55	55 + 55	ø 79	ø 116
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	239	147 + 147	ø 263	ø 300
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 25 | **GHISA**/*CAST IRON* GG25 - ø 28			
MASCHIATURA *TAPPING*	M 20			
RAPPORTO *RATIO*	1 - 1			
VELOCITÀ *RPM*	2.000			
PESO *WEIGHT*	27 kg	32 kg	39 kg	52 kg

NOTA: / NOTE: A.B.C.D. DATI MACCHINA / *A.B.C.D. MACHINE FEATURES*

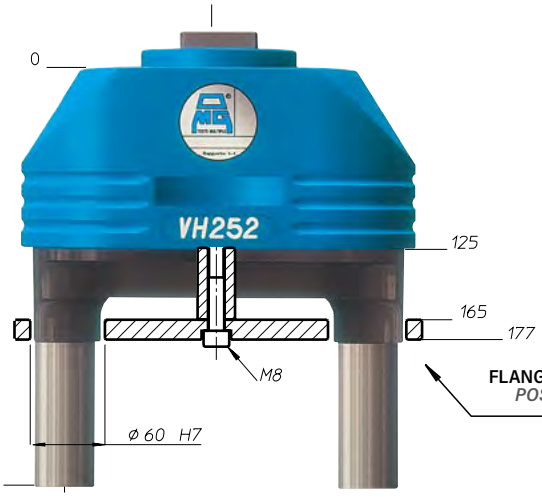


DIN 238	CODICE
B 18	011280
B 22	011281
B 24	011282

DIN 55058	CODICE
16	525405
20	525406
28	525407
36	525408

DIN 228	CODICE
cm 3	011125
cm 4	011130
cm 5	011135

CONO ISO	CODICE
50	525403

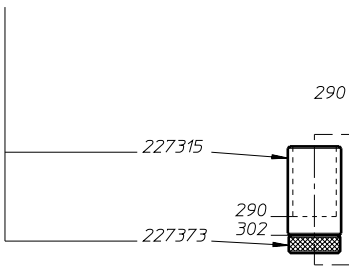


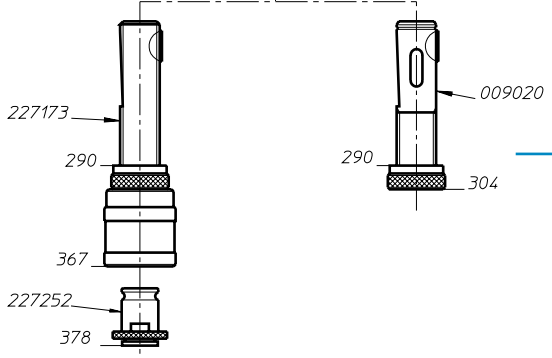
Nota:

L'utilizzo di questo accessorio richiede il mandrino preposto.
La lunghezza degli accessori, comprensivi di manicotto attacco Rapido, aumenta di mm 9,5.

Note:

The use of this accessory requires prearranged spindle. The length of this accessories whit quick connection sleeve increases of mm 9,5.





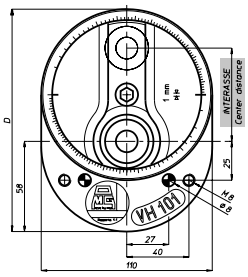
ACCESSORI PER TESTE MULTIPLE

MULTISPINDLE HEADS ACCESSORIES

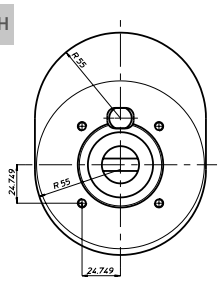
VH101

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

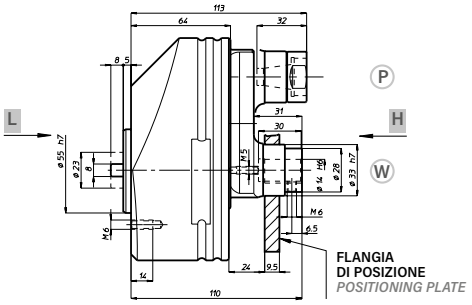
ø12 CAPACITÀ FORATURA
DRILLING CAPACITY



VISTA *VIEW* H



VISTA *VIEW* L

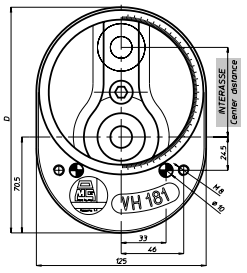


TESTA MODELLO *HEAD TYPE*	**VH 101**
ARTICOLO *ITEM*	VH 101 P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 16 - max ø 10
ARTICOLO *ITEM*	VH 101W14
ATTACCO UTENSILE *SPINDLE TYPE*	ø 14
N. MANDRINI *SPINDLES NR.*	1
CAMPO DI LAVORO MIN. *CENTRE DISTANCES MIN.*	0
CAMPO DI LAVORO MAX. *CENTRE DISTANCES MAX.*	60
D	143
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 10 | **GHISA**/*CAST IRON* GG25 - ø 12
MASCHIATURA *TAPPING*	M 10
RAPPORTO *RATIO*	1 - 1
VELOCITÀ *RPM*	3.000
PESO *WEIGHT*	2,8 kg

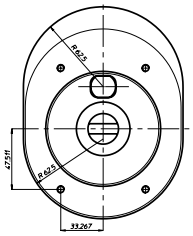
VH181

TESTE MULTIPLE AD ASSI VARIABILI • *VARIABLE AXIS HEADS*

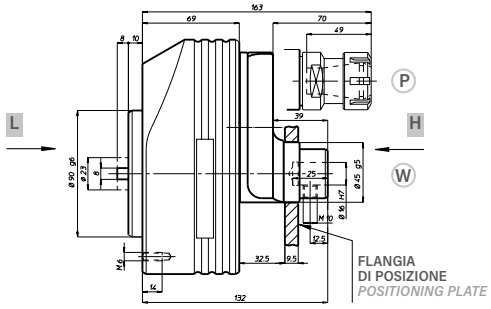
ø20 CAPACITÀ FORATURA
DRILLING CAPACITY



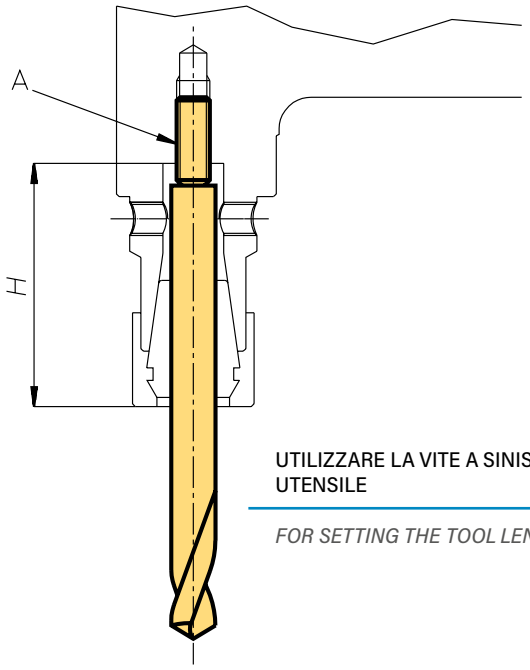
VISTA *VIEW* H



VISTA *VIEW* L



TESTA MODELLO *HEAD TYPE*	VH 181	VH 181-122
ARTICOLO *ITEM*	VH 181 P	VH 181-122-P
ATTACCO UTENSILE *SPINDLE TYPE*	ER 25 - max ø 16	
ARTICOLO *ITEM*	VH 181 W16	VH 181-122-W 16
ATTACCO UTENSILE *SPINDLE TYPE*	ø 16	
N. MANDRINI *SPINDLES NR.*	1	1
CAMPO DI LAVORO MIN.	0	56
CENTRE DISTANCES MAX	66	122
D	166	122
CAPACITÀ FORATURA *DRILLING CAPACITY*	**ACCIAIO**/*STILL* Rm 500 N/mm² - ø 18 | **GHISA**/*CAST IRON* GG25 - ø 20	
MASCHIATURA *TAPPING*	M 14	
RAPPORTO *RATIO*	1 - 1	
VELOCITÀ *RPM*	2.500	
PESO *WEIGHT*	4,1 kg	6,4 kg



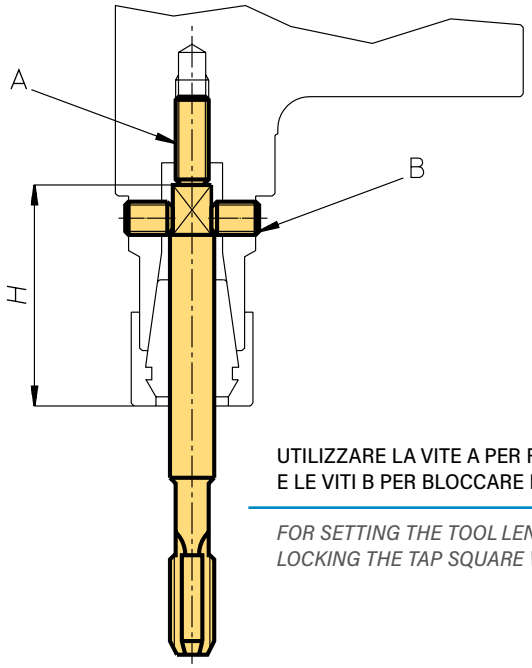
FORATURA CON PINZE ER
DRILLING WITH ER COLLETS

UTILIZZARE LA VITE A SINISTRA PER REGISTRARE L'ALTEZZA UTENSILE

FOR SETTING THE TOOL LENGHT, USE THE LEFT SCREW A

TESTA MODELLO *HEAD TYPE*	VH 04	VH 06	VH 08	VH 10	VH 13	VH 18
H MAX	23	27	44	44	52	49

NOTA: nella testa VH04 e VH06 la vite A non è presente ***NOTE:*** *in the head VH04 and VH06 there isn't the screw A*



MASCHIATURA CON PINZE ER
TAPPING WITH ER COLLETS

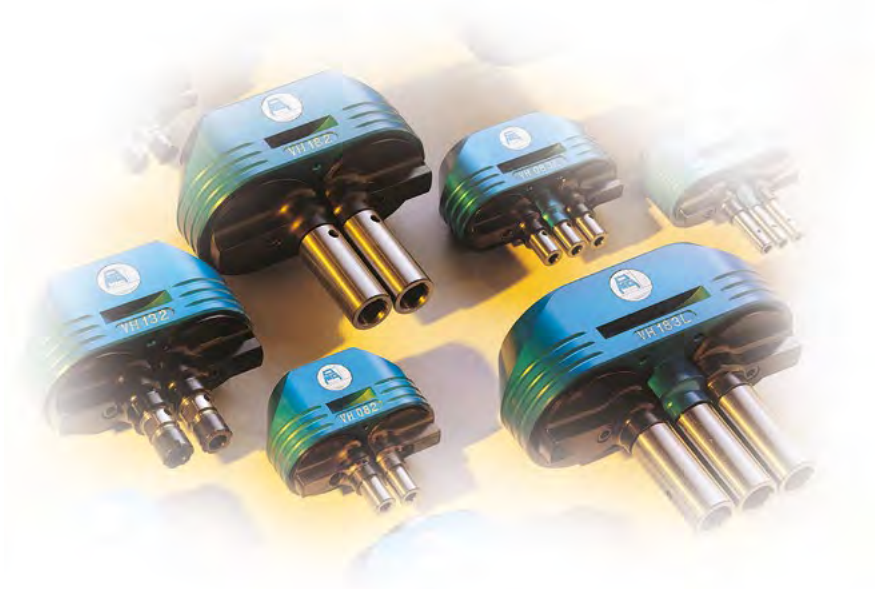
UTILIZZARE LA VITE A PER REGISTRARE L'ALTEZZA UTENSILE E LE VITI B PER BLOCCARE IL QUADRO DEL MASCHIO

FOR SETTING THE TOOL LENGHT, USE THE SCREW A; LOCKING THE TAP SQUARE WITH THE SCREWS B

TESTA MODELLO *HEAD TYPE*	VH 04	VH 06	VH 08	VH 10	VH 13	VH 18
H MAX	23	27	38	38	44	49

NOTA: nella testa VH04 e VH06 la vite A non è presente ***NOTE:*** *in the head VH04 and VH06 there isn't the screw A*

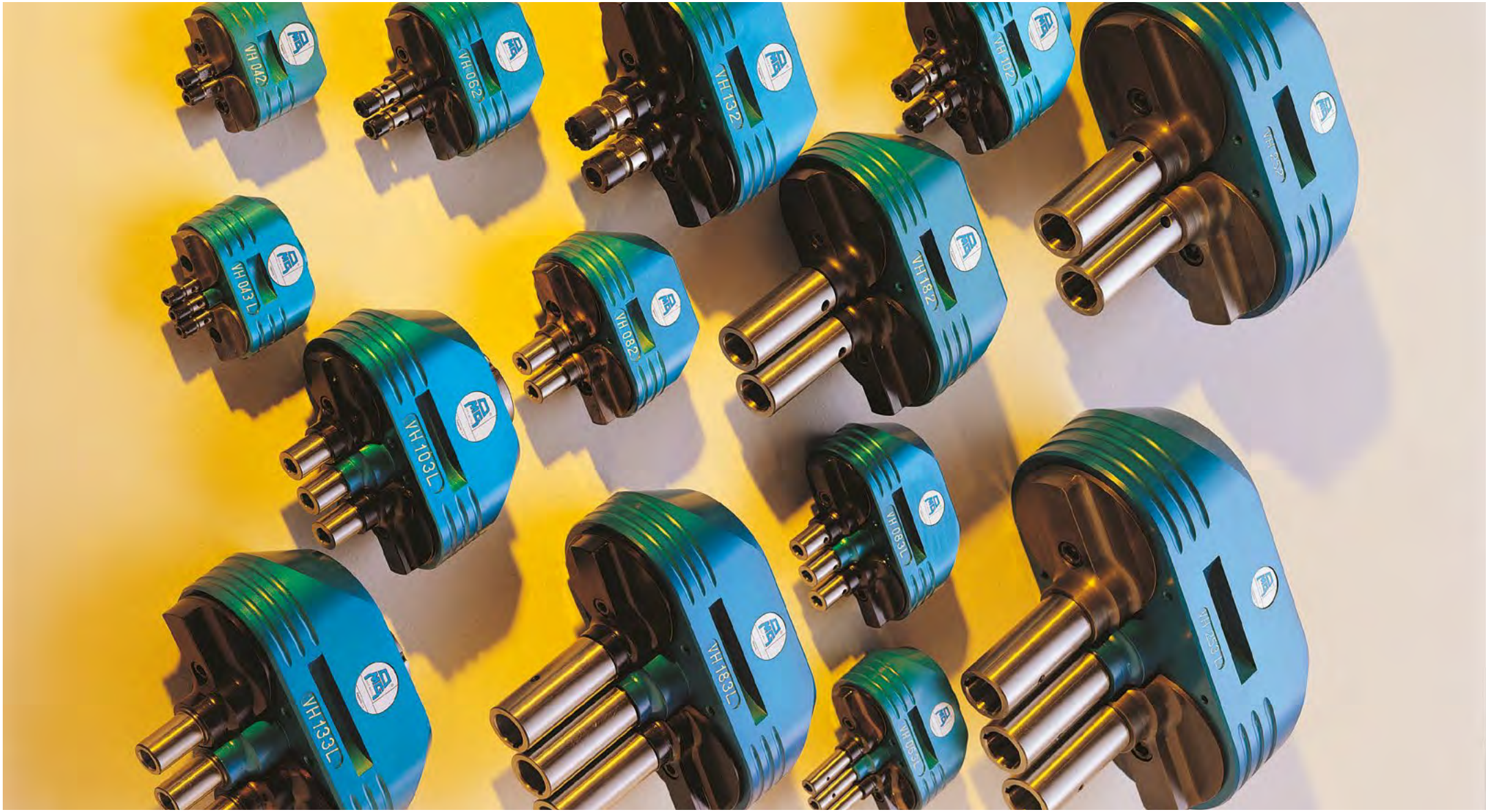
VH 042 LP	n° 2 mandrini a pinza, min. 24 max. 84	2 spindles for spring collets min. 24 max. 84
VH 042P R. 1-2	n° 2 mandrini a pinza, min. 12 max. 72 rapp. 1-2	2 spindles for spring collets min. 12 max. 72 ratio 1-2
VH 062 LP	n° 2 mandrini a pinza, min. 35 max. 111	2 spindles for spring collets min. 35 max. 111
VH 062 LD	n° 2 mandrini DIN 55058-8 min. 35 max. 111	2 spindles DIN 55058-8 min. 35 max. 111
VH 062/1	n° 1 mandrino a pinza, min. 8,5 max. 46,5	1 spindle for spring collets min. 8,5 max. 46,5
VH 062P R.1-2	n° 2 mandrini a pinza min. 17 max. 93 rapp. 1-2, 067	2 spindles for spring collets min. 17 max. 93 ratio 1-2,067
VH 062P CNC40	n° 2 mandrini a pinza min. 17 max. 93 completa di cono ISO 40	2 spindles for spring collets min. 17 max. 93 with shank ISO 40
VH 063P CNC40	n° 3 mandrini a 120° a pinza min. 27 max. 103 completa di cono ISO 40	3 spindles at 120° for spring collets min. 27 max. 103 with shank ISO 40
VH 064P CNC40	n° 4 mandrini a 90° a pinza min. 41 max. 117 completa di cono ISO 40	4 spindles at 90° for spring collets min. 41 max. 117 with shank ISO 40
VH 064/3P	n° 3 mandrini a pinza min. 41 max. 117	3 spindles for spring collets min. 41 max. 117
VH 081 P	n° 1 mandrino a pinza min. 0 max. 42	1 spindle for spring collets min. 0 max. 42
VH 082 LP	n° 2 mandrini a pinza min. 48 max. 132	2 spindles for spring collets min. 48 max. 132
VH 082 LD	n° 2 mandrini DIN 55058 - 10 min. 48 max. 132	2 spindles DIN 55058 - 10 min. 48 max. 132
VH 082 P R. 1-2	n° 2 mandrini a pinza min. 24 max. 108 rapp. 1-2,067	2 spindles for spring collets min. 24 max. 108 ratio 1-2
VH 082P CNC 40	n° 2 mandrini a pinza min. 24 max. 108 completa di cono ISO 40	2 spindles for spring collets min. 24 max. 108 with shank ISO 40
VH 082PFM	n° 2 mandrini a pinza min. 24 max. 108 fora/maschia	2 spindles for spring collets min. 24 max. 108 drilling and tapping
VH 083 LP CNC40	n° 3 mandrini in linea a pinza min. 24+24 max. 66+66 completa di cono ISO 40	3 spindles on line for spring collets min. 24+24 max. 66+66 with shank ISO 40
VH 084P CNC 40	n° 4 mandrini a pinza min. 53,5 max. 137,5 completa di cono ISO 40	4 spindles for spring collets min. 53,5 max. 137,5 with shank ISO 40
VH 084/3P	n° 3 mandrini a pinza min. 53,5 max. 137,5	3 spindles for spring collets min. 53,5 max. 137,5
VH 102 LP	n° 2 mandrini a pinza min. 56 max. 148	2 spindles for spring collets min. 56 max. 148
VH 102 LD	n° 2 mandrini DIN 55058-12 min. 56 max. 148	2 spindles DIN 55058-12 min. 56 max. 148
VH 102 P CNC 40	n° 2 mandrini a pinza min. 28 max. 120 completa di cono ISO 40	2 spindles for spring collets min. 28 max. 120 with shank ISO 40
VH 102P R. 1-2	n° 2 mandrini a pinza min. 28 max. 120 rapporto 1-2	2 spindles for spring collets min. 28 max. 120 ratio 1-2
VH 102 PFM	n° 2 mandrini a pinza min. 28 max. 120 fora/maschia	2 spindles for spring collets min. 28 max. 120 drilling and tapping
VH 102-220 P	n° 2 mandrini a pinza min. 128 max. 220	2 spindles for spring collets min. 128 max. 220
VH 102-300 P	n° 2 mandrini a pinza min. 208 max. 300	2 spindles for spring collets min. 208 max. 300
VH 104D R.1-2	n° 4 mandrini a 90° DIN 55058-12 min. 60 max. 152 rapp. 1-2	4 spindles at 90° DIN 55058-12 min. 60 max. 152 ratio 1-2
VH 104P CNC50	n° 4 mandrini a 90° a pinza min. 60 max. 152 completa di cono ISO 50	4 spindles at 90° for spring collets min. 60 max. 152 with shank ISO 50
VH 132 LP	n° 2 mandrini a pinza min. 70 max. 186	2 spindles for spring collets min. 70 max. 186
VH 132 LD	n° 2 mandrini DIN 55058-16 min. 70 max. 186	2 spindles DIN55058-16 min. 70 max. 186
VH 132D CNC50	n° 2 mandrini DIN 55058-16 min. 35 max. 151 completa di cono ISO 50	2 spindles DIN55058-16 min. 35 max. 151 with shank ISO 50
VH 132P CNC50	n° 2 mandrini a pinza min. 35 max. 151 completa di cono ISO 50	2 spindles for spring collets min. 35 max. 151 with shank ISO 50
VH 132 W12	n° 2 mandrini foro cilindrico diam. 12 min. 35 max. 151	2 spindles diam. 12 min. 35 max. 151
VH 132-260 D	n° 2 mandrini DIN 55058-16 min. 144 max. 260	2 spindles DIN 55058-16 min. 144 max. 260
VH 134P CNC50	n° 4 mandrini a 90° a pinza, min. 75 max. 191 completa di cono ISO 50	4 spindles at 90° for spring collets,min. 75 max. 191 with shank ISO 50
VH 181 R 1-2	n° 1 mandrino diam. 16 min. 16,5 max. 82,5 rapp. 1-2	1 spindle diam. 16, min. 16,5 max. 82,5 ratio 1-2
VH 182 LP	n° 2 mandrini a pinza, min. 82 max. 214	2 spindles for spring collets, min. 82 max. 214
VH 182 LD	n° 2 mandrini DIN 55058-28 min. 82 max. 214	2 spindles DIN 55058-28 min. 82 max. 214
VH 182 W16	n° 2 mandrini foro cilindrico diam. 16 min. 41 max. 173	2 spindles diam 16, min. 41 max. 173
VH 182 P CNC 50	n° 2 mandrini a pinza, min. 41 max. 173 completa di cono ISO 50	2 spindles for spring collets, min. 41 max. 173 with shank ISO 50
VH 182 P R.1-2	n° 2 mandrini a pinza, min. 41 max. 173 173 rapp. 1-2	2 spindles for spring collets, min. 41 max. 173 ratio 1-2
VH 182D R. 1-2	n° 2 mandrini DIN 55058-28 min. 41 max. 173 rapp. 1-2	2 spindles DIN 55058-28, min. 41 max. 173 ratio 1-2
VH 183 L W16	n° 3 mandrini foro cilindrico diam. 16 min. 41+41 max. 107+107	3 spindles diam.16 min. 41+41 max. 107+107
VH 252 LD	n° 2 mandrini DIN 55058-36 min. 110 max. 294	2 spindles DIN 55058-36, min. 110 max. 294



VH

GALLERY


VH 042
VH 044
VH 103
VH 183
VH 084
VH 084
VH 104
VH 134
VH 184
VH 254


VH 042
VH 062
VH 132
VH 102
VH 043L
VH 082
VH 182
VH 103L
VH 083L
VH 183L
VH 133L

VH

GALLERY

SERIE TSI TSX

Le teste multiple ad assi variabili serie TSI-TSX progettate a due mandrini paralleli o convergenti, sono adatte in lavorazioni di fresatura ed in particolare per la smussatura dei denti di ingranaggi.

Varie sono le caratteristiche tecniche delle teste multiple ad assi variabili serie TSI-TSX e sintetizzandone solamente alcune possiamo dire che:

- il corpo è in lega di alluminio;
- i supporti mandrino in ghisa e la loro regolazione avviene con un'unica azione dell'operatore;
- i mandrini possono ruotare concordi o discordi e la lubrificazione della testa è a grasso.

La loro realizzazione si è resa possibile in virtù dell'esperienza acquisita nella costruzione di teste multiple, della conoscenza dei processi produttivi e dalla capacità di saper proporre, per ogni particolare esigenza, prodotti qualificati.

The adjustable multispindle heads TSI and TSX series with two parallel or convergent spindles are suitable to mill and to chamfering the gear teeth. This is a solid, compact, reliable unit that also has a nice look.

The adjustable multispindle heads TSI and TSX series have many different features among which:

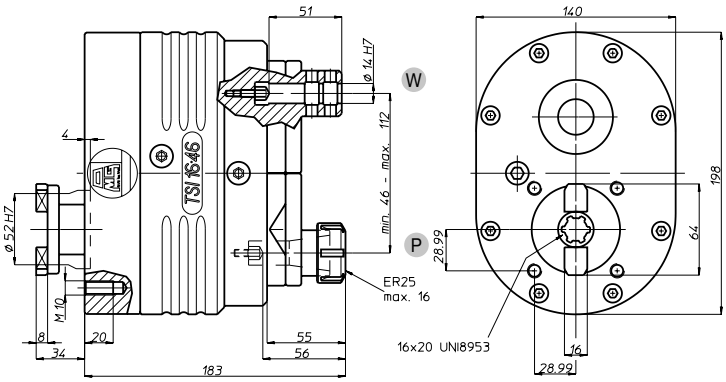
- *an aluminum body;*
- *cast iron spindle support, simply and easy adjusted by the operator;*
- *the spindles may turn in the same direction or in apposite direction and the adjustment of both spindles is achieved thanks to a single act. The tool connection may be cylindric or with spring collets. The lubrication is by long life grease.*

The production of our twin adjustable multispindle head was made possible thanks to the experience acquired in the construction of multispindle heads, our knowledge of production process and our ability to know how to cater for individual requirements with qualified products.

TSI 1646

TESTA DI FRESATURA · *TWIN SPINDLE MILLING HEAD*

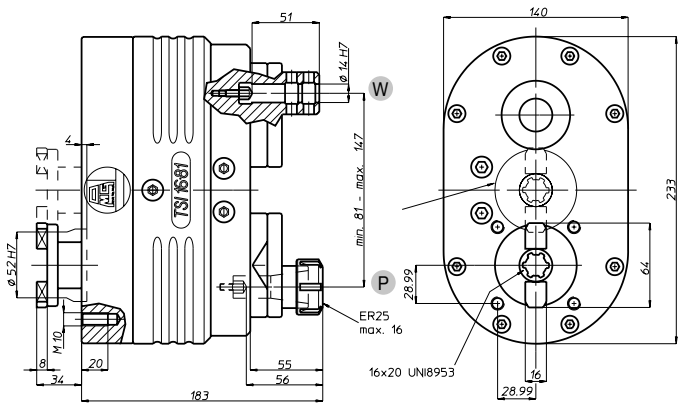
	TSI 16-46C-P TSI 16-46C-W	TSI 16-46D-P TSI 16-46D-W
PESO *WEIGHT*	12 KG	12 KG
ROTAZIONE MANDRINI *SPINDLE ROTATION*		
RAPPORTO *RATIO*	1-2	1-2
GIRI MAX *RPM*	3000	3000



TSI 1681

TESTA DI FRESATURA · *TWIN SPINDLE MILLING HEAD*

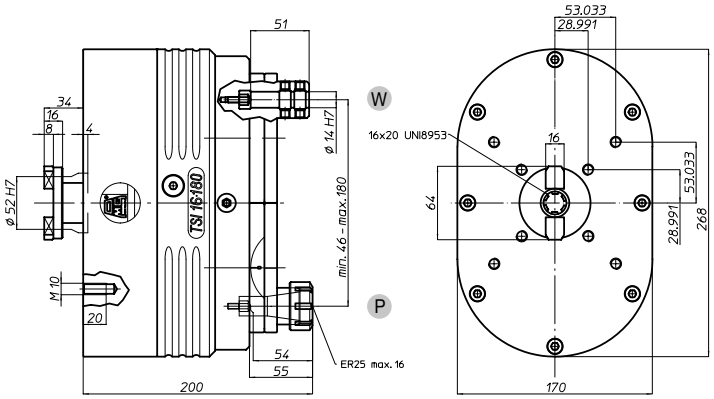
	TSI 16-81C-P TSI 16-81C-W	TSI 16-81D-P TSI 16-81D-W
PESO *WEIGHT*	13,5 KG	13,5 KG
ROTAZIONE MANDRINI *SPINDLE ROTATION*		
RAPPORTO *RATIO*	1-2	1-2
GIRI MAX *RPM*	3000	3000



TSI 16180

TESTA DI FRESATURA · *TWIN SPINDLE MILLING HEAD*

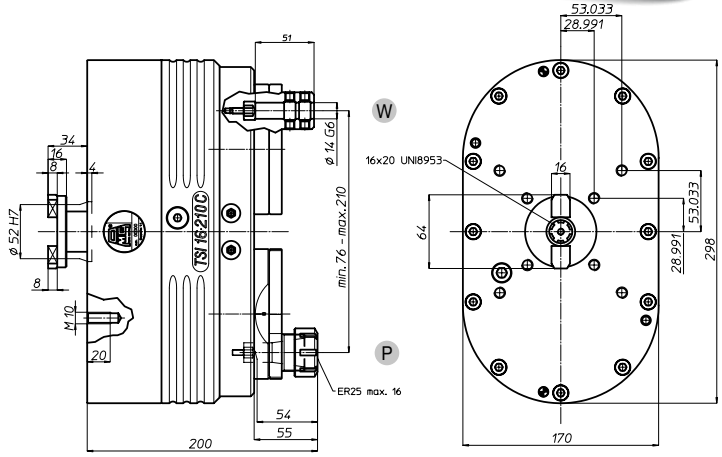
	TSI 16-180C-P TSI 16-180C-W	TSI 16-180D-P TSI 16-180D-W
PESO *WEIGHT*	22,5 KG	22,5 KG
ROTAZIONE MANDRINI *SPINDLE ROTATION*		
RAPPORTO *RATIO*	1-1	1-1
GIRI MAX *RPM*	3000	3000



TSI 16210

TESTA DI FRESATURA · *TWIN SPINDLE MILLING HEAD*

	TSI 16-210C-P TSI 16-210C-W	TSI 16-210D-P TSI 16-210D-W
PESO *WEIGHT*	22,5 KG	22,5 KG
ROTAZIONE MANDRINI *SPINDLE ROTATION*		
RAPPORTO *RATIO*	1-1	1-1
GIRI MAX *RPM*	3000	3000



TSX 13C

TESTA DI FRESATURA • *TWIN SPINDLE MILLING HEAD*

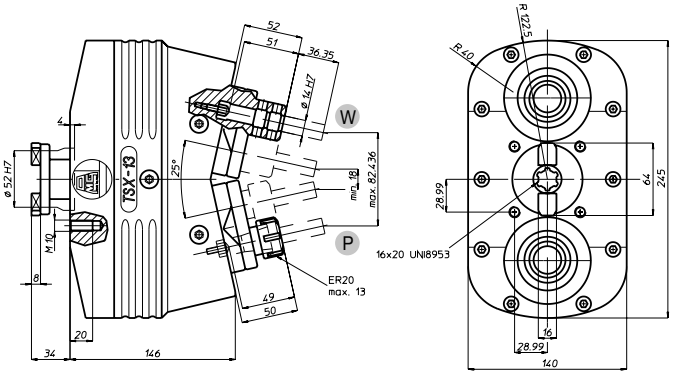
TSX 13C-P
TSX 13C-W

PESO *WEIGHT*
15,5 KG

ROTAZIONE MANDRINI *SPINDLE ROTATION*

RAPPORTO *RATIO*
1-1

GIRI MAX *RPM*
3000



TSX 13D

TESTA DI FRESATURA • *TWIN SPINDLE MILLING HEAD*

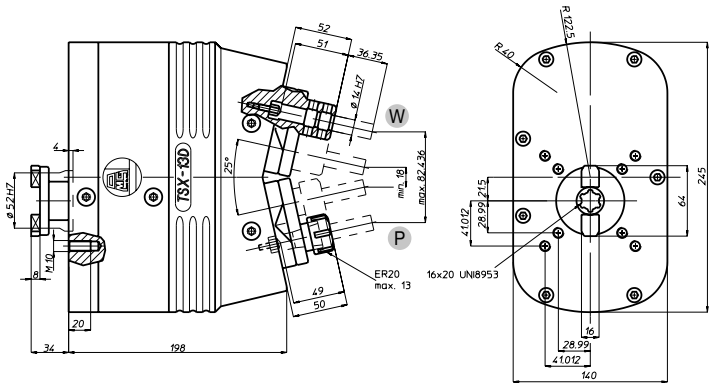
TSX 13D-P
TSX 13D-W

PESO *WEIGHT*
21 KG

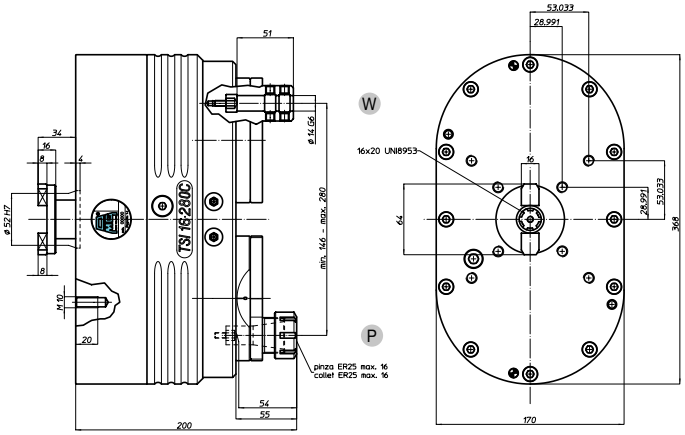
ROTAZIONE MANDRINI *SPINDLE ROTATION*

RAPPORTO *RATIO*
1-1

GIRI MAX *RPM*
3000



	TSI 16-280C-P TSI 16-280C-W	TSI 16-280D-P TSI 16-280D-W
PESO *WEIGHT*	22,5 KG	22,5 KG
ROTAZIONE MANDRINI *SPINDLE ROTATION*		
RAPPORTO *RATIO*	1-1	1-1
GIRI MAX *RPM*	3000	3000



TFS 23801

Testa di spuntatura con angolo di 34°
Fixed twin-spindle milling head with 34° from the axis

TS 31588

Testa di spuntatura ad assi variabili, interasse min. 55 max 205,24
Adjustable twin multispindle milling head, centre distance min. 55 max 205,24

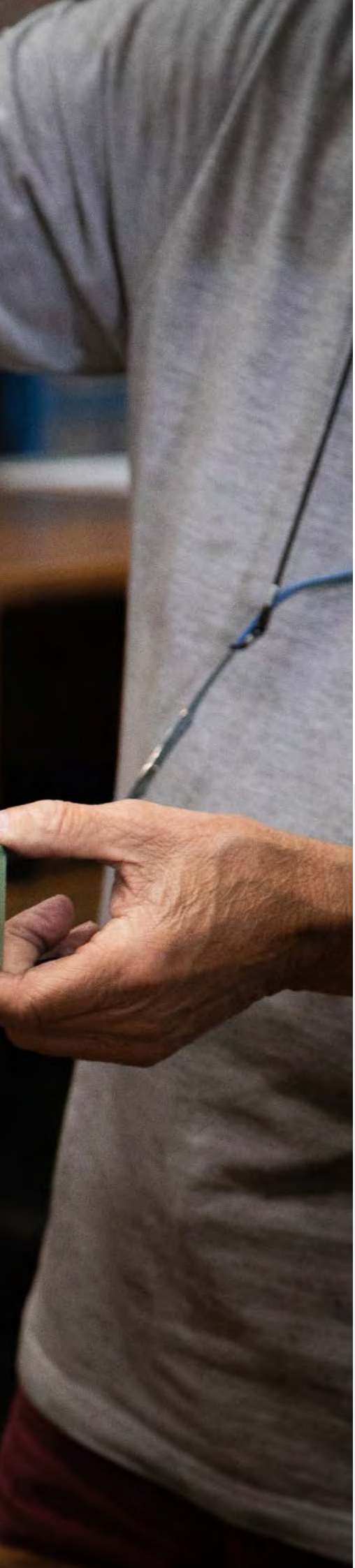
TFS 20205

Testa di spuntatura ad assi sghembi, angolo di 25°
Fixed twin-spindle milling head with skew axis at 25°

TFS 14005

Testa di spuntatura ad assi fissi e paralleli, distanza mm 40
Fixed twin-spindle milling head, axis distance mm 40

SERIE



Le teste multiple a giunti universali sono in produzione dal 1961 e confermano tutt'oggi la validità dell'idea lasciando inalterate le caratteristiche salienti:

- possibilità di utilizzo sia in foratura che in maschiatura
- possibilità di posizionamento nello spazio dei gruppi mandrino, vincolato soltanto dalle dimensioni dello stesso e dall'area di lavoro
- adattabilità a tutti i tipi di trapani o a soluzioni speciali
- vantaggiose soprattutto quando è necessario modificare di frequente gli interassi dei fori
- ampia gamma di modelli per le diverse esigenze

Sono disponibili a magazzino le seguenti versioni:

- serie T-TS a base circolare per l'esecuzione di massimo 12 fori; massima capacità di foratura diam. mm 22, interasse minimo mm 15 e massimo mm 350
- serie TL a base lineare per l'esecuzione di massimo 12 fori; massima capacità di foratura diam. mm 22, interasse minimo mm 17 e massimo mm 610
- serie TR a base rettangolare per l'esecuzione di massimo 16 fori; massima capacità di foratura diam. mm 22, interasse minimo mm 32 e massimo mm 395x345
- serie TM-TRM a base circolare e rettangolare per l'esecuzione di massimo 26 fori; grazie alle loro caratteristiche tecniche possono eseguire i più diversi schemi di foratura e maschiatura su macchine con potenza adeguata.

The universal joint multispindle heads have been in production since 1961; over the years they have been modified and updated, without however refuting the goodness of the idea and always leaving major features unaltered:

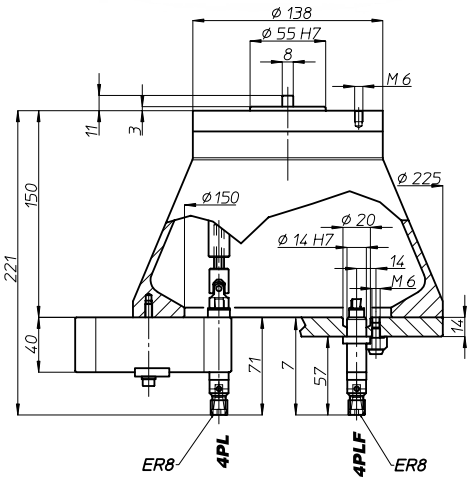
- *possibility of using for both drilling and tapping*
- *possibility of multi-positioning the spindle units, restricted only by the size of the spindle and of the working area*
- *suitable for all types of drills or for special solutions*
- *especially useful when the need arises to frequently change the hole centre distances*
- *broad range of models for different requirements*

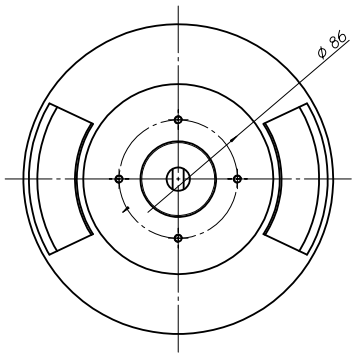
The following versions are in stock:

- *series T-TS with round base for making up to 12 holes; max drilling capacity dia. 22 mm, minimum centre distance 15 mm, max centre distance 350 mm*
- *series TL with linear base for making up to 12 holes; max drilling capacity dia. 22 mm, minimum centre distance 17 mm, max centre distance 610 mm*
- *series TR with rectangular base for making up to 16 holes; max drilling capacity dia. 22 mm, minimum centre distance 32 mm, max centre distance 395x345 mm*
- *series TM-TRM with round and rectangular base for making up to 26 holes; thanks to their technical features, they are able to execute a series of different drilling and tapping patterns on machines of adequate power.*

T2

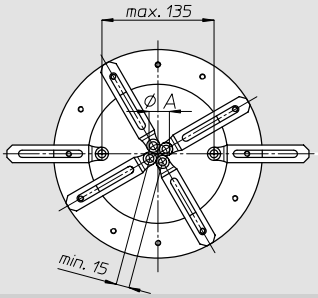
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





08	N° PRESE DI MOTO *NR. SPINDLE DRIVES*
1-1	RAPPORTO *RATIO*
4	CAPACITÀ DI FORATURA *DRILLING CAPACITY*
M4	MASCHIATURA *TAPPING*
P: ER8	ATTACCO UTENSILE *TYPE OF SPINDLE*
3,25 KG	PESO GRUPPO TESTA *HEAD WEIGHT*
0,3 KG	PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*

Ø A	15	17,5	21,5	26	30	35	39,5
N° MANDRINI *N° SPINDLES*	2	3	4	5	6	7	8



AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
T2

08 — PRESE DI MOTO *DRIVES*

R — PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*

CODICE MANDRINO
SPINDLE CODE

R — TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*

4 — CAPACITÀ FORATURA *DRILLING CAPACITY*

P — ER 8

L — SERIE LEGGERA *LIGHT SERIE*

F — ASTUCCIO *FIXED SPINDLE*

T4

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO
NR. SPINDLE DRIVES
08

RAPPORTO
RATIO
1-1

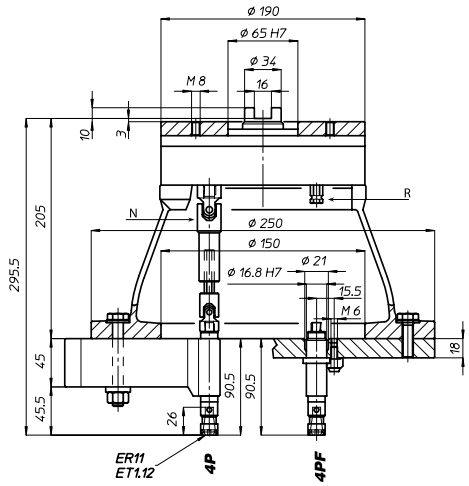
CAPACITÀ DI FORATURA
DRILLING CAPACITY
acciaio / *still* R=500 N/mm² 4
ghisa / *cast iron*: GG25 5

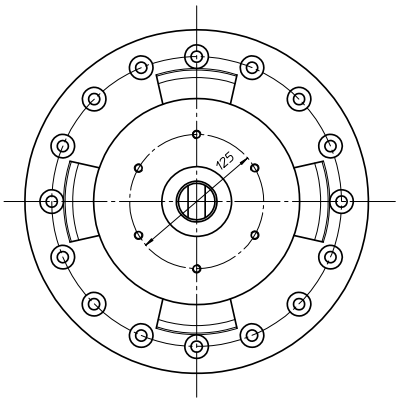
MASCHIATURA
TAPPING
M4

ATTACCO UTENSILE
TYPE OF SPINDLE
P: ER11

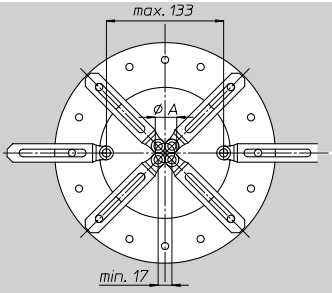
PESO GRUPPO TESTA
HEAD WEIGHT
9,5 KG

PESO GRUPPO MANDRINO
SPINDLE-SET WEIGHT
1 KG





ø A	20	24,5	29,5	34,5	39,5	45
N° MANDRINI *N° SPINDLES*	3	4	5	6	7	8



AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
T4

08
PRESE DI MOTO
DRIVES

N
PRESA DI MOTO NORMALE
STANDARD DRIVE

R
PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION

TRASMISSIONE NORMALE
STANDARD TRASMISSION
N

CAPACITÀ FORATURA
DRILLING CAPACITY
4

PINZA
P

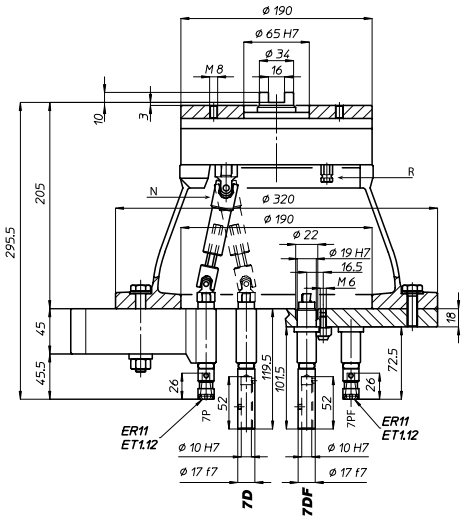
F
ASTUCCIO
FIXED SPINDLE

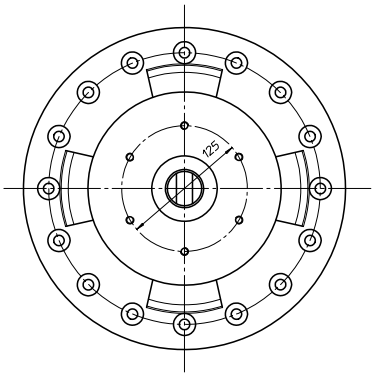
TRASMISSIONE ATTACCO RAPIDO
TRASMISSION QUICK CONNECTION
R

CODICE MANDRINO
SPINDLE CODE

T7

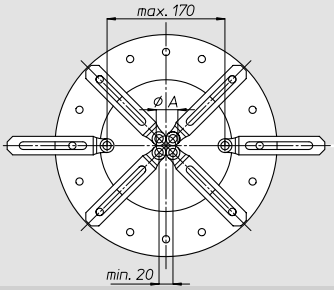
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





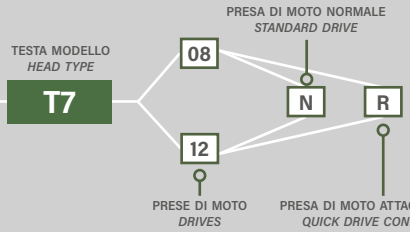
08-12	N° PRESE DI MOTO *NR. SPINDLE DRIVES*
1-1	RAPPORTO *RATIO*
acciaio / *still* R=500 N/mm² 6 **ghisa** / *cast iron*: GG25 7	CAPACITÀ DI FORATURA *DRILLING CAPACITY*
M5	MASCHIATURA *TAPPING*
D: DIN 55058 Ø10 P: ER11	ATTACCO UTENSILE *TYPE OF SPINDLE*
10 KG	PESO GRUPPO TESTA *HEAD WEIGHT*
1,1 KG	PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*

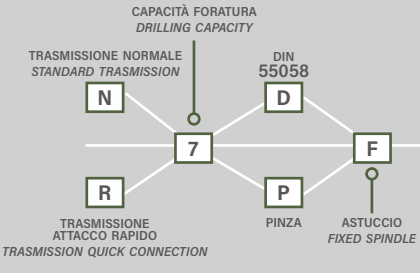
Ø A	23,5	28,5	34,5	40,5	46,5	52,5	59	65,5	71,5	77,5
N° MANDRINI *N° SPINDLES*	3	4	5	6	7	8	9	10	11	12



AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE





CODICE MANDRINO
SPINDLE CODE

T10

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO
NR. SPINDLE DRIVES
08-12

RAPPORTO
RATIO
1-1

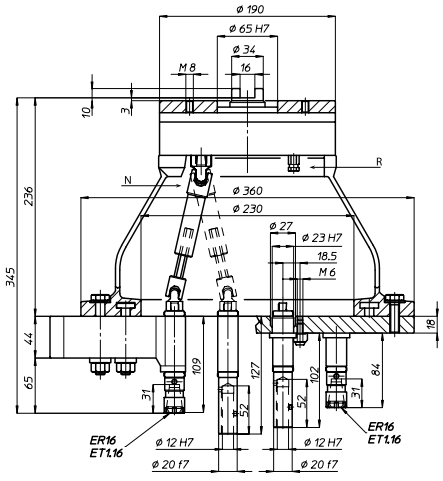
CAPACITÀ DI FORATURA
DRILLING CAPACITY
acciaio / *still* R=500 N/mm² 8
ghisa / *cast iron*: GG25 10

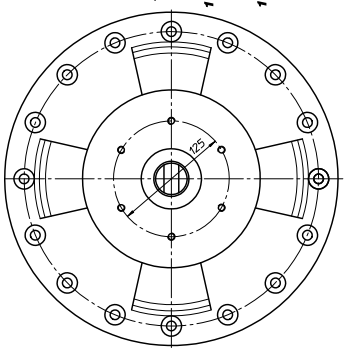
MASCHIATURA
TAPPING
M6

ATTACCO UTENSILE
TYPE OF SPINDLE
D: DIN 55058 Ø12
P: ER16

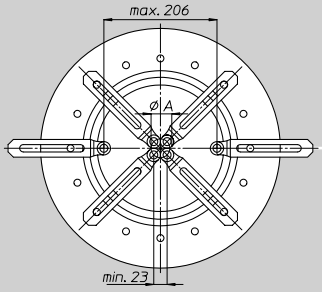
PESO GRUPPO TESTA
HEAD WEIGHT
12 KG

PESO GRUPPO MANDRINO
SPINDLE-SET WEIGHT
1,5 KG





Ø A	27	33	39,5	46,5	53,5	60,5	67,5	75	82	89,5
N° MANDRINI *N° SPINDLES*	3	4	5	6	7	8	9	10	11	12



AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
T10

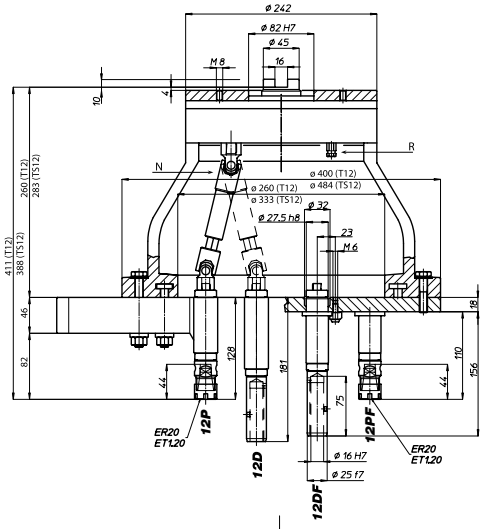
08 — PRESA DI MOTO NORMALE *STANDARD DRIVE*
12 — PRESE DI MOTO *DRIVES*
N — PRESA DI MOTO NORMALE *STANDARD DRIVE*
R — PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*

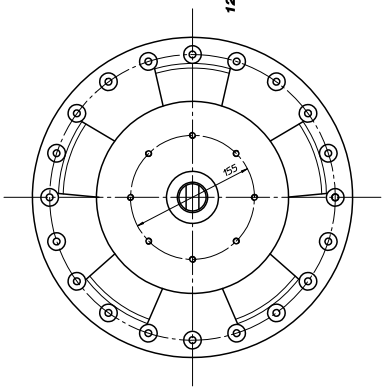
CAPACITÀ FORATURA *DRILLING CAPACITY*
TRASMISSIONE NORMALE *STANDARD TRASMISSION*
N — 10/22 — R
TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*
DIN 55058
D — F — P
PINZA
ASTUCCIO *FIXED SPINDLE*

CODICE MANDRINO
SPINDLE CODE

T12-TS12

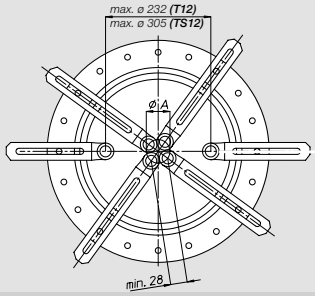
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





08-12	N° PRESE DI MOTO *NR. SPINDLE DRIVES*
1-1	RAPPORTO *RATIO*
acciaio / *still* R=500 N/mm² 10 ghisa / *cast iron*: GG25 12	CAPACITÀ DI FORATURA *DRILLING CAPACITY*
M8	MASCHIATURA *TAPPING*
D: DIN 55058 Ø16 P: ER20	ATTACCO UTENSILE *TYPE OF SPINDLE*
T12: 20 KG TS12:22,5 KG	PESO GRUPPO TESTA *HEAD WEIGHT*
2 KG	PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*

Ø A	33	40	48	56,5	65	74	82,5	91	100	108,5
N° MANDRINI *N° SPINDLES*	3	4	5	6	7	8	9	10	11	12



AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE

- T12
- TS12

PRESA DI MOTO NORMALE
STANDARD DRIVE

PRESE DI MOTO
DRIVES

- 08
- 12

- N
- R

PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION

CAPACITÀ FORATURA
DRILLING CAPACITY

TRASMISSIONE NORMALE
STANDARD TRASMISSION

TRASMISSIONE ATTACCO RAPIDO
TRASMISSION QUICK CONNECTION

- N
- R

12

DIN 55058

D

F

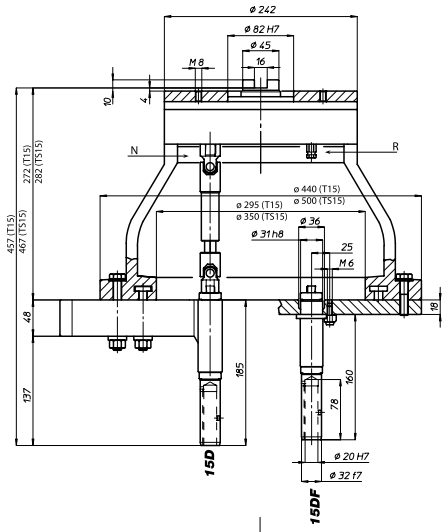
ASTUCCIO
FIXED SPINDLE

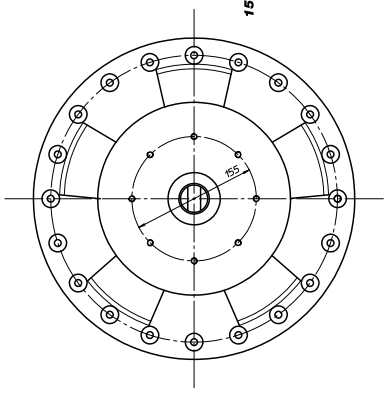
CODICE MANDRINO
SPINDLE CODE

T15-TS15

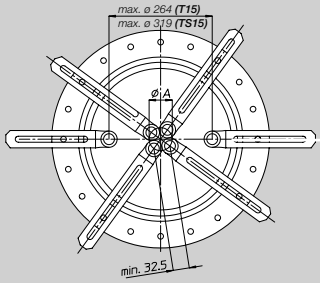
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO *NR. SPINDLE DRIVES*	08-12
RAPPORTO *RATIO*	1-1
CAPACITÀ DI FORATURA *DRILLING CAPACITY*	**acciaio** / *still* R=500 N/mm² 13 **ghisa** / *cast iron*: GG25 15
MASCHIATURA *TAPPING*	M12
ATTACCO UTENSILE *TYPE OF SPINDLE*	D: DIN 55058 Ø20
PESO GRUPPO TESTA *HEAD WEIGHT*	T15: 21,5 KG TS15: 24,5 KG
PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*	2,6 KG





Ø A	38	46,5	56	65,5	75,5	85,5	95,5	105,5	116	126
N° MANDRINI *N° SPINDLES*	3	4	5	6	7	8	9	10	11	12



AREA DI LAVORO *WORKING AREA*

CODICE TESTA *HEAD CODE*

TESTA MODELLO *HEAD TYPE*: **T15** / **TS15**

PRESE DI MOTO *DRIVES*: 08 / 12

PRESA DI MOTO NORMALE *STANDARD DRIVE*: N

PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*: R

TRASMISSIONE NORMALE *STANDARD TRASMISSION*: N

TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*: R

15

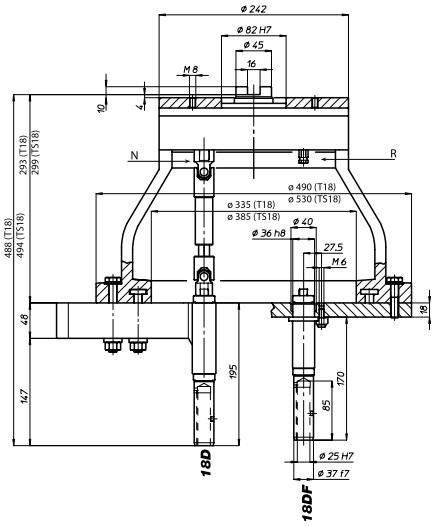
DIN 55058 D

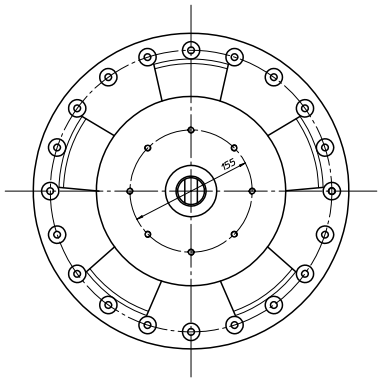
ASTUCCIO *FIXED SPINDLE*: F

CODICE MANDRINO *SPINDLE CODE*

T18-TS18

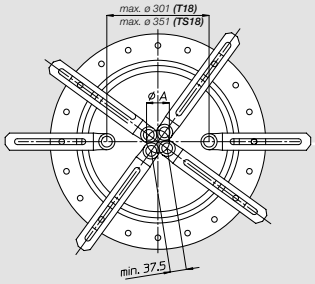
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





08	N° PRESE DI MOTO *NR. SPINDLE DRIVES*
1-1	RAPPORTO *RATIO*
acciaio / *still* R=500 N/mm² 16 ghisa / *cast iron*: GG25 18	CAPACITÀ DI FORATURA *DRILLING CAPACITY*
M14	MASCHIATURA *TAPPING*
D: DIN 55058 Ø25	ATTACCO UTENSILE *TYPE OF SPINDLE*
T18: 25 KG TS18:26,5 KG	PESO GRUPPO TESTA *HEAD WEIGHT*
3,3 KG	PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*

Ø A	44	53,5	64,5	75,5	87	98,5
N° MANDRINI *N° SPINDLES*	3	4	5	6	7	8



AREA DI LAVORO *WORKING AREA*

CODICE TESTA *HEAD CODE*

TESTA MODELLO *HEAD TYPE*: **T18** / **TS18**

08 — PRESE DI MOTO *DRIVES*

PRESA DI MOTO NORMALE *STANDARD DRIVE*: N

PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*: R

CAPACITÀ FORATURA *DRILLING CAPACITY*: 18

TRASMISSIONE NORMALE *STANDARD TRASMISSION*: N

TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*: R

DIN 55058: D

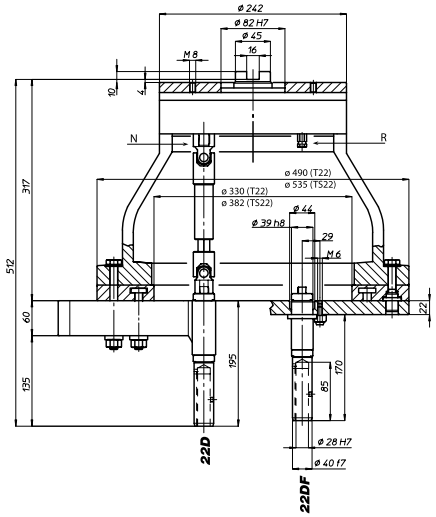
ASTUCCIO *FIXED SPINDLE*: F

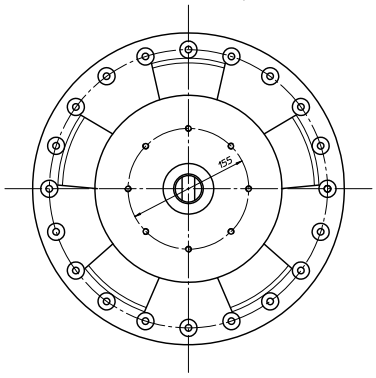
CODICE MANDRINO *SPINDLE CODE*

T22-TS22

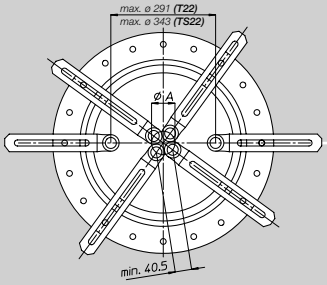
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO *NR. SPINDLE DRIVES*	08
RAPPORTO *RATIO*	1-1
CAPACITÀ DI FORATURA *DRILLING CAPACITY*	**acciaio** / *still* R=500 N/mm² 20 **ghisa** / *cast iron*: GG25 22
MASCHIATURA *TAPPING*	M16
ATTACCO UTENSILE *TYPE OF SPINDLE*	D: DIN 55058 Ø28
PESO GRUPPO TESTA *HEAD WEIGHT*	T15: 38,5 KG TS15: 41 KG
PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*	5,5 KG





Ø A	47,5	58	69,5	81,5	94	106,5
N° MANDRINI *N° SPINDLES*	3	4	5	6	7	8



AREA DI LAVORO *WORKING AREA*

CODICE TESTA *HEAD CODE*

TESTA MODELLO *HEAD TYPE*: **T22** / **TS22**

08 — PRESE DI MOTO *DRIVES*

PRESA DI MOTO NORMALE *STANDARD DRIVE*: **N**

PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*: **R**

CAPACITÀ FORATURA *DRILLING CAPACITY*

TRASMISSIONE NORMALE *STANDARD TRASMISSION*: **N**

TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*: **R**

22

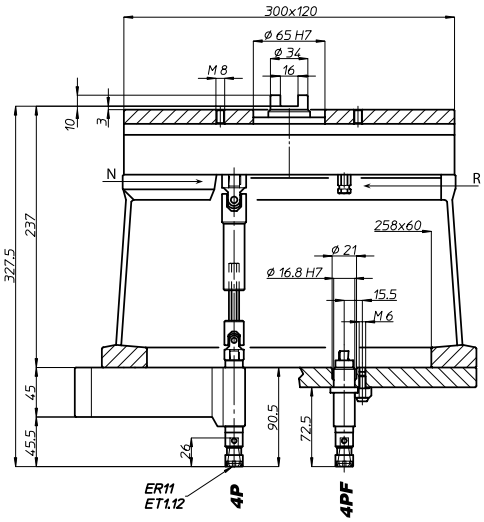
DIN 55058 **D**

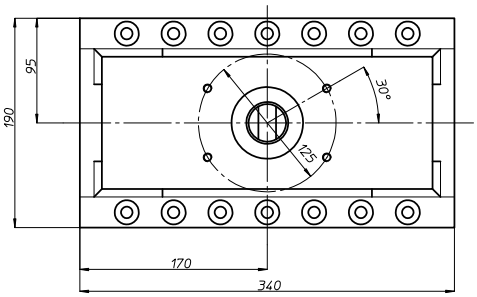
F — ASTUCCIO *FIXED SPINDLE*

CODICE MANDRINO *SPINDLE CODE*

TL20/4

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





08 — N° PRESE DI MOTO / *NR. SPINDLE DRIVES*

1-1 — RAPPORTO / *RATIO*

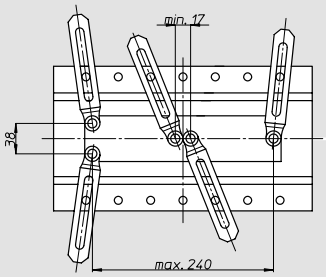
acciaio / *still* R=500 N/mm² 4
ghisa / *cast iron*: GG25 5
— CAPACITÀ DI FORATURA / *DRILLING CAPACITY*

M4 — MASCHIATURA / *TAPPING*

P: ER11 — ATTACCO UTENSILE / *TYPE OF SPINDLE*

13,5 KG — PESO GRUPPO TESTA / *HEAD WEIGHT*

1 KG — PESO GRUPPO MANDRINO / *SPINDLE-SET WEIGHT*



AREA DI LAVORO / *WORKING AREA*

CODICE TESTA / *HEAD CODE*

TESTA MODELLO / *HEAD TYPE*: **TL20/4**

08 — PRESE DI MOTO / *DRIVES*

PRESA DI MOTO NORMALE / *STANDARD DRIVE*: N

PRESA DI MOTO ATTACCO RAPIDO / *QUICK DRIVE CONNECTION*: R

CAPACITÀ FORATURA / *DRILLING CAPACITY*: 4

TRASMISSIONE NORMALE / *STANDARD TRASMISSION*: N

TRASMISSIONE ATTACCO RAPIDO / *TRASMISSION QUICK CONNECTION*: R

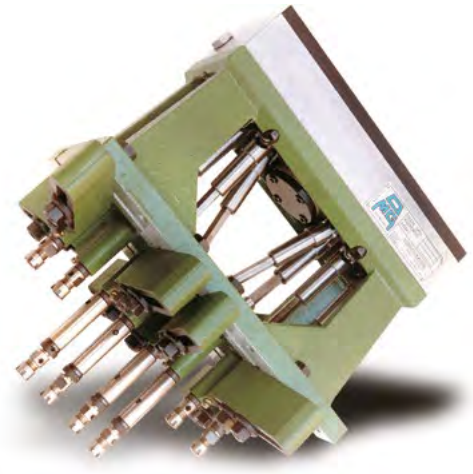
PINZA: P

ASTUCCIO / *FIXED SPINDLE*: F

CODICE MANDRINO / *SPINDLE CODE*

TL20/6

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*



N° PRESE DI MOTO
NR. SPINDLE DRIVES
08

RAPPORTO
RATIO
1-1

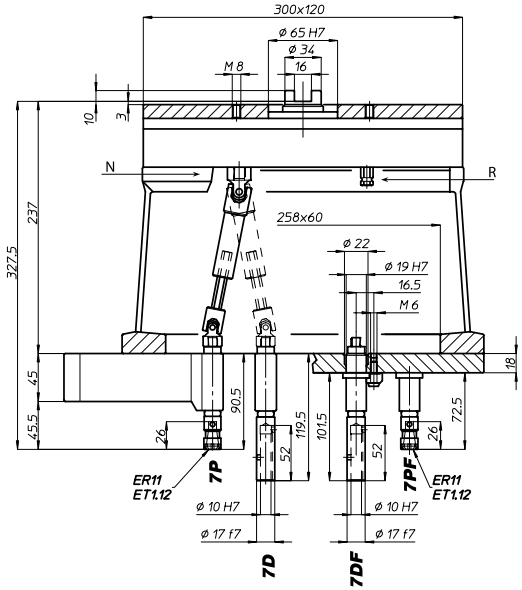
CAPACITÀ DI FORATURA
DRILLING CAPACITY
acciaio / *still* R=500 N/mm² 6
ghisa / *cast iron*: GG25 7

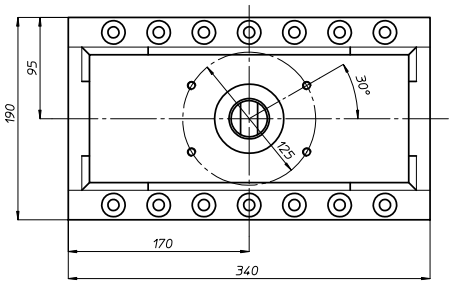
MASCHIATURA
TAPPING
M5

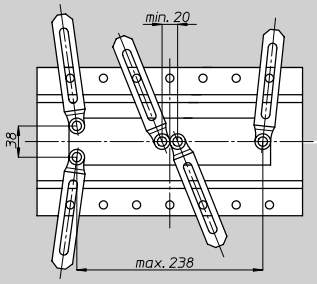
ATTACCO UTENSILE
TYPE OF SPINDLE
D: DIN 55058 Ø10
P: ER11

PESO GRUPPO TESTA
HEAD WEIGHT
13,5 KG

PESO GRUPPO MANDRINO
SPINDLE-SET WEIGHT
1 KG







AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
TL20/6

08
PRESE DI MOTO
DRIVES

PRESA DI MOTO NORMALE
STANDARD DRIVE
N

R
PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION

CAPACITÀ FORATURA
DRILLING CAPACITY
7

TRASMISSIONE NORMALE
STANDARD TRASMISSION
N

R
TRASMISSIONE ATTACCO RAPIDO
TRASMISSION QUICK CONNECTION

DIN 55058
D

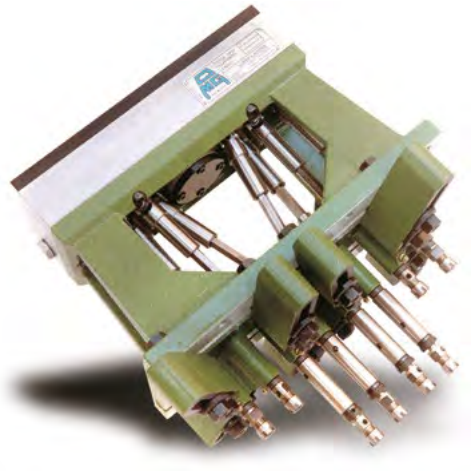
P
PINZA

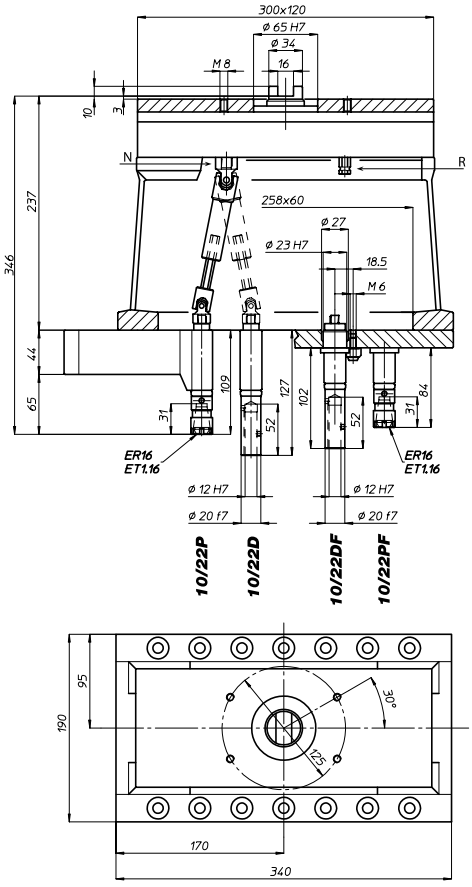
F
ASTUCCIO
FIXED SPINDLE

CODICE MANDRINO
SPINDLE CODE

TL20/8

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





08 — N° PRESE DI MOTO / *NR. SPINDLE DRIVES*

1-1 — RAPPORTO / *RATIO*

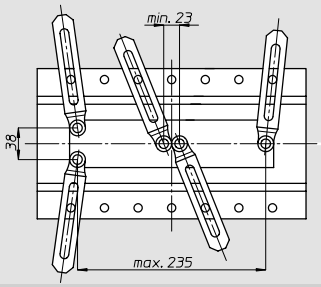
acciaio / *still* R=500 N/mm² 8
ghisa / *cast iron*: GG25 10
— CAPACITÀ DI FORATURA / *DRILLING CAPACITY*

M6 — MASCHIATURA / *TAPPING*

D: DIN 55058 Ø12
P: ER16
— ATTACCO UTENSILE / *TYPE OF SPINDLE*

13,5 KG — PESO GRUPPO TESTA / *HEAD WEIGHT*

1,5 KG — PESO GRUPPO MANDRINO / *SPINDLE-SET WEIGHT*



AREA DI LAVORO / *WORKING AREA*

CODICE TESTA / *HEAD CODE*

TESTA MODELLO / *HEAD TYPE*: **TL20/8**

- 08 — PRESE DI MOTO / *DRIVES*
  - N — PRESA DI MOTO NORMALE / *STANDARD DRIVE*
  - R — PRESA DI MOTO ATTACCO RAPIDO / *QUICK DRIVE CONNECTION*

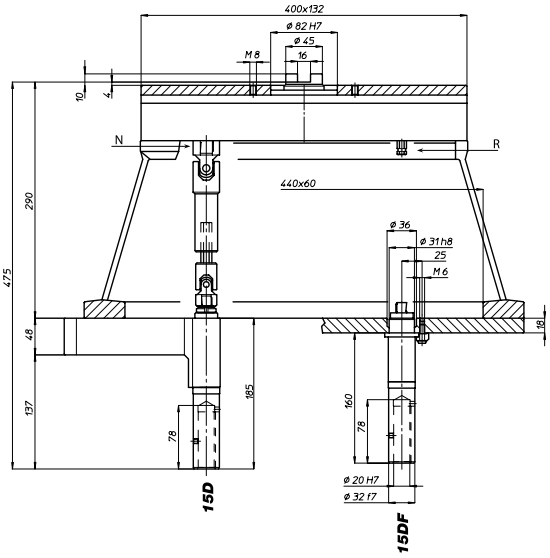
- 10/22 — CAPACITÀ FORATURA / *DRILLING CAPACITY*
  - N — TRASMISSIONE NORMALE / *STANDARD TRASMISSION*
  - R — TRASMISSIONE ATTACCO RAPIDO / *TRASMISSION QUICK CONNECTION*
- F — ASTUCCIO / *FIXED SPINDLE*
  - D — DIN 55058
  - P — PINZA

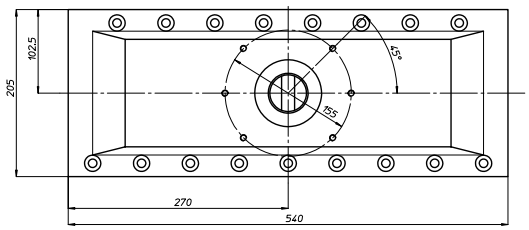
CODICE MANDRINO / *SPINDLE CODE*

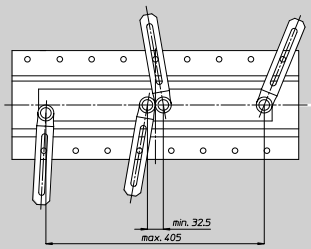
TL40/12

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO *NR. SPINDLE DRIVES*	08
RAPPORTO *RATIO*	1-1
CAPACITÀ DI FORATURA *DRILLING CAPACITY*	**acciaio** / *still* R=500 N/mm² 13 **ghisa** / *cast iron*: GG25 15
MASCHIATURA *TAPPING*	M12
ATTACCO UTENSILE *TYPE OF SPINDLE*	D: DIN 55058 Ø20
PESO GRUPPO TESTA *HEAD WEIGHT*	25 KG
PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*	2,5 KG







AREA DI LAVORO
WORKING AREA

CODICE TESTA *HEAD CODE*

TESTA MODELLO *HEAD TYPE* **TL40/12**

08 — PRESE DI MOTO *DRIVES*

PRESA DI MOTO NORMALE *STANDARD DRIVE* — N

PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION* — R

CAPACITÀ FORATURA *DRILLING CAPACITY*

TRASMISSIONE NORMALE *STANDARD TRASMISSION* — N

TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION* — R

15

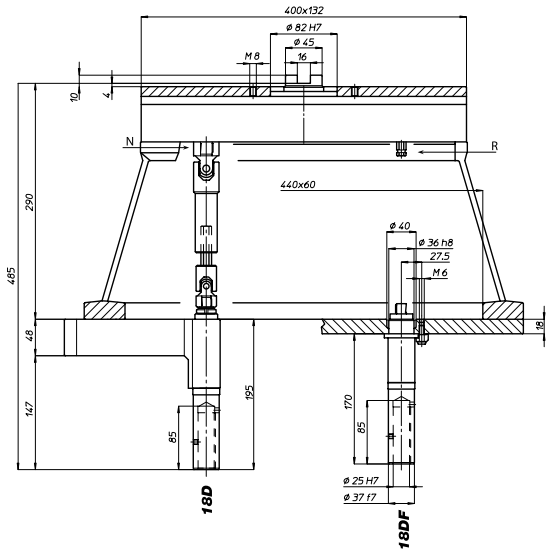
DIN 55058 D

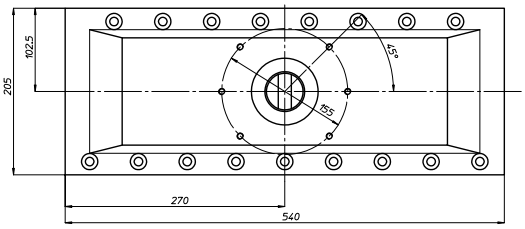
F — ASTUCCIO *FIXED SPINDLE*

CODICE MANDRINO *SPINDLE CODE*

TL40/16

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





08 — N° PRESE DI MOTO
NR. SPINDLE DRIVES

1-1 — RAPPORTO
RATIO

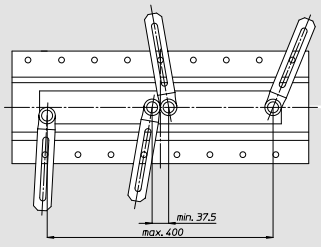
acciaio / *still* R=500 N/mm² 16
ghisa / *cast iron*: GG25 18
CAPACITÀ DI FORATURA
DRILLING CAPACITY

M14 — MASCHIATURA
TAPPING

D: DIN 55058 Ø25 — ATTACCO UTENSILE
TYPE OF SPINDLE

26 KG — PESO GRUPPO TESTA
HEAD WEIGHT

2,5 KG — PESO GRUPPO MANDRINO
SPINDLE-SET WEIGHT



AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
TL40/16

08 — PRESE DI MOTO
DRIVES

N — PRESA DI MOTO NORMALE
STANDARD DRIVE

R — PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION

CAPACITÀ FORATURA
DRILLING CAPACITY

TRASMISSIONE NORMALE
STANDARD TRASMISSION

N

18

R

TRASMISSIONE ATTACCO RAPIDO
TRASMISSION QUICK CONNECTION

DIN 55058

D

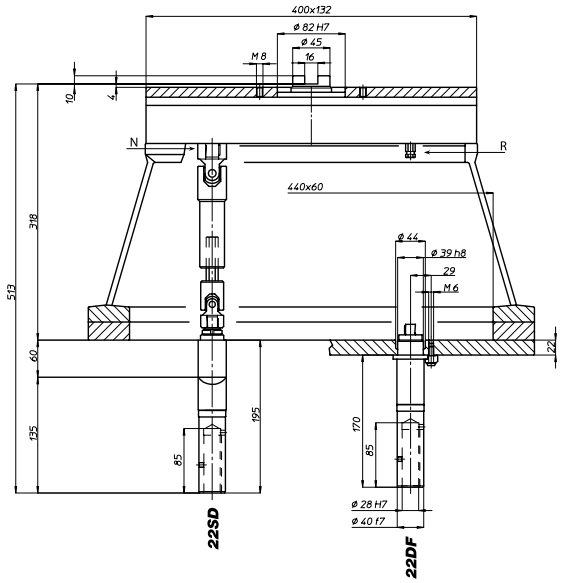
F — ASTUCCIO
FIXED SPINDLE

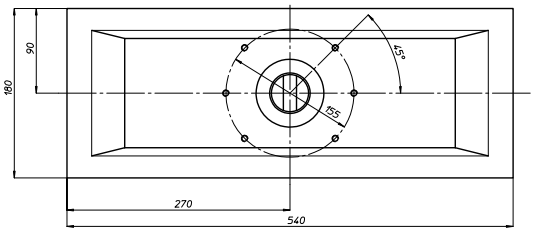
CODICE MANDRINO
SPINDLE CODE

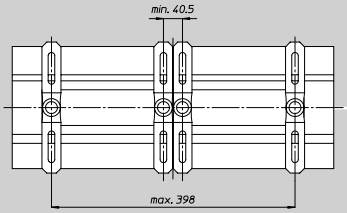
TL40/22

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO *NR. SPINDLE DRIVES*	06
RAPPORTO *RATIO*	1-1
CAPACITÀ DI FORATURA *DRILLING CAPACITY*	**acciaio** / *still* R=500 N/mm² 20 **ghisa** / *cast iron*: GG25 22
MASCHIATURA *TAPPING*	M16
ATTACCO UTENSILE *TYPE OF SPINDLE*	D: DIN 55058 Ø28
PESO GRUPPO TESTA *HEAD WEIGHT*	37 KG
PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*	5 KG







AREA DI LAVORO
WORKING AREA

CODICE TESTA *HEAD CODE*

TESTA MODELLO *HEAD TYPE* **TL40/22** — 06

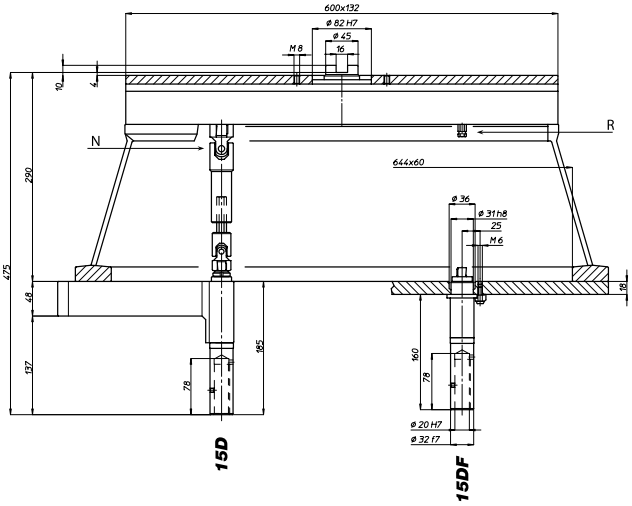
- 06 — PRESE DI MOTO *DRIVES*
- N — PRESA DI MOTO NORMALE *STANDARD DRIVE*
- R — PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*

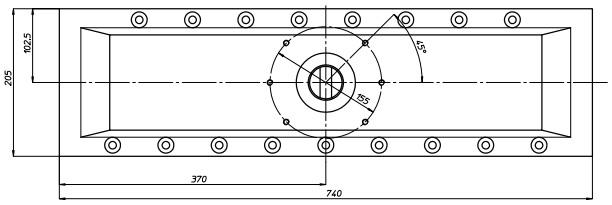
CODICE MANDRINO *SPINDLE CODE*

- N — TRASMISSIONE NORMALE *STANDARD TRASMISSION*
- R — TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*
- 22 — CAPACITÀ FORATURA *DRILLING CAPACITY*
- SD — DIN 55058
- F — ASTUCCIO *FIXED SPINDLE*

TL60/12

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





08-12 — N° PRESE DI MOTO / *NR. SPINDLE DRIVES*

1-1 — RAPPORTO / *RATIO*

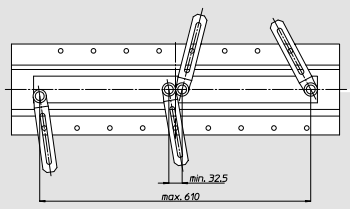
acciaio / *still* R=500 N/mm² 13
ghisa / *cast iron*: GG25 15
— CAPACITÀ DI FORATURA / *DRILLING CAPACITY*

M12 — MASCHIATURA / *TAPPING*

D: DIN 55058 Ø20 — ATTACCO UTENSILE / *TYPE OF SPINDLE*

34,5 KG — PESO GRUPPO TESTA / *HEAD WEIGHT*

2,5 KG — PESO GRUPPO MANDRINO / *SPINDLE-SET WEIGHT*



AREA DI LAVORO / *WORKING AREA*

CODICE TESTA / *HEAD CODE*

TESTA MODELLO / *HEAD TYPE*: **T60/12**

- 08 — PRESA DI MOTO NORMALE / *STANDARD DRIVE*
- 12 — PRESE DI MOTO / *DRIVES*
- N — PRESA DI MOTO NORMALE / *STANDARD DRIVE*
- R — PRESA DI MOTO ATTACCO RAPIDO / *QUICK DRIVE CONNECTION*

CAPACITÀ FORATURA / *DRILLING CAPACITY*

- N — TRASMISSIONE NORMALE / *STANDARD TRASMISSION*
- R — TRASMISSIONE ATTACCO RAPIDO / *TRASMISSION QUICK CONNECTION*
- 15
- DIN 55058 D
- F — ASTUCCIO / *FIXED SPINDLE*

CODICE MANDRINO / *SPINDLE CODE*

TL60/16

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO
NR. SPINDLE DRIVES
08-12

RAPPORTO
RATIO
1-1

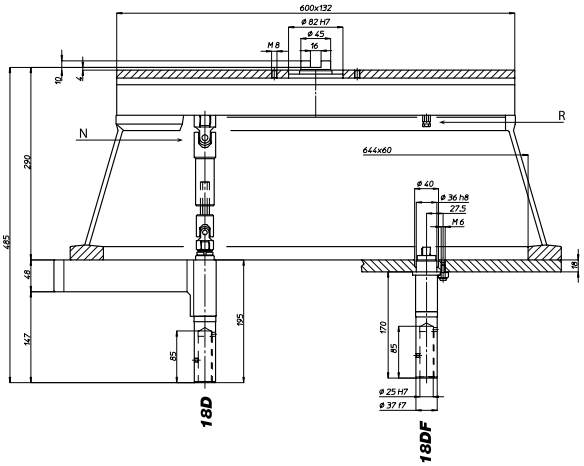
CAPACITÀ DI FORATURA
DRILLING CAPACITY
acciaio / *still* R=500 N/mm² 16
ghisa / *cast iron*: GG25 18

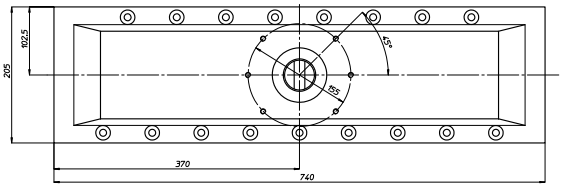
MASCHIATURA
TAPPING
M14

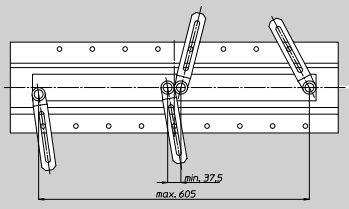
ATTACCO UTENSILE
TYPE OF SPINDLE
D: DIN 55058 Ø25

PESO GRUPPO TESTA
HEAD WEIGHT
36 KG

PESO GRUPPO MANDRINO
SPINDLE-SET WEIGHT
2,5 KG







AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
T60/16

PRESE DI MOTO
DRIVES
08
12

PRESA DI MOTO NORMALE
STANDARD DRIVE
N

PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION
R

CODICE MANDRINO
SPINDLE CODE

TRASMISSIONE NORMALE
STANDARD TRASMISSION
N

TRASMISSIONE ATTACCO RAPIDO
TRASMISSION QUICK CONNECTION
R

CAPACITÀ FORATURA
DRILLING CAPACITY
18

DIN 55058
D

ASTUCCIO
FIXED SPINDLE
F

TL60/22

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

08 — N° PRESE DI MOTO / *NR. SPINDLE DRIVES*

1-1 — RAPPORTO / *RATIO*

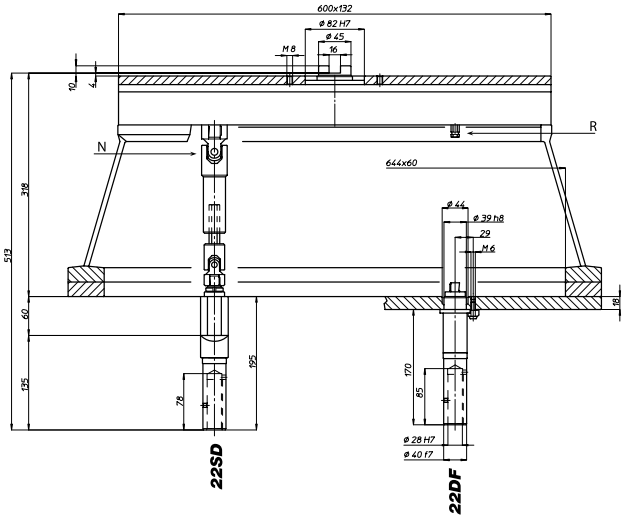
acciaio / *still* R=500 N/mm² 20
ghisa / *cast iron*: GG25 22
— CAPACITÀ DI FORATURA / *DRILLING CAPACITY*

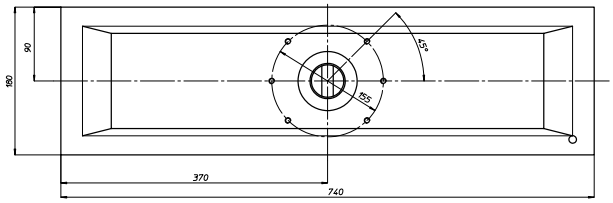
M16 — MASCHIATURA / *TAPPING*

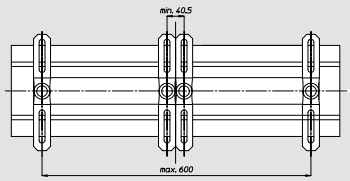
D: DIN 55058 Ø28 — ATTACCO UTENSILE / *TYPE OF SPINDLE*

47,5 KG — PESO GRUPPO TESTA / *HEAD WEIGHT*

5 KG — PESO GRUPPO MANDRINO / *SPINDLE-SET WEIGHT*







AREA DI LAVORO / *WORKING AREA*

CODICE TESTA / *HEAD CODE*

TESTA MODELLO / *HEAD TYPE*: **T60/22**

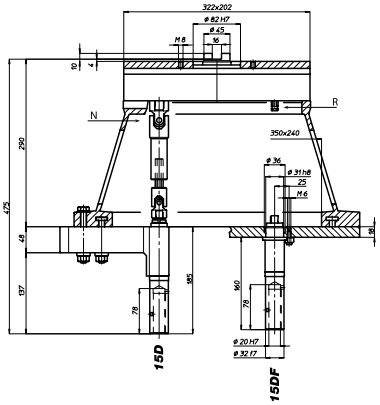
- 08 — PRESE DI MOTO / *DRIVES*
  - N — PRESA DI MOTO NORMALE / *STANDARD DRIVE*
  - R — PRESA DI MOTO ATTACCO RAPIDO / *QUICK DRIVE CONNECTION*
- 22 — CAPACITÀ FORATURA / *DRILLING CAPACITY*
  - N — TRASMISSIONE NORMALE / *STANDARD TRASMISSION*
  - R — TRASMISSIONE ATTACCO RAPIDO / *TRASMISSION QUICK CONNECTION*
- SD — DIN 55058
- F — ASTUCCIO / *FIXED SPINDLE*

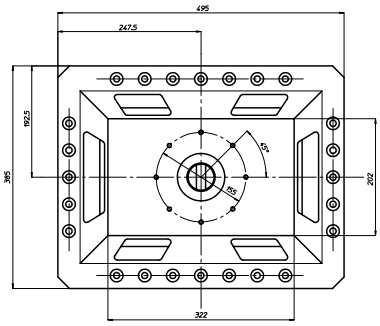
CODICE MANDRINO / *SPINDLE CODE*

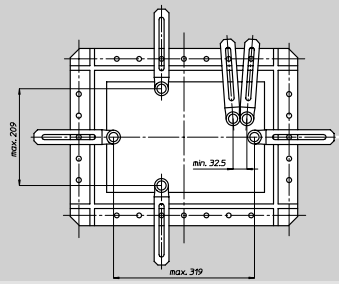
TR2/12

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO *NR. SPINDLE DRIVES*	08-12
RAPPORTO *RATIO*	1-1
CAPACITÀ DI FORATURA *DRILLING CAPACITY*	**acciaio** / *still* R=500 N/mm² 13 **ghisa** / *cast iron*: GG25 15
MASCHIATURA *TAPPING*	M12
ATTACCO UTENSILE *TYPE OF SPINDLE*	D: DIN 55058 Ø20
PESO GRUPPO TESTA *HEAD WEIGHT*	30 KG
PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*	2,6 KG







AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO *HEAD TYPE*: **TR2/12**

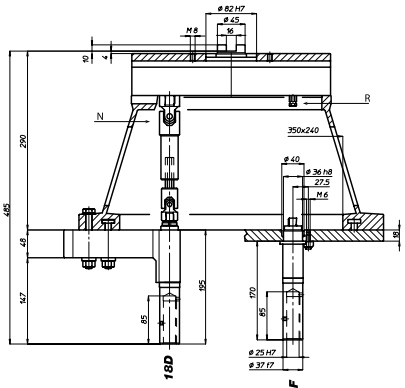
- 08 — PRESE DI MOTO *DRIVES*
- 12 — PRESE DI MOTO *DRIVES*
- N — PRESA DI MOTO NORMALE *STANDARD DRIVE*
- R — PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*

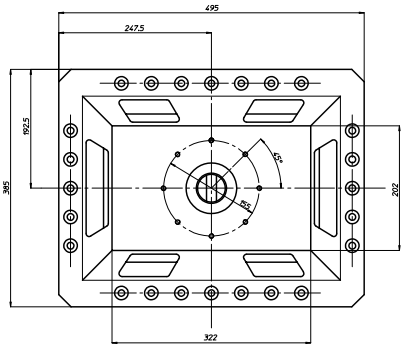
CODICE MANDRINO
SPINDLE CODE

- TRASMISSIONE NORMALE *STANDARD TRASMISSION*: N
- TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*: R
- CAPACITÀ FORATURA *DRILLING CAPACITY*: 15
- DIN 55058: D
- F — ASTUCCIO *FIXED SPINDLE*

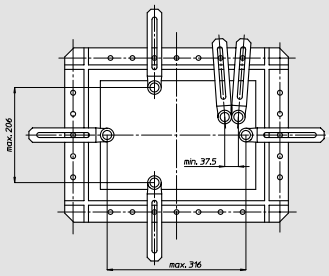
TR2/16

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





10	N° PRESE DI MOTO *NR. SPINDLE DRIVES*
1-1	RAPPORTO *RATIO*
acciaio / *still* R=500 N/mm² 16 ghisa / *cast iron*: GG25 18	CAPACITÀ DI FORATURA *DRILLING CAPACITY*
M14	MASCHIATURA *TAPPING*
D: DIN 55058 Ø25	ATTACCO UTENSILE *TYPE OF SPINDLE*
31 KG	PESO GRUPPO TESTA *HEAD WEIGHT*
3,3 KG	PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*



AREA DI LAVORO *WORKING AREA*

CODICE TESTA *HEAD CODE*

TESTA MODELLO *HEAD TYPE* **TR2/16** — 08 — PRESE DI MOTO *DRIVES*

PRESA DI MOTO NORMALE *STANDARD DRIVE* — N

PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION* — R

CAPACITÀ FORATURA *DRILLING CAPACITY* — 18

TRASMISSIONE NORMALE *STANDARD TRASMISSION* — N

TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION* — R

DIN 55058 — D

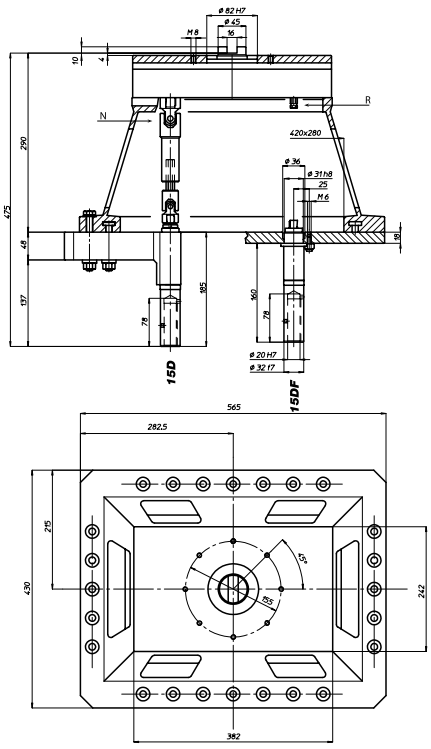
ASTUCCIO *FIXED SPINDLE* — F

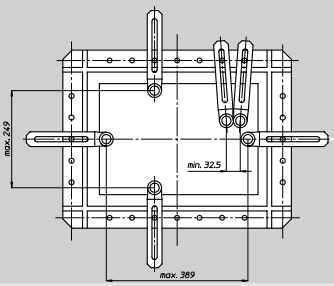
CODICE MANDRINO *SPINDLE CODE*

TR5/12

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO *NR. SPINDLE DRIVES*	08-12-16
RAPPORTO *RATIO*	1-1
CAPACITÀ DI FORATURA *DRILLING CAPACITY*	**acciaio** / *still* R=500 N/mm² 13 **ghisa** / *cast iron*: GG25 15
MASCHIATURA *TAPPING*	M12
ATTACCO UTENSILE *TYPE OF SPINDLE*	D: DIN 55058 Ø20
PESO GRUPPO TESTA *HEAD WEIGHT*	34,5 KG
PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*	2,6 KG





AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
TR5/12

08 / 12 / 16
PRESE DI MOTO
DRIVES

PRESA DI MOTO NORMALE
STANDARD DRIVE
N

R
PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION

TRASMISSIONE NORMALE
STANDARD TRASMISSION
N

TRASMISSIONE ATTACCO RAPIDO
TRASMISSION QUICK CONNECTION
R

CAPACITÀ FORATURA
DRILLING CAPACITY
15

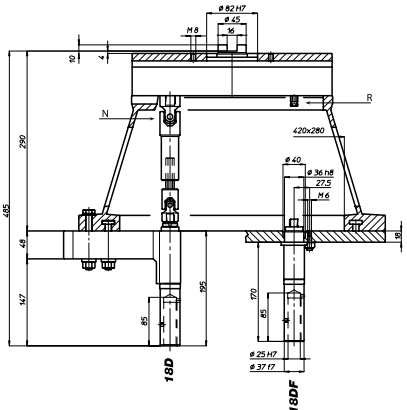
DIN 55058
D

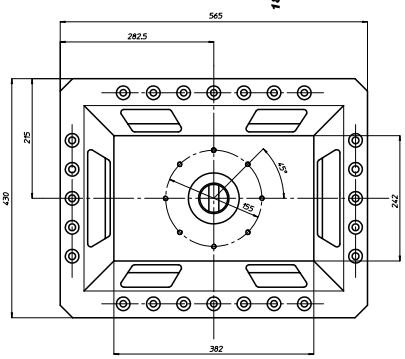
F
ASTUCCIO
FIXED SPINDLE

CODICE MANDRINO
SPINDLE CODE

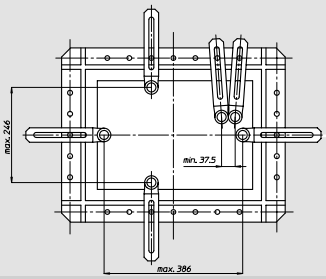
TR5/16

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*





8-12	N° PRESE DI MOTO *NR. SPINDLE DRIVES*
1-1	RAPPORTO *RATIO*
acciaio / *still* R=500 N/mm² 16 ghisa / *cast iron*: GG25 18	CAPACITÀ DI FORATURA *DRILLING CAPACITY*
M14	MASCHIATURA *TAPPING*
D: DIN 55058 Ø25	ATTACCO UTENSILE *TYPE OF SPINDLE*
36 KG	PESO GRUPPO TESTA *HEAD WEIGHT*
3,3 KG	PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*



AREA DI LAVORO *WORKING AREA*

CODICE TESTA *HEAD CODE*

TESTA MODELLO *HEAD TYPE* **TR5/16**

08 / 12 — PRESE DI MOTO *DRIVES*

PRESA DI MOTO NORMALE *STANDARD DRIVE* — N

PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION* — R

CAPACITÀ FORATURA *DRILLING CAPACITY* — 18

TRASMISSIONE NORMALE *STANDARD TRASMISSION* — N

TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION* — R

DIN 55058 — D

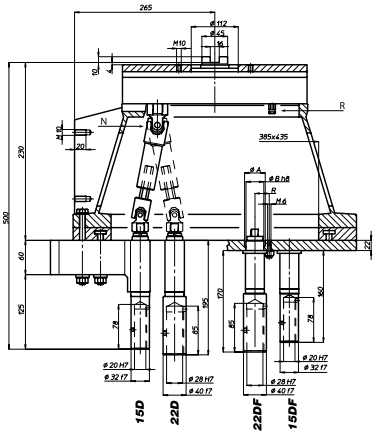
ASTUCCIO *FIXED SPINDLE* — F

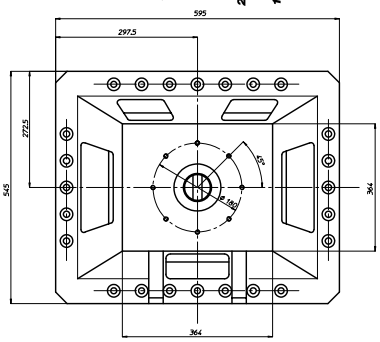
CODICE MANDRINO *SPINDLE CODE*

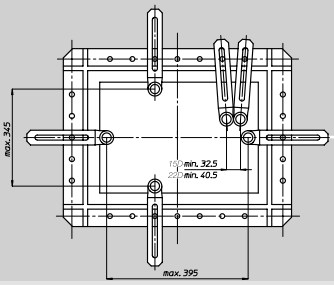
TR8/22

TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

N° PRESE DI MOTO *NR. SPINDLE DRIVES*	12
RAPPORTO *RATIO*	1-1,5
CAPACITÀ DI FORATURA *DRILLING CAPACITY*	**acciaio** / *still* R=500 N/mm² 15D: 13 22D: 20 **ghisa** / *cast iron*: GG25 15D: 15 22D: 22
MASCHIATURA *TAPPING*	15D: M12 22D: M16
ATTACCO UTENSILE *TYPE OF SPINDLE*	D: DIN 55058 Ø20-Ø28
PESO GRUPPO TESTA *HEAD WEIGHT*	86 KG
PESO GRUPPO MANDRINO *SPINDLE-SET WEIGHT*	15D: 4 KG 22D: 5,5 KG







AREA DI LAVORO
WORKING AREA

CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE

TR8/22 — 08 — N / R

- N — PRESA DI MOTO NORMALE *STANDARD DRIVE*
- R — PRESA DI MOTO ATTACCO RAPIDO *QUICK DRIVE CONNECTION*

PRESE DI MOTO *DRIVES*

CAPACITÀ FORATURA *DRILLING CAPACITY*

TRASMISSIONE NORMALE *STANDARD TRASMISSION*: N — 15 / 22

TRASMISSIONE ATTACCO RAPIDO *TRASMISSION QUICK CONNECTION*: R

DIN 55058 — D

F — ASTUCCIO *FIXED SPINDLE*

CODICE MANDRINO
SPINDLE CODE

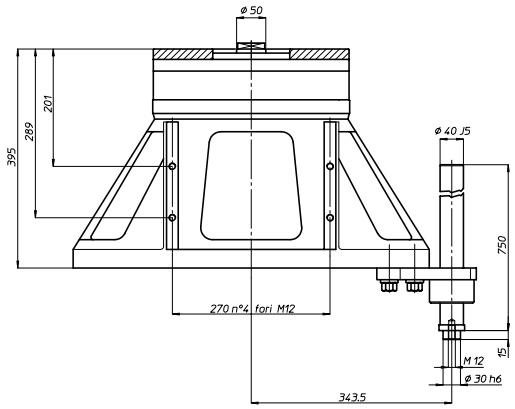
TM400

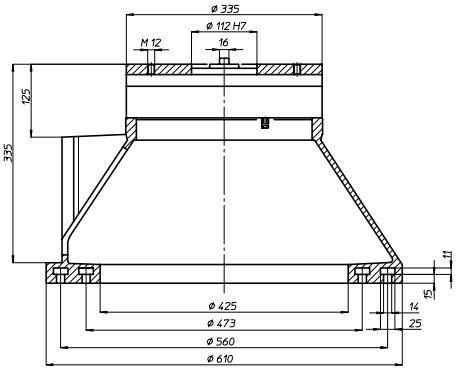
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

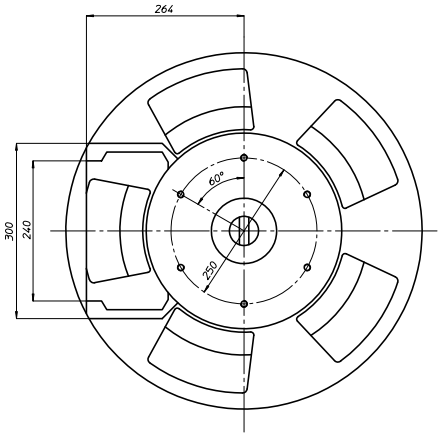
12 — N° PRESE DI MOTO / *NR. SPINDLE DRIVES*

1-1 — RAPPORTO / *RATIO*

105 KG — PESO / *WEIGHT*







CODICE TESTA / *HEAD CODE*

TESTA MODELLO / *HEAD TYPE*: **TM400** — 12 (PRESE DI MOTO / *DRIVES*) — R (PRESA DI MOTO ATTACCO RAPIDO / *QUICK DRIVE CONNECTION*)

Ø 385 — AREA DI LAVORO / *WORKING AREA*

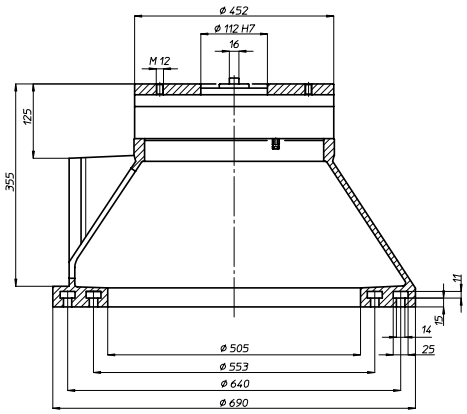
TM500

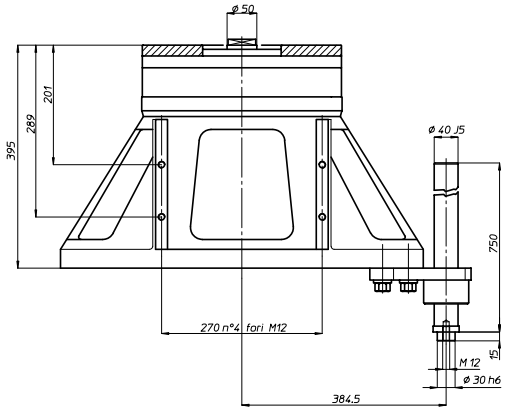
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

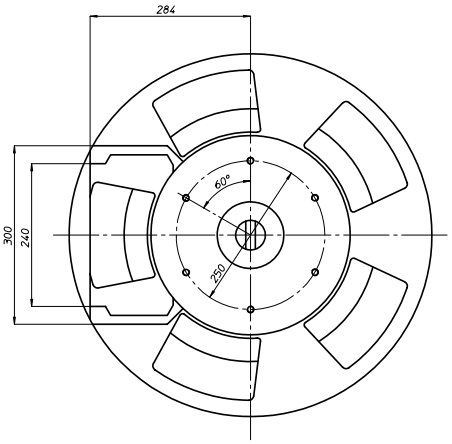
N° PRESE DI MOTO
NR. SPINDLE DRIVES
18

RAPPORTO
RATIO
1-1

PESO
WEIGHT
145 KG







CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
TM500

18
PRESE DI MOTO
DRIVES

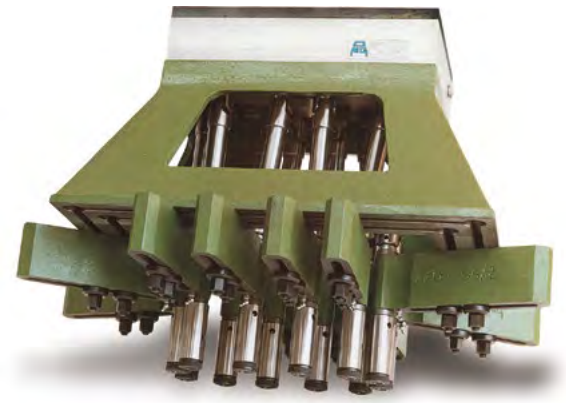
R
PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION

Ø 465

AREA DI LAVORO
WORKING AREA

TRM43

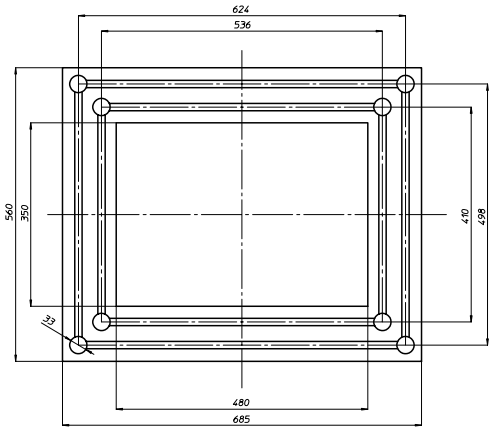
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

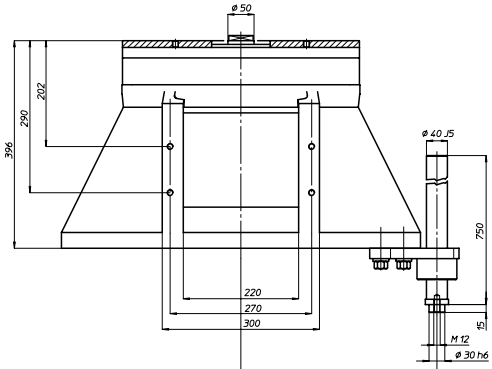


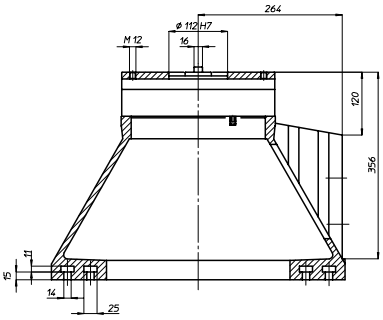
16 — N° PRESE DI MOTO
NR. SPINDLE DRIVES

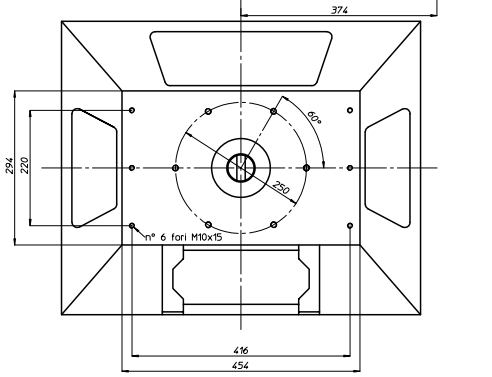
1-1 — RAPPORTO
RATIO

135 KG — PESO
WEIGHT









CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
TRM43

16
PRESE DI MOTO
DRIVES

R
PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION

300x440

AREA DI LAVORO
WORKING AREA

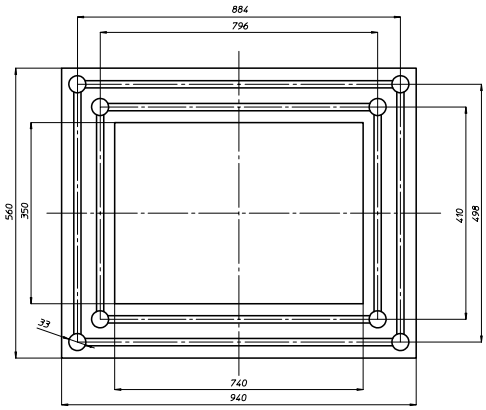
TRM73

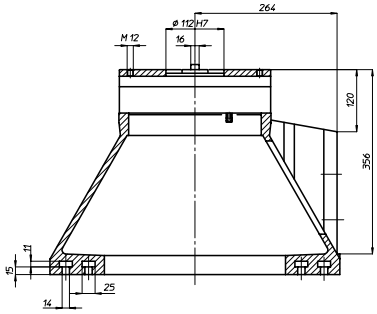
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

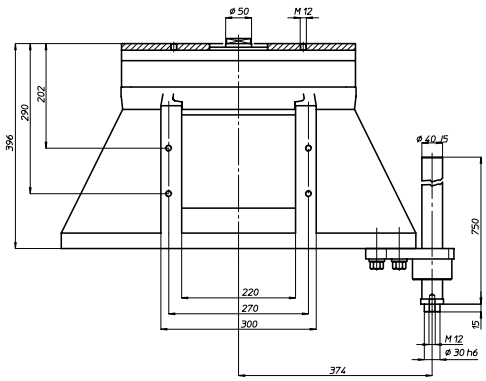
N° PRESE DI MOTO
NR. SPINDLE DRIVES
26

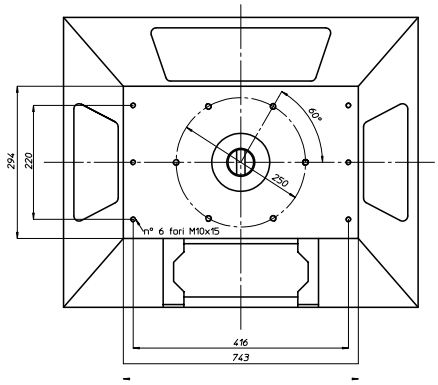
RAPPORTO
RATIO
1-1

PESO
WEIGHT
210 KG









CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
TRM73

26
PRESE DI MOTO
DRIVES

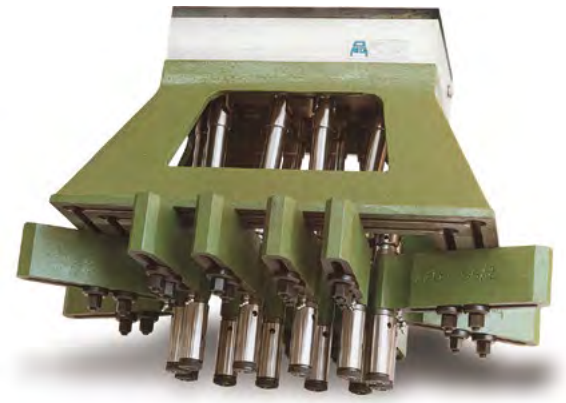
PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION
R

300x700

AREA DI LAVORO
WORKING AREA

TRM43-2P

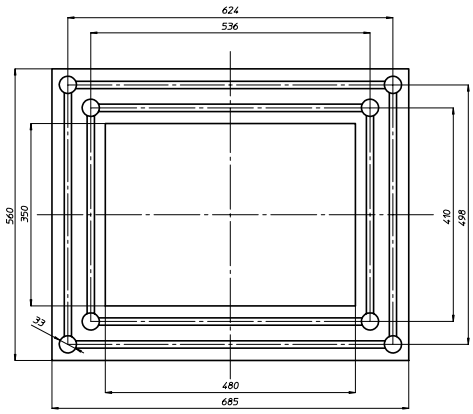
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

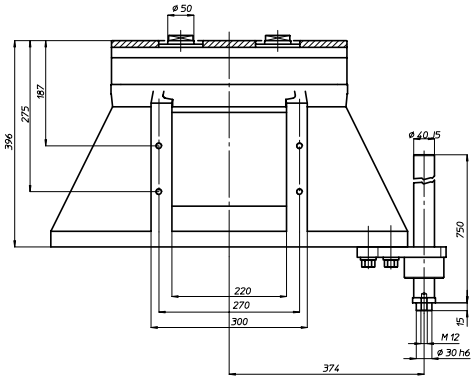


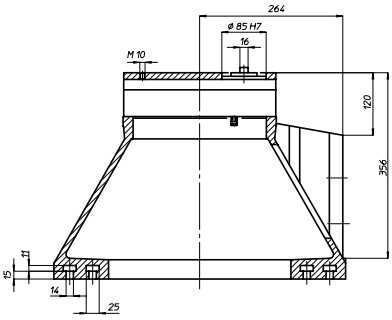
8+8 — N° PRESE DI MOTO / *NR. SPINDLE DRIVES*

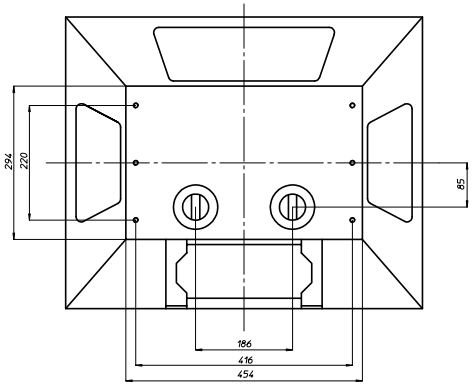
1-1 — RAPPORTO / *RATIO*

140 KG — PESO / *WEIGHT*









CODICE TESTA / *HEAD CODE*

TESTA MODELLO / *HEAD TYPE*: **TRM43** — 16 (PRESE DI MOTO / *DRIVES*) — R (PRESA DI MOTO ATTACCO RAPIDO / *QUICK DRIVE CONNECTION*) — 2P (N.2 PRESE DI FORZA / *NR.2 CENTRAL DRIVES*)

300x440 — AREA DI LAVORO / *WORKING AREA*

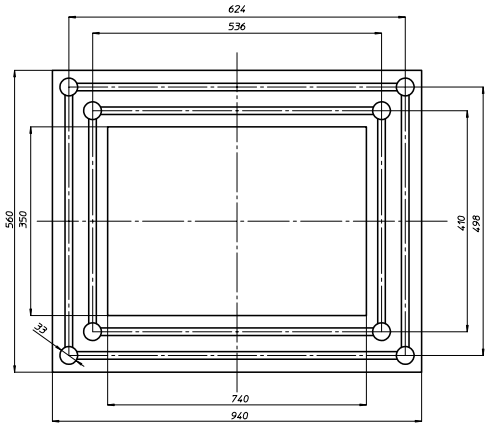
TRM73-2P

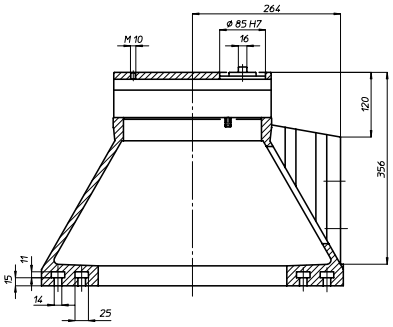
TESTA MULTIPLA A GIUNTI UNIVERSALI • *ADJUSTABLE JOINT MULTISPINDLE HEAD*

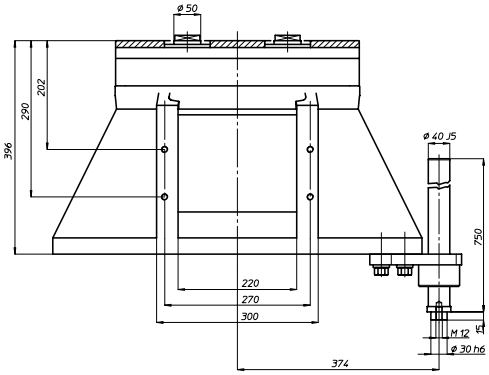
N° PRESE DI MOTO
NR. SPINDLE DRIVES
13+13

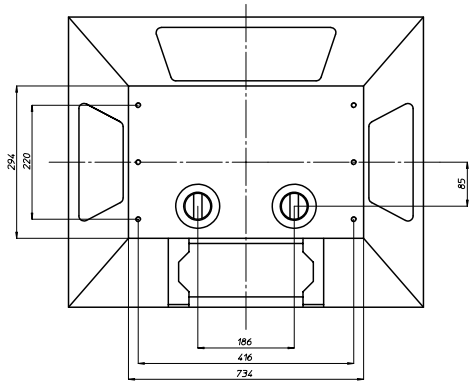
RAPPORTO
RATIO
1-1

PESO
WEIGHT
210 KG









CODICE TESTA
HEAD CODE

TESTA MODELLO
HEAD TYPE
TRM73

26 — PRESE DI MOTO *DRIVES*

PRESA DI MOTO ATTACCO RAPIDO
QUICK DRIVE CONNECTION
R

2P — N.2 PRESE DI FORZA *NR.2 CENTRAL DRIVES*

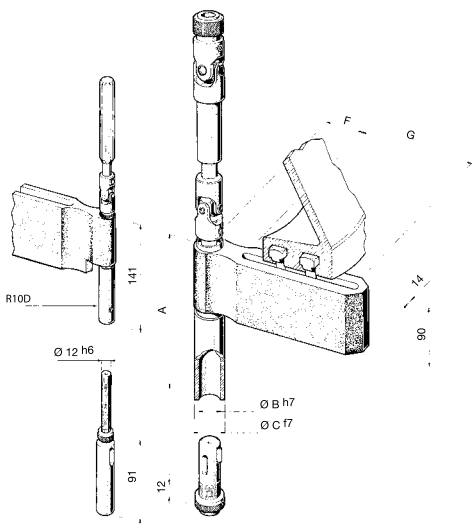
300x700

AREA DI LAVORO
WORKING AREA

SOLO PER TESTE TM-TRM

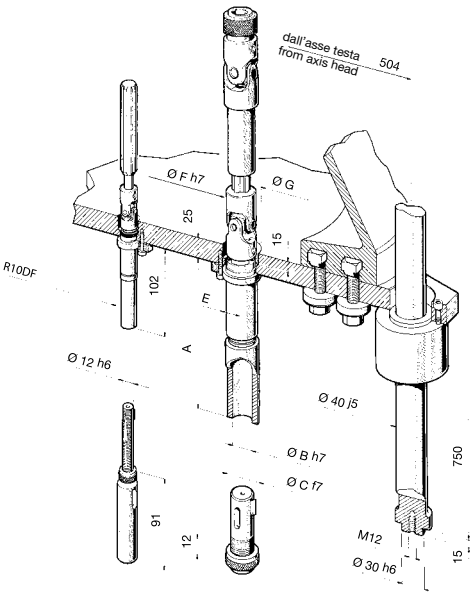
FOR TM-TRM HEADS ONLY

SU STAFFA *ON ARM*



TIPI MANDRINI *SPINDLES TYPE*	10D	12D	15D	18D	22D	25D
CODICE *CODE*	R10D-S5 R10D-S6	R12D-S5 R12D-S6	R15D-S5 R15D-S6	R18D-S5 R18D-S6	R22D-S5 R22D-S6	R25D-S5 R25D-S6
CAPACITÀ FORATURA *DRILLING CAPACITY* ACCIAIO / *STILL* R=500 N/MM	8	10	13	16	20	22
GHISA / *CAST IRON*: GG25	10	12	15	18	22	25
CAPACITÀ MASCHIATURA *TAPPING*	M6	M8	M12	M14	M16	M18
A	127	181	185	194	195	232
ØB H7	12	16	20	25	28	32
ØC F7	20	25	32	37	40	45
F	59	55	55	55	55	60
G	200 270	200 270	200 270	200 270	200 270	200 270
INTERASSE MINIMO *CENTER DISTANCE*	23	28	32,5	37,5	40,5	50
PESO *WEIGHT*	4,0 KG 4,5 KG	4,7 KG 5,2 KG	5,2 KG 5,7 KG	5,5 KG 6,3 KG	6,6 KG 7,4 KG	8,6 KG 9,5 KG

SU ASTUCCIO PER FLANGIA FISSA *FIXED PLATE SPINDLE*



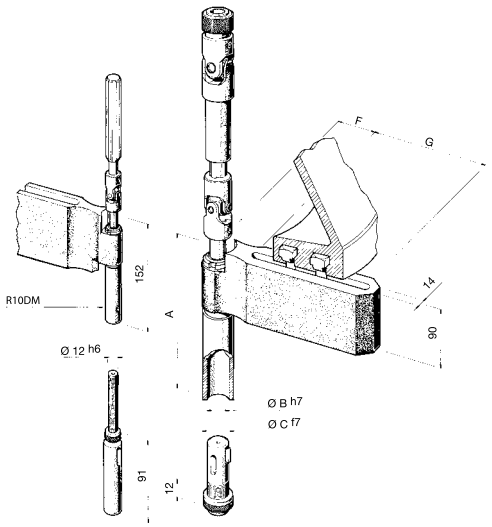
TIPI MANDRINI *SPINDLES TYPE*	10D	12D	15D	18D	22D	25D
CODICE *CODE*	R10DF	R12DF	R15DF	R18DF	R22DF	R25DF
CAPACITÀ FORATURA *DRILLING CAPACITY* ACCIAIO / *STILL* R=500 N/MM	8	10	13	16	20	22
GHISA / *CAST IRON*: GG25	10	12	15	18	22	25
CAPACITÀ MASCHIATURA *TAPPING*	M6	M8	M12	M14	M16	M18
A	102	156	160	169	170	207
ØB H7	12	16	20	25	28	32
ØC F7	20	25	32	37	40	45
E INTERASSE VITE M6 *DISTANCE SCREW M6*	18,5	23	25	27,5	29	34
ØF H7	23	27,5	31	36	39	50
ØG	27	32	36	40	44	56
INTERASSE MINIMO *CENTER DISTANCE*	23,5	28	32,5	37,5	40,5	50,5
PESO *WEIGHT*	2,0 KG	2,3 KG	2,6 KG	3,4 KG	3,8 KG	5,2 KG

SOLO PER TESTE TM-TRM

FOR TM-TRM HEADS ONLY

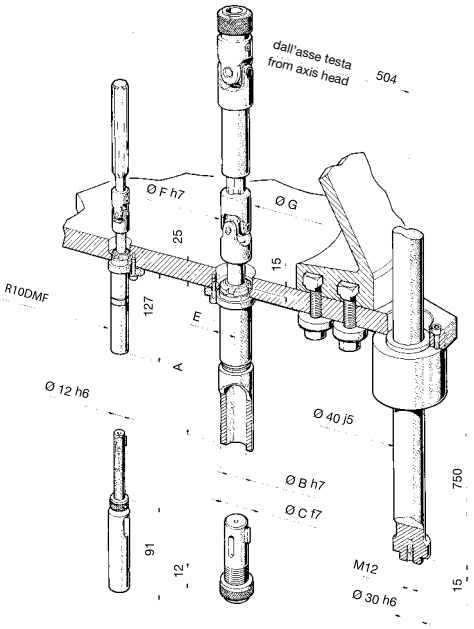
TIPI MANDRINI *SPINDLES TYPE*	10DM	15DM	22DM
CODICE *CODE*	R10DM-S5 R10DM-S6	R15DM-S5 R15DM-S6	R22DM-S5 R22DM-S6
CAPACITÀ MASCHIATURA *TAPPING*	M6	M12	M16
CORSA MASCHIATURA *TAPPING STROKE*	40	40	40
A	152	208	217
ØB H7	12	20	28
ØC F7	20	32	40
F	59	55	55
G	200 270	200 270	200 270
INTERASSE MINIMO *CENTER DISTANCE*	23	32,5	40,5
PESO *WEIGHT*	4,0 KG 4,5 KG	5,2 KG 5,7 KG	6,6 KG 7,4 KG

SU STAFFA
ON ARM



TIPI MANDRINI *SPINDLES TYPE*	10DM	15DM	22DM
CODICE *CODE*	R10DMF	R15DMF	R22DMF
CAPACITÀ MASCHIATURA *TAPPING*	M6	M12	M16
CORSA MASCHIATURA *TAPPING STROKE*	40	40	40
A	127	183	192
ØB H7	12	20	28
ØC F7	20	32	40
E INTERASSE VITE M6 *DISTANCE SCREW M6*	18,5	25	29
ØF F7	23	31	39
ØG	27	36	44
INTERASSE MINIMO *CENTER DISTANCE*	23,5	32,5	40,5
PESO *WEIGHT*	2,0 KG	2,6 KG	3,8 KG

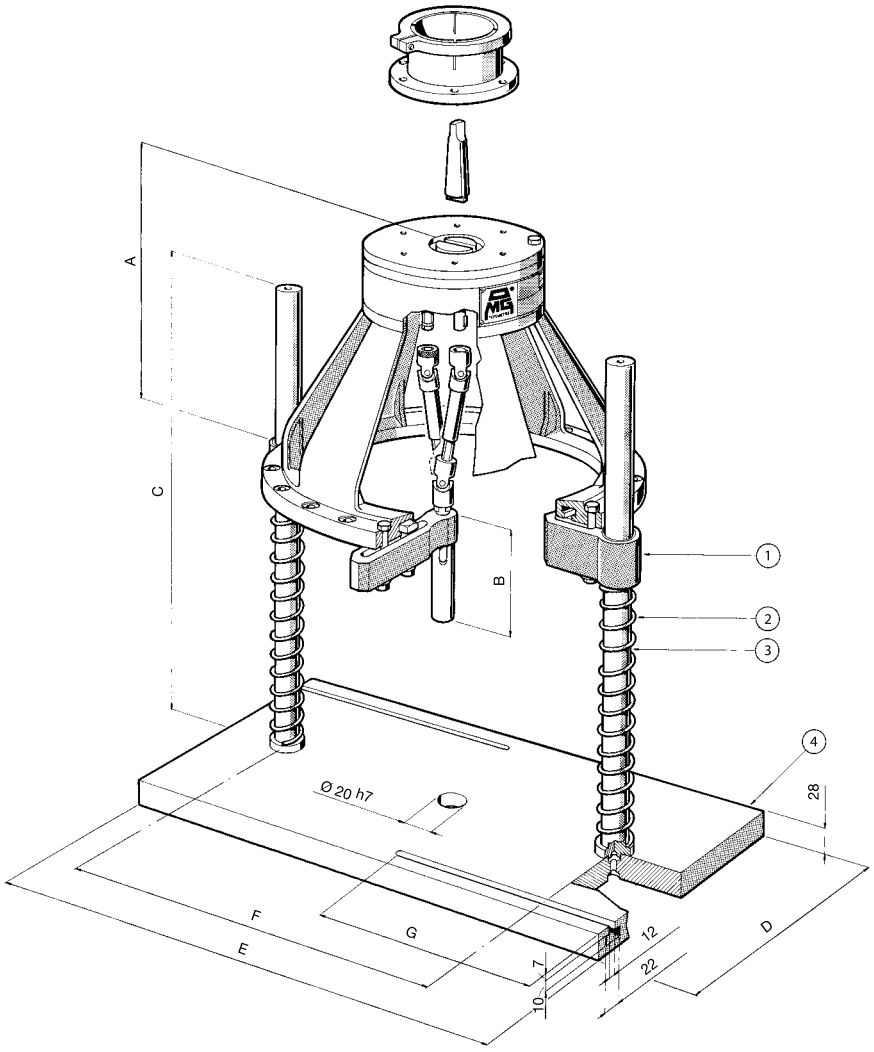
SU ASTUCCIO PER FLANGIA FISSA
FIXED PLATE SPINDLE



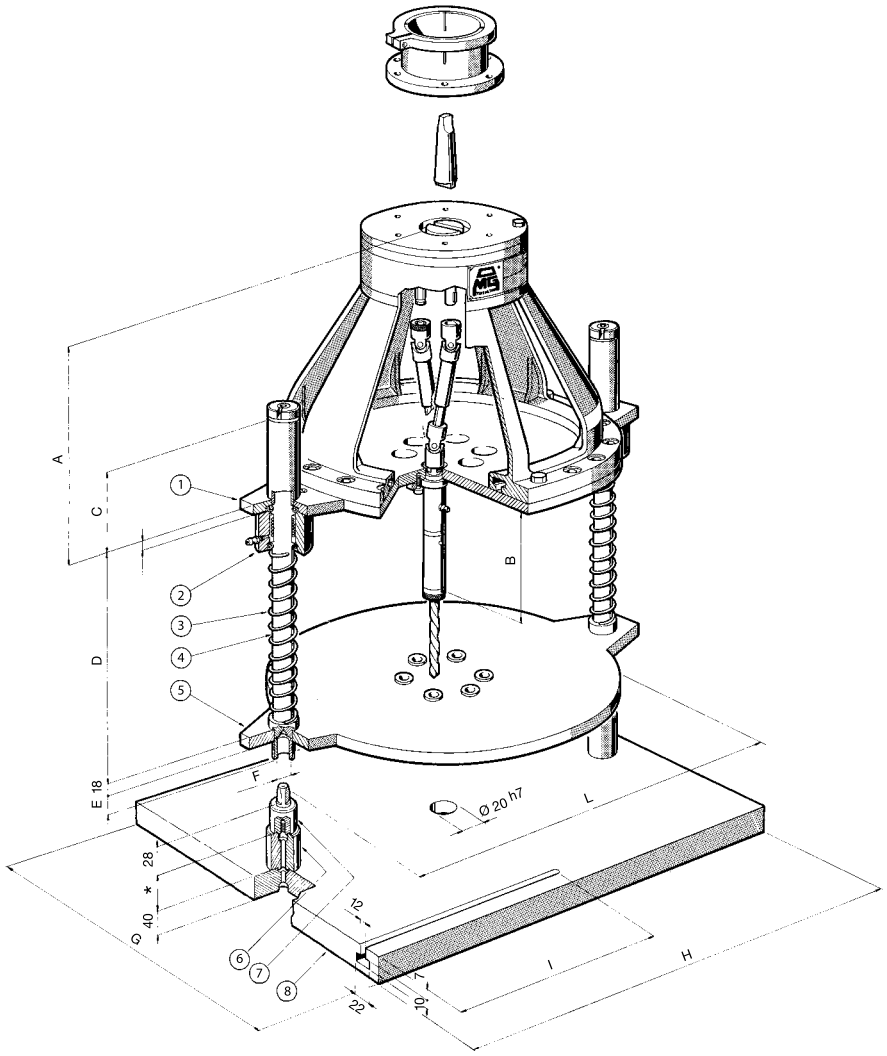
SERIE T-TS-TL-TR

ATTREZZATURE PER TESTE MULTIPLE

MULTISPINDLE HEADS EQUIPMENT



MODELLO TESTA *HEAD TYPE*	A	B		C	D	E	F	G	1 SUPPORTO DI GUIDA *GUIDE BUSH*	2 MOLLA *SPRING*	3 COLONNA *COLUMN*	4 BASE *BASE*
		DIN 55058	Pinza ER									
T4	205	91,5	76	500	250	500	280	300	076123	076126	076120	076081
T7	205	101,5	76				350					076082
T10	236	109	94,5				404					076083
T12	260	172		650	300	650	454	350	076133	076136	076130	076084
TS12	283	172					542					076088
T15	272	175					492					076085
TS15	282	175					552					076089
T18	293	185					540					076086
TS18	299	185					582					076090
T22	317	185					540					076087
TS22	317	185					582					076091
TL20/4	237	91,5	76	500	250	500	400	300	076123	076126	076120	076092
TL20/6	237	101,5	76									
TL20/8	237	109	94,5									
TL40/12	290	175		650	300	650	604	350	076133	076136	076130	076093
TL40/16	290	185										
TL40/22	318	185										
TL60/12	290	175				850	804	450	076133	076136	076130	076094
TL60/16	290	185										
TL60/22	318	185										
TR2/12	290	175				650	548		076133	076136	076130	076095
TR2/16	290	185										
TR5/12	290	175					629					076096
TR5/16	290	185										



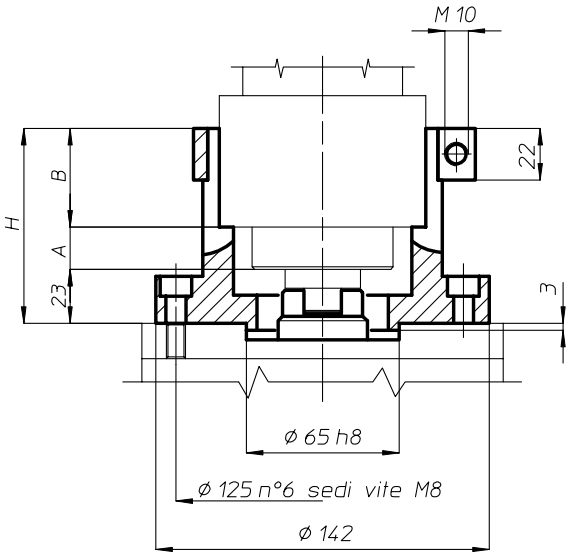
* a richiesta

MODELLO TESTA *HEAD TYPE*	A	B		C	D	E	ØFh7	G	H	I	L	1 FLANGIA FISSA *FIXED PLATE*	2 CARTUCCIA DI GUIDA *GUIDE BUSH*	3 MOLLA *SPRING*	4 COLONNA *COLUMN*	5 MASCHERA *DRILLING JIG*	6 DISTANZIALE *SPACER*	7 PUNTALE *PUSH-ROD*	8 BASE *BASE*
		DIN 55058	Pinza ER																
T4	205	91,5	76								280	076001				076051			076081
T7	205	101,5	76	70	280	22	10	250	500	300	350	076002	076122	076126	076121	076052		076127	076082
T10	236	109	94,5								404	076003				076053			076083
T12	260	172									454	076004				076054			076084
TS12	283	172									542	076005				076055			076085
T15	272	175									492	076006				076056			076086
TS15	282	175									552	076007				076057			076087
T18	293	185		100	405	27	18	300	650	350	540	076008	076132	076136	076131	076058		076137	076088
TS18	299	185									582	076009				076059			076089
T22	317	185									540	076010				076060			076090
TS22	317	185									582	076011				076061			076091
TL20/4	237	91,5	76																
TL20/6	237	101,5	76	70	280	22	10	250	500	300	400	076012	076122	076126	076121	076062		076127	076092
TL20/8	237	109	94,5																
TL40/12	290	175																	
TL40/16	290	185							650	350	604	076013				076063			076093
TL40/22	318	185																	
TL60/12	290	175																	
TL60/16	290	185							850	450	804	076014				076064			076094
TL60/22	318	185																	
TR2/12	290	175																	
TR2/16	290	185							650	350	548	076015				076065			076095
TR5/12	290	175																	
TR5/16	290	185									629	076016				076066			076096

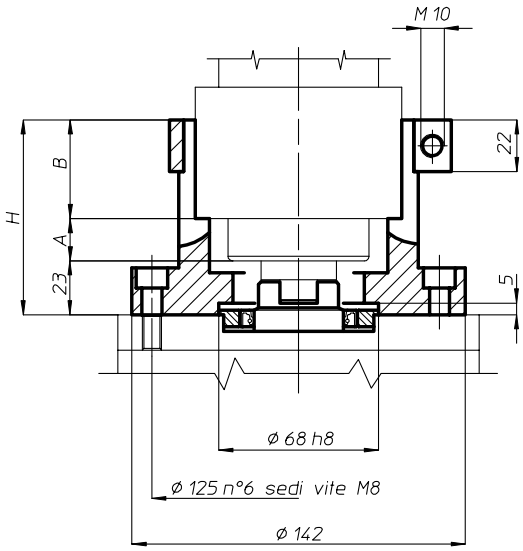
ATTACCO CONO MORSE TRASCINATORE
MORSE TAPER WITH DRIVING DOG

T4 - T7 - T10 - TL20...

SOLO VERSIONE ORIZZONTALE
FOR HORIZONTAL USE ONLY

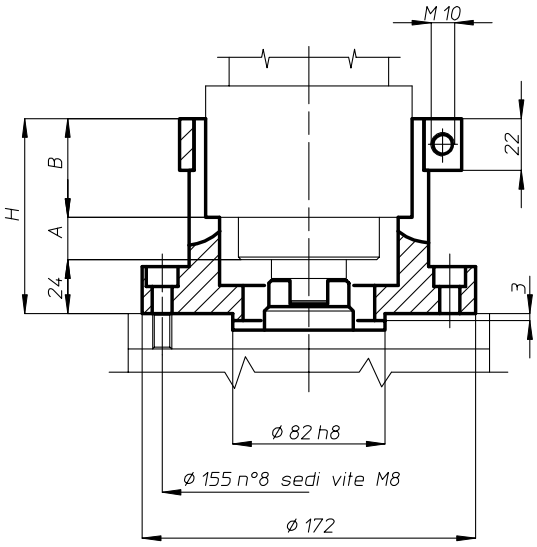


VERSIONE STANDARD
STANDARD VERSION

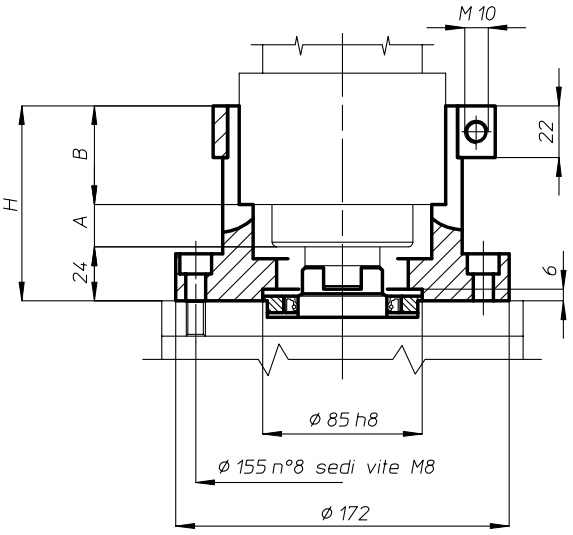


T4 - T7 - T10 - TL20...

SOLO VERSIONE ORIZZONTALE
FOR HORIZONTAL USE ONLY



VERSIONE STANDARD
STANDARD VERSION



NOTE

NOTES

TESTE MULTIPLE AD ASSI FISSI
FIXED MULTISPINDLE HEADS

SYSTEM MT

SYSTEM TC

SYSTEM TC3

SERIE TFS

SYSTEM MT

TESTE MULTIPLE FLESSIBILI AD ASSI FISSI

MULTISPINDLE HEADS WITH FIXED CENTERS DISTANCE

Il sistema MT si utilizza dove gli interassi e le capacità di torsione sono ridotte. L'interasse minimo realizzabile è mm 10 perché al di sotto di tale misura verrebbero a mancare i requisiti di sicurezza caratteristici dei prodotti O.M.G.. Le realizzazioni MT, generalmente, hanno dimensioni contenute, pochi mandrini (3 o 4), peso ridotto (kg 2) e sono lubrificate con grasso long-life. È possibile eseguire con la medesima testa filettature con passo differente.
Tutta la componentistica, trattata termicamente, ruota interamente su cuscinetti offrendo la possibilità di raggiungere velocità di rotazione di 10.000 giri al minuto. Nonostante le caratteristiche minute, si possono comunque realizzare teste con un ragguardevole numero di mandrini (oltre 20) e con corpi di una certa dimensione.

The MT system is for small centre distances and low torque requirements. The minimum centre distance is 10 mm; below this heads reliability becomes questionable. MT units are normally very compact and with 3 or 4 spindles weigh little - 2 kg for example - and are permanent grease lubricated. Rotating components are hardened and ground, and are carried in anti-friction bearings enabling these heads to run up to 10.000 rpm. In special cases, MT heads are built with large bodies and high numbers of spindles - even in excess of 20.

SYSTEM TC

TESTE MULTIPLE FLESSIBILI AD ASSI FISSI

MULTISPINDLE HEADS WITH FIXED CENTERS DISTANCE

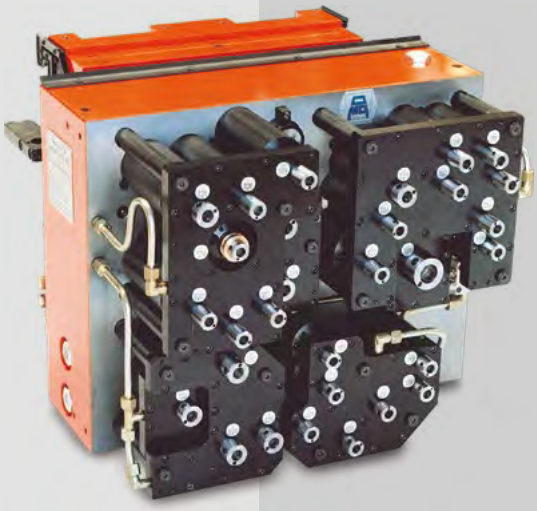
Migliaia di realizzazioni sia per trapani, unità, macchine combinate, centri di lavorazione con cambio automatico dell'utensile sono state costruite con il sistema TC, la serie di media capacità. La sua caratteristica principale sta nell'essere la più grande normalizzazione in materia di teste multiple oggi sul mercato. Corpi testa il lega di alluminio delle più varie forme e dimensioni sono normalizzati. Partendo da un interasse minimo di mm 16 si può realizzare qualsiasi figura il cliente richieda; mandrini con tutti i tipi di attacchi utensili (a pinza DIN 6499, DIN 55058, Komet ABS, DIN 1895, ecc.) ruotano su cuscinetti a rullini selezionati, su cuscinetti a sfere a contatto obliquo di precisione, su cuscinetti a rulli conici, tutti indifferentemente per potere utilizzare qualsiasi tipologia di utensile. I mandrini di maschiatura a patrona partono da un interasse di mm 28. Colonne mobili o fisse per maschiare guida utensili completano l'intera gamma. È permesso inoltre superare abbondantemente la soglia dei 10.000 giri al minuto per ottemperare alle elevate velocità richieste dagli utensili.

Many TC system - medium capacity - heads have been supplied for drilling machines, unit head applications, special machines and machining centres. Outstanding is that this standardised series has become the industries Modular multihead market leader. Head bodies of many sizes and form have been rationalised. With a minimum centre distance of 16 mm holes patterns can be provided for any client need; spindles with all types of tool connection (DIN 6499 collets, DIN 55058, Komet, ABS, DIN 1895, etc.) are carried in combinations of selected needle, precision angular contact ball and taper rolling bearings to suit all tool types. Threading spindles with lead nuts give a minimum centres distance of 28 mm; additionally, fixed and movable columns with bush lates for tool guidance are available when required. When the tolls or work demand. TC series head spindles can be run excess of 10.000 rpm.

SYSTEM TC3

TESTE MULTIPLE FLESSIBILI AD ASSI FISSI

MULTISPINDLE HEADS WITH FIXED CENTERS DISTANCE



La serie TC3 è l'espressione dell'alta tecnologia O.M.G.. È il sistema di teste utilizzato per trasmettere elevate potenze su grosse unità, rototraslanti, macchine col cambio automatico delle teste. Massicce, solide, dal peso elevato (anche kg 900) non hanno limiti di utilizzo che non siano quelli della macchina utensile.
Il corpo, normalmente in fusione di ghisa sferoidale, racchiude tutto il cinematismo rettificato, con lubrificazione forzata e prssurizzato. Vari tipi di mandrini sono disponibili su questo tipo di teste e tra essi particolarmente indicati sono quelli supportati da cuscinetti a contatto obliquo di precisione adatti ad operazioni di foratura senza guida utensile, alesatura, fresatura; in questo caso all'interno della testa si hanno due tipi di lubrificazione, ad olio per gli ingranaggi elicoidali ad evolvente rettificato e a grasso per tutti i gruppi mandrino. Anche questa serie si può equipaggiare con maschere guida utensili su colonne mobili o fisse, adduttori per refrigerante passanti per il centro dell'utensile.
Molte macchine utensili non potrebbero funzionare senza queste teste multiple e la qualità delle lavorazioni dipende esclusivamente dalla loro precisione, tanto che si potrebbero definire vere e proprie "macchine utensili".

The TC3 series is the expression of O.M.G.'s cutting-edge technology. This system of heads is used for transmitting high powers on large units, rotational-translating, machines with automatic head change. Sturdy, strong, of heavy weight (up to 900 kg) they have no restrictions as regards use excepting those of all machine tools.
The body, normally made of spheroidal cast iron, encloses all the ground kinematic mechanism, with forced and pressurised lubrication. Various types of spindles are available on this type of head and, among these, especially appropriate are those supported by precision oblique contact bearings suitable for drilling operations without tool jigs, boring, milling; in this case, inside the head are two types of lubrication - oil for the helical gears with ground involute and grease for all the spindle units. This series can also be equipped with tool jigs on moving or fixed columns, coolant feeders passing through the centre of the tool.
Many machine tools could not operate without these multiple heads and the quality of machining operations depends on their precision alone, to the extent that they could be considered "machine tools" in their own right.

TFS: Testa Fissa Speciale. Speciale perché la sua progettazione è unica in quanto nasce per soddisfare richieste specifiche e particolari per le quali non può essere utilizzato nessuno degli standard già esistenti.
A differenza delle altre serie speciali MT-TC-TC3 che siamo riusciti a standardizzare e quindi a redigere delle tabelle tecniche, per la serie TFS possiamo presentarvi solo immagini, in quanto la loro unicità non ci permette di definire alcuna scheda tecnica, se non una specifica per ogni testa.
In breve:
1- non hanno limiti di dimensioni perché dipendono dalla macchina su cui verranno applicate;
2-possono trasmettere potenze fino e oltre il limite della macchina stessa;
3-possono equipaggiare una qualsiasi macchina utensile o far parte di applicazioni particolari.
Tutta la testa ed i suoi componenti sono studiati propriamente per soddisfare le caratteristiche di lavorazione che il pezzo, gli utensili e il cliente richiede.

TFS: Special Fixed Head. Special because of its unique design, intended to cater for specific requirements and parts for which no existing standards can be used.
Unlike the other special series MT-TC-TC3 which we have managed to standardise and for which we have consequently drawn up technical charts, for the TFS series, we are only able to provide you with images because their uniqueness makes it impossible to define any technical sheet, except a specific one for each head.
In short:
1- there are no dimensional limits because these depend on the machine on which they are to be fitted;
2-they can transmit powers up to and beyond the limit of the machine itself;
3-they can equip any machine tool or become part of special applications.
The entire head and its component parts have been designed to satisfy the machining characteristics that the piece, the tools and the customer require.

SERIES TFS

TESTE FISSE SPECIALI

SPECIAL FIXED HEADS

MT 05599

Testa multipla per foratura corpo rubinetto. Applicazione su tornio. Peso Kg 4,8.

Multispindle head for tap's body drilling on turning centre. Weight Kg 4,8.

MT 38098

Testa multipla per rivettatura componenti in plastica. Peso Kg 22.

Rivet multispindle head for plastic components. Weight Kg 22.

MT 22604

Testa multipla per foratura su corpo pompa. Applicazione su torretta a revolver. Peso Kg 11,5.

Multispindle head for pump's body drilling on turret head. Weight Kg 11,5.

MT 38205

Testa multipla di maschiatura con compensazione a trazione. Peso Kg 16,5.

Multispindle tapping head with tapping compensation. Weight Kg 16,5.

MT 09305

Testa multipla per foratura su valvole oleodinamiche. Applicazione su centro di lavoro con ATC. Peso Kg 19.

Multispindle head for hydraulic control valves drilling on ATC machining centre. Weight Kg 19.

TC 15102

Testa di foratura su ghisa.
Applicazione su tornio. Peso Kg 47.

Drilling multispindle head on cast iron for turning centre. Weight Kg 47.

TC 06694

Testa di foratura su alluminio per centro di lavoro con ATC.
Peso Kg 33,5.

Drilling multispindle head on aluninium for ATC. Weight Kg 33,5.

TC 40604

Testa di foratura su alluminio, punte in metallo duro, passaggio refrigerante centro utensile a 50 Bar, 9500 giri/min. Peso Kg 26.

Drilling multispindle head on aluninium, hard metal tools, coolant through the centre tool at 50 Bar, 9500 Rpm. Weight Kg 26.

TC 13006

Testa multipla per lavorazione testata motore a scoppio. Peso Kg 8,5.

Multispindle head for working internal combustion engine. Weight Kg 8,5.

TC 34706

Testa multipla per foratura ad alta velocità con circolazione liquido per stabilizzazione temperatura. Peso Kg 9.

High speed multispindle head with coolant for temperature control. Weight Kg 9.

TC 38204

Testa multipla di spazzolatura con doppia rotazione: testa e mandrini. Peso Kg 224.

Brushing multispindle head with double rotation: body and spindles. Weight Kg 224.

TC3 43889

Testa di maschiatura equipaggiata di maschiatori con controllo rottura utensile a radiofrequenza. Peso Kg 69.

Tapping head equipped with tapping spindles with broken tool control device by remote control. Weight Kg 69.

TC3 33391

Testa di maschiatura a patrona di componente in ghisa per motore agricolo. Peso Kg 450.

Lead screw tapping head for tractor engine. Weight Kg 450.

TC3 35602

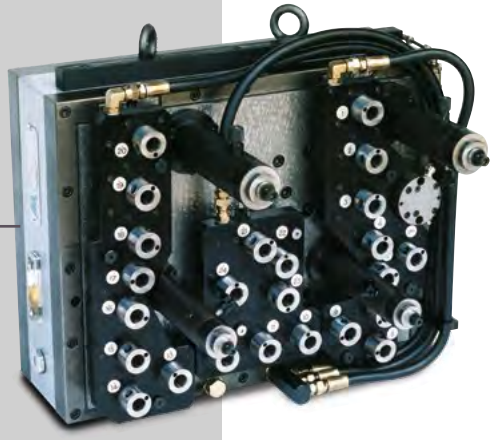
Testa di alesatura e smussatura con utensile combinato su cerchi ruota in acciaio per autotrazione. Peso Kg 285.

Boring and chamfering head with combined tools on truck's steel rim. Weight Kg 285.

TC3 35205

Testa di foratura f25 con passaggio refrigerante per centro utensile a 50 Bar su componenti per desalatori. Peso Kg 322.

Drilling multispindle head f25 with coolant through the centre tool at 50 Bar for desalinators. Weight Kg 322.



TC3 10191

Testa di foratura basamento motore di autoveicolo. Peso Kg 540.

Drilling head for car engine. Weight Kg 540.

TSF 38906

Testa di fresatura per biella in acciaio. Peso Kg 72,5.

Milling head for steel connecting rod. Weight Kg 72,5.

TSF 34102

Testa di fresatura pendolare a 24°. Peso Kg 25,5.

Testa di fresatura pendolare a 24°. Peso Kg 25,5.

TSF 06806

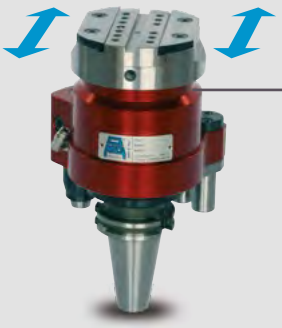
Testa di foratura con movimento assiale mandrino. Peso Kg 15.

Drilling head with axial spindle movement weight. Weight Kg 15.

TSF 30605

Testa di foratura su 4 lati di componente oleodinamico. Peso Kg 11.

Drilling head on 4 sides of hydraulic components. Weight Kg 11.



TSF 21704

Testa con slitta movimentata idraulicamente. Peso Kg 6,5.

Head equipped with hydraulic slide. Weight Kg 6,5.

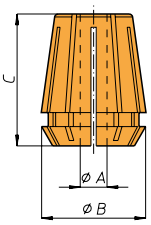
TSF 36805

Testa di lavorazione facce di motore automobile. Peso Kg 291.

Multispindle head for working on different car engine faces. Weight Kg 291.

ACCESSORI

ACCESSORIES



PINZE DIN 6499 FORMA B - TIPO ER
SPRING COLLETS DIN 6499 FORM B - ER TYPE

ER8		øB=8,5		C=15													
CODICE *CODE*	224400	224401	224402	224403	224404	224405	224406	224407	224408								
øA	1-0,5	1,5-1	2-1,5	2,5-2	3-2,5	3,5-3	4-3,5	4,5-4	5-4,5								

ER11		øB=11,5		C=18													
CODICE *CODE*	224411	224412	224413	224414	224415	224416	224417	224418	224419	224420	224421	224422	224423				
øA	1-0,5	1,5-1	2-1,5	2,5-2	3-2,5	3,5-3	4-3,5	4,5-4	5-4,5	5,5-5	6-5,5	6,5-6	7-6,5				

ER16		øB=17		C=27,5													
CODICE *CODE*	224426	224424	224425	224467	224436	224429	224430	224431	224432	224433	224434	224435					
øA	1-0,5	1,5-1	2-1,5	2,5-2	3-2,5	4-3	5-4	6-5	7-6	8-7	9-8	10-9					

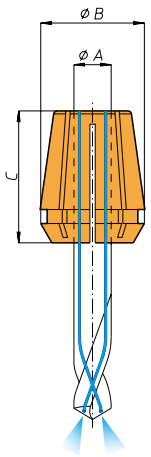
ER20		øB=21		C=31,5													
CODICE *CODE*	224451	224437	224450	224409	224410	224440	224441	224442	224443	224444	224445	224446	224447	224448	224449		
øA	1-0,5	1,5-1	2-1,5	2,5-2	3-2,5	4-3	5-4	6-5	7-6	8-7	9-8	10-9	11-10	12-11	13-12		

ER25		øB=26		C=34													
CODICE *CODE*	224468	224469	224470	224471	224472	224454	224455	224456	224457	224458	224459	224460	224461	224462	224463	224464	
øA	1-0,5	1,5-1	2-1,5	2,5-2	3-2,5	4-3	5-4	6-5	7-6	8-7	9-8	10-9	11-10	12-11	13-12	14-13	
CODICE *CODE*	224465	224466	224550														
øA	15-14	16-15	16-17														

ER32		øB=33		C=40													
CODICE *CODE*	224473	224474	224476	224477	224478	224479	224480	224481	224482	224483	224484	224485	224486	224487			
øA	2,5-2	3-2,5	4-3	5-4	6-5	7-6	8-7	9-8	10-9	11-10	12-11	13-12	14-13	15-14			
CODICE *CODE*	224488	224489	224490	224491	224492	224551	224552										
øA	16-15	17-16	18-17	19-18	20-19	21-20	22-21										

ER40		øB=41		C=46													
CODICE *CODE*	224499	224500	224501	224502	224503	224504	224505	224506	224507	224508	224509	224510	224511	224512	224513		
øA	3-2	4-3	5-4	6-5	7-6	8-7	9-8	10-9	11-10	12-11	13-12	14-13	15-14	16-15	17-16		
CODICE *CODE*	224514	224515	224516	224517	224518	224519	224520	224521	224522	224523	224524	224525	224526				
øA	18-17	19-18	20-19	21-20	22-21	23-22	24-23	25-24	26-25	27-26	28-27	29-28	30-29				

ER50		øB=52		C=60													
CODICE *CODE*	224530	224531	224532	224533	224534	224535	224536	224537	224538	224539	224540	224541	224542	224543	224544	224545	224546
øA	6-4	8-6	10-8	12-10	14-12	16-14	18-16	20-18	22-20	24-22	25-23	26-24	28-26	30-28	32-30	34-32	36-34



PINZE DIN 6499
SPRING COLLETS DIN 6499

ER16 UPV		øB=17		C=27,5													
CODICE *CODE*	235205	235206	235207	235208	235209	235210	235211	235212									
øA	3	4	5	6	7	8	9	10									

ER20 UPV		øB=21		C=31,5													
CODICE *CODE*	235215	235216	235217	235218	235219	235220	235221	235222	235223	235224	235225						
øA	3	4	5	6	7	8	9	10	11	12	13						

ER25 UPV		øB=26		C=34													
CODICE *CODE*	235228	235229	235230	235231	235232	235233	235234	235235	235236	235237	235238	235239	235240	235241			
øA	3	4	5	6	7	8	9	10	11	12	13	14	15	16			

ER32 UPV		øB=33		C=40													
CODICE *CODE*	235246	235247	235248	235249	235250	235251	235252	235253	235254	235255	235256	235257	235258	235259	235260		
øA	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
CODICE *CODE*	235261	235262	235263														
øA	18	19	20														

ER40 UPV		øB=41		C=46													
CODICE *CODE*	235266	235267	235268	235269	235270	235271	235272	235273	235274	235275	235276	235277	235278	235279	235280		
øA	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
CODICE *CODE*	235281	235282	235283	235284	235285	235286	235287	235288									
øA	19	20	21	22	23	24	25	26									

PINZE DI MASCHIATURA CON COMPENSAZIONE - TIPO ET1*
*TAPPING COLLETS WITH COMPENSATION - ET1 TYPE**

ET 1-12	A=21,5			øB=11,5		C=5,5		CAPACITÀ M2 - M4										
CODICE CODE	224650	224651	224652	224653	224654													
øA	1,4	2,2	2,5	2,8	3,5													

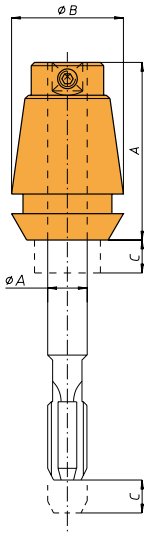
ET 1-16	A=27			øB=17		C=7		CAPACITÀ M2 - M8										
CODICE CODE	224658	224659	224660	224661	224662	224663	224664	224665										
øA	1,4	2,2	2,5	2,8	3,5	4	4,5	6										

ET 1-20	A=31			øB=21		C=7		CAPACITÀ M2 - M10										
CODICE CODE	224670	224671	224672	224673	224674	224675	224676	224677										
øA	2,2	2,5	2,8	3,5	4	4,5	6	7										

ET1-25	A=34			øB=26		C=8		CAPACITÀ M2 - M12										
CODICE CODE	224682	224683	224684	224685	224686	224687	224688	224689	224690	224691								
øA	2,2	2,5	2,8	3,5	4	4,5	6	7	8	9								

ET 1-32	A=43			øB=33		C=10		CAPACITÀ M35 - M16										
CODICE CODE	224695	224696	224697	224698	224699	224700	224701	224702	224703									
øA	4	4,5	6	7	8	9	10	11	12									

ET1-40	A=54			øB=41		C=13		CAPACITÀ M5 - M20										
CODICE CODE	224706	224707	224708	224709	224710	224711	224712	224713	224714									
øA	6	7	8	9	10	11	12	14	16									



*Not suitable for coolant through (tool)

PINZE DI MASCHIATURA SENZA COMPENSAZIONE - TIPO ER
TAPPING COLLETS WITHOUT COMPENSATION - ER TYPE

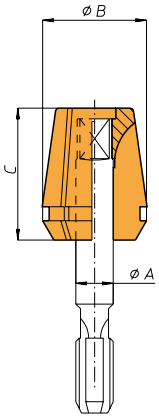
ER 16 GB	øB=16			C=27,5														
CODICE CODE	224585	224587	22458	224589	224590													
øA	4,5	6	7	8	9													

ER 20 GB	øB=20			C=31,5														
CODICE CODE	224593	224595	224596	224597	224598	224599	224600											
øA	4,5	6	7	8	9	10	11											

ER 25 GB	øB=25			C=34														
CODICE CODE	224604	224606	224607	224608	224609	224610	224611	224612	224613	224614								
øA	4,5	6	7	8	9	10	11	12	14	16								

ER 32 GB	øB=32			C=40														
CODICE CODE	224617	224619	224620	224621	224622	224623	224624	224625	224626	224627	224628	224629						
øA	4,5	6	7	8	9	10	11	12	14	16	18	20						

ER 40 GB	øB=40			C=46														
CODICE CODE	224634	224635	224636	224637	224638	224639	224640	224641	224642	224643	224644	224645						
øA	6	7	8	9	10	11	12	14	16	18	20	22						

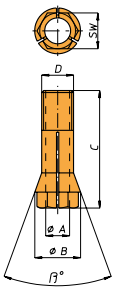


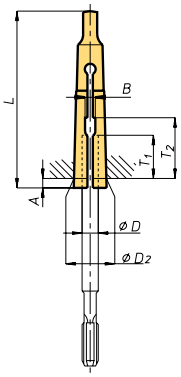
PINZE
COLLETS

6023E	øB=6,5			C=20		D=M5x0,6		SW=5,5		β°=20°		COPPIA SERRAGGIO (NM)=3						
CODICE CODE	224740	224741	224742	224743	224746													
øA	1	1,5	2	2,5	3													

600E	øB=9			C=28,5		D=M6x0,75		SW=7		β°=20°		COPPIA SERRAGGIO (NM)=5						
CODICE CODE	224574	224575	224576	224577	224578	224579												
øA	1,5	2	2,5	3	3,5	4												

601E	øB=11			C=33		D=M8x0,75		SW=9		β°=20°		COPPIA SERRAGGIO (NM)=9						
CODICE CODE	224728	224729	224730	224731	224732	224733	224734	224735	224736	224737								
øA	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6								

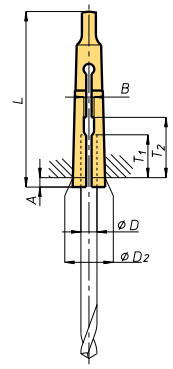




PINZE PORTA MASCHI DIN 6328
TAPHOLDER COLLETS DIN 6328

DIN 6328 - CONO MORSE 1	D2=12.065					A=3,5	L=65,5										
D	2,5	2,8	3,5	4	4,5	6	7	8	9								
CODICE *CODE*	224000	224002	224008	224010	224012	224018	224022	224024	224026								
B	2,2	2,2	2,8	3,1	3,5	5,1	5,7	6,3	7,3								
T1	15	15	16	16	18	19,5	19,5	22	25								
T2	19	19	21	24	24	26	27	30	32								

DIN 6328 - CONO MORSE 2	D2=17.78					A=5	L=80										
D	6	7	8	9	10	11	12										
CODICE *CODE*	224112	224116	224120	224122	224126	224128	224134										
B	5,1	5,7	6,4	7,3	8,3	9,3	9,3										
T1	19,5	19,5	19,5	22	23	24	24										
T2	26	26	27	22	32	34	34										



PINZE PORTA PUNTE DIN 6329
TOOLHOLDER COLLETS DIN 6329

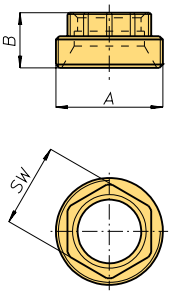
DIN 6329 - CONO MORSE 1	D2=12.065					A=3,5	L=65,5														
D	3	3,2	3,5	3,75	4	4,25	4,5	4,75	5	5,25	5,5	5,75	6	6,25	6,5	6,75	7	7,25	7,5	7,75	8
CODICE *CODE*	224164	224166	224168	224170	224172	224174	224176	224178	224180	224182	224184	224186	224188	224190	224192	224194	224196	224198	224200	224202	224204
B	1,8			2,2		2,4		2,7				3,2				3,8					
T1	20											22				22					
T2	25					26						29				29					

DIN 6329 - CONO MORSE 2	D2=17.78					A=5	L=80														
D	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12	12,5	13					
CODICE *CODE*	224260	224262	224264	224266	224268	224270	224272	224274	224276	224278	224280	224282	224284	224286	224288	224290					
B	3,2			3,8			4,8			5,3			6,3								
T1	22						25						28								
T2	29						33			37			39								

GHIERE ESAGONALI PER PINZE DIN 6499
EXAGON CLAMPING NUT FOR SPRING COLLETS DIN 6499

Ghiera *Nut*	Codice *Code*	øA	B	SW	Coppia serraggio *Clamping force (Nm)*	
ER 11AE	224980	M18 x 1	9	15	24 (30)	
ER 16AE	224981	M24 x 1	12	19	40 (50)	
ER 20AE	224982	M28 x 1,5	13	22	52 (65)	
ER 25AE	224983	M32 x 1,5	16,5	27	80 (100)	
ER 32AE	224984	M40 x 1,5	19	32	104 (130)	

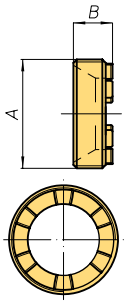
Tra parentesi valore massimo - *Between brackets max. value*



GHIERE REGOFIX PER PINZE DIN 6499
REGOFIX CLAMPING NUT FOR SPRING COLLETS DIN 6499

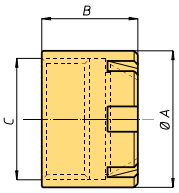
Ghiera *Nut*	Codice *Code*	øA	B	*Wrench*	Coppia serraggio *Clamping force (Nm)* Pinze con scarico *Spring collet with extractor*	Pinze senza scarico *Spring collet without extractor*
HI-Q/ER AX 11	224951	M18 x 1	7,5	E 11 AX	21 (25)	24 (29)
HI-Q/ER AX 16	224950	M24 x 1	7,6	E 16 AX	40 (50)	40 (50)
HI-Q/ER AX 20	224952	M28 x 1,5	8,5	E 20 AX	35 (42)	40 (50)
HI-Q/ER AX 25	224953	M32 x 1,5	8,8	E 25 AX	64 (80)	64 (80)
HI-Q/ER AX 32	224954	M40 x 1,5	9,8	E 32 AX	72 (90)	104 (125)

Tra parentesi valore massimo - *Between brackets max. value*

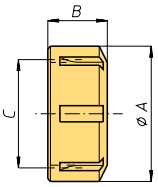


GHIERE PER PINZE DIN 6499
CLAMPING NUT FOR SPRING COLLETS DIN 6499

Ghiera *Nut*	Codice *Code*	øA	B	C	Coppia serraggio *Clamping force (Nm)* Pinze con scarico *Spring collet with extractor*	Pinze senza scarico *Spring collet without extractor*
ER 8M	224900	11,8	10,8	M10 x 0,75	5 (6)	5 (6)
ER 11M	224902	16	12	M13 x 0,75	12 (15)	16 (20)
ER 16M	224904	22	18	M19 x 1	24 (30)	24 (30)
ER 20M	224906	28	21	M24 x 1	28 (35)	28 (35)
ER 25M	224908	35	20	M30 x 1	32 (40)	32 (40)



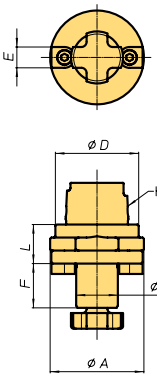
ER 11 S	224985	19	11,3	M14 x 0,75	16 (19)	24 (30)
ER 16 S	224932	28	17,5	M22 x 1,5	44 (53)	56 (70)
ER 20 S	224935	34	19	M25 x 1,5	35 (42)	80 (100)
ER 25 S	224974	42	20	M32 x 1,5	64 (80)	104 (130)
ER 32 S	224975	50	22,5	M40 x 1,5	136 (170)	136 (170)
ER 40 S	224976	63	25,5	M50 x 1,5	176 (220)	176 (220)
ER 50 S	224986	78	35,3	M64 x 2	240 (300)	240 (300)



HI-Q/ER 11	224933	19	11,3	M14 x 0,75	16 (19)	24 (30)
HI-Q/ER 16	224909	28	17,5	M22 x 1,5	44 (53)	56 (70)
HI-Q/ER 20	224910	34	19	M25 x 1,5	35 (42)	80 (100)
HI-Q/ER 25	224912	42	20	M32 x1,5	64 (80)	104 (130)
HI-Q/ER 32	224914	50	22,5	M40 x 1,5	136 (170)	136 (170)
HI-Q/ER 40	224916	63	25,5	M50 x 1,5	176 (220)	176 (220)
HI-Q/ER 50	224918	78	35,3	M64 x 2	240 (300)	240 (300)

Tra parentesi valore massimo - *Between brackets max. value*

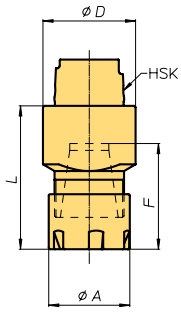
INSERTO HSK PORTA FRESA
HSK MILL ADAPTERS



Codice *Code*	Grandezza *Size*	HSK	øA	øB	øD	E	F	L	Vite *Screw*	Chiave* *Wrench**
009401	HSK 32-16	32	36	16	32	8	17	15	M8	097419
009419	HSK 32-22	32	54	22	32	10	19	22	M10	097415
009404	HSK 40-16	40	40	16	40	8	17	15	M8	097419
009405	HSK 40-22	40	54	22	40	10	19	22	M10	097415
009416	HSK 50-22	50	54	22	50	10	19	23	M10	
009406	HSK 50-27	50	64	27	50	12	21	23	M12	097416
009417	HSK 63-27	63	64	27	64	12	21	25	M12	
009408	HSK 63-32	63	74	32	63	14	24	25	M16	097417
009414	HSK 80-32	80	80	32	80	14	24	35	M16	
009413	HSK 80-40	80	80	40	80	16	27	35	M20	097591

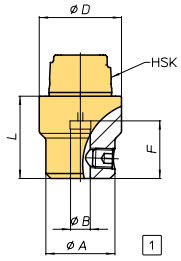
*Le chiavi non sono comprese - **The wrench aren't included*

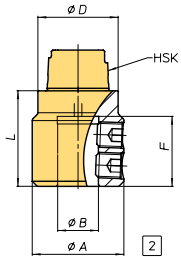
INSERTO HSK PORTA PINZE PER UTENSILI A GAMBO CILINDRICO
HSK ADAPTERS WITH COLLET FOR CYLINDRICAL SHANK TOOLS



Codice *Code*	Grandezza *Size*	HSK	Pinza *Collet*	øA	øD	F	L	Ghiera *Nut*
009400	HSK 32-ER 20M	32	ER 20	28	32	37,5	49,5	ER 20M
009402	HSK 32-ER 25M	32	ER 25	35	32	41	53	ER 25M
009415	HSK 40-ER 20M	40	ER 20	28	40	37,5	49,5	ER 20M
009403	HSK 40-ER 25M	40	ER 25	35	40	41	54	ER 25M
009418	HSK 40-ER 32M	40	ER 32	50	42	47	59,5	ER 32UM
009407	HSK 50-ER 32	50	ER 32	50	50	47	64	ER 32UM
009409	HSK 63-ER 32	63	ER 32	50	63	47	65	ER 32UM
009410	HSK 63-ER 40	63	ER 40	63	63	53	71	ER 40UM
009411	HSK 80-ER 40	80	ER 40	63	80	53	73,5	ER 40UM
009412	HSK 80-ER 50	80	ER 50	78	80	69	91,5	ER 50UM

INSERTO HSK WELDON/WHISTLE NOTCH
ADAPTER HSK WELDON/WHISTLE NOTCH

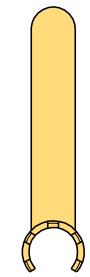




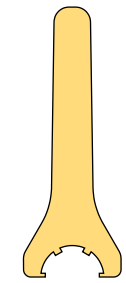
Codice *Code*	Grandezza *Size*	HSK	øA	øD	F	L	B	TIPO *Type*
228220	HSK 32 W8	32	28	32	30	45	8	1
228221	HSK 32 W10	32	32	32	30	45	10	
228222	HSK 32 W12	32	32	32	35	50	12	
228223	HSK 40 W8	40	28	40	30	45	8	
228224	HSK 40 W10	40	35	40	30	45	10	
228225	HSK 40 W12	40	40	40	35	50	12	
228226	HSK 40 W16	40	40	40	40	55	16	
228227	HSK 50 W8	50	28	50	30	45	8	
228228	HSK 50 W10	50	35	50	30	45	10	
228229	HSK 50 W12	50	42	50	35	50	12	
228230	HSK 50 W16	50	50	50	40	55	16	
228231	HSK 50 W20	50	50	50	45	60	20	
228232	HSK 63 W8	63	28	63	30	45	8	
228233	HSK 63 W10	63	35	63	30	45	10	
228234	HSK 63 W12	63	42	63	35	50	12	
228235	HSK 63 W16	63	50	63	40	55	16	
228236	HSK 63 W20	63	52	63	45	60	20	
228237	HSK 63 W25	63	63	63	50	70	25	2
228238	HSK 63 W32	63	72	63	55	75	32	

CHIAVI PER GHIERE
CLAMPING NUTS SPANNER

Chiavi *Spanner*	Codice chiave *Spanner code*	Per ghiera *For clamping nut*	Codice ghiera *Clamping nut code*	
CE 8M	231300	ER 8M	224900	
CE 11M	231302	ER 11M	224902	
CE 16M	231306	ER 16M	224904	
CE 20M	231309	ER 20M	224906	
CE 25M	231313	ER 25M	224908	

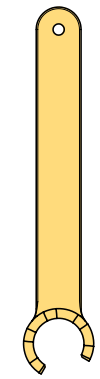


Chiavi *Spanner*	Codice chiave *Spanner code*	Per ghiera *For clamping nut*	Codice ghiera *Clamping nut code*	
CE 20U	231315	ER 20UM	224973	224910
CE 25U	231314	ER 25UM	224974	224912
CE32U	231320	ER 32UM	224975	224914
CE 40U	231321	ER 40UM	224976	224916
CE 50U	231323	ER 50UM	224986	224918



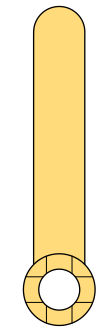
CHIAVI PER GHIERE
CLAMPING NUTS SPANNER

Chiavi *Spanner*	Codice chiave *Spanner code*	Per ghiera *For clamping nut*	Codice ghiera *Clamping nut code*	
E 11 AX	231356	ERAX11	224951	
E 16 AX	231357	ERAX16	224950	
E 20 AX	231358	ERAX20	224952	
E 25 AX	231359	ERAX25	224953	
E 32 AX	231360	ERAX32	224954	

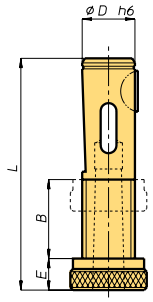


CHIAVI PER VITI
SPANNER SCREW

Chiavi *Spanner*	Codice chiave *Spanner code*	Inserto HSK *HSK mill adapter*			
CM8	097419	HSK 32-16 HSK 40-16			
CM10	097415	HSK 40-22 HSK 50-22			
CM12	097416	HSK 50-27 HSK 63-27			
CM16	097417	HSK 63-32 HSK 80-32			
CM20	097591	HSK 80-40			

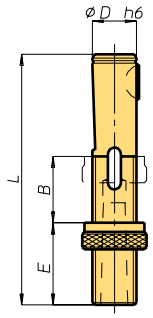


INSERTI REGISTRABILI DIN 6327/1 PORTA UTENSILI A CONO MORSE
DIN 6327/1 ADJUSTABLE ADAPTERS FOR MORSE TAPER SHANK TOOLS



Codice *Code*	Grandezza *Size*	Cono Morse *Morse taper*	øD^{h6}	Filettatura *Thread*	B	E	L	Linguetta *Woodruff key*
009010	D 16 x 1	1	16	Tr 16 x 1,5	28	12	85	5 x 6,5
009012	D 20 x 1	1	20	Tr 20 x 2	28	12	88	5 x 7,5
009014	D 25 x 2	2	25	Tr 25 x 2	30	12	95	6 x 9
009016	D 28 x 2	2	28	Tr 28 x 2	30	12	95	6 x 9
009018	D 32 x 3	3	32	Tr 32 x 2	36	12	118	8 x 11
009020	D 36 x 3	3	36	Tr 36 x 2	36	14	118	8 x 11
009022	D 48 x 4	4	48	Tr 48 x 2	47	18	144	10 x 13

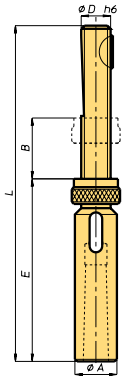
INSERTI REGISTRABILI DIN 6327/2 PORTA UTENSILI A CONO MORSE
DIN 6327/2 ADJUSTABLE ADAPTERS FOR MORSE TAPER SHANK TOOLS



Codice *Code*	Grandezza *Size*	Cono Morse *Morse taper*	øD^{h6}	Filettatura *Thread*	B	E	L	Linguetta *Woodruff key*
009024	F 16 x 1 x 25	1	16	Tr 16 x 1,5	28	37	110	5 x 6,5
009026	F 16 x 1 x 50					62	135	
009028	F 16 x 1 x 75					87	160	
009030	F 16 x 1 x 100					112	185	
009032	F 20 x 1 x 25	1	20	Tr 20 x 2	28	37	113	5 x 7,5
009034	F 20 x 1 x 50					62	38	
009036	F 20 x 1 x 75					87	163	
009038	F 20 x 1 x 100					112	188	
009040	F 25 x 2 x 25	2	25	Tr 25 x 2	30	37	120	6 x 9
009042	F 25 x 2 x 50					62	145	
009044	F 25 x 2 x 75					87	170	
009046	F 25 x 2 x 100					112	195	
009048	F 28 x 2 x 25	2	28	Tr 28 x 2	30	37	120	6 x 9
009050	F 28 x 2 x 50					62	145	
009052	F 28 x 2 x 75					87	1170	
009054	F 28 x 2 x 100					112	195	
009056	F 32 x 3 x 25	3	32	Tr 32 x 2	36	37	148	8 x 11
009058	F 32 x 3 x 50					62	178	
009060	F 32 x 3 x 75					87	208	
009062	F 32 x 3 x 100					112	238	
009064	F 36 x 3 x 25	3	36	Tr 36 x 2	36	37	148	8 x 11
009066	F 36 x 3 x 50					62	178	
009068	F 36 x 3 x 75					87	208	
009070	F 36 x 3 x 100					112	238	
009072	F 48 x 4 x 25	4	48	Tr 48 x 2	47	37	184	10 x 13
009074	F 48 x 4 x 50					62	224	
009076	F 48 x 4 x 75					87	264	
009078	F 48 x 4 x 100					112	304	

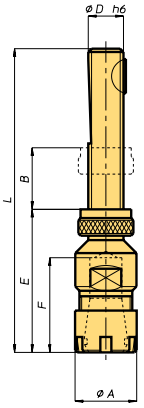
INSERTI REGISTRABILI PORTA UTENSILI A CONO MORSE (NORMA OMG)
ADJUSTABLE ADAPTERS FOR MORSE TAPER SHANK TOOLS (OMG NORM)

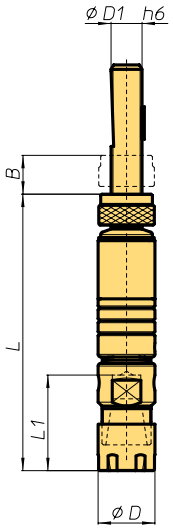
Codice *Code*	Grandezza *Size*	Cono Morse *Morse taper*	øD^{h6}	Filettatura *Thread*	øA	B	E	L	Linguetta *Woodruff key*
009110	Tr 8 x 1	1	8	Tr 8 x 1	16,8	16	84	126	2 x 3,7
009116	Tr 10 x 1	1	10	Tr 10 x 1,5	19,5	18	89	138	3 x 5
009122	Tr 12 x 1	1	12	Tr 12 x 1,5	22	18	91	138	3 x 5



INSERTO PORTA PINZE PER UTENSILI A GAMBO CILINDRICO (DIN 6327)
DIN 6327 ADJUSTABLE ADAPTERS FOR CYLINDRICAL SHANK TOOLS

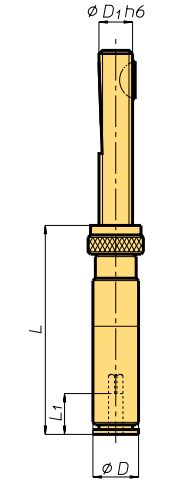
Codice *Code*	Grandezza *Size*	øD^{h6}	Filettatura *Thread*	øA	B	E	F	L	Pinza *Collet*	Linguetta *Woodruff key*
009112	Tr 8 ER 8	8	Tr 8 x 1	12	16	36	23	75	ER 8	2 x 3,7
009114	Tr 8 ER 11	8	Tr 8 x 1	16	16	41	28	80	ER 11	2 x 3,7
009118	Tr 10 ER 11	10	Tr 10 x 1,5	16	18	43	28	93	ER 11	3 x 5
009120	Tr 10 ER 16	10	Tr 10 x 1,5	22	18	54	39	104	ER 16	3 x 5
009124	Tr 12 ER 16	12	Tr 12 x 1,5	22	18	56	39	106	ER 16	3 x 5
009130	Tr 16 ER 20	16	Tr 16 x 1,5	28	28	65	47	136	ER 20	5 x 6,5
009140	Tr 20 ER 20	20	Tr 20 x 2	32	28	65	47	139	ER 20	5 x 7,5
009145	Tr 20 ER 25	20	Tr 20 x 2	35	28	61	44	135	ER 25	5 x 7,5
009170	Tr 28 ER 32	28	Tr 28 x 2	50	30	65	49	147	ER 32	6 x 9





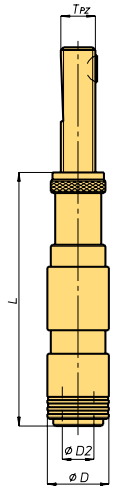
MANDRINI OMG PER MASCHIARE CON DIAMETRO RIDOTTO
OMG TAPPING SPINDLES WITH REDUCED DIAMETER

Codice *Code*	Mandrino *Spindle*				øD	D1	L	L1	B	Pinza *Collet*
009450	MM.Tr8.ER8	M5	0,5	8	15	8	75	23	16	ER8
009453	MM.Tr8.ER11	M6	1	10	19	8	90	27	16	ER11
009451	MM.Tr10.ER11	M6	1	10	19	10	90	27	18	ER11
009454	MM.Tr10.ER16	M8	1	10	22	10	105	37	18	ER16
009452	MM.Tr12.ER16	M8	1	10	22	12	107	37	18	ER16



MANDRINI PER MASCHIARE CON DIAMETRO RIDOTTO
TAPPING SPINDLES WITH REDUCED DIAMETER

Codice *Code*	Mandrino *Spindle*			øD	D1	L	L1
227030	MR. 0 -10 x 1.5 Tpz	M1 - M10	2.5 - 7.2	14	10	44	15
227031	MR. 0 -12 x 1.5 Tpz				12		
227032	MR. 1 -12 x 1.5 Tpz	M4 - M14	4.5 - 11.3	19	12	52	17
227033	MR. 1 -16 x 1.5 Tpz				16		
227034	MR. 2 -20 x 2 Tpz	M8 - M24	7 - 18	31	20	77	30
227035	MR. 2 -28 x 2 Tpz				28		
227036	MR. 3 -28 x 2 Tpz	M14 - M36	11 - 28	48	28	95	44
227037	MR. 3 -36 x 2 Tpz				36	97	
227038	MR. 4 -36 x 2 Tpz	M22 - M48	18 - 36	60	36	132	71
227039	MR. 4 -48 x 2 Tpz				48	136	

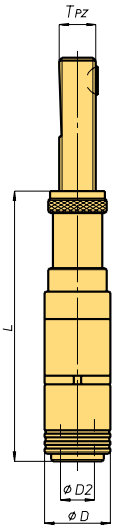


MANDRINI A CAMBIO RAPIDO PER MASCHIARE CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CLUCKS WITH AXIAL COMPENSATION

Mandrino *Spindle*		D	D2				16x1.5 Tpz	Codice *Code*	20x2 Tpz	Codice *Code*	L 28x2 Tpz	Codice *Code*	36x2 Tpz	Codice *Code*
MF 0-5D-20-10	M1 - M10	23	13	20	10	0	116	227060	116	227061				
MF 0-5D-15-15				15	15		111	227062	111	227063				
MF 0-5D-0-30				0	30		96	227064	96	227065				
MF 1-5D-30-10	M3 - M12	35	19	30	10	1	148	227066	148	227067	148	227068		
MF 1-5D-20-20				20	20		138	227069	138	227070	138	227071		
MF 1-5D-0-40				0	40		118	227072	118	227073	118	227074		
MF 2-4D-30-10	M8 - M20	50	31	30	10	2			172	227075	172	227076	172	227077
MF 2-4D-20-20				20	20				162	227078	162	227079	162	227080
MF 2-4D-0-40				0	40				142	227081	142	227082	142	227083
MF 3-3D-30-10	M14 - M33	72	48	30	10	3					218	227084	218	227085
MF 3-3D-20-20				20	20						208	227086	208	227087
MF 3-3D-0-40				0	40						188	227088	188	227089

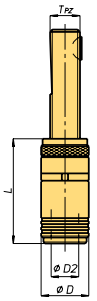
MANDRINI A CAMBIO RAPIDO PER MASCHIARE CON COMPENSAZIONE ASSIALE E SPOSTAMENTO PARALLELO ALL'ASSE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION AND RADIAL PARALLEL FLOATING

Mandrino *Spindle*		D	D2				16x1.5 Tpz	Codice *Code*	20x2 Tpz	Codice *Code*	L 28x2 Tpz	Codice *Code*	36x2 Tpz	Codice *Code*
MF 0-5D-20-10	M1 - M10	23	13	0,25	20	10	0	138	227090	138	227091				
MF 0-5D-15-15					15	15		133	227092	133	227093				
MF 0-5D-0-30					0	30		118	227094	118	227095				
MF 1-5D-30-10	M3 - M12	35	19	0,5	30	10	1	163	227096	163	227097	163	227098		
MF 1-5D-20-20					20	20		153	227099	153	227100	153	227101		
MF 1-5D-0-40					0	40		133	227102	133	227103	133	227104		
MF 2-4D-30-10	M8 - M20	50	31	1	30	10	2			196	227105	196	227106	174	227077
MF 2-4D-20-20					20	20				186	227108	186	227109	164	227080
MF 2-4D-0-40					0	40				166	227111	166	227112	144	227083
MF 3-3D-30-10	M14 - M33	72	48	1,5	30	10	3					252	227084	220	227085
MF 3-3D-20-20					20	20						242	227116	210	227087
MF 3-3D-0-40					0	40						222	227118	190	227089



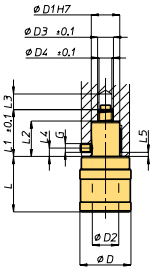
MANDRINI A CAMBIO RAPIDO PER MASCHIARE CON SPOSTAMENTO PARALLELLO ALL'ASSE
QUICK CHANGE TAPPING CHUCKS WITH RADIAL PARALLEL FLOATING

Mandrino *Spindle*		D	D2			16x1.5 Tpz	Codice *Code*	20x2 Tpz	Codice *Code*	L 28x2 Tpz	Codice *Code*	36x2 Tpz	Codice *Code*
MFC 0	M1 - M10	23	13	0,25	0	65	227131	65	227132				
MFC 1	M3 - M12	35	19	0,5	1	70	227133	70	227134	70	227135		
MFC 2	M8 - M20	50	31	1	2			96	227136	96	227137	98	227138
MFC 3	M14 - M33	72	48	1,5	3					136	227139	138	227146



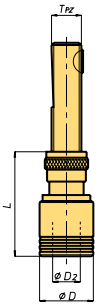
MANDRINI A CAMBIO RAPIDO PER MASCHIARE CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION

Codice *Code*	Mandrino *Spindle*					D	D1	D2	D3	D4	L	L1	L2 min.	L3 min.	L4	L5	G	Chiavetta DIN 6885
227185	MKD0.GC	M1 - M10	0	6,5	6,5	26	15	13	8,2	6	37	32	18,5	11	6	3	M5	5x3x12
227186	MKD1.GC	M3 - M12	1	7,5	7,5	36	20	19	11,2	9	39	33	24,5	11	6	3	M6	6x4x16
227187	MKD2.GC	M8 - M20	2	12,5	12,5	53	25	31	13,2	11	63	39	30,5	20	8	4	M8	6x6x20



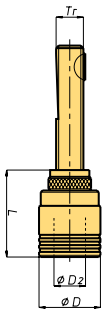
MANDRINI A CAMBIO RAPIDO PER MASCHIARE CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION

Mandrino *Spindle*					øD	øD2	28x2 Tpz	Codice *Code*	36x2 Tpz	L Codice *Code*	48x2 Tpz	Codice *Code*
AKD 1-..	M3- M12	1	20	20	32	19	65	227190	67	227191	71	227192
AKD 2-..	M8 - M20	2	20	25	50	31			83	227193	87	227194
AKD 40-..	M6 - M18	4	20	20	40	26	80	227195				

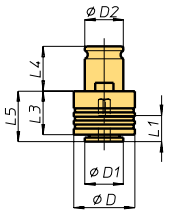


MANDRINI A CAMBIO RAPIDO PER MASCHIARE CON COMPENSAZIONE ASSIALE
QUICK CHANGE TAPPING CHUCKS WITH AXIAL COMPENSATION

Mandrino *Spindle*					øD	øD2	16x1,5 Tpz	Codice *Code*	20x2 Tpz	Codice *Code*	L 28x2 Tpz	Codice *Code*	36x2 Tpz	Codice *Code*
MKD-0- Tr..	M1 - M10	0	6,5	6,5	26	13	50	227165	50	227166				
MKD-1- Tr..	M1 - M12	1	7,5	7,5	36	19	52	227167	52	227168	52	227169		
MKD-2- Tr..	M4 - M20	2	12,5	12,5	53	31			76	227171	76	227172	78	227173
MKD-3- Tr..	M4 - M33	3	20	20	78	48							111	227175

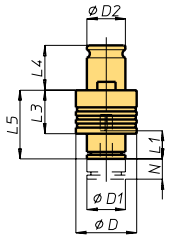


BUSSOLE PORTA MASCHIO A CAMBIO RAPIDO CON FRIZIONE DESTRA E SFERE
QUICK CONNECTION TAP-HOLDER BUSHES WITH BALL RIGHT CLUTCH



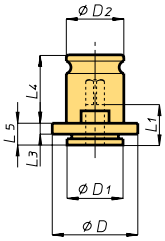
Codice *Code*	Bussola *Bush*		øgambo maschio *Tap shank diametre*	øD	øD1	øD2	L1	L3	L4	L5
227206	BFS 0	M1 - M10	2,5 - 7,2	23	13	13	15	20	19,5	21
227207	BFS 1	M3 - M12	3,5 - 11,3	32	19	19	17	25	21,5	25
227208	BFS 2	M8 - M20	7 - 18	50	30	31	30	31	35	34
227209	BFS 3	M14 - M33	11 - 28	72	48	48	44	41	55,5	45
227210	BFS 40	M6 - M18	6 - 14	40	25	26	30	27	32	30

BUSSOLE PORTA MASCHIO A CAMBIO RAPIDO CON FRIZIONE DESTRA E SFERE
QUICK CONNECTION TAP-HOLDER BUSHES WITH BALL RIGHT CLUTCH



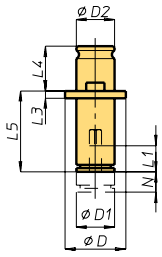
Codice *Code*	Bussola *Bush*		øgambo maschio *Tap shank diametre*	N	øD	øD1	øD2	L1	L3	L4	L5
227211	BFSR 0	M1 - M10	2,5 - 7,2	8	23	13	13	15	20	19,5	28
227212	BFSR 1	M2 - M12	3,5 - 11,3	10	32	19	19	17	25	21,5	33
227213	BFSR 2	M8 - M20	7 - 18	15	50	30	31	30	31	35	59
227214	BFSR 3	M14 - M33	11 - 28	25	72	48	48	44	41	55,5	82

BUSSOLE PORTA MASCHIO A CAMBIO RAPIDO
QUICK CONNECTION TAP-HOLDER BUSHES



Codice *Code*	Bussola *Bush*		øgambo maschio *Tap shank diametre*	øD	øD1	øD2	L1	L3	L4	L5
227250	BFC 0	M1 - M10	2,5 - 7,2	22	13	13	15	4	19,5	7
227251	BFC 1	M3 - M12	3,5 - 11,3	30	19	19	17	4	21,5	7
227252	BFC 2	M8 - M20	7 - 18	48	30	31	30	5	35	11
227253	BFC 3	M14 - M33	11 - 28	70	48	48	44	6	55,5	14
227254	BFC 40	M6 - M18	6 - 14	40	25	26	30	5	32	13

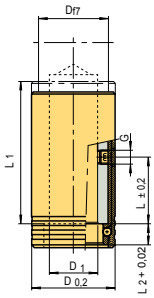
BUSSOLE PORTA MASCHIO A CAMBIO RAPIDO
QUICK CONNECTION TAP-HOLDER BUSHES



Codice *Code*	Bussola *Bush*		øgambo maschio *Tap shank diametre*	N	øD	øD1	øD2	L1	L3	L4	L5
227255	BFCR 0	M1 - M10	2,5 - 7,2	8	22	13	13	15	4	19,5	28
227256	BFCR 1	M2 - M12	3,5 - 11,3	10	30	19	19	17	4	21,5	33
227257	BFCR 2	M8 - M20	7 - 18	15	48	30	31	30	5	35	59
227258	BFCR 3	M14 - M33	11 - 28	25	70	48	48	44	6	55,5	82

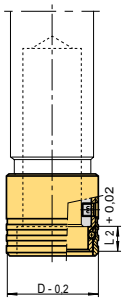
MANICOTTI AD INNESTO RAPIDO
QUICK CONNECTION SLEEVES

Codice *Code*	Manicotto *Sleeve*	øD	øD1	øD3	L	L1	L2	G
227309	AIRFA. 12	24	12	20	22	48	9	M5
227310	AIRFA. 16	30	16	25	34	64	9,5	M6
227311	AIRFA. 20	38	20	32	34	70	11	M6
227312	AIRFA. 25	45	25	37	38	76	12	M8
227313	AIRFA. 28	48	28	40	38	78	12	M8
227314	AIRFA. 32	55	32	45	45	89	14	M8
227315	AIRFA. 36	60	36	50	45	97	16	M8
227316	AIRFA. 48	80	48	67	57	122	20	M10



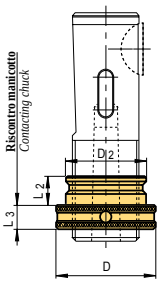
MANICOTTI AD INNESTO RAPIDO
QUICK CONNECTION SLEEVES

Codice *Code*	Manicotto *Sleeve*	øD	øD1	øD3	øD4	L	L1	L2	G
227350	AIRFCA. 16	27	16	25	22	8	30	9,5	M5
227351	AIRFCA. 20	34	20	32	28	8	30	11	M5
227352	AIRFCA. 25	41	25	37	34,5	8	32	12	M6
227353	AIRFCA. 28	44	28	40	37	8	32	12	M6
227354	AIRFCA. 32	49	32	45	41	9	39	13,5	M6
227355	AIRFCA. 36	55	36	50	46	9	39	16	M6
227356	AIRFCA. 48	73	48	67	61	11	51	20	M8



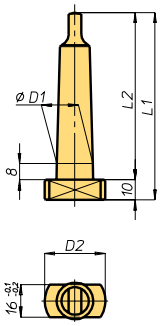
GHIERE AD INNESTO RAPIDO
RING NUTS

Codice *Code*	Manicotto *Sleeve*	øD	øD2	L2	L3
227367	GIRF. 12	21,5	16,4	9	9
227368	GIRF. 16	26	19,9	9,5	9
227369	GIRF. 20	33	25,4	11	9
227370	GIRF. 25	40	31,9	12	10
227371	GIRF. 28	42	33,9	12	10
227372	GIRF. 32	47	37,9	13,5	10
227373	GIRF. 36	54	43,4	16	10
227374	GIRF. 48	72	57,9	20	14



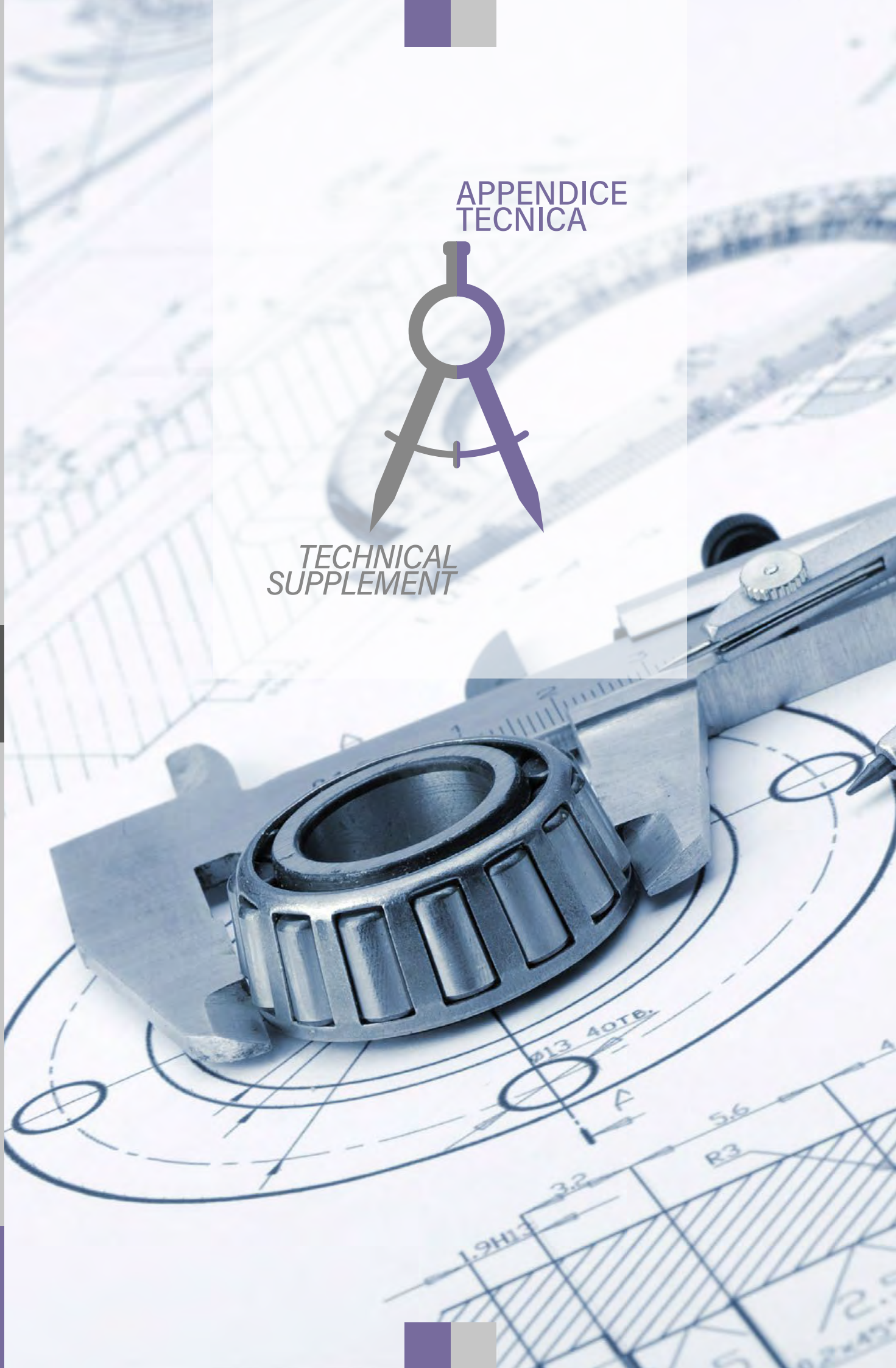
TRASCINATORI A CONO MORSE
MORSE TAPER WITH DRIVING DOG

Codice *Code*	Cono Morse *Morse taper*	A	B	L1	L2	L3	D1	D2	D3	R	ß
011120	2	8	6,3	93	83	16	17,78	28	13,5	6	1°25'50"
011125	3	8	7,9	112	102	20	23,825	30	18,5	7	1°26'16"
011130	4	8	11,9	135,5	125,5	24	31,267	42	24,5	8	1°29'15"
011135	5	8	15,9	167,5	157,5	29	44,399	50	35,7	10	1°30'26"
011136	6	8	19	228	218	40	63,348	62	51	13	1°29'



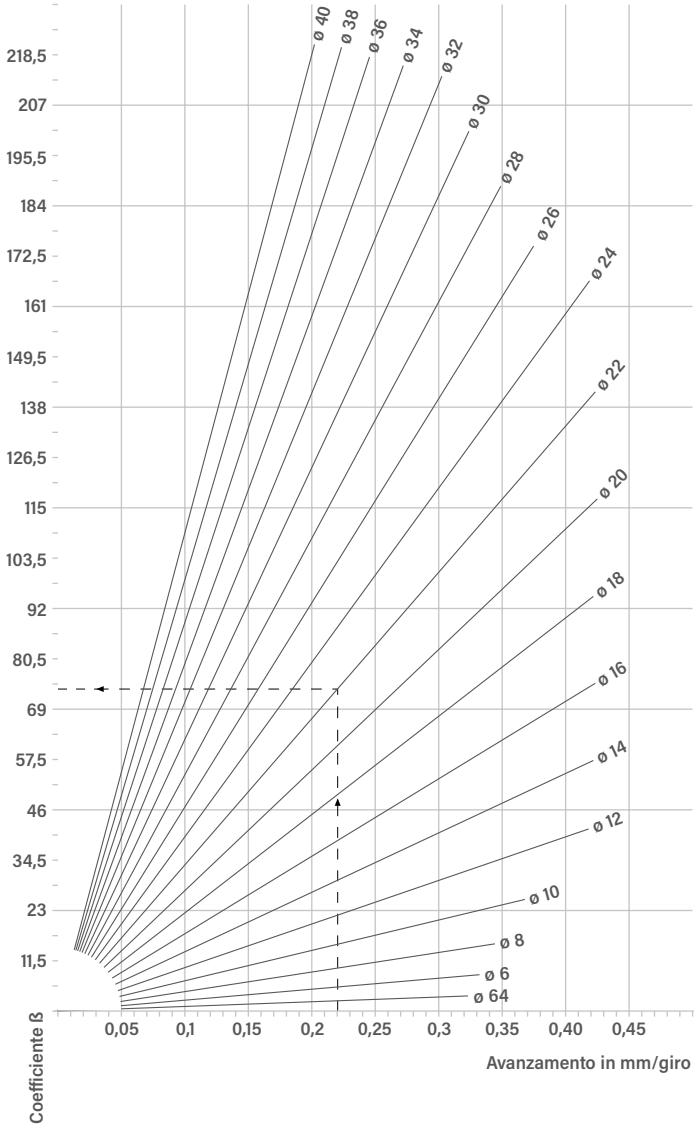
APPENDICE TECNICA

TECHNICAL SUPPLEMENT




0.5x45°
0.01MM

CALCOLO MOMENTO TORCENTE E POTENZA
ESTIMATE TORQUE AND POWER



La OMG, con questo diagramma, desidera offrire la possibilità di calcolare con velocità e ottima approssimazione, il momento torcente e la relativa potenza necessaria per l'esecuzione delle forature. Scegliendo l'appropiato avanzamento sull'ascissa, congiungendo con il relativo diametro di foratura, in ordinata si leggerà un determinato valore del "coefficente ß"; moltiplicando questo per la resistenza del materiale si otterrà il momento torcente. Applicando poi la formula

$$N = \frac{M_t \times n}{9549,3}$$

dove n è il n° di giri, si otterrà la potenza N espressa in kW

With this diagram, OMG makes it possible to calculate the torque and corresponding power necessary for drilling quickly and with maximum approximation. By selecting the proper feed on the abscissa and adding it to the corresponding drilling diameter on the ordinate, a certain «coefficient ß» value is obtained. By multiplying this by the material strength, the torque can be found. Then, by applying the formula,

$$N = \frac{M_t \times n}{9549,3}$$

where n is the number of revolutions, it is possible to determine power N expressed in kW.

Es:

a = 0,22 mm/giro
punta Ø 22
giri/1' = 230
R = 500 N/mm²
coefficiente ß = 73

$$M_t = \frac{73 \times 500}{1000} = 36,5 \text{ Nm}$$

$$N = \frac{36,5 \times 230}{9549,3} = 0,88 \text{ kW}$$

Ex:

a = 0,22 mm/revs
tip Ø 22
rpm = 230
R = 500 N/mm²
coefficient ß = 73

Dimensioni estremità mandrini macchine utensili per la costruzione del manicotto di collegamento.

Spindles dimensions off machine-tools to manufacture the connection collar.

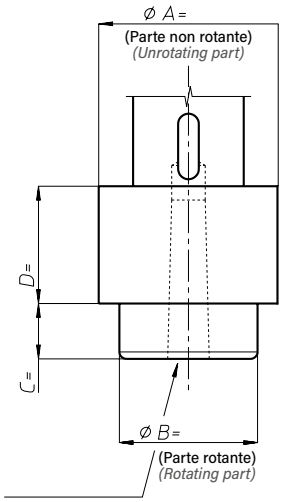


Fig. 1

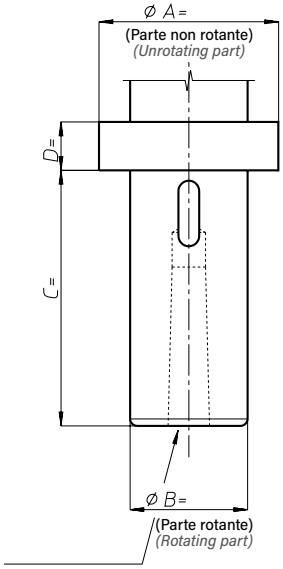


Fig. 2

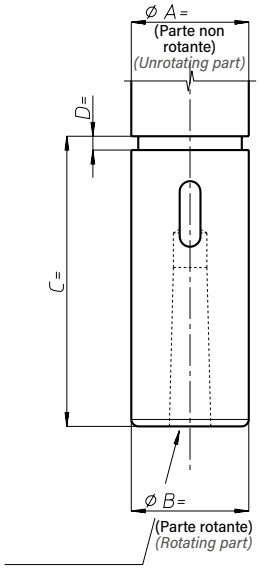


Fig. 3

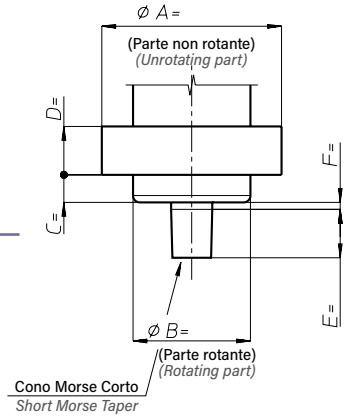


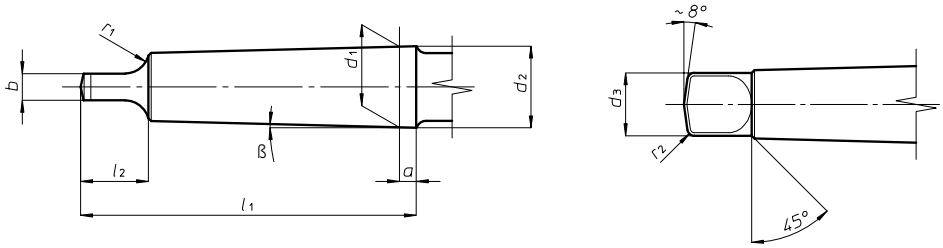
Fig. 4

Se nessuna figura si adatta alla vostra macchina, disegnate qui l'estremità mandrino.

If no picture fits your machine, draw here the spindle end.

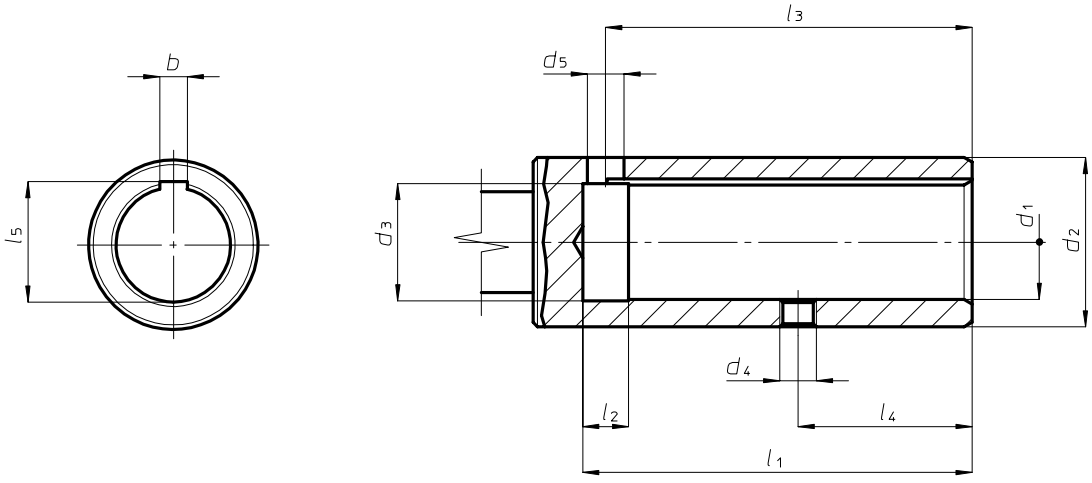
DIN 228

CONO MORSE · *MORSE TAPER*

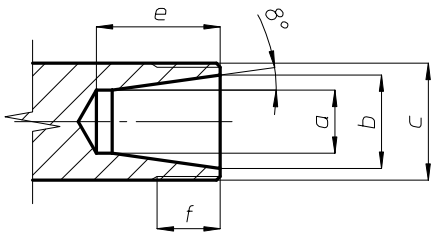


Cono Morse *Morse Taper*	a	b h13	d1	d2	d3max	l1max	l2max	r1	r2	ß
0	3	3,9	9,045	9,2	6	59,5	10,5	4	1	1°29'27"
1	3,5	5,2	12,065	12,2	8,7	65,5	13,5	5	1,2	1°25'43"
2	5	6,3	17,780	18	13,5	80	16	6	1,6	1°25'50"
3	5	7,9	23,825	24,1	18,5	99	20	7	2	1°26'16"
4	6,5	11,9	31,267	31,6	24,5	124	24	8	2,5	1°29'15"
5	6,5	15,9	44,399	44,7	35,7	156	29	10	3	1°30'26"
6	8	19	63,348	63,8	51	218	40	13	4	1°29'36"

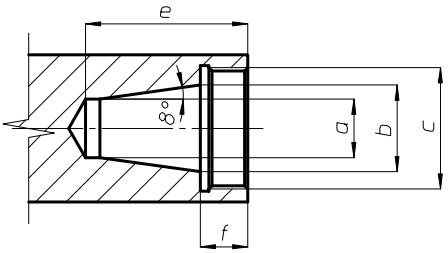
DIN 5058



Grandezza *Size d1 H7*	Ø8	Ø10	12	16	Ø20	Ø25	28	Ø32	Ø36	48
b	2	3	3	5	5	6	6	8	9	10
d2f7	15	18	20	25	32	37	40	45	50	67
d3	8,6	10,6	12,6	16,6	20,6	25,6	28,6	32,8	36,8	48,8
d4	M4	M5	M5	M6	M6	M8	M8	M8	M8	M10
d5	3,5	5	5	6	6	8	8	10	10	12
l1 min	42	52	52	75	78	85	85	106	106	129
l2	8	8	8	8	8	10	10	10	10	12
l3	35	48	48	70	73	80	80	101	101	123
l4 ±0,1	16	22	22	34	34	38	38	45	45	57
l5 ±0,1	9	11,1	13,1	17,3	21,3	26,7	29,7	33,7	37,7	50,1



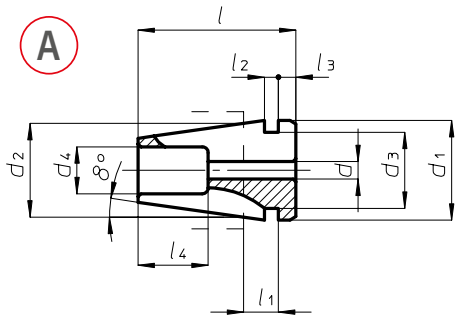
Grandezza *Size d1 H7*	Serraggio *Clamping*	a	b ±0,05	c	e	f	
ER8	0,5... 5,0	5,2	8	M10x0,75	13,0	7,5	
ER11	0,5... 7,0	7,5	11	M13x0,75	17,0	10,0	
ER16	0,5... 10,0	10,5	16	M19x1,00	22,0	13,0	
ER20	0,5... 13,0	13,5	20	M24x1,00	26,5	13,5	
ER25	0,5... 16,0	18,0	25	M30x1,00	29,0	14,0	
ER16	0,5... 10,0	10,5	16	M22x1,50	22,0	13,0	
ER20	0,5... 13,0	13,5	20	M25x1,50	26,5	13,5	
ER25	0,5... 16,0	18,0	25	M32x1,50	29,0	14,0	
ER32	1,0... 20,0	23,5	32	M40x1,50	34,0	16,0	
ER40	2,0... 30,0	30,5	40	M50x1,50	38,0	17,0	
ER50	4,0... 34,0	38,0	50	M64x2,00	48,0	24,0	

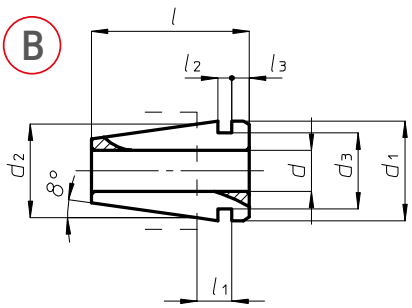


Grandezza *Size d1 H7*	Serraggio *Clamping*	a	b ±0,05	c	e	f	
ER11	0,5... 7,0	7,5	11	M18x1,00	23,0	7,0	
ER16	0,5... 10,0	10,5	16	M24x1,00	32,0	10,0	
ER20	0,5... 13,0	13,5	20	M28x1,50	37,5	11,0	
ER25	0,5... 16,0	18,0	25	M32x1,50	41,0	12,0	
ER32	1,0... 20,0	23,5	32	M40x1,50	48,0	14,0	

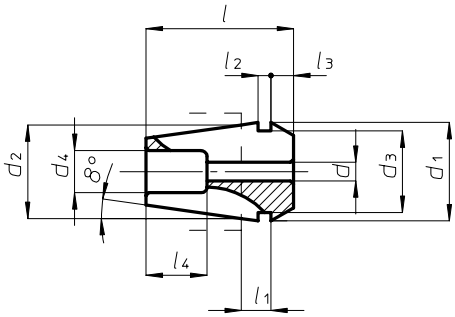
DIN 6499-B

PINZE · *COLLETS*

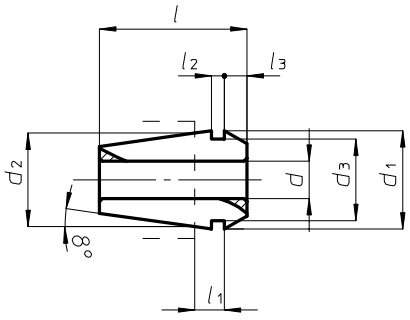




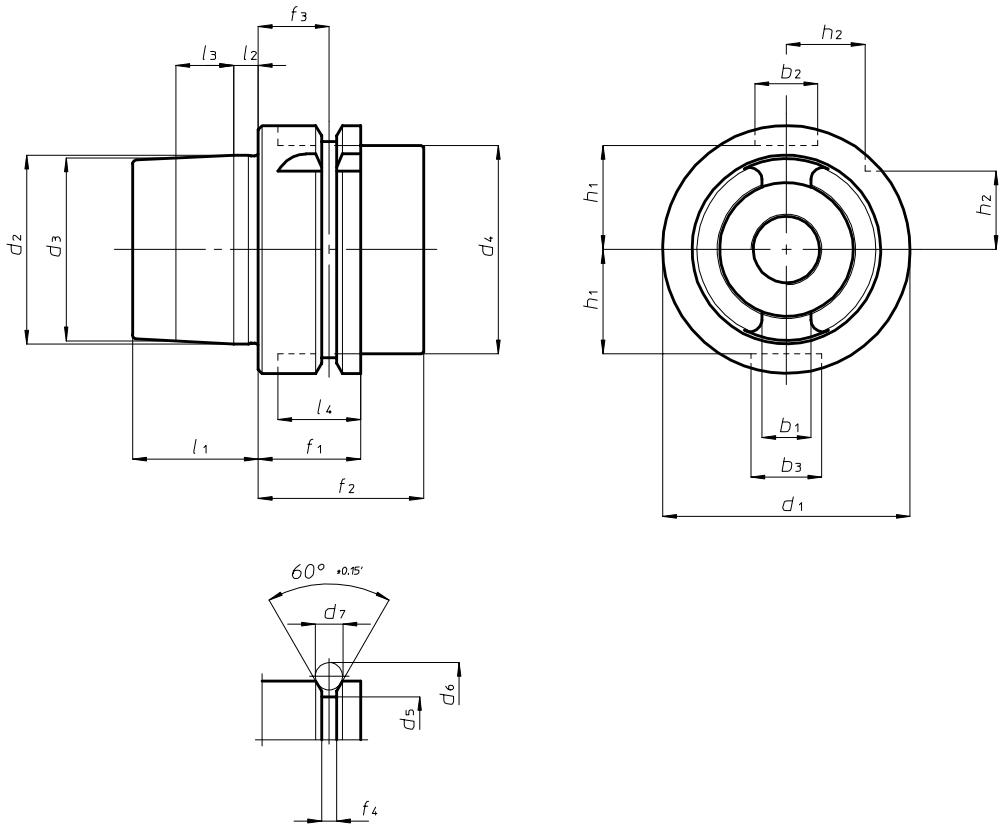
Grandezza *Size d1 H7*	d	d1	d2	d3	d4	l	l1	l2	l3	l4	Disegno *Picture*
ER8	0,5... 2,5	8,5	8,0	6,5	4,0	13,5	2,98	1,2	1,5	6,0	A
ER8	3,0... 5,0	8,5	8,0	6,5	-	13,5	2,98	1,2	1,5	-	A



Grandezza *Size d1 H7*	d	d1	d2	d3	d4	l	l1	l2	l3	l4	
ER11	0,5... 2,5	11,5	11,0	9,5	5,0	18,0	3,80	2,0	2,5	9,0	
ER16	0,5... 4,5	17,0	16,0	13,8	7,5	27,5	6,26	2,7	4,0	10,0	
ER20	1,0... 6,5	21,0	20,0	17,4	9,0	31,5	6,36	2,8	4,8	13,0	
ER25	1,0... 7,5	26,0	25,0	22,0	12,0	34,0	6,66	3,1	5,0	15,0	
ER32	2,0... 3,5	33,0	32,0	29,2	15,0	40,0	7,16	3,6	5,5	20,0	
ER32	4,0... 7,5	33,0	32,0	29,2	15,0	40,0	7,16	3,6	5,5	15,0	
ER40	3,0... 3,5	41,0	40,0	36,2	20,0	46,0	7,66	4,1	7,0	21,0	
ER40	4,0... 8,5	41,0	40,0	36,2	20,0	46,0	7,66	4,1	7,0	18,0	
ER50	4,0... 10,0	52,0	50,0	46,0	20,0	60,0	12,60	5,5	8,5	26,0	



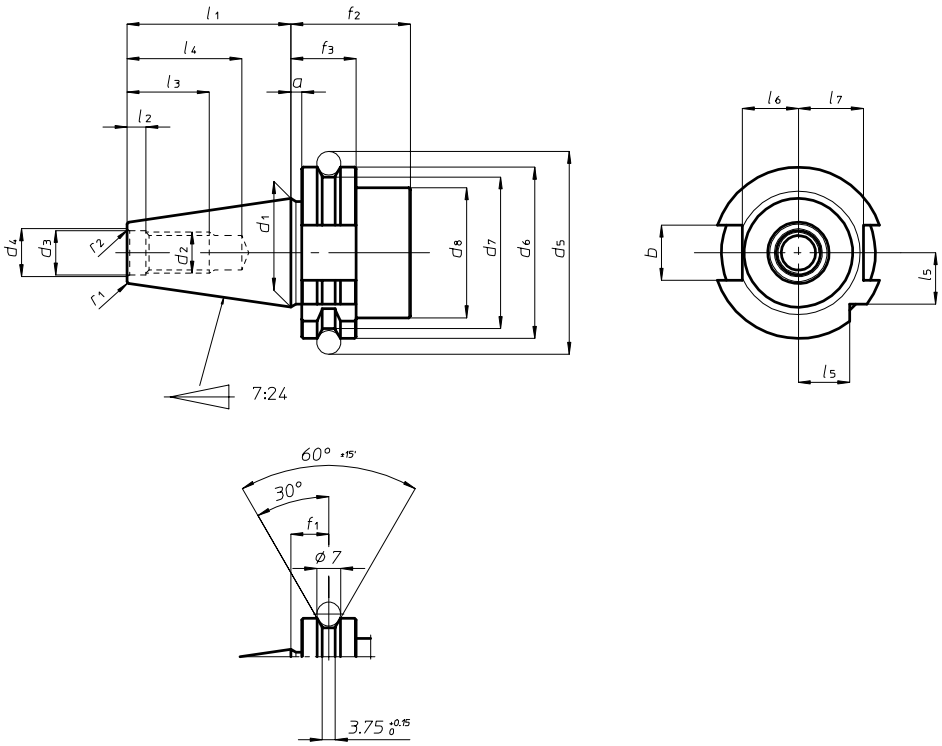
Grandezza *Size d1 H7*	d	d1	d2	d3		l	l1	l2	l3		
ER11	3,0... 7,0	11,5	11,0	9,5		18,0	3,80	2,0	2,5		
ER16	5,0... 10,0	17,0	16,0	13,8		27,5	6,26	2,7	4,0		
ER20	7,0... 13,0	21,0	20,0	17,4		31,5	6,36	2,8	4,8		
ER25	8,0... 16,0	26,0	25,0	22,0		34,0	6,66	3,1	5,0		
ER32	8,0... 20,0	33,0	32,0	29,2		40,0	7,16	3,6	5,5		
ER40	9,0... 30,0	41,0	40,0	36,2		46,0	7,66	4,1	7,0		
ER50	12,0... 34,0	52,0	50,0	46,0		60,0	12,60	5,5	8,5		



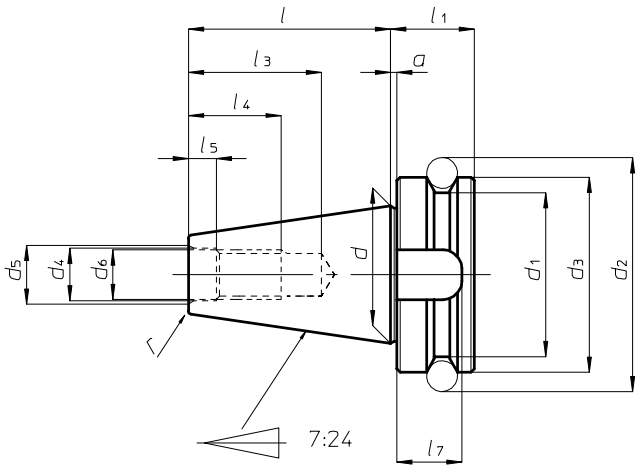
	HSK50		HSK63		HSK80		HSK100	
b1 H10	10,5		12,5		16		20	
b2 H10	12		16		18		20	
b3 H10	14		18		20		22	
d1 H10	50		63		80		100	
d2	38	+0,009 +0,006	48	+0,011 +0,007	60	+0,013 +0,008	75	+0,015 +0,009
d3	36,900	+0,006 +0,003	46,530	+0,007 +0,003	58,100	+0,008 +0,003	72,600	+0,009 +0,003
d4 max	42		53		67		85	
d5 $^{0}_{-0,1}$	43		55		70		92	
d6 $^{0}_{-0,1}$	59,3		72,3		88,8		109,75	
d7	7		7		7		7	
f1 $^{0}_{-0,1}$	26		26		26		29	
f2 min	42		42		42		45	
f3 ±0,1	18		18		18		20	
f4 $^{+0,15}_{0}$	3,75		3,75		3,75		3,75	
h1 $^{0}_{-0,2}$	21		26,5		34		44	
h2 $^{0}_{-0,3}$	15,5		20		25		31,5	
l1 $^{0}_{-0,2}$	25		32		40		50	
l2	5		6,3		8		10	
l3	11		14,7		19		24	
l4	19		21		22		24	

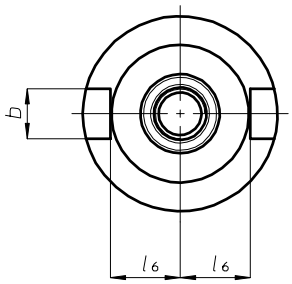
DIN 6981

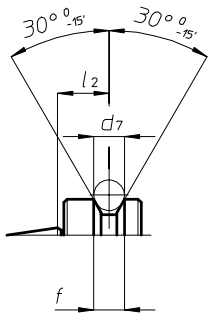
FORMA A · *A SHAPE*



Grandezza *Size d1 H7*	30	40	45	50
a $^{+0,1}_{-0,1}$	32	3,2	3,2	3,2
b H12	16,1	16,1	19,3	25,7
d1	31,75	44,45	57,15	69,85
d2	M12	M16	M20	M24
d3 H7	13	17	21	25
d4 max	14	19	23,4	28
d5 $^{+0,05}_{-0,05}$	59,3	72,3	91,35	107,25
d6 $^{0}_{-0,1}$	50	63,55	82,55	97,50
d7 $^{0}_{-0,5}$	44,3	56,25	75,25	91,25
d8 max	45	50	63	80
f1 $^{+0,1}_{-0,1}$	11,1	11,1	11,1	11,1
f2 min	35	35	35	35
f3 $^{0}_{-0,1}$	19,1	19,1	19,1	19,1
l1 $^{0}_{-0,3}$	47,8	68,4	82,7	101,75
l2 $^{+0,5}_{0}$	5,5	8,2	10	11,5
l3 min	24	32	40	47
l4 min	33,5	42,5	52,5	61,5
l5 $^{0}_{-0,3}$	15	18,5	24	30
l6 $^{0}_{-0,4}$	16,4	22,8	29,1	35,5
l7 $^{0}_{-0,4}$	19	25	31,3	37,7
r1	0,6 $^{0}_{-0,3}$	1,2 $^{0}_{-0,5}$	2 $^{0}_{-0,5}$	2,5 $^{0}_{-0,5}$
r2 $^{0}_{-0,5}$	0,8	1	1,2	1,5

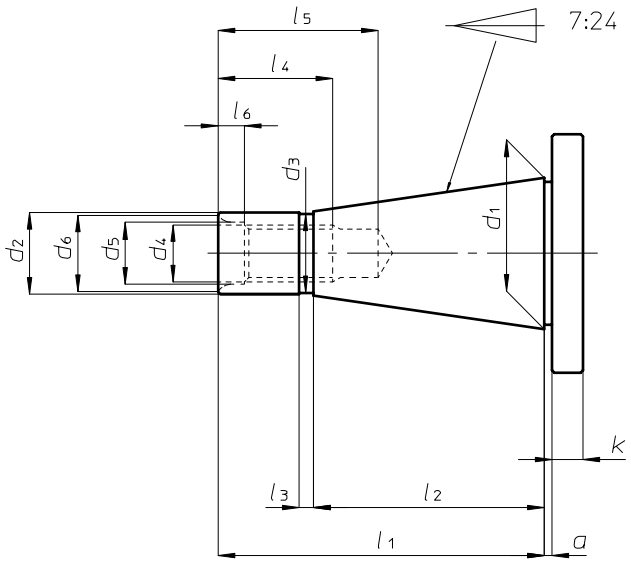


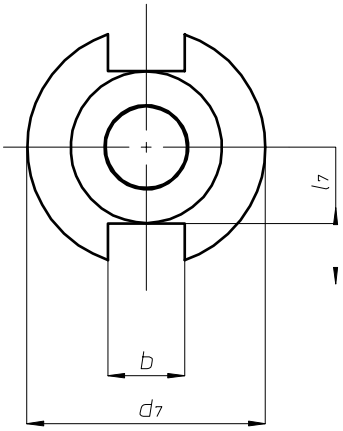




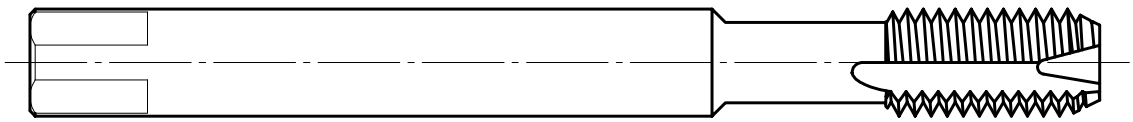
Grandezza *Size d1 H7*	30	40	50
a ±0,4	2	2	3
b H8	16,1	16,1	25,7
d	31,75	44,45	69,85
d1 - 0,1 - 0,3	38	53	85
d2	56,144	74,679	119,019
d3 H8	46	63	100
d4 H8	12,5	17	25
d5	14,5	19	27
d6	M12	M16	M24
d7	8	10	15
f + 0,1 0	8	10	15
l ±0,15	48,4	65,4	101,8
l1	22	27	38
l2 ±0,1	13,6	16,6	23,2
l3	34	43	62
l4	24	30	45
l5 + 0,5 0	7	9	13
l6 0 - 0,2	16,3	22,6	35,4
l7	17	21	31
r	0,5	1	1

DIN 2080





Grandezza *Size*	30	40	45	50
a ±0,2	1,6	1,6	3,2	3,2
b H12	16,1	16,1	19,3	25,7
d1	31,75	44,45	57,15	69,85
d2 a 10	17,4	25,3	32,4	39,6
d3	16,5	24	30	38
d4	M12	M16	M20	M24
d5	13	17	21	26
d6 max	16	21,5	26	32
d7 $^{0}_{-0,4}$	50	63	80	97,5
k ±0,15	8	10	12	12
l1	68,4	93,4	106,8	126,8
l2	48,4	65,4	82,8	101,8
l3	3	5	6	8
l4	24	32	40	47
l5 min	33,5	42,5	52,5	61,5
l6 $^{+0,5}_{0}$	5,5	8,2	10	11,5
l7 max	16,2	22,5	29	35,3



Maschi *Clamping*		ISO 529		DIN 371 (DIN 2181)		DIN 371		DIN 376		JAPAN JIS		US STANDARD	
(mm)	(pollici)	(Ø)	(□)	(Ø)	(□)	(Ø)	(□)	(Ø)	(□)	(Ø)	(□)	(Ø)"	(□)"
M1.0		2,50	2,10	-	-	2,50	2,10	-	-	3,00	2,50	-	-
M1.1		2,50	2,10	-	-	2,50	2,10	-	-	3,00	2,50	-	-
M1.2		2,50	2,10	-	-	2,50	2,10	-	-	3,00	2,50	-	-
M1.4		2,50	2,10	-	-	2,50	2,10	-	-	3,00	2,50	-	-
M1.6	1/16	2,50	2,10	-	-	2,50	2,10	-	-	3,00	2,50	0,141	0,110
M1.7		2,50	2,10	-	-	2,50	2,10	-	-	3,00	2,50	-	-
M1.8		2,50	2,10	-	-	2,50	2,10	-	-	3,00	2,50	0,141	0,110
M2.0		2,80	2,10	2,50	2,00	2,50	2,10	-	-	3,00	2,50	0,141	0,110
M2.2		2,80	2,10	2,80	2,24	2,50	2,10	-	-	3,00	2,50	0,141	0,110
M2.3		2,80	2,10	2,80	2,24	2,50	2,10	-	-	3,00	2,50	-	-
M2.5	3/32	2,80	2,10	2,80	2,24	2,50	2,10	-	-	3,00	2,50	0,141	0,110
M2.6		2,80	2,10	2,80	2,24	2,50	2,10	-	-	3,00	2,50	-	-
M3.0	1/8	3,15	2,50	3,15	2,50	3,50	2,70	3,00	-	4,00	3,00	0,141	0,110
M3.5		3,55	2,80	3,55	2,80	4,00	3,00	2,50	2,10	4,00	3,00	0,141	0,110
M4.0	5/32	4,00	3,15	-	-	4,50	3,40	2,80	2,10	5,00	4,00	0,168	0,131
M4.5	3/16	4,50	3,55	-	-	6,00	4,90	3,50	2,70	5,00	4,00	0,194	0,152
M5.0		5,00	4,00	-	-	6,00	4,90	3,50	2,70	5,50	4,50	0,194	0,152
M6.0	1/4	6,30	5,00	-	-	6,00	4,90	4,50	3,40	6,00	4,50	0,255	0,191
M7.0	5/16	7,10	5,60	-	-	7,00	5,50	5,50	4,30	6,20	5,00	0,318	0,238
M8.0		8,00	6,30	-	-	8,00	6,20	6,00	4,90	6,20	5,00	0,318	0,238
M9.0		9,00	7,10	-	-	9,00	7,00	7,00	5,50	7,00	5,50	0,381	0,286
M10.0	3/8	10,00	8,00	-	-	10,00	8,00	7,00	5,50	7,00	5,50	0,381	0,286
M11.0		8,00	6,30	-	-	-	-	8,00	6,20	8,00	6,20	0,381	0,286
M12.0	1/2	9,00	7,10	-	-	-	-	9,00	7,00	8,50	6,50	0,367	0,275
M14.0	9/16	11,20	9,00	11,20	-	-	-	11,00	9,00	10,50	8,00	0,429	0,322
M16.0	5/8	12,50	10,00	12,50	-	-	-	12,00	9,00	12,50	10,00	0,480	0,360
M18.0	11/16	14,00	11,20	14,00	-	-	-	14,00	11,00	14,00	11,00	0,542	0,406
M20.0	13/16	14,00	11,20	14,00	-	-	-	16,00	12,00	15,00	12,00	0,652	0,489
M22.0	7/8	16,00	12,50	16,00	-	-	-	18,00	14,50	17,00	13,00	0,697	0,523
M24.0	15/16	18,00	14,00	18,00	-	-	-	18,00	14,50	19,00	15,00	0,760	0,570
M27.0	1 1/16	20,00	16,00	20,00	-	-	-	20,00	16,00	20,00	15,00	0,896	0,672
M30.0	1 3/16	20,00	16,00	20,00	-	-	-	22,00	18,00	23,00	23,17	1,021	0,766

US STANDARD: in pollici

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