



MANDRINI PORTA UTENSILI  
PER MACCHINE A CNC

*TOOLS HOLDING SPINDLES  
FOR CNC MACHINES*

*MANDRIN PORTE- OUTILS  
POUR MACHINES CNC*

*WERKZEUGTRÄGERSPINDE  
FÜR CNC - MASCHINEN*



CATALOGO MECCANICA 2010





PAGNONI S.R.L. é una affermata azienda, nella costruzione di mandrineria e complementi per macchine automatiche.

Specializzatasi nella realizzazione di mandrini con attacco ISO e HSK, nelle varie versioni, standard e no, ultimamente ha approntato una nuova linea di produzione, in modo tale di soddisfare il mercato locale ed internazionale.

Specializzata nel realizzare grosse serie, il suo organico prevede anche una linea per realizzare, con tempistica rapida, ogni eventuale richiesta personalizzata.

Continuamente aggiornata dal punto di vista tecnico, la produzione é caratterizzata da un'ottima resa qualitativa e da una costante disponibilità di articoli pronti a magazzino.

Tutti i nostri portautensili per macchine CNC e relativi accessori sono costruiti con acciaio da cementazione di alta qualità. Questi sono cementati, temperati, rinvenuti, sabbiati e bruniti: hanno una durezza in superficie di 58/60 HRC.

Tutte le parti di contatto tra la macchina e l'utensile sono totalmente retificati, comprese le filettature esterne per la ghiera di serraggio pinza.

Le quote di costruzione e le tolleranze di esecuzione rispondono alle normative DIN.

Siamo in grado di fornire anche portautensili e accessori speciali non presenti a catalogo.



*PAGNONI S.R.L. is a established company, in the construction of spindles and accessories for automated machinery.*

*It specialises in the construction of spindles with ISO and HSK connections, in either standard or customised versions. Recently it has set up a new line so as to satisfy local and international market.*

*All these components are generally produced in big runs, but the company also has a line that enables it to meet quickly and accurately any request for tailor-made products.*

*Continuously updated from the technical viewpoint, its production is characterised by excellent quality levels and the availability of wide range of ready-made articles.*

*Our tool holders for CNC machines and the relative accessories are all made of first-rate case-hardening steel. The parts are case-hardened, hardened and tempered, sand-blasted and burnished: their surface hardness is 58/60 HRC.*

*All contact surfaces between the machine and the tool are ground all over, including the external threaded parts for the jaw clamping ring-nut.*

*Construction dimensions and execution tolerances conform to DIN standards.*

*We can supply tool holders and special accessories not included in our standard line-up*



## Come raggiungerci



**Mandri ni porta utensili  
per macchine a CNC**

Tool holding spindles  
for CNC machines

Mandrin porte-outils  
pour machines CNC

A Werkzeugträgerspindel  
für CNC-Maschinen



DIN 69871/AD+B

Pag.6



MAS 403 BT/AD+B

Pag.56



DIN 2080

Pag.113



DIN 69893/HSK

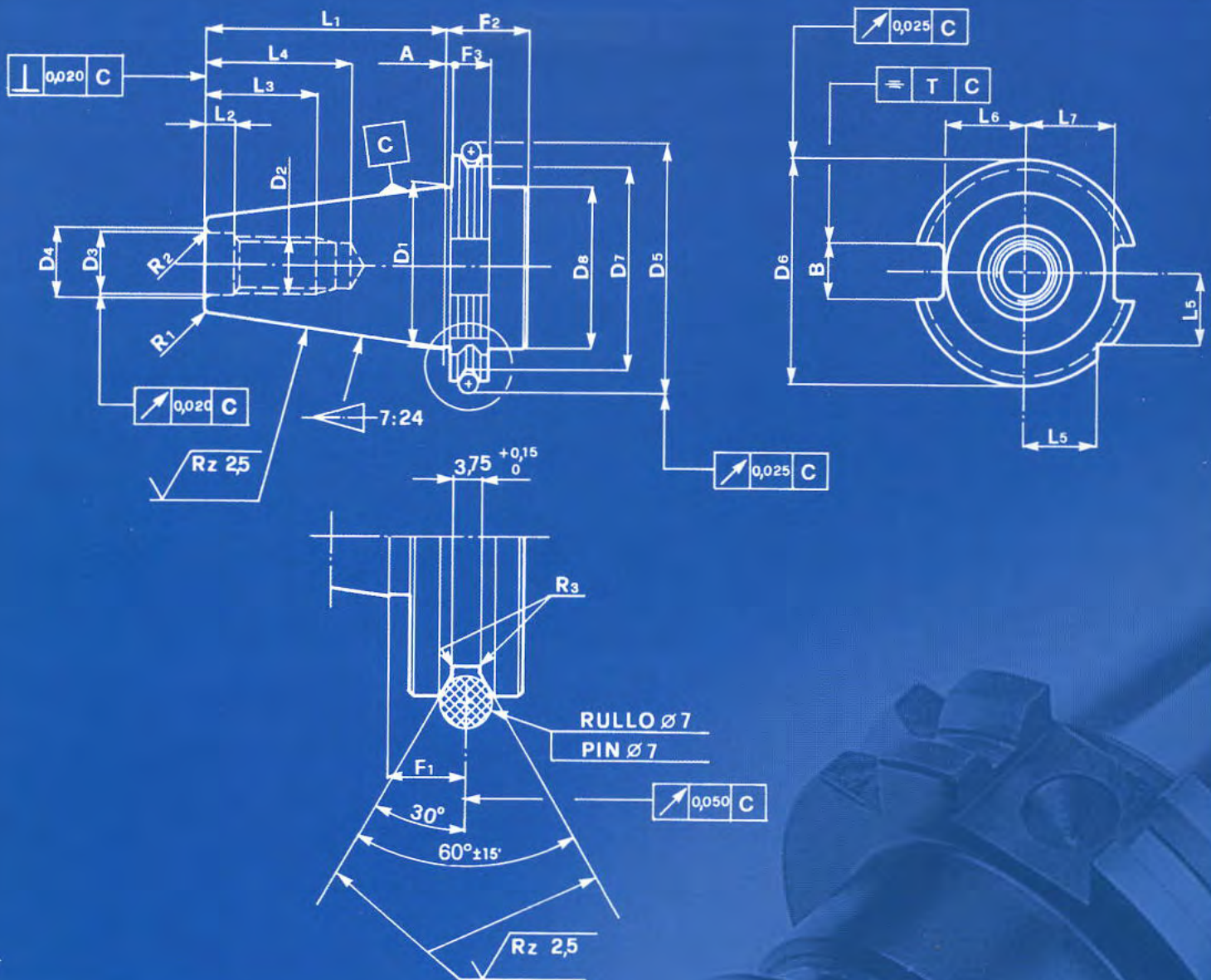
Pag.149



ACCESSORI

Pag.297

DIN 69871



Cono - Size 40 50

$A_{\pm 0,1}$		3,2
$B_{H12}$	16,1	25,7
$D_1$	44,45	69,85
$D_2$	M16	M24
$D_3_{H7}$	17	25
$D_4_{max}$	19	28
$D_5_{\pm 0,05}$	72,3	107,25
$D_6^{0}_{-0,1}$	63,55	97,50
$D_7^{0}_{-0,5}$	56,25	91,25
$D_8_{max}$	50	80
$F1_{\pm 0,1}$		11,1

Cono - Size 40 50

$F_2_{min}$		35
$F_3^{0}_{-0,1}$		15,9
$L_1^{0}_{-0,3}$	68,4	101,75
$L_2^{+0,5}_{0}$	8,2	11,5
$L_3_{min}$	32	47
$L_4_{min}$	42,5	61,5
$L_5^{0}_{-0,3}$	18,5	30
$L_6^{0}_{-0,4}$	22,8	35,5
$L_7^{0}_{-0,4}$	25	37,7
$R_1^{0}_{-0,5}$	1,2	2,5
$R_2^{0}_{-0,5}$	1	1,5
T	0,12	0,20

**MANDRINI PAGNONI CON ATTACCO ISO**

**DATI TECNICI**

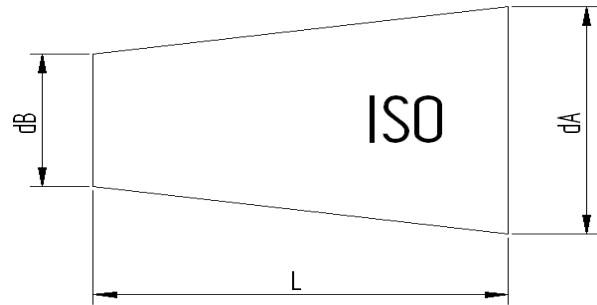


TUTTI I MANDRINI PORTAUTENSILI PAGNONI VENGONO PRODOTTI SECONDO LE NORMATIVE DIN

**TOLLERANZA DEL CONO**

PRODOTTI IN CLASSE AT3

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**COASSIALITÀ PORTAPINZE**

La norma DIN6391 ammette un'errore massimo di 0.016 sia per i portapinze DIN6499 che per DIN 6388.

La nostra produzione normalmente presenta uno scostamento massimo di eccentricità tra cono ISO e sede pinza compreso tra i 0,003 e 0,010 mm.

**COASSIALITÀ PORTAFRESE FISSI E COMBINATI**

I portafrese fissi e combinati di nostra produzione rispondono ai criteri prescritti dalla norma DIN 6358, la quale prevede un errore massimo di coassialità tra cono ISO 30 e ISO 40 ed i diametri 16-22-27-32-40, di 0,01.

Mentre per ISO 50 è ammesso un errore massimo di 0,015 mm.

**COASSIALITÀ PORTAFRESE WELDON - WHISTLE NOTCH**

Rispettando la normativa DIN 6359-1 i portafrese WELDON devono rispondere ai seguenti requisiti :

Foro: tolleranza H5

coassialità: scostamento massimo consentito tra cono e sede Weldon <0.01 (per ISO 40)

Garantiamo la tolleranza prescritta sul foro e un valore di coassialità mediamente di 0,005.

**EQUILIBRATURA**

La maggior parte dei portautensili presenti in questa categoria sono prebilanciati in classe G 6,3 8000 rpm min -1. o bilanciati a 12000 giri rpm min-1.

**DATI COSTRUTTIVI**

- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4-0,5 mm
- Temprati-rinvenuti
- Durezza HRC 58 +-2 resistenza 800-1000 N/mm2
- Bruniti
- Finitura di rettifica interna, esterna e nelle filettature delle ghiera chiudipinza

**EQUILIBRATURA MANDRINI PER ALTE VELOCITÀ**

Eventuali bilanciature supplementari sui nostri mandrini vengono eseguite su richiesta cliente, con una classe massima di bilanciatura di G 2,5 a 25000 rpm.

**DATI COSTRUTTIVI MANDRINI PER ALTE VELOCITÀ**

- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4 - 0,5 mm
- Temprati-rinvenuti
- Durezza HRC 58 +-2 resistenza 800-1000 N/ mm2
- Bruniti
- Finitura di rettifica interna, esterna del cono
- Rettifica parte anteriore e nelle filettature delle ghiera chiudipinza.
- Collaudati 100% con strumenti di misura certificati e forniti con certificato di bilanciatura.



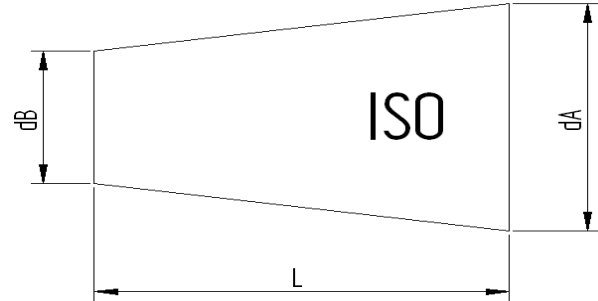
**PAGNONI DIN TOOLHOLDERS**
**TECHNICAL FEATURES**


ALL PAGNONI TOOLHOLDERS ARE MANUFACTURED ACCORDING TO DIN NORM.

**CONE'S TOLERANCE**

ACCORDING TO THE CLASS AT3.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004


**COLLET CHUCK'S RUNOUT ACCURACY**

The norm DIN6391 permits a runout error between external cone and internal cone / collet seat of 0.016. Our production has a runout accuracy which is guaranteed to be within 0,003 / 0,010 m at the tool seat.

**SHELL END MILL ADAPTOR'S RUNOUT ACCURACY**

Our shell end mill adaptors meet the requirements of the norm DIN6358, which prescribes for diameters 16-22-27-32-40 a runout accuracy of:0,01 for SK 30/40 0,015 for SK 50.

**WELDON END MILL HOLDER'S RUNOUT ACCURACY**

According to the norm DIN6359-1 Weldon end mill holders have to meet the following requirements:

Bore: H5 tolerance

Runout accuracy: <0.01 (for SK 40)

Our end mill adaptors ensure the prescribed holes' tolerance and have a runout accuracy which is normally 0.005

**BALANCING**

The major part of toolholders of this category can run up to 8000 rpm grade G 6,3 or 12000 rpm.

**CONSTRUCTIVE FEATURES**

- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm
- Hardened-Tempered
- Hardness HRC 58+-2, Strength 800-1000 N/mm2
- Black oxidized
- Internal and external grinding finished.

**HIGH-SPEED BALANCING TOOLHOLDERS**

Any additional balancing on our toolholders are carried out on client request, with a class maximum of balancing of 25.000 rpm grade g 2,5.

**CONSTRUCTIVE FEATURES FOR HIGH-SPEED TOOLHOLDERS**

- Manufactured with casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm
- Hardened-Tempered
- Hardness HRC 58+-2, Strength 800-1000 N/mm2
- Black oxidized
- Internal and external grinding finish of the cone
- Grinding finish on the front side and on the thread of collet nuts.
- Tested 100% with certified measuring instruments and supplied with balancing certificate

**PAGNONI-STEILKEGELAUFNAHMEN**

**TECHNISCHE DATEN**

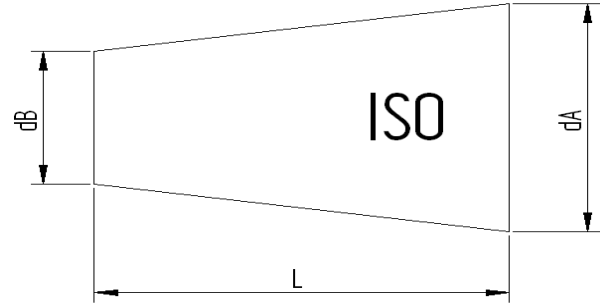


Alle Pagnoni-Steilkegelaufnahmen werden nach den DIN-Normen angefertigt.

**KEGELSCHAFTTOLERANZ**

In Klasse AT3 angefertigt.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**RUNDLAUFGENAUIGKEIT DER SPANNZANGENAUFNAHME**

Die DIN 6391- Norm schreibt eine Rundlaufgenauigkeit zwischen Aussenkegel und Innenkegel / Spannzangensitz vom 0,016 vor.

Unsere Spannzangenfutter weisen einen Rundlauffehler zwischen ISO-Kegelaufnahme und Spannzangensitz, der zwischen 0,003 und 0,010 mm liegt.

**AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT**

Pagnoni- Aufsteckfräsdorne entsprechen der DIN 6358- Norm, die einen höchsten Rundlauffehler zwischen ISO 30- und ISO40-Kegel und den Durchmessern 16-22-27-32-40 vom 0,01 vorsieht.

Der mögliche höchste Rundlauffehler für ISO 50 ist 0,015 mm.

**WELDON AUFSTECKFRÄSDORNE-RUNDLAUFGENAUIGKEIT**

Nach der DIN 6359-1-Norm müssen die Weldon- Aufsteckfräsdorne die folgenden Forderungen aufweisen:

Bohrung: Toleranz H5

Rundlaufgenauigkeit:höchster möglicher Rundlauffehler zwischen Kegel und Weldonsitz < 0,01 (für ISO 40)

Die vorgeschriebene Toleranz der Bohrung und eine durchschnittliche Rundlaufgenauigkeit von 0,005 sind verischart.

**WUCHTUNG**

Die meisten Werkzeughalter dieser Gruppe sind in Klasse G6,3 auf 8.000 U/Min -1 vorgewuchtet oder auf 12.000 U/Min -1 gewuchtet.

**KONSTRUKTIONSDATEN**

- aus legiertem Einsatzstahl angefertigt
- in der Einsatzhärte tiefe von 0,4-0,5 mm
- gehärtet, angelassen
- Härte HRC 58 +-2, Festigkeit 800-1000 N-mm2
- brüniert
- inneres, äußeres Schleifen und am Gewinde der Spannzangenmutter

**WUCHTUNG MIT HOCHGESCHWINDIGKEIT**

Auf Anfrage können wir die Werkzeughalter auf maximal G2,5 25.000 U/min. gegen Aufpreis auswuchten.

**KONSTRUKTIONSDATEN**

- aus legiertem Einsatzstahl angefertigt
- in der Einsatzhärte tiefe von 0,4-0,5 mm
- gehärtet, angelassen
- Härte HRC 58+-2, Festigkeit 800-1000 N/mm2
- brüniert
- inneres, äußeres Schleifen des Kegels
- Schleifen der Vorderseite und am Gewinde der Spannzangenmutter
- 100% durch zertifizierte Meßinstrumente geprüft und mit Wuchtungsprotokoll geliefert

**MANDRINS PAGNONI AVEC ATTACHEMENT ISO**

**DONNE TECNICQUES**

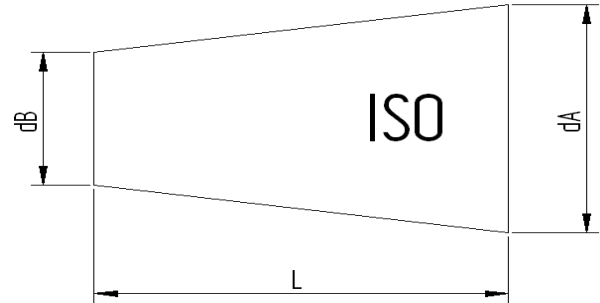


TOUS LES MANDRINS PORTE-OUTILS PAGNONI SONT PRODUITS SUIVANT LES SPÉCIFICATIONS DIN

**TOLLERANCE DU CONE**

EN CLASSE AT3.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**COAXIALITÉ PORTE-PINCE**

La norme DIN6391 admet une erreur maximum du 0.016 soit pour les porte-pinces DIN6499 soit pour DIN6388. Dans notre production l'écart d'excentricité maximum entre cône ISO et logement de la pince est compris entre:0,003 et 0,0010 mm.

**COAXIALITÉ PORTE-FRAISES FIXES ET COMBINES**

Les porte-fraises fixes et combinés de notre production suivent la spécification de la norme DIN6358, qui prévoit pour les diamètres 16-22-27-32-40 une concentricité de 0,01 pour ISO 30 et ISO 40 0,015 pour ISO 50.

**COAXIALITÉ PORTE-FRAISES WELDON**

Suivant les spécifications DIN 6359-1 les porte-fraises WELDON doivent suivre les conditions suivantes :

- Trou: tolérance H5
- Coaxialité: écart maximum toléré entre cône et logement du Weldon <0.01 (pour ISO 40)
- Nous assurons la tolérance prévue sur le trou et une coaxialité en moyenne de 0.005.

**EQUILIBRAGE**

La plupart des porte-outils sont pré-équilibrés en classe G 6,3 8000 Tr/Min -1. ou équilibrés à 12000 Tr/Min- 1.

**ELEMENTS DE CONSTRUCTION**

- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 -0,5 mm
- Trempé - Revenu
- Dureté HRC 58 +- 2 résistance 800-1000 N/mm2
- Brunis
- Rectification du cône intérieur, extérieur et dans le filetage des écrous qui serrent la pince.

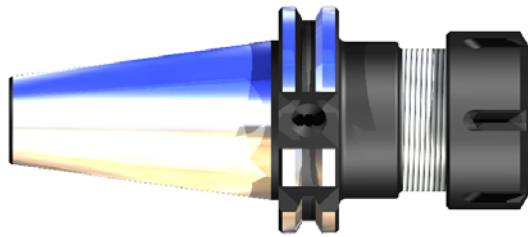
**EQUILIBRAGE MANDRINS POUR HAUTE VITESSE**

Équilibrage éventuels sur nos mandrins sont exécutés sur demande du client, avec une maximum classe de équilibrage de G 2,5 à 25.000 rpm.

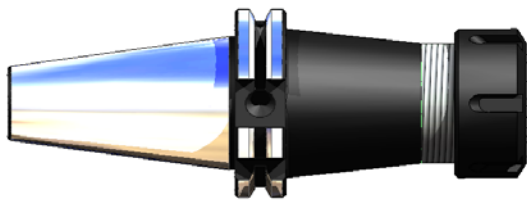
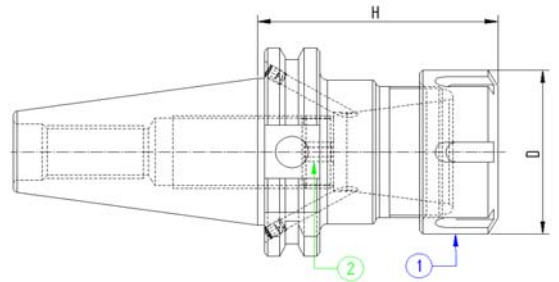
**ELEMENTS DE CONSTRUCTION POUR MANDRINS HAUTE VITESSE**

- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 - 0,5 mm
- Trempé - Revenu
- Dureté HRC 58+-2, résistance 800-1000 N/mm2
- Brunis
- Finition de rectification intérieure, extérieure et du cône
- Rectification du cône intérieur et dans le filetage des écrous qui serrent la pince.
- Contrôlés à 100 % avec des instruments de mesure certifiés et livrés avec un certificat d'équilibrage.

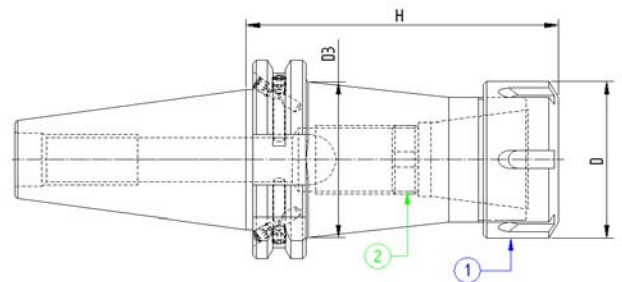
**Bilanciato G.6,3 12.000 RPM**



**FIG. 1**



**FIG. 2**

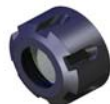


Codice	ISO	Descrizione	H	D	D3	FIG.
140PP110	40	ISO40 DIN69871 P/P H.70 ER16	70	32	-	1
140PP113	40	ISO40 DIN69871 P/P H.70 ER20	70	35	-	1
140PP116	40	ISO40 DIN69871 P/P H.70 ER25	70	42	-	1
140PP120	40	ISO40 DIN69871 P/P H.70 ER32	70	50	-	1
140PP126	40	ISO40 DIN69871 P/P H.70 ER40	70	63	-	1
140PP210	40	ISO40 DIN69871 P/P H.100 ER16	100	32	-	2
140PP213	40	ISO40 DIN69871 P/P H.100 ER20	100	35	-	2
140PP216	40	ISO40 DIN69871 P/P H.100 ER25	100	42	-	2
140PP220	40	ISO40 DIN69871 P/P H.100 ER32	100	50	-	2
140PP226	40	ISO40 DIN69871 P/P H.100 ER40	100	63	50	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

ER      **GHIERA**      Q.tà      **GRANO INT.**      Q.tà



16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1



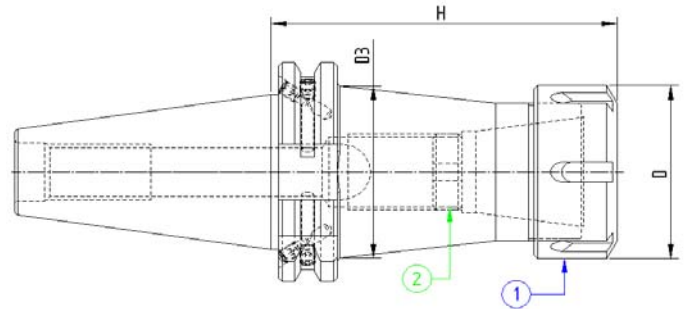
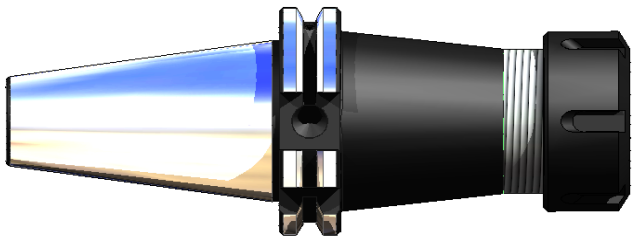
MANDRINI PORTAPINZA TIPO ER  
ER COLLET CHUCK  
MANDRINS A PINCES TYPE ER  
SPANNZAGENFUTTER ER TYPE



**DIN 69871 AD/B**

**DIN 6499**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D	D3
140PP310	40	ISO40 DIN69871 P/P H.130 ER16	130	32	38
140PP313	40	ISO40 DIN69871 P/P H.130 ER20	130	35	40
140PP316	40	ISO40 DIN69871 P/P H.130 ER25	130	42	-
140PP320	40	ISO40 DIN69871 P/P H.130 ER32	130	50	-
140PP326	40	ISO40 DIN69871 P/P H.130 ER40	130	63	-
140PP410	40	ISO40 DIN69871 P/P H.160 ER16	160	32	-
140PP413	40	ISO40 DIN69871 P/P H.160 ER20	160	35	43
140PP416	40	ISO40 DIN69871 P/P H.160 ER25	160	42	-
140PP420	40	ISO40 DIN69871 P/P H.160 ER32	160	50	-
140PP426	40	ISO40 DIN69871 P/P H.160 ER40	160	63	50
140PP510	40	ISO40 DIN69871 P/P H.200 ER16	200	32	-
140PP513	40	ISO40 DIN69871 P/P H.200 ER20	200	35	45
140PP516	40	ISO40 DIN69871 P/P H.200 ER25	200	42	-
140PP520	40	ISO40 DIN69871 P/P H.200 ER32	200	50	-
140PP526	40	ISO40 DIN69871 P/P H.200 ER40	200	63	50

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIÈCES DETACHEES - ERSATZTEILE**

ER      GHIERA      Q.tà      GRANO INT.      Q.tà



16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1



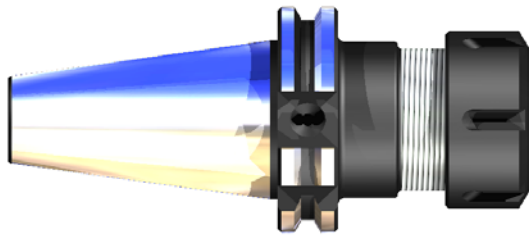
MANDRINI PORTAPINZA TIPO ER  
ER COLLET CHUCK  
MANDRINS A PINCES TYPE ER  
SPANNZAGENFUTTER ER TYPE



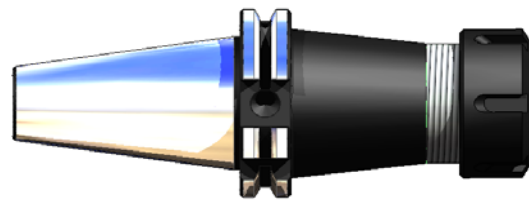
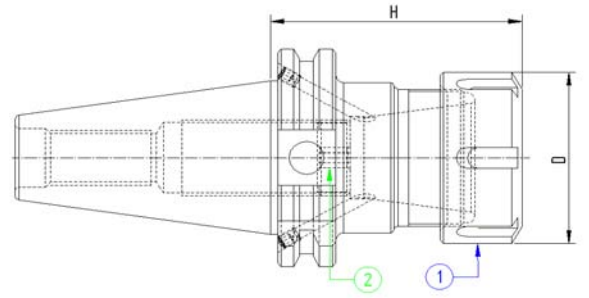
**DIN 69871 AD/B**

**DIN 6499**

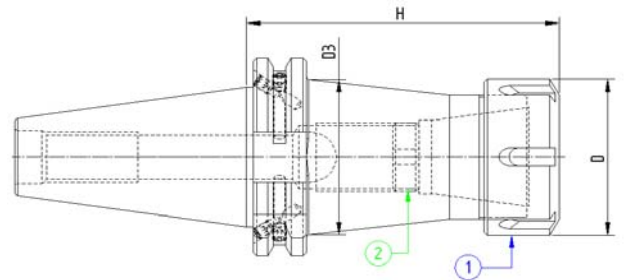
**Bilanciato G.6,3 12.000 RPM**



**FIG. 1**



**FIG. 2**

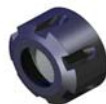


Codice	ISO	Descrizione	H	D	D3	FIG.
150PP110	50	ISO50 DIN69871 P/P H80 ER16	80	32	-	1
150PP113	50	ISO50 DIN69871 P/P H80 ER20	80	35	-	1
150PP116	50	ISO50 DIN69871 P/P H80 ER25	80	42	-	1
150PP120	50	ISO50 DIN69871 P/P H80 ER32	80	50	-	1
150PP126	50	ISO50 DIN69871 P/P H80 ER40	80	63	-	1
150PP210	50	ISO50 DIN69871 P/P H100 ER16	100	32	-	2
150PP213	50	ISO50 DIN69871 P/P H100 ER20	100	35	-	2
150PP216	50	ISO50 DIN69871 P/P H100 ER25	100	42	-	2
150PP220	50	ISO50 DIN69871 P/P H100 ER32	100	50	-	2
150PP226	50	ISO50 DIN69871 P/P H100 ER40	100	63	-	2
150PP234	50	ISO50 DIN69871 P/P H100 ER50	100	-	-	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	GHIERA	Q.tà	GRANO INT.	Q.tà
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16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1
50	-	1	103015901	1



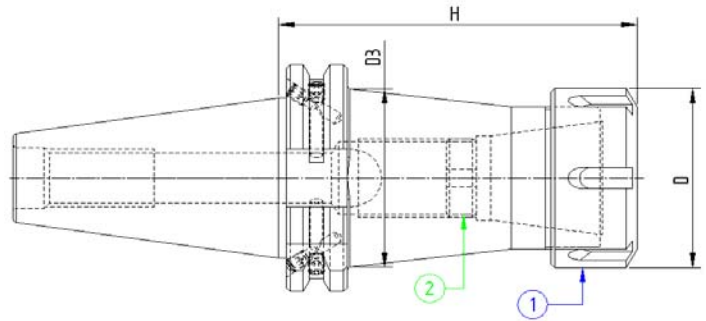
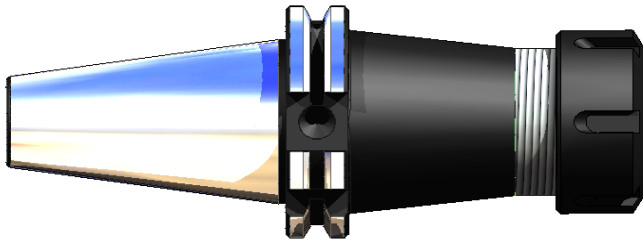
MANDRINI PORTAPINZA TIPO ER  
ER COLLET CHUCK  
MANDRINS A PINCES TYPE ER  
SPANNZAGENFUTTER ER TYPE



**DIN 69871 AD/B**

**DIN 6499**

**Bilanciato G.6,3 12.000 RPM**

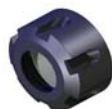


Codice	ISO	Descrizione	H	D	D3
150PP310	50	ISO50 DIN69871 P/P H130 ER16	130	32	37
150PP313	50	ISO50 DIN69871 P/P H130 ER20	130	35	40
150PP316	50	ISO50 DIN69871 P/P H130 ER25	130	42	47
150PP320	50	ISO50 DIN69871 P/P H130 ER32	130	50	-
150PP326	50	ISO50 DIN69871 P/P H130 ER40	130	63	-
150PP334	50	ISO50 DIN69871 P/P H130 ER50	130	-	-
150PP410	50	ISO50 DIN69871 P/P H160 ER16	160	32	-
150PP413	50	ISO50 DIN69871 P/P H160 ER20	160	35	43
150PP416	50	ISO50 DIN69871 P/P H160 ER25	160	42	-
150PP420	50	ISO50 DIN69871 P/P H160 ER32	160	50	-
150PP426	50	ISO50 DIN69871 P/P H160 ER40	160	63	-
150PP434	50	ISO50 DIN69871 P/P H160 ER50	160	-	-
150PP510	50	ISO50 DIN69871 P/P H200 ER16	200	32	-
150PP513	50	ISO50 DIN69871 P/P H200 ER20	200	35	45
150PP516	50	ISO50 DIN69871 P/P H200 ER25	200	42	-
150PP520	50	ISO50 DIN69871 P/P H200 ER32	200	50	-
150PP526	50	ISO50 DIN69871 P/P H200 ER40	200	63	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER      **GHIERA**      Q.tà      **GRANO INT.**      Q.tà



16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1
50	-	1	103015901	1



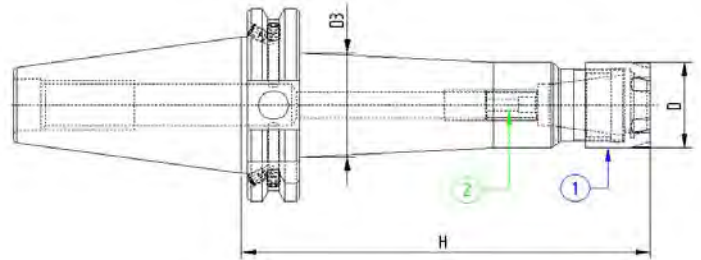
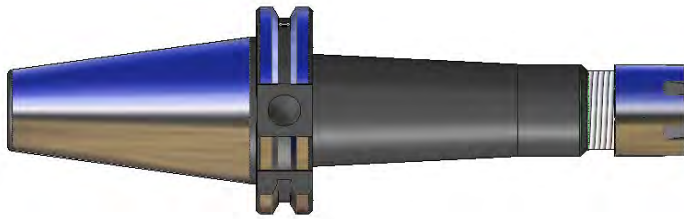
MANDRINI PORTAPINZA TIPO ER MINI  
ER COLLET CHUCK MINI  
MANDRINS A PINCES TYPE ER MINI  
SPANNZAGENFUTTER ER TYPE MINI



**DIN 69871 AD/B**

**DIN 6499**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
140PM107	40	ISO40 DIN69871 P/P H70 ER11MINI	70	20	16
140PM110	40	ISO40 DIN69871 P/P H70 ER16MINI	70	26	22
140PM207	40	ISO40 DIN69871 P/P H100 ER11MINI	100	21	16
140PM210	40	ISO40 DIN69871 P/P H100 ER16MINI	100	27	22
140PM213	40	ISO40 DIN69871 P/P H100 ER20MINI	100	28	28
140PM216	40	ISO40 DIN69871 P/P H100 ER25MINI	100	35	35
140PM307	40	ISO40 DIN69871 P/P H130 ER11MINI	130	22	16
140PM310	40	ISO40 DIN69871 P/P H130 ER16MINI	130	27	22
140PM313	40	ISO40 DIN69871 P/P H130 ER20MINI	130	34	28
140PM316	40	ISO40 DIN69871 P/P H130 ER25MINI	130	35	35
140PM410	40	ISO40 DIN69871 P/P H160 ER16MINI	160	27	22
140PM413	40	ISO40 DIN69871 P/P H160 ER20MINI	160	35	28
140PM416	40	ISO40 DIN69871 P/P H160 ER25MINI	160	36	35
140PM510	40	ISO40 DIN69871 P/P H200 ER16MINI	200	32	22
140PM513	40	ISO40 DIN69871 P/P H200 ER20MINI	200	38	28
140PM516	40	ISO40 DIN69871 P/P H200 ER25MINI	200	45	35

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER MINI    **GHIERA**    Q.tà    **GRANO int.**    Q.tà



11	911GHRMN	1	100601001	1
16	916GHRMN	1	101001601	1
20	920GHRMN	1	101001601	1
25	925GHRMN	1	101815801	1





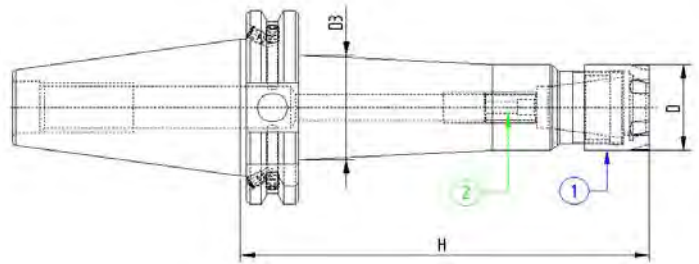
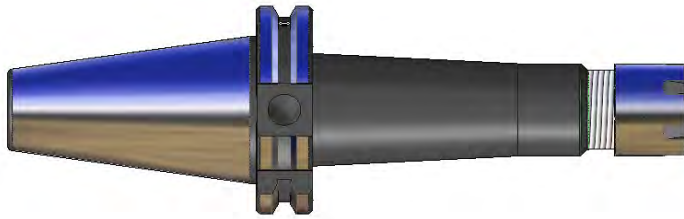
MANDRINI PORTAPINZA TIPO ER MINI  
ER COLLET CHUCK MINI  
MANDRINS A PINCES TYPE ER MINI  
SPANNZAGENFUTTER ER TYPE MINI



**DIN 69871 AD/B**

**DIN 6499**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
150PM210	50	ISO50 DIN69871 P/P H100 ER16MINI	100	28	22
150PM213	50	ISO50 DIN69871 P/P H100 ER20MINI	100	31	28
150PM216	50	ISO50 DIN69871 P/P H100 ER25MINI	100	35	35
150PM310	50	ISO50 DIN69871 P/P H130 ER16MINI	130	27	22
150PM313	50	ISO50 DIN69871 P/P H130 ER20MINI	130	33	28
150PM316	50	ISO50 DIN69871 P/P H130 ER25MINI	130	40	35
150PM405	50	ISO50 DIN69871 P/P H160 ER08MINI	160	20	12
150PM407	50	ISO50 DIN69871 P/P H160 ER11MINI	160	23	16
150PM410	50	ISO50 DIN69871 P/P H160 ER16MINI	160	30	22
150PM413	50	ISO50 DIN69871 P/P H160 ER20MINI	160	35	28
150PM416	50	ISO50 DIN69871 P/P H160 ER25MINI	160	42	35
150PM510	50	ISO50 DIN69871 P/P H200 ER16MINI	200	30	22
150PM513	50	ISO50 DIN69871 P/P H200 ER20MINI	200	36	28
150PM516	50	ISO50 DIN69871 P/P H200 ER25MINI	200	44	35

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

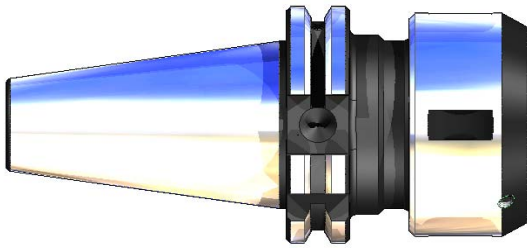
**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER MINI    **GHIERA**    Q.tà    **GRANO int.**    Q.tà

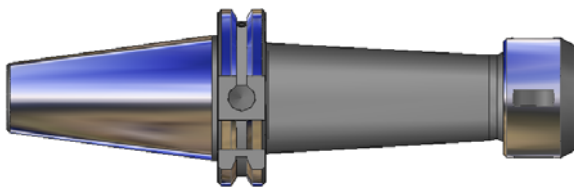
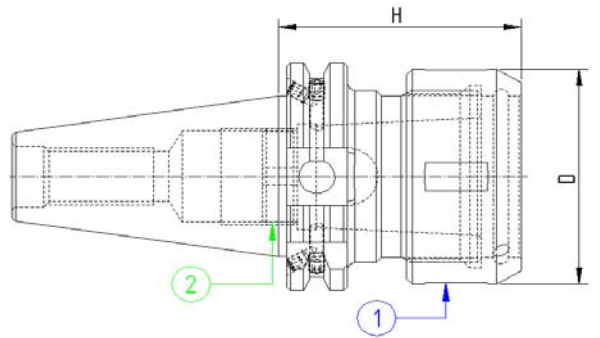


8	908GHRMN	1	-	-
11	911GHRMN	1	100601001	1
16	916GHRMN	1	101001601	1
20	920GHRMN	1	101001601	1
25	925GHRMN	1	101815801	1

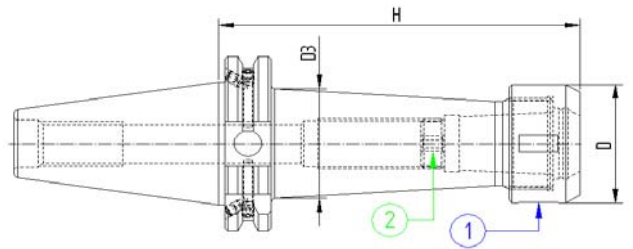
**Bilanciato G.6,3 12.000 RPM**



**FIG. 1**





**FIG. 2**



Codice	ISO	Descrizione	H	D	D3	FIG.
140PO116	40	ISO40 DIN69871 P/P H70 EOC16	70	43	-	1
140PO125	40	ISO40 DIN69871 P/P H70 EOC25	70	60	-	1
140PO132	40	ISO40 DIN69871 P/P H80 EOC32	80	72	-	1
140PO216	40	ISO40 DIN69871 P/P H100 EOC16	100	43	-	1
140PO225	40	ISO40 DIN69871 P/P H100 EOC25	100	60	-	1
140PO232	40	ISO40 DIN69871 P/P H100 EOC32	100	72	-	1
140PO316	40	ISO40 DIN69871 P/P H130 EOC16	130	43	40	2
140PO325	40	ISO40 DIN69871 P/P H130 EOC25	130	60	49	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

EOC	GHIERA	Q.tà	GRANO INT.	Q.tà
				
16	916GHROS	1	101815801	1
25	925GHROS	1	102715901	1
32	932GHROS	1	102715901	1



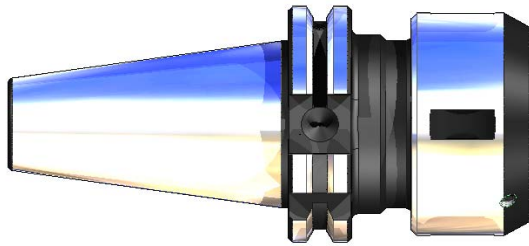
MANDRINI PORTAPINZA TIPO EOC  
 ER COLLET CHUCK  
 MANDRINS A PINCES TYPE EOC  
 SPANNZAGENFUTTER EOC TYPE



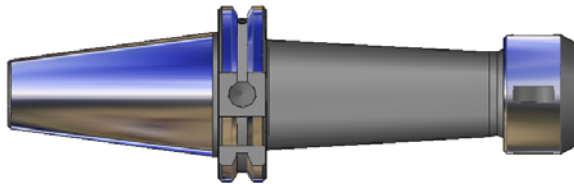
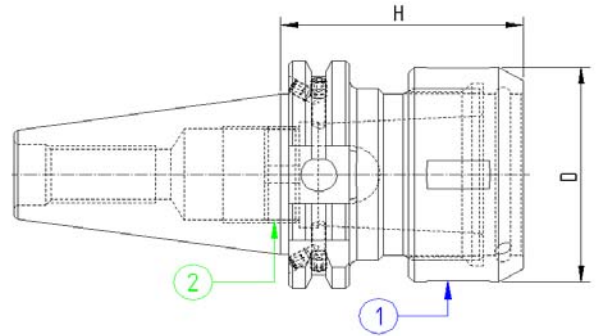
**DIN 69871 AD/B**

**DIN 6388**

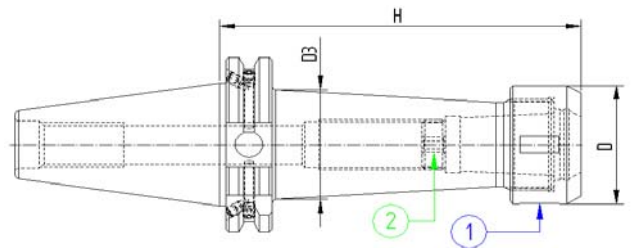
**Bilanciato G.6,3 12.000 RPM**



**FIG. 1**



**FIG. 2**

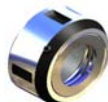


Codice	ISO	Descrizione	H	D	D3	FIG.
150PO116	50	ISO50 DIN69871 P/P H70 EOC16	70	43	-	1
150PO125	50	ISO50 DIN69871 P/P H70 EOC25	70	60	-	1
150PO132	50	ISO50 DIN69871 P/P H80 EOC32	80	72	-	1
150PO216	50	ISO50 DIN69871 P/P H100 EOC16	100	43	-	1
150PO225	50	ISO50 DIN69871 P/P H100 EOC25	100	60	-	1
150PO232	50	ISO50 DIN69871 P/P H100 EOC32	100	72	-	1
150PO316	50	ISO50 DIN69871 P/P H130 EOC16	130	43	49	2
150PO325	50	ISO50 DIN69871 P/P H130 EOC25	130	60	58	2
150PO332	50	ISO50 DIN69871 P/P H130 EOC32	130	72	62	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

EOC    GHIERA    Q.tà    GRANO INT.    Q.tà



16	916GHROS	1	101815801	1
25	925GHROS	1	102715901	1
32	932GHROS	1	102715901	1



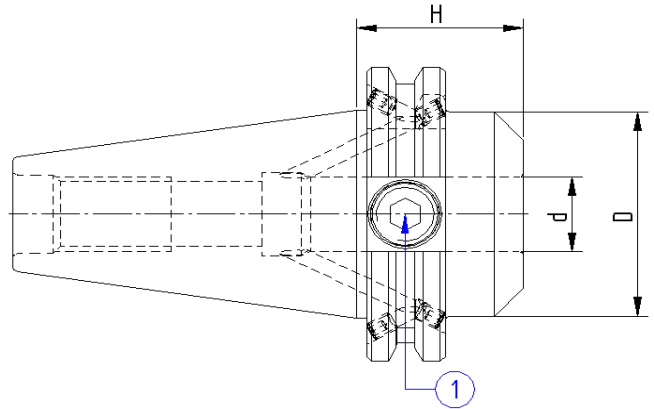
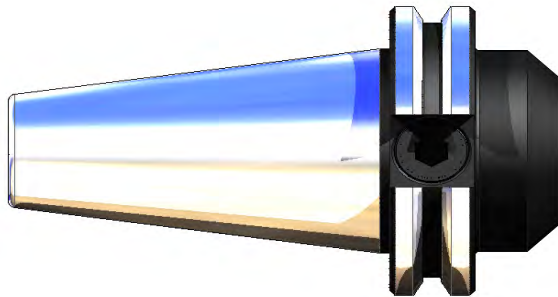
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**DIN 69871 AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
140WLC16	40	ISO40 DIN69871 WELDON H35 D.16	35	16	44
140WLC20	40	ISO40 DIN69871 WELDON H35 D.20	35	20	44
140WLC25	40	ISO40 DIN69871 WELDON H35 D.25	35	25	50
140WLC32	40	ISO40 DIN69871 WELDON H70 D.32	70	32	72

Codice	ISO	Descrizione	H	d	D
150WLC16	50	ISO50 DIN69871 WELDON H35 D.16	35	16	70
150WLC20	50	ISO50 DIN69871 WELDON H35 D.20	35	20	70
150WLC25	50	ISO50 DIN69871 WELDON H35 D.25	35	25	70
150WLC32	50	ISO50 DIN69871 WELDON H35 D.32	35	32	80
150WLC40	50	ISO50 DIN69871 WELDON H35 D.40	35	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	GRANO int.	Q.tà	
16	101401604	1	-	-	
20	101601604	1	-	-	
25	101801202	1	-	-	
32	102002002	1	-	-	
40	102001204	1	-	-	
		solo x H = 70		101401004	1
				-	-

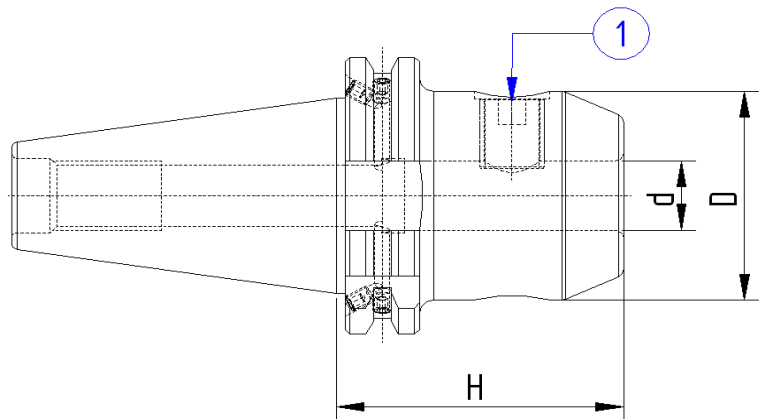
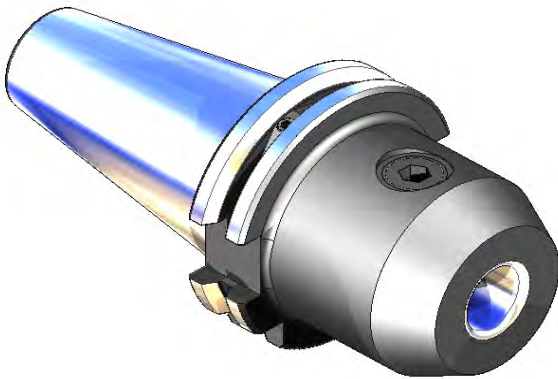


MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**DIN 69871 AD/B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
140WLD06	40	ISO40 DIN69871 WELDON H50 D.06	50	6	25
140WLD08	40	ISO40 DIN69871 WELDON H50 D.08	50	8	28
140WLD10	40	ISO40 DIN69871 WELDON H50 D.10	50	10	35
140WLD12	40	ISO40 DIN69871 WELDON H50 D.12	50	12	42
140WLD14	40	ISO40 DIN69871 WELDON H50 D.14	50	14	44
140WLD16	40	ISO40 DIN69871 WELDON H63 D.16	63	16	48
140WLD18	40	ISO40 DIN69871 WELDON H63 D.18	63	18	50
140WLD20	40	ISO40 DIN69871 WELDON H63 D.20	63	20	52
140WLD25	40	ISO40 DIN69871 WELDON H100 D.25	100	25	65
140WLD32	40	ISO40 DIN69871 WELDON H100 D.32	100	32	72
140WLD40	40	ISO40 DIN69871 WELDON H115 D.40	115	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

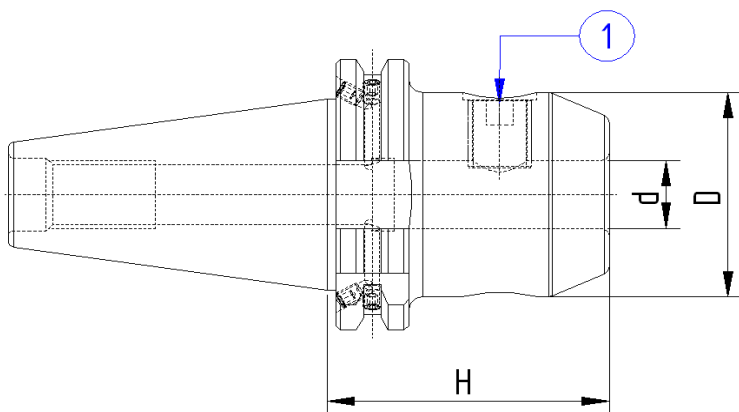
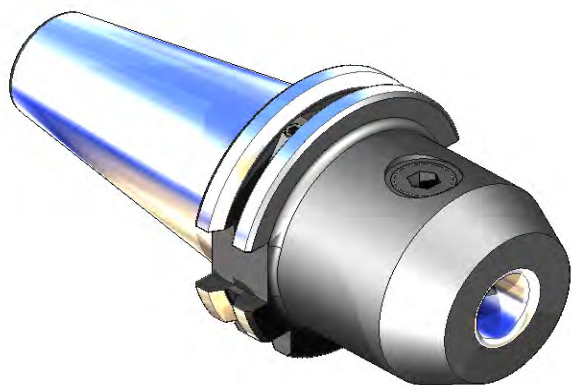
**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

**D**      **GRANO**      **Q.tà**



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2


**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
150WLD06	50	ISO50 DIN69871 WELDON H63 D.06	63	6	25
150WLD08	50	ISO50 DIN69871 WELDON H63 D.08	63	8	28
150WLD10	50	ISO50 DIN69871 WELDON H63 D.10	63	10	35
150WLD12	50	ISO50 DIN69871 WELDON H63 D.12	63	12	42
150WLD14	50	ISO50 DIN69871 WELDON H63 D.14	63	14	44
150WLD16	50	ISO50 DIN69871 WELDON H63 D.16	63	16	48
150WLD18	50	ISO50 DIN69871 WELDON H63 D.18	63	18	50
150WLD20	50	ISO50 DIN69871 WELDON H63 D.20	63	20	52
150WLD25	50	ISO50 DIN69871 WELDON H80 D.25	80	25	65
150WLD32	50	ISO50 DIN69871 WELDON H100 D.32	100	32	72
150WLD40	50	ISO50 DIN69871 WELDON H120 D.40	120	40	80
150WLD50	50	ISO50 DIN69871 WELDON H120 D.50	120	50	90

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

D	GRANO	Q.tà
		
6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2
50	102422504	2



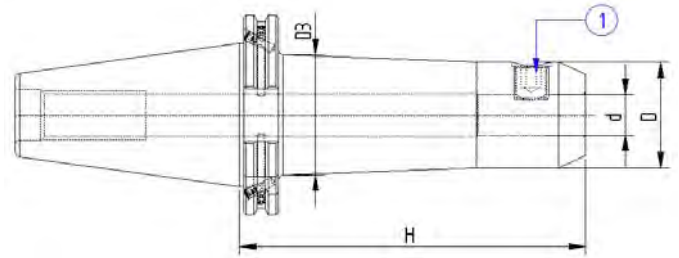
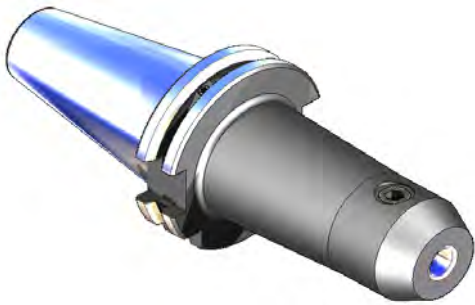
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**DIN 69871 AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
140WE206	40	ISO40 DIN69871 WELDON H100 D.6	100	6	25	35
140WE208	40	ISO40 DIN69871 WELDON H100 D.8	100	8	28	38
140WE210	40	ISO40 DIN69871 WELDON H100 D.10	100	10	35	40
140WE212	40	ISO40 DIN69871 WELDON H100 D.12	100	12	42	-
140WE214	40	ISO40 DIN69871 WELDON H100 D.14	100	14	44	-
140WE216	40	ISO40 DIN69871 WELDON H100 D.16	100	16	48	-
140WE218	40	ISO40 DIN69871 WELDON H100 D.18	100	18	50	-
140WE220	40	ISO40 DIN69871 WELDON H100 D.20	100	20	50	-

Codice	ISO	Descrizione	H	d	D	D3
140WE306	40	ISO40 DIN69871 WELDON H130 D.6	130	6	25	35
140WE308	40	ISO40 DIN69871 WELDON H130 D.8	130	8	28	38
140WE310	40	ISO40 DIN69871 WELDON H130 D.10	130	10	35	40
140WE312	40	ISO40 DIN69871 WELDON H130 D.12	130	12	42	-
140WE314	40	ISO40 DIN69871 WELDON H130 D.14	130	14	44	-
140WE316	40	ISO40 DIN69871 WELDON H130 D.16	130	16	48	-
140WE318	40	ISO40 DIN69871 WELDON H130 D.18	130	18	50	-
140WE320	40	ISO40 DIN69871 WELDON H130 D.20	130	20	50	-
140WE325	40	ISO40 DIN69871 WELDON H130 D.25	130	25	65	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

**D      GRANO      Q.tà**



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2



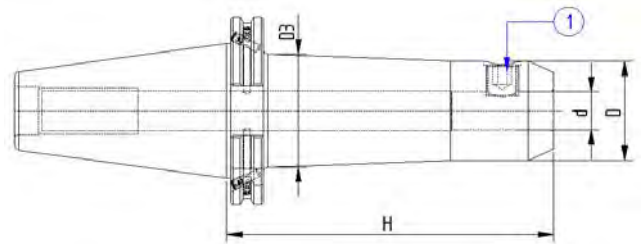
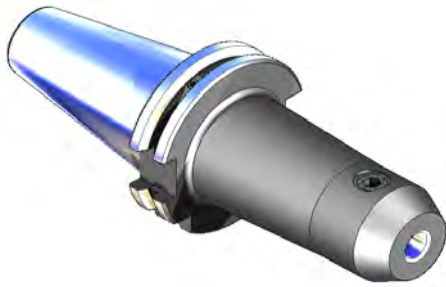
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**DIN 69871 AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
140WE406	40	ISO40 DIN69871 WELDON H160 D.6	160	6	25	35
140WE408	40	ISO40 DIN69871 WELDON H160 D.8	160	8	27,5	38
140WE410	40	ISO40 DIN69871 WELDON H160 D.10	160	10	34,5	40
140WE412	40	ISO40 DIN69871 WELDON H160 D.12	160	12	41,5	-
140WE414	40	ISO40 DIN69871 WELDON H160 D.14	160	14	44	-
140WE416	40	ISO40 DIN69871 WELDON H160 D.16	160	16	48	-
140WE418	40	ISO40 DIN69871 WELDON H160 D.18	160	18	50	-
140WE420	40	ISO40 DIN69871 WELDON H160 D.20	160	20	50	-
140WE425	40	ISO40 DIN69871 WELDON H160 D.25	160	25	65	-
140WE432	40	ISO40 DIN69871 WELDON H160 D.32	160	32	72	-

Codice	ISO	Descrizione	H	d	D	D3
140WE506	40	ISO40 DIN69871 WELDON H200 D.6	200	6	25	38
140WE508	40	ISO40 DIN69871 WELDON H200 D.8	200	8	28	41
140WE510	40	ISO40 DIN69871 WELDON H200 D.10	200	10	35	43
140WE512	40	ISO40 DIN69871 WELDON H200 D.12	200	12	42	48
140WE514	40	ISO40 DIN69871 WELDON H200 D.14	200	14	44	48
140WE516	40	ISO40 DIN69871 WELDON H200 D.16	200	16	48	-
140WE518	40	ISO40 DIN69871 WELDON H200 D.18	200	18	50	-
140WE520	40	ISO40 DIN69871 WELDON H200 D.20	200	20	50	-
140WE525	40	ISO40 DIN69871 WELDON H200 D.25	200	25	65	-
140WE532	40	ISO40 DIN69871 WELDON H200 D.32	200	32	72	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	D	GRANO	Q.tà
6	100601004	1	16	101401604	1
8	100801004	1	18	101401604	1
10	101001204	1	20	101601604	1
12	101201604	1	25	101802002	2
14	101201604	1	32	102002002	2





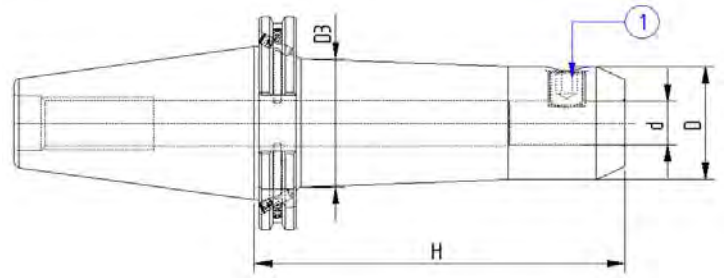
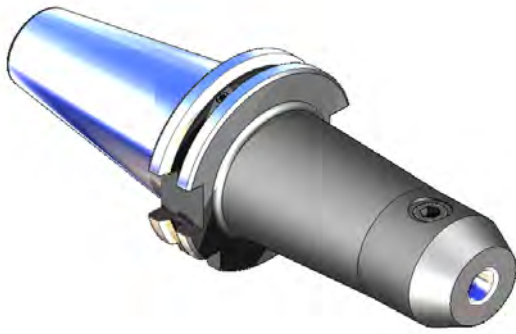
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**DIN 69871 AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**





Codice	ISO	Descrizione	H	d	D	D3
150WE206	50	ISO50 DIN69871 WELDON H.100 D.06	100	6	25	35
150WE208	50	ISO50 DIN69871 WELDON H.100 D.08	100	8	28	38
150WE210	50	ISO50 DIN69871 WELDON H.100 D.10	100	10	35	42
150WE212	50	ISO50 DIN69871 WELDON H.100 D.12	100	12	42	48
150WE214	50	ISO50 DIN69871 WELDON H.100 D.14	100	14	44	50
150WE216	50	ISO50 DIN69871 WELDON H.100 D.16	100	16	48	54
150WE218	50	ISO50 DIN69871 WELDON H.100 D.18	100	18	50	56
150WE220	50	ISO50 DIN69871 WELDON H.100 D.20	100	20	52	59
150WE225	50	ISO50 DIN69871 WELDON H.100 D.25	100	25	65	-

Codice	ISO	Descrizione	H	d	D	D3
150WE306	50	ISO50 DIN69871 WELDON H.130 D.6	130	6	25	35
150WE308	50	ISO50 DIN69871 WELDON H.130 D.8	130	8	28	38
150WE310	50	ISO50 DIN69871 WELDON H.130 D.10	130	10	35	42
150WE312	50	ISO50 DIN69871 WELDON H.130 D.12	130	12	42	48
150WE314	50	ISO50 DIN69871 WELDON H.130 D.14	130	14	44	50
150WE316	50	ISO50 DIN69871 WELDON H.130 D.16	130	16	48	54
150WE318	50	ISO50 DIN69871 WELDON H.130 D.18	130	18	50	56
150WE320	50	ISO50 DIN69871 WELDON H.130 D.20	130	20	52	59
150WE325	50	ISO50 DIN69871 WELDON H.130 D.25	130	25	65	-
150WE332	50	ISO50 DIN69871 WELDON H.130 D.32	130	32	72	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	D	GRANO	Q.tà
					
6	100601004	1	16	101401604	1
8	100801004	1	18	101401604	1
10	101001204	1	20	101601604	1
12	101201604	1	25	101802002	2
14	101201604	1	32	102002002	2



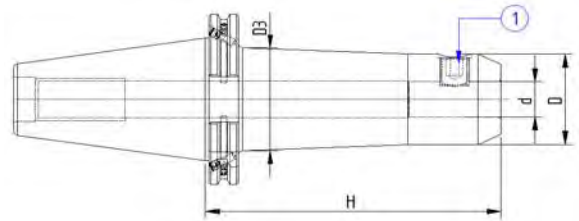
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**DIN 69871 AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
150WE406	50	ISO50 DIN69871 WELDON H160 D.6	160	6	25	35
150WE408	50	ISO50 DIN69871 WELDON H160 D.8	160	8	28	38
150WE410	50	ISO50 DIN69871 WELDON H160 D.10	160	10	34,5	42
150WE412	50	ISO50 DIN69871 WELDON H160 D.12	160	12	42	48
150WE414	50	ISO50 DIN69871 WELDON H160 D.14	160	14	44	50
150WE416	50	ISO50 DIN69871 WELDON H160 D.16	160	16	47,5	54
150WE418	50	ISO50 DIN69871 WELDON H160 D.18	160	18	50	56
150WE420	50	ISO50 DIN69871 WELDON H160 D.20	160	20	51,5	59
150WE425	50	ISO50 DIN69871 WELDON H160 D.25	160	25	65	70
150WE432	50	ISO50 DIN69871 WELDON H160 D.32	160	32	65	-
150WE440	50	ISO50 DIN69871 WELDON H160 D.40	160	40	80	-
150WE450	50	ISO50 DIN69871 WELDON H160 D.50	160	50	90	-

Codice	ISO	Descrizione	H	d	D	D3
150WE506	50	ISO50 DIN69871 WELDON H200 D.6	200	6	25	38
150WE508	50	ISO50 DIN69871 WELDON H200 D.8	200	8	28	41
150WE510	50	ISO50 DIN69871 WELDON H200 D.10	200	10	35	45
150WE512	50	ISO50 DIN69871 WELDON H200 D.12	200	12	42	51
150WE514	50	ISO50 DIN69871 WELDON H200 D.14	200	14	44	53
150WE516	50	ISO50 DIN69871 WELDON H200 D.16	200	16	48	57
150WE518	50	ISO50 DIN69871 WELDON H200 D.18	200	18	50	59
150WE520	50	ISO50 DIN69871 WELDON H200 D.20	200	20	52	61
150WE525	50	ISO50 DIN69871 WELDON H200 D.25	200	25	65	72
150WE532	50	ISO50 DIN69871 WELDON H200 D.32	200	32	72	-
150WE540	50	ISO50 DIN69871 WELDON H200 D.40	200	40	80	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	D	GRANO	Q.tà
6	100601004	1	18	101401604	1
8	100801004	1	20	101601604	1
10	101001204	1	25	101802002	2
12	101201604	1	32	102002002	2
14	101201604	1	40	102002002	2
16	101401604	1	50	102422504	2

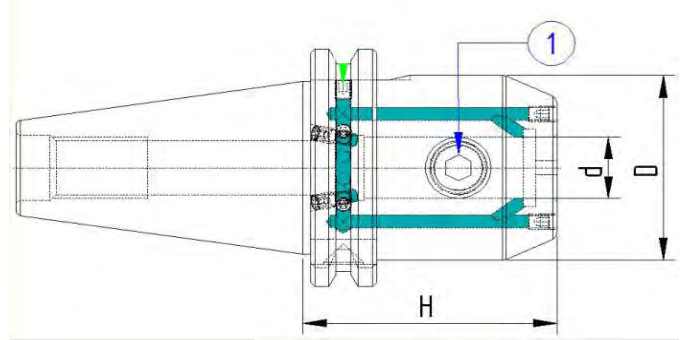


MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**DIN 69871 AD/B**


**Bilanciato G.6,3 12.000 RPM**



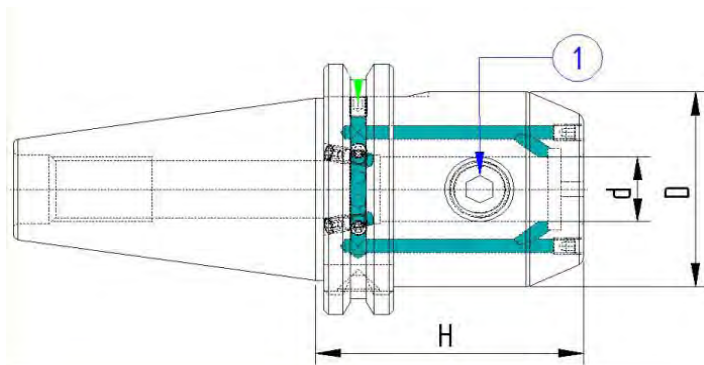
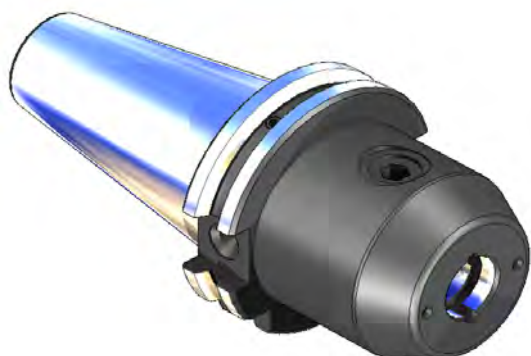
Codice	ISO	Descrizione	H	d	D
140WLK06	40	ISO40 DIN69871 WELDON H50 D.6	50	6	25
140WLK08	40	ISO40 DIN69871 WELDON H50 D.8	50	8	28
140WLK10	40	ISO40 DIN69871 WELDON H50 D.10	50	10	35
140WLK12	40	ISO40 DIN69871 WELDON H50 D.12	50	12	42
140WLK14	40	ISO40 DIN69871 WELDON H50 D.14	50	14	44
140WLK16	40	ISO40 DIN69871 WELDON H63 D.16	63	16	48
140WLK18	40	ISO40 DIN69871 WELDON H63 D.18	63	18	50
140WLK20	40	ISO40 DIN69871 WELDON H63 D.20	63	20	52
140WLK25	40	ISO40 DIN69871 WELDON H100 D.25	100	25	63
140WLK32	40	ISO40 DIN69871 WELDON H100 D.32	100	32	72

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà
		
6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
150WLK06	50	ISO50 DIN69871 WELDON H63 D.6	63	6	25
150WLK08	50	ISO50 DIN69871 WELDON H63 D.8	63	8	28
150WLK10	50	ISO50 DIN69871 WELDON H63 D.10	63	10	35
150WLK12	50	ISO50 DIN69871 WELDON H63 D.12	63	12	42
150WLK14	50	ISO50 DIN69871 WELDON H63 D.14	63	14	44
150WLK16	50	ISO50 DIN69871 WELDON H63 D.16	63	16	48
150WLK18	50	ISO50 DIN69871 WELDON H63 D.18	63	18	50
150WLK20	50	ISO50 DIN69871 WELDON H63 D.20	63	20	52
150WLK25	50	ISO50 DIN69871 WELDON H80 D.25	80	25	65
150WLK32	50	ISO50 DIN69871 WELDON H100 D.32	100	32	72
150WLK40	50	ISO50 DIN69871 WELDON H120 D.40	120	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

D

GRANO

Q.tà



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2



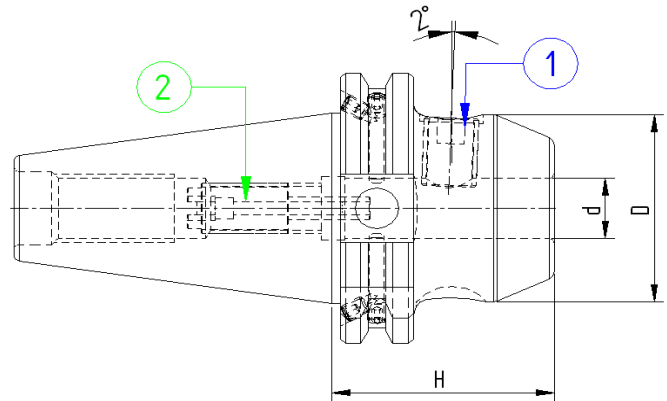
MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTILS TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**DIN 69871 AD/B**

**DIN 1835 E**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
140WHN06	40	ISO40 DIN69871 W/NOTCH H50 D.6	50	6	25
140WHN08	40	ISO40 DIN69871 W/NOTCH H50 D.8	50	8	28
140WHN10	40	ISO40 DIN69871 W/NOTCH H50 D.10	50	10	35
140WHN12	40	ISO40 DIN69871 W/NOTCH H50 D.12	50	12	42
140WHN14	40	ISO40 DIN69871 W/NOTCH H50 D.14	50	14	44
140WHN16	40	ISO40 DIN69871 W/NOTCH H63 D.16	63	16	48
140WHN18	40	ISO40 DIN69871 W/NOTCH H63 D.18	63	18	50
140WHN20	40	ISO40 DIN69871 W/NOTCH H63 D.20	63	20	52
140WHN25	40	ISO40 DIN69871 W/NOTCH H100 D.25	100	25	65
140WHN32	40	ISO40 DIN69871 W/NOTCH H100 D.32	100	32	72
140WHN40	40	ISO40 DIN69871 W/NOTCH H115 D.40	115	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	GRANO int.	Q.tà
				
6	100601004	1	100504009	1
8	100801004	1	101200409	1
10	101001204	1	101200409	1
12	101201604	1	101200409	1
14	101201604	1	101200409	1
16	101401604	1	101200409	1
18	101401604	1	101200409	1
20	101601604	1	101200409	1
25	101802002	2	101200409	1
32	102002002	2	101200409	1
40	102002002	2	101204007	1



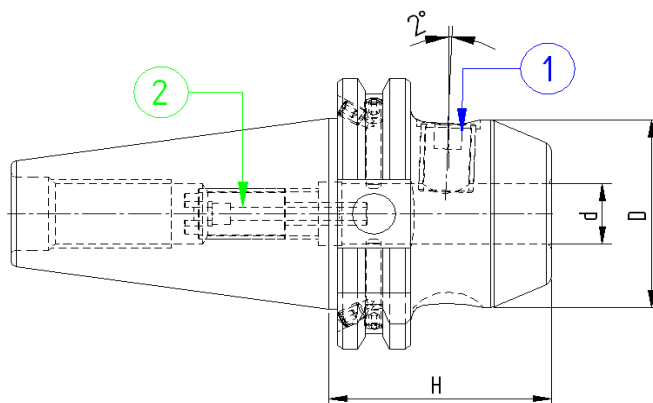
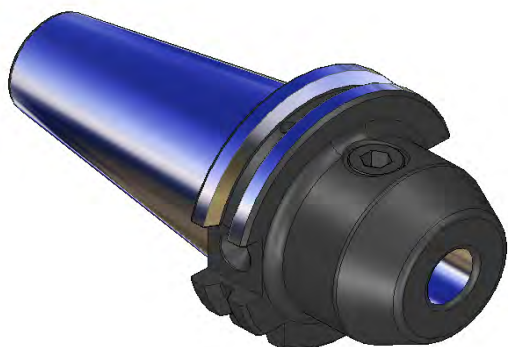
MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**DIN 69871 AD/B**

**DIN 1835 E**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
150WHN06	50	ISO50 DIN69871 W/NOTCH H63 D.06	63	6	25
150WHN08	50	ISO50 DIN69871 W/NOTCH H63 D.08	63	8	28
150WHN10	50	ISO50 DIN69871 W/NOTCH H63 D.10	63	10	35
150WHN12	50	ISO50 DIN69871 W/NOTCH H63 D.12	63	12	42
150WHN14	50	ISO50 DIN69871 W/NOTCH H63 D.14	63	14	44
150WHN16	50	ISO50 DIN69871 W/NOTCH H63 D.16	63	16	48
150WHN18	50	ISO50 DIN69871 W/NOTCH H63 D.18	63	18	50
150WHN20	50	ISO50 DIN69871 W/NOTCH H63 D.20	63	20	52
150WHN25	50	ISO50 DIN69871 W/NOTCH H80 D.25	80	25	65
150WHN32	50	ISO50 DIN69871 W/NOTCH H100 D.32	100	32	72
150WHN40	50	ISO50 DIN69871 W/NOTCH H120 D.40	120	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	GRANO int.	Q.tà
6	100601004	1	100504009	1
8	100801004	1	101204009	1
10	101001204	1	101204009	1
12	101201604	1	101204007	1
14	101201604	1	101204007	1
16	101401604	1	101204007	1
18	101401604	1	101204007	1
20	101601604	1	101204007	1
25	101802002	2	101204007	1
32	102002002	2	101204007	1
40	102002002	2	101204007	1



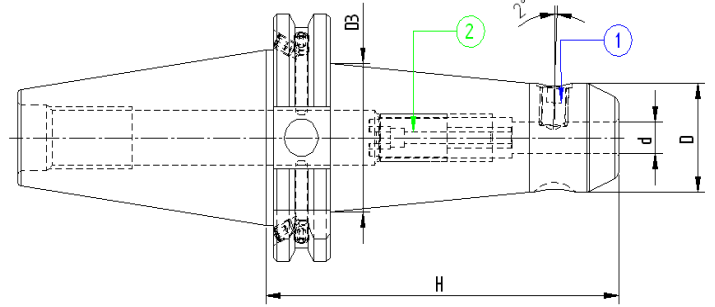
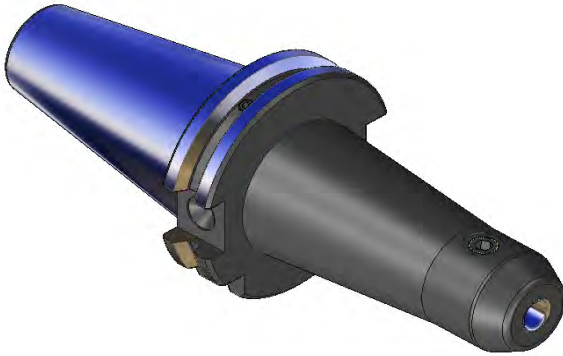
MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTILS TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**DIN 69871 AD/B**

**DIN 1835 E**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
140WN206	40	ISO40 DIN69871 W/NOTCH H100 D.06	100	6	25	35
140WN208	40	ISO40 DIN69871 W/NOTCH H100 D.08	100	8	28	38
140WN210	40	ISO40 DIN69871 W/NOTCH H100 D.10	100	10	35	40
140WN212	40	ISO40 DIN69871 W/NOTCH H100 D.12	100	12	42	-
140WN214	40	ISO40 DIN69871 W/NOTCH H100 D.14	100	14	44	-
140WN216	40	ISO40 DIN69871 W/NOTCH H100 D.16	100	16	48	-
140WN218	40	ISO40 DIN69871 W/NOTCH H100 D.18	100	18	50	-
140WN220	40	ISO40 DIN69871 W/NOTCH H100 D.20	100	20	50	-

*----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----*

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	GRANO int.	Q.tà
				
6	100601004	1	100504009	1
8	100801004	1	101200409	1
10	101001204	1	101200409	1
12	101201604	1	101200407	1
14	101201604	1	101200407	1
16	101401604	1	101200407	1
18	101401604	1	101200407	1
20	101601604	1	101200407	1



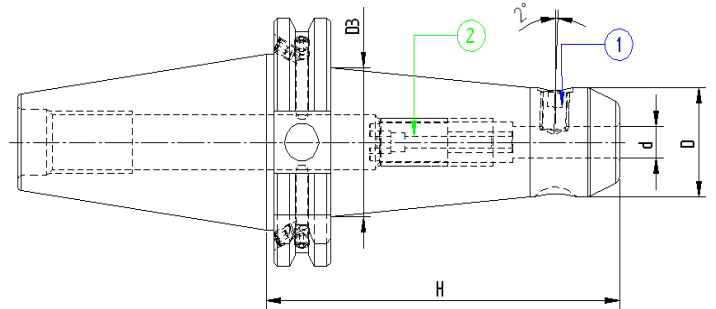
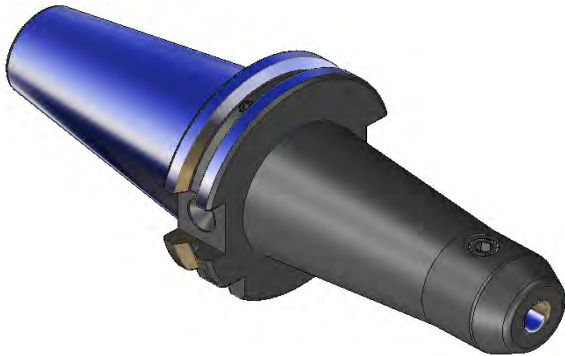
MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**DIN 69871 AD/B**

**DIN 1835 E**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
150WN206	50	ISO50 DIN69871 W/NOTCH H100 D.06	100	6	25	35
150WN208	50	ISO50 DIN69871 W/NOTCH H100 D.08	100	8	28	38
150WN210	50	ISO50 DIN69871 W/NOTCH H100 D.10	100	10	35	42
150WN212	50	ISO50 DIN69871 W/NOTCH H100 D.12	100	12	42	48
150WN214	50	ISO50 DIN69871 W/NOTCH H100 D.14	100	14	44	50
150WN216	50	ISO50 DIN69871 W/NOTCH H100 D.16	100	16	48	54
150WN218	50	ISO50 DIN69871 W/NOTCH H100 D.18	100	18	50	56
150WN220	50	ISO50 DIN69871 W/NOTCH H100 D.20	100	20	52	59
150WN225	50	ISO50 DIN69871 W/NOTCH H100 D.25	100	25	65	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GRANO	Q.tà	GRANO int:	Q.tà
6	100601004	1	100504009	1
8	100801004	1	101204009	1
10	101001204	1	101204009	1
12	101201604	1	101204007	1
14	101201604	1	101204007	1
16	101401604	1	101204007	1
18	101401604	1	101204007	1
20	101601604	1	101204007	1
25	101802002	2	101204007	1





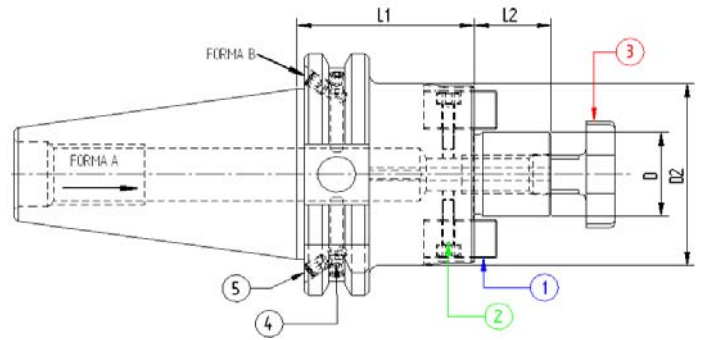
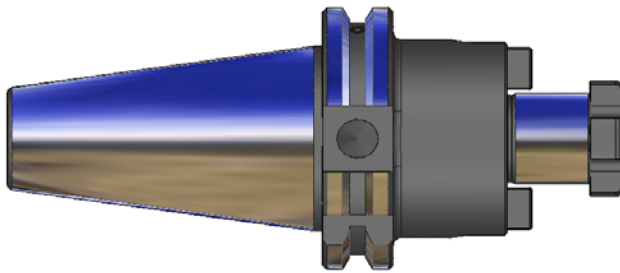
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A' SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



# DIN 69871 AD

## ISO 3937



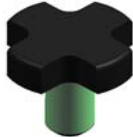
**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2
140PF016	40	ISO40 DIN69871 P/F FISSO H35 D.16	35	17	16	38
140PF022	40	ISO40 DIN69871 P/F FISSO H35 D.22	35	19	22	48
140PF027	40	ISO40 DIN69871 P/F FISSO H35 D.27	35	21	27	58
140PF032	40	ISO40 DIN69871 P/F FISSO H35 D.32	35	24	32	78
140PF116	40	ISO40 DIN69871 P/F FISSO H45 D.16	45	17	16	38
140PF122	40	ISO40 DIN69871 P/F FISSO H45 D.22	45	19	22	48
140PF127	40	ISO40 DIN69871 P/F FISSO H50 D.27	50	21	27	58
140PF132	40	ISO40 DIN69871 P/F FISSO H55 D.32	55	24	32	78
140PF140	40	ISO40 DIN69871 P/F FISSO H55 D.40	55	27	40	88

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Diam.	TASSELLO	Q.tà	VITE	Q.tà	VITE CROCE	Q.tà
						
16	916TSL01	2	110301001	2	916VTC02	1
22	922TSL01	2	110301201	2	922VTC02	1
27	927TSL01	2	110401601	2	927VTC02	1
32	932TSL01/04	2	110601601	2	932VTC02	1
40	940TSL01	2	110601601	2	940VTC02	1



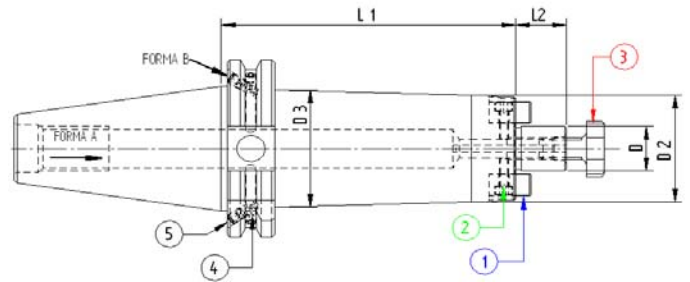
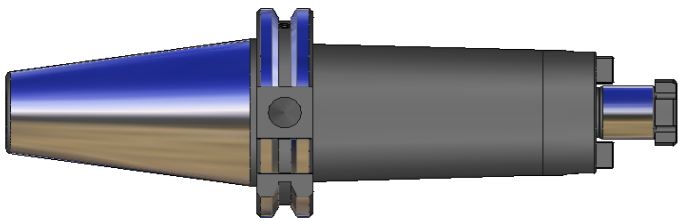
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A' SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



**DIN 69871 AD**

**ISO 3937**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2	D3
140PF216	40	ISO40 DIN69871 P/F FISSO H100 D.16	100	17	16	39	-
140PF222	40	ISO40 DIN69871 P/F FISSO H100 D.22	100	19	22	46	48
140PF227	40	ISO40 DIN69871 P/F FISSO H100 D.27	100	21	27	55	-
140PF232	40	ISO40 DIN69871 P/F FISSO H100 D.32	100	24	32	66	-
140PF240	40	ISO40 DIN69871 P/F FISSO H100 D.40	100	27	40	70	-
140PF316	40	ISO40 DIN69871 P/F FISSO H130 D.16	130	17	16	38	-
140PF322	40	ISO40 DIN69871 P/F FISSO H130 D.22	130	19	22	46	48
140PF327	40	ISO40 DIN69871 P/F FISSO H130 D.27	130	21	27	58	-
140PF332	40	ISO40 DIN69871 P/F FISSO H130 D.32	130	24	32	78	-
140PF340	40	ISO40 DIN69871 P/F FISSO H130 D.40	130	27	40	88	-
140PF416	40	ISO40 DIN69871 P/F FISSO H160 D.16	160	17	16	39	-
140PF422	40	ISO40 DIN69871 P/F FISSO H160 D.22	160	19	22	46	48
140PF427	40	ISO40 DIN69871 P/F FISSO H160 D.27	160	21	27	50	-
140PF432	40	ISO40 DIN69871 P/F FISSO H160 D.32	160	24	32	78	-
140PF440	40	ISO40 DIN69871 P/F FISSO H160 D.40	160	27	40	88	-
140PF516	40	ISO40 DIN69871 P/F FISSO H200 D.16	200	17	16	39	-
140PF522	40	ISO40 DIN69871 P/F FISSO H200 D.22	200	19	22	46	48
140PF527	40	ISO40 DIN69871 P/F FISSO H200 D.27	200	21	27	58	-
140PF532	40	ISO40 DIN69871 P/F FISSO H200 D.32	200	24	32	78	-
140PF540	40	ISO40 DIN69871 P/F FISSO H200 D.40	200	27	40	88	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Diam.	TASSELLO	Q.tà	VITE	Q.tà	VITE CROCE	Q.tà
16	916TSL01	2	110301001	2	916VTC02	1
22	922TSL01	2	110301201	2	922VTC02	1
27	927TSL01	2	110401601	2	927VTC02	1
32	932TSL01	2	110601601	2	932VTC02	1
40	940TSL01	2	110601601	2	940VTC02	1



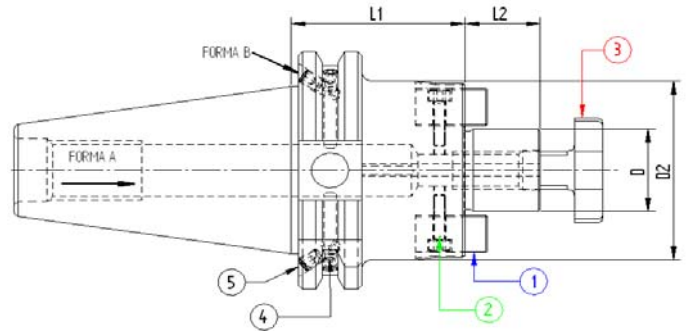
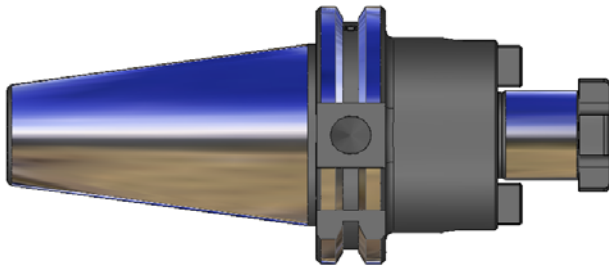
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A' SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KUHLMITTELKANALEN



**DIN 69871 AD**

**ISO 3937**



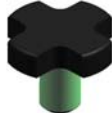
**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2
150PF016	50	ISO50 DIN69871 P/F FISSO H.35 D.16	35	17	16	38
150PF022	50	ISO50 DIN69871 P/F FISSO H.35 D.22	35	19	22	48
150PF027	50	ISO50 DIN69871 P/F FISSO H.35 D.27	35	21	27	58
150PF032	50	ISO50 DIN69871 P/F FISSO H.35 D.32	35	24	32	78
150PF040	50	ISO50 DIN69871 P/F FISSO H.35 D.40	35	27	40	88
150PF116	50	ISO50 DIN69871 P/F FISSO H.45 D.16	45	17	16	38
150PF122	50	ISO50 DIN69871 P/F FISSO H.45 D.22	45	19	22	48
150PF127	50	ISO50 DIN69871 P/F FISSO H.45 D.27	45	21	27	58
150PF132	50	ISO50 DIN69871 P/F FISSO H.55 D.32	55	24	32	78
150PF140	50	ISO50 DIN69871 P/F FISSO H.55 D.40	55	27	40	88
150PF150	50	ISO50 DIN69871 P/F FISSO H.60 D.50	60	30	50	90

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Diam.	TASSELLO	Q.tà	VITE	Q.tà	VITE CROCE	Q.tà
						
16	916TSL01	2	110301001	2	916VTC02	1
22	922TSL01	2	110301201	2	922VTC02	1
27	927TSL01	2	110401601	2	927VTC02	1
32	932TSL01	2	110601601	2	932VTC02	1
40	940TSL01-05	2	110601601	2	940VTC02	1
50	940TSL03	2	110601601	2	-	-



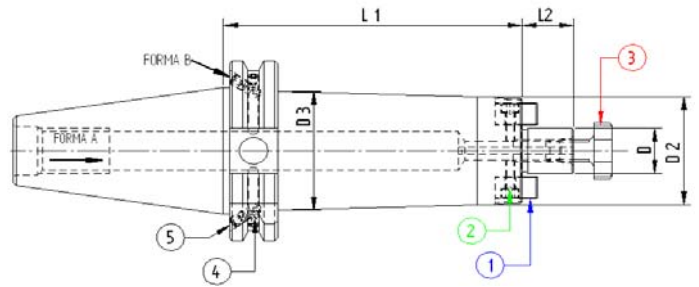
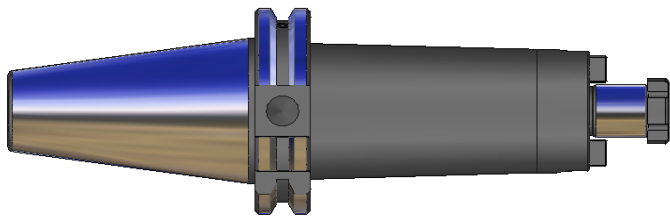
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A' SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



**DIN 69871 AD**

**ISO 3937**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2	D3
150PF216	50	ISO50 DIN69871 P/F FISSO H.100 D.16	100	17	16	39	-
150PF222	50	ISO50 DIN69871 P/F FISSO H.100 D.22	100	19	22	50	60
150PF227	50	ISO50 DIN69871 P/F FISSO H.100 D.27	100	21	27	55	78
150PF232	50	ISO50 DIN69871 P/F FISSO H.100 D.32	100	24	32	66	78
150PF240	50	ISO50 DIN69871 P/F FISSO H.100 D.40	100	27	40	70	78
150PF316	50	ISO50 DIN69871 P/F FISSO H.130 D.16	130	17	16	39	-
150PF322	50	ISO50 DIN69871 P/F FISSO H.130 D.22	130	19	22	50	60
150PF327	50	ISO50 DIN69871 P/F FISSO H.130 D.27	130	21	27	55	78
150PF332	50	ISO50 DIN69871 P/F FISSO H.130 D.32	130	24	32	66	78
150PF340	50	ISO50 DIN69871 P/F FISSO H.130 D.40	130	27	40	70	78
150PF416	50	ISO50 DIN69871 P/F FISSO H.160 D.16	160	17	16	39	-
150PF422	50	ISO50 DIN69871 P/F FISSO H.160 D.22	160	19	22	50	60
150PF427	50	ISO50 DIN69871 P/F FISSO H.160 D.27	160	21	27	55	78
150PF432	50	ISO50 DIN69871 P/F FISSO H.160 D.32	160	24	32	66	78
150PF440	50	ISO50 DIN69871 P/F FISSO H.160 D.40	160	27	40	70	78
150PF516	50	ISO50 DIN69871 P/F FISSO H.200 D.16	200	17	16	39	-
150PF522	50	ISO50 DIN69871 P/F FISSO H.200 D.22	200	19	22	50	60
150PF527	50	ISO50 DIN69871 P/F FISSO H.200 D.27	200	21	27	55	78
150PF532	50	ISO50 DIN69871 P/F FISSO H.200 D.32	200	24	32	66	78
150PF540	50	ISO50 DIN69871 P/F FISSO H.200 D.40	200	27	40	70	78

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Diam.	TASSELLO	Q.tà	VITE	Q.tà	VITE CROCE	Q.tà
16	916TSL01	2	110301001	2	916VTC02	1
22	922TSL01	2	110301201	2	922VTC02	1
27	927TSL01	2	110401601	2	927VTC02	1
32	932TSL01	2	110601601	2	932VTC02	1
40	940TSL01	2	110601601	2	940VTC02	1



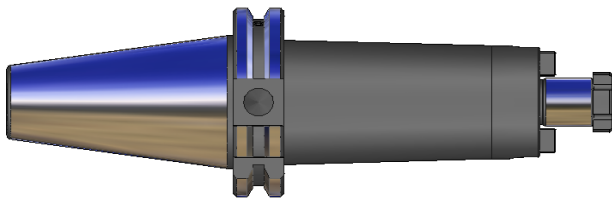
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A' SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



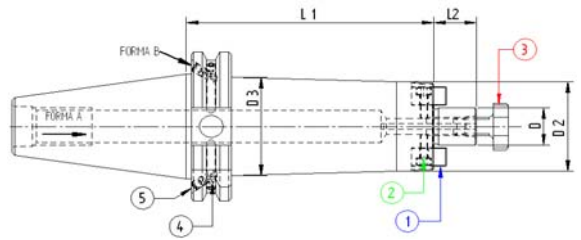
**DIN 69871 AD**

**ISO 3937**

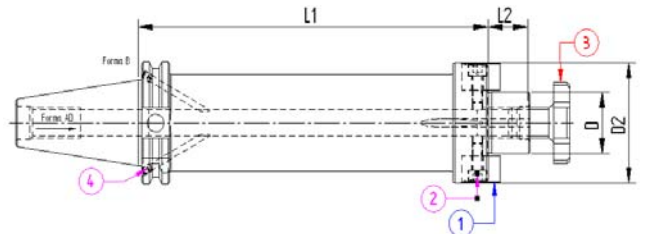
**Bilanciato G.6,3 12.000 RPM**



**Fig. 1**





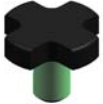
**Fig. 2**



Codice	ISO	Descrizione	L1	L2	D	D2	D3	Fig.
150PF616	50	ISO50 DIN69871 P/F FISSO H.250 D.16	250	17	16	38	52	1
150PF622	50	ISO50 DIN69871 P/F FISSO H.250 D.22	250	19	22	48	62	1
150PF627	50	ISO50 DIN69871 P/F FISSO H.250 D.27	250	21	27	58	72	1
150PF632	50	ISO50 DIN69871 P/F FISSO H.250 D.32	250	24	32	66	66	2
150PF640	50	ISO50 DIN69871 P/F FISSO H.250 D.40	250	27	40	80	80	2
150PF716	50	ISO50 DIN69871 P/F FISSO H.300 D.16	300	17	16	38	54	1
150PF722	50	ISO50 DIN69871 P/F FISSO H.300 D.22	300	19	22	48	65	1
150PF727	50	ISO50 DIN69871 P/F FISSO H.300 D.27	300	21	27	58	76	1
150PF732	50	ISO50 DIN69871 P/F FISSO H.300 D.32	300	24	32	66	66	2
150PF740	50	ISO50 DIN69871 P/F FISSO H.300 D.40	300	27	40	80	80	2
150PF816	50	ISO50 DIN69871 P/F FISSO H.350 D.16	350	17	16	38	57	1
150PF822	50	ISO50 DIN69871 P/F FISSO H.350 D.22	350	19	22	48	69	1
150PF827	50	ISO50 DIN69871 P/F FISSO H.350 D.27	350	21	27	58	79	1
150PF832	50	ISO50 DIN69871 P/F FISSO H.350 D.32	350	24	32	66	66	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Diam.	TASSELLO	Q.tà	VITE	Q.tà	VITE CROCE	Q.tà
16		2		2		1
22	916TSL01	2	110301001	2	916VTC02	1
27	922TSL01	2	110301201	2	922VTC02	1
32	927TSL01	2	110401601	2	927VTC02	1
32	932TSL01	2	110601601	2	932VTC02	1
40	940TSL01	2	110601601	2	940VTC02	1



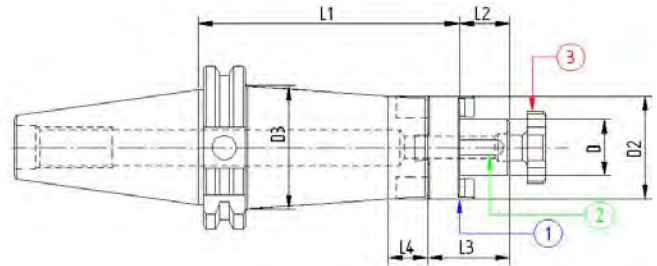
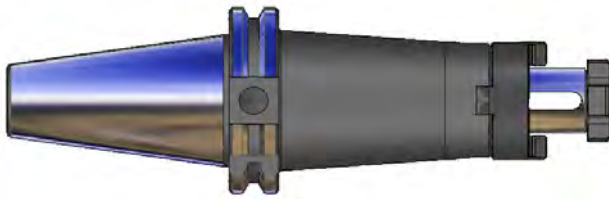
MANDRINI PORTAFRESE COMBINATI  
 KOMBI-SHELL MILL ADAPTOR  
 MANDRINS PORTE-FRAISES A DOUBLE USAGE  
 KOMBI AUFSTECKFRAESDORNE



**DIN 69871 A**

**DIN 6358**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	L3	D	D2	D3
140PU116	40	ISO40 DIN69871 P/F UNIVERS.H55 D.16	55	17	27	16	32	-
140PU122	40	ISO40 DIN69871 P/F UNIVERS.H55 D.22	55	19	31	22	40	-
140PU127	40	ISO40 DIN69871 P/F UNIVERS.H55 D.27	55	21	33	27	48	-
140PU132	40	ISO40 DIN69871 P/F UNIVERS.H60 D.32	60	24	38	32	58	-
140PU140	40	ISO40 DIN69871 P/F UNIVERS.H60 D.40	60	27	41	40	70	-
140PU216	40	ISO40 DIN69871 P/F UNIVERS.H100 D.16	100	17	27	16	32	44
140PU222	40	ISO40 DIN69871 P/F UNIVERS.H100 D.22	100	19	31	22	40	-
140PU227	40	ISO40 DIN69871 P/F UNIVERS.H100 D.27	100	21	33	27	48	-
140PU232	40	ISO40 DIN69871 P/F UNIVERS.H100 D.32	100	24	38	32	58	-
140PU240	40	ISO40 DIN69871 P/F UNIVERS.H100 D.40	100	27	41	40	70	-
140PU316	40	ISO40 DIN69871 P/F UNIVERS.H130 D.16	130	17	27	16	32	39
140PU322	40	ISO40 DIN69871 P/F UNIVERS.H130 D.22	130	19	31	22	40	-
140PU327	40	ISO40 DIN69871 P/F UNIVERS.H130 D.27	130	21	33	27	48	-
140PU332	40	ISO40 DIN69871 P/F UNIVERS.H130 D.32	130	24	38	32	58	-
140PU340	40	ISO40 DIN69871 P/F UNIVERS.H130 D.40	130	27	41	40	70	-
140PU416	40	ISO40 DIN69871 P/F UNIVERS.H160 D.16	160	17	27	16	32	44
140PU422	40	ISO40 DIN69871 P/F UNIVERS.H160 D.22	160	19	31	22	40	-
140PU427	40	ISO40 DIN69871 P/F UNIVERS.H160 D.27	160	21	33	27	48	-
140PU432	40	ISO40 DIN69871 P/F UNIVERS.H160 D.32	160	24	38	32	58	-
140PU440	40	ISO40 DIN69871 P/F UNIVERS.H160 D.40	160	27	41	40	70	-
140PU516	40	ISO40 DIN69871 P/F UNIVERS.H200 D.16	200	17	27	16	32	44
140PU522	40	ISO40 DIN69871 P/F UNIVERS.H200 D.22	200	19	31	22	40	52
140PU527	40	ISO40 DIN69871 P/F UNIVERS.H200 D.27	200	21	33	27	48	-
140PU532	40	ISO40 DIN69871 P/F UNIVERS.H200 D.32	200	24	38	32	58	-
140PU540	40	ISO40 DIN69871 P/F UNIVERS.H200 D.40	200	27	41	40	70	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

**D**      **GIUNTO**      **Q.tà**      **LINGUETTA**      **Q.tà**      **VITE CROCE**      **Q.tà**



16	916GNT01	1	170402004	1	916VTC02	1
22	922GNT01	1	170602506	1	922VTC02	1
27	927GNT01	1	170702507	1	927VTC02	1
32	932GNT01	1	170802807	1	932VTC02	1
40	940GNT01	1	171003208	1	940VTC02	1



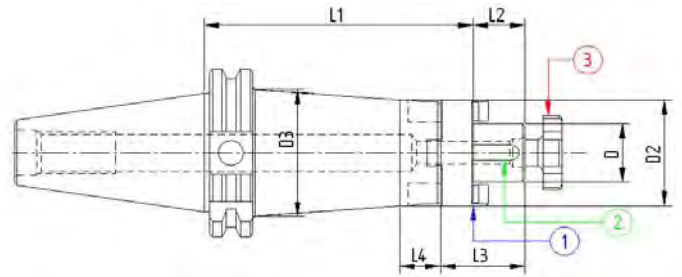
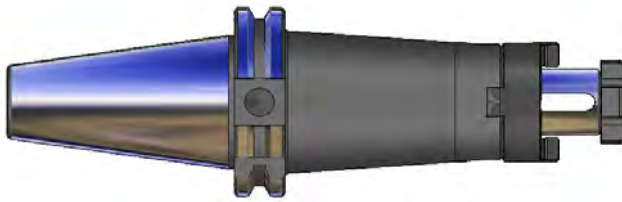
MANDRINI PORTAFRESE COMBINATI  
 KOMBI-SHELL MILL ADAPTOR  
 MANDRINS PORTE-FRAISES A DOUBLE USAGE  
 KOMBI AUFSTECKFRAESDORNE



**DIN 69871 A**

**DIN 6358**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	L3	D	D2	D3
150PU116	50	ISO50 DIN69871 P/F UNIVERS.H55 D.16	55	17	27	16	32	-
150PU122	50	ISO50 DIN69871 P/F UNIVERS.H55 D.22	55	19	31	22	40	-
150PU127	50	ISO50 DIN69871 P/F UNIVERS.H55 D.27	55	21	33	27	48	-
150PU132	50	ISO50 DIN69871 P/F UNIVERS.H55 D.32	55	24	38	32	58	-
150PU140	50	ISO50 DIN69871 P/F UNIVERS.H55 D.40	55	27	41	40	70	-
150PU216	50	ISO50 DIN69871 P/F UNIVERS.H100 D.16	100	17	27	16	32	44
150PU222	50	ISO50 DIN69871 P/F UNIVERS.H100 D.22	100	19	31	22	40	50
150PU227	50	ISO50 DIN69871 P/F UNIVERS.H100 D.27	100	21	33	27	48	60
150PU232	50	ISO50 DIN69871 P/F UNIVERS.H100 D.32	100	24	38	32	58	-
150PU240	50	ISO50 DIN69871 P/F UNIVERS.H100 D.40	100	27	41	40	70	-
150PU316	50	ISO50 DIN69871 P/F UNIVERS.H130 D.16	130	17	27	16	32	44
150PU322	50	ISO50 DIN69871 P/F UNIVERS.H130 D.22	130	19	31	22	40	52
150PU327	50	ISO50 DIN69871 P/F UNIVERS.H130 D.27	130	21	33	27	48	60
150PU332	50	ISO50 DIN69871 P/F UNIVERS.H130 D.32	130	24	38	32	58	66
150PU340	50	ISO50 DIN69871 P/F UNIVERS.H130 D.40	130	27	41	40	70	-
150PU416	50	ISO50 DIN69871 P/F UNIVERS.H160 D.16	160	17	27	16	32	44
150PU422	50	ISO50 DIN69871 P/F UNIVERS.H160 D.22	160	19	31	22	40	52
150PU427	50	ISO50 DIN69871 P/F UNIVERS.H160 D.27	160	21	33	27	48	60
150PU432	50	ISO50 DIN69871 P/F UNIVERS.H160 D.32	160	24	38	32	58	68
150PU440	50	ISO50 DIN69871 P/F UNIVERS.H160 D.40	160	27	41	40	70	-
150PU516	50	ISO50 DIN69871 P/F UNIVERS.H200 D.16	200	17	27	16	32	44
150PU522	50	ISO50 DIN69871 P/F UNIVERS.H200 D.22	200	19	31	22	40	52
150PU527	50	ISO50 DIN69871 P/F UNIVERS.H200 D.27	200	21	33	27	48	60
150PU532	50	ISO50 DIN69871 P/F UNIVERS.H200 D.32	200	24	38	32	58	-
150PU540	50	ISO50 DIN69871 P/F UNIVERS.H200 D.40	200	27	41	40	70	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE CROCE	Q.tà
16	916GNT01	1	170402004	1	916VTC02	1
22	922GNT01	1	170602506	1	922VTC02	1
27	927GNT01	1	170702507	1	927VTC02	1
32	932GNT01	1	170802807	1	932VTC02	1
40	940GNT01	1	171003208	1	940VTC02	1



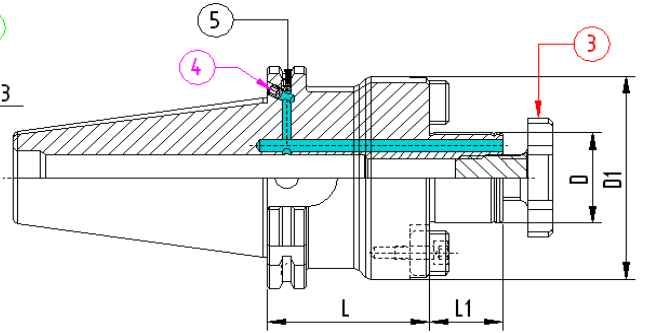
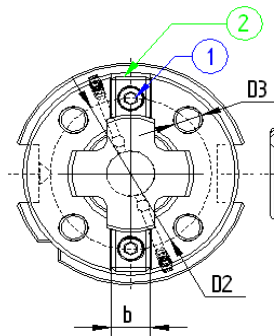
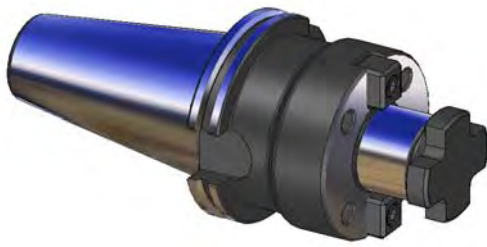
PORTA FRESE AD INSERTI  
FACE MILL HOLDERS FOR FACE MILLING CUTTERS  
MANDRINS PORTE-FRAISES POUR FRAISES A' SURFACE  
AUFSPECKFRAESERDOORNE FUER MESSERKOEPFE



**DIN 69871 A**

**DIN 6357**




**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	L1	D	D1	b	D2	D3
140PI140	40	ISO40 DIN69871 P/F TRA.FR.H60 D40FM	60	30	40	89	15,9	66,7	M12
150PI140	50	ISO50 DIN69871 P/F TRA.FR.H70 D40FM	70	30	40	89	15,9	66,7	M12
150PI160	50	ISO50 DIN69871 P/F TRA.FR.H70 D60FM	70	40	60	129	25,4	101,6	M16

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà
						
140PI140	110601601	2	940TSL04	2	940VTC02	1
150PI140	110601601	2	940TSL04	2	940VTC02	1
150PI160	111202501	2	960TSL04	2	-	-





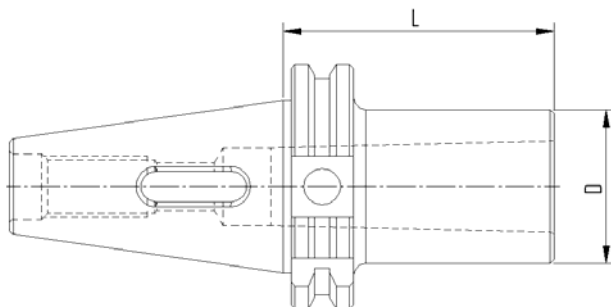
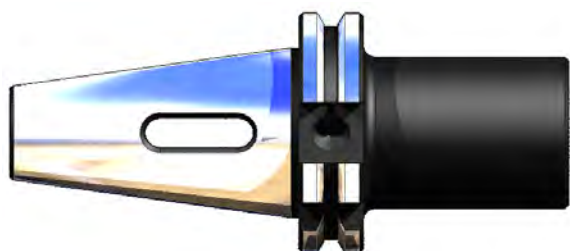
MANDRINI PORTAPUNTE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTORS FOR DRILLS  
 DOUILLES POUR CONE MORSE A TENON  
 ZWISCHENUELSEN FUER MORSEKEGEL MIT AUSTREIBLAPPEN



**DIN 69871 A**

**DIN 228-2 D**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
140MP201	40	ISO40 DIN69871 H120 CM1 PUNTE	120	25
140MP202	40	ISO40 DIN69871 H120 CM2 PUNTE	120	32
140MP203	40	ISO40 DIN69871 H135 CM3 PUNTE	135	40
140MP204	40	ISO40 DIN69871 H165 CM4 PUNTE	165	48

Codice	ISO	Descrizione	L	D
150MP201	50	ISO50 DIN69871 H120 CM1 PUNTE	120	25
150MP202	50	ISO50 DIN69871 H135 CM2 PUNTE	135	32
150MP203	50	ISO50 DIN69871 H155 CM3 PUNTE	155	40
150MP204	50	ISO50 DIN69871 H180 CM4 PUNTE	180	48
150MP205	50	ISO50 DIN69871 H215 CM5 PUNTE	215	63

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----



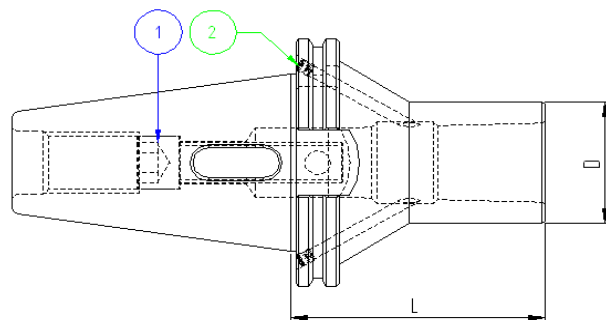
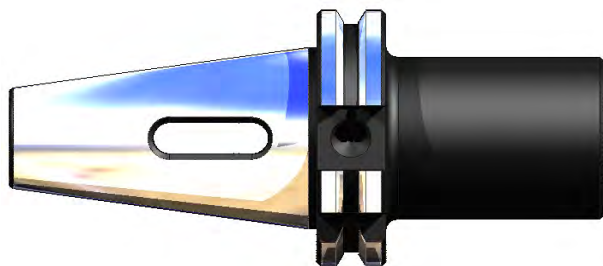
MANDRINI PORTAPUNTE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTORS FOR DRILLS  
 DOUILLES POUR CONE MORSE A TENON  
 ZWISCHENUELSEN FUER MORSEKEGEL MIT AUSTREIBBLAPPEN



**DIN 69871 AD-B**

**DIN 228-2 D**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
140MP101	40	ISO40 DIN69871 H.50 CM1 PUNTE	50	25
140MP102	40	ISO40 DIN69871 H.50 CM2 PUNTE	50	32
140MP103	40	ISO40 DIN69871 H.70 CM3 PUNTE	70	40
140MP104	40	ISO40 DIN69871 H.95 CM4 PUNTE	95	48

Codice	ISO	Descrizione	L	D
150MP101	50	ISO50 DIN69871 H.45 CM1 PUNTE	45	25
150MP102	50	ISO50 DIN69871 H.60 CM2 PUNTE	60	32
150MP103	50	ISO50 DIN69871 H.65 CM3 PUNTE	65	40
150MP104	50	ISO50 DIN69871 H.95 CM4 PUNTE	95	48
150MP105	50	ISO50 DIN69871 H.105 CM5 PUNTE	105	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

CM	VITE	Q.tà
----	------	------



1	110603501	1
2	111004001	1
3	111205001	1
4	111606015	1
5	-	-



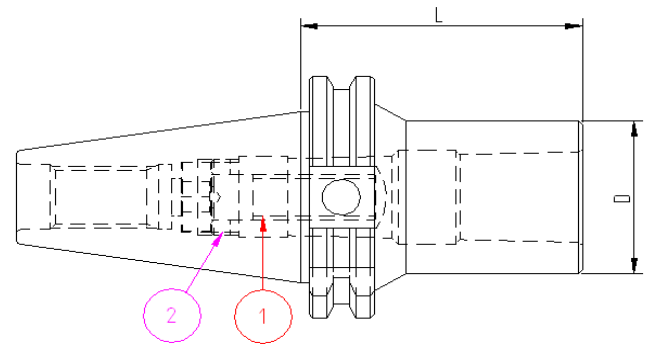
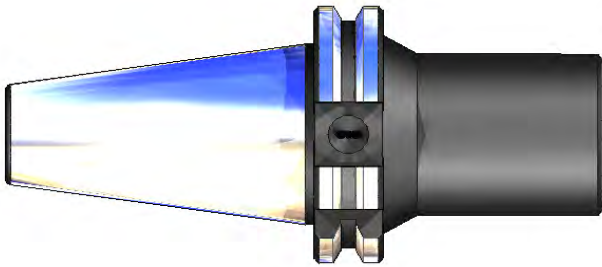
MANDRINI PORTAFRESE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTER WITH TREAD  
 DOUILLES POUR CONE MORSE AVEC TARAUDAGE  
 ZWISCHENUELSEN FUER MORSEKEGEL MIT ANZUGSGWINDE



**DIN 69871 A**

**DIN 228-2 C**

**Bilanciato G.6,3 12.000 RPM**





Codice	ISO	Descrizione	L	D
140MF201	40	ISO40 DIN69871 H120 CM1 FRESE	120	25
140MF202	40	ISO40 DIN69871 H120 CM2 FRESE	120	32
140MF203	40	ISO40 DIN69871 H135 CM3 FRESE	135	40
140MF204	40	ISO40 DIN69871 H165 CM4 FRESE	165	48

Codice	ISO	Descrizione	L	D
150MF202	50	ISO50 DIN69871 H170 CM2 FRESE	170	32
150MF203	50	ISO50 DIN69871 H170 CM3 FRESE	170	40
150MF204	50	ISO50 DIN69871 H170 CM4 FRESE	170	48
150MF205	50	ISO50 DIN69871 H220 CM5 FRESE	220	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

CM	GHIERA	Q.tà	VITE	Q.tà
				
1	121206502	1	110603501	1
2	121500802	1	111003014	1
3	122000903	1	111204003	1
4	122501204	1	111604514	1
5	123301205	1	112005003	1



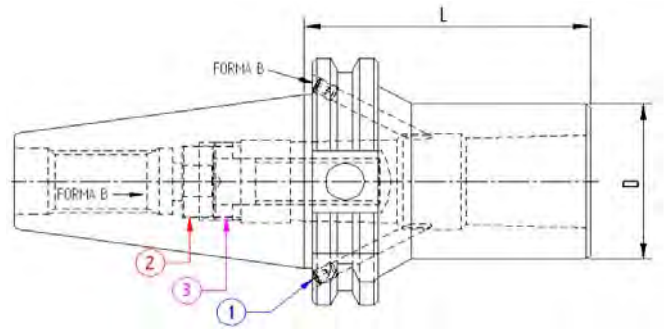
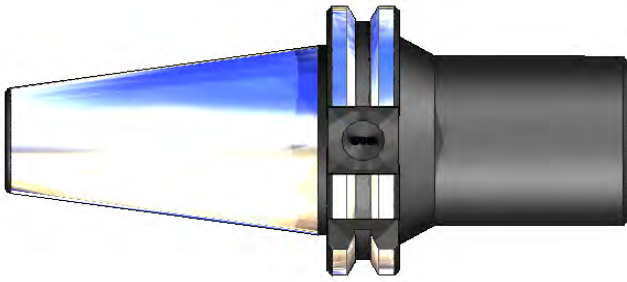
MANDRINI PORTAFRESE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTER WITH TREAD  
 DOUILLES POUR CONE MORSE AVEC TARAUDAGE  
 ZWISCHENUELSEN FUER MORSEKEGEL MIT ANZUGSGWINDE



**DIN 69871 AD/B**

**DIN 228-2 C**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
140MF101	40	ISO40 DIN69871 H50 CM1 FRESE	50	25
140MF102	40	ISO40 DIN69871 H50 CM2 FRESE	50	32
140MF103	40	ISO40 DIN69871 H70 CM3 FRESE	70	40
140MF104	40	ISO40 DIN69871 H95 CM4 FRESE	95	48

Codice	ISO	Descrizione	L	D
150MF101	50	ISO50 DIN69871 H50 CM1 FRESE	50	25
150MF102	50	ISO50 DIN69871 H50 CM2 FRESE	50	32
150MF103	50	ISO50 DIN69871 H65 CM3 FRESE	65	40
150MF104	50	ISO50 DIN69871 H95 CM4 FRESE	95	48
150MF105	50	ISO50 DIN69871 H100 CM5 FRESE	100	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

CM	GHIERA	Q.tà	VITE	Q.tà
----	--------	------	------	------



1	121206502	1	110603501	1
2	121500802	1	111003014	1
3	122000903	1	111204003	1
4	122501204	1	111604514	1
5	123301205	1	112005003	1

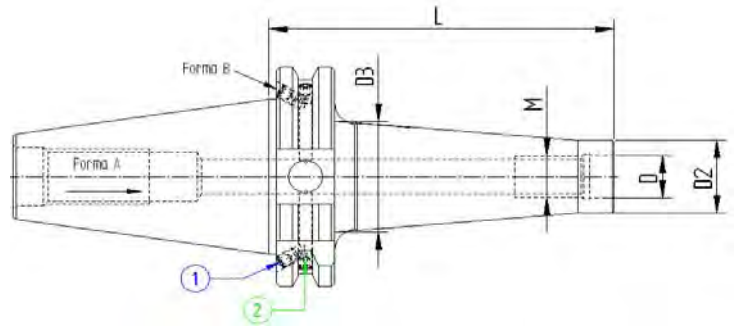
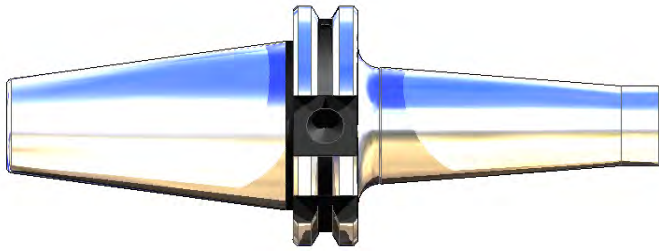


MANDRINI PER FRESE CON ATTACCO FILETTATO  
 MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
 MANDRINS POUR FRAISER A VISSER  
 SPANFUTTER FUER EINSCHRAUBFRAESER



**DIN 69871 A**

**Bilanciato G.2,5 20.000 RPM**



Codice	ISO	Descrizione	L	D3	M	D	D2
140AF108	40	ISO40 DIN69871 P/F ATT.FILET. M8X55	55	15	M8X1,25	8,5	13
140AF110	40	ISO40 DIN69871 P/F ATT.FILET. M10x55	55	19,5	M10X1,5	10,5	18
140AF112	40	ISO40 DIN69871 P/F ATT.FILET. M12x55	55	24	M12X1,75	12,5	21
140AF116	40	ISO40 DIN69871 P/F ATT.FILET. M16X55	55	34	M16X2	17	29
140AF208	40	ISO40 DIN69871 P/F ATT.FILET. M8x75	75	23	M8X1,25	8,5	13
140AF210	40	ISO40 DIN69871 P/F ATT.FILET. M10x75	75	25	M10X1,5	10,5	18
140AF212	40	ISO40 DIN69871 P/F ATT.FILET. M12x75	75	24	M12X1,75	12,5	21
140AF216	40	ISO40 DIN69871 P/F ATT.FILET. M16x75	75	34	M16X2	17	29
140AF308	40	ISO40 DIN69871 P/F ATT.FILET. M8x95	95	23	M8X1,25	8,5	13
140AF310	40	ISO40 DIN69871 P/F ATT.FILET. M10x95	95	28	M10X1,5	10,5	18
140AF312	40	ISO40 DIN69871 P/F ATT.FILET. M12x95	95	31	M12X1,75	12,5	21
140AF316	40	ISO40 DIN69871 P/F ATT.FILET. M16x95	95	34	M16X2	17	29
140AF408	40	ISO40 DIN69871 P/F ATT.FILET. M8x115	115	25	M8X1,25	8,5	13
140AF410	40	ISO40 DIN69871 P/F ATT.FILET. M10x115	115	28	M10X1,5	10,5	18
140AF412	40	ISO40 DIN69871 P/F ATT.FILET. M12x115	115	31	M12X1,75	12,5	21
140AF416	40	ISO40 DIN69871 P/F ATT.FILET. M16x115	115	39	M16X2	17	29
140AF510	40	ISO40 DIN69871 P/F ATT.FILET. M10x145	145	34	M10X1,5	10,5	18
140AF512	40	ISO40 DIN69871 P/F ATT.FILET. M12x145	145	38	M12X1,75	12,5	21
140AF516	40	ISO40 DIN69871 P/F ATT.FILET. M16x145	145	39	M16X2	17	29

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

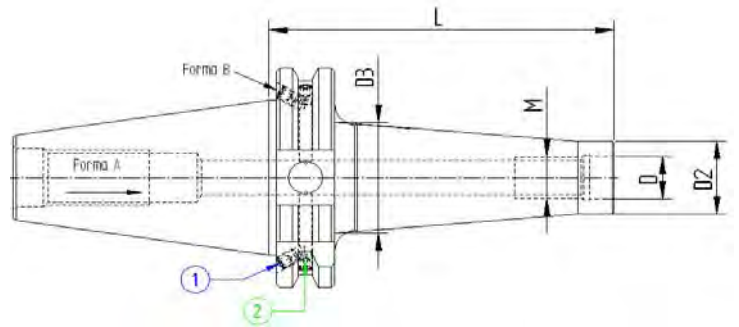
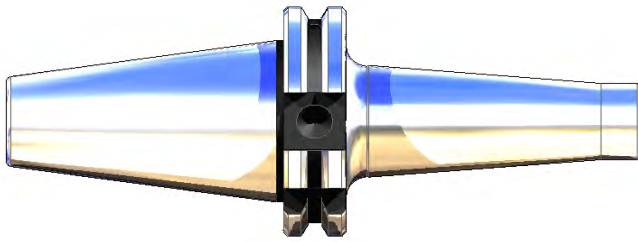


MANDRINI PER FRESE CON ATTACCO FILETTATO  
 MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
 MANDRINS POUR FRAISER A VISSER  
 SPANFUTTER FUER EINSCHRAUBFRAESER



**DIN 69871 A**

**Bilanciato G.2,5 20.000 RPM**



Codice	ISO	Descrizione	L	D3	M	D	D2
150AF110	50	ISO50 DIN69871 P/F ATT.FILET. M10X65	65	19,5	M10X1,5	10,5	18
150AF112	50	ISO50 DIN69871 P/F ATT.FILET. M12X65	65	24	M12X1,75	12,5	21
150AF116	50	ISO50 DIN69871 P/F ATT.FILET. M16X65	65	34	M16X2	17	29
150AF210	50	ISO50 DIN69871 P/F ATT.FILET. M10x85	85	28	M10X1,5	10,5	18
150AF212	50	ISO50 DIN69871 P/F ATT.FILET. M12x85	85	32	M12X1,75	12,5	21
150AF216	50	ISO50 DIN69871 P/F ATT.FILET. M16x85	85	36	M16X2	17	29
150AF310	50	ISO50 DIN69871 P/F ATT.FILET. M10x135	135	28	M10X1,5	10,5	18
150AF312	50	ISO50 DIN69871 P/F ATT.FILET. M12x135	135	32	M12X1,75	12,5	21
150AF316	50	ISO50 DIN69871 P/F ATT.FILET. M16x135	135	36	M16X2	17	29
150AF410	50	ISO50 DIN69871 P/F ATT.FILET. M10x185	185	32	M10X1,5	10,5	18
150AF412	50	ISO50 DIN69871 P/F ATT.FILET. M12x185	185	36	M12X1,75	12,5	21
150AF416	50	ISO50 DIN69871 P/F ATT.FILET. M16x185	185	42	M16X2	17	29
150AF512	50	ISO50 DIN69871 P/F ATT.FILET. M12x235	235	42	M12X1,75	12,5	21
150AF516	50	ISO50 DIN69871 P/F ATT.FILET. M16x235	235	44	M16X2	17	29

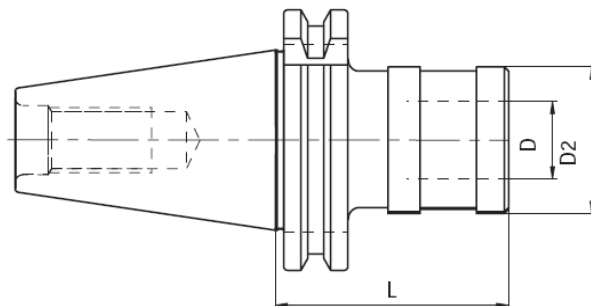
----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----



PORTAMASCHI A CAMBIO RAPIDO  
 QUICK CHANGE TAP HOLDER  
 MANDRINS DE TARAUDAGE A CHANGEMENT RAPIDE  
 GEWINDE-SCHNELLWECHSELFUTTER



**DIN 69871 AD/B**



Codice	ISO	Descrizione	L	D2	D
140PCRM1	40	ISO40 DIN69871 M/PORTAM/C/R H.60 GR.1	60	38	19
140PCRM2	40	ISO40 DIN69871 M/PORTAM/C/R H.92 GR.2	92	54	31
150PCRM1	50	ISO50 DIN69871 M/PORTAM/C/R H.62 GR.1	62	38	19
150PCRM2	50	ISO50 DIN69871 M/PORTAM/C/R H.83 GR.2	83	54	31

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHOR**



RIF. PAGINA . 298



RIF. PAGINA . 299

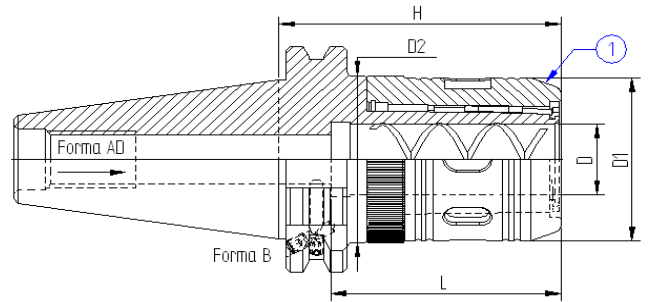


MANDRINI A FORTE SERRAGGIO  
MILLING CHUCK  
MANDRINS A FORT SERRAGE  
KRAFTSPANNFUTTER



**DIN 69871 A**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	D	D1	D2	L	H
140FS120	40	ISO40 DIN69871 F. SERR. Ø20 H75	20	46	47	60	75
140FS132	40	ISO40 DIN69871 F. SERR. Ø32 H95	32	62	63	80	95
140FS332	40	ISO40 DIN69871 F. SERR. Ø32 H135	32	62	63	80	135
150FS120	50	ISO50 DIN69871 F. SERR. Ø20 H85	20	46	47	60	85
150FS132	50	ISO50 DIN69871 F. SERR. Ø32 H85	32	62	63	80	85
150FS332	50	ISO50 DIN69871 F. SERR. Ø32 H135	32	62	63	80	135

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHOR**



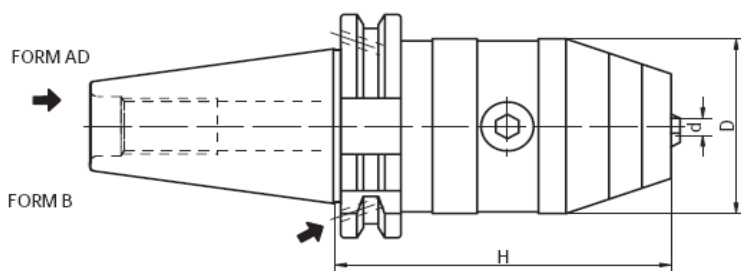




MANDRINI INTEGRALI CON CHIAVE ESAGONALE  
 DRILL CHUCK WITH HEX-KEY LOCK SYSTEM  
 MANDRINS MONBLOC-SERRAGE PAR CLE 6 PANS  
 NC-KURZBOHRFUTTER-SPANNEN DURCH 6 - KANTSCHLUSSEL



# DIN 69871 AD/B



Codice	ISO	Descrizione	H	D	d
140MAZ13	40	ISO40 DIN69871 M/AUTOS./FORI H.90 D.13	90	50	1-13
140MAZ16	40	ISO40 DIN69871 M/AUTOS./FORI H.95 D.16	95	57	3-16
150MAZ13	50	ISO50 DIN69871 M/AUTOS./FORI H.90 D.13	90	50	1-13
150MAZ16	50	ISO50 DIN69871 M/AUTOS./FORI H.95 D.16	95	57	3-16

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

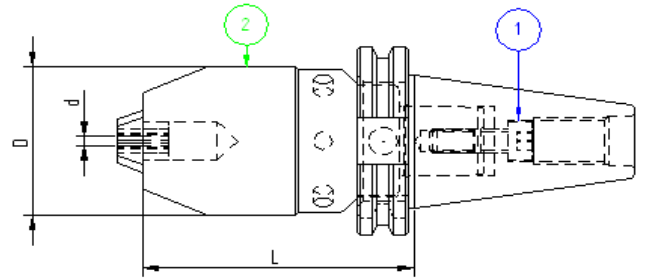


MANDRINI PORTAPUNTE INTEGRALI  
UNIVERSAL DRILL CHUCKS  
MANDRINS UNIVERSELS DE PERÇAGE  
NC-BOHRFUTTER



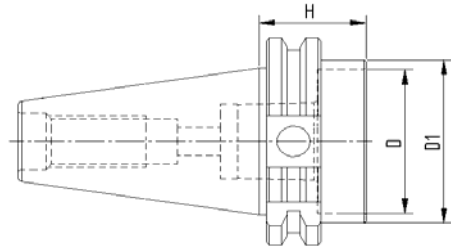
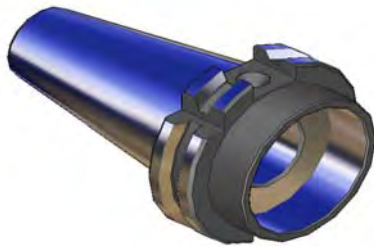
**DIN 69871 A**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D	d
140MPI13	40	ISO40 DIN69871 P/PUNTA INT.H87 DC13	87	50	1-13
140MPI16	40	ISO40 DIN69871 P/PUNTA INT.H106 DC16	106	57	3-16
150MPI13	50	ISO50 DIN69871 P/PUNTA INT.H87 DC13	87	50	1-13
150MPI16	50	ISO50 DIN69871 P/PUNTA INT.H106 DC16	106	57	3-16

**MANDRINI DI RICAMBIO - REPLACEMENT DRILL CHUCK HEADS -  
MANDRINS DE RECHANGE - ERSATZTEILE BOHRFÜTTER**



Codice	ISO	Descrizione	D	D1	H
140CPI13	40	ISO40 DIN69871 SOLO MANDRINO 1-13	40	50	21
140CPI16	40	ISO40 DIN69871 SOLO MANDRINO 3-16	44	50	26
150CPI13	50	ISO50 DIN69871 SOLO MANDRINO 1-13	40	50	16
150CPI16	50	ISO50 DIN69871 SOLO MANDRINO 3-16	44	-	15

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIÈCES DETACHEES - ERSATZTEILE**

Codice	MANDRINO	Q.tà	VITE	Q.tà
--------	----------	------	------	------



140MPI13	913INS01	1	110802501	1
140MPI16	916INS01	1	110803501	1
150MPI13	913INS01	1	110803501	1
150MPI16	916INS01	1	110803501	1



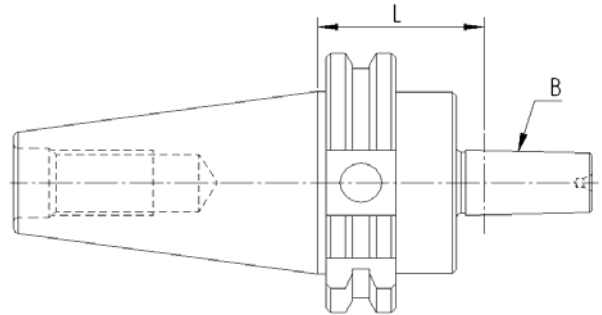
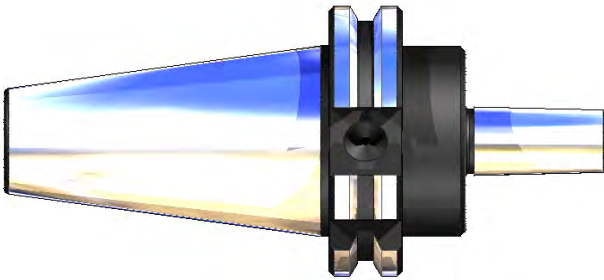
ATTACCO PER MANDRINI PORTAPUNTE  
ARBORS FOR DRILL CHUCKS  
ARBRES POUR MANDRINS DE PERÇAGE  
BOHRFUTTERAUFNAHMEN



**DIN 69871 A**

**DIN 238**

**Bilanciato G.6,3 12.000 RPM**



<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>L</b>	<b>B</b>
140MPP12	40	ISO40 DIN69871 P/PUNTE H.40 B12	40	12
140MPP16	40	ISO40 DIN69871 P/PUNTE H.40 B16	40	16
140MPP18	40	ISO40 DIN69871 P/PUNTE H.40 B18	40	18
150MPP12	50	ISO50 DIN69871 P/PUNTE H.40 B12	40	12
150MPP16	50	ISO50 DIN69871 P/PUNTE H.40 B16	40	16
150MPP18	50	ISO50 DIN69871 P/PUNTE H.40 B18	40	18

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

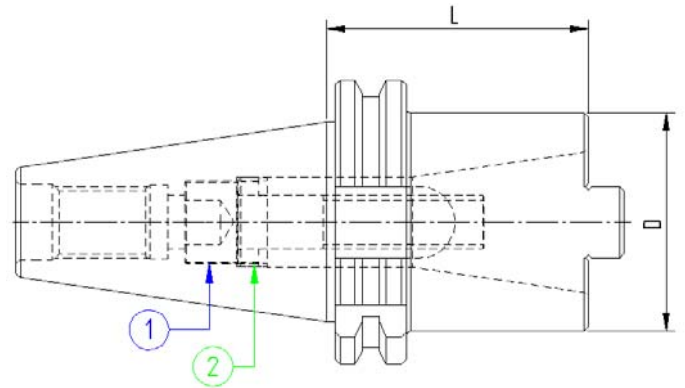
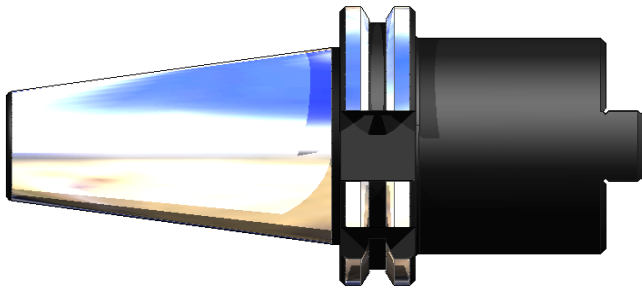


MANDRINI DI RIDUZIONE  
REDUCTION SLEEVES  
DOUILLES DE REDUCTION  
ZWISCHENHUELSEN SK-SK



**DIN 69871**

**DIN 64871 AD**





Codice	ISO	Descrizione	L	D
140ISO30	40-30	ISO40 DIN69871 RIDUZIONE H70 ISO30	70	49
140ISO40	40-40	ISO40 DIN69871 RIDUZIONE H100 ISO40	100	68

Codice	ISO	Descrizione	L	D
150ISO40	50-40	ISO50 DIN69871 RIDUZIONE H70 ISO40	70	68
150ISO50	50-50	ISO50 DIN69871 RIDUZIONE H120 ISO50	120	100

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ISO	VITE	Q.tà	GHIERA	Q.tà
				
40-30	111205501	1	122000603	1
40-40	111606514	1	122400903	1
50-40	111606514	1	122400903	1
50-50	113408504	1	124002009	1

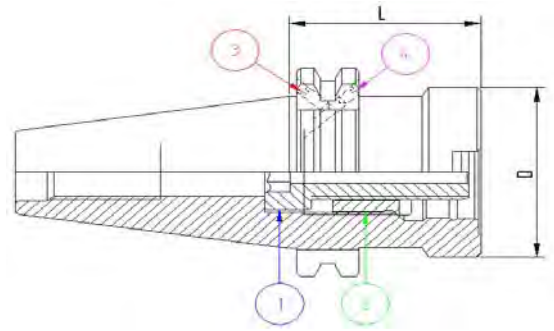
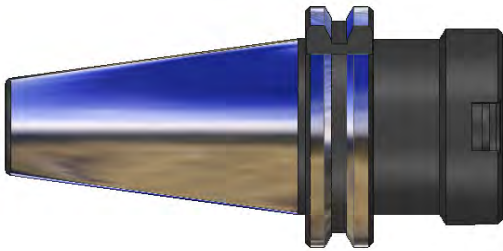


ATTACCHI BASE MODULARI "VARILOCK"  
 MODULAR BASIC HOLDERS "VARILOCK"  
 MODULE DE BASE "VARILOCK"  
 GRUNDAUFNAHMEN "VARILOCK"





**DIN 69871 A**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
140VL050	40	ISO40 DIN69871 MODULARE H27 D50	27	50
140VL063	40	ISO40 DIN69871 MODULARE H27 D63	27	63
140VL150	40	ISO40 DIN69871 MODULARE H50 D50	50	50
140VL163	40	ISO40 DIN69871 MODULARE H50 D63	50	63



**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	GHIERA	Q.tà
				
140VL050	111604011	1	122502007	1
140VL063	112004014	1	123001708	1
140VL150	111604011	1	122502007	1
140VL163	112005011	1	123002408	1

Codice	ISO	Descrizione	L	D
150VL050	50	ISO50 DIN69871 MODULARE H27 D.50	27	50
150VL063	50	ISO50 DIN69871 MODULARE H27 D.63	27	63
150VL080	50	ISO50 DIN69871 MODULARE H27 D.80	27	80
150VL150	50	ISO50 DIN69871 MODULARE H50 D.50	50	50
150VL163	50	ISO50 DIN69871 MODULARE H50 D.63	50	63
150VL180	50	ISO50 DIN69871 MODULARE H50 D.80	50	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

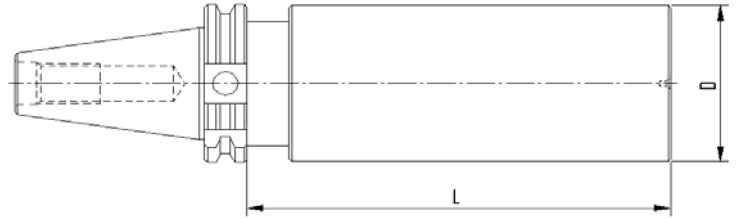
D.	VITE	Q.tà	GHIERA	Q.tà
				
50	111604011	1	122502007	1
63	112005012	1	123002408	1
80	112005012	1	123002408	1



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDER WITH SOFT SHANK  
 BARRES D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SCHAFT



**DIN 69871 A**



<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>D</b>	<b>L</b>
140ST263	40	ISO40 DIN69871 ST.TENERO D.63X250	63	250
150ST397	50	ISO50 DIN69871 ST.TENERO D.97x315	97	315

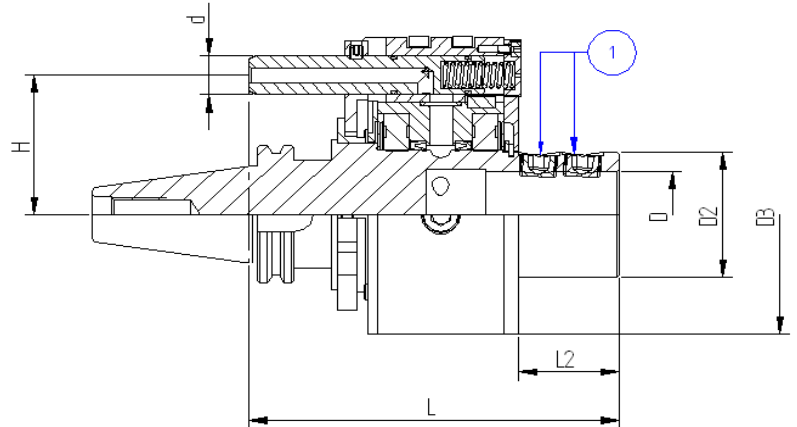
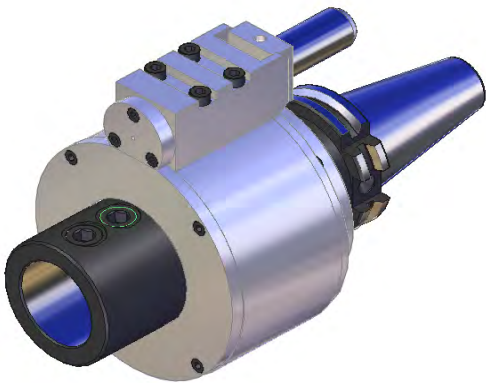
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**



DISTRIBUTORE ROTANTE DI REFRIGERANTE  
 COOLANT FEEDER  
 DISPOSITIV D'ARROSAGE TOURNANTE  
 HUEHLMITTELZUFUEHRUNG



**DIN 69871**



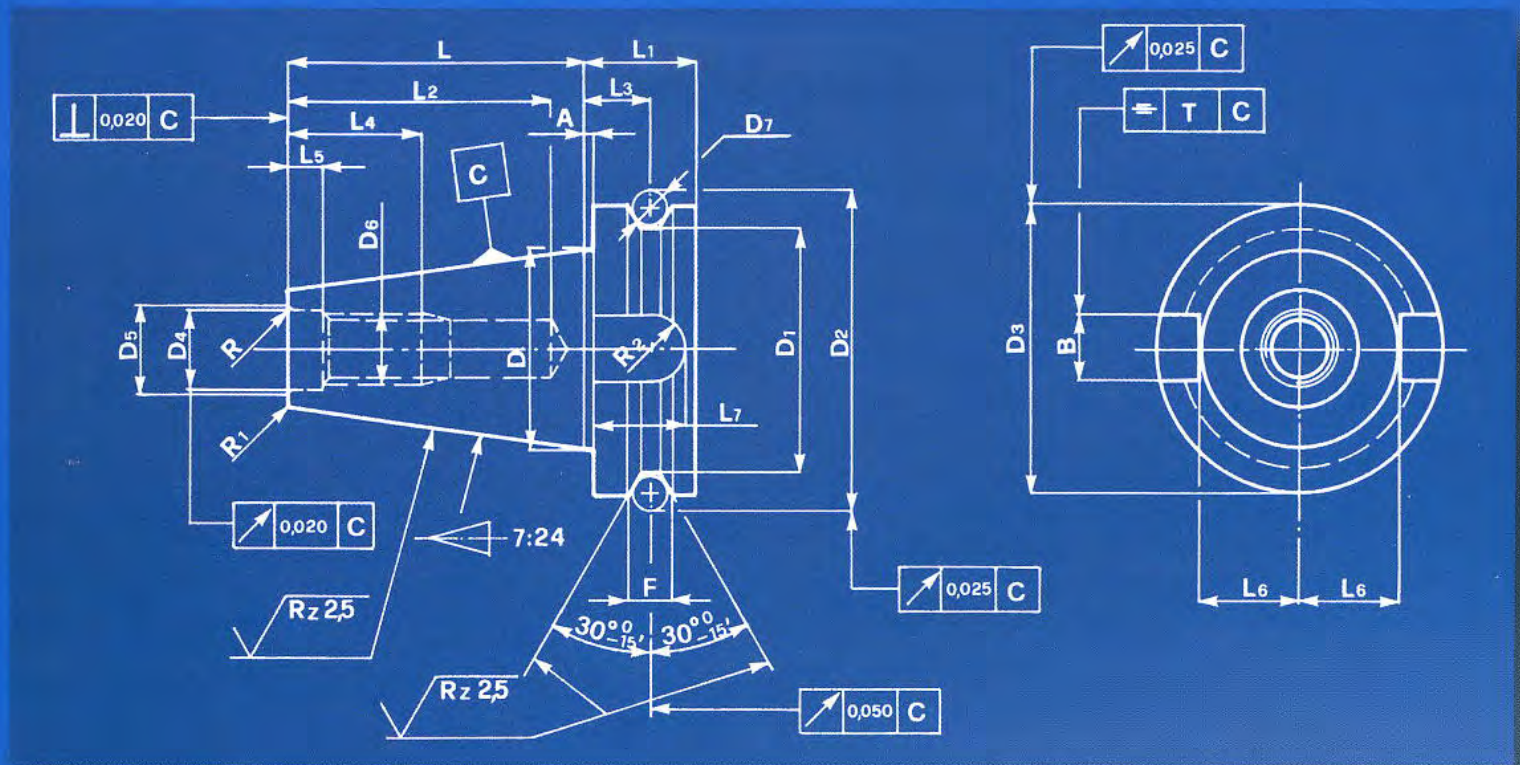
Codice	ISO	Descrizione	H	d	L	L2	D	D2	D3
140DRC32	40	ISO40 DIN69871 DISTRIB.ROTANTE D.32	65	18	150	33,8	32	48	95
Codice	ISO	Descrizione	H	d	L	L2	D	D2	D3
150DRC40	50	ISO50 DIN69871 DISTRIB.ROTANTE D.40	80	18	164,7	49	40	58	110

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ISO40	GRANO	Q.tà	ISO50	GRANO	Q.tà
32	101400804	2	32	-	-
40	-	-	40	101616154	2

MAS 403BT





**Cono - Size 40 50**

A ± 0,2	2	3
B H12	16,1	25,7
D	44,45	69,85
D1 <sup>-0,1</sup> <sub>-0,3</sub>	53	85
D2 <sup>0</sup> <sub>-0,1</sub>	69,679	109,980
D3 <sup>0</sup> <sub>-0,05</sub>	63	100
D4 H7	17	25
D5	19	27
D6 <sup>0</sup>	M16	M24
D7	8	12
F <sup>+0,1</sup> <sub>0</sub>	10	15

**Cono - Size 40 50**

L ± 0,2	65,4	101,8
L1	27	38
L2	60	90
L3 ± 0,1	16,6	23,2
L4	30	45
L5 ± 0,1	8	11
L6 <sup>0</sup> <sub>-0,2</sub>	22,6	35
L7	21	31
R1		1
R2	8,05	12,85
T	0,12	0,20

**MANDRINI PAGNONI CON ATTACCO ISO**

**DATI TECNICI**

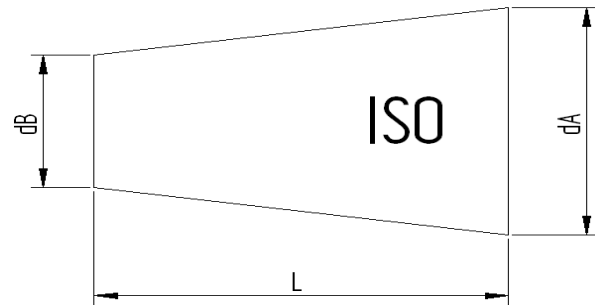


TUTTI I MANDRINI PORTAUTENSILI PAGNONI VENGONO PRODOTTI SECONDO LE NORMATIVE DIN

**TOLLERANZA DEL CONO**

PRODOTTI IN CLASSE **AT3**

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**COASSIALITA' PORTAPINZE**

La norma DIN6391 ammette un'errore massimo di 0.016 sia per i portapinze DIN6499 che per i portapinze DIN 6388.

La nostra produzione normalmente presenta uno scostamento massimo di eccentricità tra cono ISO e sede pinza compreso tra i 0,003 mm e 0,010 mm.

**COASSIALITA' PORTAFRESE FISSI E COMBINATI**

I portafrese fissi e combinati di nostra produzione rispondono ai criteri prescritti dalla norma DIN6358, la quale prevede un errore massimo di coassialità tra cono ISO 30 e ISO 40 ed i diametri 16 / 22 / 27 / 32 / 40, di 0,01.

Mentre per ISO 50 è ammesso un errore massimo di 0,015 mm.

**COASSIALITA' PORTAFRESE WELDON**

Rispettando la normativa DIN 6359-1 i portafrese WELDON devono rispondere ai seguenti requisiti:

Foro: tolleranza H5

Coassialità: scostamento massimo consentito tra cono e sede WELDON <0.01 (solo per ISO 40)

Garantiamo la tolleranza prescritta sul foro e un valore di coassialità mediamente di 0.005

**EQUILIBRATURA**

La maggior parte dei portautensili presenti in questa categoria sono prebilanciati in classe G 6,3 a 8.000 rpm min<sup>-1</sup>. oppure bilanciati in classe G 6,3 a 12.000 rpm min<sup>-1</sup>.

**DATI COSTRUTTIVI**

- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4 - 0,5 mm.
- Temprati e rinvenuti.
- Durezza HRC 58 ± 2 resistenza 800-1000 N / mm<sup>2</sup>.
- Bruniti
- Finitura di rettifica interna, esterna e nelle filettature delle ghiera chiudipinza.

**EQUILIBRATURA MANDRINI PER ALTE VELOCITA'**

Eventuali bilanciature supplementari sui nostri mandrini vengono eseguite su richiesta cliente, con una classe massima di bilanciatura di G 2,5 a 25.000 rpm.

**DATI COSTRUTTIVI PER MANDRINI PER ALTE VELOCITA'**

- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4 - 0,5 mm.
- Temprati e rinvenuti.
- Durezza HRC 58 ± 2 resistenza 800-1000 N / mm<sup>2</sup>.
- Bruniti
- Finitura di rettifica interna, esterna e nelle filettature delle ghiera chiudipinza.
- Collaudati 100% con strumenti di misura certificati e forniti con certificato di bilanciatura.

**PAGNONI DIN TOOLHOLDERS**

**TECHNICAL FEATURES**

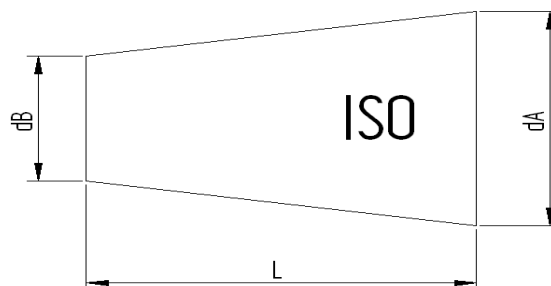


ALL PAGNONI TOOLHOLDERS ARE MANUFACTURED ACCORDING TO DIN NORM.

**CONE'S TOLERANCE**

ACCORDING TO THE CLASS **AT3**

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**COLLET CHUCK'S RUNOUT ACCURACY**

The norm DIN6391 permits a runout error between external cone and internal cone / collet of 0.016  
Our production has a runout accuracy which is guaranteed to be within 0,003 / 0,010 mm at the tool seat.

**SHELL END MILL ADAPTOR'S RUNOUT ACCURACY**

Our shell end mill adaptors meet the requirements of the norm DIN6358, which prescribes for diameters 16 / 22 / 27 / 32 / 40 a runout accuracy of: 0,01 for SK 30 / 40 and 0,015 for SK50.

**WELDON END MILL HOLDER'S RUNOUT ACCURACY**

According to the DIN6359-1 Weldon end mill holders have to meet the following requirements:  
Bore: H5 tollerance  
Runout accuracy: <0.01 (for SK40)  
Our end mill adaptors ensure the prescribed holes' tolerance and have a runout accuracy which is normally 0.005

**BALANCING**

The major part of toolholders of this category can run up to 8.000 rpm grade G 6,3 or 12.000 rpm.  
Besides the descriptive and dimensional table of products, you can find the additive balancing grade.

**CONSTRUCTIVE FEATURES**

- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm.
- Hardened-Tempered.
- Hardness HRC 58 ± 2, strenght 800-1000 N / mm2.
- Black oxided.
- Internal and external grinding finished.

**HIGH-SPEED BALANCING TOOLHOLDERS**

Any additional balancing on our toolholders are carried out on client request, with a class maximum of balancing of 25.000 rpm grade G 2,5.

**CONSTRUCTIVE FEATURES FOR HIGH-SPEED TOOLHOLDERS**

- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm.
- Hardened-Tempered.
- Hardness HRC 58 ± 2, strenght 800-1000 N / mm2.
- Black oxided.
- Internal and external grinding finished of the cone.
- Grinding finish on the front side and on the thread of collet nuts.
- Tested 100% with certified measuring instruments and supplied with balancing certificate.

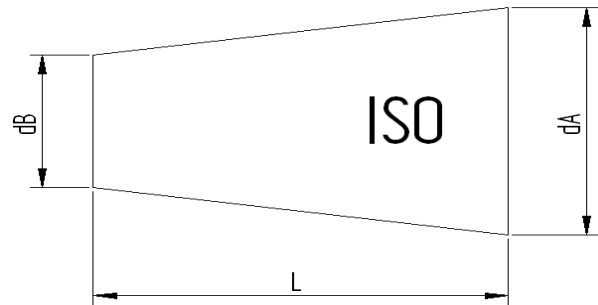


Alle Pagnoni - steilkegelaufnahmen werden nach den DIN-Normen angefertigt.

### KEGELSCHAFTTOLERANZ

In Klasse **AT3** angefertigt.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



### RUNDLAUFGENAUIGKEIT DER SPANNZANGENAUFNAHME

Die DIN 639-Norm schreibt eine Rundlaufgenauigkeit zwischen Aussenkegel und Innenkegel/Spannzangensitz vom 0,016 vor.

Unsere Spannzangenfutter weisen einen Rundlauffehler zwischen ISO-Kegelaufnahme und Spannzangensitz, der zwischen 0,003 und 0,010 mm liegt.

### AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT

Pagnoni-Aufsteckfräsdorne entsprechen der DIN 6358-Norm, die einen höchsten Rundlauffehler zwischen ISO 30- und ISO 40- Kegel und den Durchmessern 16 / 22 / 27 / 32 / 40 vom 0,01 vorsieht.

Der mögliche höchste Rundlauffehler für ISO 50 ist 0,015 mm.

### WELDON AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT

Nach der DIN 6359-1-Norm müssen die Weldon - Aufsteckfräsdorne die folgenden Forderungen aufweisen:

Bohrung: toleranz H5

Rundlaufgenauigkeit: höchster möglicher Rundlauffehler zwischen Kegel und Weldonsitz <0,01 (für ISO 40).

Die vorgeschriebene Toleranz der Bohrung und eine durchschnittliche Rundlaufgenauigkeit von 0,005 sind verischart.

### WUCHTUNG

Die meisten Werkzeughalter dieser Gruppe sind in Klasse G6,3 auf 8.000 U/Min -1 vorgewuchtet oder auf 12.000 U/Min -1 gewuchtet.

### KONSTRUKTIONSDATEN

- Aus legiertem Einsatzstahl angefertigt.
- in der Einsatzhärte von 0,4 - 0,5 mm zementiert.
- gehärtet, angelassen.
- Härte HRC 58 ± 2, 800-1000 N / mm<sup>2</sup>.
- Brüniert
- inneres, äußeres Schleifen und am Gewinde der Spannzangenmutter.

### WUCHTUNG MIT HOCHGESCHWINDIGKEIT

Auf Anfrage können wir die Werkzeughalter auf maximal G2,5 25.000 U/Min gegen Aufpreis auswuchten.

### KONSTRUKTIONSDATEN

- aus legiertem Einsatzstahl angefertigt.
- in der Einsatzhärte von 0,4 - 0,5 mm zementiert.
- gehärtet, angelassen.
- Härte HRC 58 ± 2, 800-1000 N / mm<sup>2</sup>.
- Brüniert
- inneres, äußeres Schleifen des Kegels.
- 100% durch zertifizierte Meßinstrumente geprüft und mit Wuchtungsprotokoll geliefert.

**MANDRINS PAGNONI AVEC ATTACHEMENT ISO**

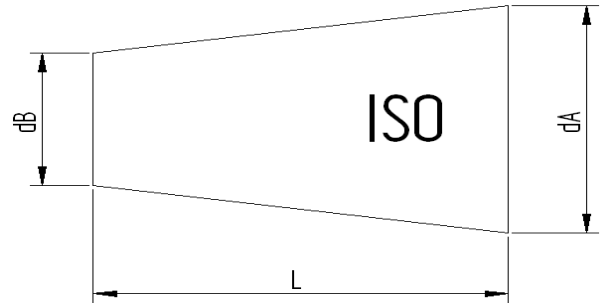
**DONNE TECHNIQUES**

Tous les mandrins porte-outils PAGNONI sont produits suivant les spécifications DIN.

**TOLLERANCE DU CONE**

En classe **AT3**.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**COAXIALITÉ PORTE-PINCE**

La norme DIN6391 admet une erreur maximum du 0,016 soit pour les porte-pinces DIN6499 soit pour DIN6388. Dans notre production l'écart d'excentricité maximum entre cône ISO et logement de la pince est compris entre: 0,003 et 0,010 mm.

**COAXIALITÉ PORTE-FRAISES FIXES ET COMBINES**

Les porte-fraises fixes et combinés de notre production suivent la spécification de la norme DIN 6358, qui prévoit pour les diamètres 16 / 22 / 27 / 32 / 40 une concentricité de 0,01 pour ISO 30 et ISO 40 0,015 pour ISO 50.

**COAXIALITÉ PORTE-FRAISES WELDON**

Suivant les spécifications DIN6359-1 les porte-fraises WELDON doivent suivre les conditions suivantes:

- Trou: tolérance H5.
- Coaxialité: écart maximum toléré entre cône et logement du Weldon <0,01 (pour ISO 40).
- Nous assurons la tolérance prévue sur le trou et une coaxialité en moyenne de 0,005.

**EQUILIBRAGE**

La plupart des porte-outils sont pré-équilibrés en classe G 6,3 8.000 Tr/Min -1 ou équilibrés à 12.000 Tr/Min -1.

**ELEMENTS DE CONSTRUCTION**

- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 - 0,5 mm.
- Trempé - Revenu.
- Dureté HRC 58 ± 2 résistance 800-1000 N / mm2.
- Brunis.
- Rectification du cône intérieur, extérieur et dans le filetage des écrous qui serrent la pince.

**EQUILIBRAGE MANDRINS POUR HAUTE VITESSE**

Équilibrage éventuels sur nos mandrins sont exécutés sur demande du client, avec une maximum classe de équilibrage de G2,5 à 25.000 rpm.

**ELEMENTS DE CONSTRUCTION POUR MANDRINS HAUTE VITESSE**

- Produits en acier cémenté allié.
- Cémenté avec une profondeur 0,4 - 0,5 mm.
- Trempé - Revenu.
- Dureté HRC 58 ± 2 résistance 800-1000 N / mm2.
- Brunis.
- Fiition de rectification intérieure, extérieure et di cône.
- Contrôlés à 100% avec des instruments de mesure certifiés et livrés avec un certificat d'équilibrage.

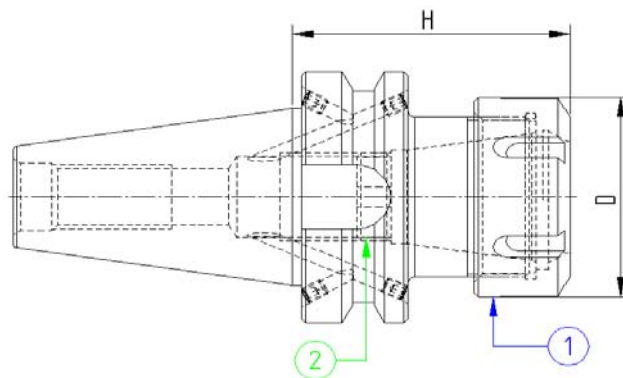
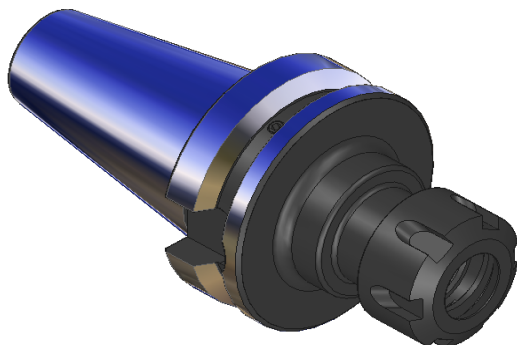

**MANDRINI PORTAPINZA TIPO ER**  
 ER COLLET CHUCK  
 MANDRINS A PINCES TYPE ER  
 SPANNZANGENFUTTER ER



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 6499**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D
340PP110	40	ISO40 MAS403BT P/P H.70 ER16	70	32
340PP113	40	ISO40 MAS403BT P/P H.70 ER20	70	35
340PP116	40	ISO40 MAS403BT P/P H.70 ER25	70	42
340PP120	40	ISO40 MAS403BT P/P H.70 ER32	70	50
340PP126	40	ISO40 MAS403BT P/P H.70 ER40	70	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	GHIERA	Q.tà	GRANO	Q.tà
				
16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1

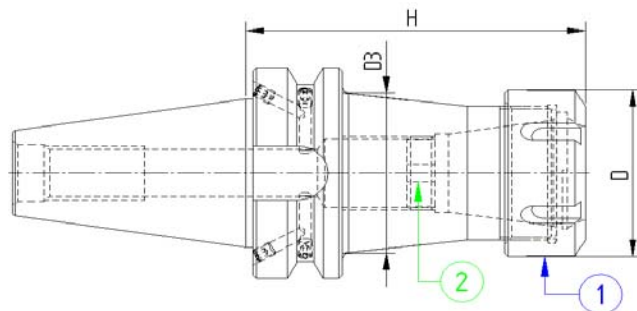
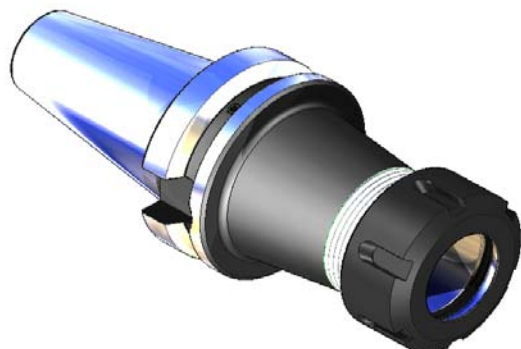

**MANDRINI PORTAPINZA TIPO ER**  
 ER COLLET CHUCK  
 MANDRINS A PINCES TYPE ER  
 SPANNZANGENFUTTER ER



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 6499**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
340PP210	40	ISO40 MAS403BT P/P H100 ER16	100	-	32
340PP213	40	ISO40 MAS403BT P/P H100 ER20	100	-	35
340PP216	40	ISO40 MAS403BT P/P H100 ER25	100	-	42
340PP220	40	ISO40 MAS403BT P/P H100 ER32	100	-	50
340PP226	40	ISO40 MAS403BT P/P H100 ER40	100	50	63
340PP310	40	ISO40 MAS403BT P/P H130 ER16	130	36	32
340PP313	40	ISO40 MAS403BT P/P H130 ER20	130	40	35
340PP316	40	ISO40 MAS403BT P/P H130 ER25	130	42	42
340PP320	40	ISO40 MAS403BT P/P H130 ER32	130	50	50
340PP326	40	ISO40 MAS403BT P/P H130 ER40	130	50	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	GHIERA	Q.tà	GRANO	Q.tà
				
16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1

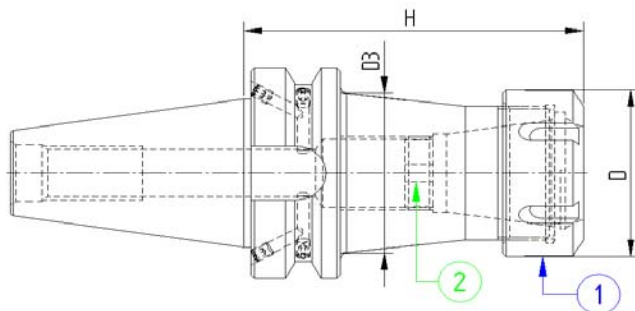
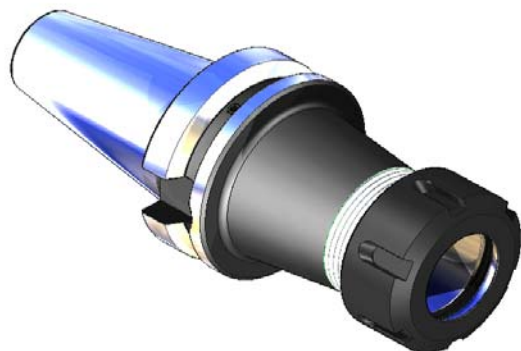
MANDRINI PORTAPINZA TIPO ER  
ER COLLET CHUCK  
MANDRINS A PINCES TYPE ER  
SPANNZANGENFUTTER ER



**JIS-B 6339 M.AS 403/BT AD/B**

**DIN 6499**

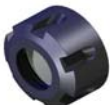

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
340PP410	40	ISO40 MAS403BT P/P H160 ER16	160	-	32
340PP413	40	ISO40 MAS403BT P/P H160 ER20	160	-	35
340PP416	40	ISO40 MAS403BT P/P H160 ER25	160	-	42
340PP420	40	ISO40 MAS403BT P/P H160 ER32	160	-	50
340PP426	40	ISO40 MAS403BT P/P H160 ER40	160	50	63
340PP510	40	ISO40 MAS403BT P/P H200 ER16	200	-	32
340PP513	40	ISO40 MAS403BT P/P H200 ER20	200	-	35
340PP516	40	ISO40 MAS403BT P/P H200 ER25	200	-	42
340PP520	40	ISO40 MAS403BT P/P H200 ER32	200	-	50
340PP526	40	ISO40 MAS403BT P/P H200 ER40	200	50	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	GHIERA	Q.tà	GRANO	Q.tà
				
16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1



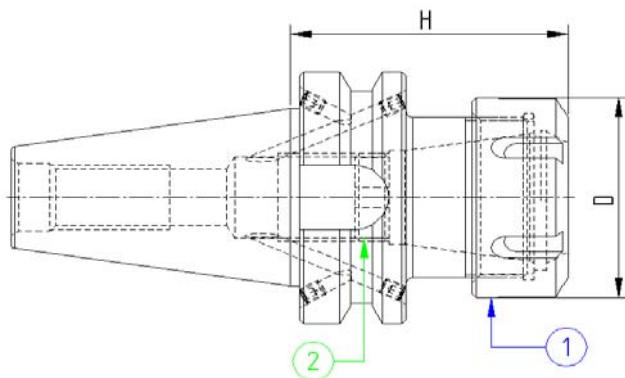
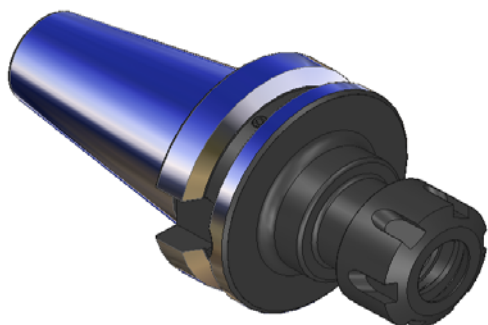

**MANDRINI PORTAPINZA TIPO ER**  
 ER COLLET CHUCK  
 MANDRINS A PINCES TYPE ER  
 SPANNZANGENFUTTER ER



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 6499**

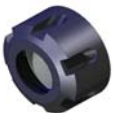

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D
350PP110	50	ISO50 MAS403BT P/P H80 ER16	80	32
350PP113	50	ISO50 MAS403BT P/P H80 ER20	80	35
350PP116	50	ISO50 MAS403BT P/P H80 ER25	80	42
350PP120	50	ISO50 MAS403BT P/P H80 ER32	80	50
350PP126	50	ISO50 MAS403BT P/P H80 ER40	80	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIÈCES DETACHEES - ERSATZTEILE**

ER	GHIERA	Q.tà	GRANO	Q.tà
				
16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1

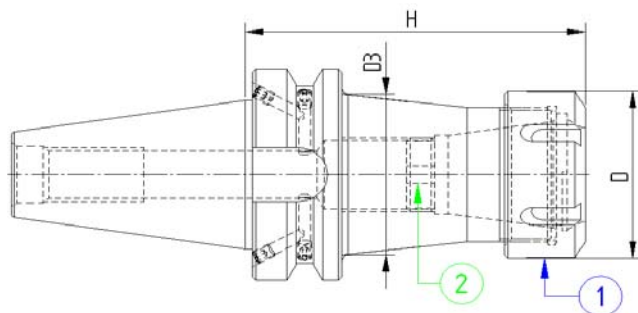
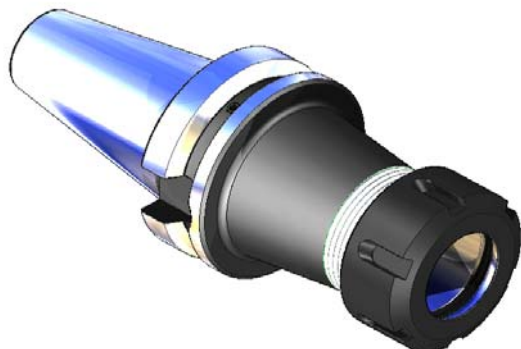

**MANDRINI PORTAPINZA TIPO ER**  
 ER COLLET CHUCK  
 MANDRINS A PINCES TYPE ER  
 SPANNZANGENFUTTER ER



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 6499**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
350PP210	50	ISO50 MAS403BT P/P H100 ER16	100	-	32
350PP213	50	ISO50 MAS403BT P/P H100 ER20	100	-	35
350PP216	50	ISO50 MAS403BT P/P H100 ER25	100	-	42
350PP220	50	ISO50 MAS403BT P/P H100 ER32	100	-	50
350PP226	50	ISO50 MAS403BT P/P H100 ER40	100	-	63
350PP234	50	ISO50 MAS403BT P/P H100 ER50	100	80	-
350PP310	50	ISO50 MAS403BT P/P H130 ER16	130	32	32
350PP313	50	ISO50 MAS403BT P/P H130 ER20	130	35	35
350PP316	50	ISO50 MAS403BT P/P H130 ER25	130	42	42
350PP320	50	ISO50 MAS403BT P/P H130 ER32	130	50	50
350PP326	50	ISO50 MAS403BT P/P H130 ER40	130	63	63
350PP334	50	ISO50 MAS403BT P/P H130 ER50	130	80	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	GHIERA	Q.tà	GRANO	Q.tà
16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1
50	-	-	103015901	1

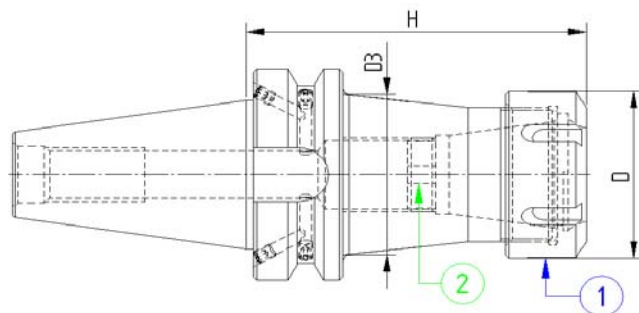
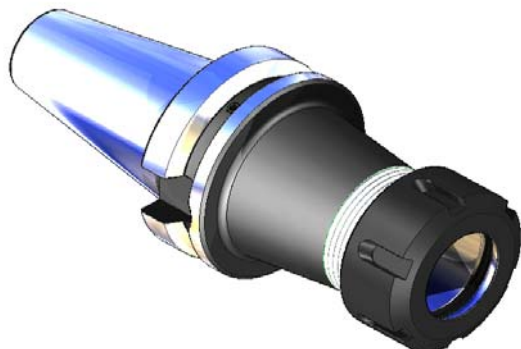
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ER COLLET CHUCK  
MANDRINS A PINCES TYPE ER  
SPANNZANGENFUTTER ER



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 6499**

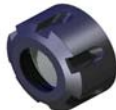

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
350PP410	50	ISO50 MAS403BT P/P H160 ER16	160	32	32
350PP413	50	ISO50 MAS403BT P/P H160 ER20	160	35	35
350PP416	50	ISO50 MAS403BT P/P H160 ER25	160	42	42
350PP420	50	ISO50 MAS403BT P/P H160 ER32	160	50	50
350PP426	50	ISO50 MAS403BT P/P H160 ER40	160	63	63
350PP510	50	ISO50 MAS403BT P/P H200 ER16	200	32	32
350PP513	50	ISO50 MAS403BT P/P H200 ER20	200	42	42
350PP516	50	ISO50 MAS403BT P/P H200 ER25	200	42	42
350PP520	50	ISO50 MAS403BT P/P H200 ER32	200	50	50
350PP526	50	ISO50 MAS403BT P/P H200 ER40	200	63	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	GHIERA	Q.tà	GRANO	Q.tà
				
16	916GHREQ	1	101001601	1
20	920GHREQ	1	101001601	1
25	925GHREQ	1	101815801	1
32	932GHREQ	1	102215901	1
40	940GHREQ	1	103015901	1



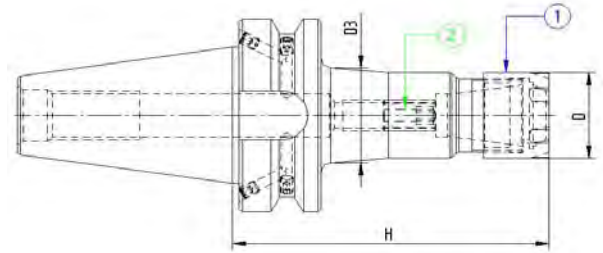
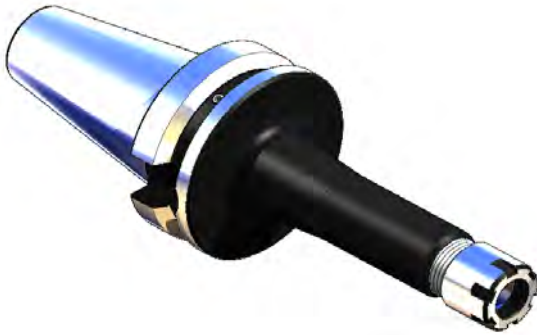
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ER MINI COLLET CHUCK  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER MINI



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 6499**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
340PM207	40	ISO40 MAS403BT P/P H100 ER11MINI	100	20	16
340PM210	40	ISO40 MAS403BT P/P H100 ER16MINI	100	26	22
340PM213	40	ISO40 MAS403BT P/P H100 ER20MINI	100	28	28
340PM216	40	ISO40 MAS403BT P/P H100 ER25MINI	100	35	35
340PM307	40	ISO40 MAS403BT P/P H130 ER11MINI	130	22	16
340PM310	40	ISO40 MAS403BT P/P H130 ER16MINI	130	28	22
340PM313	40	ISO40 MAS403BT P/P H130 ER20MINI	130	34	28
340PM316	40	ISO40 MAS403BT P/P H130 ER25MINI	130	40	35
340PM407	40	ISO40 MAS403BT P/P H160 ER11MINI	160	28	16
340PM410	40	ISO40 MAS403BT P/P H160 ER16MINI	160	26	22
340PM413	40	ISO40 MAS403BT P/P H160 ER20MINI	160	34	28
340PM416	40	ISO40 MAS403BT P/P H160 ER25MINI	160	35	35
340PM510	40	ISO40 MAS403BT P/P H200 ER16MINI	200	32	22
340PM513	40	ISO40 MAS403BT P/P H200 ER20MINI	200	38	28
340PM516	40	ISO40 MAS403BT P/P H200 ER25MINI	200	44	35

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER MINI	GHIERA	Q.tà	GRANO	Q.tà
				
11	911GHRMN	1	100601004	1
16	916GHRMN	1	101001601	1
20	920GHRMN	1	101001601	1
25	925GHRMN	1	101815801	1



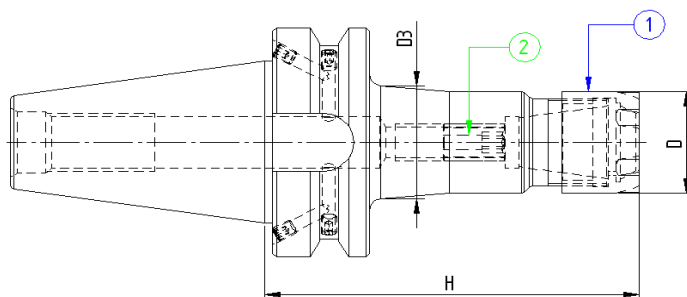
MANDRINI PORTAPINZA TIPO ER MINI  
ER MINI COLLET CHUCK  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER MINI



**JIS-B 6339 M.AS 403/BT.A**

**DIN 6357**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	D3	D
350PM210	50	ISO50 MAS403BT P/P H100 ER16MINI	100	26	22
350PM213	50	ISO50 MAS403BT P/P H100 ER20MINI	100	28	28
350PM216	50	ISO50 MAS403BT P/P H100 ER25MINI	100	35	35
350PM310	50	ISO50 MAS403BT P/P H130 ER16MINI	130	25	22
350PM313	50	ISO50 MAS403BT P/P H130 ER20MINI	130	32	28
350PM316	50	ISO50 MAS403BT P/P H130 ER25MINI	130	40	35
350PM410	50	ISO50 MAS403BT P/P H160 ER16MINI	160	28	22
350PM413	50	ISO50 MAS403BT P/P H160 ER20MINI	160	35	28
350PM416	50	ISO50 MAS403BT P/P H160 ER25MINI	160	40	35
350PM510	50	ISO50 MAS403BT P/P H200 ER16MINI	200	35	22
350PM513	50	ISO50 MAS403BT P/P H200 ER20MINI	200	42	28
350PM516	50	ISO50 MAS403BT P/P H200 ER25MINI	200	44	35

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	GHIERA	Q.tà	GRANO	Q.tà
16	916GHRMN	1	101001601	1
20	920GHRMN	1	101001601	1
25	925GHRMN	1	101815801	1



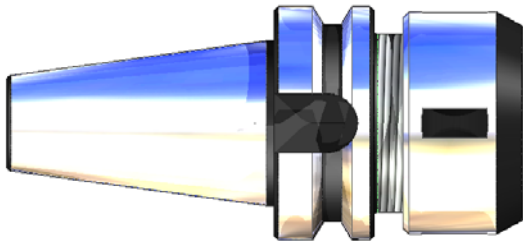
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EOC COLLET CHUCK  
MANDRINS A PINCES TYPE EOC  
SPANNZANGENFUTTER EOC



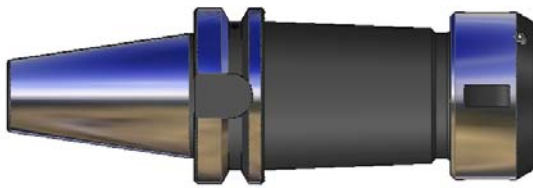
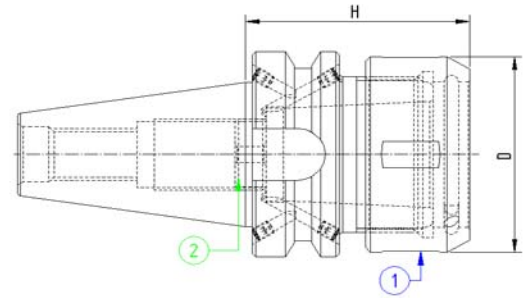
**JIS-B 6339 M.AS 403/BT.AD/B**

**DIN 6388**

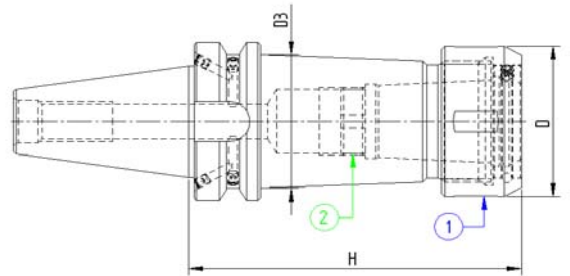
**Bilanciato G.6,3 12.000 RPM**



**FIG. 1**



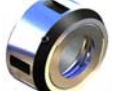

**FIG. 2**



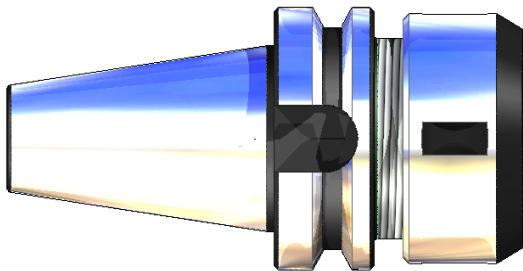
Codice	ISO	Descrizione	H	D	D3	FIG.
340PO116	40	ISO40 MAS403BT P/P H70 EOC16	70	43	-	1
340PO125	40	ISO40 MAS403BT P/P H70 EOC25	70	60	-	1
340PO132	40	ISO40 MAS403BT P/P H80 EOC32	80	72	-	1
340PO216	40	ISO40 MAS403BT P/P H100 EOC16	100	43	-	1
340PO225	40	ISO40 MAS403BT P/P H100 EOC25	100	60	-	1
340PO316	40	ISO40 MAS403BT P/P H130 EOC16	130	43	42	2
340PO325	40	ISO40 MAS403BT P/P H130 EOC25	130	60	48	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

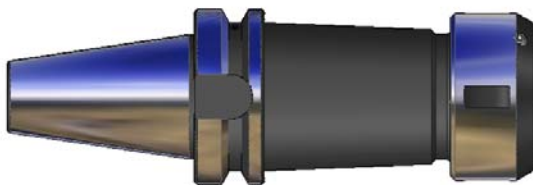
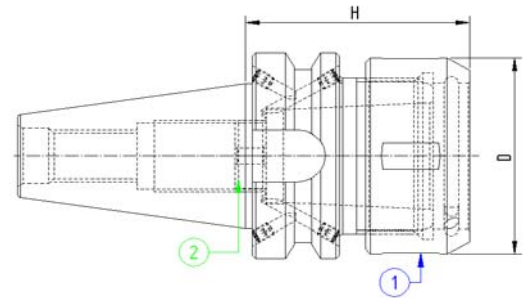
**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

EOC	GHIERA	Q.tà	GRANO	Q.tà
				
16	916GHROS	1	101815801	1
25	925GHROS	1	102715901	1
32	932GHROS	1	102715901	1

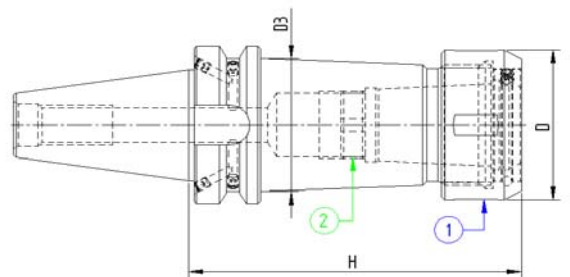
**Bilanciato G.6,3 12.000 RPM**



**FIG. 1**



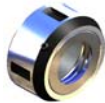
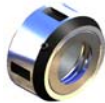

**FIG. 2**



Codice	ISO	Descrizione	H	D	D3	FIG.
350PO116	50	ISO50 MAS403BT P/P H70 EOC16	70	43	-	1
350PO125	50	ISO50 MAS403BT P/P H85 EOC25	85	60	-	1
350PO132	50	ISO50 MAS403BT P/P H90 EOC32	90	72	-	1
350PO216	50	ISO50 MAS403BT P/P H100 EOC16	100	43	-	1
350PO225	50	ISO50 MAS403BT P/P H100 EOC25	100	60	-	1
350PO232	50	ISO50 MAS403BT P/P H100 EOC32	100	72	-	1
350PO325	50	ISO50 MAS403BT P/P H130 EOC25	130	60	48	2
350PO332	50	ISO50 MAS403BT P/P H130 EOC32	130	72	60	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

EOC	VITE	Q.tà	GRANO	Q.tà
		1		1
16	916GHROS	1	101815801	1
25	925GHROS	1	102715901	1
32	932GHROS	1	102715901	1



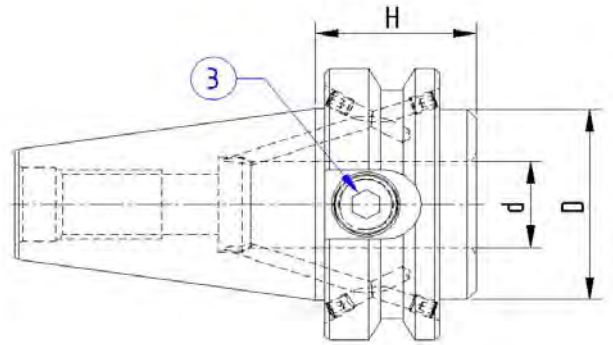
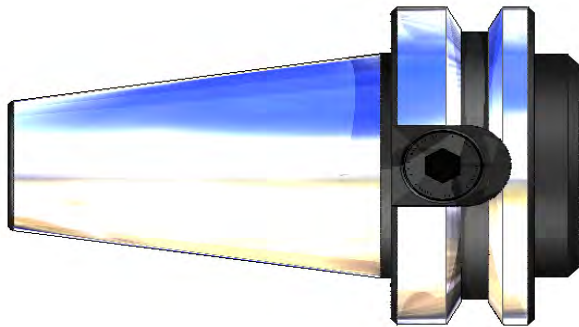
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
340WLC16	40	ISO40 MAS403BT WELDON H35 D.16	35	16	44
340WLC20	40	ISO40 MAS403BT WELDON H35 D.20	35	20	44
340WLC25	40	ISO40 MAS403BT WELDON H35 D.25	35	25	44
340WLC32	40	ISO40 MAS403BT WELDON H70 D.32	70	32	72

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà	GRANO INT.	Q.tà
16	101401604	1	-	-
20	101401204	1	-	-
25	101601004	1	-	-
32	102002002	1	101610701	1

Codice	ISO	Descrizione	H	d	D
350WLC16	50	ISO50 MAS403BT WELDON H44 D.16	44	16	70
350WLC20	50	ISO50 MAS403BT WELDON H44 D.20	44	20	70
350WLC25	50	ISO50 MAS403BT WELDON H44 D.25	44	25	70
350WLC32	50	ISO50 MAS403BT WELDON H44 D.32	44	32	80
350WLC40	50	ISO50 MAS403BT WELDON H44 D.40	44	40	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
16	101401604	1
20	101601604	1
25	101802002	1
32	102002002	1
40	102002002	1

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**





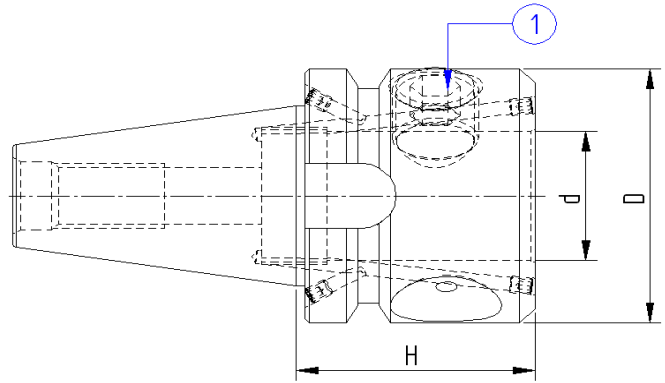
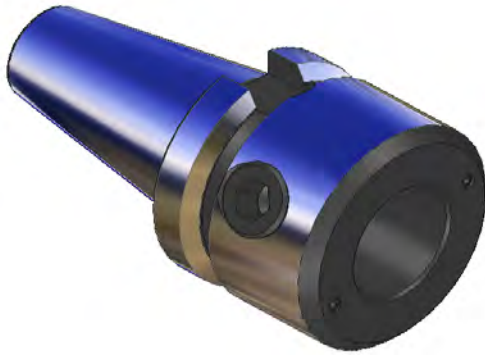
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
340WLS25	40	ISO40 MAS403BT WELDON H55 D.25	55	25	63
340WLS32	40	ISO40 MAS403BT WELDON H55 D.32	55	34	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
---	-------	------



25	-	-
32	102001604	1



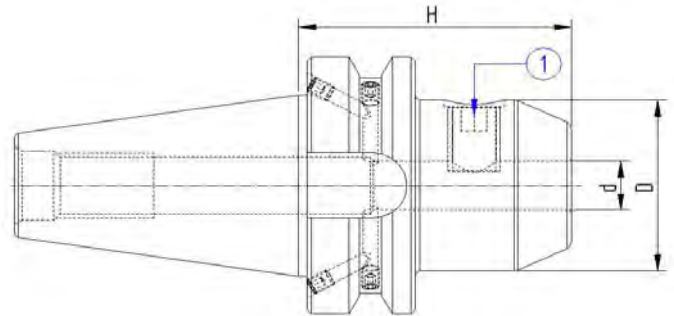
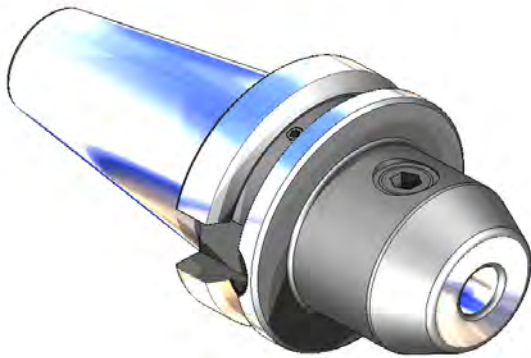
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
340WLD06	40	ISO40 MAS403BT WELDON H50 D.06	50	6	25
340WLD08	40	ISO40 MAS403BT WELDON H50 D.08	50	8	28
340WLD10	40	ISO40 MAS403BT WELDON H63 D.10	63	10	35
340WLD12	40	ISO40 MAS403BT WELDON H63 D.12	63	12	42
340WLD14	40	ISO40 MAS403BT WELDON H63 D.14	63	14	44
340WLD16	40	ISO40 MAS403BT WELDON H63 D.16	63	16	48
340WLD18	40	ISO40 MAS403BT WELDON H63 D.18	63	18	50
340WLD20	40	ISO40 MAS403BT WELDON H63 D.20	63	20	52
340WLD25	40	ISO40 MAS403BT WELDON H90 D.25	90	25	65
340WLD32	40	ISO40 MAS403BT WELDON H100 D.32	100	32	72
340WLD40	40	ISO40 MAS403BT WELDON H105 D.40	105	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
---	-------	------



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2



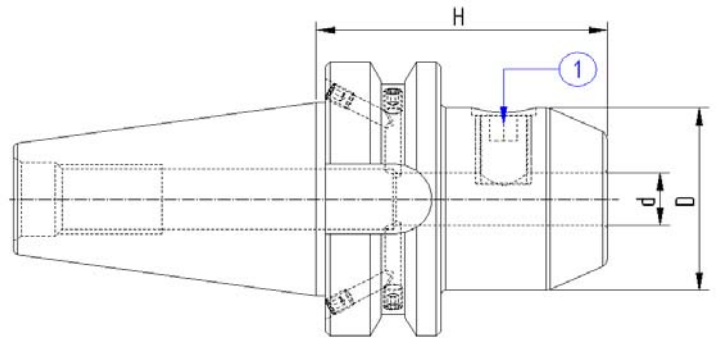
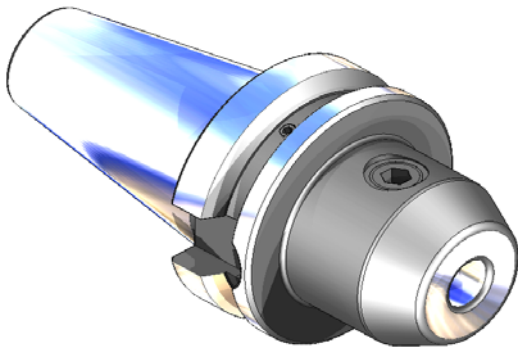
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
350WLD06	50	ISO50 MAS403BT WELDON H63 D.6	63	6	25
350WLD08	50	ISO50 MAS403BT WELDON H63 D.8	63	8	28
350WLD10	50	ISO50 MAS403BT WELDON H63 D.10	63	10	35
350WLD12	50	ISO50 MAS403BT WELDON H80 D.12	80	12	42
350WLD14	50	ISO50 MAS403BT WELDON H80 D.14	80	14	44
350WLD16	50	ISO50 MAS403BT WELDON H80 D.16	80	16	48
350WLD18	50	ISO50 MAS403BT WELDON H80 D.18	80	18	50
350WLD20	50	ISO50 MAS403BT WELDON H80 D.20	80	20	52
350WLD25	50	ISO50 MAS403BT WELDON H100 D.25	100	25	65
350WLD32	50	ISO50 MAS403BT WELDON H105 D.32	105	32	72
350WLD40	50	ISO50 MAS403BT WELDON H120 D.40	120	40	80
350WLD50	50	ISO50 MAS403BT WELDON H125 D.50	125	50	90

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
---	-------	------



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2
50	102422504	2



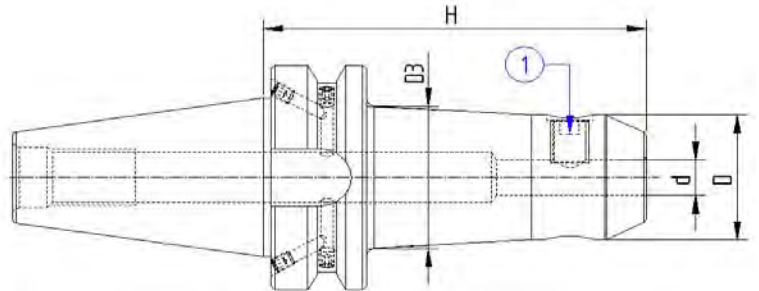
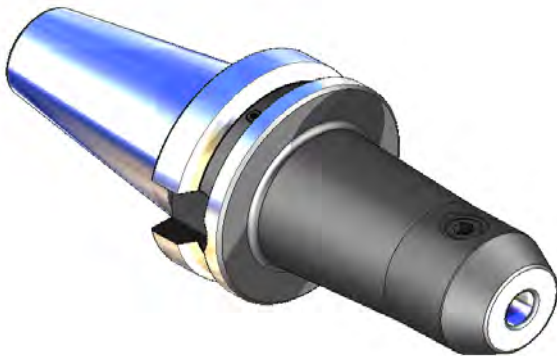
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
340WE206	40	ISO40 MAS403BT WELDON H100 D.06	100	6	25	35
340WE208	40	ISO40 MAS403BT WELDON H100 D.08	100	8	28	38
340WE210	40	ISO40 MAS403BT WELDON H100 D.10	100	10	35	40
340WE212	40	ISO40 MAS403BT WELDON H100 D.12	100	12	42	-
340WE214	40	ISO40 MAS403BT WELDON H100 D.14	100	14	44	-
340WE216	40	ISO40 MAS403BT WELDON H100 D.16	100	16	48	-
340WE218	40	ISO40 MAS403BT WELDON H100 D.18	100	18	50	-
340WE220	40	ISO40 MAS403BT WELDON H100 D.20	100	20	52	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
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6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1



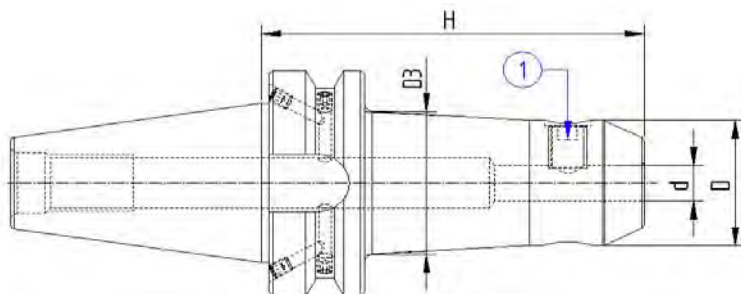
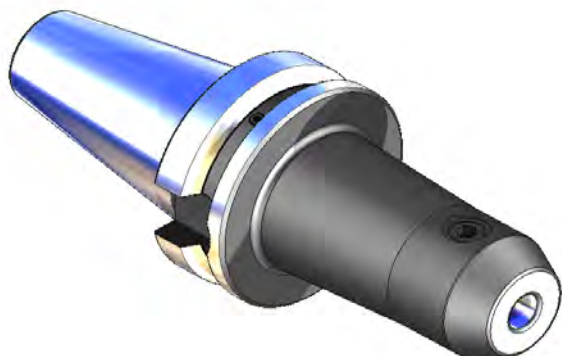
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 .MAS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
340WE306	40	ISO40 MAS403BT WELDON H130 D.06	130	6	25	35
340WE308	40	ISO40 MAS403BT WELDON H130 D.08	130	8	28	38
340WE310	40	ISO40 MAS403BT WELDON H130 D.10	130	10	35	40
340WE312	40	ISO40 MAS403BT WELDON H130 D.12	130	12	42	-
340WE314	40	ISO40 MAS403BT WELDON H130 D.14	130	14	44	-
340WE316	40	ISO40 MAS403BT WELDON H130 D.16	130	16	48	-
340WE318	40	ISO40 MAS403BT WELDON H130 D.18	130	18	50	-
340WE320	40	ISO40 MAS403BT WELDON H130 D.20	130	20	52	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø      GRANO      Q.tà



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1



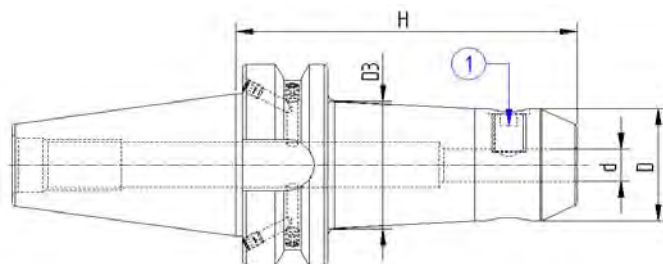
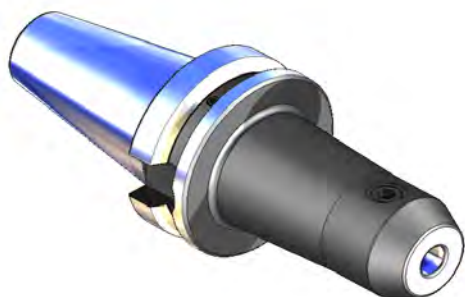
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNABME WELDON



**JIS-B 6339 .MAS 403/BT .AD/B**

**DLN 1835 B**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
340WE406	40	ISO40 MAS403BT WELDON H160 D.06	160	6	25	35
340WE408	40	ISO40 MAS403BT WELDON H160 D.08	160	8	28	38
340WE410	40	ISO40 MAS403BT WELDON H160 D.10	160	10	35	40
340WE412	40	ISO40 MAS403BT WELDON H160 D.12	160	12	42	42
340WE414	40	ISO40 MAS403BT WELDON H160 D.14	160	14	44	44
340WE416	40	ISO40 MAS403BT WELDON H160 D.16	160	16	48	48
340WE418	40	ISO40 MAS403BT WELDON H160 D.18	160	18	50	50
340WE420	40	ISO40 MAS403BT WELDON H160 D.20	160	20	52	52
340WE425	40	ISO40 MAS403BT WELDON H160 D.25	160	25	65	65
340WE432	40	ISO40 MAS403BT WELDON H160 D.32	160	32	72	72
340WE506	40	ISO40 MAS403BT WELDON H200 D.6	200	6	25	38
340WE508	40	ISO40 MAS403BT WELDON H200 D.8	200	8	28	41
340WE510	40	ISO40 MAS403BT WELDON H200 D.10	200	10	35	43
340WE512	40	ISO40 MAS403BT WELDON H200 D.12	200	12	42	48
340WE514	40	ISO40 MAS403BT WELDON H200 D.14	200	14	44	48
340WE516	40	ISO40 MAS403BT WELDON H200 D.16	200	16	48	48
340WE518	40	ISO40 MAS403BT WELDON H200 D.18	200	18	50	50
340WE520	40	ISO40 MAS403BT WELDON H200 D.20	200	20	52	52
340WE525	40	ISO40 MAS403BT WELDON H200 D.25	200	25	65	65
340WE532	40	ISO40 MAS403BT WELDON H200 D.32	200	32	72	72

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà	Ø	GRANO	Q.tà
					
6	100601004	1	16	101401604	1
8	100801004	1	18	101401604	1
10	101001204	1	20	101601604	1
12	101201604	1	25	101802002	2
14	101201604	1	32	102002002	2



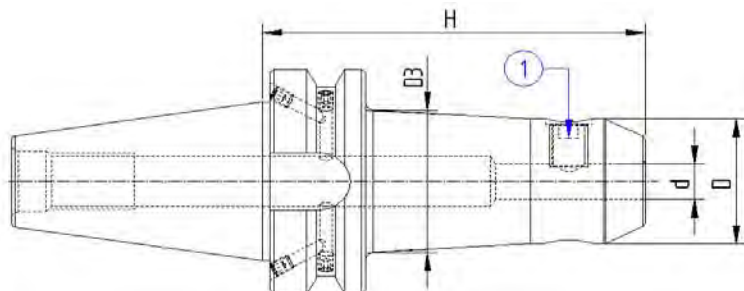
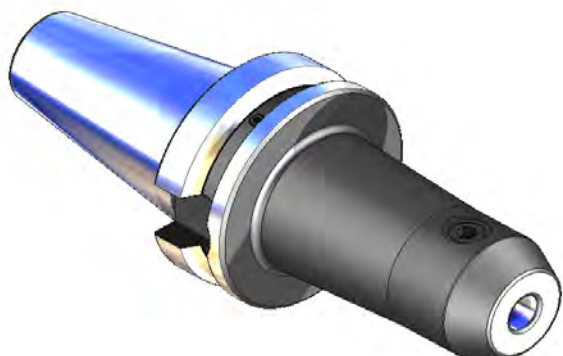
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DI N 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
350WE206	50	ISO50 MAS403BT WELDON H100 D.6	100	6	25	35
350WE208	50	ISO50 MAS403BT WELDON H100 D.8	100	8	28	38
350WE210	50	ISO50 MAS403BT WELDON H100 D.10	100	10	35	40
350WE212	50	ISO50 MAS403BT WELDON H100 D.12	100	12	42	-
350WE214	50	ISO50 MAS403BT WELDON H100 D.14	100	14	44	-
350WE216	50	ISO50 MAS403BT WELDON H100 D.16	100	16	48	-
350WE218	50	ISO50 MAS403BT WELDON H100 D.18	100	18	50	-
350WE220	50	ISO50 MAS403BT WELDON H100 D.20	100	20	52	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
---	-------	------



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1



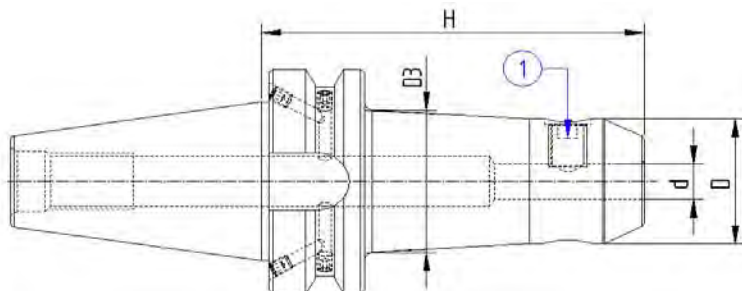
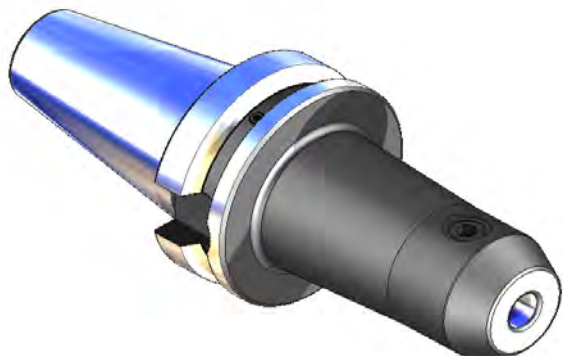
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DI N 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
350WE306	50	ISO50 MAS403BT WELDON H130 D.6	130	6	25	35
350WE308	50	ISO50 MAS403BT WELDON H130 D.8	130	8	28	38
350WE310	50	ISO50 MAS403BT WELDON H130 D.10	130	10	35	42
350WE312	50	ISO50 MAS403BT WELDON H130 D.12	130	12	42	48
350WE314	50	ISO50 MAS403BT WELDON H130 D.14	130	14	44	50
350WE316	50	ISO50 MAS403BT WELDON H130 D.16	130	16	48	54
350WE318	50	ISO50 MAS403BT WELDON H130 D.18	130	18	50	62
350WE320	50	ISO50 MAS403BT WELDON H130 D.20	130	20	52	66
350WE325	50	ISO50 MAS403BT WELDON H130 D.25	130	25	65	72
350WE332	50	ISO50 MAS403BT WELDON H130 D.32	130	32	72	-
350WE340	50	ISO50 MAS403BT WELDON H130 D.40	130	40	80	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
---	-------	------



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2





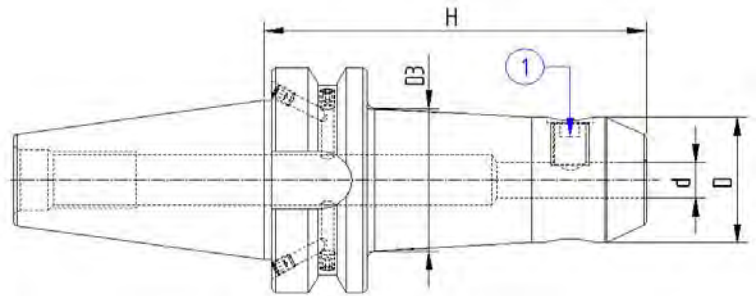
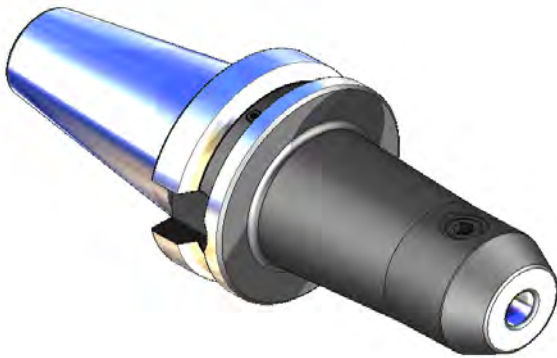
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
350WE406	50	ISO50 MAS403BT WELDON H160 D.6	160	6	25	42
350WE408	50	ISO50 MAS403BT WELDON H160 D.8	160	8	28	45
350WE410	50	ISO50 MAS403BT WELDON H160 D.10	160	10	35	49
350WE412	50	ISO50 MAS403BT WELDON H160 D.12	160	12	42	55
350WE414	50	ISO50 MAS403BT WELDON H160 D.14	160	14	44	57
350WE416	50	ISO50 MAS403BT WELDON H160 D.16	160	16	48	60
350WE418	50	ISO50 MAS403BT WELDON H160 D.18	160	18	50	63
350WE420	50	ISO50 MAS403BT WELDON H160 D.20	160	20	52	69
350WE425	50	ISO50 MAS403BT WELDON H160 D.25	160	25	65	72
350WE432	50	ISO50 MAS403BT WELDON H160 D.32	160	32	72	-
350WE440	50	ISO50 MAS403BT WELDON H160 D.40	160	40	80	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø      GRANO      Q.tà



6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2



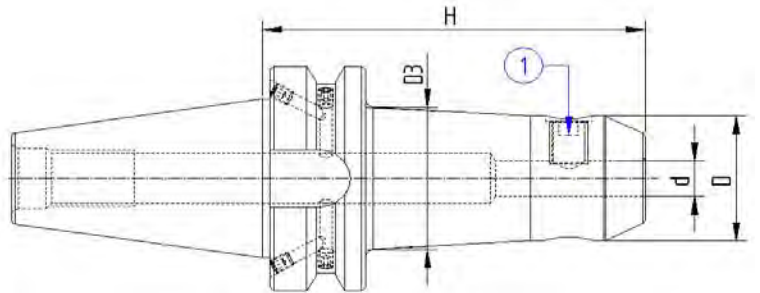
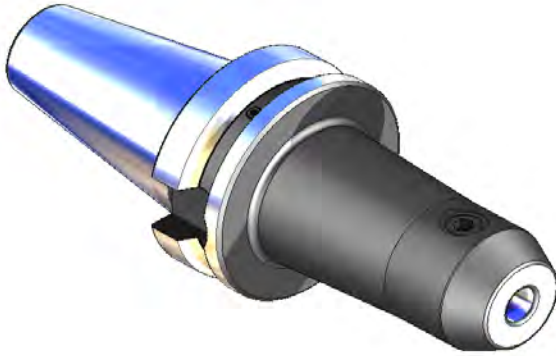
MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTIL TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
350WE506	50	ISO50 MAS403BT WELDON H200 D.6	200	6	25	42
350WE508	50	ISO50 MAS403BT WELDON H200 D.8	200	8	28	45
350WE510	50	ISO50 MAS403BT WELDON H200 D.10	200	10	35	49
350WE512	50	ISO50 MAS403BT WELDON H200 D.12	200	12	42	55
350WE514	50	ISO50 MAS403BT WELDON H200 D.14	200	14	44	57
350WE516	50	ISO50 MAS403BT WELDON H200 D.16	200	16	48	60
350WE518	50	ISO50 MAS403BT WELDON H200 D.18	200	18	50	63
350WE520	50	ISO50 MAS403BT WELDON H200 D.20	200	20	52	69
350WE525	50	ISO50 MAS403BT WELDON H200 D.25	200	25	65	72
350WE532	50	ISO50 MAS403BT WELDON H200 D.32	200	32	72	-
350WE540	50	ISO50 MAS403BT WELDON H200 D.40	200	40	80	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà
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6	100601004	1
8	100801004	1
10	101001204	1
12	101201604	1
14	101201604	1
16	101401604	1
18	101401604	1
20	101601604	1
25	101802002	2
32	102002002	2
40	102002002	2



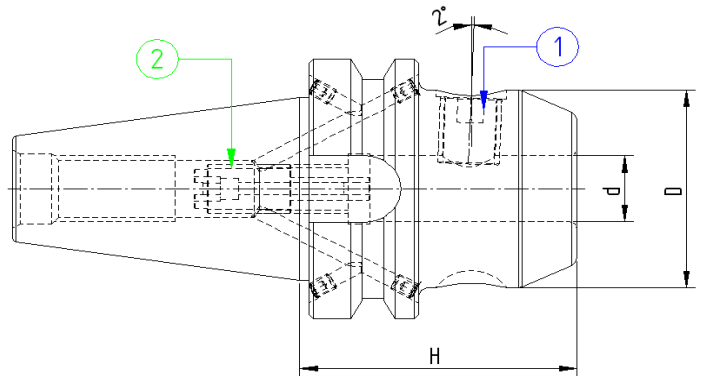
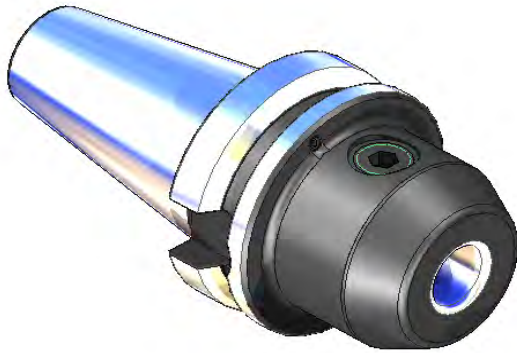
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 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTIL TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 E**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
340WHN06	40	ISO40 MAS403BT W/NOTCH H50 D.6	50	6	25
340WHN08	40	ISO40 MAS403BT W/NOTCH H50 D.8	50	8	28
340WHN10	40	ISO40 MAS403BT W/NOTCH H63 D.10	63	10	35
340WHN12	40	ISO40 MAS403BT W/NOTCH H63 D.12	63	12	42
340WHN14	40	ISO40 MAS403BT W/NOTCH H63 D.14	63	14	44
340WHN16	40	ISO40 MAS403BT W/NOTCH H63 D.16	63	16	48
340WHN18	40	ISO40 MAS403BT W/NOTCH H63 D.18	63	18	50
340WHN20	40	ISO40 MAS403BT W/NOTCH H63 D.20	63	20	52
340WHN25	40	ISO40 MAS403BT W/NOTCH H90 D.25	90	25	65
340WHN32	40	ISO40 MAS403BT W/NOTCH H100 D.32	100	32	72
340WHN40	40	ISO40 MAS403BT W/NOTCH H105 D.40	105	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà	VITE	Q.tà
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6	100601004	1	100504009	1
8	100801004	1	101204009	1
10	101001204	1	101204009	1
12	101201604	1	101204009	1
14	101201604	1	101204009	1
16	101401604	1	101204009	1
18	101401604	1	101204009	1
20	101601604	1	101204009	1
25	101802002	2	101204009	1
32	102002002	2	101204009	1
40	102002002	2	101204009	1



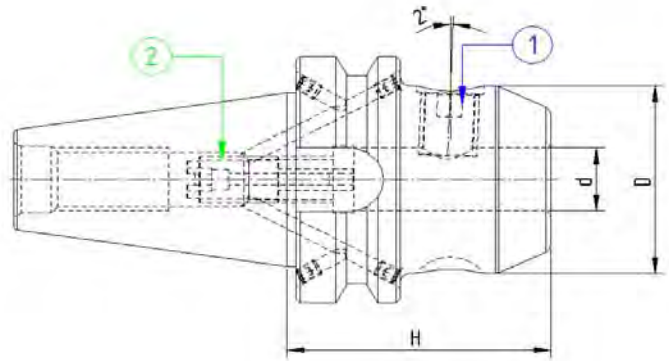
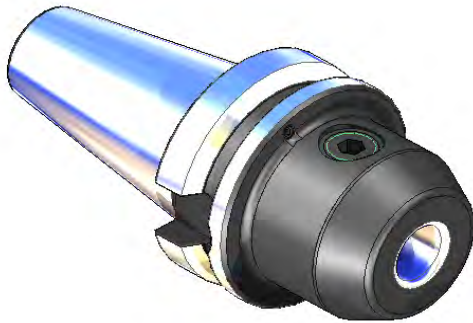
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 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTIL TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 E**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D
350WHN06	50	ISO50 MAS403BT W/NOTCH H63 D.6	63	6	25
350WHN08	50	ISO50 MAS403BT W/NOTCH H63 D.8	63	8	28
350WHN10	50	ISO50 MAS403BT W/NOTCH H70 D.10	70	10	35
350WHN12	50	ISO50 MAS403BT W/NOTCH H80 D.12	80	12	42
350WHN14	50	ISO50 MAS403BT W/NOTCH H80 D.14	80	14	44
350WHN16	50	ISO50 MAS403BT W/NOTCH H80 D.16	80	16	48
350WHN18	50	ISO50 MAS403BT W/NOTCH H80 D.18	80	18	50
350WHN20	50	ISO50 MAS403BT W/NOTCH H80 D.20	80	20	52
350WHN25	50	ISO50 MAS403BT W/NOTCH H100 D.25	100	25	65
350WHN32	50	ISO50 MAS403BT W/NOTCH H105 D.32	105	32	72
350WHN40	50	ISO50 MAS403BT W/NOTCH H120 D.40	120	40	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà	VITE	Q.tà
				
6	100601004	1	100504009	1
8	100801004	1	101204009	1
10	101001204	1	101204009	1
12	101201604	1	101204007	1
14	101201604	1	101204007	1
16	101401604	1	101204007	1
18	101401604	1	101204007	1
20	101601604	1	101204007	1
25	101802002	2	101204007	1
32	102002002	2	101204007	1
40	102002002	2	101204007	1



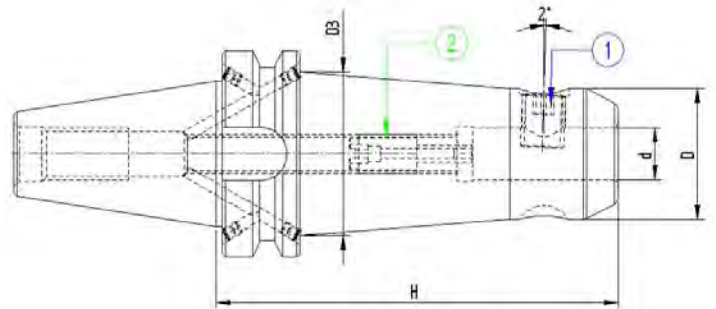
MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTIL TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 E**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
340WN206	40	ISO40 MAS403BT W/NOTCH H100 D.06	100	6	25	35
340WN208	40	ISO40 MAS403BT W/NOTCH H100 D.08	100	8	28	38
340WN210	40	ISO40 MAS403BT W/NOTCH H100 D.10	100	10	35	40
340WN212	40	ISO40 MAS403BT W/NOTCH H100 D.12	100	12	42	-
340WN214	40	ISO40 MAS403BT W/NOTCH H100 D.14	100	14	44	-
340WN216	40	ISO40 MAS403BT W/NOTCH H100 D.16	100	16	48	-
340WN218	40	ISO40 MAS403BT W/NOTCH H100 D.18	100	18	50	-
340WN220	40	ISO40 MAS403BT W/NOTCH H100 D.20	100	20	52	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà	VITE	Q.tà
				
6	100601004	1	100504009	1
8	100801004	1	101204009	1
10	101001204	1	101204009	1
12	101201604	1	101204007	1
14	101201604	1	101204007	1
16	101401604	1	101204007	1
18	101401604	1	101204007	1
20	101601604	1	101204007	1



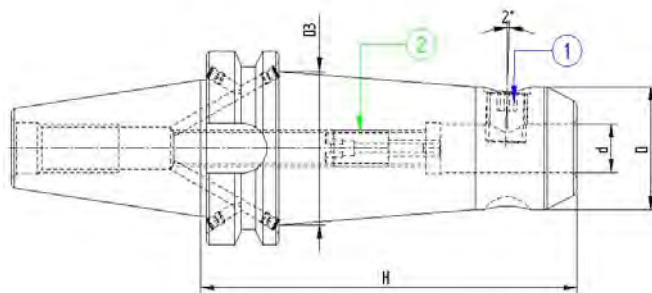
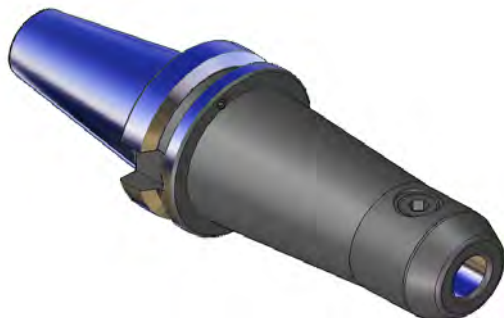
MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTIL TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 1835 E**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	d	D	D3
350WN206	50	ISO50 MAS403BT W/NOTCH H100 D.06	100	6	25	35
350WN208	50	ISO50 MAS403BT W/NOTCH H100 D.08	100	8	28	38
350WN210	50	ISO50 MAS403BT W/NOTCH H100 D.10	100	10	35	42
350WN212	50	ISO50 MAS403BT W/NOTCH H100 D.12	100	12	42	48
350WN214	50	ISO50 MAS403BT W/NOTCH H100 D.14	100	14	44	50
350WN216	50	ISO50 MAS403BT W/NOTCH H100 D.16	100	16	48	54
350WN218	50	ISO50 MAS403BT W/NOTCH H100 D.18	100	18	50	62
350WN220	50	ISO50 MAS403BT W/NOTCH H100 D.20	100	20	52	66

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GRANO	Q.tà	VITE	Q.tà
6	100601004	1	100504009	1
8	100801004	1	101204009	1
10	101001204	1	101204009	1
12	101201604	1	101204007	1
14	101201604	1	101204007	1
16	101401604	1	101204007	1
18	101401604	1	101204007	1
20	101601604	1	101204007	1



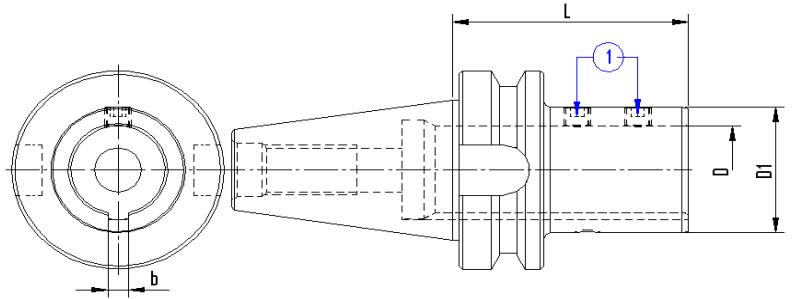
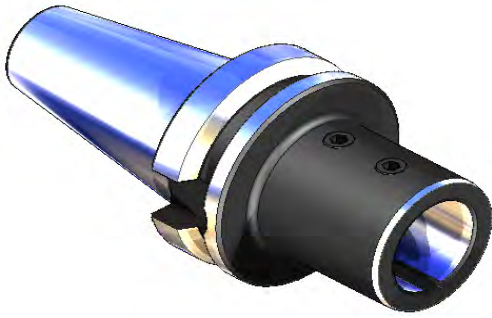
MANDRINI PER ASTUCCI REGISTRABILI  
 MASTER SHANKS FOR ADJUSTABLE ADAPTORS  
 MANDRINS POUR DOUILLES REGLAGE  
 STELLHUELSENAUFNAHMEN



**JIS-B 6339 M.AS 403/BT.AD**

**DIN 6327**

**Bilanciato G.6,3 12.000 RPM**



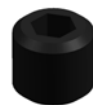
Codice	ISO	Descrizione	L	D	D1	b
340AR128	40	ISO40 MAS403BT AST.REG. H.70 D.28	70	28	40	6
340AR136	40	ISO40 MAS403BT AST.REG. H.120 D.36	120	36	50	8

Codice	ISO	Descrizione	L	D	D1	b
350AR128	50	ISO50 MAS403BT AST.REG. H.100 D.28	100	28	40	6
350AR136	50	ISO50 MAS403BT AST.REG. H.100 D.36	100	36	50	8

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

D.	GRANO	Q.tà
28	100800604	2
36	101000604	2





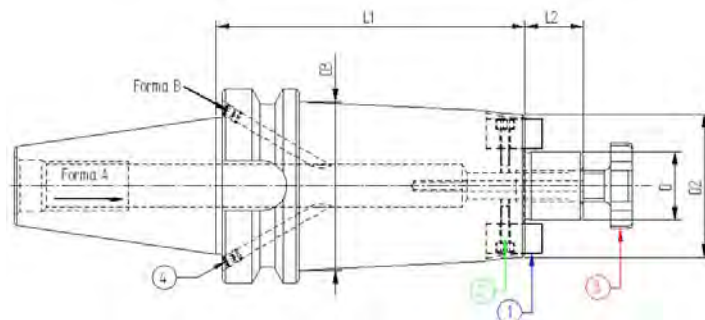
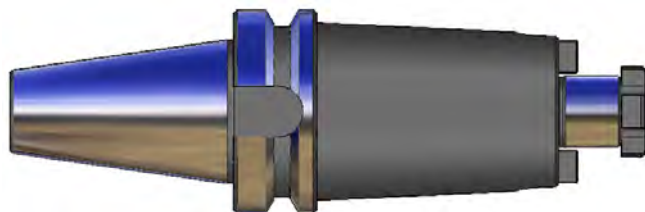
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



**JIS-B 6339.M.AS 403/BT.AD/B**

**ISO 3937**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2	D3
340PF016	40	ISO40 MAS403BT P/F FISSO H35 D.16	35	17	16	46	-
340PF022	40	ISO40 MAS403BT P/F FISSO H35 D.22	35	19	22	59	-
340PF027	40	ISO40 MAS403BT P/F FISSO H35 D.27	35	21	27	58	-
340PF116	40	ISO40 MAS403BT P/F FISSO H45 D.16	45	17	16	38	-
340PF122	40	ISO40 MAS403BT P/F FISSO H45 D.22	45	19	22	48	-
340PF127	40	ISO40 MAS403BT P/F FISSO H45 D.27	45	21	27	58	-
340PF132	40	ISO40 MAS403BT P/F FISSO H50 D.32	50	24	32	78	-
340PF140	40	ISO40 MAS403BT P/F FISSO H55 D.40	55	27	40	88	-
340PF216	40	ISO40 MAS403BT P/F FISSO H100 D.16	100	17	16	39	-
340PF222	40	ISO40 MAS403BT P/F FISSO H100 D.22	100	19	22	50	59
340PF227	40	ISO40 MAS403BT P/F FISSO H100 D.27	100	21	27	55	-
340PF232	40	ISO40 MAS403BT P/F FISSO H100 D.32	100	24	32	66	-
340PF240	40	ISO40 MAS403BT P/F FISSO H100 D.40	100	27	40	70	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà
16	110301001	2	916TSL01	2	916VTC02	1
22	110301201	2	922TSL01	2	922VTC02	1
27	110401601	2	927TSL01	2	927VTC02	1
32	110601601	2	932TSL01	2	932VTC02	1
40	110601601	2	940TSL01	2	940VTC02	1





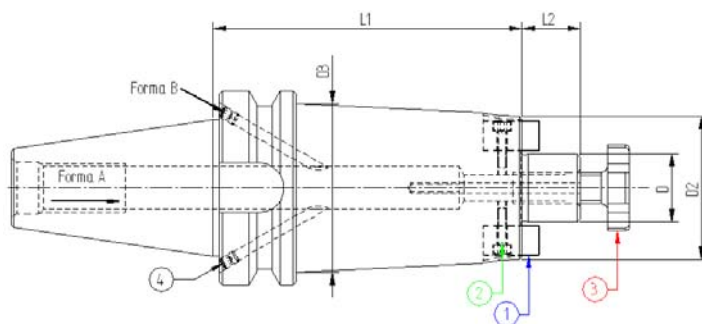
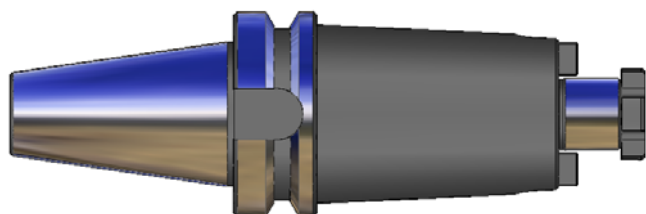
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



**JIS-B 6339.MAS 403/BT.AD/B**

**ISO 3937**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2	D3
340PF316	40	ISO40 MAS403BT P/F FISSO H130 D.16	130	17	16	39	-
340PF322	40	ISO40 MAS403BT P/F FISSO H130 D.22	130	19	22	50	59
340PF327	40	ISO40 MAS403BT P/F FISSO H130 D.27	130	21	27	55	-
340PF332	40	ISO40 MAS403BT P/F FISSO H130 D.32	130	24	32	66	-
340PF340	40	ISO40 MAS403BT P/F FISSO H130 D.40	130	27	40	70	-
340PF416	40	ISO40 MAS403BT P/F FISSO H160 D.16	160	17	16	39	-
340PF422	40	ISO40 MAS403BT P/F FISSO H160 D.22	160	19	22	50	59
340PF427	40	ISO40 MAS403BT P/F FISSO H160 D.27	160	21	27	55	-
340PF432	40	ISO40 MAS403BT P/F FISSO H160 D.32	160	24	32	66	-
340PF440	40	ISO40 MAS403BT P/F FISSO H160 D.40	160	27	40	70	-
340PF516	40	ISO40 MAS403BT P/F FISSO H200 D.16	200	17	16	39	-
340PF522	40	ISO40 MAS403BT P/F FISSO H200 D.22	200	19	22	50	59
340PF527	40	ISO40 MAS403BT P/F FISSO H200 D.27	200	21	27	55	-
340PF532	40	ISO40 MAS403BT P/F FISSO H200 D.32	200	24	32	66	-
340PF540	40	ISO40 MAS403BT P/F FISSO H200 D.40	200	27	40	70	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà
16	110301001	2	916TSL01	2	916VTC02	1
22	110301201	2	922TSL01	2	922VTC02	1
27	110401601	2	927TSL01	2	927VTC02	1
32	110601601	2	932TSL01	2	932VTC02	1
40	110601601	2	940TSL01	2	940VTC02	1



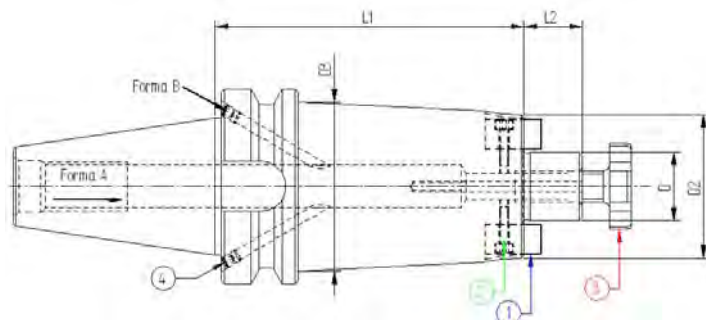
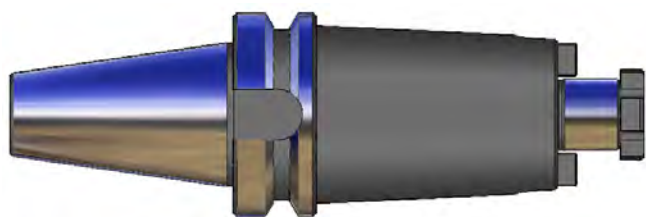
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



**JIS-B 6339.M.AS 403/BT.AD/B**

**ISO 3937**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2	D3
350PF016	50	ISO50 MAS403BT P/F FISSO H50 D.16	50	17	16	38	-
350PF022	50	ISO50 MAS403BT P/F FISSO H50 D.22	50	19	22	48	-
350PF027	50	ISO50 MAS403BT P/F FISSO H50 D.27	50	21	27	58	-
350PF032	50	ISO50 MAS403BT P/F FISSO H50 D.32	50	24	32	78	-
350PF040	50	ISO50 MAS403BT P/F FISSO H50 D.40	50	27	40	88	-
350PF116	50	ISO50 MAS403BT P/F FISSO H60 D.16	60	17	16	38	-
350PF122	50	ISO50 MAS403BT P/F FISSO H60 D.22	60	19	22	48	-
350PF127	50	ISO50 MAS403BT P/F FISSO H60 D.27	60	21	27	58	-
350PF132	50	ISO50 MAS403BT P/F FISSO H60 D.32	60	24	32	78	-
350PF140	50	ISO50 MAS403BT P/F FISSO H60 D.40	60	27	40	88	-
350PF216	50	ISO50 MAS403BT P/F FISSO H100 D.16	100	17	16	39	-
350PF222	50	ISO50 MAS403BT P/F FISSO H100 D.22	100	19	22	50	60
350PF227	50	ISO50 MAS403BT P/F FISSO H100 D.27	100	21	27	55	78
350PF232	50	ISO50 MAS403BT P/F FISSO H100 D.32	100	24	32	66	78
350PF240	50	ISO50 MAS403BT P/F FISSO H100 D.40	100	27	40	70	78

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà
16	110301001	2	916TSL01	2	916VTC02	1
22	110301201	2	922TSL01	2	922VTC02	1
27	110401601	2	927TSL01	2	927VTC02	1
32	110601601	2	932TSL01	2	932VTC02	1
40	110601601	2	940TSL01	2	940VTC02	1



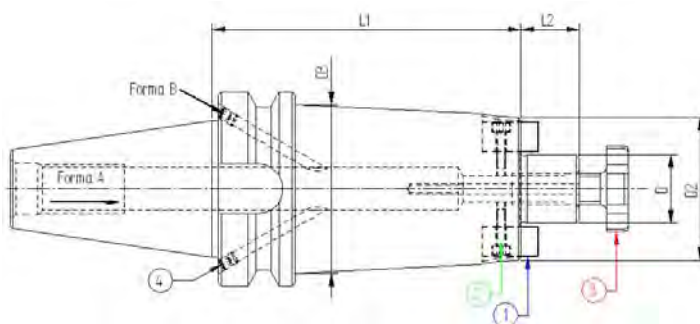
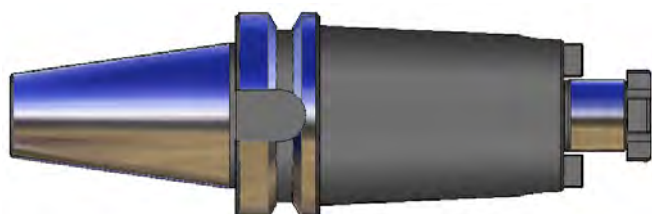
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



**JIS-B 6339.MAS 403/BT.AD/B**

**ISO 3937**




**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	D	D2	D3
350PF316	50	ISO50 MAS403BT P/F FISSO H130 D.16	130	17	16	39	-
350PF322	50	ISO50 MAS403BT P/F FISSO H130 D.22	130	19	22	50	60
350PF327	50	ISO50 MAS403BT P/F FISSO H130 D.27	130	21	27	55	78
350PF332	50	ISO50 MAS403BT P/F FISSO H130 D.32	130	24	32	66	78
350PF340	50	ISO50 MAS403BT P/F FISSO H130 D.40	130	27	40	70	78
350PF416	50	ISO50 MAS403BT P/F FISSO H160 D.16	160	17	16	39	-
350PF422	50	ISO50 MAS403BT P/F FISSO H160 D.22	160	19	22	50	60
350PF427	50	ISO50 MAS403BT P/F FISSO H160 D.27	160	21	27	55	78
350PF432	50	ISO50 MAS403BT P/F FISSO H160 D.32	160	24	32	66	78
350PF440	50	ISO50 MAS403BT P/F FISSO H160 D.40	160	27	40	70	78
350PF516	50	ISO50 MAS403BT P/F FISSO H200 D.16	200	17	16	39	-
350PF522	50	ISO50 MAS403BT P/F FISSO H200 D.22	200	19	22	50	60
350PF527	50	ISO50 MAS403BT P/F FISSO H200 D.27	200	21	27	55	78
350PF532	50	ISO50 MAS403BT P/F FISSO H200 D.32	200	24	32	66	78
350PF540	50	ISO50 MAS403BT P/F FISSO H200 D.40	200	27	40	70	78

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà			
16		110301001	2		916TSL01	2		916VTC02	1
22		110301201	2		922TSL01	2		922VTC02	1
27		110401601	2		927TSL01	2		927VTC02	1
32		110601601	2		932TSL01	2		932VTC02	1
40		110601601	2		940TSL01	2		940VTC02	1



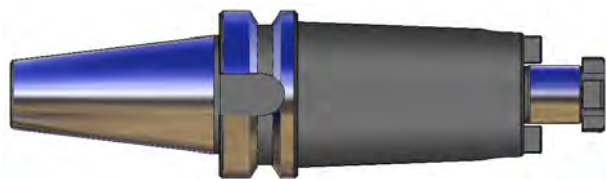
PORTAFRESE FISSI CON PASSAGGIO REFRIGERANTE  
SHELL END MILL HOLDERS WITH COOLANT THROUGH PILOT  
PORTE-FRAISES A SURFACE AVEC ARROSAGE  
AUFSTECKFRAESERDORNE MIT KÜHLMITTELKANALEN



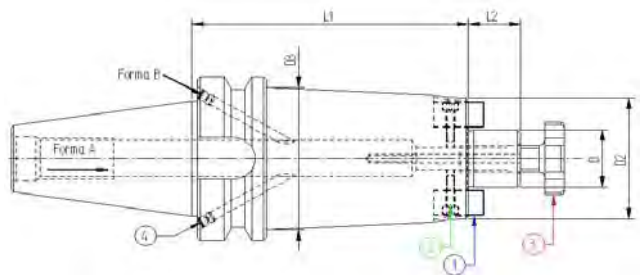
**JIS-B 6339.M.AS 403/BT.AD/B**

**ISO 3937**

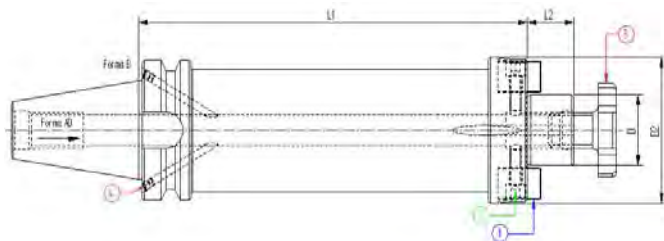
**Bilanciato G.6,3 12.000 RPM**



**Fig. 1**






**Fig. 2**



Codice	ISO	Descrizione	L1	L2	d	D2	D3	Fig.
350PF616	50	ISO50 MAS403BT P/F FISSO H250 D.16	250	17	16	38	51	1
350PF622	50	ISO50 MAS403BT P/F FISSO H250 D.22	250	19	22	48	61	1
350PF627	50	ISO50 MAS403BT P/F FISSO H250 D.27	250	21	27	58	71	1
350PF632	50	ISO50 MAS403BT P/F FISSO H250 D.32	250	24	32	66	66	2
350PF640	50	ISO50 MAS403BT P/F FISSO H250 D.40	250	27	40	88	88	2
350PF716	50	ISO50 MAS403BT P/F FISSO H300 D.16	300	17	16	38	53	1
350PF722	50	ISO50 MAS403BT P/F FISSO H300 D.22	300	19	22	48	63	1
350PF727	50	ISO50 MAS403BT P/F FISSO H300 D.27	300	21	27	58	74	1
350PF732	50	ISO50 MAS403BT P/F FISSO H300 D.32	300	24	32	66	81	1
350PF740	50	ISO50 MAS403BT P/F FISSO H300 D.40	300	27	40	80	80	2
350PF816	50	ISO50 MAS403BT P/F FISSO H350 D.16	350	17	16	38	56	1
350PF822	50	ISO50 MAS403BT P/F FISSO H350 D.22	350	19	22	48	66	1
350PF827	50	ISO50 MAS403BT P/F FISSO H350 D.27	350	21	27	58	77	1
350PF832	50	ISO50 MAS403BT P/F FISSO H350 D.32	350	24	32	66	84	1
350PF840	50	ISO50 MAS403BT P/F FISSO H350 D.40	350	27	40	80	80	2

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà
						
16	110301001	2	916TSL01	2	916VTC02	1
22	110301201	2	922TSL01	2	922VTC02	1
27	110401601	2	927TSL01	2	927VTC02	1
32	110601601	2	932TSL01	2	932VTC02	1
40	110601601	2	940TSL01	2	940VTC02	1



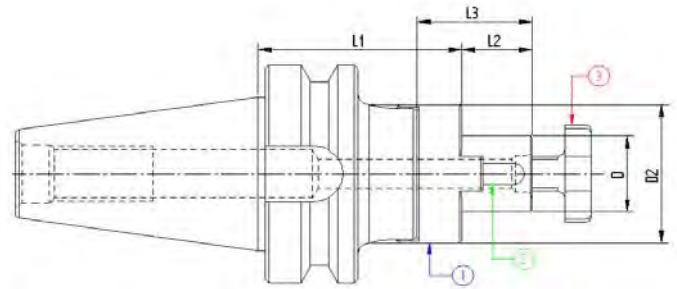
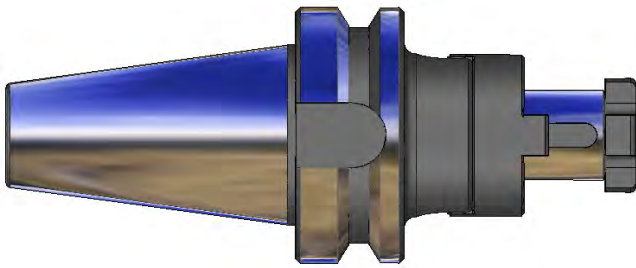
MANDRINI PORTAFRESE COMBINATI  
 KOMBI-SHELL MILL ADAPTOR  
 MANDRINS PORTE-FRAISES A DOUBLE USAGE  
 KOMBI AUFSTECKFRESORNE



**JIS-B 6339 M.AS 403/BT.A**

**DIN 6358**

**Bilanciato G.6,3 12.000 RPM**



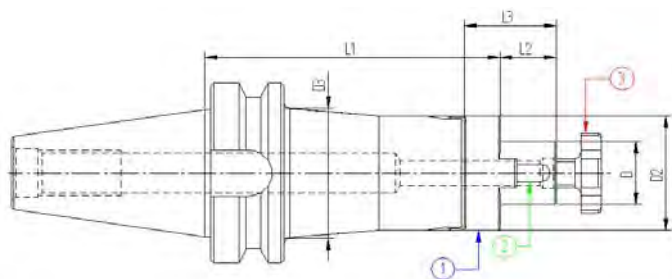
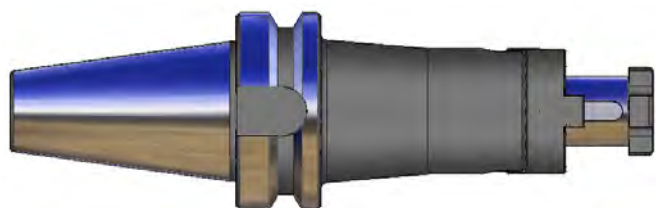
Codice	ISO	Descrizione	L1	L2	L3	D	D2
340PU116	40	ISO40 MAS403BT P/F UNIVERS.H55 D.16	55	17	27	16	32
340PU122	40	ISO40 MAS403BT P/F UNIVERS.H55 D.22	55	19	31	22	40
340PU127	40	ISO40 MAS403BT P/F UNIVERS.H55 D.27	55	21	33	27	48
340PU132	40	ISO40 MAS403BT P/F UNIVERS.H60 D.32	60	24	38	32	58
340PU140	40	ISO40 MAS403BT P/F UNIVERS.H60 D.40	60	27	41	40	70

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE CROCE	Q.tà
16	916GNT01	1	170402004	1	916VTC02	1
22	922GNT01	1	170602506	1	922VTC02	1
27	927GNT01	1	170702507	1	927VTC02	1
32	932GNT01	1	170802807	1	932VTC02	1
40	940GNT01	1	171003208	1	940VTC02	1

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	L3	D	D2	D3
340PU216	40	ISO40 MAS403BT P/F UNIVERS.H100 D.16	100	17	27	16	32	44
340PU222	40	ISO40 MAS403BT P/F UNIVERS.H100 D.22	100	19	31	22	40	-
340PU227	40	ISO40 MAS403BT P/F UNIVERS.H100 D.27	100	21	33	27	48	-
340PU232	40	ISO40 MAS403BT P/F UNIVERS.H100 D.32	100	24	38	32	58	-
340PU240	40	ISO40 MAS403BT P/F UNIVERS.H100 D.40	100	27	41	40	70	-
340PU316	40	ISO40 MAS403BT P/F UNIVERS. H130 D.16	130	17	27	16	32	39
340PU322	40	ISO40 MAS403BT P/F UNIVERS. H130 D.22	130	19	31	22	40	47
340PU327	40	ISO40 MAS403BT P/F UNIVERS. H130 D.27	130	21	33	27	48	56
340PU332	40	ISO40 MAS403BT P/F UNIVERS. H130 D.32	130	24	38	32	58	58
340PU340	40	ISO40 MAS403BT P/F UNIVERS. H130 D.40	130	27	41	40	70	53
340PU416	40	ISO40 MAS403BT P/F UNIVERS. H160 D.16	160	17	27	16	32	39
340PU422	40	ISO40 MAS403BT P/F UNIVERS. H160 D.22	160	19	31	22	40	40
340PU427	40	ISO40 MAS403BT P/F UNIVERS. H160 D.27	160	21	33	27	48	48
340PU432	40	ISO40 MAS403BT P/F UNIVERS. H160 D.32	160	24	38	32	58	58
340PU440	40	ISO40 MAS403BT P/F UNIVERS. H160 D.40	160	27	41	40	70	53
340PU516	40	ISO40 MAS403BT P/F UNIVERS. H200 D.16	200	17	27	16	32	42
340PU522	40	ISO40 MAS403BT P/F UNIVERS. H200 D.22	200	19	31	22	40	50
340PU527	40	ISO40 MAS403BT P/F UNIVERS. H200 D.27	200	21	33	27	48	48
340PU532	40	ISO40 MAS403BT P/F UNIVERS. H200 D.32	200	24	38	32	58	58
340PU540	40	ISO40 MAS403BT P/F UNIVERS. H200 D.40	200	27	41	40	70	53

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE CROCE	Q.tà
16	916GNT01	1	170402004	1	916VTC02	1
22	922GNT01	1	170602506	1	922VTC02	1
27	927GNT01	1	170702507	1	927VTC02	1
32	932GNT01	1	170802807	1	932VTC02	1
40	940GNT01	1	171003208	1	940VTC02	1



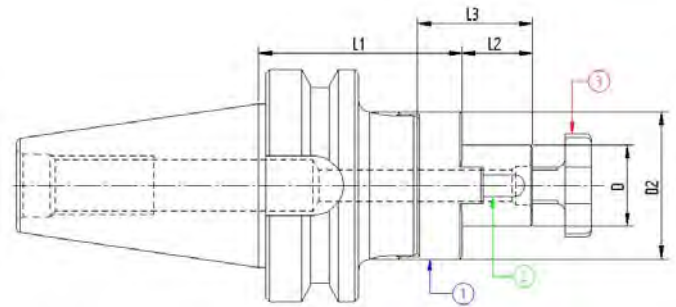
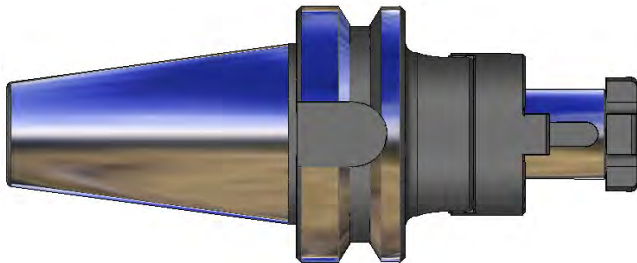
MANDRINI PORTAFRESE COMBINATI  
 KOMBI-SHELL MILL ADAPTOR  
 MANDRINS PORTE-FRAISES A DOUBLE USAGE  
 KOMBI AUFSTECKFRESORNE



**JIS-B 6339 MAS 403/BT.A**

**DI N 6358**




**Bilanciato G.6,3 12.000 RPM**



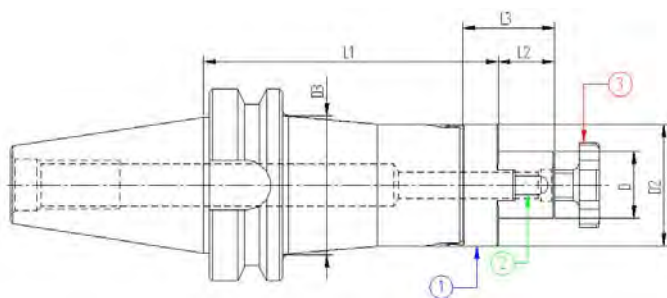
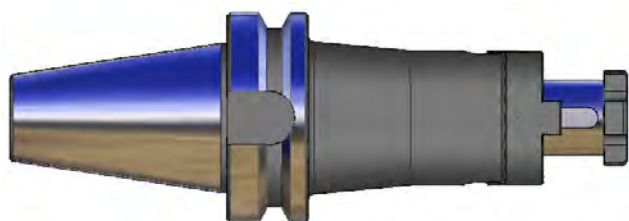
Codice	ISO	Descrizione	L1	L2	L3	D	D2
350PU116	50	ISO50 MAS403BT P/F UNIVERS. H70 D.16	70	17	27	16	32
350PU122	50	ISO50 MAS403BT P/F UNIVERS. H70 D.22	70	19	31	22	40
350PU127	50	ISO50 MAS403BT P/F UNIVERS. H70 D.27	70	21	33	27	48
350PU132	50	ISO50 MAS403BT P/F UNIVERS. H70 D.32	70	24	38	32	58
350PU140	50	ISO50 MAS403BT P/F UNIVERS. H70 D.40	70	27	41	40	70

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE CROCE	Q.tà
16		1		1		1
22	916GNT01	1	170402004	1	916VTC02	1
27	922GNT01	1	170602506	1	922VTC02	1
32	927GNT01	1	170702507	1	927VTC02	1
40	932GNT01	1	170802807	1	932VTC02	1
	940GNT01	1	171003208	1	940VTC02	1

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L1	L2	L3	D	D2	D3
350PU216	50	ISO50 MAS403BT P/F UNIVERS. H100 D.16	100	17	27	16	32	44
350PU222	50	ISO50 MAS403BT P/F UNIVERS. H100 D.22	100	19	31	22	40	50
350PU227	50	ISO50 MAS403BT P/F UNIVERS. H100 D.27	100	21	33	27	48	60
350PU232	50	ISO50 MAS403BT P/F UNIVERS. H100 D.32	100	24	38	32	58	-
350PU240	50	ISO50 MAS403BT P/F UNIVERS. H100 D.40	100	27	41	40	70	-
350PU316	50	ISO50 MAS403BT P/F UNIVERS. H130 D.16	130	17	27	16	32	44
350PU322	50	ISO50 MAS403BT P/F UNIVERS. H130 D.22	130	19	31	22	40	50
350PU327	50	ISO50 MAS403BT P/F UNIVERS. H130 D.27	130	21	33	27	48	60
350PU332	50	ISO50 MAS403BT P/F UNIVERS. H130 D.32	130	24	38	32	58	65
350PU340	50	ISO50 MAS403BT P/F UNIVERS. H130 D.40	130	27	41	40	70	77
350PU416	50	ISO50 MAS403BT P/F UNIVERS. H160 D.16	160	17	27	16	32	44
350PU422	50	ISO50 MAS403BT P/F UNIVERS. H160 D.22	160	19	31	22	40	50
350PU427	50	ISO50 MAS403BT P/F UNIVERS. H160 D.27	160	21	33	27	48	60
350PU432	50	ISO50 MAS403BT P/F UNIVERS. H160 D.32	160	24	38	32	58	66
350PU440	50	ISO50 MAS403BT P/F UNIVERS. H160 D.40	160	27	41	40	70	78
350PU516	50	ISO50 MAS403BT P/F UNIVERS. H200 D.16	200	17	27	16	32	44
350PU522	50	ISO50 MAS403BT P/F UNIVERS. H200 D.22	200	19	31	22	40	50
350PU527	50	ISO50 MAS403BT P/F UNIVERS. H200 D.27	200	21	33	27	48	60
350PU532	50	ISO50 MAS403BT P/F UNIVERS. H200 D.32	200	24	38	32	58	68
350PU540	50	ISO50 MAS403BT P/F UNIVERS. H200 D.40	200	27	41	40	70	78

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE CROCE	Q.tà			
16		916GNT01	1		170402004	1		916VTC02	1
22		922GNT01	1		170602506	1		922VTC02	1
27		927GNT01	1		170702507	1		927VTC02	1
32		932GNT01	1		170802807	1		932VTC02	1
40		940GNT01	1		171003208	1		940VTC02	1





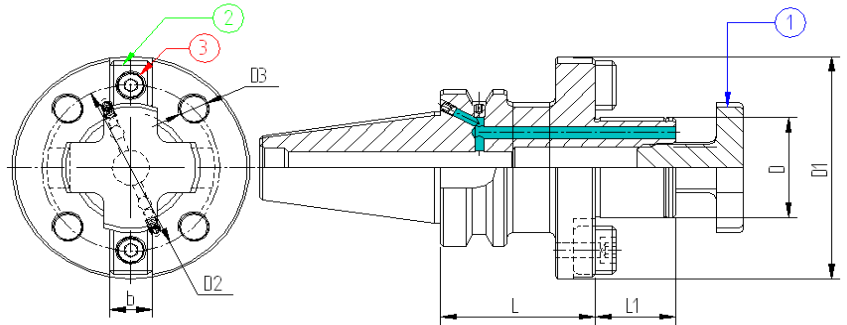
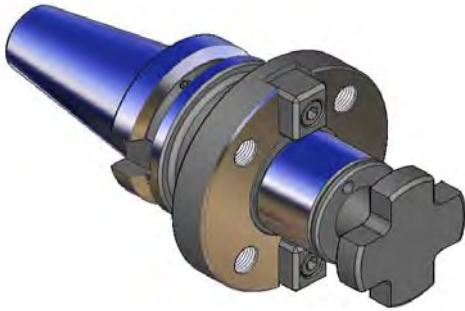
MANDRINI PORTAFRESE PER FRESE A SPIANARE  
 FACE MILL HOLDER FOR FACE MILLING CUTTERS  
 MANDRINS PORTE-FRAISE POUR FRAISES A SURFACER  
 AUFSTECKFRAESERDORNE FUER MESSERKOEPE



**JIS-B 6339 M.AS 403/BT.A**

**DI.N 6357**


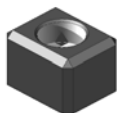

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	L1	D	D1	b	D2	D3
340PI140	40	ISO40 MAS403BT P/F TRA.FR.H.60 D40FM	60	30	40	89	15,9	66,7	M12
350PI140	50	ISO50 MAS403BT P/F TRA.FR.H70 D40FM	70	30	40	89	15,9	66,7	M12
350PI160	50	ISO50 MAS403BT P/F TRA.FR.H80 D60FM	80	40	60	129	25,4	101,6	M12

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà
						
40	110601601	2	940TSL04	2	940VTC02	1
60	111202501	2	960TSL04	2	-	-



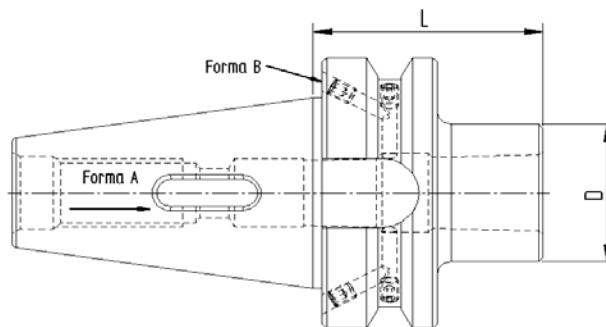
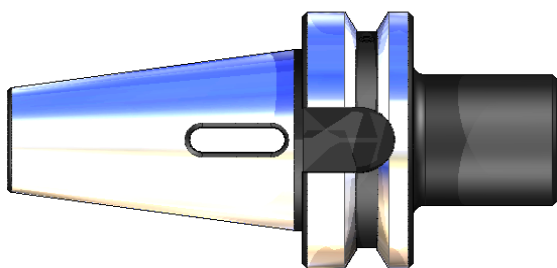
MANDRINI PORTAPUNTE-FRESE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTORS FOR DRILL AND MILLS  
 DOUILLES POUR CONE MORSE A TENON ET AVEC TARAUDAGE  
 ZWISCHENHULSEN FÜR MORSEKEGEL MIT AUSTREIBLAPPEN ODER ANZUGSGWINDE



**JIS-B 6339 MAS 403/BT.A**

**DIN 228-2**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
340MP101	40	ISO40 MAS403BT H50 CM1 PUNTE	50	25
340MP102	40	ISO40 MAS403BT H50 CM2 PUNTE	50	32
340MP103	40	ISO40 MAS403BT H70 CM3 PUNTE	70	40
340MP104	40	ISO40 MAS403BT H95 CM4 PUNTE	95	48
350MP101	50	ISO50 MAS403BT H45 CM1 PUNTE	45	25
350MP102	50	ISO50 MAS403BT H60 CM2 PUNTE	60	32
350MP103	50	ISO50 MAS403BT H65 CM3 PUNTE	65	40
350MP104	50	ISO50 MAS403BT H95 CM4 PUNTE	95	48
350MP105	50	ISO50 MAS403BT H105 CM5 PUNTE	105	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

TIPO	VITE	Q.tà
------	------	------



CM1	110604501	1
CM2	111004501	1
CM3	111205501	1
CM4	111606015	1
CM5	-	1

**VITI FORNITE SOLO  
 NEL CASO DI  
 MANDRINO  
 COMBINATO**



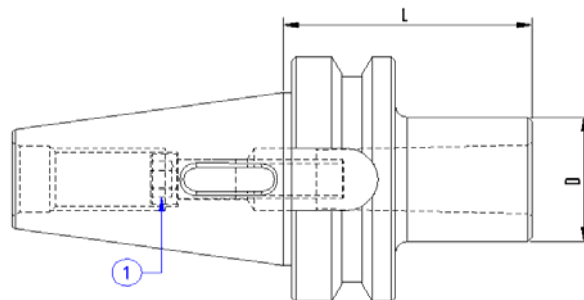
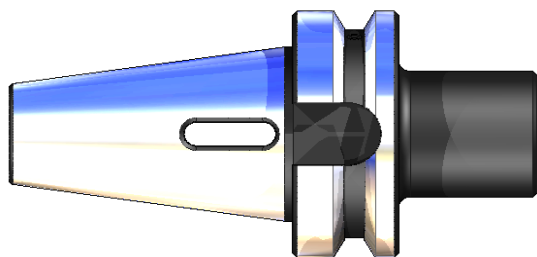
MANDRINI PORTAPUNTE-FRESE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTORS FOR DRILL AND MILLS  
 DOUILLES POUR CONE MORSE A TENON ET AVEC TARAUDAGE  
 ZWISCHENHULSEN FÜR MORSEKEGEL MIT AUSTREIBLAPPEN ODER ANZUGSGEWINDE



**JIS-B 6339 M.AS 403/BT.A**

**DIN 228-2**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
340MP201	40	ISO40 MAS403BT H120 CM1 PUNTE	120	25
340MP202	40	ISO40 MAS403BT H120 CM2 PUNTE	120	32
340MP203	40	ISO40 MAS403BT H135 CM3 PUNTE	135	40
340MP204	40	ISO40 MAS403BT H165 CM4 PUNTE	165	48
350MP201	50	ISO50 MAS403BT H120 CM1 PUNTE	120	25
350MP202	50	ISO50 MAS403BT H135 CM2 PUNTE	135	32
350MP203	50	ISO50 MAS403BT H155 CM3 PUNTE	155	40
350MP204	50	ISO50 MAS403BT H180 CM4 PUNTE	180	48
350MP205	50	ISO50 MAS403BT H215 CM5 PUNTE	215	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

TIPO	VITE	Q.tà
------	------	------



CM1	110604501	1
CM2	111004501	1
CM3	111205501	1
CM4	111606015	1
CM5	-	1

**VITI FORNITE SOLO  
 NEL CASO DI  
 MANDRINO  
 COMBINATO**



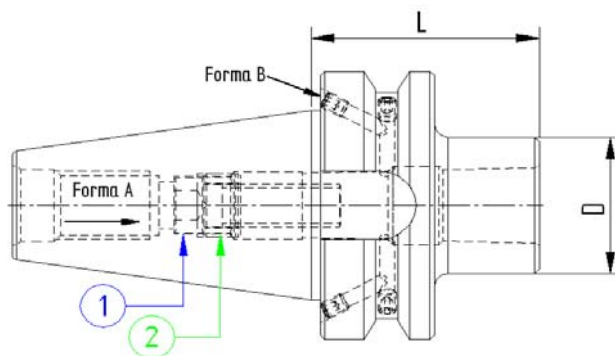
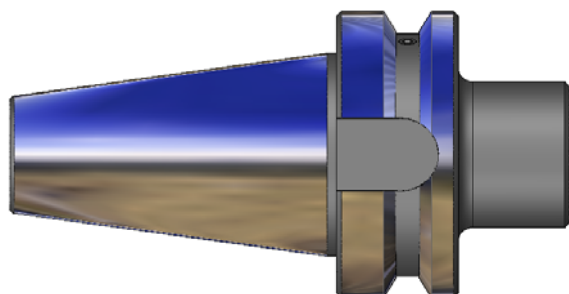
MANDRINI PORTAFRESE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTER WITH TREAD  
 DOUILLES POUR CONE MORSE AVEC TARAUDAGE  
 SPANFUTTER FUER EIN SCHRAUBFRAESER



**JIS-B 6339 M.AS 403/BT.A**

**DIN 228-2**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
340MF101	40	ISO40 MAS403BT H50 CM1 FRESE	50	25
340MF102	40	ISO40 MAS403BT H50 CM2 FRESE	50	32
340MF103	40	ISO40 MAS403BT H70 CM3 FRESE	70	40
340MF104	40	ISO40 MAS403BT H95 CM4 FRESE	95	48
350MF101	50	ISO50 MAS403BT H50 CM1 FRESE	50	25
350MF102	50	ISO50 MAS403BT H50 CM2 FRESE	50	32
350MF103	50	ISO50 MAS403BT H65 CM3 FRESE	65	40
350MF104	50	ISO50 MAS403BT H95 CM4 FRESE	95	48
350MF105	50	ISO50 MAS403BT H100 CM5 FRESE	100	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

TIPO	VITE	Q.tà	GHIERA	Q.tà
				
CM1	110603501	1	-	-
CM2	111003014	1	121500802	1
CM3	111204003	1	122000903	1
CM4	111604514	1	122501204	1
CM5	112005003	1	123301205	1



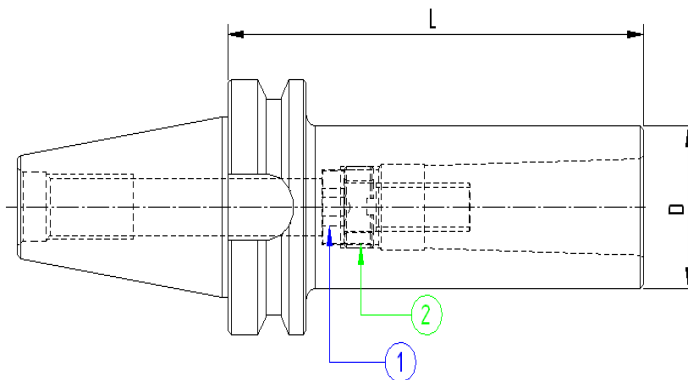
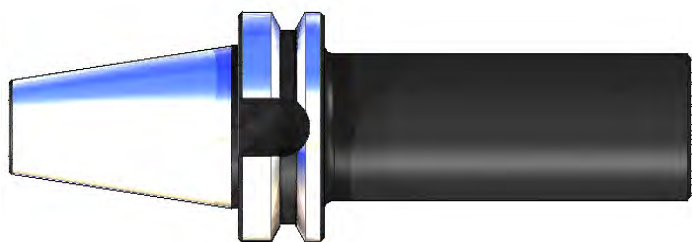
MANDRINI PORTAFRESE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTER WITH TREAD  
 DOUILLES POUR CONE MORSE AVEC TARAUDAGE  
 SPANFUTTER FUER EIN SCHRAUBFRAESER



**JIS-B 6339 M.AS 403/BT.A**

**DIN 228-2**



**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D
340MF201	40	ISO40 MAS403BT H120 CM1 FRESE	120	25
340MF202	40	ISO40 MAS403BT H120 CM2 FRESE	120	32
340MF203	40	ISO40 MAS403BT H135 CM3 FRESE	135	40
340MF204	40	ISO40 MAS403BT H165 CM4 FRESE	165	48
350MF201	50	ISO50 MAS403BT H185 CM1 FRESE	185	25
350MF202	50	ISO50 MAS403BT H185 CM2 FRESE	185	32
350MF203	50	ISO50 MAS403BT H185 CM3 FRESE	185	40
350MF204	50	ISO50 MAS403BT H185 CM4 FRESE	185	48
350MF205	50	ISO50 MAS403BT H200 CM5 FRESE	200	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

TIPO	VITE	Q.tà	GHIERA	Q.tà
				
CM1	110603501	1	-	-
CM2	111003014	1	121500802	1
CM3	111204003	1	122000903	1
CM4	111604514	1	122501204	1
CM5	112005003	1	123301205	1

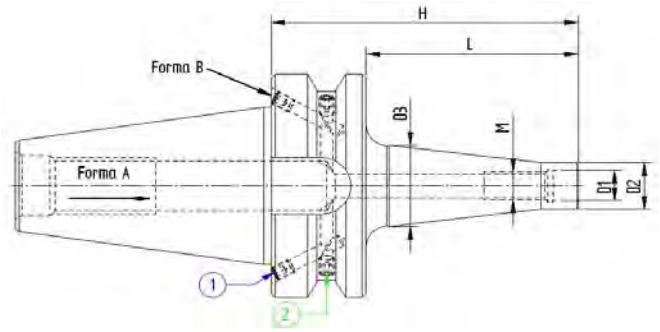
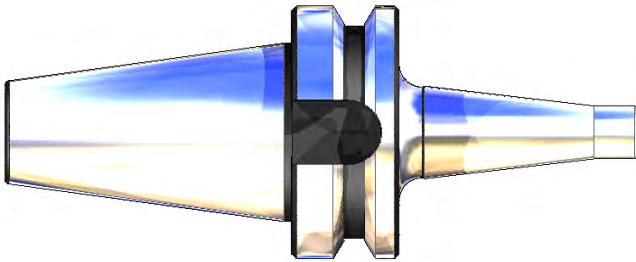


MANDRINI PER FRESE CON ATTACCO FILETTATO  
 MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
 MANDRINS POUR FRAISER A VISSER  
 SPANFUTTER FUER EINSCHRAUBFRAESER



**JIS-B 6339.M.AS 403/BT.AD/B**

**Bilanciato G.2,5 20.000 RPM**



Codice	ISO	Descrizione	H	L	D3	M	D1	D2
340AF106	40	ISO40 MAS403BT P/F ATT.FILET. M6x63	63	36	13	M6	6,5	9,7
340AF108	40	ISO40 MAS403BT P/F ATT.FILET. M8x63	63	36	15	M8	8,5	13
340AF110	40	ISO40 MAS403BT P/F ATT.FILET.M10x63	63	36	19,5	M10	10,5	18
340AF112	40	ISO40 MAS403BT P/F ATT.FILET.M12x63	63	36	24	M12	12,5	21
340AF116	40	ISO40 MAS403BT P/F ATT.FILET.M16x63	63	36	34	M16	17	29
340AF206	40	ISO40 MAS403BT P/F ATT.FILET. M6x83	83	56	20	M6	6,5	9,7
340AF208	40	ISO40 MAS403BT P/F ATT.FILET. M8x83	83	56	23	M8	8,5	13
340AF210	40	ISO40 MAS403BT P/F ATT.FILET.M10x83	83	56	25	M10	10,5	18
340AF212	40	ISO40 MAS403BT P/F ATT.FILET.M12x83	83	56	24	M12	12,5	21
340AF216	40	ISO40 MAS403BT P/F ATT.FILET.M16x83	83	56	34	M16	17	29
340AF308	40	ISO40 MAS403BT P/F ATT.FILET. M8x103	103	76	23	M8	8,5	13
340AF310	40	ISO40 MAS403BT P/F ATT.FILET.M10x103	103	76	28	M10	10,5	18
340AF312	40	ISO40 MAS403BT P/F ATT.FILET.M12x103	103	76	31	M12	12,5	21
340AF316	40	ISO40 MAS403BT P/F ATT.FILET.M16x103	103	76	34	M16	17	29
340AF410	40	ISO40 MAS403BT P/F ATT.FILET.M10x123	123	96	28	M10	10,5	18
340AF412	40	ISO40 MAS403BT P/F ATT.FILET.M12x123	123	96	31	M12	12,5	21
340AF416	40	ISO40 MAS403BT P/F ATT.FILET.M16x123	123	96	39	M16	17	29
340AF516	40	ISO40 MAS403BT P/F ATT.FILET.M16x153	153	126	39	M16	17	29

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

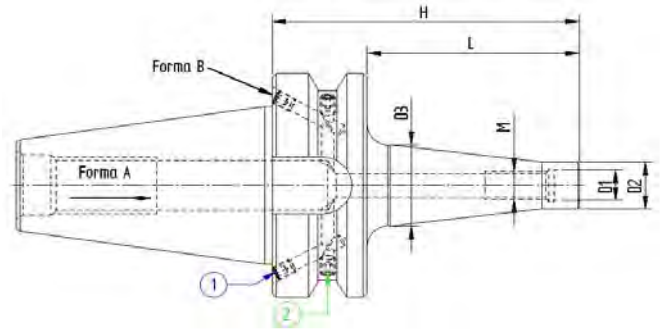
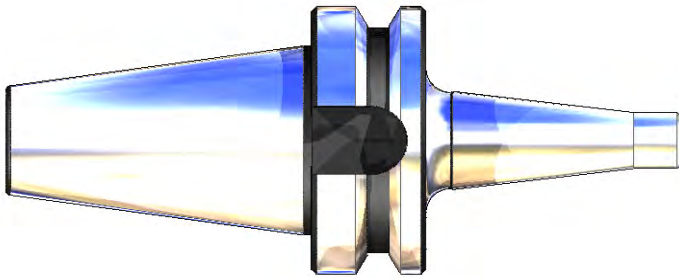


MANDRINI PER FRESE CON ATTACCO FILETTATO  
 MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
 MANDRINS POUR FRAISER A VISSER  
 SPANFUTTER FUER EINSCHRAUBFRAESER



**JIS-B 6339 M.AS 403/BT.A**

**Bilanciato G.2,5 20.000 RPM**



Codice	ISO	Descrizione	H	L	D3	M	D1	D2
350AF112	50	ISO50 MAS403BT P/F ATT.FILET.M12x64	64	26	24	M12	12,5	21
350AF116	50	ISO50 MAS403BT P/F ATT.FILET.M16x64	64	26	34	M16	17	29
350AF212	50	ISO50 MAS403BT P/F ATT.FILET.M12x104	104	66	32	M12	12,5	21
350AF216	50	ISO50 MAS403BT P/F ATT.FILET.M16x104	104	66	36	M16	17	29
350AF312	50	ISO50 MAS403BT P/F ATT.FILET.M12x154	154	116	32	M12	12,5	21
350AF316	50	ISO50 MAS403BT P/F ATT.FILET.M16X154	154	116	40	M16	17	29
350AF412	50	ISO50 MAS403BT P/F ATT.FILET.M12X204	204	166	36	M12	12,5	21
350AF416	50	ISO50 MAS403BT P/F ATT.FILET.M16x204	204	166	42	M16	17	29
350AF512	50	ISO50 MAS403BT P/F ATT.FILET.M12x254	254	216	42	M12	12,5	21
350AF516	50	ISO50 MAS403BT P/F ATT.FILET.M16x254	254	216	44	M16	17	29

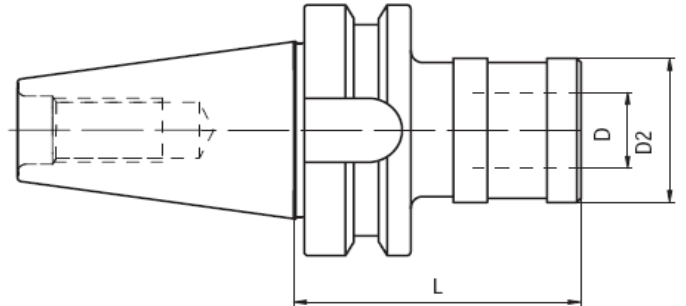
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**



MANDRINI PORTAMASCHI A CAMBIO RAPIDO  
 QUICK CHANGE TAP HOLDER  
 MANDRINS DE TARAUDAGE A CHANGEMENT RAPID  
 GEWINDE -SCHNELLWECHSELFUTTER



**JIS-B 6339 M.AS 403/BT.AD/B**



Codice	ISO	Descrizione	L	D	D2
340PCRM1	40	ISO40 MAS403BT M/PORTAM/C/R L67 GR.1	67	19	38
340PCRM2	40	ISO40 MAS403BT M/PORTAM/C/R L93 GR.2	93	31	54
350PCRM1	50	ISO50 MAS403BT M/PORTAM/C/R L80 GR.1	80	19	38
350PCRM2	50	ISO50 MAS403BT M/PORTAM/C/R L102 GR.2	102	31	54

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHOR**



RIF. PAGINA 298



RIF. PAGINA 299



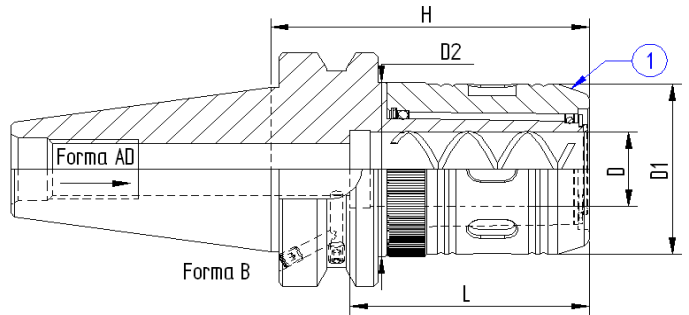


MANDRINI A FORTE SERRAGGIO  
MILLING CHUCK  
MANDRINS A FORT SERRAGE  
KRAFTSPANNFUTTER



**JIS-B 6339.M.AS 403/BT.AD/B**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	H	L	D	D1	D2
340FS120	40	ISO40 MAS403BT F. SERR. Ø20 H80	80	60	20	46	47
340FS132	40	ISO40 MAS403BT F. SERR. Ø32 H85	85	80	32	62	63
340FS332	40	ISO40 MAS403BT F. SERR. Ø32 H135	135	80	32	62	63

Codice	ISO	Descrizione	H	L	D	D1	D2
350FS220	50	ISO50 MAS403BT F. SERR. Ø20 H100	100	60	20	46	47
350FS232	50	ISO50 MAS403BT F. SERR. Ø32 H100	100	80	32	62	63
350FS332	50	ISO50 MAS403BT F. SERR. Ø32 H135	135	80	32	62	63

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**

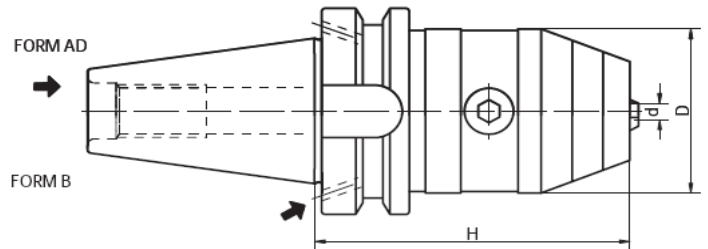




MANDRINI PORTAPUNTE INTEGRALI PER ROTAZIONE DX E SX  
 NC DRILL CHUCKS FOR LEFT AND RIGHT ROTATION  
 MANDRIN DE PERÇAGE CNC POUR ROTATION GAUCHE-DROITE  
 NC-BOHRFUTTER FUER RECHTS-UND LINKSLAUF



**JIS-B 6339.M.AS 403/BT.AD/B**

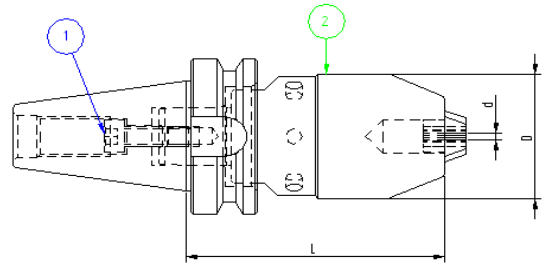


**CON REFRIGERANTE CENTRALE - WITH INTERNAL COOLANT SUPPLY -  
 AVEC ARROSAGE INTERNE - MIT ZENTRALEM KÜHLMITTELLOCH**

Codice	ISO	Descrizione	H	D	d
340MAZ13	40	ISO40 MAS403BT M/AUTOS./FORI H90 D13	90	50	1-13
340MAZ16	40	ISO40 MAS403BT M/AUTOS./FORI H95 D16	95	57	3-16
Codice	ISO	Descrizione	H	D	d
350MAZ13	50	ISO50 MAS403BT M/AUTOS./FORI H90 D13	90	50	1-13
350MAZ16	50	ISO50 MAS403BT M/AUTOS./FORI H95 D16	95	57	3-16

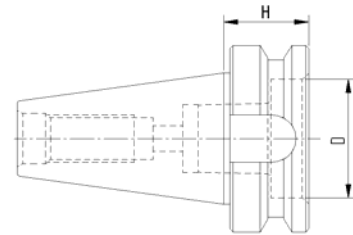
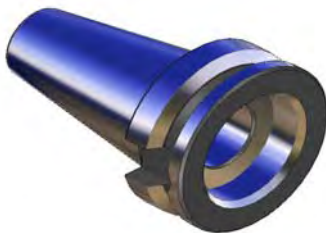
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**Bilanciato G.6,3 12.000 RPM**



Codice	ISO	Descrizione	L	D	d
340MPI13	40	ISO40 MAS403BT P/PUNTA INT.H98 DC13	98	50	1-13
340MPI16	40	ISO40 MAS403BT P/PUNTA INT.H98 DC16	98	57	1-16
350MPI13	50	ISO50 MAS403BT P/PUNTA INT.H109 DC13	104	50	1-13
350MPI16	50	ISO50 MAS403BT P/PUNTA INT.H109 DC16	109	57	1-16

**MANDRINI DI RICAMBIO - REPLACEMENT DRILL CHUCK HEADS -  
 MANDRINS DE RECHANGE - ERSATZTEILE BOHRFÜTTER**



Codice	ISO	Descrizione	H	D
340CPI13	40	ISO40 MAS403BT SOLO MANDRINO 1-13	27	40
340CPI16	40	ISO40 MAS403BT SOLO MANDRINO 3-16	27	44
350CPI13	50	ISO50 MAS403BT SOLO MANDRINO 1-13	38	40
350CPI16	50	ISO50 MAS403BT SOLO MANDRINO 3-16	38	44

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Codice	MANDRINO	Q.tà	VITE	Q.tà
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340MPI13	913INS01	1	110802501	1
340MPI16	916INS01	1	110802501	1
350MPI13	913INS01	1	110803501	1
350MPI16	916INS01	1	110803501	1



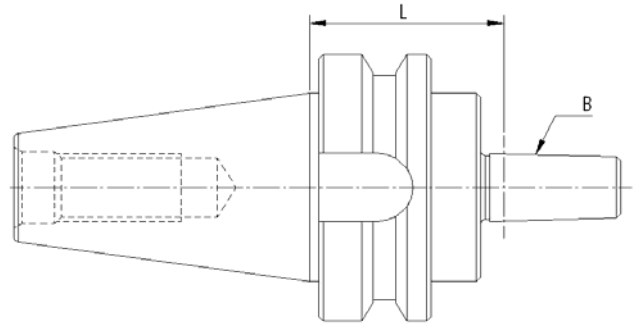
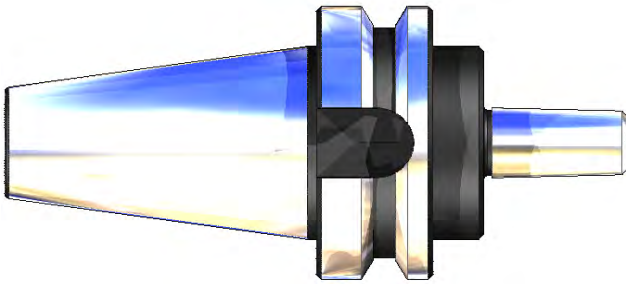
ATTACCO PER MANDRINI PORTAPUNTE  
ARBORS FOR DRILL CHUCKS  
ARBRES POUR MANDRINS DE PERÇAGE  
BOHRFUTTERAUFNAHMEN



**JIS-B 6339 M.AS 403/BT .AD/B**

**DIN 238**

**Bilanciato G.6,3 12.000 RPM**



<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>L</b>	<b>B</b>
340MPP12	40	ISO40 MAS403BT P/PUNTE H.45 B12	45	12
340MPP16	40	ISO40 MAS403BT P/PUNTE H.45 B16	45	16
340MPP18	40	ISO40 MAS403BT P/PUNTE H.45 B18	45	18

<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>L</b>	<b>B</b>
350MPP12	50	ISO50 MAS403BT P/PUNTE H.45 B12	45	12
350MPP16	50	ISO50 MAS403BT P/PUNTE H.45 B16	45	16
350MPP18	50	ISO50 MAS403BT P/PUNTE H.45 B18	45	18

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

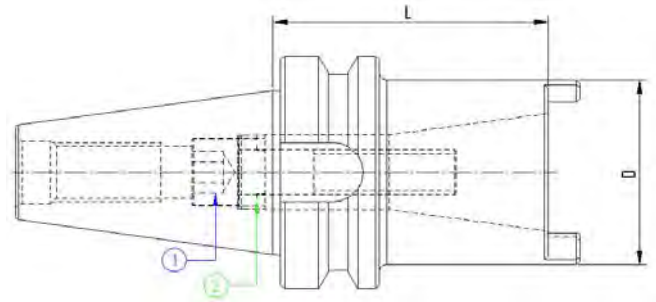
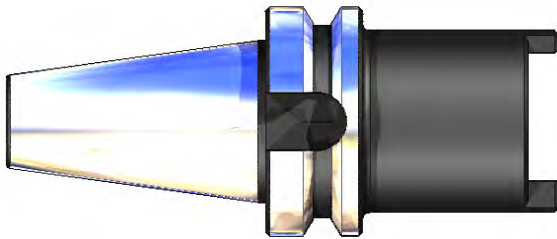


MANDRINI DI RIDUZIONE  
REDUCTION SLEEVES  
DOUILLES DE REDUCTION  
ZWISCHENHUELSEN SK-SK



**JIS-B 6339 M.AS 403/BT.A**

**M.AS403BT.A**



Codice	ISO	Descrizione	L	D
340ISO30	40	ISO40 MAS403BT RIDUZIONE H70 ISO30	70	50
340ISO40	40	ISO40 MAS403BT RIDUZIONE H100 ISO40	100	68

Codice	ISO	Descrizione	L	D
350ISO40	50	ISO50 MAS403BT RIDUZIONE H70 ISO40	70	78
350ISO50	50	ISO50 MAS403BT PROLUNGA H120 ISO50	120	100

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

TIPO	VITE	Q.tà	GHIERA	Q.tà
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ISO30	111205501	1	122000603	1
ISO40	111606514	1	122400903	1
ISO50	112408504	1	124002009	1



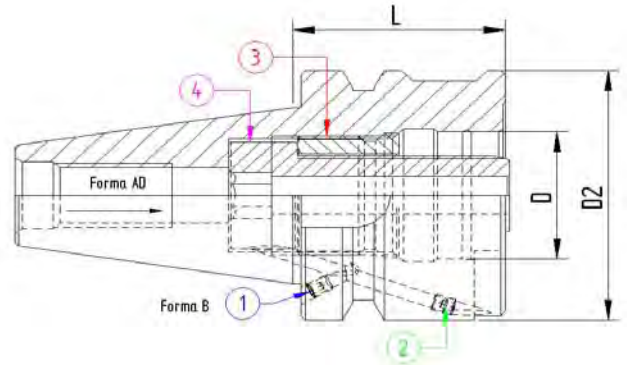
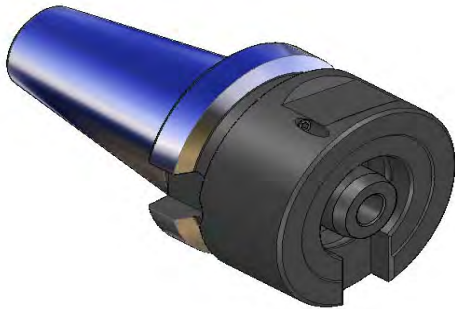
ATTACCHI BASE MODULARI "VARILOCK"  
 MODULAR BASIC HOLDERS "VARILOCK"  
 MODULE DE BASE "VARILOCK"  
 GRUNDAUFNAHMEN "VARILOCK"



**JIS-B 6339 M.AS 403/BT.AD/B**



**M.AS403BT-A**

**Bilanciato G.6,3 12.000 RPM**





Codice	ISO	Descrizione	L	D2
340VL050	40	ISO40 MAS403BT MODULARE H.27 D.50	27	50
340VL063	40	ISO40 MAS403BT MODULARE H.35 D.63	35	63
340VL150	40	ISO40 MAS403BT MODULARE H.50 D.50	50	50
340VL163	40	ISO40 MAS403BT MODULARE H.50 D.63	50	63
340VL180	40	ISO40 MAS403BT MODULARE H.50 D.80	50	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	VITE	Q.tà	BOCCOLA	Q.tà
				
50	111604011	1	122502007	1
63	112005011	1	123002408	1
80	112005011	1	123002408	1

Codice	ISO	Descrizione	L	D2
350VL050	50	ISO50 MAS403BT MODULARE H.38 D.50	38	50
350VL150	50	ISO50 MAS403BT MODULARE H.50 D.50	50	50
350VL163	50	ISO50 MAS403BT MODULARE H.50 D.63	50	63
350VL180	50	ISO50 MAS403BT MODULARE H.50 D.80	50	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	VITE	Q.tà	BOCCOLA	Q.tà
				
50	111604011	1	122502007	1
63	112005012	1	123002408	1
80	112005012	1	123002408	1

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

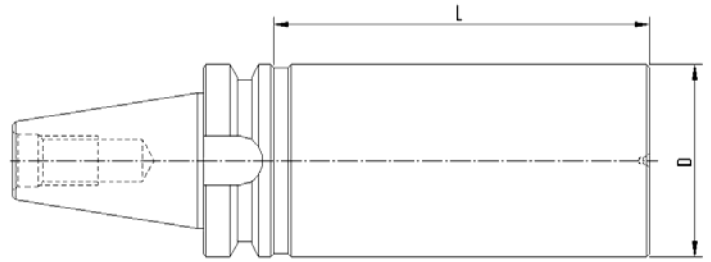
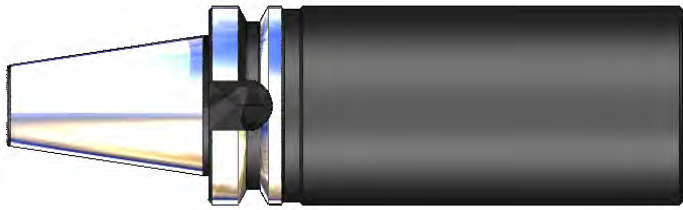


MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDER WITH SOFT SHANK  
 BARRES D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SCHAFT



**JIS-B 6339 M.AS 403/BT.AD**

**DLN 6358**



<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>L</b>	<b>D</b>
340ST263	40	ISO40 MAS403BT ST.TENERO D.63x250	250	63
350ST397	50	ISO50 MAS403BT ST.TENERO D.97X315	315	97

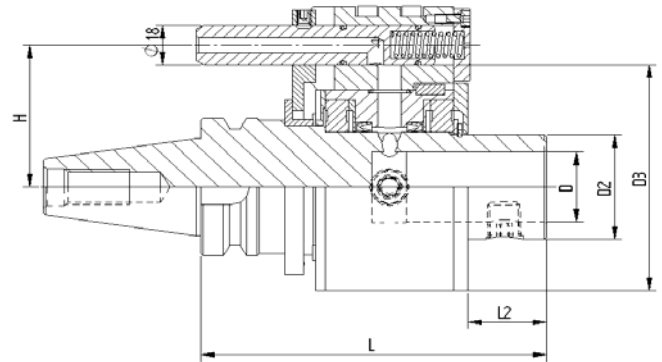
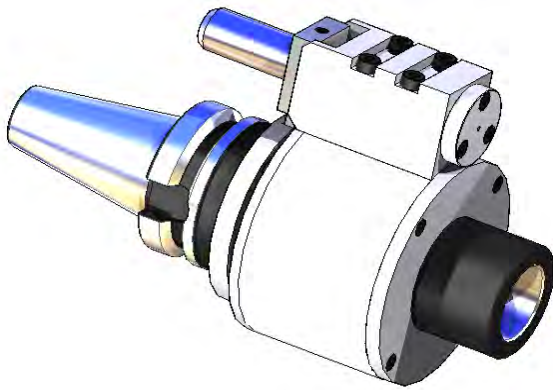
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**



DISTRIBUTORE ROTANTE DI REFRIGERANTE  
 COOLANT FEEDER  
 DISPOSITIV D'ARROSAGE TOURNANTE  
 HUEHLMITTELZUFUEHRUNG




# JTS-B 6339.M.AS 403/BT



Codice	ISO	Descrizione	H	L	L2	D	D2	D3
340DRC32	40	ISO40 MAS403BT DISTRIB.ROTANTE D.32	65	150	34	32	48	95
340DRC40	40	ISO40 MAS403BT DISTRIB.ROTANTE D.40	65	160	44	40	58	110

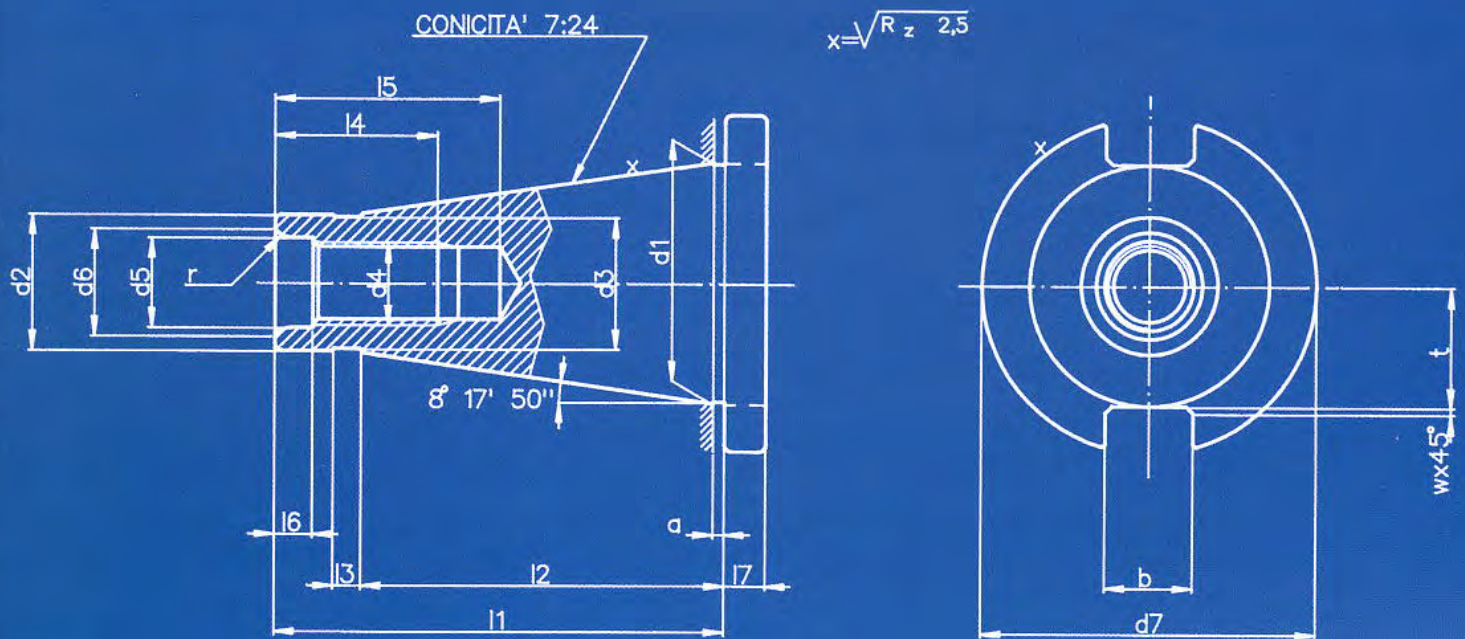
Codice	ISO	Descrizione	H	L	L2	D	D2	D3
350DRC40	50	ISO50 MAS403BT DISTRIB.ROTANTE D40	80	165	49	40	58	110

## COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

D	GRANO	Q.tà
		
32	101416154	1
40	101601604	2



DIN 2080



**Cono - Size**

**40**

**50**

a ± 0,2	1,6	3,2
b H12	16,1	25,7
d1	44,45	69,85
a10	25,3	39,6
d2 max.	25,00	39,29
min.	24,92	39,19
d3	24	38
d4	M16	M24
d5	17	26
d6	21	31
d7 <sup>0</sup> <sub>-0,2</sub>	63	97,5
l1	95	130
l2	67	105
l3	5	8
l4	32	47
l5 min.	42,5	61,5
l6 <sup>0</sup> <sub>-0,5</sub>	8,2	11,5
l7 ± 0,15	10	12
t max.	22,5	35,3
r	4	6
w	1,6	2

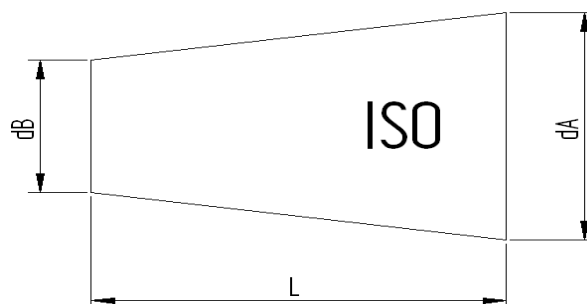
**MANDRINI PAGNONI CON ATTACCO ISO**
**DATI TECNICI**


TUTTI I MANDRINI PORTAUTENSILI PAGNONI VENGONO PRODOTTI SECONDO LE NORMATIVE DIN

**TOLLERANZA DEL CONO**

PRODOTTI IN CLASSE AT3

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004


**COASSIALITÀ PORTAPINZE**

La norma DIN6391 ammette un'errore massimo di 0.016 sia per i portapinze DIN6499 che per DIN 6388.

La nostra produzione normalmente presenta uno scostamento massimo di eccentricità tra cono ISO e sede pinza compreso tra i 0,003 e 0,010 mm.

**COASSIALITÀ PORTAFRESE FISSI E COMBINATI**

I portafrese fissi e combinati di nostra produzione rispondono ai criteri prescritti dalla norma DIN 6358, la quale prevede un errore massimo di coassialità tra cono ISO 30 e ISO 40 ed i diametri 16-22-27-32-40, di 0,01.

Mentre per ISO 50 è ammesso un errore massimo di 0,015 mm.

**COASSIALITÀ PORTAFRESE WELDON - WHISTLE NOTCH**

Rispettando la normativa DIN 6359-1 i portafrese WELDON devono rispondere ai seguenti requisiti :

Foro: tolleranza H5

coassialità: scostamento massimo consentito tra cono e sede Weldon <0.01 (per ISO 40)

Garantiamo la tolleranza prescritta sul foro e un valore di coassialità mediamente di 0,005.

**DATI COSTRUTTIVI**

- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4-0,5 mm
- Temprati-rinvenuti
- Durezza HRC 58 +-2 resistenza 800-1000 N/mm<sup>2</sup>
- Bruniti
- Finitura di rettifica interna, esterna e nelle filettature delle ghiera chiudipinza

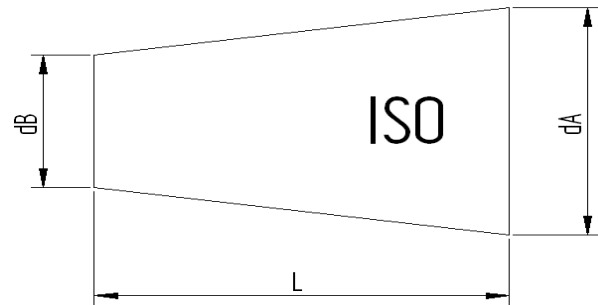


ALL PAGNONI TOOLHOLDERS ARE MANUFACTURED ACCORDING TO DIN NORM.

### CONE'S TOLERANCE

ACCORDING TO THE CLASS AT3.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



### COLLET CHUCK'S RUNOUT ACCURACY

The norm DIN6391 permits a runout error between external cone and internal cone / collet seat of 0.016.

Our production has a runout accuracy which is guaranteed to be within 0,003 / 0,010 m at the tool seat.

### SHELL END MILL ADAPTOR'S RUNOUT ACCURACY

Our shell end mill adaptors meet the requirements of the norm DIN6358, which prescribes for diameters 16-22-27-32-40 a runout accuracy of:0,01 for SK 30/40 0,015 for SK 50.

### WELDON END MILL HOLDER'S RUNOUT ACCURACY

According to the norm DIN6359-1 Weldon end mill holders have to meet the following requirements:

Bore: H5 tolerance

Runout accuracy: <0.01 (for SK 40)

Our end mill adaptors ensure the prescribed holes' tolerance and have a runout accuracy which is normally 0.005

### CONSTRUCTIVE FEATURES

- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm
- Hardened-Tempered
- Hardness HRC 58+-2, Strength 800-1000 N/mm2
- Black oxidized
- Internal and external grinding finished.

**PAGNONI-STEILKEGELAUFNAHMEN**

**TECHNISCHE DATEN**

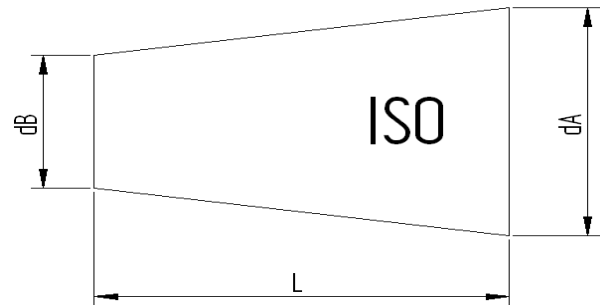


Alle Pagnoni-Steilkegelaufnahmen werden nach den DIN-Normen angefertigt.

**KEGELSCHAFTTOLERANZ**

In Klasse AT3 angefertigt.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**RUNDLAUFGENAUIGKEIT DER SPANNZANGENAUFNAHME**

Die DIN 6391- Norm schreibt eine Rundlaufgenauigkeit zwischen Aussenkegel und Innenkegel / Spannzangensitz vom 0,016 vor.

Unsere Spannzangenfutter weisen einen Rundlauffehler zwischen ISO-Kegelaufnahme und Spannzangensitz, der zwischen 0,003 und 0,010 mm liegt.

**AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT**

Pagnoni- Aufsteckfräsdorne entsprechen der DIN 6358- Norm, die einen höchsten Rundlauffehler zwischen ISO 30- und ISO40-Kegel und den Durchmessern 16-22-27-32-40 vom 0,01 vorsieht.

Der mögliche höchste Rundlauffehler für ISO 50 ist 0,015 mm.

**WELDON AUFSTECKFRÄSDORNE-RUNDLAUFGENAUIGKEIT**

Nach der DIN 6359-1-Norm müssen die Weldon- Aufsteckfräsdorne die folgenden Forderungen aufweisen:

Bohrung: Toleranz H5

Rundlaufgenauigkeit:höchster möglicher Rundlauffehler zwischen Kegel und Weldon Sitz < 0,01 (für ISO 40)

Die vorgeschriebene Toleranz der Bohrung und eine durchschnittliche Rundlaufgenauigkeit von 0,005 sind verichert.

**KONSTRUKTIONSDATEN**

- aus legiertem Einsatzstahl angefertigt
- in der Einsatzhärte tiefe von 0,4-0,5 mm
- gehärtet, angelassen
- Härte HRC 58 +-2, Festigkeit 800-1000 N-mm2
- brüniert
- inneres, äußeres Schleifen und am Gewinde der Spannzangenmutter

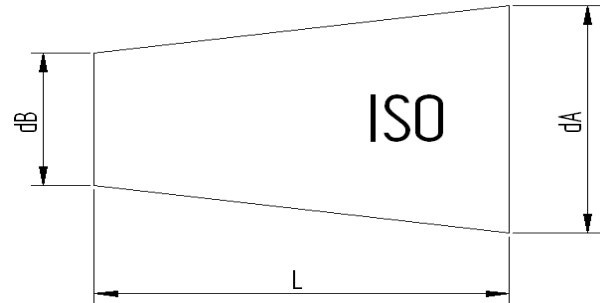


TOUS LES MANDRINS PORTE-OUTILS PAGNONI SONT PRODUITS SUIVANT LES SPÉCIFICATIONS *DIN*

**TOLLERANCE DU CONE**

EN CLASSE AT3.

ISO	L	dA - dB	AT3
30	42	12.250	+ 0.002
40	59	17.208	+ 0.003
50	92	26.833	+ 0.004



**COAXIALITÉ PORTE-PINCE**

La norme DIN6391 admet une erreur maximum du 0.016 soit pour les porte-pinces DIN6499 soit pour DIN6388.

Dans notre production l'écart d'excentricité maximum entre cône ISO et logement de la pince est compris entre:0,003 et 0,0010 mm.

**COAXIALITÉ PORTE-FRAISES FIXES ET COMBINES**

Les porte-fraises fixes et combinés de notre production suivent la spécification de la norme DIN6358, qui prévoit pour les diamètres 16-22-27-32-40 une concentricité de 0,01 pour ISO 30 et ISO 40 0,015 pour ISO 50.

**COAXIALITÉ PORTE-FRAISES WELDON**

Suivant les spécifications DIN 6359-1 les porte-fraises WELDON doivent suivre les conditions suivantes :

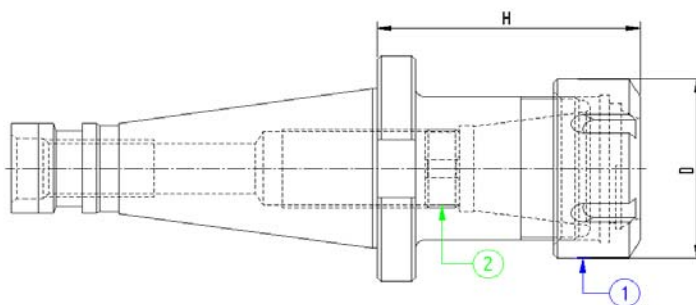
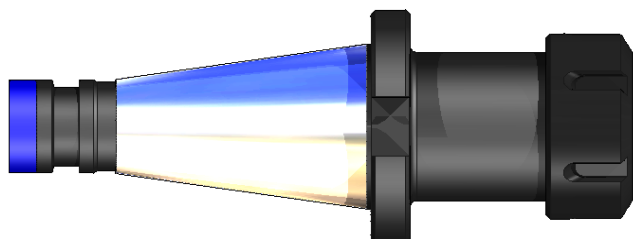
Trou: tolérance H5

Coaxialité: écart maximum toléré entre cône et logement du Weldon <0.01 (pour ISO 40)

Nous assurons la tolérance prévue sur le trou et une coaxialité en moyenne de 0.005.

**ELEMENTS DE CONSTRUCTION**

- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 -0,5 mm
- Trempé - Revenu
- Dureté HRC 58 +- 2 résistance 800-1000 N/mm2
- Brunis
- Rectification du cône intérieur, extérieur et dans le filetage des écrous qui serrent la pince.



Codice	ISO	Descrizione	ER	D	H
540PP110	40	ISO40 DIN2080 P/P H70 ER16	16	32	70
540PP113	40	ISO40 DIN2080 P/P H70 ER20	20	35	70
540PP116	40	ISO40 DIN2080 P/P H70 ER25	25	42	70
540PP120	40	ISO40 DIN2080 P/P H70 ER32	32	50	70
540PP126	40	ISO40 DIN2080 P/P H70 ER40	40	63	70
550PP110	50	ISO50 DIN2080 P/P H80 ER16	16	32	80
550PP113	50	ISO50 DIN2080 P/P H80 ER20	20	35	80
550PP116	50	ISO50 DIN2080 P/P H80 ER25	25	42	80
550PP120	50	ISO50 DIN2080 P/P H80 ER32	32	50	80
550PP126	50	ISO50 DIN2080 P/P H80 ER40	40	63	80

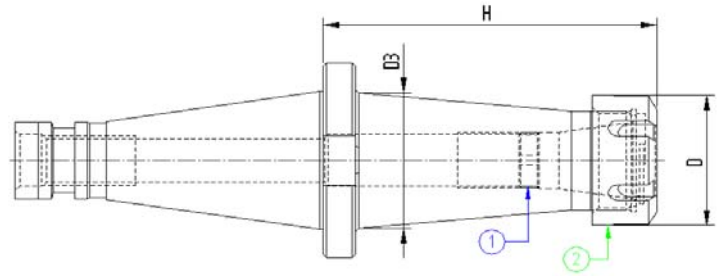
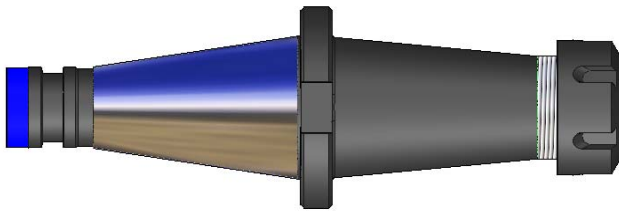
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
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ISO 40 - 50	ER	101001601	Q.tà	916GHREQ	Q.tà
16		101001601	1	916GHREQ	1
20		101001601	1	920GHREQ	1
25		101815801	1	925GHREQ	1
32		102215901	1	932GHREQ	1
40		103015901	1	940GHREQ	1



### L=100

Codice	ISO	Descrizione	ER	D	H	D3
540PP210	40	ISO40 DIN2080 P/P H100 ER16	16	32	100	-
540PP213	40	ISO40 DIN2080 P/P H100 ER20	20	35	100	-
540PP216	40	ISO40 DIN2080 P/P H100 ER25	25	42	100	-
540PP220	40	ISO40 DIN2080 P/P H100 ER32	32	50	100	-
540PP226	40	ISO40 DIN2080 P/P H100 ER40	40	63	100	-
550PP210	50	ISO50 DIN2080 P/P H100 ER16	16	32	100	-
550PP213	50	ISO50 DIN2080 P/P H100 ER20	20	35	100	-
550PP216	50	ISO50 DIN2080 P/P H100 ER25	25	42	100	-
550PP220	50	ISO50 DIN2080 P/P H100 ER32	32	50	100	-
550PP226	50	ISO50 DIN2080 P/P H100 ER40	40	63	100	-

### L=130

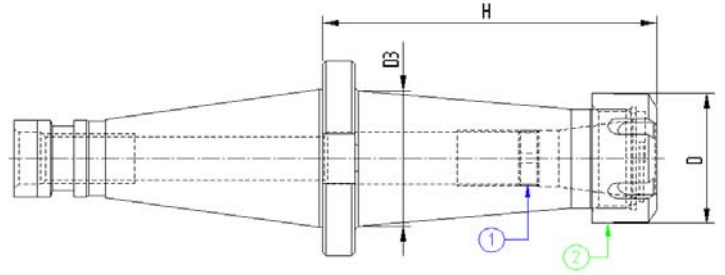
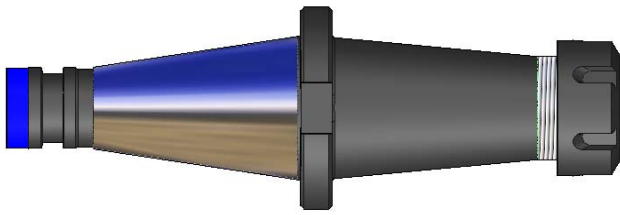
Codice	ISO	Descrizione	ER	D	H	D3
540PP310	40	ISO40 DIN2080 P/P H130 ER16	16	32	130	-
540PP313	40	ISO40 DIN2080 P/P H130 ER20	20	35	130	-
540PP316	40	ISO40 DIN2080 P/P H130 ER25	25	42	130	-
540PP320	40	ISO40 DIN2080 P/P H130 ER32	32	50	130	-
540PP326	40	ISO40 DIN2080 P/P H130 ER40	40	63	130	-
550PP310	50	ISO50 DIN2080 P/P H130 ER16	16	32	130	-
550PP313	50	ISO50 DIN2080 P/P H130 ER20	20	35	130	-
550PP316	50	ISO50 DIN2080 P/P H130 ER25	25	42	130	-
550PP320	50	ISO50 DIN2080 P/P H130 ER32	32	50	130	-
550PP326	50	ISO50 DIN2080 P/P H130 ER40	40	63	130	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
ISO 40 - 50	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1





**L=160**

Codice	ISO	Descrizione	ER	D	H	D3
540PP410	40	ISO40 DIN2080 P/P H160 ER16	16	32	160	-
540PP413	40	ISO40 DIN2080 P/P H160 ER20	20	35	160	-
540PP416	40	ISO40 DIN2080 P/P H160 ER25	25	42	160	-
540PP420	40	ISO40 DIN2080 P/P H160 ER32	32	50	160	-
540PP426	40	ISO40 DIN2080 P/P H160 ER40	40	63	160	-
550PP410	50	ISO50 DIN2080 P/P H160 ER16	16	32	160	-
550PP413	50	ISO50 DIN2080 P/P H160 ER20	20	35	160	-
550PP416	50	ISO50 DIN2080 P/P H160 ER25	25	42	160	-
550PP420	50	ISO50 DIN2080 P/P H160 ER32	32	50	160	-
550PP426	50	ISO50 DIN2080 P/P H160 ER40	40	63	160	-

**L=200**

Codice	ISO	Descrizione	ER	D	H	D3
540PP510	40	ISO40 DIN2080 P/P H200 ER16	16	32	200	-
540PP513	40	ISO40 DIN2080 P/P H200 ER20	20	35	200	-
540PP516	40	ISO40 DIN2080 P/P H200 ER25	25	42	200	-
540PP520	40	ISO40 DIN2080 P/P H200 ER32	32	50	200	-
540PP526	40	ISO40 DIN2080 P/P H200 ER40	40	63	200	-
550PP510	50	ISO50 DIN2080 P/P H200 ER16	16	32	200	-
550PP513	50	ISO50 DIN2080 P/P H200 ER20	20	35	200	-
550PP516	50	ISO50 DIN2080 P/P H200 ER25	25	42	200	-
550PP520	50	ISO50 DIN2080 P/P H200 ER32	32	50	200	-
550PP526	50	ISO50 DIN2080 P/P H200 ER40	40	63	200	-

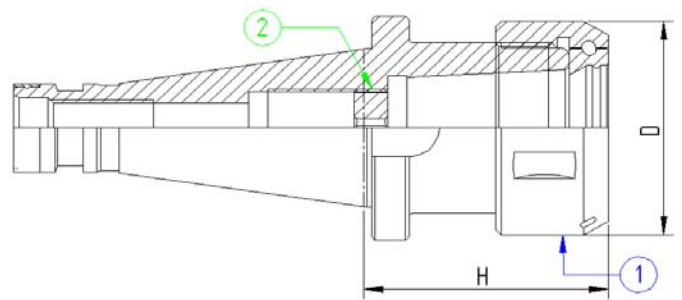
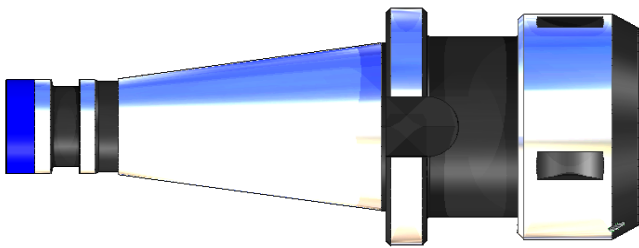
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono   ER   GHIERA INT.   Q.tà   GHIERA   Q.tà



ISO 40 - 50	ER	101001601	Q.tà	916GHREQ	Q.tà
	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1



Codice	ISO	Descrizione	EOC	D	H
540PO116	40	ISO40 DIN2080 P/P H70 EOC16	16	43	70
540PO125	40	ISO40 DIN2080 P/P H70 EOC25	25	60	70
540PO132	40	ISO40 DIN2080 P/P H85 EOC32	32	72	85
550PO116	50	ISO50 DIN2080 P/P H70 EOC16	16	43	70
550PO125	50	ISO50 DIN2080 P/P H70 EOC25	25	60	70
550PO132	50	ISO50 DIN2080 P/P H80 EOC32	32	72	85

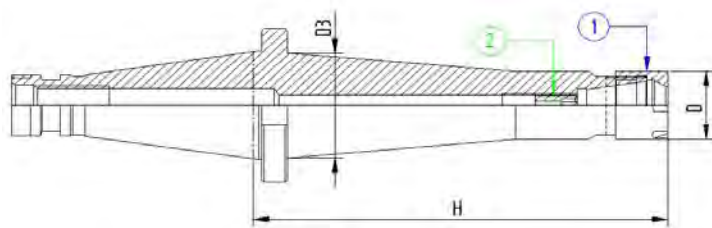
----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    EOC    **GHIERA INT.**    Q.tà    **GHIERA**    Q.tà



ISO 40 - 50	16	101001601	1	916GHROS	1
	25	102715901	1	925GHROS	1
	32	102715901	1	932GHROS	1



**PORTAPINZA MINI L= 100**

Codice	ISO	Descrizione	ER MINI	H	D	D3
540PM207	40	ISO40 DIN2080 P/P H100 ER11MINI	11	100	16	22
540PM210	40	ISO40 DIN2080 P/P H100 ER16MINI	16	100	22	26
540PM213	40	ISO40 DIN2080 P/P H100 ER20MINI	20	100	28	-
540PM216	40	ISO40 DIN2080 P/P H100 ER25MINI	25	100	35	-
550PM210	50	ISO50 DIN2080 P/P H.100 ER16MINI	16	100	22	-
550PM213	50	ISO50 DIN2080 P/P H.100 ER20MINI	20	100	28	-
550PM216	50	ISO50 DIN2080 P/P H.100 ER25MINI	16	100	35	-

**PORTAPINZA MINI L= 160**

Codice	ISO	Descrizione	ER MINI	H	D	D3
540PM410	40	ISO40 DIN2080 P/P H160 ER16MINI	16	160	22	32
540PM413	40	ISO40 DIN2080 P/P H160 ER20MINI	20	160	28	36
540PM416	40	ISO40 DIN2080 P/P H160 ER25MINI	25	160	35	44
550PM410	50	ISO50 DIN2080 P/P H160 ER16MINI	16	160	22	30
550PM413	50	ISO50 DIN2080 P/P H160 ER20MINI	20	160	28	36
550PM416	50	ISO50 DIN2080 P/P H160 ER25MINI	25	160	35	42

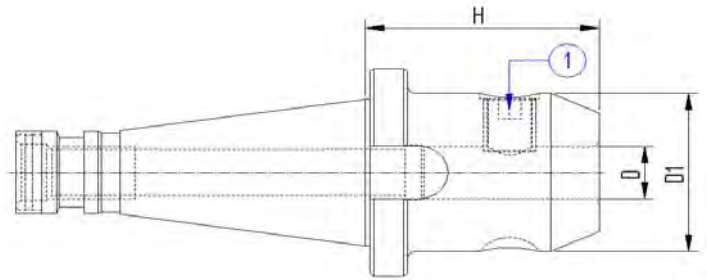
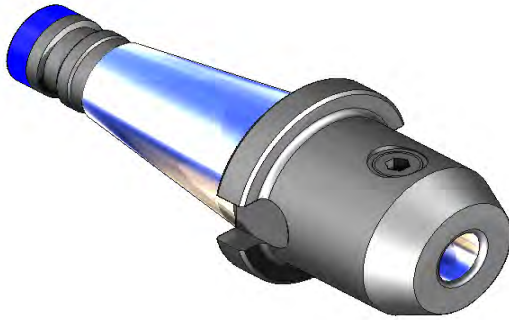
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono   ERM   GHIERA   Q.tà   GHIERA   Q.tà



ISO 40-50	11	100601001		911GHRMN	1
	16	101001601	1	916GHRMN	1
	20	101001601	1	920GHRMN	1
	25	101815801	1	925GHRMN	1



Codice	ISO	Descrizione	D	D1	H
540WLD06	40	ISO40 DIN2080 WELDON H50 D.6	6	25	50
540WLD08	40	ISO40 DIN2080 WELDON H50 D.8	8	28	50
540WLD10	40	ISO40 DIN2080 WELDON H50 D.10	10	35	50
540WLD12	40	ISO40 DIN2080 WELDON H50 D.12	12	42	50
540WLD14	40	ISO40 DIN2080 WELDON H50 D.14	14	44	50
540WLD16	40	ISO40 DIN2080 WELDON H63 D.16	16	48	63
540WLD18	40	ISO40 DIN2080 WELDON H63 D.18	18	50	63
540WLD20	40	ISO40 DIN2080 WELDON H63 D.20	20	52	63
540WLD25	40	ISO40 DIN2080 WELDON H90 D.25	25	65	90
540WLD32	40	ISO40 DIN2080 WELDON H90 D.32	32	72	90
540WLD40	40	ISO40 DIN2080 WELDON H90 D.40	40	78	90
550WLD06	50	ISO50 DIN2080 WELDON H50 D.6	6	25	50
550WLD08	50	ISO50 DIN2080 WELDON H50 D.8	8	28	50
550WLD10	50	ISO50 DIN2080 WELDON H63 D.10	10	35	63
550WLD12	50	ISO50 DIN2080 WELDON H63 D.12	12	42	63
550WLD14	50	ISO50 DIN2080 WELDON H63 D.14	14	44	63
550WLD16	50	ISO50 DIN2080 WELDON H63 D.16	16	48	63
550WLD18	50	ISO50 DIN2080 WELDON H63 D.18	18	50	63
550WLD20	50	ISO50 DIN2080 WELDON H63 D.20	20	52	63
550WLD25	50	ISO50 DIN2080 WELDON H80 D.25	25	65	80
550WLD32	50	ISO50 DIN2080 WELDON H85 D.32	32	72	85
550WLD40	50	ISO50 DIN2080 WELDON H95 D.40	40	78	95

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø WLD	GRANO 1	Q.tà	ANELLO x ISO 40	ANELLO x ISO 50
ISO 40 - 50	6	100601004	1		
	8	100801004	1		
	10	101001204	1		
	12 - 14	101201604	1		
	16 - 18	101401604	1		
	20	101601604	1		
	25	101802002	2		
	32 - 40	102002002	2		

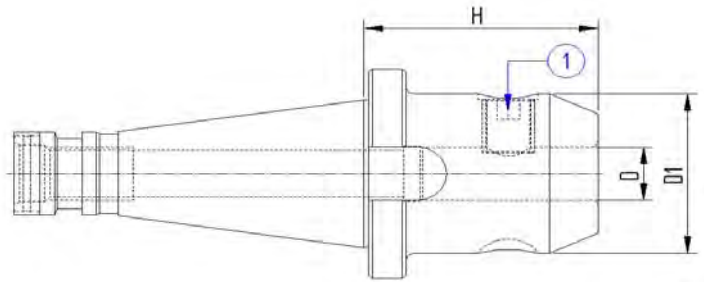
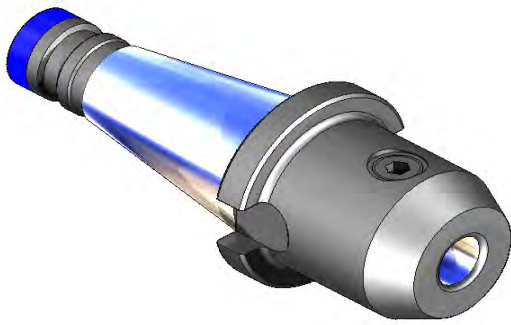


MANDRINI PORTA FRESA TIPO WELDON LUNGH  
 END MILL HOLDERS WELDON LONG TYPE  
 MANDRINS POUR OUTILS TYPE WELDON LONGUE  
 ZYLINDERSCHAFTAUFNAHME WELDON LANG



**DIN 2080**

**DIN 1835 E**



**L=100**

Codice	ISO	Descrizione	D	D1	H
540WE206	40	ISO40 DIN2080 H100 WELDON D6	6	25	100
540WE208	40	ISO40 DIN2080 H100 WELDON D8	8	28	100
540WE210	40	ISO40 DIN2080 H100 WELDON D10	10	35	100
540WE212	40	ISO40 DIN2080 H100 WELDON D12	12	42	100
540WE214	40	ISO40 DIN2080 H100 WELDON D14	14	44	100
540WE216	40	ISO40 DIN2080 H100 WELDON D16	16	48	100
540WE218	40	ISO40 DIN2080 H100 WELDON D18	18	50	100
540WE220	40	ISO40 DIN2080 H100 WELDON D20	20	52	100
540WE225	40	ISO40 DIN2080 H100 WELDON D25	25	65	100
540WE232	40	ISO40 DIN2080 H100 WELDON D32	32	72	100
550WE206	50	ISO50 DIN2080 H100 WELDON D6	6	25	100
550WE208	50	ISO50 DIN2080 H100 WELDON D8	8	28	100
550WE210	50	ISO50 DIN2080 H100 WELDON D10	10	35	100
550WE212	50	ISO50 DIN2080 H100 WELDON D12	12	42	100
550WE214	50	ISO50 DIN2080 H100 WELDON D14	14	44	100
550WE216	50	ISO50 DIN2080 H100 WELDON D16	16	48	100
550WE218	50	ISO50 DIN2080 H100 WELDON D18	18	50	100
550WE220	50	ISO50 DIN2080 H100 WELDON D20	20	52	100
550WE225	50	ISO50 DIN2080 H100 WELDON D25	25	65	100
550WE232	50	ISO50 DIN2080 H100 WELDON D32	32	72	100

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø WE	GRANO 1	Q.tà	ANELLO x ISO 40	ANELLO x ISO 50
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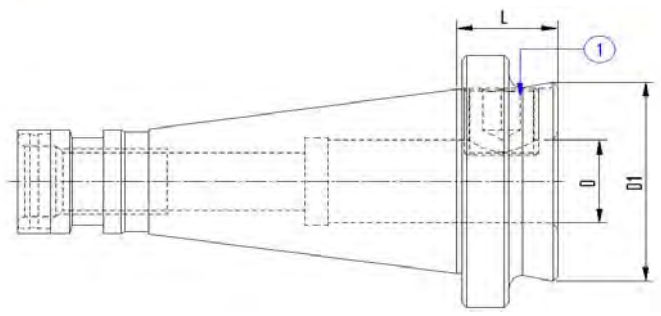
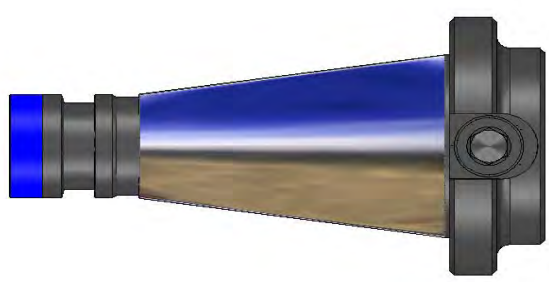


ISO 40 - 50	Ø WE	GRANO 1	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32	102002002	2


**MANDRINI PORTA FRESA TIPO WELDON CORTI**  
**SHORT END MILL WELDON HOLDERS**  
**MANDRINS COURTS PORTE-FRAISE TYPE WELDON**  
**KURZE ZYLINDERSCHAFTAUFNAHME WELDON**



**DIN 2080**  
**DIN 1835 E**



Codice	ISO	Descrizione	D	D1	L
540WLC16	40	ISO40 DIN2080 H22 WELDON D16	16	48	22
540WLC20	40	ISO40 DIN2080 H22 WELDON D20	20	48	22
540WLC25	40	ISO40 DIN2080 H22 WELDON D25	25	48	22
540WLC32	40	ISO40 DIN2080 H55 WELDON D32	32	61	55
550WLC16	50	ISO50 DIN2080 H20 WELDON D16	16	48	20
550WLC20	50	ISO50 DIN2080 H20 WELDON D20	20	48	20
550WLC25	50	ISO50 DIN2080 H20 WELDON D25	25	65	20
550WLC32	50	ISO50 DIN2080 H35 WELDON D32	32	72	35

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLC    GRANO 1    Q.tà    ANELLO x ISO 40    ANELLO x ISO 50



ISO 40 - 50	Ø WLC	GRANO 1	Q.tà
	16	101401604	1
	20	101601604	1
	25	101601604	1
	32	102002002	1

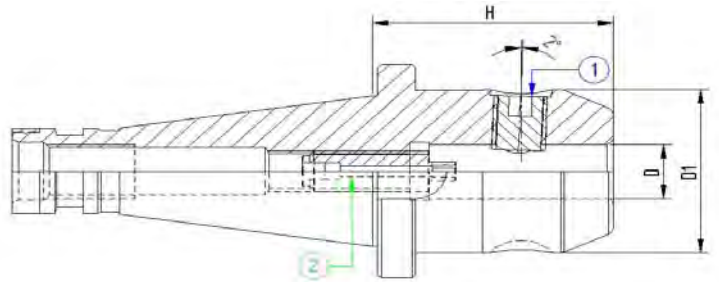
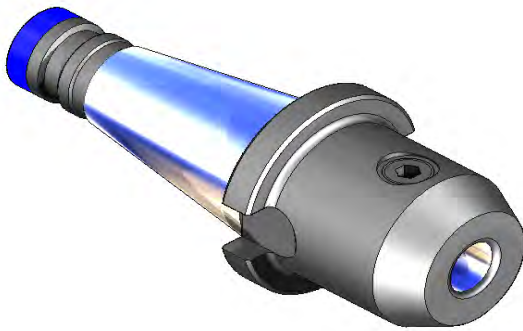


MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTILS TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNahme WHISTLE NOTCH



**DIN 2080**

**DIN 1835 E**



Codice	ISO	Descrizione	D	D1	H
540WHN06	40	ISO40 DIN2080 W.NOTCH H50 D.6	6	25	50
540WHN08	40	ISO40 DIN2080 W.NOTCH H50 D.8	8	28	50
540WHN10	40	ISO40 DIN2080 W.NOTCH H50 D.10	10	35	50
540WHN12	40	ISO40 DIN2080 W.NOTCH H50 D.12	12	42	50
540WHN14	40	ISO40 DIN2080 W.NOTCH H50 D.14	14	44	50
540WHN16	40	ISO40 DIN2080 W.NOTCH H63 D.16	16	48	63
540WHN18	40	ISO40 DIN2080 W.NOTCH H63 D.18	18	50	63
540WHN20	40	ISO40 DIN2080 W.NOTCH H63 D.20	20	52	63
540WHN25	40	ISO40 DIN2080 W.NOTCH H90 D.25	25	65	90
540WHN32	40	ISO40 DIN2080 W.NOTCH H90 D.32	32	72	90

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø WHN	GRANO 1	Q.tà	VITE	Q.tà
ISO 40	6	100601004	1	100504009	1
	8	100801004	1	101200409	1
	10	101001204	1	101200409	1
	12 - 14	101201604	1	101200409	1
	16 - 18	101401604	1	101200409	1
	20	101601604	1	101200409	1
	25	101802002	2	101200409	1
	32	102002002	2	101200409	1

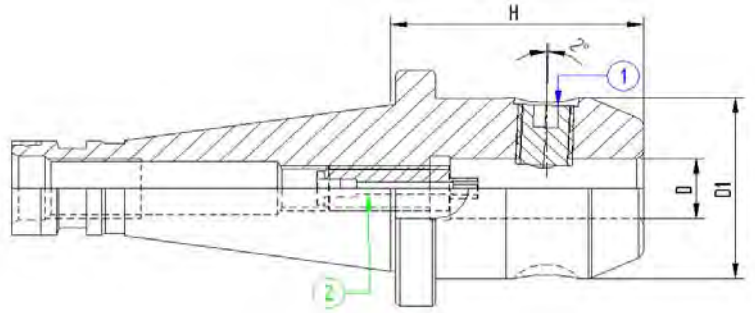
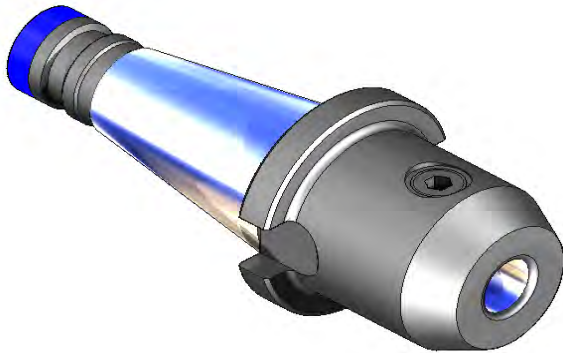


MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTILS TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNABME WHISTLE NOTCH



**DIN 2080**

**DIN 1835 E**



Codice	ISO	Descrizione	D	D1	H
550WHN06	50	ISO50 DIN2080 W.NOTCH H50 D.6	6	25	50
550WHN08	50	ISO50 DIN2080 W.NOTCH H50 D.8	8	28	50
550WHN10	50	ISO50 DIN2080 W.NOTCH H63 D.10	10	35	63
550WHN12	50	ISO50 DIN2080 W.NOTCH H63 D.12	12	42	63
550WHN14	50	ISO50 DIN2080 W.NOTCH H63 D.14	14	44	63
550WHN16	50	ISO50 DIN2080 W.NOTCH H63 D.16	16	48	63
550WHN18	50	ISO50 DIN2080 W.NOTCH H63 D.18	18	50	63
550WHN20	50	ISO50 DIN2080 W.NOTCH H63 D.20	20	52	63
550WHN25	50	ISO50 DIN2080 W.NOTCH H80 D.25	25	65	80
550WHN32	50	ISO50 DIN2080 W.NOTCH H85 D.32	32	72	85
550WHN40	50	ISO50 DIN2080 W.NOTCH H95 D.40	40	80	95

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø WHN	GRANO 1	Q.tà	VITE	Q.tà
ISO 40	6	100601004	1	100504009	1
	8	100801004	1	101200409	1
	10	101001204	1	101200409	1
	12 - 14	101201604	1	101200407	1
	16 - 18	101401604	1	101200407	1
	20	101601604	1	101200407	1
	25	101802002	2	101200407	1
	32 - 40	102002002	2	101200407	1



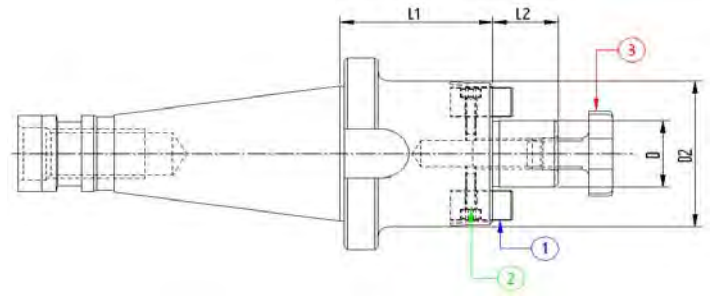
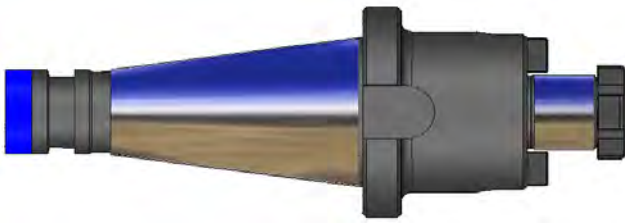


MANDRINI PORTAFRESA TRASCINAMENTO FISSO AD+B  
 FACE MILL HOLDERS-TENONS DRIVE WITH INTERNAL COOLANT- SHORT  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FÜR FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR



**DIN2080**

**ISO3937**

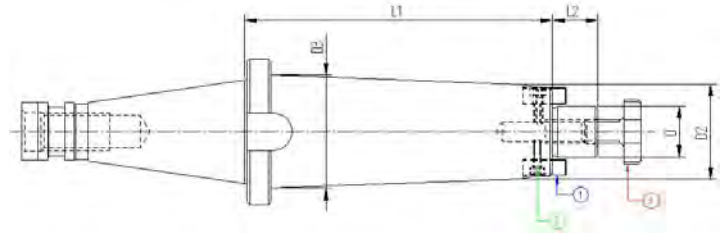
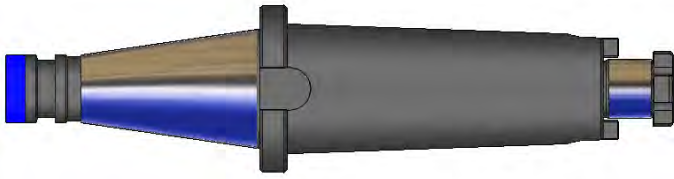


Codice	ISO	Descrizione	D	L1	D2	L2
540PF116	40	ISO40 DIN2080 P/F FISSO H45 D16	16	45	38	17
540PF122	40	ISO40 DIN2080 P/F FISSO H45 D22	22	45	48	19
540PF127	40	ISO40 DIN2080 P/F FISSO H45 D27	27	45	58	21
540PF132	40	ISO40 DIN2080 P/F FISSO H50 D32	32	50	78	24
540PF140	40	ISO40 DIN2080 P/F FISSO H55 D40	40	55	88	27
550PF116	50	ISO50 DIN2080 P/F FISSO H45 D16	16	45	38	17
550PF122	50	ISO50 DIN2080 P/F FISSO H45 D22	22	45	48	19
550PF127	50	ISO50 DIN2080 P/F FISSO H45 D27	27	45	58	21
550PF132	50	ISO50 DIN2080 P/F FISSO H50 D32	32	50	78	24
550PF140	50	ISO50 DIN2080 P/F FISSO H50 D40	40	50	88	27

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE A CROCE	Q.tà
ISO 40 - 50	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1



**L=100**

Codice	ISO	Descrizione	D	L1	D2	L2	D3
540PF216	40	ISO40 DIN2080 P/F FISSO H100 D.16	16	100	38	17	38
540PF222	40	ISO40 DIN2080 P/F FISSO H100 D.22	22	100	48	19	48
540PF227	40	ISO40 DIN2080 P/F FISSO H100 D.27	27	100	58	21	58
540PF232	40	ISO40 DIN2080 P/F FISSO H100 D.32	32	100	63	24	61
540PF240	40	ISO40 DIN2080 P/F FISSO H100 D.40	40	100	80	27	45
550PF216	50	ISO50 DIN2080 P/F FISSO H100 D.16	16	100	38	17	42
550PF222	50	ISO50 DIN2080 P/F FISSO H100 D.22	22	100	48	19	53
550PF227	50	ISO50 DIN2080 P/F FISSO H100 D.27	27	100	58	21	58
550PF232	50	ISO50 DIN2080 P/F FISSO H100 D.32	32	100	66	24	66
550PF240	50	ISO50 DIN2080 P/F FISSO H100 D.40	40	100	80	27	70

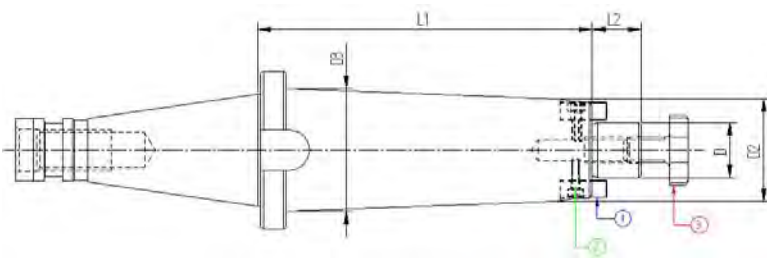
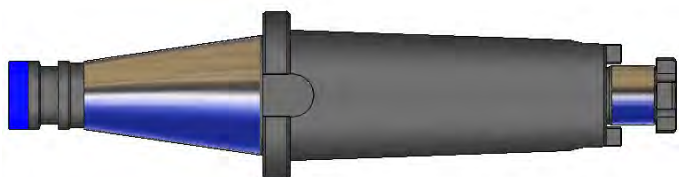
**L=130**

Codice	ISO	Descrizione	D	L1	D2	L2	D3
540PF316	40	ISO40 DIN2080 P/F FISSO H130 D.16	16	130	38	17	38
540PF322	40	ISO40 DIN2080 P/F FISSO H130 D.22	22	130	48	19	48
540PF327	40	ISO40 DIN2080 P/F FISSO H130 D.27	27	130	58	21	58
540PF332	40	ISO40 DIN2080 P/F FISSO H130 D.32	32	130	66	24	45
540PF340	40	ISO40 DIN2080 P/F FISSO H130 D.40	40	130	80	27	45
550PF316	50	ISO50 DIN2080 P/F FISSO H130 D.16	16	130	38	17	45
550PF322	50	ISO50 DIN2080 P/F FISSO H130 D.22	22	130	48	19	48
550PF327	50	ISO50 DIN2080 P/F FISSO H130 D.27	27	130	58	21	58
550PF332	50	ISO50 DIN2080 P/F FISSO H130 D.32	32	130	66	24	66
550PF340	50	ISO50 DIN2080 P/F FISSO H130 D.40	40	130	80	27	80

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE A CROCE	Q.tà
ISO 40 - 50	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1



### L=160

Codice	ISO	Descrizione	D	L1	D2	L2	D3
540PF416	40	ISO40 DIN2080 P/F FISSO H160 D.16	16	160	38	17	38
540PF422	40	ISO40 DIN2080 P/F FISSO H160 D.22	22	160	48	19	48
540PF427	40	ISO40 DIN2080 P/F FISSO H160 D.27	27	160	58	21	58
540PF432	40	ISO40 DIN2080 P/F FISSO H160 D.32	32	160	66	24	45
540PF440	40	ISO40 DIN2080 P/F FISSO H160 D.40	40	160	80	27	45
550PF416	50	ISO50 DIN2080 P/F FISSO H160 D.16	16	160	38	17	47
550PF422	50	ISO50 DIN2080 P/F FISSO H160 D.22	22	160	48	19	57
550PF427	50	ISO50 DIN2080 P/F FISSO H160 D.27	27	160	58	21	58
550PF432	50	ISO50 DIN2080 P/F FISSO H160 D.32	32	160	66	24	66
550PF440	50	ISO50 DIN2080 P/F FISSO H160 D.40	40	160	80	27	70


### L=200

Codice	ISO	Descrizione	D	L1	D2	L2	D3
540PF516	40	ISO40 DIN2080 P/F FISSO H200 D.16	16	200	38	17	38
540PF522	40	ISO40 DIN2080 P/F FISSO H200 D.22	22	200	48	19	48
540PF527	40	ISO40 DIN2080 P/F FISSO H200 D.27	27	200	58	21	58
540PF532	40	ISO40 DIN2080 P/F FISSO H200 D.32	32	200	66	24	45
540PF540	40	ISO40 DIN2080 P/F FISSO H200 D.40	40	200	80	27	45
550PF516	50	ISO50 DIN2080 P/F FISSO H200 D.16	16	200	38	17	48
550PF522	50	ISO50 DIN2080 P/F FISSO H200 D.22	22	200	48	19	64
550PF527	50	ISO50 DIN2080 P/F FISSO H200 D.27	27	200	58	21	58
550PF532	50	ISO50 DIN2080 P/F FISSO H200 D.32	32	200	66	24	66
550PF540	50	ISO50 DIN2080 P/F FISSO H200 D.40	40	200	80	27	70

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

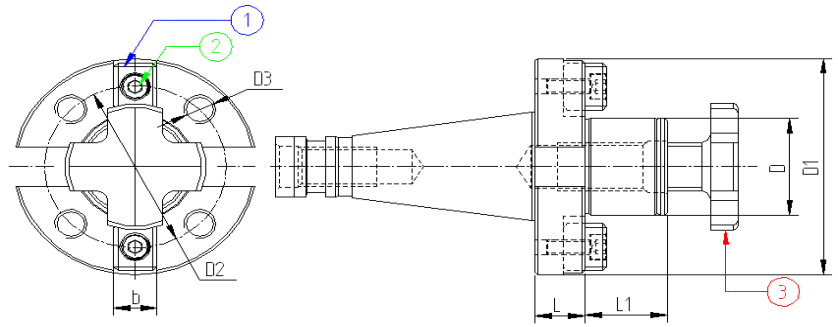
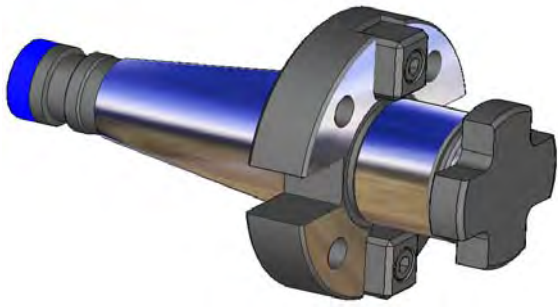
Tipo Cono	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE A CROCE	Q.tà
ISO 40 - 50	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1


**MANDRINI PORTAFRESE A SPIANARE**  
**FACE MILL HOLDER FOR FACE MILLING CUTTERS**  
**MANDRINS PORTE-FRAISE POUR FRAISES A SURFACER**  
**AUFSTECKFRAESERDORNE FUER MESSERKOEPF**



**DIN 2080**

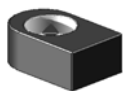


**DIN 3937**

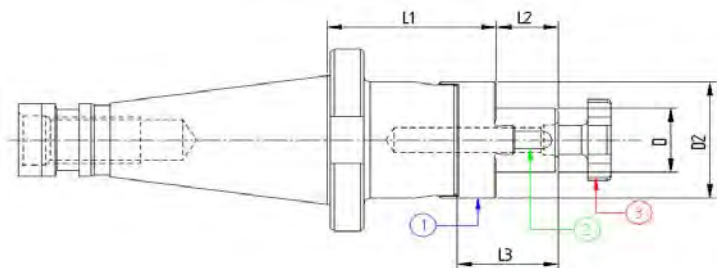
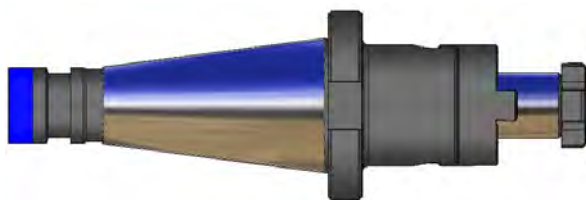


Codice	ISO	Descrizione	D	L	L1	D1	D2	D3	b
540PI140	40	ISO40 DIN2080 P/F TRA. FR. H20 D40	40	20	30	89	66,7	M12	15,9
550PI140	50	ISO50 DIN2080 P/F TRA. FR. H30 D40	40	30	30	89	66,7	M12	15,9
550PI160	50	ISO50 DIN2080 P/F TRA. FR. H30 D60	60	30	40	129	102	M16	25,4

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

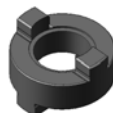


Tipo Cono	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE A CROCE	Q.tà
							
ISO 40 - 50	40	940TSL04	2	110601601	2	940VTC02	1
ISO 50	60	960TSL04	2	111202501	2	NON FORNITA	-

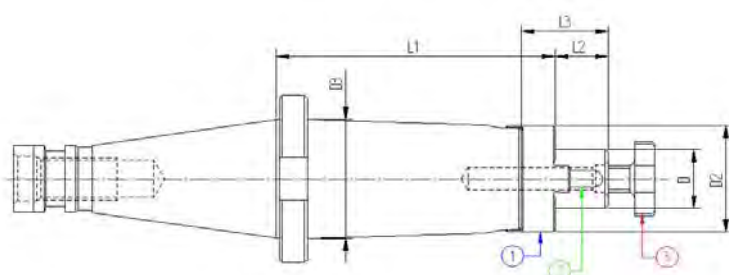
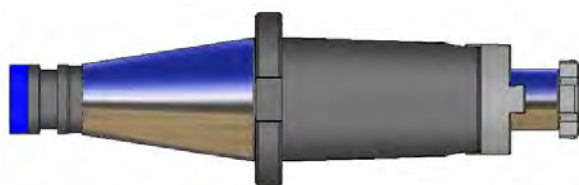


Codice	ISO	Descrizione	D	L1	L2	L3	D2
540PU116	40	ISO40 DIN2080 P/F UNIV.H52 D.16	16	52	17	27	32
540PU122	40	ISO40 DIN2080 P/F UNIV.H52 D.22	22	52	19	31	40
540PU127	40	ISO40 DIN2080 P/F UNIV.H52 D.27	27	52	21	33	48
540PU132	40	ISO40 DIN2080 P/F UNIV.H52 D.32	32	52	24	38	58
540PU140	40	ISO40 DIN2080 P/F UNIV.H52 D.40	40	52	27	41	70
550PU116	50	ISO50 DIN2080 P/F UNIV.H55 D.16	16	55	17	27	32
550PU122	50	ISO50 DIN2080 P/F UNIV.H55 D.22	22	55	19	31	40
550PU127	50	ISO50 DIN2080 P/F UNIV.H55 D.27	27	55	21	33	48
550PU132	50	ISO50 DIN2080 P/F UNIV.H55 D.32	32	55	24	38	58
550PU140	50	ISO50 DIN2080 P/F UNIV.H55 D.40	40	55	27	41	70

*----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----*

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE A CROCE	Q.tà
							
ISO 40 - 50	16	916GNT01	1	170402004	1	916VTC02	1
	22	922GNT01	1	170602506	1	922VTC02	1
	27	927GNT01	1	170702507	1	927VTC02	1
	32	932GNT01	1	170802807	1	932VTC02	1
	40	940GNT01	1	171003208	1	940VTC02	1



### L=100

Codice	ISO	Descrizione	D	L1	L2	L3	D2	D3
540PU216	40	ISO40 DIN2080 P/F UNIV.H100 D.16	16	100	17	27	32	40
540PU222	40	ISO40 DIN2080 P/F UNIV.H100 D.22	22	100	19	31	40	44
540PU227	40	ISO40 DIN2080 P/F UNIV.H100 D.27	27	100	21	33	48	-
540PU232	40	ISO40 DIN2080 P/F UNIV.H100 D.32	32	100	24	38	58	-
540PU240	40	ISO40 DIN2080 P/F UNIV.H100 D.40	40	100	27	41	70	-
550PU216	50	ISO50 DIN2080 P/F UNIV.H100 D.16	16	100	17	27	32	50
550PU222	50	ISO50 DIN2080 P/F UNIV.H100 D.22	22	100	19	31	40	60
550PU227	50	ISO50 DIN2080 P/F UNIV.H100 D.27	27	100	21	33	48	60
550PU232	50	ISO50 DIN2080 P/F UNIV.H100 D.32	32	100	24	38	58	-
550PU240	50	ISO50 DIN2080 P/F UNIV.H100 D.40	40	100	27	41	70	-

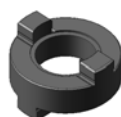
### L=130

Codice	ISO	Descrizione	D	L1	L2	L3	D2	D3
540PU316	40	ISO40 DIN2080 P/F UNIV.H130 D.16	16	130	17	27	32	-
540PU322	40	ISO40 DIN2080 P/F UNIV.H130 D.22	22	130	19	31	40	-
540PU327	40	ISO40 DIN2080 P/F UNIV.H130 D.27	27	130	21	33	48	-
540PU332	40	ISO40 DIN2080 P/F UNIV.H130 D.32	32	130	24	38	58	-
540PU340	40	ISO40 DIN2080 P/F UNIV.H130 D.40	40	130	27	41	70	-
550PU316	50	ISO50 DIN2080 P/F UNIV.H130 D.16	16	130	17	27	32	-
550PU322	50	ISO50 DIN2080 P/F UNIV.H130 D.22	22	130	19	31	40	-
550PU327	50	ISO50 DIN2080 P/F UNIV.H130 D.27	27	130	21	33	48	-
550PU332	50	ISO50 DIN2080 P/F UNIV.H130 D.32	32	130	24	38	58	-
550PU340	50	ISO50 DIN2080 P/F UNIV.H130 D.40	40	130	27	41	70	-

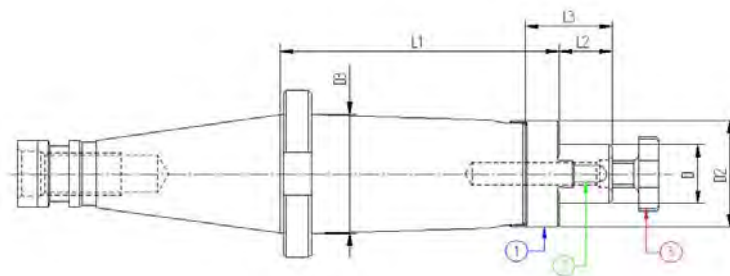
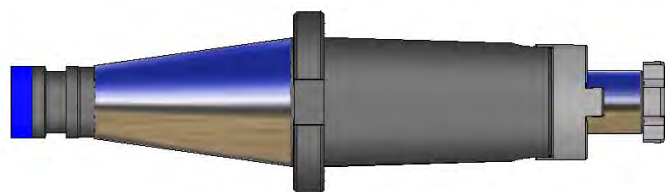
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono    Ø    GIUNTO    Q.tà    LINGUETTA    Q.tà    VITE A CROCE    Q.tà



ISO 40 - 50	Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE A CROCE	Q.tà
	16	916GNT01	1	170402004	1	916VTC02	1
	22	922GNT01	1	170602506	1	922VTC02	1
	27	927GNT01	1	170702507	1	927VTC02	1
	32	932GNT01	1	170802807	1	932VTC02	1
	40	940GNT01	1	171003208	1	940VTC02	1



### L=160

Codice	ISO	Descrizione	D	L1	L2	L3	D2	D3
540PU416	40	ISO40 DIN2080 P/F UNIV.H160 D.16	16	160	17	27	32	-
540PU422	40	ISO40 DIN2080 P/F UNIV.H160 D.22	22	160	19	31	40	-
540PU427	40	ISO40 DIN2080 P/F UNIV.H160 D.27	27	160	21	33	48	-
540PU432	40	ISO40 DIN2080 P/F UNIV.H160 D.32	32	160	24	38	58	-
540PU440	40	ISO40 DIN2080 P/F UNIV.H160 D.40	40	160	27	41	70	-
550PU416	50	ISO50 DIN2080 P/F UNIV.H160 D.16	16	160	17	27	32	-
550PU422	50	ISO50 DIN2080 P/F UNIV.H160 D.22	22	160	19	31	40	-
550PU427	50	ISO50 DIN2080 P/F UNIV.H160 D.27	27	160	21	33	48	-
550PU432	50	ISO50 DIN2080 P/F UNIV.H160 D.32	32	160	24	38	58	-
550PU440	50	ISO50 DIN2080 P/F UNIV.H160 D.40	40	160	27	41	70	-

### L=200

Codice	ISO	Descrizione	D	L1	L2	L3	D2	D3
540PU516	40	ISO40 DIN2080 P/F UNIV.H200 D.16	16	200	17	27	32	42
540PU522	40	ISO40 DIN2080 P/F UNIV.H200 D.22	22	200	19	31	40	-
540PU527	40	ISO40 DIN2080 P/F UNIV.H200 D.27	27	200	21	33	48	-
540PU532	40	ISO40 DIN2080 P/F UNIV.H200 D.32	32	200	24	38	58	-
540PU540	40	ISO40 DIN2080 P/F UNIV.H200 D.40	40	200	27	41	70	-
550PU516	50	ISO50 DIN2080 P/F UNIV.H200 D.16	16	200	17	27	32	45
550PU522	50	ISO50 DIN2080 P/F UNIV.H200 D.22	22	200	19	31	40	52
550PU527	50	ISO50 DIN2080 P/F UNIV.H200 D.27	27	200	21	33	48	60
550PU532	50	ISO50 DIN2080 P/F UNIV.H200 D.32	32	200	24	38	58	70
550PU540	50	ISO50 DIN2080 P/F UNIV.H200 D.40	40	200	27	41	70	-

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE A CROCE	Q.tà
ISO 40 - 50	16	916GNT01	1	170402004	1	916VTC02	1
	22	922GNT01	1	170602506	1	922VTC02	1
	27	927GNT01	1	170702507	1	927VTC02	1
	32	932GNT01	1	170802807	1	932VTC02	1
	40	940GNT01	1	171003208	1	940VTC02	1

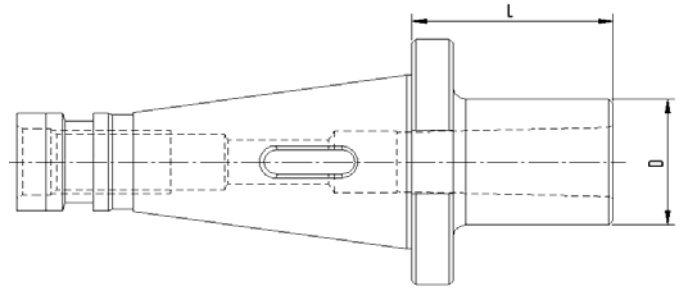
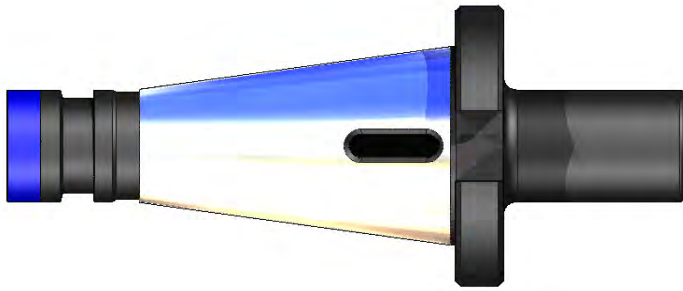


MANDRINI PORTAPUNTE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTORS FOR DRILLS  
 DOUILLES POUR CONE MORSE A TENON  
 ZWINSCHENHULSEN FÜR MORSEKEGEL MIT AUSTREIBLAPPEN



**DIN2080**


**DIN 228-2**



<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>MORSE</b>	<b>D</b>	<b>L</b>
540MP101	40	ISO40 DIN2080 H50 CM1 PUNTE	1	25	50
540MP102	40	ISO40 DIN2080 H50 CM2 PUNTE	2	32	50
540MP103	40	ISO40 DIN2080 H65 CM3 PUNTE	3	40	65
540MP104	40	ISO40 DIN2080 H95 CM4 PUNTE	4	48	95
550MP101	50	ISO50 DIN2080 H45 CM1 PUNTE	1	25	45
550MP102	50	ISO50 DIN2080 H60 CM2 PUNTE	2	32	60
550MP103	50	ISO50 DIN2080 H65 CM3 PUNTE	3	40	65
550MP104	50	ISO50 DIN2080 H70 CM4 PUNTE	4	48	70
550MP105	50	ISO50 DIN2080 H105 CM5 PUNTE	5	63	105

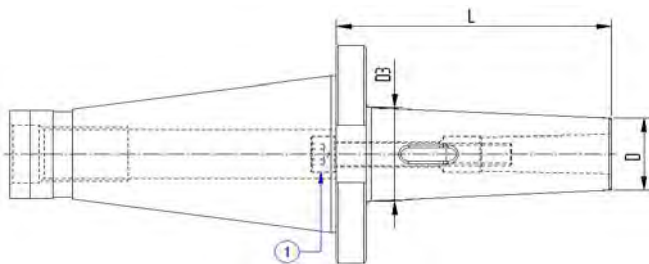
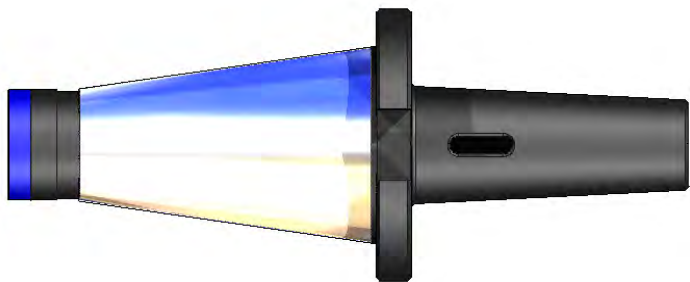
----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----




**MANDRINI PORTAPUNTE ATTACCO CONO MORSE-SERIE LUNGA**  
**MORSE TAPER ADAPTORS FOR DRILLS- LONG TYPE**  
**DOUILLES POUR CONE MORSE A TENON-SERIE LONGUE**  
**ZWISCHENHULSEN FUR MORSEKEGEL MIT AUSTREIBLAPPEN- LANGE**



**DIN2080**  
**DIN 228-2**



Codice	ISO	Descrizione	Morse	D	D3	L
540MP201	40	ISO40 DIN2080 H92 CM1 PUNTE	1	25	25	92
540MP202	40	ISO40 DIN2080 H109 CM2 PUNTE	2	32	32	109
540MP203	40	ISO40 DIN2080 H129 CM3 PUNTE	3	40	40	129
540MP204	40	ISO40 DIN2080 H152 CM4 PUNTE	4	48	48	152
550MP201	50	ISO50 DIN2080 H96 CM1 PUNTE	1	25	25	96
550MP202	50	ISO50 DIN2080 H113 CM2 PUNTE	2	32	32	113
550MP203	50	ISO50 DIN2080 H133 CM3 PUNTE	3	40	40	133
550MP204	50	ISO50 DIN2080 H163 CM4 PUNTE	4	48	48	163
550MP205	50	ISO50 DIN2080 H193 CM5 PUNTE	5	63	63	193

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE


Tipo Cono

VITE 1

ISO 40 - 50

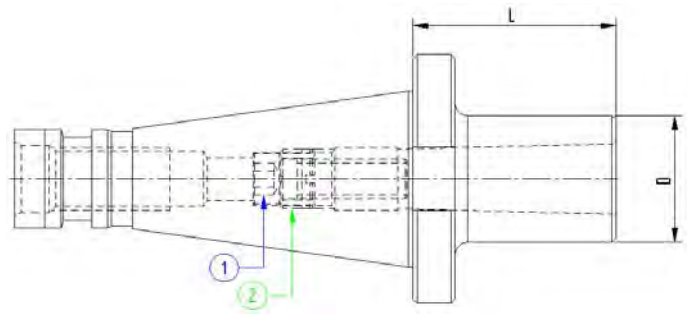
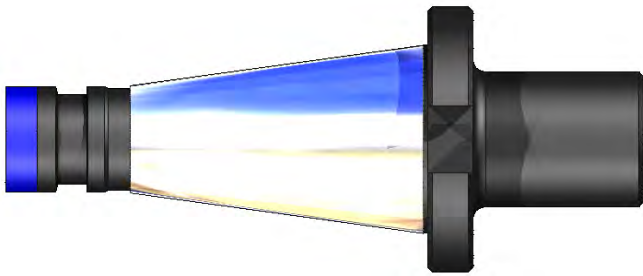
FORNIBILE SOLO SU  
MANDRINO  
COMBINATO




**MANDRINI PORTAFRESE ATTACCO CONO MORSE**  
**MORSE TAPER ADAPTER WITH TREAD**  
**DOUILLES POUR CONE MORSE AVEC TARAUDAGE**  
**ZWISCHENHULSEN FÜR MORSEKEGEL MIT ANZUGSGEWINDE**



**DIN2080**  
**DIN 228-2**



Codice	ISO	Descrizione	MORSE	D	L
540MF101	40	ISO40 DIN2080 H50 CM1 FRESE	1	25	50
540MF102	40	ISO40 DIN2080 H50 CM2 FRESE	2	32	50
540MF103	40	ISO40 DIN2080 H65 CM3 FRESE	3	40	65
540MF104	40	ISO40 DIN2080 H95 CM4 FRESE	4	48	95
550MF101	50	ISO50 DIN2080 H45 CM1 FRESE	1	25	45
550MF102	50	ISO50 DIN2080 H60 CM2 FRESE	2	32	60
550MF103	50	ISO50 DIN2080 H65 CM3 FRESE	3	40	65
550MF104	50	ISO50 DIN2080 H65 CM4 FRESE	4	48	65
550MF105	50	ISO50 DIN2080 H120 CM5 FRESE	5	63	120

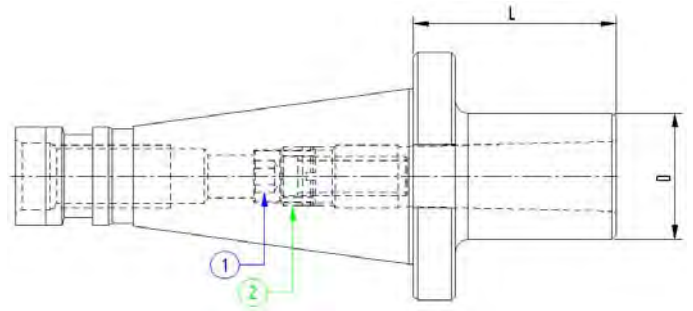
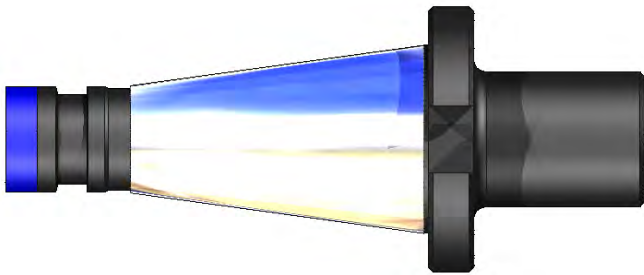
**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	HSK	VITE (1)	Q.tà	BOCCOLA (2)	Q.tà
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ISO 40 - 50	CM	Part Number	Q.tà	Part Number	Q.tà
	CM1	110603501	1	-	1
	CM2	111003014	1	121500802	1
	CM3	111204003	1	122000903	1
	CM4	111604514	1	122501204	1
	CM5	112005003	1	123301205	1



Codice	ISO	Descrizione	MORSE	D	L
540MF201	40	ISO40 DIN2080 H115 CM1 FRESE	1	25	115
540MF202	40	ISO40 DIN2080 H115 CM2 FRESE	2	32	115
540MF203	40	ISO40 DIN2080 H115 CM3 FRESE	3	40	115
540MF204	40	ISO40 DIN2080 H165 CM4 FRESE	4	48	165
550MF201	50	ISO50 DIN2080 H115 CM1 FRESE	1	25	115
550MF202	50	ISO50 DIN2080 H115 CM2 FRESE	2	32	115
550MF203	50	ISO50 DIN2080 H115 CM3 FRESE	3	40	115
550MF204	50	ISO50 DIN2080 H165 CM4 FRESE	4	48	165
550MF205	50	ISO50 DIN2080 H200 CM5 FRESE	5	63	200

**SU RICHIESTA LUNGHEZZE FINO A 350mm**

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    HSK    **VITE (1)**    Q.tà    **BOCCOLA (2)**    Q.tà



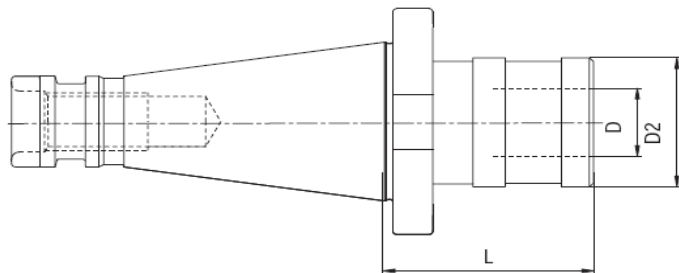
ISO 40 - 50	CM	Part Number	Q.tà	Part Number	Q.tà
	CM1	110603501	1	-	1
	CM2	111003014	1	121500802	1
	CM3	111204003	1	122000903	1
	CM4	111604514	1	122501204	1
	CM5	112005003	1	123301205	1



MANDRINI PORTAMASCHI A CAMBIO RAPIDO  
 QUICK CHANGE TAP HOLDER  
 MANDRINS DE TARAUDAGE A CHANGEMENT RAPID  
 GEWINDE -SCHNELLWECHSELFUTTER



**DIN 2080**

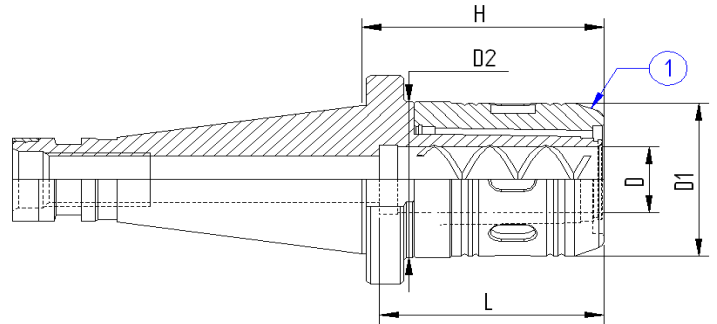


Codice	ISO	Descrizione	D	D2	L
540PCRM1	40	DIN2080 ISO40 M./PORTAM./C/R H52 GR.1	19	36	52
540PCRM2	40	DIN2080 ISO40 M./PORTAM./C/R H77 GR.2	31	53	77
550PCRM2	50	DIN2080 ISO50 M./PORTAM./C/R H79 GR.2	31	53	79

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**





Codice	ISO	Descrizione	D	D1	D2	L	H
540FS120	40	DIN2080 ISO40 F. SERR. Ø20 H65	20	46	47	60	65
540FS132	40	DIN2080 ISO40 F. SERR. Ø32 H80	32	62	63	80	80
550FS120	50	DIN2080 ISO50 F. SERR. Ø20 H70	20	46	47	60	70
550FS132	50	DIN2080 ISO50 F. SERR. Ø32 H75	32	62	63	80	75

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHOR**



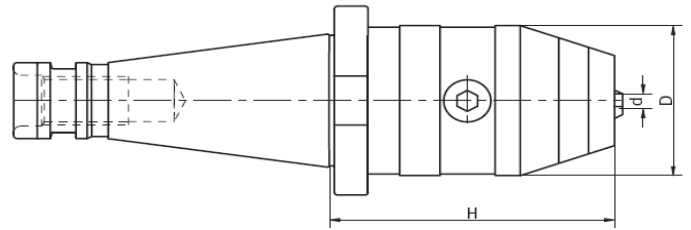
RIF. PAGINA **300**



MANDRINI INTEGRALI CON CHIAVE ESAGONALE  
 DRILL CHUCK WITH EXAG-KEY LOCK SYSTEM  
 MANDRINS MONOBLOC-SERRAGE PAR CLE 6 PANS  
 NC-KURZBOHRFUTTER-SPANNEN DURCH 6 - KANTSCHLUSSEL

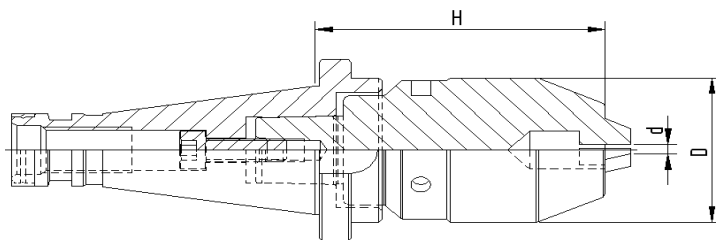


# DIN 2080



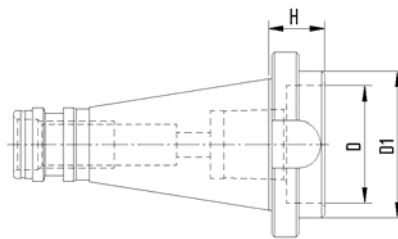
Codice	ISO	Descrizione	d	D	H
540MA013	40	DIN2080 ISO40 M./AUTOS. H85 D13	1-13	50	85
540MA016	40	DIN2080 ISO40 M./AUTOS. H90 D16	3-16	50	90
550MA013	50	DIN2080 ISO50 M./AUTOS. H95 D13	1-13	50	95
550MA016	50	DIN2080 ISO50 M./AUTOS. H100 D16	3-16	50	100

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

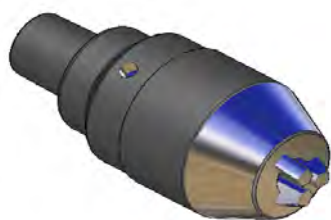


Codice	ISO	Descrizione	d	D	H
540MPI13	40	DIN2080 ISO40 M./PORTAP./ 1-13 H90	1-13	50	90
540MPI16	40	DIN2080 ISO40 M./PORTAP./ 3-16 H100	3-16	57	100
550MPI13	50	DIN2080 ISO50 M./PORTAP./ 1-13 H85	1-13	50	85
550MPI16	50	DIN2080 ISO50 M./PORTAP./ 3-16 H90	3-16	57	90

**MANDRINI DI RICAMBIO - REPLACEMENT DRILL CHUCK HEADS -  
MANDRINS DE RECHANGE - ERSATZTEILE BOHRFUTTER**



Codice	ISO	Descrizione	D	D1	H
540CPI13	40	DIN2080 ISO40 SOLO MANDRINO 1-13	40	50	21
540CPI16	40	DIN2080 ISO40 SOLO MANDRINO 3-16	44	50	26
550CPI13	50	DIN2080 ISO50 SOLO MANDRINO 1-13	40	50	16
550CPI16	50	DIN2080 ISO50 SOLO MANDRINO 3-16	44	-	15



Codice	Descrizione
913INS01	INSERTO 1-13
916INS01	INSERTO 3-16

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIÈCES DETACHEES - ERSATZTEILE**

ISO	VITE	Q.tà
40	110802501	1
50	110803501	1

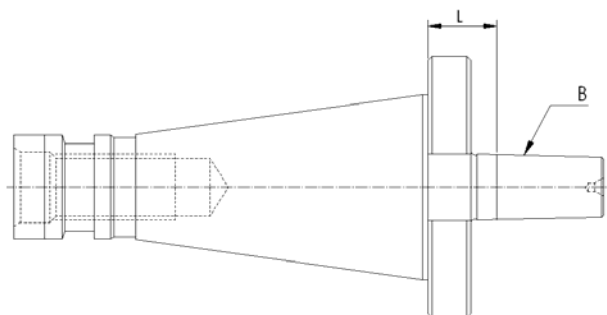
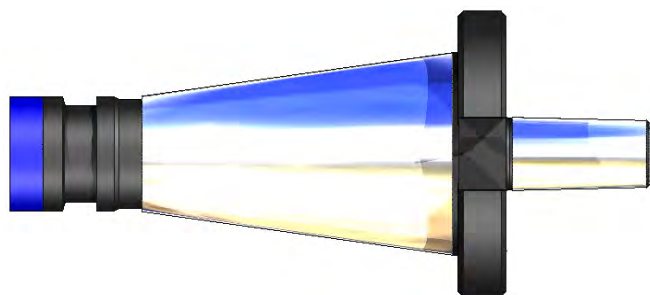


ATTACCO PER MANDRINI PORTAPUNTE  
ARBORS FOR DRILL CHUCK  
ARBRES POUR MANDRINS DE PERCAGE  
BOHRFUTTERAUFNAHMEN



**DIN 2080**

**DIN 1835 B**



<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>B</b>	<b>L</b>
540MPP12	40	ISO40 PORTAPUNTE H18 B12	12	18
540MPP16	40	ISO40 PORTAPUNTE H18 B16	16	18
540MPP18	40	ISO40 PORTAPUNTE H18 B18	18	18
550MPP12	50	ISO50 PORTAPUNTE H20 B12	12	20
550MPP16	50	ISO50 PORTAPUNTE H20 B16	16	20
550MPP18	50	ISO50 PORTAPUNTE H20 B18	18	20

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----



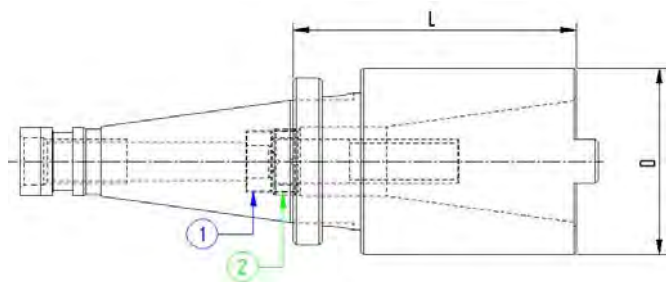
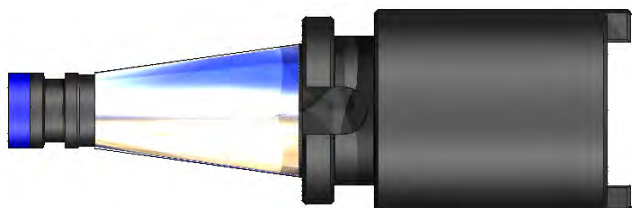


MANDRINI RIDUZIONE DA DIN2080 A DIN2080/DIN69871/ MAS403BT  
 ISO TAPER ADAPTORS  
 DOUILLES INTERMEDIAIRES SA X SA  
 ZWISCHENHULSEN SK X SK



**DIN 2080**



**DIN 1835 B**

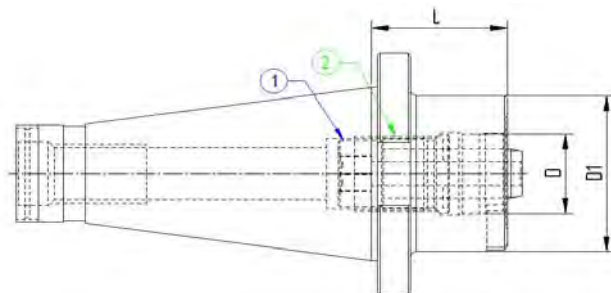
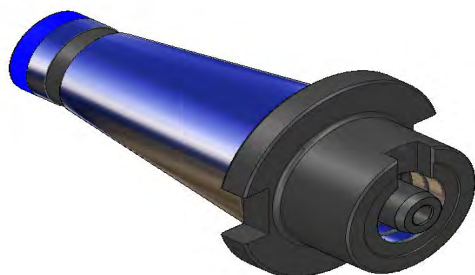


Codice	ISO	Descrizione	Rid. ISO	D	L
540ISO30	40	ISO40 RIDUZIONE H50 ISO30	30	50	50
540ISO40	40	ISO40 RIDUZIONE H100 ISO40	40	68	100
550ISO30	50	ISO50 RIDUZIONE H16 ISO30	30	50	16
550ISO40	50	ISO50 RIDUZIONE H63 ISO40	40	78	63
550ISO50	50	ISO50 RIDUZIONE H100 ISO50	50	100	100

**----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----**

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ISO 40 - 50	VITE	Q.tà	GHIERA	Q.tà
				
30	111205501	1	122000603	1
40	111606514	1	122400903	1
50	112408504	1	124002009	1



Codice	ISO	Descrizione	D	D1	L
540VL150	40	DIN2080 ISO40 MODULARE 50 H50	27	50	50
540VL163	40	DIN2080 ISO40 MODULARE 63 H50	32	63	50
550VL050	50	DIN2080 ISO50 MODULARE 50 H27	27	50	27
550VL063	50	DIN2080 ISO50 MODULARE 63 H27	32	63	27
550VL080	50	DIN2080 ISO50 MODULARE 80 H27	32	80	27
550VL150	50	DIN2080 ISO50 MODULARE 50 H50	27	50	50
550VL163	50	DIN2080 ISO50 MODULARE 63 H50	32	63	50
550VL180	50	DIN2080 ISO50 MODULARE 80 H50	32	80	50

----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

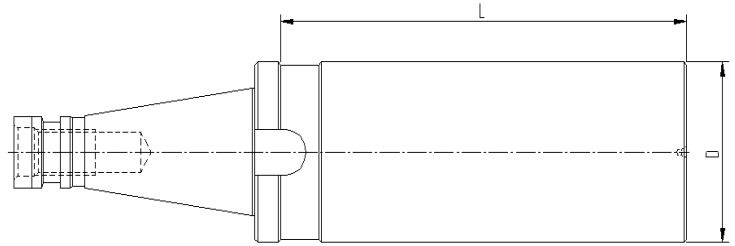
Diam.	VITE	Q.tà	BOCCOLA	Q.tà
50	111604011	1	122502007	1
63	112005012	1	123002408	1
80	112005012	1	123002408	1



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDER WITH SOFT SHANK  
 BARRES D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SCHAFT



**DIN 2080**



<b>Codice</b>	<b>ISO</b>	<b>Descrizione</b>	<b>D</b>	<b>L</b>
540ST263	40	ISO40 STELO TENERO D63x250	63	250
550ST397	50	ISO50 STELO TENERO D97x315	97	315

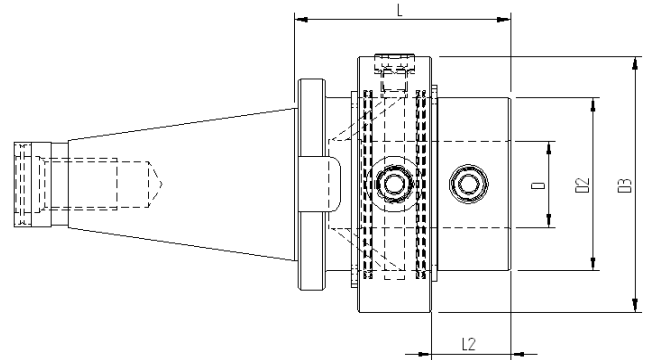
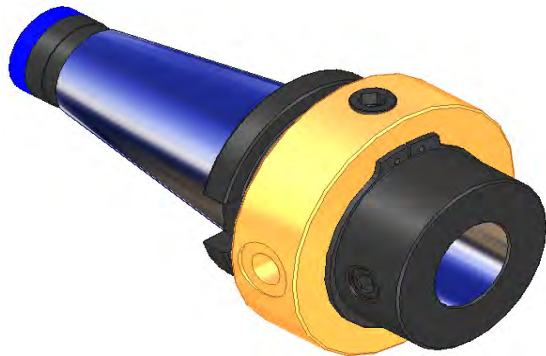
----- Secondo fattibilità, fornibili su richiesta con cono ISO 30 -----



DISTRIBUTORE PER RIFREGERAZIONE INTERNA  
 DISTRIBUTOR FOR INTERNAL REFRIGERATION  
 DISTRIBUTION POUR REFRIGERATION INTERNE  
 DREHVERTEILER FÜR INNERE KÜHLUNG

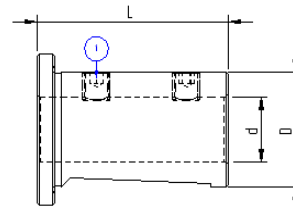


**DIN 2080**



Codice	ISO	Descrizione	L	D	D2	D3	L2
540DRB40	40	ISO40 DIN2080 DISTRIB.ROTANTE D.40	100	40	80	118	35
550DRB40	50	ISO50 DIN2080 DISTRIB.ROTANTE D.40	100	40	80	118	36

**ACCESSORI - ACCESSORIES - ACCESSIRES - ZUBEHOR**



Codice	ISO	Descrizione	L	D	d
932RCD14	40	RIDUZIONE CILINDRICA D.32/14	55	32	14
932RCD16	40	RIDUZIONE CILINDRICA D.32/16	55	32	16
932RCD18	40	RIDUZIONE CILINDRICA D.32/18	55	32	18
932RCD20	40	RIDUZIONE CILINDRICA D.32/20	55	32	20
932RCD25	40	RIDUZIONE CILINDRICA D.32/25	55	32	25
940RCD16	50	RIDUZIONE CILINDRICA D.40/16	55	40	16
940RCD20	50	RIDUZIONE CILINDRICA D.40/20	55	40	20
940RCD25	50	RIDUZIONE CILINDRICA D.40/25	60	40	25
940RCD32	50	RIDUZIONE CILINDRICA D.40/32	65	40	32

Tipo Cono    Ø    **GRANO**    Q.tà

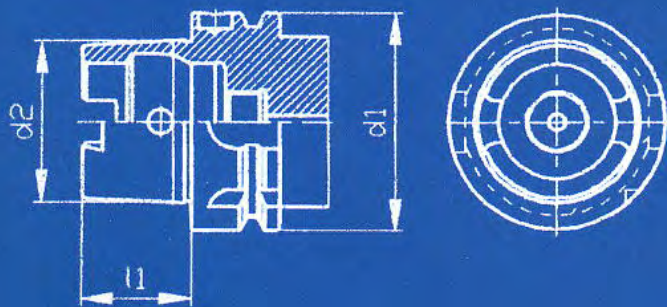


ISO 40	14	100801004	2
	16	100801004	2
	18	100800804	2
	20	100800604	2
	25	100800604	2
ISO 50	16	100800604	1
	20	100800604	1
	25	100800604	1
	32	-	-

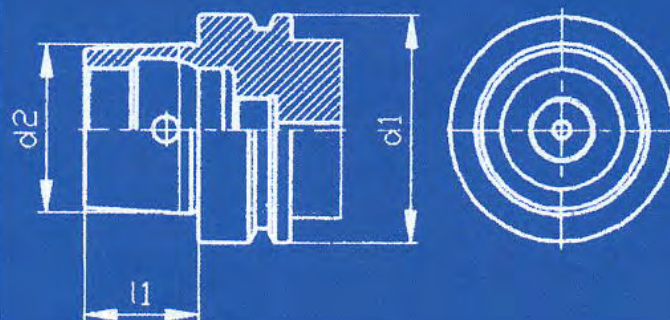
HSK 50/A



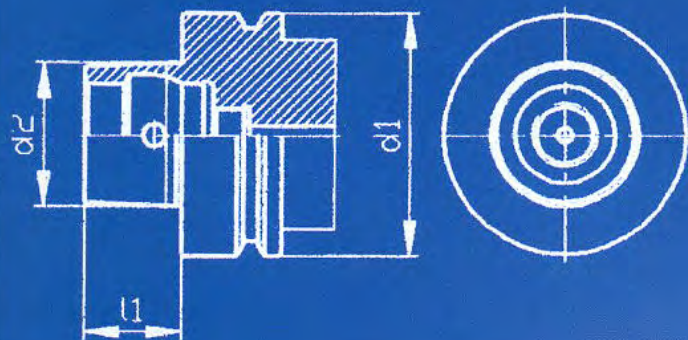
HSK A



HSK E



HSK F

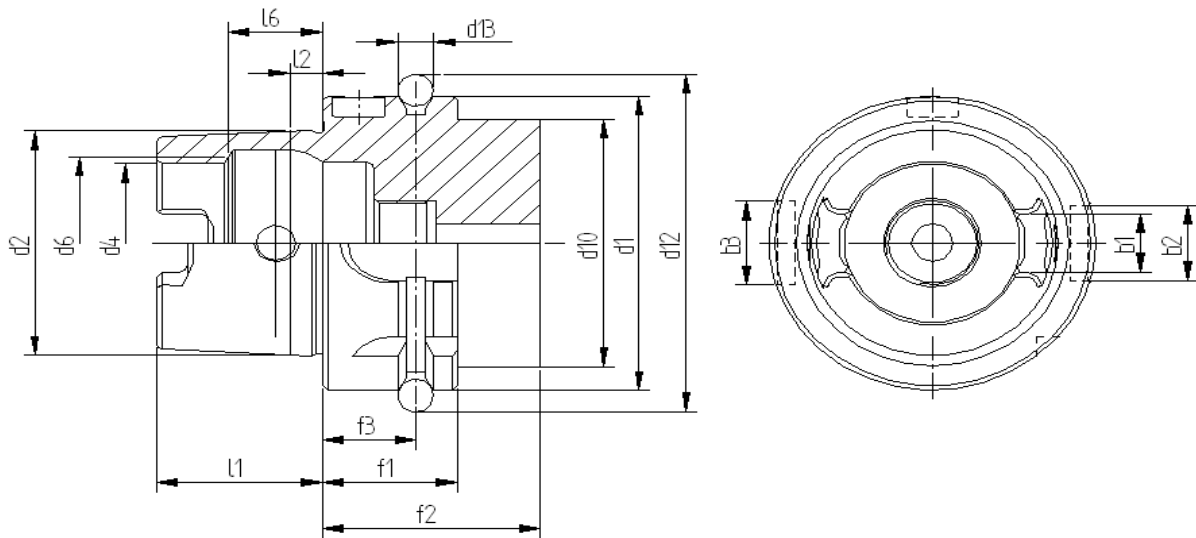


HSK A/E

d1 Nominal dia.	d2 Taper dia.	l1 Taper length
32	24	16
40	30	20
50	38	25
63	48	32
100	75	50

HSK F

d1 Nominal dia.	d2 Taper dia.	l1 Taper length
40	24	16
50	30	20
63	38	25
100	60	40



	HSK 32	HSK 40	HSK 50	HSK 63	HSK 100
b1	7,05	8.05	10.54	12,54	20.02
b2	7	9	12	16	20
b3	9	11	14	18	22
d1	32	40	50	63	100
d2	24	30	38	48	75
d4	17	21	26	34	53
d6	19	23	29	37	58
d10	26	34	42	53	85
d12	37	45	59.3	72,3	109.75
d13	4	4	7	7	7
f1	20	20	26	26	29
f2	35	35	42	42	45
f3	16	16	18	18	20
l1	16	20	25	32	50
l2	3,2	4	5	6,3	10
l6	8,92	11.42	14.13	18,13	28.56

**Forma A**



- Usato su centri di lavoro, fresatrici e macchine speciali con cambio utensile automatico.
- Adduzione refrigerante centrale.
- Coppia trasmessa con due chiavette al fondo della sede conica.
- Tacche di riferimento sulla flangia per riferimento posizione tagliente. Foro di predisposizione al sistema di riconoscimento a norme DIN 69873 sull'esterno flangia.

**Form A**



- Used on machining centres, milling machines, turning machines special machines with automatic tool change.
- Central, axial coolant supply through coolant tube.
- Torque transmission via two key slots at end of taper.
- Two slots on collar for tool magazine, location edge. Hole for data carrier DIN 69873 in collar.

**Form A**



- Anwendung für Bearbeitungszentren, Fräsmaschinen, Drehmaschinen, Sondermaschinen mit automatischem Werkzeugwechsel.
- Zentrale, axiale Kühlmittelzufuhr über Kühlmittelrohr.
- Drehmomentübertragung über zwei Mitnehmernuten am Kegelumlauf.
- Zwei Bundnuten für Werkzeugmagazin, Positionskerbe.
- Bohrung für Datenträger DIN69873 im Bund.
- Balluffchip

**Forme A**



- Utilisation sur les centre d'usinage, les fraiseuses, les machines spéciales à changement d'outils automatique.
- Alimentation centrale, axiale du liquide de lubrification par tube d'arrosage.
- Transmission du couple par deux gorges d'entraînement à l'extrémité du cône.
- Deux gorges magasin à outils, entaille de positionnement, perçage pour support de données DIN69873 dans l'épaulement.

**MANDRINI PAGNONI CON ATTACCO HSK**
**DATI TECNICI**


TUTTI I MANDRINI PORTAUTENSILI PAGNONI VENGONO PRODOTTI SECONDO LE NORMATIVE DIN  
 QUESTE NORMATIVE PREVEDONO LE STESSE CLASSI DI TOLLERANZA PER GLI ATTACCHI DIN69893 A+E+F

**TOLLERANZA DEL CONO**

HSK	L1	L2	D.A.	D.B.	B (only type A)
32 A	3,02	7.03	24 + 0.005 + 0.007	23,27 + 0.003 + 0.005	7.05 ± 0.04
40 A+E	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005	8.05 ± 0.04
50 A+E	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006	10.54 ± 0.04
50 F	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005	/
63 A+E	6,03	14.07	48 + 0.007 + 0.0011	46,53 + 0.003 + 0.007	12.54 ± 0.04
63 F	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006	/
100 A	10	24	75 + 0.009 + 0.0015	72,6 + 0.003 + 0.009	20.02 ± 0.04

**COASSIALITA' PORTAPINZE**

La norma DIN69882-6 ammette un'errore massimo di 0.005 mm. per i portapinze  
 DIN6499.

**COASSIALITA' PORTAFRESE FISSI E COMBINATI**

I portafrese fissi e combinati rispondono ai criteri prescritti dalla norma  
 DIN69882-2, la quale prevede per i Ø 16/22/27/32 una coassialità di 0,01.

**COASSIALITA' PORTAFRESE WELDON**

Secondo la normativa DIN 69882-4 il portafrese WELDON deve rispondere ai  
 seguenti requisiti:

Foro: tolleranza H5 e Coassialità: 0.005

**EQUILIBRATURA**

Tutti i nostri mandrini presenti in questa categoria sono prebilanciati in classe G 6,3 a 8000 rpm min-1 o bilanciati a 15.000 rpm min-1.

**DATI COSTRUTTIVI**

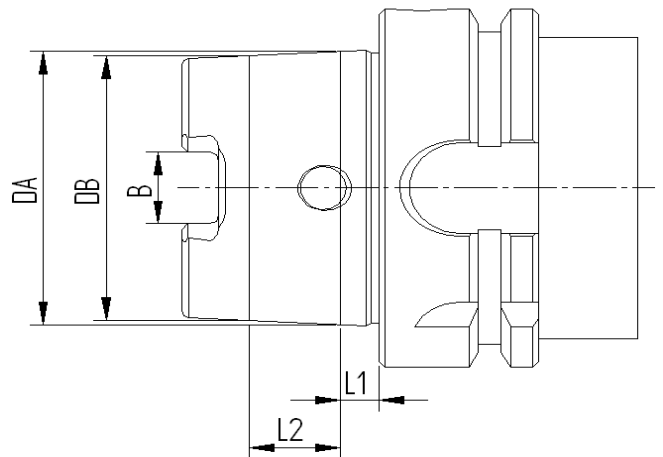
- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4 - 0,5 mm.
- Temprati e rinvenuti.
- Durezza HRC 58 ± 2 resistenza 800-1000 N / mm<sup>2</sup>.
- Bruniti
- Finitura di rettifica interna, esterna e nelle filettature delle ghiere chiudipinza.
- Collaudati 100% con strumenti di misura certificati.

**EQUILIBRATURA MANDRINI PER ALTE VELOCITA'**

Eventuali bilanciature supplementari sui nostri mandrini vengono eseguite su richiesta cliente, con una classe massima di bilanciatura di G 2,5 a 25.000 rpm.

**DATI COSTRUTTIVI PER MANDRINI PER ALTE VELOCITA'**

- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4 - 0,5 mm.
- Temprati e rinvenuti.
- Durezza HRC 58 ± 2 resistenza 800-1000 N / mm<sup>2</sup>.
- Bruniti
- Finitura di rettifica interna, esterna del corpo.
- Rettifica parte anteriore e nelle filettature delle ghiere chiudipinza.
- Collaudati 100% con strumenti di misura certificati e forniti con certificato di bilanciatura.







ALL PAGNONI TOOLHOLDERS ARE MANUFACTURED ACCORDING TO DIN NORM.  
THESE NORMS PROVIDE THE SAME CLASS OF TOLERANCE FOR THE ATTACHMENT DIN69893 A+E+F

### CONE'S TOLERANCE

HSK	L1	L2	D.A.	D.B.	B (only type A)
32 A	3,02	7.03	24 + 0.005 + 0.007	23,27 + 0.003 + 0.005	7.05 ± 0.04
40 A+E	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005	8.05 ± 0.04
50 A+E	3,025	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006	10.54 ± 0.04
50 F	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005	/
63 A+E	6,03	14.07	48 + 0.007 + 0.0011	46,53 + 0.003 + 0.007	12.54 ± 0.04
63 F	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006	/
100 A	10	24	75 + 0.009 + 0.0015	72,6 + 0.003 + 0.009	20.02 ± 0.04

### COLLET CHUCK'S RUNOUT ACCURACY

The norm DIN69882-6 permits a runout error of 0.005 mm. for DIN6499 collet chucks.

### SHELL END MILL ADAPTOR'S RUNOUT ACCURACY

Our shell end mill adaptors meet the requirements of the norm DIN69882-2, which prescribes for diameters Ø 16/22/ 27/32 a runout accuracy of 0,01.

### WELDON END MILL HOLDER'S RUNOUT ACCURACY

According to norm DIN 69882-4 WELDON end end mill holders have to meet the following requirements:

Bore: H5 and runout accuracy: 0.005

### BALANCING

All our toolholders of this category are pre-balanced in grade G 6,3 at 8000 rpm or balanced at 15.000 rpm.

### CONSTRUCTIVE FEATURES

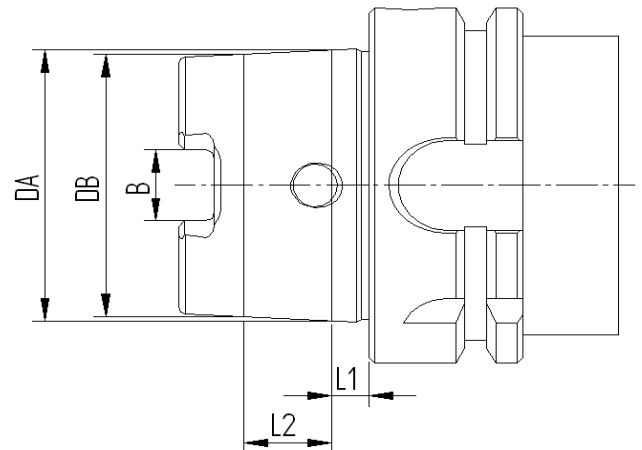
- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm.
- Hardened-Tempered.
- Hardness HRC 58 ± 2, strenght 800-1000 N / mm2.
- Black oxidized.
- Thread of collet nuts, internal and external diameters are completely grinding finished
- Tested 100% with certified measuring instruments.

### HIGH-SPEED BALANCING TOOLHOLDERS

Any additional balancing on our toolholders are carried out on client request, with a class maximum of balancing of 25.000 rpm grade G 2,5.

### CONSTRUCTIVE FEATURES FOR HIGH-SPEED TOOLHOLDERS

- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm.
- Hardened-Tempered.
- Hardness HRC 58 ± 2, strenght 800-1000 N / mm2.
- Black oxidized.
- Internal and external grinding finished of the cone
- Grinding finish on the front side and on the thread of collet nuts.
- Tested 100% with certified measuring instruments and supplied with balancing certificate.



**STEILGEKELAUFNAMEN PAGNONI HSK**
**TECHNISCHE DATEN**


ALLE PAGNONI - STEILGEKELAUFNAMEN WERDEN NACH DEN DIN - NORMEN ANGEFERTIGT.

DIESE NORMEN SEHEN DIE GLEICHEN TOLERANZKLASSEN FÜR DIE DIN69893 A+E+F AUFNAHMEN VOR.

**KEGELSCHAFTTOLERANZ**

HSK	L1	L2	D.A.	D.B.	B (only type A)
32 A	3,02	7.03	24 $\begin{matrix} + 0.005 \\ + 0.007 \end{matrix}$	23,27 $\begin{matrix} + 0.003 \\ + 0.005 \end{matrix}$	7.05 $\pm 0.04$
40 A+E	4	9.05	30 $\begin{matrix} + 0.005 \\ + 0.007 \end{matrix}$	29,05 $\begin{matrix} + 0.003 \\ + 0.005 \end{matrix}$	8.05 $\pm 0.04$
50 A+E	5	11	38 $\begin{matrix} + 0.006 \\ + 0.009 \end{matrix}$	36,9 $\begin{matrix} + 0.003 \\ + 0.006 \end{matrix}$	10.54 $\pm 0.04$
50 F	4	9.05	30 $\begin{matrix} + 0.005 \\ + 0.007 \end{matrix}$	29,05 $\begin{matrix} + 0.003 \\ + 0.005 \end{matrix}$	/
63 A+E	6,03	14.07	48 $\begin{matrix} + 0.007 \\ + 0.0011 \end{matrix}$	46,53 $\begin{matrix} + 0.003 \\ + 0.007 \end{matrix}$	12.54 $\pm 0.04$
63 F	5	11	38 $\begin{matrix} + 0.006 \\ + 0.009 \end{matrix}$	36,9 $\begin{matrix} + 0.003 \\ + 0.006 \end{matrix}$	/
100 A	10	24	75 $\begin{matrix} + 0.009 \\ + 0.0015 \end{matrix}$	72,6 $\begin{matrix} + 0.003 \\ + 0.009 \end{matrix}$	20.02 $\pm 0.04$

**RUNDLAUFGENAUIGKEIT DER SPANNZANGENAUFNAHME**

Die DIN 69882-6 Norm schreibt eine Rundlaufgenauigkeit zwischen Aussenkegel und Innenkegel/Spanzangensitz für die DIN 6499-Spannzangenaufnahmen von 0,005 vor.

**AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT**

Pagnoni-Aufsteckfräsdorne entsprechen der DIN 69882-2 Norm, die für die  $\emptyset$  16 / 22 / 27 / 32 eine Rundlaufgenauigkeit von 0,01 vorsieht.

**WELDON AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT**

Nach der DIN 69882-4 Norm muß der Weldon - Aufsteckfräsdorne die folgenden Forderungen aufweisen:

Bohrung: toleranz H5

Rundlaufgenauigkeit: 0.005

**WUCHTUNG**

Alle Steilkegelaufnahmen dieser Gruppe sind in Klasse G 6,3 auf 8.000 U/Min -1 vorgewuchtet oder auf 15.000 U/Min -1 gewuchtet.

**KONSTRUKTIONSDATEN**

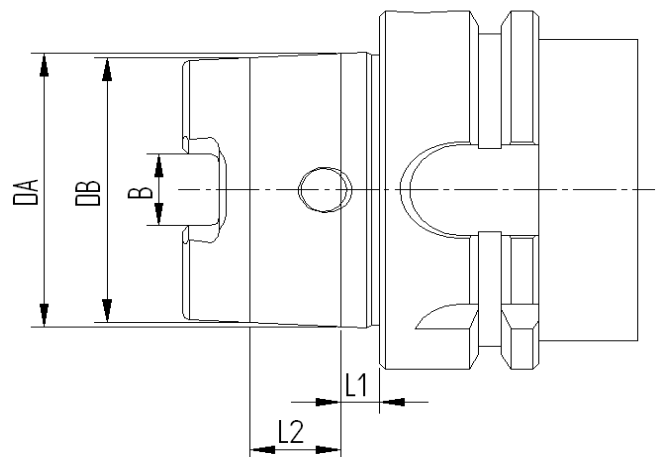
- aus Einastzstahl angefertigt
- in der Einsatztiefe von 0,4 - 0,5 mm.
- gehärtet, angelassen
- Härte HRC 58  $\pm$  2, Festigkeit 800-1000 N / mm<sup>2</sup>.
- Brüniert
- inneres, äußeres Schleifen und am Gewinde der Spannzangennutter.
- 100% durch zertifizierte Meßinstrumente geprüft.

**WUCHTUNG MIT HOCHGESCHWINDIGKEIT**

Auf Anfrage können wir die Werkzeughalter auf maximal G2,5 25.000 U/Min gegen Aufpreis auswuchten.

**KONSTRUKTIONSDATEN**

- aus Einastzstahl angefertigt
- in der Einsatztiefe von 0,4 - 0,5 mm.
- gehärtet, angelassen
- Härte HRC 58  $\pm$  2, Festigkeit 800-1000 N / mm<sup>2</sup>.
- Brüniert
- inneres, äußeres Schleifen des Kegels.
- Schleifen der Vorderseite und am Gewinde der Spannzangennutter.
- 100% durch zertifizierte Meßinstrumente geprüft und mit Wuchtungsprotokoll geliefert.



**MANDRINS PAGNONI AVEC ATTACHEMENT HSK**
**DONNE TECHNIQUES**

TOUS LES MANDRINS PORTE-OUTILS PAGNONI SONT FABRIQUÉS SELON LES NORMES DIN QUI PRÉVOIENT LES MÊMES CLASSES DE TOLÉRANCE POUR LES ATTACHEMENT DIN69893 A+E+F

**TOLLERANCE DU CONE**

HSK	L1	L2	D.A.	D.B.	B (only type A)
32 A	3,02	7.03	24 + 0.005 + 0.007	23,27 + 0.003 + 0.005	7.05 ± 0.04
40 A+E	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005	8.05 ± 0.04
50 A+E	3,025	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006	10.54 ± 0.04
50 F	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005	/
63 A+E	6,03	14.07	48 + 0.007 + 0.0011	46,53 + 0.003 + 0.007	12.54 ± 0.04
63 F	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006	/
100 A	10	24	75 + 0.009 + 0.0015	72,6 + 0.003 + 0.009	20.02 ± 0.04

**COAXIALITÉ PORTE-PINCE**

La norme DIN 69882-6 permet une erreur de 0,005 mm. Maximum pour les porte-pinces DIN 6499.

**COAXIALITÉ PORTE-FRAISES FIXES ET COMBINÉS**

Les porte-fraises fixes et combinés de notre production suivent la spécification de la norme DIN69882-2 qui prévoit pour les diamètres Ø 16 / 22 / 27 / 32 une coaxialité de 0,01.

**COAXIALITÉ PORTE-FRAISES WELDON**

Suivant les spécifications DIN69882-4 les porte-fraises WELDON doivent suivre les conditions suivantes:

Trou: H5 runout  
Coaxialité: 0.005

**EQUILIBRAGE**

La plupart des porte-outils sont pré-équilibrés en classe G 6,3 8.000 Tr/Min -1 ou équilibrés à 15.000 Tr/Min -1.

**ELEMENTS DE CONSTRUCTION**

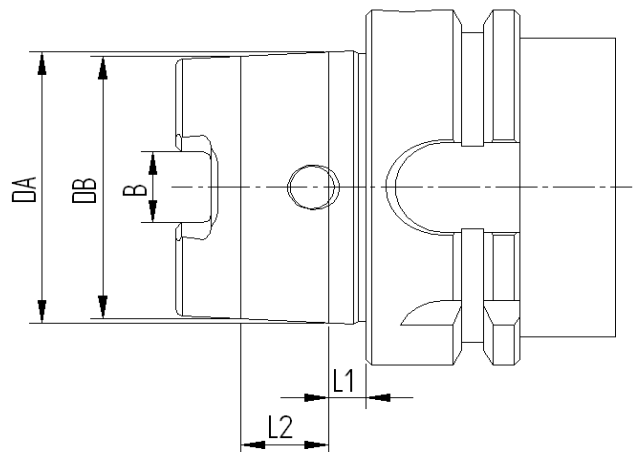
- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 - 0,5 mm.
- Trempé - Revenu.
- Dureté HRC 58 ± 2 résistance 800-1000 N / mm<sup>2</sup>.
- Brunis.
- Rectification du cône intérieur, extérieur et dans le filetage des écrous qui serrent la pince.
- Contrôlés à 100% avec des instruments de mesure certifiés.

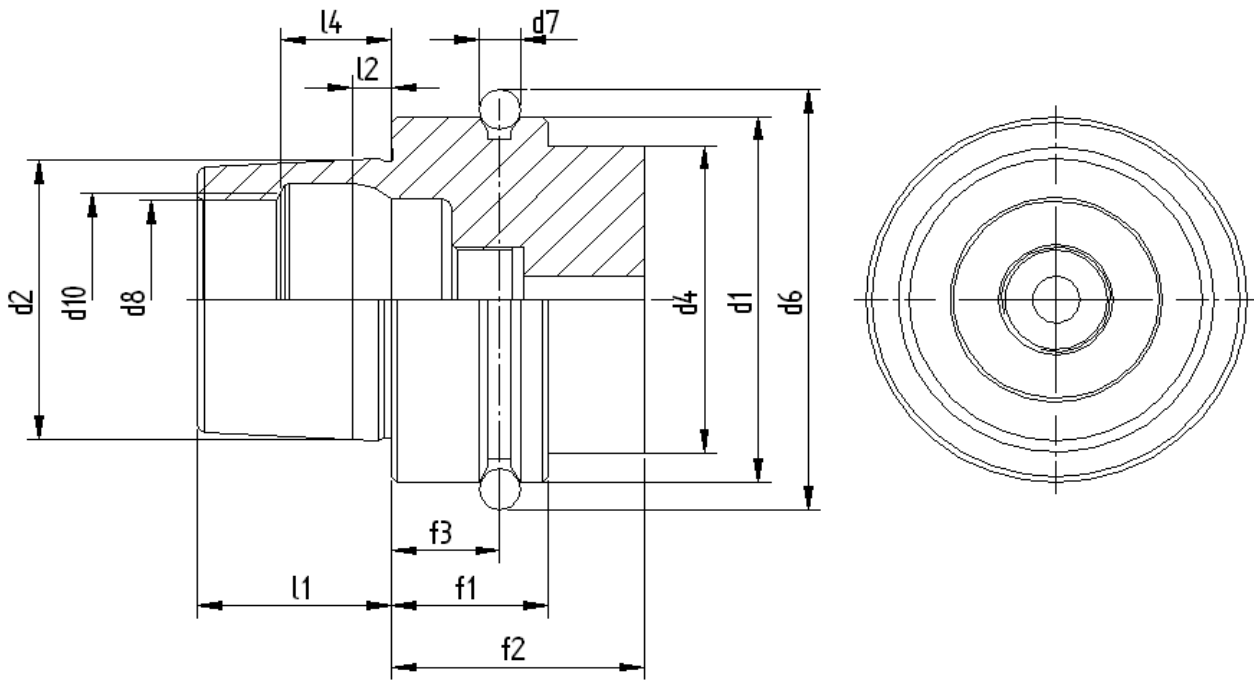
**EQUILIBRAGE MANDRINS POUR HAUTE VITESSE**

Équilibrage éventuels sur nos mandrins sont exécutés sur demande du client, avec une maximum classe de équilibrage de G2,5 à 25.000 rpm.

**ELEMENTS DE CONSTRUCTION POUR MANDRINS HAUTE VITESSE**

- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 - 0,5 mm.
- Trempé - Revenu.
- Dureté HRC 58 ± 2 résistance 800-1000 N / mm<sup>2</sup>.
- Brunis.
- Finition de rectification intérieure, extérieure et du cône.
- Rectification du cône intérieur et dans le filetage des écrous qui serrent la pince.
- Contrôlés à 100% avec des instruments de mesure certifiés et livrés avec un certificat d'équilibrage.





	HSK 50	HSK 63
d1	50	63
d2	38	48
d4	42	53
d6	59.3	72,3
d7	7	7
d8	26	34
d10	29	37
f1	26	26
f2	42	42
f3	18	18
l1	25	32
l2	5	6,3
l4	14.13	18,13

**Forma E**



- Usato su elettromandri e su macchine per il legno.
- Rotazione simmetrica senza chiavette di trascinamento.
- Coppia trasmessa solo per attrito tra le superfici.
- Adduzione refrigerante dal centro.

**Form E**



- Used for high frequency spindles and wood machining.
- Rotationally symmetrical, without key slots.
- Torque transmission via friction resistance.
- Central coolant supply possible through coolant tube.

**Form E**



- Anwendung für Hochfrequenzspindeln, Holzbearbeitungsmaschinen.
- Rotationssymmetrisch, ohne Mitnehmernuten.
- Drehmomentübertragung über Reibschluss.
- Zentrale Kühlmittelzufuhr über Kühlmittelrohr möglich

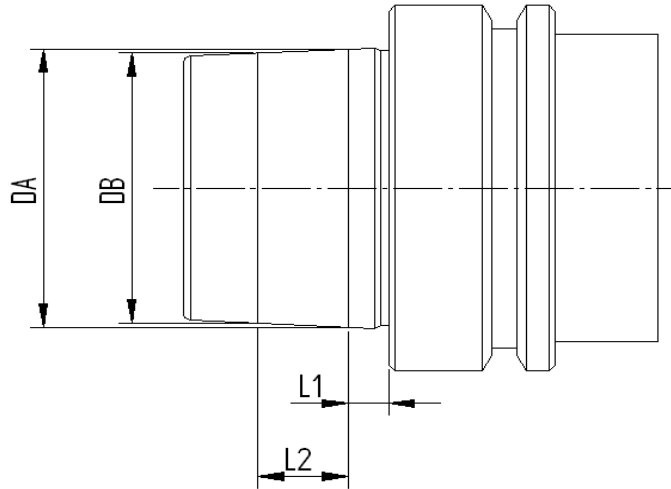
**Forme E**



- Utilisation pour des broches à hautes fréquences, les machines à usiner le bois.
- Symétrie de rotation, sans gorges d'entraînement.
- Transmission du couple par friction.
- Possibilité d'alimentation centrale du liquide de lubrification par tube d'arrosage.

**MANDRINI PAGNONI CON ATTACCO HSK**
**DATI TECNICI**


TUTTI I MANDRINI PORTAUTENSILI PAGNONI VENGONO PRODOTTI SECONDO LE NORMATIVE DIN  
 QUESTE NORMATIVE PREVEDONO LE STESSA CLASSI DI TOLLERANZA PER GLI ATTACCHI DIN69893 A+E+F

**TOLLERANZA DEL CONO**


HSK	L1	L2	D.A.		D.B.	
32 A	3,02	7.03	24	+ 0.005 + 0.007	23,27	+ 0.003 + 0.005
40 A+E	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
50 A+E	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
50 F	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
63 A+E	6,03	14.07	48	+ 0.007 + 0.0011	46,53	+ 0.003 + 0.007
63 F	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
100 A	10	24	75	+ 0.009 + 0.0015	72,6	+ 0.003 + 0.009

**COASSIALITA' PORTAPINZE**

La norma DIN69882-6 ammette un'errore massimo di 0.005 mm. per i portapinze DIN6499.

**COASSIALITA' PORTAFRESE FISSI E COMBINATI**

I portafrese fissi e combinati rispondono ai criteri prescritti dalla norma DIN69882-2, la quale prevede per i Ø 16 / 22 / 27 / 32 una coassialità di 0,01.

**COASSIALITA' PORTAFRESE WELDON**

Secondo la normativa DIN 69882-4 il portafrese WELDON deve rispondere ai seguenti requisiti:

Foro: tolleranza H5

Coassialità: 0.005

**EQUILIBRATURA**

Tutti i nostri mandrini presenti in questa categoria sono prebilanciati in classe G 6,3 a 8000 rpm min-1 o bilanciati a 20.000 rpm min-1.

**DATI COSTRUTTIVI**

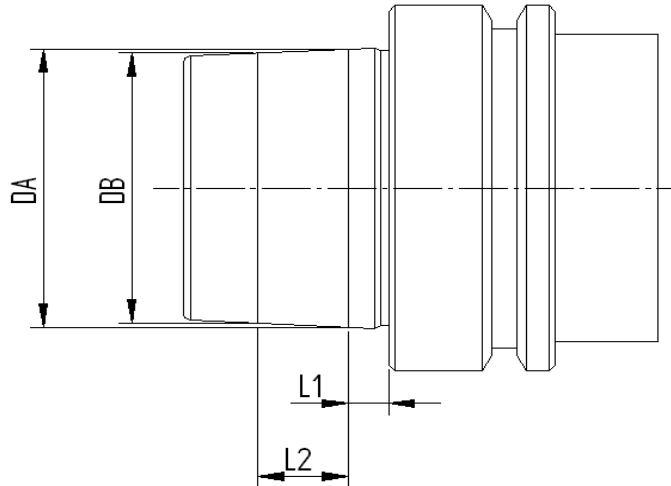
- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4 - 0,5 mm.
- Temprati e rinvenuti.
- Durezza HRC 58 ± 2 resistenza 800-1000 N / mm2.
- Bruniti
- Finitura di rettifica interna, esterna e nelle filettature delle ghiere chiudipinza.
- Collaudati 100% con strumenti di misura certificati.



ALL PAGNONI TOOLHOLDERS ARE MANUFACTURED ACCORDING TO DIN NORMS.

THESE NORMS PROVIDE THE SAME CLASSES OF TOLLERANCE FOR THE ATTACHMENT DIN69893 A+E+F

### CONE'S TOLERANCE



HSK	L1	L2	D.A.		D.B.	
32 A	3,02	7.03	24	+ 0.005 + 0.007	23,27	+ 0.003 + 0.005
40 A+E	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
50 A+E	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
50 F	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
63 A+E	6,03	14.07	48	+ 0.007 + 0.0011	46,53	+ 0.003 + 0.007
63 F	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
100 A	10	24	75	+ 0.009 + 0.0015	72,6	+ 0.003 + 0.009

### COLLET CHUCK'S RUNOUT ACCURACY

The norm DIN69882-6 permits a runout error of 0.005 mm. for DIN6499 collet chucks.

### SHELL END MILL ADAPTOR'S RUNOUT ACCURACY

Our shell end mill adaptors meet the requirements of the norm DIN69882-2, which prescribes for diameters Ø 16 / 22 / 27 / 32 a runout accuracy of 0,01.

### WELDON END MILL HOLDER'S RUNOUT ACCURACY

According to norm DIN 69882-4 WELDON end end mill holders have to meet the following requirements:

Bore: H5

Runout accuracy: 0.005

### BALANCING

All our toolholders of this category are pre-balanced in grade G 6,3 at 8000 rpm or balanced at 20.000 rpm.

### CONSTRUCTIVE FEATURES

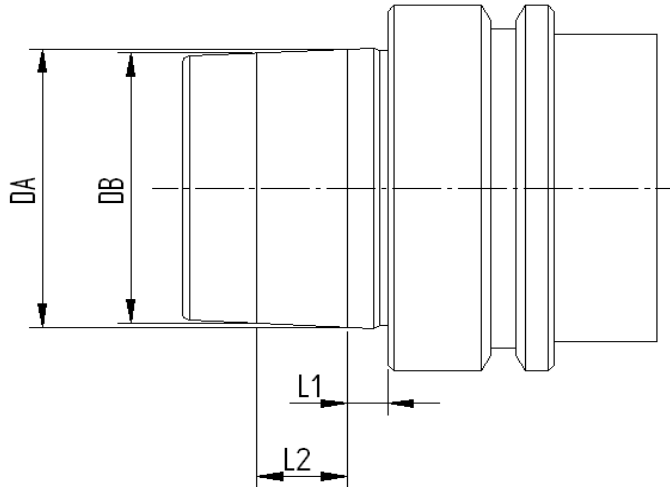
- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm.
- Hardened-Tempered.
- Hardness HRC 58 ± 2, strenght 800-1000 N / mm2.
- Black oxidized.
- Thread of collet nuts, internal and external diameters are completely grinding finished
- Tested 100% with certified measuring instruments.



ALLE PAGNONI - STEILGEKELAUFNHMEN WERDEN NACH DEN DIN - NORMEN ANGEFERTIGT.

DIESE NORMEN SEHEN DIE GLEICHEN TOLERANZKLASSEN FÜR DIE DIN69893 A+E+F AUFNHMEN VOR.

### KEGELSCHAFTTOLERANZ



HSK	L1	L2	D.A.		D.B.	
32 A	3,02	7.03	24	+ 0.005 + 0.007	23,27	+ 0.003 + 0.005
40 A+E	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
50 A+E	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
50 F	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
63 A+E	6,03	14.07	48	+ 0.007 + 0.0011	46,53	+ 0.003 + 0.007
63 F	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
100 A	10	24	75	+ 0.009 + 0.0015	72,6	+ 0.003 + 0.009

### RUNDLAUFGENAUIGKEIT DER SPANNZANGENAUFNAHME

Die DIN 69882-6 Norm schreibt eine Rundlaufgenauigkeit zwischen Aussenkegel und Innenkegel/Spannzangensitz für die DIN 6499 Spannzangenaufnahmen von 0,005 vor.

### AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT

Pagnoni-Aufsteckfräsdorne entsprechen der DIN 69882-2 Norm, die für die  $\varnothing 16 / 22 / 27 / 32$  eine Rundlaufgenauigkeit vom 0,01 vorsieht.

### WELDON AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT

Nach der DIN 69882-4 Norm muß der Weldon - Aufsteckfräsdorn die folgenden Forderungen aufweisen:

Bohrung: toleranz H5

Rundlaufgenauigkeit: 0.005

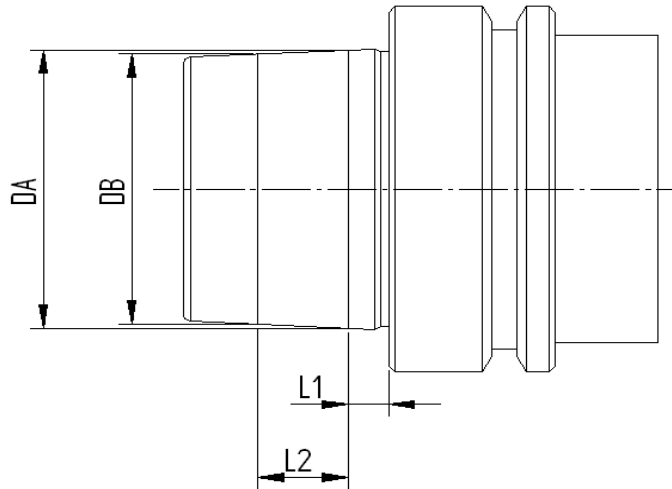
### WUCHTUNG

Alle Steilkegelaufnahmen dieser Gruppe sind in Klasse G 6,3 auf 8.000 U/Min -1 vorgewuchtet oder auf 20.000 U/Min -1 gewuchtet.

### KONSTRUKTIONSDATEN

- aus Einastzstahl angefertigt
- in der Einsatztiefe von 0,4 - 0,5 mm zementiert
- gehärtet, angelassen
- Härte HRC 58  $\pm$  2, Festigkeit 800-1000 N / mm<sup>2</sup>.
- Brüniert
- inneres, äußeres Schleifen und am Gewinde der Spannzangenmutter
- 100% durch zertifizierte Meßinstrumente geprüft.

TOUS LES MANDRINS PORTE-OUTILS PAGNONI SONT FABRIQUÉS SELON LES NORMES DIN QUI PRÉVOIENT LES MÊMES CLASSES DE TOLÉRANCE POUR LES ATTACHEMENT DIN69893 A+E+F

**TOLLERANCE DU CONE**


HSK	L1	L2	D.A.		D.B.	
32 A	3,02	7.03	24	+ 0.005 + 0.007	23,27	+ 0.003 + 0.005
40 A+E	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
50 A+E	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
50 F	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
63 A+E	6,03	14.07	48	+ 0.007 + 0.0011	46,53	+ 0.003 + 0.007
63 F	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
100 A	10	24	75	+ 0.009 + 0.0015	72,6	+ 0.003 + 0.009

**COAXIALITÉ PORTE-PINCE**

La norme DIN 69882-6 permet une erreur de 0,005 mm. Maximum pour les porte-pinces DIN 6499.

**COAXIALITÉ PORTE-FRAISES FIXES ET COMBINÉS**

Les porte-fraises fixes et combinés de notre production suivent la spécification de la norme DIN69882-2 qui prévoit pour les diamètres 16 / 22 / 27 / 32 une coaxialité de 0,01.

**COAXIALITÉ PORTE-FRAISES WELDON**

Suivant les spécifications DIN69882-4 les porte-fraises WELDON doivent suivre les conditions suivantes:

Trou: H5

Coaxialité: 0.005

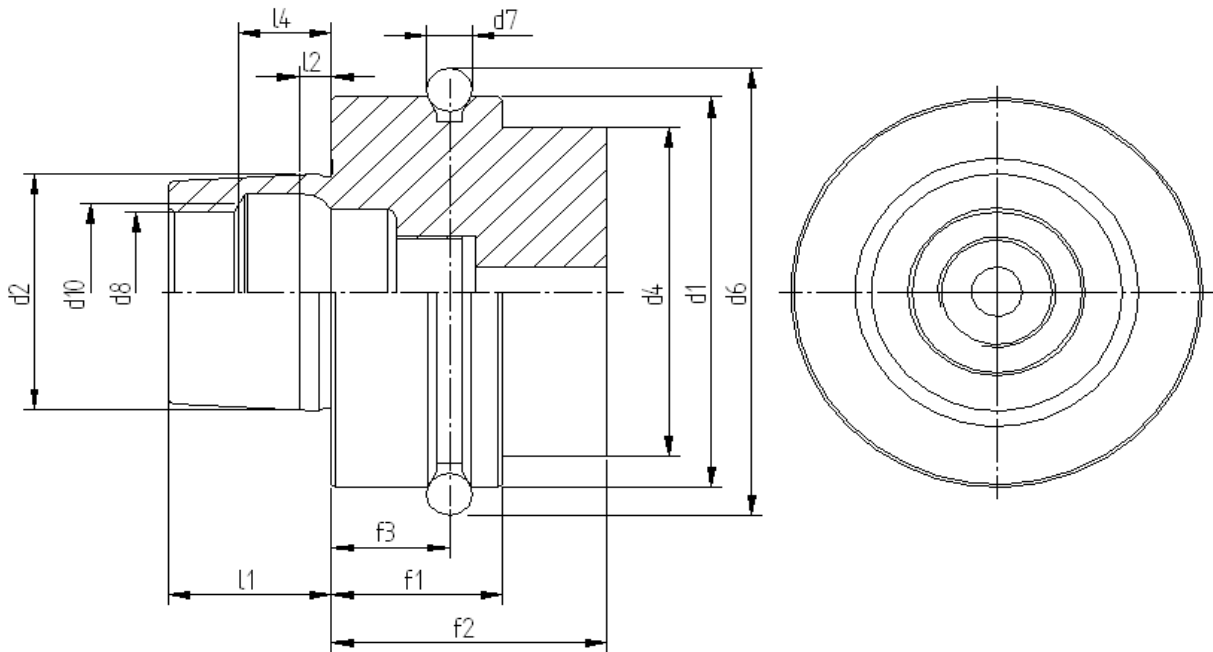
**EQUILIBRAGE**

La plupart des porte-outils sont pré-équilibrés en classe G 6,3 8.000 Tr/Min -1 ou équilibrés à 20.000 Tr/Min -1.

**ELEMENTS DE CONSTRUCTION**

- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 - 0,5 mm.
- Trempé - Revenu.
- Dureté HRC 58 ± 2 résistance 800-1000 N / mm<sup>2</sup>.
- Brunis.
- Retification du cône intérieur, extérieur et dans le filetage des écrous qui serrent la pince.
- Contrôlés à 100% avec des instruments de mesure certifiés.





	HSK 50	HSK 63
d1	50	63
d2	30	38
d4	42	53
d6	59.3	72,3
d7	7	7
d8	21	26
d10	23	29
f1	26	26
f2	42	42
f3	18	18
l1	20	25
l2	4	5
l4	11.42	14,13

**Forma F**



- Usato su elettromandrini e su macchine per il legno.
- Con flangia maggiorata.
- Adduzione refrigerante dal centro.

**Form F**



- Used for high frequency spindles and wood machining.
- With larger collar.
- Central coolant supply possible through coolant tube.

**Form F**



- Anwendung für Hochfrequenzspindeln, Holzbearbeitungsmaschinen.
- Mit vergrößertem Bund.
- Zentrale Kühlmittelzufuhr über Kühlmittelrohr möglich.

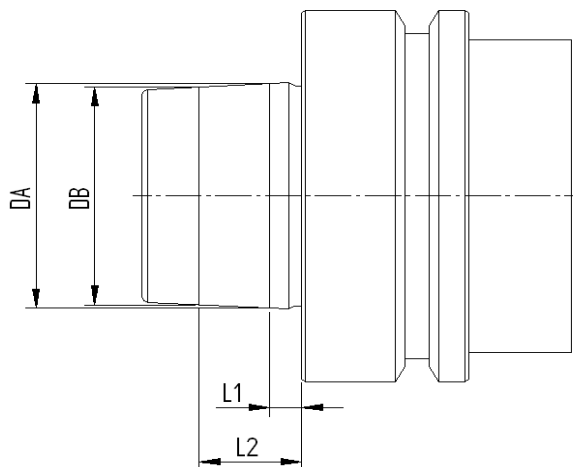
**Forme F**



- Utilisation pour des broches à hautes fréquences, les machines à usiner le bois.
- Avec épaulement agrandi.
- Possibilité d'alimentation centrale du liquide de lubrification par tube d'arrosage.



TUTTI I MANDRINI PORTAUTENSILI PAGNONI VENGONO PRODOTTI SECONDO LE NORMATIVE DIN  
 QUESTE NORMATIVE PREVEDONO LE STESSE CLASSI DI TOLLERANZA PER GLI ATTACCHI DIN69893 A+E+F

**TOLLERANZA DEL CONO**


HSK	L1	L2	D.A.	D.B.
32 A	3,02	7.03	24 + 0.005 + 0.007	23,27 + 0.003 + 0.005
40 A+E	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005
50 A+E	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006
50 F	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005
63 A+E	6,03	14.07	48 + 0.007 + 0.0011	46,53 + 0.003 + 0.007
63 F	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006
100 A	10	24	75 + 0.009 + 0.0015	72,6 + 0.003 + 0.009

**COASSIALITA' PORTAPINZE**

La norma DIN69882-6 ammette un'errore massimo di 0.005 mm. per i portapinze DIN6499.

**COASSIALITA' PORTAFRESE FISSI E COMBINATI**

I portafrese fissi e combinati rispondono ai criteri prescritti dalla norma DIN69882-2, la quale prevede per i Ø 16 / 22 / 27 / 32 una coassialità di 0,01.

**COASSIALITA' PORTAFRESE WELDON**

Secondo la normativa DIN 69882-4 il portafrese WELDON deve rispondere ai seguenti requisiti:

Foro: tolleranza H5

Coassialità: 0.005

**EQUILIBRATURA**

Tutti i nostri mandrini presenti in questa categoria sono prebilanciati in classe G 6,3 a 8000 rpm min-1 o bilanciati a 20.000 rpm min-1.

**DATI COSTRUTTIVI**

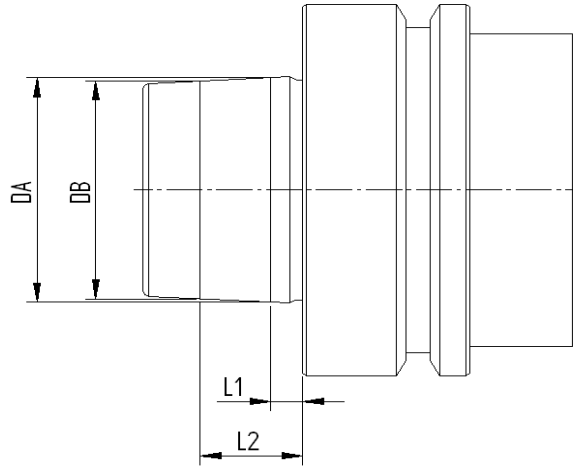
- Costruiti in acciaio da cementazione legato.
- Cementati con profondità 0,4 - 0,5 mm.
- Temprati e rinvenuti.
- Durezza HRC 58 ± 2 resistenza 800-1000 N / mm2.
- Bruniti
- Finitura di rettifica interna, esterna e nelle filettature delle ghiere chiudipinza.
- Collaudati 100% con strumenti di misura certificati.



ALL PAGNONI TOOLHOLDERS ARE MANUFACTURED ACCORDING TO DIN NORMS.

THESE NORMS PROVIDE THE SAME CLASSES OF TOLLERANCE FOR THE ATTACHMENT DIN69893 A+E+F

### CONE'S TOLERANCE



HSK	L1	L2	D.A.		D.B.	
32 A	3,02	7.03	24	+ 0.005 + 0.007	23,27	+ 0.003 + 0.005
40 A+E	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
50 A+E	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
50 F	4	9.05	30	+ 0.005 + 0.007	29,05	+ 0.003 + 0.005
63 A+E	6,03	14.07	48	+ 0.007 + 0.0011	46,53	+ 0.003 + 0.007
63 F	5	11	38	+ 0.006 + 0.009	36,9	+ 0.003 + 0.006
100 A	10	24	75	+ 0.009 + 0.0015	72,6	+ 0.003 + 0.009

### COLLET CHUCK'S RUNOUT ACCURACY

The norm DIN69882-6 permits a runout error of 0.005 mm. for DIN6499 collet chucks.

### SHELL END MILL ADAPTOR'S RUNOUT ACCURACY

Our shell end mill adaptors meet the requirements of the norm DIN69882-2, which prescribes for diameters  $\varnothing$  16 / 22 / 27 / 32 a runout accuracy of 0,01.

### WELDON END MILL HOLDER'S RUNOUT ACCURACY

According to norm DIN 69882-4 WELDON end end mill holders have to meet the following requirements:

Bore: H5

Runout accuracy: 0.005

### BALANCING

All our toolholders of this category are pre-balanced in grade G 6,3 at 8000 rpm or balanced at 20.000 rpm.

### CONSTRUCTIVE FEATURES

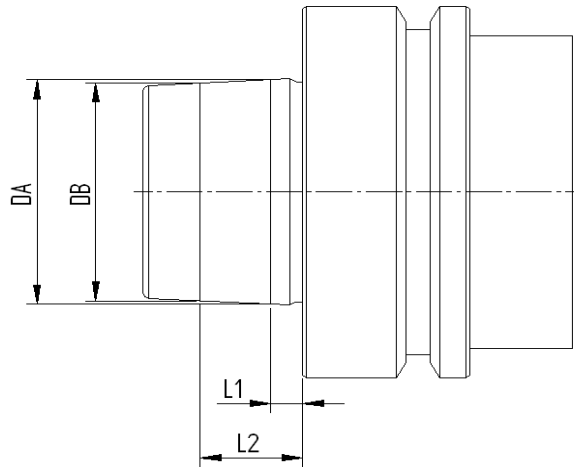
- Manufactured with Casehardening Steel.
- Casehardened with depth 0,4 - 0,5 mm.
- Hardened-Tempered.
- Hardness HRC  $58 \pm 2$ , strenght 800-1000 N / mm<sup>2</sup>.
- Black oxidized.
- Thread of collet nuts, internal and external diameters are completely grinding finished
- Tested 100% with certified measuring instruments.



ALLE PAGNONI - STEILGEKELAUFNHMEN WERDEN NACH DEN DIN - NORMEN ANGEFERTIGT.

DIESE NORMEN SEHEN DIE GLEICHEN TOLERANZKlassen FÜR DIE DIN69893 A+E+F AUFNHMEN VOR.

### KEGELSCHAFTTOLERANZ



HSK	L1	L2	D.A.	D.B.
32 A	3,02	7.03	24 + 0.005 + 0.007	23,27 + 0.003 + 0.005
40 A+E	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005
50 A+E	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006
50 F	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005
63 A+E	6,03	14.07	48 + 0.007 + 0.0011	46,53 + 0.003 + 0.007
63 F	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006
100 A	10	24	75 + 0.009 + 0.0015	72,6 + 0.003 + 0.009

### RUNDLAUFGENAUIGKEIT DER SPANNZANGENAUFNAHME

Die DIN 69882-6 Norm schreibt eine Rundlaufgenauigkeit zwischen Aussenkegel und Innenkegel/Spannzangensitz für die DIN 6499 Spannzangenaufnahmen von 0,005 vor.

### AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT

Pagnoni-Aufsteckfräsdorne entsprechen der DIN 69882-2 Norm, die für die  $\varnothing 16 / 22 / 27 / 32$  eine Rundlaufgenauigkeit von 0,01 vorsieht.

### WELDON AUFSTECKFRÄSDORNE - RUNDLAUFGENAUIGKEIT

Nach der DIN 69882-4 Norm muß der Weldon - Aufsteckfräsdorn die folgenden Forderungen aufweisen:

Bohrung: toleranz H5

Rundlaufgenauigkeit: 0.005

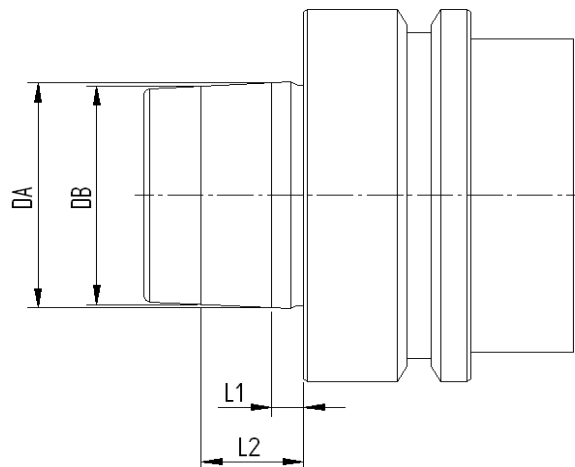
### WUCHTUNG

Alle Steilkegelaufnahmen dieser Gruppe sind in Klasse G 6,3 auf 8.000 U/Min -1 vorgewuchtet oder auf 20.000 U/Min -1 gewuchtet.

### KONSTRUKTIONSDATEN

- aus legiertem Einastzstahl angefertigt
- in der Einsatzhärtetiefe von 0,4 - 0,5 mm zementiert
- gehärtet, angelassen
- Härte HRC 58  $\pm$  2, Festigkeit 800-1000 N / mm<sup>2</sup>.
- Brüniert
- inneres, äußeres Schleifen und am Gewinde der Spannzangenmutter
- 100% durch zertifizierte Meßinstrumente geprüft.

TOUS LES MANDRINS PORTE-OUTILS PAGNONI SONT FABRIQUÉS SELON LES NORMES DIN QUI PRÉVOIENT LES MÊMES CLASSES DE TOLÉRANCE POUR LES ATTACHEMENT DIN69893 A+E+F

**TOLLERANCE DU CONE**


HSK	L1	L2	D.A.	D.B.
32 A	3,02	7.03	24 + 0.005 + 0.007	23,27 + 0.003 + 0.005
40 A+E	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005
50 A+E	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006
50 F	4	9.05	30 + 0.005 + 0.007	29,05 + 0.003 + 0.005
63 A+E	6,03	14.07	48 + 0.007 + 0.0011	46,53 + 0.003 + 0.007
63 F	5	11	38 + 0.006 + 0.009	36,9 + 0.003 + 0.006
100 A	10	24	75 + 0.009 + 0.0015	72,6 + 0.003 + 0.009

**COAXIALITÉ PORTE-PINCE**

La norme DIN 69882-6 permet une erreur de 0,005 mm. Maximum pour les porte-pinces DIN 6499.

**COAXIALITÉ PORTE-FRAISES FIXES ET COMBINÉS**

Les porte-fraises fixes et combinés de notre production suivent la spécification de la norme DIN69882-2 qui prévoit pour les diamètres 16 / 22 / 27 / 32 une coaxialité de 0,01.

**COAXIALITÉ PORTE-FRAISES WELDON**

Suivant les spécifications DIN69882-4 les porte-fraises WELDON doivent suivre les conditions suivantes:

Trou: H5 runout

Coaxialité: 0.005

**EQUILIBRAGE**

La plupart des porte-outils sont pré-équilibrés en classe G 6,3 8.000 Tr/Min -1 ou équilibrés à 20.000 Tr/Min -1.

**ELEMENTS DE CONSTRUCTION**

- Produits en acier cémenté allié.
- Cémentés avec une profondeur 0,4 - 0,5 mm.
- Trempé - Revenu.
- Dureté HRC 58 ± 2 résistance 800-1000 N / mm<sup>2</sup>.
- Brunis.
- Retification du cône intérieur, extérieur et dans le filetage des écrous qui serrent la pince.
- Contrôlés à 100% avec des instruments de mesure certifiés.



MANDRINI PORTAPINZA TIPO ER MINI  
ER COLLET CHUCK MINI  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER TYPE MINI

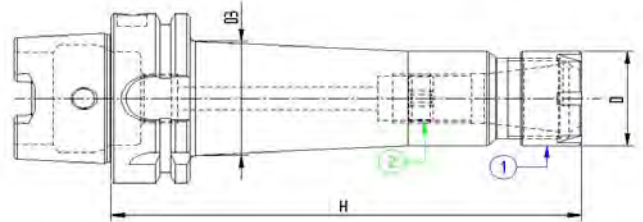
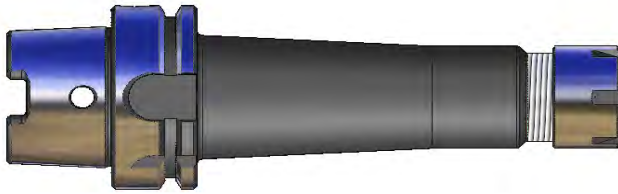


**DIN 69893**

**DIN 6499**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**STANDARD**

Codice	HSK	Descrizione	ER	D	H	D3
65APM207	50/A	HSK50/A DIN69893 P/P H100 ER11MINI	11	16	100	20
65APM210	50/A	HSK50/A DIN69893 P/P H100 ER16MINI	16	22	100	26

**L = 160**

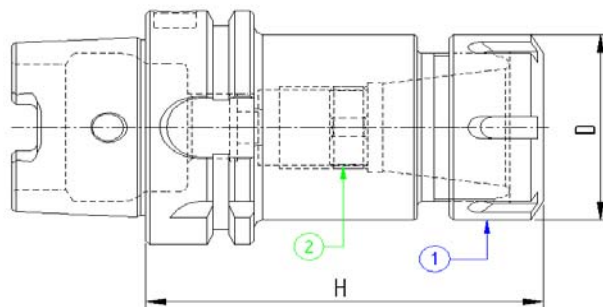
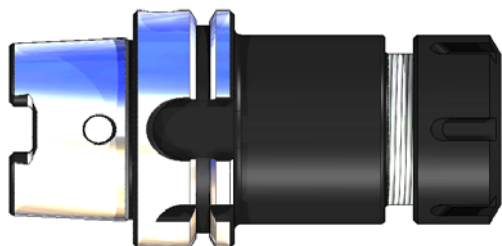
Codice	HSK	Descrizione	ER	D	H	D3
65APM407	50/A	HSK50/A DIN69893 P/P H160 ER11MINI	11	16	160	23,5
65APM410	50/A	HSK50/A DIN69893 P/P H160 ER16MINI	16	22	160	28

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	ER MINI	GRANO	Q.tà	GHIERA	Q.tà
HSK50/A	11		1		1
	16		1		1

**Bilanciato G.2,5 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**STANDARD**

Codice	HSK	Descrizione	ER	D	H
65APP110	50/A	HSK50/A DIN69893 P/P H70 ER16	16	32	70
65APP113	50/A	HSK50/A DIN69893 P/P H70 ER20	20	35	70
65APP116	50/A	HSK50/A DIN69893 P/P H70 ER25	25	42	70
65APP120	50/A	HSK50/A DIN69893 P/P H70 ER32	32	50	70
65APP126	50/A	HSK50/A DIN69893 P/P H70 ER40	40	63	70

**L = 160**

Codice	HSK	Descrizione	ER	D	H
65APP210	50/A	HSK50/A DIN69893 P/P H100 ER16	16	32	100
65APP213	50/A	HSK50/A DIN69893 P/P H100 ER20	20	35	100
65APP216	50/A	HSK50/A DIN69893 P/P H100 ER25	25	42	100
65APP220	50/A	HSK50/A DIN69893 P/P H100 ER32	32	50	100
65APP226	50/A	HSK50/A DIN69893 P/P H100 ER40	40	63	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

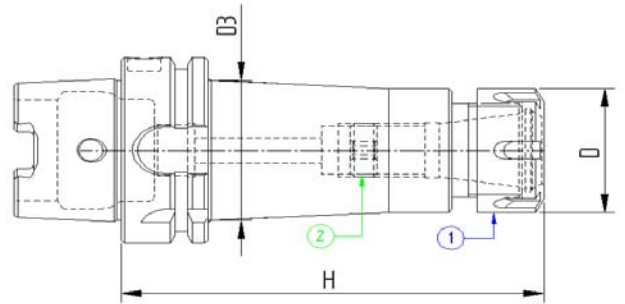
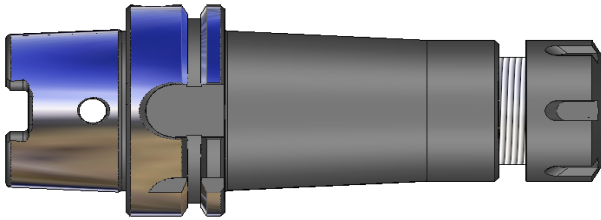
Tipo Cono    ER    GRANO    Q.tà    GHIERA    Q.tà



HSK50/A	ER	GRANO	Q.tà	GHIERA	Q.tà
	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.2,5 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	H	D3
65APP410	50/A	HSK50/A DIN69893 P/P H160 ER16	16	32	160	-
65APP413	50/A	HSK50/A DIN69893 P/P H160 ER20	20	35	160	-
65APP416	50/A	HSK50/A DIN69893 P/P H160 ER25	25	42	160	42
65APP420	50/A	HSK50/A DIN69893 P/P H160 ER32	32	50	160	50
65APP426	50/A	HSK50/A DIN69893 P/P H160 ER40	40	63	160	-

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	ER	GRANO	Q.tà	GHIERA	Q.tà
					
HSK50/A	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1





MANDRINI PORTAPINZA TIPO EOC  
EOC COLLET CHUCK  
MANDRINS A PINCES TYPE EOC  
SPANNZANGENFUTTER EOC TYP

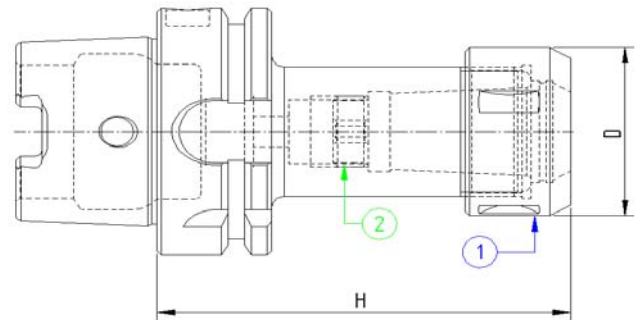
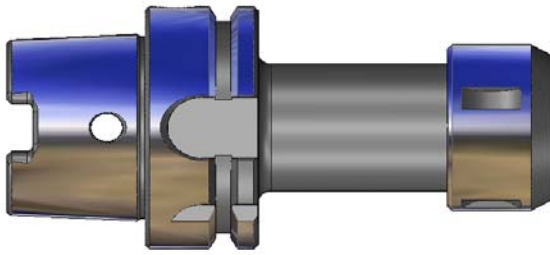


**DIN 69893**

**DIN 6388**

**Bilanciato G.2,5 20.000 RPM**

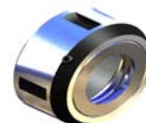
**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	EOC	D	H
65APO216	50/A	HSK50/A DIN69893 P/P H100 EOC16	16	43	100
65APO225	50/A	HSK50/A DIN69893 P/P H100 EOC25	25	60	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    EOC    **GHIERA INT.**    Q.tà    **GHIERA**    Q.tà



HSK50/A	16	101815801	1	916GHROS	1
	25	102715901	1	925GHROS	1



MANDRINO PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON

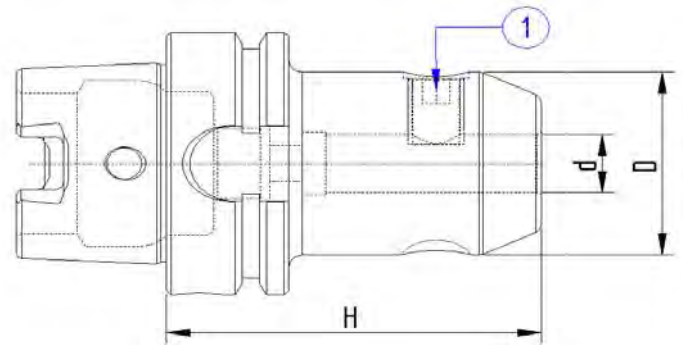


**DIN 69893**

**DIN 1835 B**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
65AWLD06	50/A	HSK50/A DIN69893 WELDON H65 D.6	6	25	65
65AWLD08	50/A	HSK50/A DIN69893 WELDON H65 D.8	8	28	65
65AWLD10	50/A	HSK50/A DIN69893 WELDON H65 D.10	10	35	65
65AWLD12	50/A	HSK50/A DIN69893 WELDON H80 D.12	12	42	80
65AWLD14	50/A	HSK50/A DIN69893 WELDON H80 D.14	14	44	80
65AWLD16	50/A	HSK50/A DIN69893 WELDON H80 D.16	16	48	80
65AWLD18	50/A	HSK50/A DIN69893 WELDON H80 D.18	18	50	80
65AWLD20	50/A	HSK50/A DIN69893 WELDON H80 D.20	20	52	80
65AWLD25	50/A	HSK50/A DIN69893 WELDON H105 D.25	25	65	105
65AWLD32	50/A	HSK50/A DIN69893 WELDON H120 D.32	32	72	120

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    GRANO    Q.tà



HSK50/A	Ø WLD	GRANO	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32	102002002	2



MANDRINO PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON

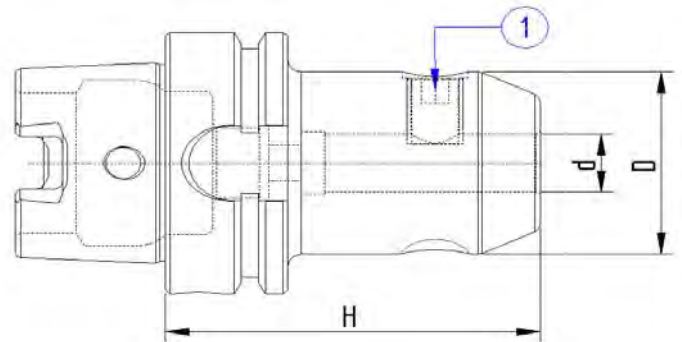


**DIN 69893**

**DIN 1835 B**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
65AWE206	50/A	HSK50/A DIN69893 WELDON H100 D.6	6	25	100
65AWE208	50/A	HSK50/A DIN69893 WELDON H100 D.8	8	28	100
65AWE210	50/A	HSK50/A DIN69893 WELDON H100 D.10	10	35	100
65AWE212	50/A	HSK50/A DIN69893 WELDON H100 D.12	12	42	100
65AWE214	50/A	HSK50/A DIN69893 WELDON H100 D.14	14	44	100
65AWE216	50/A	HSK50/A DIN69893 WELDON H100 D.16	16	48	100
65AWE218	50/A	HSK50/A DIN69893 WELDON H100 D.18	18	50	100
65AWE220	50/A	HSK50/A DIN69893 WELDON H100 D.20	20	52	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    GRANO    Q.tà



HSK50/A	Ø WLD	GRANO	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1



MANDRINO PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSCHAFTAUFNAHME WELDON

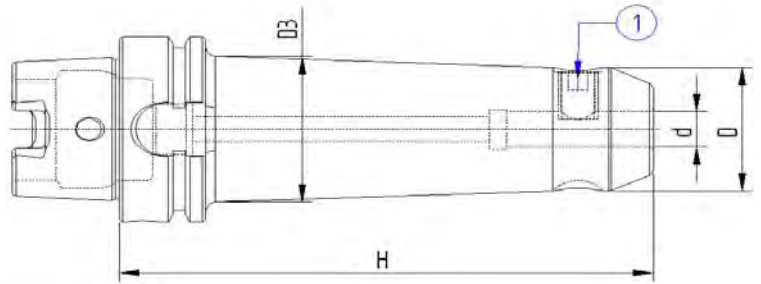


**DIN 69893**

**DIN 1835 B**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H	D3
65AWE406	50/A	HSK50/A DIN69893 WELDON H160 D.6	6	25	160	-
65AWE408	50/A	HSK50/A DIN69893 WELDON H160 D.8	8	28	160	-
65AWE410	50/A	HSK50/A DIN69893 WELDON H160 D.10	10	35	160	-
65AWE412	50/A	HSK50/A DIN69893 WELDON H160 D.12	12	42	160	-
65AWE414	50/A	HSK50/A DIN69893 WELDON H160 D.14	14	44	160	-
65AWE416	50/A	HSK50/A DIN69893 WELDON H160 D.16	16	48	160	-
65AWE418	50/A	HSK50/A DIN69893 WELDON H160 D.18	18	50	160	-
65AWE420	50/A	HSK50/A DIN69893 WELDON H160 D.20	20	52	160	-
65AWE425	50/A	HSK50/A DIN69893 WELDON H160 D.25	25	65	160	-

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

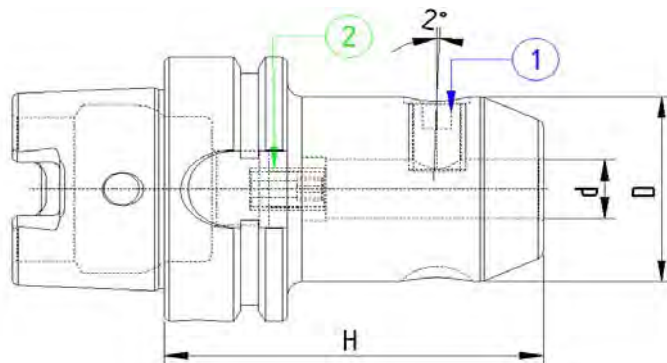
Tipo Cono    Ø WLD    GRANO    Q.tà



HSK50/A		GRANO	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
65AWHN06	50/A	HSK50/A DIN69893 W/NOTCH H80 D06	6	25	80
65AWHN08	50/A	HSK50/A DIN69893 W/NOTCH H80 D08	8	28	80
65AWHN10	50/A	HSK50/A DIN69893 W/NOTCH H80 D10	10	35	80
65AWHN12	50/A	HSK50/A DIN69893 W/NOTCH H90 D12	12	42	90
65AWHN14	50/A	HSK50/A DIN69893 W/NOTCH H90 D14	14	44	90
65AWHN16	50/A	HSK50/A DIN69893 W/NOTCH H90 D16	16	48	90
65AWHN18	50/A	HSK50/A DIN69893 W/NOTCH H90 D18	18	50	90
65AWHN20	50/A	HSK50/A DIN69893 W/NOTCH H100 D20	20	52	100
65AWHN25	50/A	HSK50/A DIN69893 W/NOTCH H110 D25	25	65	110
65AWHN32	50/A	HSK50/A DIN69893 W/NOTCH H120 D32	32	72	120

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	Ø WHN	GRANO	Q.tà	GRANO	Q.tà
-----------	-------	-------	------	-------	------



HSK50/A	d	GRANO	Q.tà	GRANO	Q.tà
	6	100601004	1	100801601	1
	8	100801004	1	100801601	1
	10	101001204	1	100801601	1
	12 - 14	101201604	1	100801601	1
	16 - 18	101401604	1	100801601	1
	20	101601604	1	100801601	1
	25	101802002	2	-	1
	32	102002002	2	-	1



MANDRINI PORTAFRESE A TRASCINAMENTO FISSO CON PASAGGIO REFRIGERANTE  
 FACE MILL HOLDERS-TENDONS DRIVE-WITH INTERNAL COOLANT SUPPLY  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FUER FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

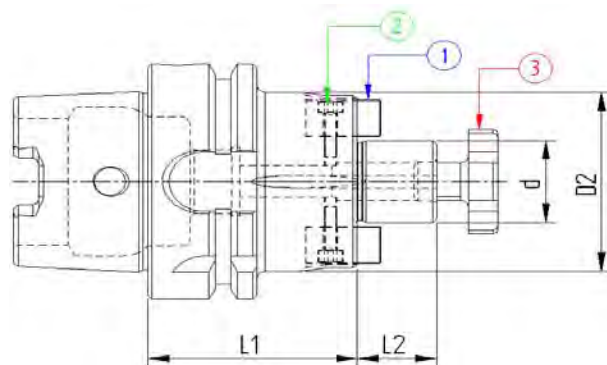
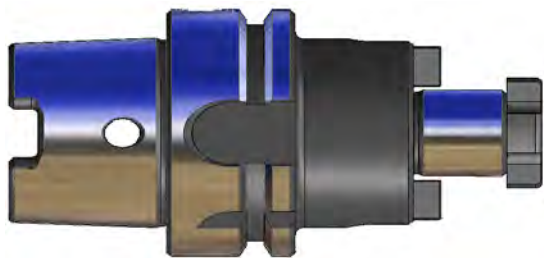


**DIN 69893**

**ISO 3937**

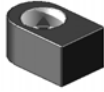


**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



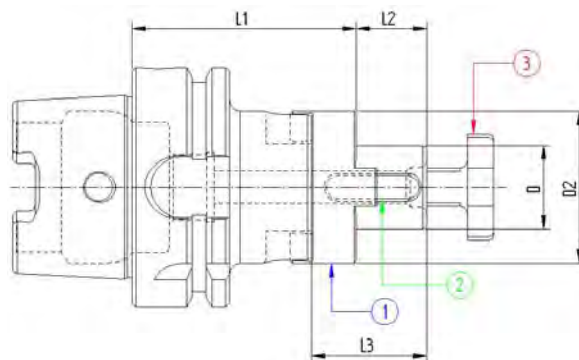
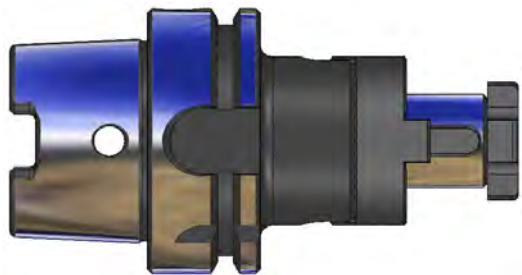
Codice	HSK	Descrizione	L1	L2	d	D2
65APF116	50/A	HSK50/A DIN69893 P/F FISSO H50 D16	50	17	16	38
65APF122	50/A	HSK50/A DIN69893 P/F FISSO H60 D22	60	19	22	48
65APF127	50/A	HSK50/A DIN69893 P/F FISSO H60 D27	60	21	27	58
65APF132	50/A	HSK50/A DIN69893 P/F FISSO H60 D32	60	24	32	66
65APF140	50/A	HSK50/A DIN69893 P/F FISSO H70 D40	70	27	40	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	TASSELLO	Q.tà	VITE	Q.tà	VITE CROCE	Q.tà
							
HSK50/A	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1

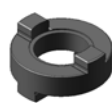


**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



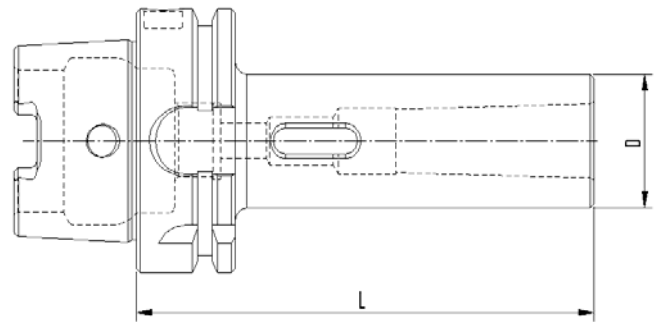
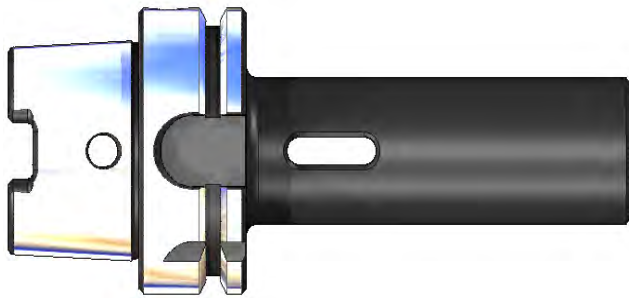
Codice	HSK	Descrizione	D	L1	L2	L3	D2
65APU116	50/A	HSK 50/A P/FRESA UNIV.H50 D.16	16	50	17	27	32
65APU122	50/A	HSK 50/A P/FRESA UNIV.H50 D.22	22	50	19	31	40
65APU127	50/A	HSK 50/A P/FRESA UNIV.H65 D.27	27	65	21	33	48
65APU132	50/A	HSK 50/A P/FRESA UNIV.H65 D.32	32	65	24	38	58
65APU140	50/A	HSK 50/A P/FRESA UNIV.H75 D.40	40	75	27	41	70

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	GIUNTO	Q.tà	LINGUETTA	Q.tà	VITE CROCE	Q.tà
							
HSK50/A	16	916GNT01	1	170402004	1	916VTC02	1
	22	922GNT01	1	170602506	1	922VTC02	1
	27	927GNT01	1	170702507	1	927VTC02	1
	32	932GNT01	1	170802807	1	932VTC02	1
	40	940GNT01	1	171003208	1	940VTC02	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>L</b>	<b>D</b>
65AMP101	50/A	HSK50/A DIN69893 H100 CM1PUNTE	100	25
65AMP102	50/A	HSK50/A DIN69893 H120 CM2PUNTE	120	32
65AMP103	50/A	HSK50/A DIN69893 H140 CM3PUNTE	140	40





MANDRINI PORTAFRESE CONO MORSE REFRIGERAMENTO INTERNO  
 MORSE TAPER MILL ADAPTERS WITH INTERNAL COOLANT  
 DOUILLES POUR CONE MORSE AVEC TARAUDAGE  
 ZWISCHENHUELSEN FÜR MORSEKEDEL MIT ZENTRALER KUEHLMITTELZUFUHR

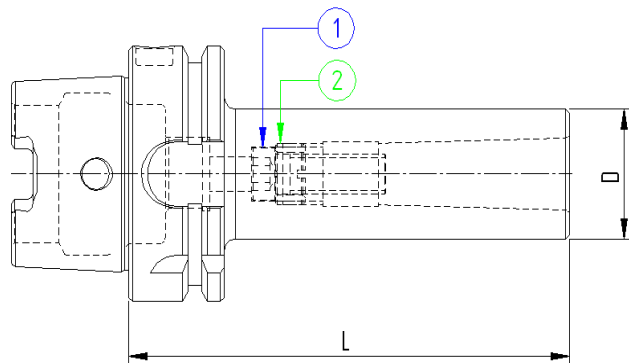
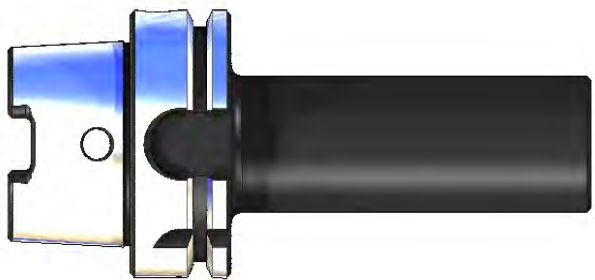


**DIN 69893**

**DIN 228-2**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	L	D
65AMF101	50/A	HSK50/A DIN69893 H100 CM1FRESE	100	25
65AMF102	50/A	HSK50/A DIN69893 H120 CM2FRESE	120	32
65AMF103	50/A	HSK50/A DIN69893 H140 CM3FRESE	140	40

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    CM    **GIERA INTERNA**    Q.tà    **VITE**    Q.tà



HSK50/A	CM1	-	-	110603501	1
	CM2	121500802	1	111003014	1
	CM3	122000903	1	111204003	1



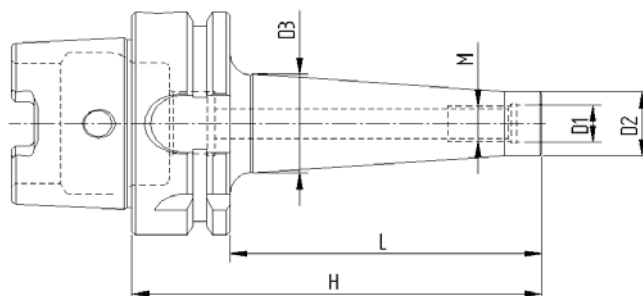
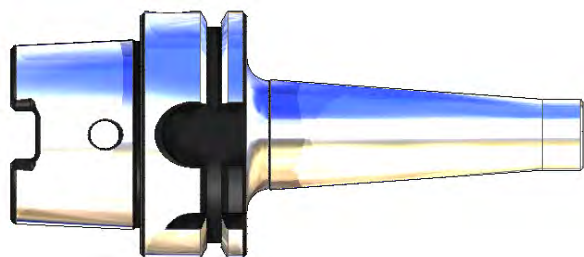
MANDRINI PER FRESE CON ATTACCO FILETTATO  
MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
MANDRINS POUR FRAISES A VISSER  
SPANFUTTER FÜR EINCHRAUBFRAESER



**DIN 69893**

**DIN 1835 B**

**Bilanciato G.2,5 20.000 RPM**



**L = 59**

Codice	HSK	Descrizione	D1	D2	H	L	M
65AAF106	50/A	HSK50/A DIN69893 P/F AT.FIL.M6x59	6,5	9,7	59	33	M6
65AAF108	50/A	HSK50/A DIN69893 P/F AT.FIL.M8x59	8,5	13	59	33	M8
65AAF110	50/A	HSK50/A DIN69893 P/F AT.FIL.M10x59	10,5	18	59	33	M10
65AAF112	50/A	HSK50/A DIN69893 P/F AT.FIL.M12x59	12,5	21	59	33	M12

**L = 84**

Codice	HSK	Descrizione	D1	D2	H	L	M
65AAF206	50/A	HSK50/A DIN69893 P/F AT.FIL.M6x84	6,5	9,7	84	58	M6
65AAF208	50/A	HSK50/A DIN69893 P/F AT.FIL.M8x84	8,5	13	84	58	M8
65AAF210	50/A	HSK50/A DIN69893 P/F AT.FIL.M10x84	10,5	18	84	58	M10
65AAF212	50/A	HSK50/A DIN69893 P/F AT.FIL.M12x84	12,5	21	84	58	M12

**L = 109**

Codice	HSK	Descrizione	D1	D2	H	L	M
65AAF306	50/A	HSK50/A DIN69893 P/F AT.FIL.M6x109	6,5	9,7	109	83	M6
65AAF308	50/A	HSK50/A DIN69893 P/F AT.FIL.M8x109	8,5	13	109	83	M8
65AAF310	50/A	HSK50/A DIN69893 P/F AT.FIL.M10x109	10,5	18	109	83	M10
65AAF312	50/A	HSK50/A DIN69893 P/F AT.FIL.M12x109	12,5	21	109	83	M12

**L = 134**

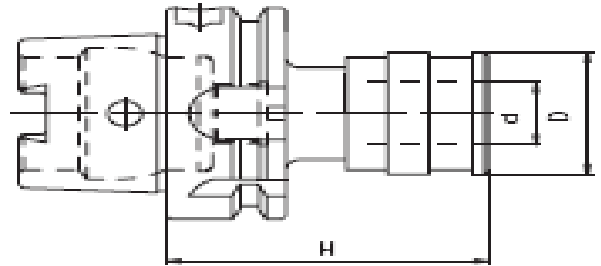
Codice	HSK	Descrizione	D1	D2	H	L	M
65AAF408	50/A	HSK50/A DIN69893 P/F AT.FIL.M8x134	8,5	13	134	108	M8
65AAF410	50/A	HSK50/A DIN69893 P/F AT.FIL.M10x134	10,5	18	134	108	M10
65AAF412	50/A	HSK50/A DIN69893 P/F AT.FIL.M12x134	12,5	21	134	108	M12



PORTAMASCHI A CAMBIO RAPIDO  
 QUICK CHANGE TAP HOLDER  
 MANDRINS DE TARAUDAGE A' CHANGEMENT RAPIDE  
 GEWINDE-SCHNELLWECHSELFUTTER



**DIN 69893**



**CON COMPENSAZIONE**

Codice	HSK	Descrizione	D	d	H
65APCRM1	50/A	HSK50/A M/PORTAM/C/R H72 GR.1	38	19	72
65APCRM2	50/A	HSK50/A M/PORTAM/C/R H110 GR.2	54	31	110

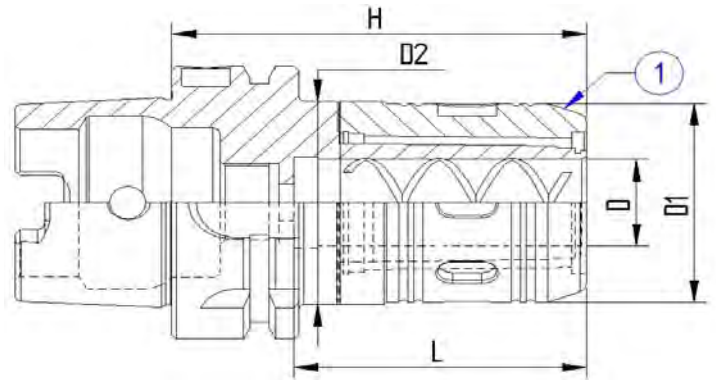
**SENZA COMPENSAZIONE**

Codice	HSK	Descrizione	D	d	H
65APRRM1	50/A	HSK50/A M/PORTAM/C/R/R H72 GR.1	38	19	72
65APRRM2	50/A	HSK50/A M/PORTAM/C/R/R H110 GR.2	54	31	110

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHOR**



**Bilanciato G.6,3 12.000 RPM**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>H</b>	<b>D</b>	<b>D1</b>	<b>D2</b>	<b>L</b>
65AFS120	50/A	HSK 50/A FORTE SERRAGGIO Ø20 H90	90	20	46	47	60
65AFS232	50/A	HSK 50/A FORTE SERRAGGIO Ø32 H110	110	32	62	63	80

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**



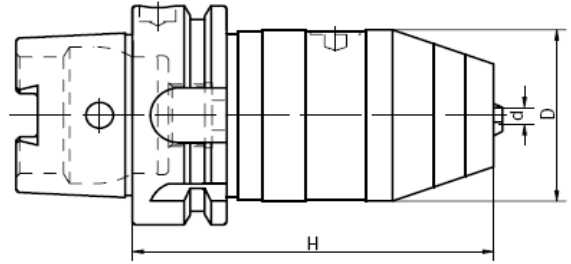
RIF. PAGINA **300**



MANDRINI PORTAPUNTE INTEGRALI PER ROTAZIONE DESTRA E SINISTRA  
 NC-DRILL CHUCKS FOR LEFT AND RIGHT ROTATION  
 MANDRINS DE PERÇAGE CNC POUR ROTATION GAUCHE-DROITE  
 NC-BOHRFUTTER FUER RECHTS UND LINKSLAUF



**DIN 69893**



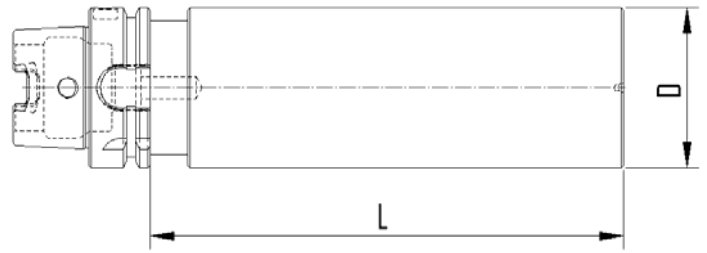
<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>H</b>	<b>D</b>	<b>Capacità</b>
65AMAZ13	50/A	HSK50/A M/AUTOS./FORI H111 D13	111	50	1-13
65AMAZ16	50/A	HSK50/A M/AUTOS./FORI H111 D16	111	57	3-16



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDERS WITH SOFT SHANK  
 BARRE D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SHAFT



**DIN 69893**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>L</b>	<b>D</b>
65AST250	50/A	HSK50/A DIN69893 ST.TENERO D.50x200	200	50
65AST263	50/A	HSK50/A DIN69893 ST.TENERO D.63x200	200	63

HSK 50/E



MANDRINI PORTAPINZA TIPO ER MINI  
ER COLLET CHUCKS MINI  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER TYPE MINI

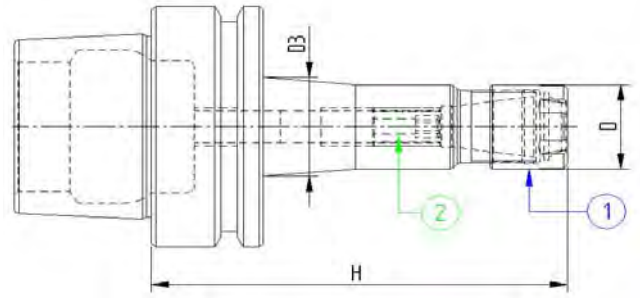
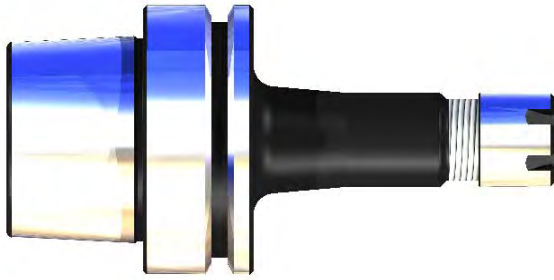


**DIN 69893**

**DIN 6499**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



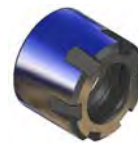
Codice	HSK	Descrizione	ER	D	H	D3
65EPM207	50/E	HSK50/E DIN69893 P/P H100 ER11MINI	11	16	100	20
65EPM210	50/E	HSK50/E DIN69893 P/P H100 ER16MINI	16	22	100	24

**L = 160**

Codice	HSK	Descrizione	ER	D	H	D3
65EPM407	50/E	HSK50/E DIN69893 P/P H160 ER11MINI	11	16	160	24
65EPM410	50/E	HSK50/E DIN69893 P/P H160 ER16MINI	16	22	160	30

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Typo Cono | ER MINI | GRANO INT. | Q.tà | GHIERA | Q.tà

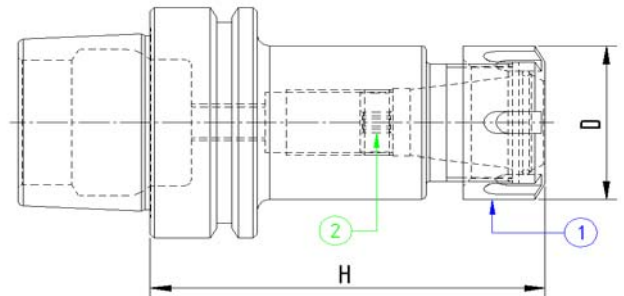
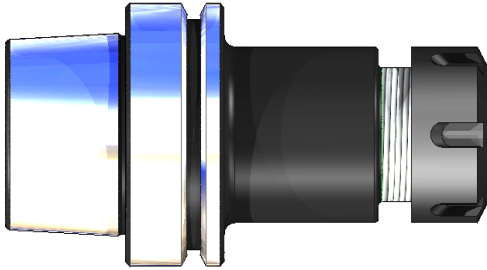


HSK50/E	11	100601001	1	911GHRMN	1
	16	101001601	1	916GHRMN	1



**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	H
65EPP210	50/E	HSK50/E DIN69893 P/P H80 ER16	16	32	80
65EPP213	50/E	HSK50/E DIN69893 P/P H80 ER20	20	35	80
65EPP216	50/E	HSK50/E DIN69893 P/P H80 ER25	25	42	80
65EPP220	50/E	HSK50/E DIN69893 P/P H80 ER32	32	50	80
65EPP226	50/E	HSK50/E DIN69893 P/P H80 ER40	40	63	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

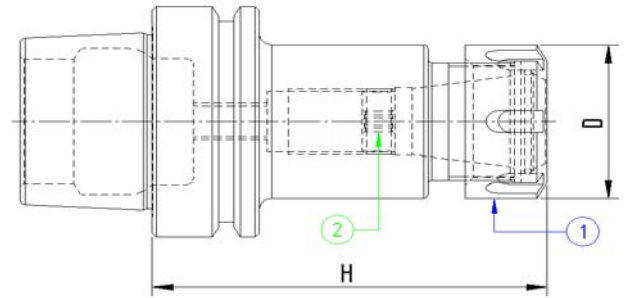
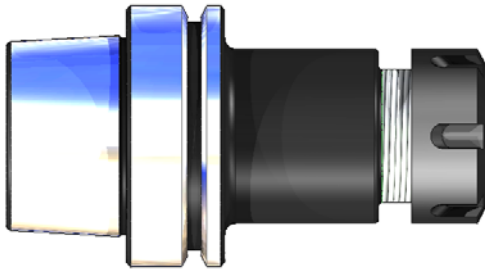
Tipo Cono    ER    GRANO INT.    Q.tà    GHIERA    Q.tà



HSK50/E	ER	GRANO INT.	Q.tà	GHIERA	Q.tà
	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	H
65EPP410	50/E	HSK50/E DIN69893 P/P H160 ER16	16	32	160
65EPP413	50/E	HSK50/E DIN69893 P/P H160 ER20	20	35	160
65EPP416	50/E	HSK50/E DIN69893 P/P H160 ER25	25	42	160
65EPP420	50/E	HSK50/E DIN69893 P/P H160 ER32	32	50	160
65EPP426	50/E	HSK50/E DIN69893 P/P H160 ER40	40	63	160

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

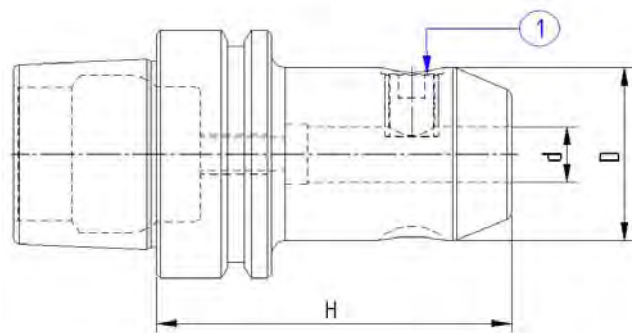
Tipo Cono    ER    GRANO INT.    Q.tà    GHIERA    Q.tà



HSK50/E	ER	GRANO INT.	Q.tà	GHIERA	Q.tà
	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
65EWLD06	50/E	HSK50/E DIN69893 WELDON H65 D.06	6	25	65
65EWLD08	50/E	HSK50/E DIN69893 WELDON H65 D.08	8	28	65
65EWLD10	50/E	HSK50/E DIN69893 WELDON H65 D.10	10	35	65
65EWLD12	50/E	HSK50/E DIN69893 WELDON H80 D.12	12	42	80
65EWLD14	50/E	HSK50/E DIN69893 WELDON H80 D.14	14	44	80
65EWLD16	50/E	HSK50/E DIN69893 WELDON H80 D.16	16	48	80
65EWLD18	50/E	HSK50/E DIN69893 WELDON H80 D.18	18	50	80
65EWLD20	50/E	HSK50/E DIN69893 WELDON H80 D.20	20	52	80
65EWLD25	50/E	HSK50/E DIN69893 WELDON H105 D.25	25	65	105

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono    Ø WLD    GRANO 1    Q.tà



HSK50/E	d	Part Number	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2



MANDRINI PORTAFRESE TIPO WHISTLE NOTCH  
 END MILL HOLDERS WHISTLE NOTCH  
 MANDRINS POUR OUTILS TYPE WHISTLE NOTCH  
 ZYLINDERSCHAFTAUFNAHME WHISTLE NOTCH

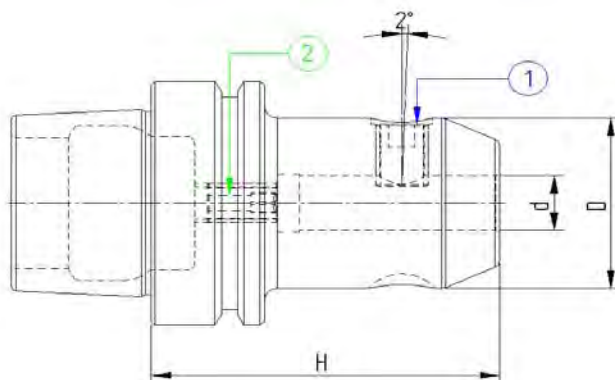
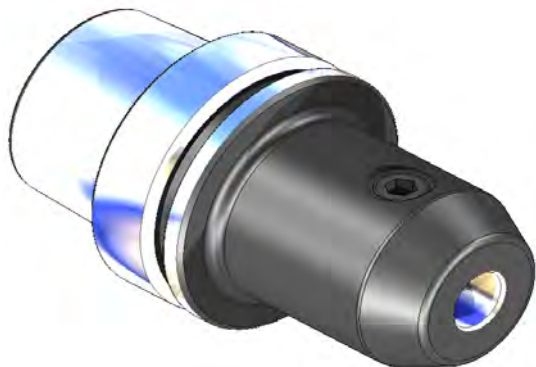


**DIN 69893**

**DIN 1835 E**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
65EWHN06	50/E	HSK50/E DIN69893 W/NOTCH H80 D06	6	25	80
65EWHN08	50/E	HSK50/E DIN69893 W/NOTCH H80 D08	8	28	80
65EWHN10	50/E	HSK50/E DIN69893 W/NOTCH H80 D10	10	35	80
65EWHN12	50/E	HSK50/E DIN69893 W/NOTCH H90 D12	12	42	90
65EWHN14	50/E	HSK50/E DIN69893 W/NOTCH H90 D14	14	44	90
65EWHN16	50/E	HSK50/E DIN69893 W/NOTCH H100 D16	16	48	100
65EWHN18	50/E	HSK50/E DIN69893 W/NOTCH H100 D18	18	50	100
65EWHN20	50/E	HSK50/E DIN69893 W/NOTCH H100 D20	20	52	100
65EWHN25	50/E	HSK50/E DIN69893 W/NOTCH H110 D25	25	65	110
65EWHN32	50/E	HSK50/E DIN69893 W/NOTCH H120 D32	32	72	120

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WHN    GRANO    Q.tà



HSK50/E	Ø WHN	GRANO	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32	102002002	2



MANDRINI PORTAFRESA TRASCINAMENTO FISSO CON REFRIGERAZIONE INTERNA  
 FACE MILL HOLDERS-TENONS DRIVE WITH INTERNAL COOLANT  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FÜR FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

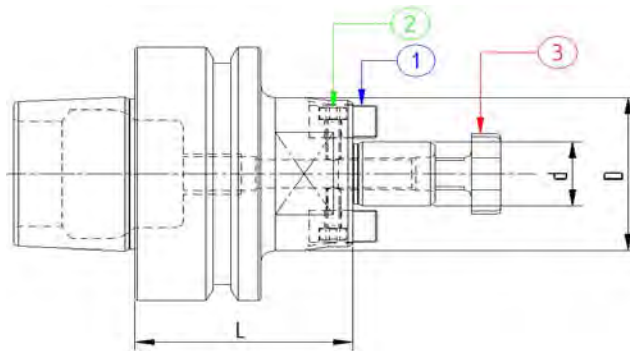
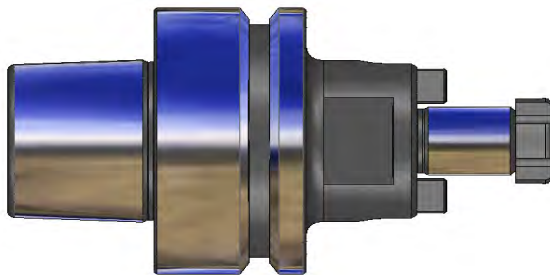


**DIN 69893**

**ISO 3937**


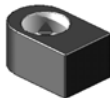

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	L	d	D
65EPF116	50/E	HSK50/E DIN69893 P/F FISSO H50 D16	50	16	38
65EPF122	50/E	HSK50/E DIN69893 P/F FISSO H60 D22	60	22	48
65EPF127	50/E	HSK50/E DIN69893 P/F FISSO H60 D27	60	27	58
65EPF132	50/E	HSK50/E DIN69893 P/F FISSO H60 D32	60	32	66
65EPF140	50/E	HSK50/E DIN69893 P/F FISSO H70 D40	70	40	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	VITE CROCE	Q.tà	TASSELLO	Q.tà	VITE TASSELLO	Q.tà
							
HSK50/E	16	916VTC02	1	916TSL01	2	110301001	2
	22	922VTC02	1	922TSL01	2	110301201	2
	27	927VTC02	1	927TSL01	2	110401601	2
	32	932VTC02	1	932TSL01	2	110601601	2
	40	940VTC02	1	940TSL01	2	110601601	2



MANDRINI PORTAPUNTE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTORS FOR DRILLS  
 DOUILLES POUR CONE MORSE A TENON  
 ZWISCHENHUELSEN FUER MORSEKEGEL MIT AUSTREIBLAPPEN

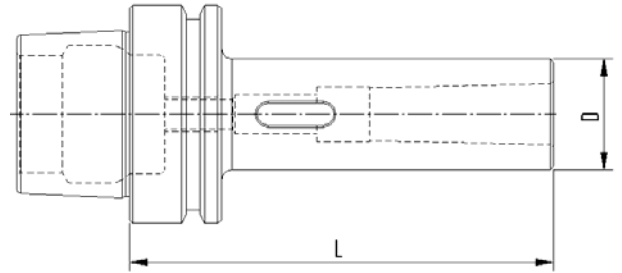
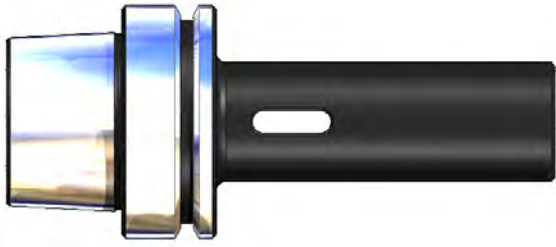


**DIN 69893**

**DIN 228-2**

**Bilanciato G.6,3 20.000 RPM**

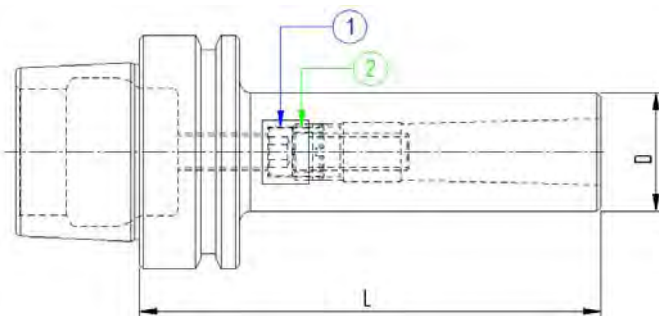
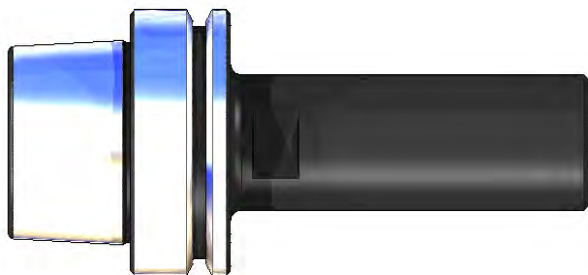
**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>L</b>	<b>D</b>
65EMP101	50/E	HSK50/E DIN69893 H100 CM1PUNTE	100	25
65EMP102	50/E	HSK50/E DIN69893 H120 CM2PUNTE	120	32
65EMP103	50/E	HSK50/E DIN69893 H140 CM3PUNTE	140	40
65EMP104	50/E	HSK50/E DIN69893 H160 CM4PUNTE	160	48

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	L	D
65EMF101	50/E	HSK50/E DIN69893 H105 CM1FRESE	105	25
65EMF102	50/E	HSK50/E DIN69893 H120 CM2FRESE	120	32
65EMF103	50/E	HSK50/E DIN69893 H140 CM3FRESE	140	40

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    CM    **GHIERA INT.**    Q.tà    **VITE**    Q.tà



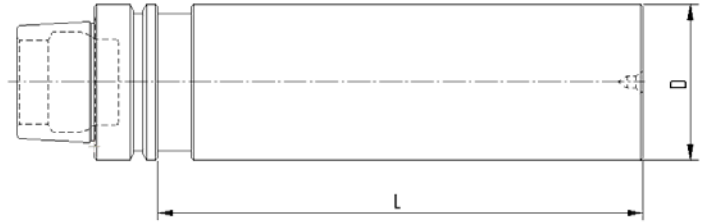
HSK50/E	CM1	-	0	110603501	1
	CM2	121500802	1	111003014	1
	CM3	122000903	1	111204003	1



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDERS WITH SOFT SHANK  
 BARRES D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SHAFT



**DIN 69893**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>L</b>	<b>D</b>
65EST250	50/E	HSK50/E DIN69893 ST.TENERO D.50x200	200	50
65EST263	50/E	HSK50/E DIN69893 ST.TENERO D.63x200	200	63



HSK 50/F



MANDRINI PORTAPINZA TIPO ER MIINI  
ER COLLET CHUCKS MINI  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER TYPE MINI

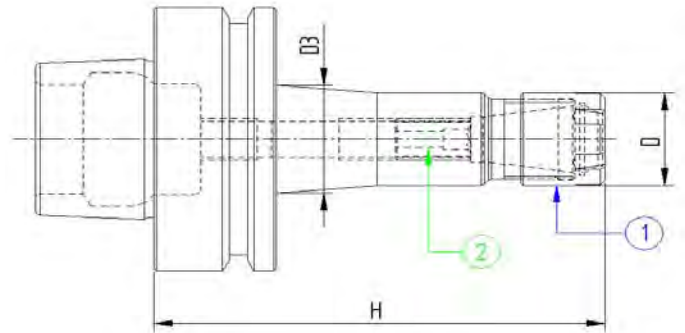
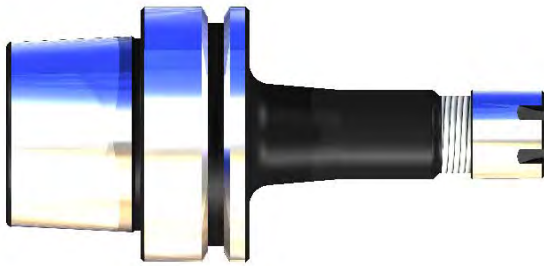


**DIN 69893**

**DIN 6499**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	H	D3
65FPM207	50/F	HSK50/F DIN69893 P/P H100 ER11MINI	11	16	100	19
65FPM210	50/F	HSK50/F DIN69893 P/P H100 ER16MINI	16	22	100	25

**L = 160**

Codice	HSK	Descrizione	ER	D	H	D3
65FPM407	50/F	HSK50/F DIN69893 P/P H160 ER11MINI	11	16	160	19
65FPM410	50/F	HSK50/F DIN69893 P/P H160 ER16MINI	16	22	160	25

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

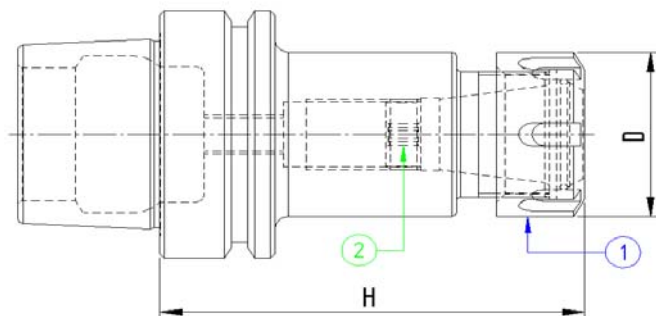
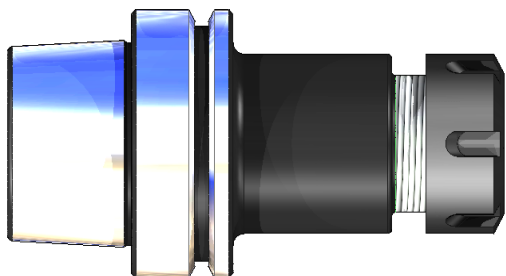
Tipo Cono    ER MINI    GRANO    Q.tà    GHIERA    Q.tà



HSK50/F	11	100601004	1	911GHRMN	1
	16	101001601	1	916GHRMN	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	H
65FPP210	50/F	HSK50/F DIN69893 P/PINZA H.100 ER16	16	32	100
65FPP213	50/F	HSK50/F DIN69893 P/PINZA H.100 ER20	20	35	100
65FPP216	50/F	HSK50/F DIN69893 P/PINZA H.100 ER25	25	42	100
65FPP220	50/F	HSK50/F DIN69893 P/PINZA H.100 ER32	32	50	100
65FPP226	50/F	HSK50/F DIN69893 P/PINZA H.100 ER40	40	63	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

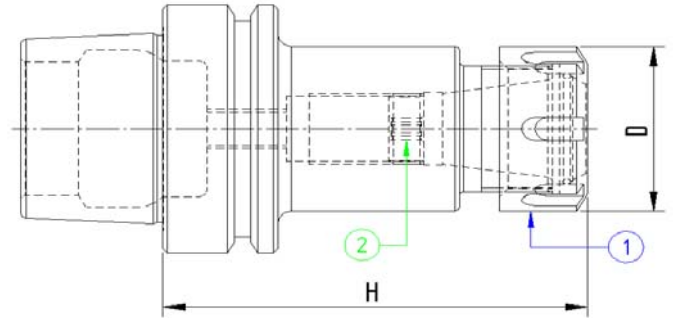
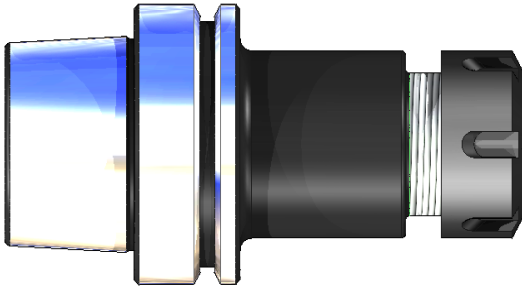
Tipo Cono    ER    GRANO INT.    Q.tà    GHIERA    Q.tà



HSK50/F	ER	GRANO INT.	Q.tà	GHIERA	Q.tà
	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	L
65FPP410	50/F	HSK50/F DIN69893 P/PINZA H.160 ER16	16	32	160
65FPP413	50/F	HSK50/F DIN69893 P/PINZA H.160 ER20	20	35	160
65FPP416	50/F	HSK50/F DIN69893 P/PINZA H.160 ER25	25	42	160
65FPP420	50/F	HSK50/F DIN69893 P/PINZA H.160 ER32	32	50	160
65FPP426	50/F	HSK50/F DIN69893 P/PINZA H.160 ER40	40	63	160

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono: **ER**    GRANO INT.    Q.tà: **GHIERA**    Q.tà



HSK50/F	ER	GRANO INT.	Q.tà	GHIERA	Q.tà
16	101001601	1	916GHREQ	1	
20	101001601	1	920GHREQ	1	
25	101815801	1	925GHREQ	1	
32	102215901	1	932GHREQ	1	
40	103015901	1	940GHREQ	1	



MANDRINI PORTAFRESE TIPO WELDON  
 END MILL HOLDERS WELDON  
 MANDRINS POUR OUTILS TYPE WELDON  
 ZYLINDERSHAFTAUFNAHME WELDON

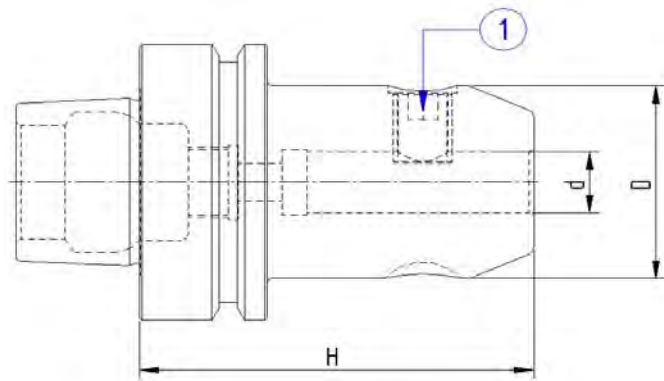
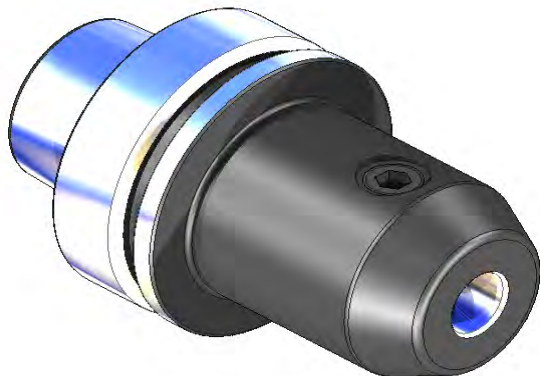


**DIN 69893**

**DIN 1835 B**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
65FWLD06	50/F	HSK50/F DIN69893 WELDON H.65 D.06	6	25	65
65FWLD08	50/F	HSK50/F DIN69893 WELDON H.65 D.08	8	28	65
65FWLD10	50/F	HSK50/F DIN69893 WELDON H.65 D.10	10	35	65
65FWLD12	50/F	HSK50/F DIN69893 WELDON H.80 D.12	12	42	80
65FWLD14	50/F	HSK50/F DIN69893 WELDON H.80 D.14	14	44	80
65FWLD16	50/F	HSK50/F DIN69893 WELDON H.80 D.16	16	48	80
65FWLD18	50/F	HSK50/F DIN69893 WELDON H.80 D.18	18	50	80
65FWLD20	50/F	HSK50/F DIN69893 WELDON H.80 D.20	20	52	80
65FWLD25	50/F	HSK50/F DIN69893 WELDON H.105 D.25	25	65	105

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

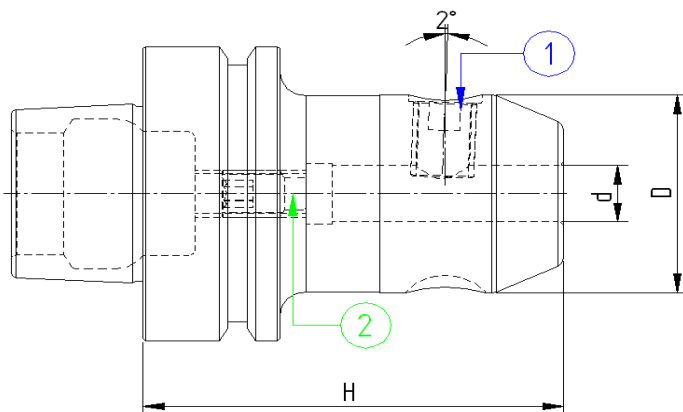
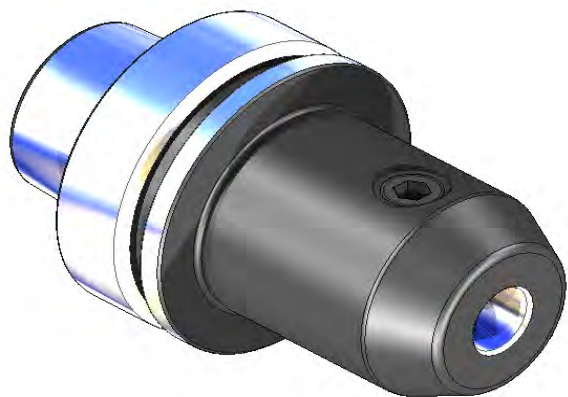
Tipo Cono    Ø WLD    GRANO    Q.tà



HSK50/F			
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



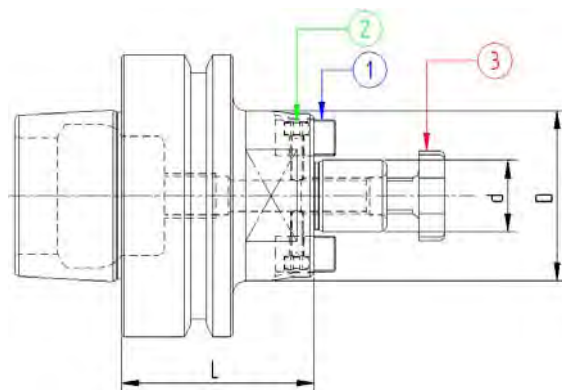
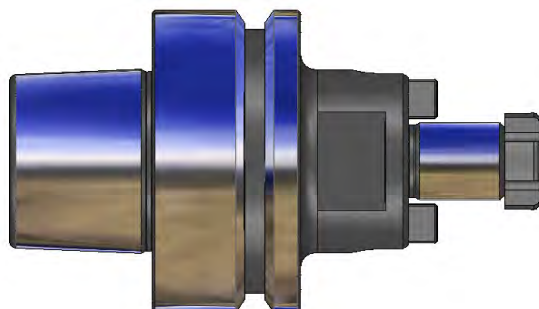
Codice	HSK	Descrizione	d	D	H
65FVHN06	50/F	HSK50/F DIN69893 W/NOTCH H80 D06	6	25	80
65FVHN08	50/F	HSK50/F DIN69893 W/NOTCH H80 D08	8	28	80
65FVHN10	50/F	HSK50/F DIN69893 W/NOTCH H80 D10	10	35	80
65FVHN12	50/F	HSK50/F DIN69893 W/NOTCH H90 D12	12	42	90
65FVHN14	50/F	HSK50/F DIN69893 W/NOTCH H90 D14	14	44	90
65FVHN16	50/F	HSK50/F DIN69893 W/NOTCH H100 D16	16	48	100
65FVHN18	50/F	HSK50/F DIN69893 W/NOTCH H100 D18	18	50	100
65FVHN20	50/F	HSK50/F DIN69893 W/NOTCH H100 D20	20	52	100
65FVHN25	50/F	HSK50/F DIN69893 W/NOTCH H110 D25	25	65	110
65FVHN32	50/F	HSK50/F DIN69893 W/NOTCH H120 D32	32	72	120

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	Ø WHN	GRANO	Q.tà	GRANO	Q.tà
HSK50/F	6	100601004	1	101001601	1
	8	100801004	1	101001601	1
	10	101001204	1	101001601	1
	12 - 14	101201604	1	101001601	1
	16 - 18	101401604	1	101001601	1
	20	101601604	1	101001601	1
	25	101802002	2	101001601	1
	32	102002002	2	101001601	1


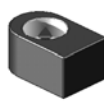

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	L	d	D
65FPF116	50/F	HSK50/F DIN69893 P/F FISSO H50 D16	50	16	38
65FPF122	50/F	HSK50/F DIN69893 P/F FISSO H50 D22	50	22	48
65FPF127	50/F	HSK50/F DIN69893 P/F FISSO H60 D27	60	27	58
65FPF132	50/F	HSK50/F DIN69893 P/F FISSO H60 D32	60	32	66
65FPF140	50/F	HSK50/F DIN69893 P/F FISSO H70 D40	70	40	80

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	Ø	VITE CROCE	Q.tà	TASSELLO	Q.tà	VITE TASSELLO	Q.tà
							
HSK50/F	16	916VTC02	1	916TSL01	2	110301001	2
	22	922VTC02	1	922TSL01	2	110301201	2
	27	927VTC02	1	927TSL01	2	110401601	2
	32	932VTC02	1	932TSL01	2	110601601	2
	40	940VTC02	1	940TSL01	2	110601601	2



MANDRINI PORTAPUNTE CON ATTACCO CONO MORSE  
 MORSE TAPER ADAPTORS FOR DRILLS  
 DOUILLES POUR CONE MORSE A TENON  
 ZWISCHENHUELSEN FUER MORSEKEGEL MIT AUSTREIBLAPPEN

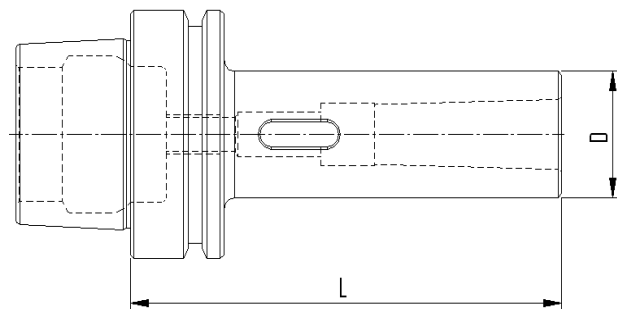
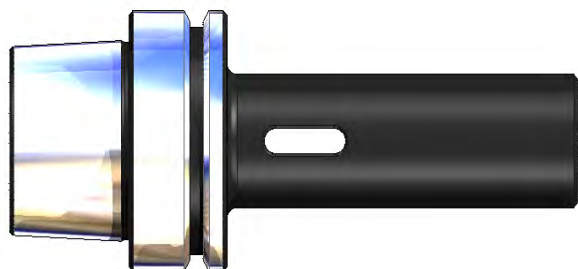


**DIN 69893**

**DIN 228-2**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>L</b>	<b>D</b>
65FMP101	50/F	HSK50/F DIN69893 H100 CM1PUNTE	100	25
65FMP102	50/F	HSK50/F DIN69893 H120 CM2PUNTE	120	32
65FMP103	50/F	HSK50/F DIN69893 H140 CM3PUNTE	140	40
65FMP104	50/F	HSK50/F DIN69893 H160 CM4PUNTE	160	48





MANDRINI PORTAFRESE CONO MORSE  
 MORSE TAPER MIL ADAPTERS WITH THREAD  
 DOUILLES POUR CONE MORSE  
 ZWISCHENHUELSEN FÜR MORSEKEGEL

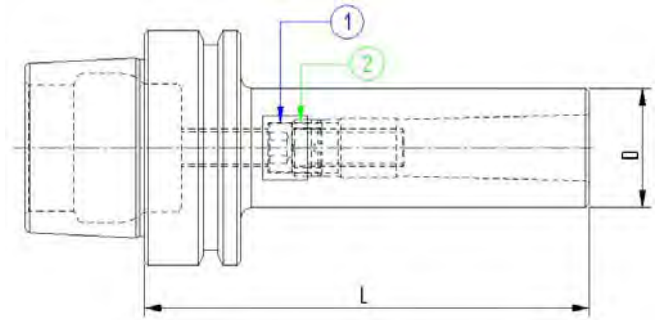
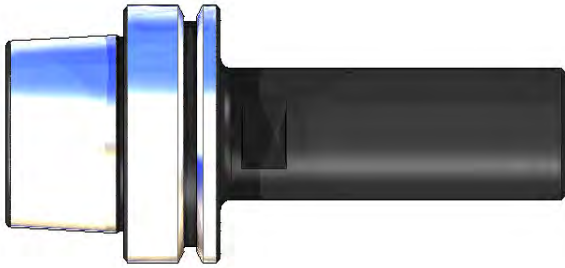


**DIN 69893**

**DIN 228-2**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	L	D
65FMF101	50/F	HSK50/F DIN69893 H105 CM1FRESE	105	25
65FMF102	50/F	HSK50/F DIN69893 H120 CM2FRESE	120	32
65FMF103	50/F	HSK50/F DIN69893 H140 CM3FRESE	140	40

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    CM    **GIERA INTERNA**    Q.tà    **VITE**    Q.tà



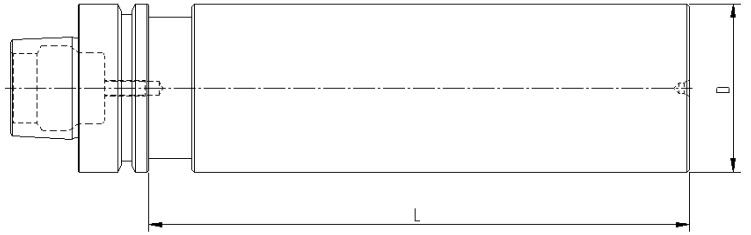
HSK50/A	CM1	-	0	110603501	1
	CM2	121500802	1	111003014	1
	CM3	122000903	1	111204003	1



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDERS WITH SOFT SHANK  
 BARRE D'ALESAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SHAFT



**DIN 69893**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>L</b>	<b>D</b>
65FST250	50/F	HSK50/F DIN69893 ST.TENERO D.50x200	200	50
65FST263	50/F	HSK50/F DIN69893 ST.TENERO D.63x200	200	63

HSK 63/A



MANDRINI PORTAPINZA TIPO ER MINI  
ER COLLET CHUCK MINI  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER TYP MINI

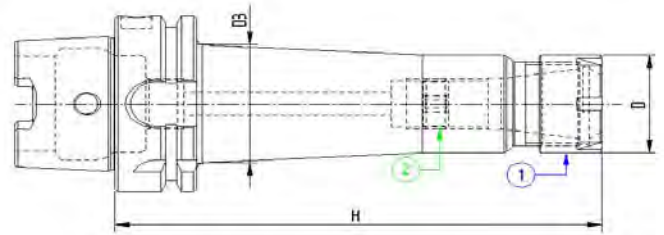


**DIN 69893**

**DIN 6499**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



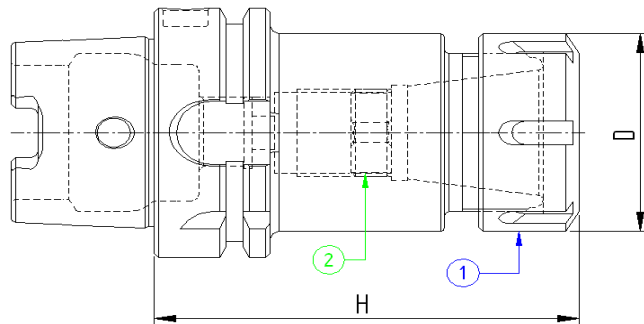
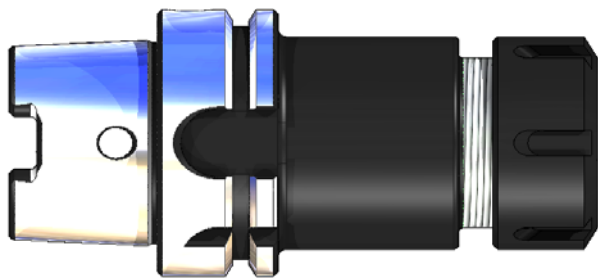
Codice	HSK	Descrizione	ER	D	H	D3
66APM107	63/A	HSK63/A DIN69893 P/P H80 ER11MINI	11	16	80	-
66APM207	63/A	HSK63/A DIN69893 P/P H100 ER11MINI	11	16	100	19
66APM210	63/A	HSK63/A DIN69893 P/P H100 ER16MINI	16	22	100	25
66APM213	63/A	HSK63/A DIN69893 P/P H100 ER20MINI	20	28	100	31
66APM216	63/A	HSK63/A DIN69893 P/P H100 ER25MINI	25	35	100	35
66APM407	63/A	HSK63/A DIN69893 P/P H160 ER11MINI	11	16	160	23
66APM410	63/A	HSK63/A DIN69893 P/P H160 ER16MINI	16	22	160	28
66APM413	63/A	HSK63/A DIN69893 P/P H160 ER20MINI	20	28	160	35
66APM416	63/A	HSK63/A DIN69893 P/P H160 ER25MINI	25	35	160	42

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
HSK	11	100601004	1	911GHRMN	1
	16	101001601	1	916GHRMN	1
	20	101001601	1	920GHRMN	1
	25	101815801	1	925GHRMN	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	H
66APP110	63/A	HSK63/A DIN69893 P/P H75 ER16	16	32	75
66APP113	63/A	HSK63/A DIN69893 P/P H75 ER20	20	35	75
66APP116	63/A	HSK63/A DIN69893 P/P H75 ER25	25	42	75
66APP120	63/A	HSK63/A DIN69893 P/P H75 ER32	32	50	75
66APP126	63/A	HSK63/A DIN69893 P/P H80 ER40	40	63	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

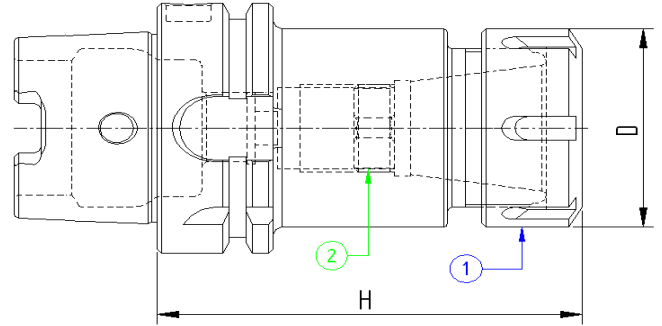
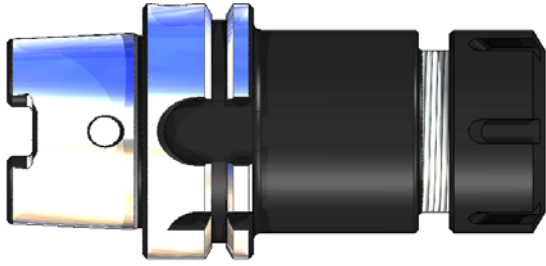
Tipo Cono    ER    **GHIERA INT.**    Q.tà    **GHIERA**    Q.tà



HSK	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
16		101001601	1	916GHREQ	1
20		101001601	1	920GHREQ	1
25		101815801	1	925GHREQ	1
32		102215901	1	932GHREQ	1
40		103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**



**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=100**

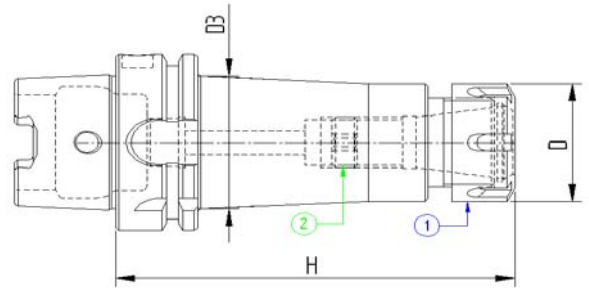
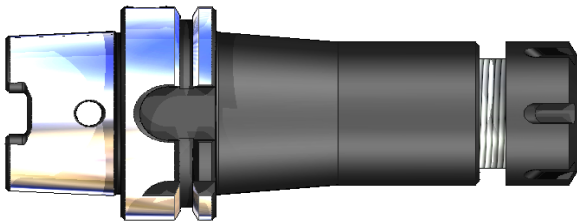
Codice	HSK	Descrizione	ER	D	H
66APP210	63/A	HSK63/A DIN69893 P/P H100 ER16	16	32	100
66APP213	63/A	HSK63/A DIN69893 P/P H100 ER20	20	35	100
66APP216	63/A	HSK63/A DIN69893 P/P H100 ER25	25	42	100
66APP220	63/A	HSK63/A DIN69893 P/P H100 ER32	32	50	100
66APP226	63/A	HSK63/A DIN69893 P/P H100 ER40	40	63	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
					
HSK	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



### L=120

Codice	HSK	Descrizione	ER	D	D3	H
66APP310	63/A	HSK63/A DIN69893 P/P H120 ER16	16	32	-	120
66APP313	63/A	HSK63/A DIN69893 P/P H120 ER20	20	35	-	120
66APP316	63/A	HSK63/A DIN69893 P/P H120 ER25	25	42	-	120
66APP320	63/A	HSK63/A DIN69893 P/P H120 ER32	32	50	-	120
66APP326	63/A	HSK63/A DIN69893 P/P H120 ER40	40	63	50	120

### L=160

Codice	HSK	Descrizione	ER	D	D3	H
66APP410	63/A	HSK63/A DIN69893 P/P H160 ER16	16	32	38	160
66APP413	63/A	HSK63/A DIN69893 P/P H160 ER20	20	35	42	160
66APP416	63/A	HSK63/A DIN69893 P/P H160 ER25	25	42	48	160
66APP420	63/A	HSK63/A DIN69893 P/P H160 ER32	32	50	50	160
66APP426	63/A	HSK63/A DIN69893 P/P H160 ER40	40	63	50	160

### L=200

Codice	HSK	Descrizione	ER	D	D3	H
66APP510	63/A	HSK63/A DIN69893 P/P H200 ER16	16	32	40	200
66APP513	63/A	HSK63/A DIN69893 P/P H200 ER20	20	35	44	200
66APP516	63/A	HSK63/A DIN69893 P/P H200 ER25	25	42	50	200
66APP520	63/A	HSK63/A DIN69893 P/P H200 ER32	32	50	50	200
66APP526	63/A	HSK63/A DIN69893 P/P H200 ER40	40	63	50	200

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono    ER    GRANO    Q.tà    GHIERA    Q.tà



HSK	ER	GRANO	Q.tà	GHIERA	Q.tà
16	16	101001601	1	916GHREQ	1
20	20	101001601	1	920GHREQ	1
25	25	101815801	1	925GHREQ	1
32	32	102215901	1	932GHREQ	1
40	40	103015901	1	940GHREQ	1



MANDRINI PORTAPINZA TIPO EOC  
EOC COLLET CHUCK  
MANDRINS A PINCES TYPE ER  
SPANNZANGENFUTTER EOC TYP

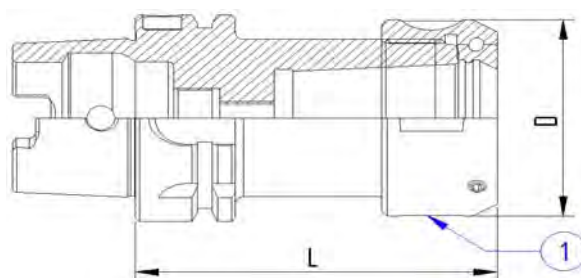
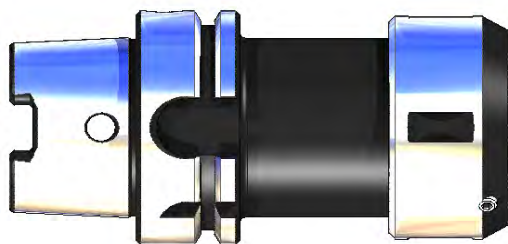


**DIN 69893**

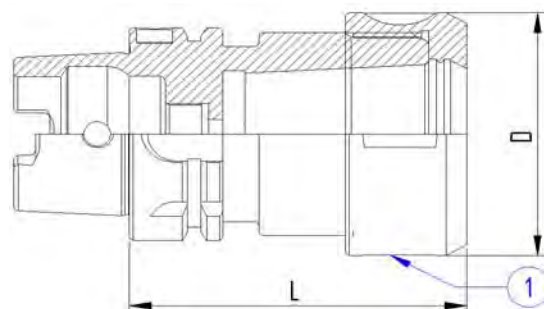
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**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**FIGURA 1**

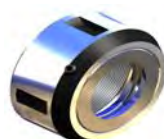


**FIGURA 2**

Codice	HSK	Descrizione	EOC	D	L	Fig.
66APO216	63/A	HSK63/A DIN69893 P/P H100 EOC16	16	43	100	1
66APO225	63/A	HSK63/A DIN69893 P/P H100 EOC25	25	60	100	1
66APO232	63/A	HSK63/A DIN69893 P/P H120 EOC32	32	72	120	2
66APO416	63/A	HSK63/A DIN69893 P/P H160 EOC16	16	43	160	1
66APO425	63/A	HSK63/A DIN69893 P/P H160 EOC25	25	60	160	1
66APO432	63/A	HSK63/A DIN69893 P/P H160 EOC32	32	72	160	2

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    EOC    **GHIERA**    Q.tà

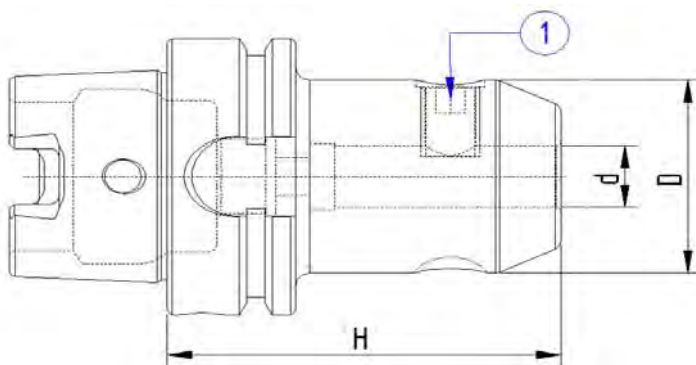


ISO 40	16	916GHROS	1
	25	925GHROS	1
	32	932GHROS	1



**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**




Codice	HSK	Descrizione	d	D	H
66AWLD06	63/A	HSK63/A DIN69893 WELDON H65 D.06	6	25	65
66AWLD08	63/A	HSK63/A DIN69893 WELDON H65 D.08	8	28	65
66AWLD10	63/A	HSK63/A DIN69893 WELDON H65 D.10	10	35	65
66AWLD12	63/A	HSK63/A DIN69893 WELDON H80 D.12	12	42	80
66AWLD14	63/A	HSK63/A DIN69893 WELDON H80 D.14	14	44	80
66AWLD16	63/A	HSK63/A DIN69893 WELDON H80 D.16	16	48	80
66AWLD18	63/A	HSK63/A DIN69893 WELDON H80 D.18	18	50	80
66AWLD20	63/A	HSK63/A DIN69893 WELDON H80 D.20	20	52	80
66AWLD24	63/A	HSK63/A DIN69893 WELDON H100 D.24	24	63	100
66AWLD25	63/A	HSK63/A DIN69893 WELDON H110 D.25	25	65	110
66AWLD32	63/A	HSK63/A DIN69893 WELDON H110 D.32	32	72	110
66AWLD40	63/A	HSK63/A DIN69893 WELDON H125 D.40	40	80	125

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono    Ø WLD    **GRANO**    Q.tà



HSK63/A	d	GRANO	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	24	101802002	2
	25	101802002	2
	32 - 40	102002002	2


**MANDRINO PORTAFRESE CON ATTACCO TIPO WELDON**  
**END MILL HOLDERS WELDON**  
**MANDRINS POUR OUTIL TYPE WELDON**  
**ZYLINDERSHAFTAUFNAHME WELDON**

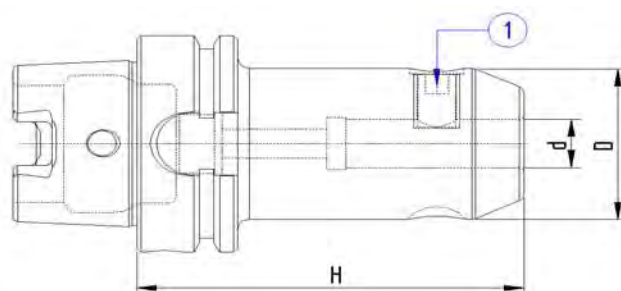


**DIN 69893**

**DIN 1835 B**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=100**

<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>d</b>	<b>D</b>	<b>H</b>
66AWE206	63/A	HSK63/A DIN69893 WELDON H.100 D.6	6	25	100
66AWE208	63/A	HSK63/A DIN69893 WELDON H.100 D.8	8	28	100
66AWE210	63/A	HSK63/A DIN69893 WELDON H.100 D.10	10	35	100
66AWE212	63/A	HSK63/A DIN69893 WELDON H.100 D.12	12	42	100
66AWE214	63/A	HSK63/A DIN69893 WELDON H.100 D.14	14	44	100
66AWE216	63/A	HSK63/A DIN69893 WELDON H.100 D.16	16	48	100
66AWE218	63/A	HSK63/A DIN69893 WELDON H.100 D.18	18	50	100
66AWE220	63/A	HSK63/A DIN69893 WELDON H.100 D.20	20	52	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

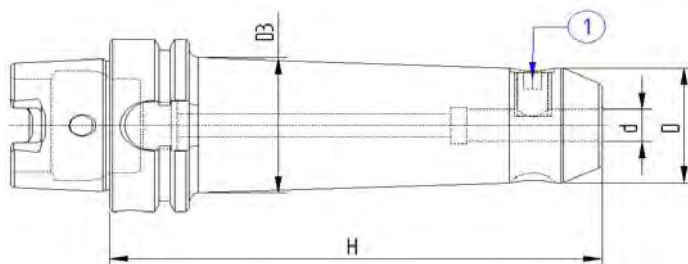
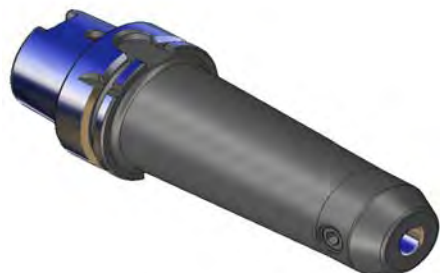
Tipo Cono    Ø WLD    GRANO    Q.tà



<b>HSK63/A</b>	<b>d</b>	<b>GRANO</b>	<b>Q.tà</b>
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=120**

Codice	HSK	Descrizione	d	D	H	D3
66AWE306	63/A	HSK63/A DIN69893 WELDON H.120 D.6	6	25	120	-
66AWE308	63/A	HSK63/A DIN69893 WELDON H.120 D.8	8	28	120	-
66AWE310	63/A	HSK63/A DIN69893 WELDON H.120 D.10	10	35	120	-
66AWE312	63/A	HSK63/A DIN69893 WELDON H.120 D.12	12	42	120	-
66AWE314	63/A	HSK63/A DIN69893 WELDON H.120 D.14	14	44	120	-
66AWE316	63/A	HSK63/A DIN69893 WELDON H.120 D.16	16	48	120	-
66AWE318	63/A	HSK63/A DIN69893 WELDON H.120 D.18	18	50	120	-
66AWE320	63/A	HSK63/A DIN69893 WELDON H.120 D.20	20	52	120	-
66AWE325	63/A	HSK63/A DIN69893 WELDON H.120 D.25	25	65	120	-
66AWE332	63/A	HSK63/A DIN69893 WELDON H.120 D.32	32	72	120	-

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

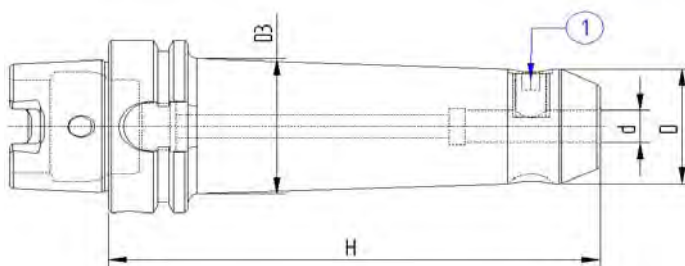
Tipo Cono    Ø WLD    GRANO    Q.tà



HSK63/A	d	GRANO	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32	102002002	2

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=160**

Codice	HSK	Descrizione	d	D	H	D3
66AWE406	63/A	HSK63/A DIN69893 WELDON H.160 D.6	6	25	160	-
66AWE408	63/A	HSK63/A DIN69893 WELDON H.160 D.8	8	28	160	-
66AWE410	63/A	HSK63/A DIN69893 WELDON H.160 D.10	10	35	160	-
66AWE412	63/A	HSK63/A DIN69893 WELDON H.160 D.12	12	42	160	-
66AWE414	63/A	HSK63/A DIN69893 WELDON H.160 D.14	14	44	160	-
66AWE416	63/A	HSK63/A DIN69893 WELDON H.160 D.16	16	48	160	-
66AWE418	63/A	HSK63/A DIN69893 WELDON H.160 D.18	18	50	160	-
66AWE420	63/A	HSK63/A DIN69893 WELDON H.160 D.20	20	52	160	-
66AWE425	63/A	HSK63/A DIN69893 WELDON H.160 D.25	25	65	160	-
66AWE432	63/A	HSK63/A DIN69893 WELDON H.160 D.32	32	72	160	-
66AWE440	63/A	HSK63/A DIN69893 WELDON H.160 D.40	40	80	160	-

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

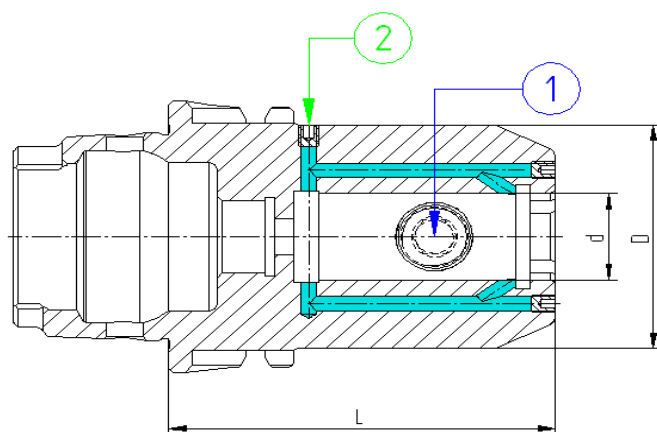
Tipo Cono    Ø WLD    GRANO    Q.tà



HSK63/A		GRANO	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32 - 40	102002002	2

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	L
66AWLK06	63/A	HSK63/A DIN69893 WELDON/C H65 D.6	6	25	65
66AWLK08	63/A	HSK63/A DIN69893 WELDON/C H65 D.8	8	28	65
66AWLK10	63/A	HSK63/A DIN69893 WELDON/C H65 D.10	10	35	65
66AWLK12	63/A	HSK63/A DIN69893 WELDON/C H80 D.12	12	42	80
66AWLK14	63/A	HSK63/A DIN69893 WELDON/C H80 D.14	14	44	80
66AWLK16	63/A	HSK63/A DIN69893 WELDON/C H80 D.16	16	48	80
66AWLK18	63/A	HSK63/A DIN69893 WELDON/C H80 D.18	18	50	80
66AWLK20	63/A	HSK63/A DIN69893 WELDON/C H80 D.20	20	52	80
66AWLK25	63/A	HSK63/A DIN69893 WELDON/C H110 D.25	25	65	110
66AWLK32	63/A	HSK63/A DIN69893 WELDON/C H110 D.32	32	72	110
66AWLK40	63/A	HSK63/A DIN69893 WELDON/C H125 D.40	40	80	125

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	Ø WLD	GRANO 1	Q.tà	GRANO 2	Q.tà
HSK63/A	6	100601004	1	100300404 M3x4	2
	8	100801004	1	100400504 M4x5	2
	10	101001204	1	100400504 M4x5	2
	12 - 14	101201604	1	100400504 M4x5	2
	16 - 18	101401604	1	100400504 M4x5	3
	20	101601604	1	100400504 M4x5	3
	25	101802002	2	100400504 M4x5	3
	32 - 40	102002002	2	100400504 M4x5	3



MANDRINO PORTAFRESE CON ATTACCO TIPO WISTHLE NOTCH  
 END MILL HOLDERS WISTHLE NOTCH  
 MANDRINS POUR OUTIL TYPE WISTHLE NOTCH  
 ZYLINDERSHAFTAUFAHME WISTHLE NOTCH

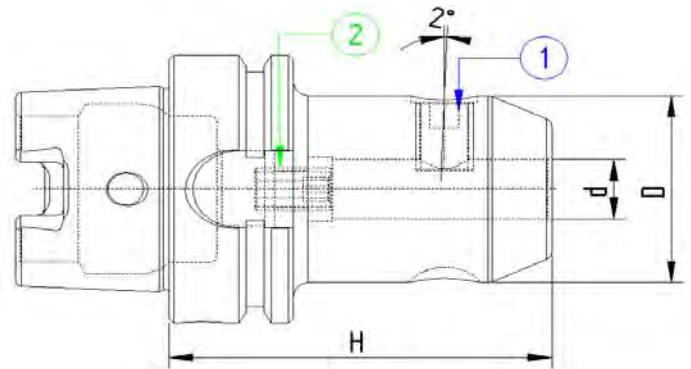


**DIN 69893**

**DIN 1835 E**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
66AWHN06	63/A	HSK63/A DIN69893 W/NOTCH H.80 D.06	6	25	80
66AWHN08	63/A	HSK63/A DIN69893 W/NOTCH H.80 D.08	8	28	80
66AWHN10	63/A	HSK63/A DIN69893 W/NOTCH H.80 D.10	10	35	80
66AWHN12	63/A	HSK63/A DIN69893 W/NOTCH H.90 D.12	12	42	90
66AWHN14	63/A	HSK63/A DIN69893 W/NOTCH H.90 D.14	14	44	90
66AWHN16	63/A	HSK63/A DIN69893 W/NOTCH H.100 D.16	16	48	100
66AWHN18	63/A	HSK63/A DIN69893 W/NOTCH H.100 D.18	18	50	100
66AWHN20	63/A	HSK63/A DIN69893 W/NOTCH H.100 D.20	20	52	100
66AWHN25	63/A	HSK63/A DIN69893 W/NOTCH H.110 D.25	25	65	110
66AWHN32	63/A	HSK63/A DIN69893 W/NOTCH H.110 D.32	32	72	110

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø WLD	GRANO 1	Q.tà	GRANO INTERNO	Q.tà
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HSK63/A	Ø WLD	GRANO 1	Q.tà	GRANO INTERNO	Q.tà
	6	100601004	1	100501607	1
	8	100801004	1	100601607	1
	10	101001204	1	100801601	1
	12 - 14	101201604	1	101001601	1
	16 - 18	101401604	1	101001601	1
	20	101601604	1	101001801	1
	25	101802002	2	101001801	1
	32	102002002	2	101001801	1



MANDRINI PORTAFRESE A TRASCINAMENTO FISSO CON PASAGGIO REFRIGERANTE  
 FACE MILL HOLDERS-TENONS DRIVE-WITH INTERNAL COOLANT SUPPLY  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FUER FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

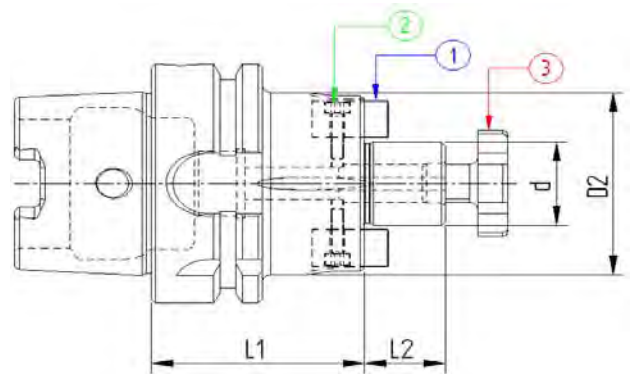
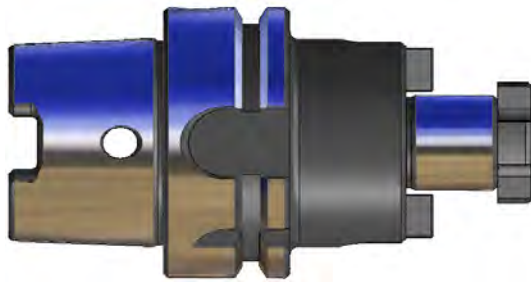


**DIN 69893**

**ISO 3937**

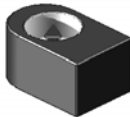


**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



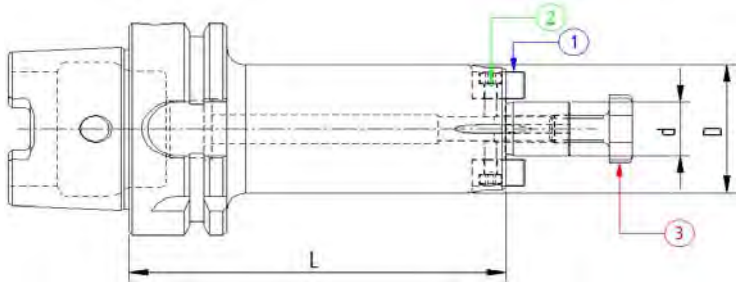
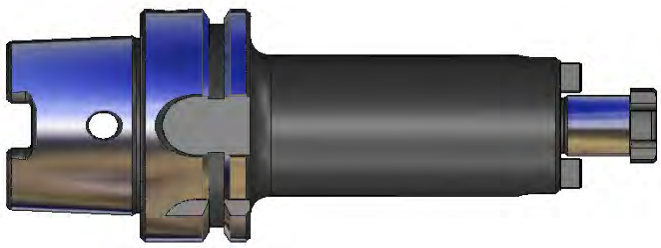
Codice	HSK	Descrizione	D	L1	L2	D2
66APF116	63/A	HSK63/A DIN69893 P/F FISSO H50 D.16	16	50	17	38
66APF122	63/A	HSK63/A DIN69893 P/F FISSO H50 D.22	22	50	19	48
66APF127	63/A	HSK63/A DIN69893 P/F FISSO H60 D.27	27	60	21	58
66APF132	63/A	HSK63/A DIN69893 P/F FISSO H60 D.32	32	60	24	66
66APF140	63/A	HSK63/A DIN69893 P/F FISSO H60 D.40	40	60	27	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	TASSELLO	Q.tà	VITE	Q.tà	VITE A CROCE	Q.tà
							
HSK	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



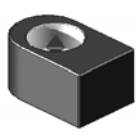


**L=100**

Codice	HSK	Descrizione	d	L	D
66APF216	63/A	HSK63/A DIN69893 P/F FISSO H100 D16	16	100	38
66APF222	63/A	HSK63/A DIN69893 P/F FISSO H100 D22	22	100	48
66APF227	63/A	HSK63/A DIN69893 P/F FISSO H100 D27	27	100	58
66APF232	63/A	HSK63/A DIN69893 P/F FISSO H100 D32	32	100	66
66APF240	63/A	HSK63/A DIN69893 P/F FISSO H100 D40	40	100	80

**L=160**

Codice	HSK	Descrizione	d	L	D
66APF416	63/A	HSK63/A DIN69893 P/F FISSO H160 D16	16	160	38
66APF422	63/A	HSK63/A DIN69893 P/F FISSO H160 D22	22	160	48
66APF427	63/A	HSK63/A DIN69893 P/F FISSO H160 D27	27	160	58
66APF432	63/A	HSK63/A DIN69893 P/F FISSO H160 D32	32	160	66
66APF440	63/A	HSK63/A DIN69893 P/F FISSO H160 D40	40	160	80

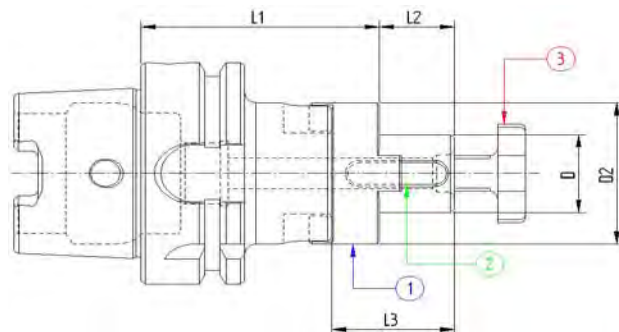
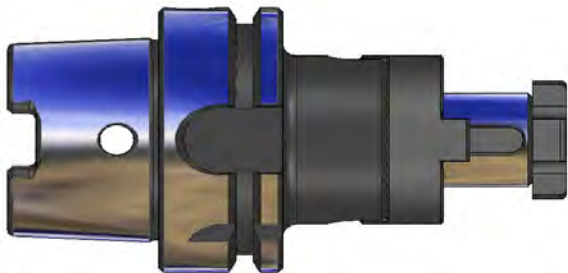
**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	TASSELLO	Q.tà	VITE	Q.tà	VITE A CROCE	Q.tà
							
HSK	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1



**Bilanciato G.6,3 20.000 RPM**

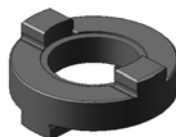
**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	D	L1	L2	L3	D2
66APU116	63/A	HSK63/A DIN69893 P/F UNIV.H60 D16	16	60	17	27	32
66APU122	63/A	HSK63/A DIN69893 P/F UNIV.H60 D22	22	60	19	31	40
66APU127	63/A	HSK63/A DIN69893 P/F UNIV.H60 D27	27	60	21	33	48
66APU132	63/A	HSK63/A DIN69893 P/F UNIV.H60 D32	32	60	24	38	58
66APU140	63/A	HSK63/A DIN69893 P/F UNIV.H70 D40	40	70	27	41	70

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

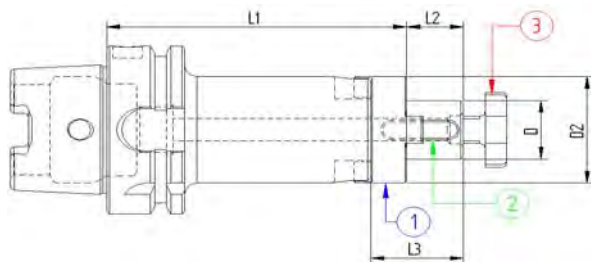
Tipo Cono	HSK	VITE A CROCE	Q.tà	DISTANZIALE	Q.tà	LINGUETTA	Q.tà
-----------	-----	--------------	------	-------------	------	-----------	------



HSK63/A							
16	916VTC02	1	916GNT01	1	170402004	1	
22	922VTC02	1	922GNT01	1	170602506	1	
27	927VTC02	1	927GNT01	1	170702507	1	
32	932VTC02	1	932GNT01	1	170802807	1	
40	940VTC02	1	940GNT01	1	171003208	1	

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**




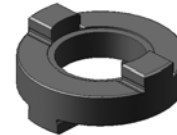

### L=100

Codice	HSK	Descrizione	D	L1	L2	L3	D2
66APU216	63/A	HSK63/A DIN69893 P/F UNIV. H100 D16	16	100	17	27	32
66APU222	63/A	HSK63/A DIN69893 P/F UNIV. H100 D22	22	100	19	31	40
66APU227	63/A	HSK63/A DIN69893 P/F UNIV. H100 D27	27	100	21	33	48
66APU232	63/A	HSK63/A DIN69893 P/F UNIV. H100 D32	32	100	24	38	58
66APU240	63/A	HSK63/A DIN69893 P/F UNIV. H100 D40	40	100	27	41	70

### L=160

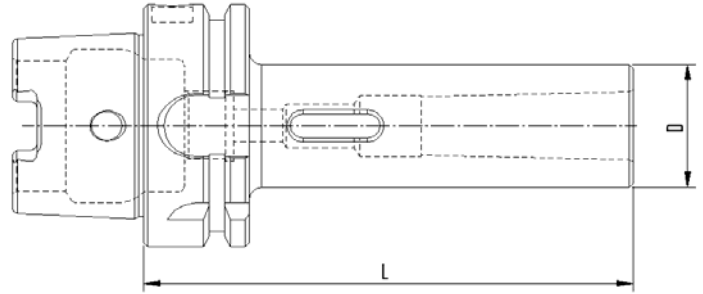
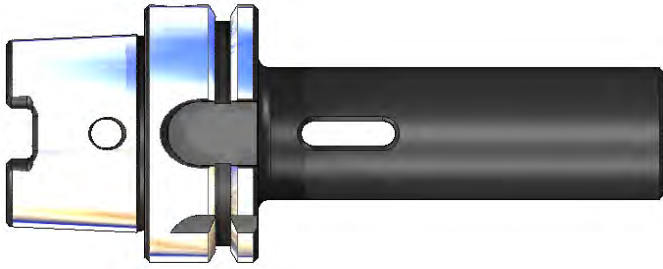
Codice	HSK	Descrizione	D	L1	L2	L3	D2
66APU416	63/A	HSK63/A DIN69893 P/F UNIV.H160 D16	16	160	17	27	32
66APU422	63/A	HSK63/A DIN69893 P/F UNIV.H160 D22	22	160	19	31	40
66APU427	63/A	HSK63/A DIN69893 P/F UNIV.H160 D27	27	160	21	33	48
66APU432	63/A	HSK63/A DIN69893 P/F UNIV.H160 D32	32	160	24	38	58
66APU440	63/A	HSK63/A DIN69893 P/F UNIV.H160 D40	40	160	27	41	70

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	HSK	VITE A CROCE	Q.tà	DISTANZIALE	Q.tà	LINGUETTA	Q.tà
							
HSK63/A	16	916VTC02	1	916GNT01	1	170402004	1
	22	922VTC02	1	922GNT01	1	170602506	1
	27	927VTC02	1	927GNT01	1	170702507	1
	32	932VTC02	1	932GNT01	1	170802807	1
	40	940VTC02	1	940GNT01	1	171003208	1

**Bilanciato G.6,3 20.000 RPM**

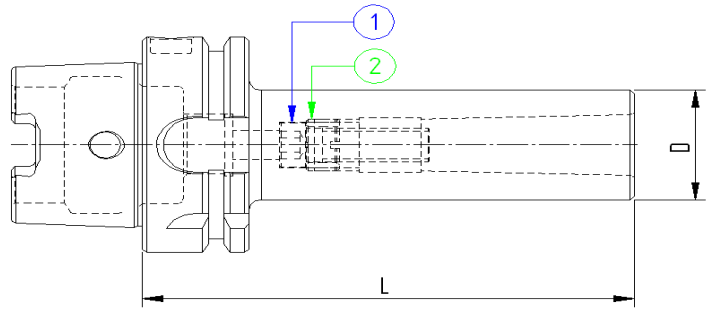
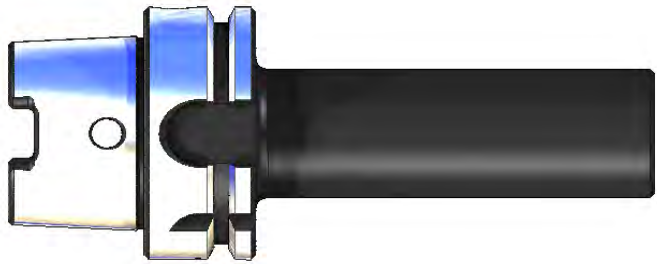
**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>MORSE</b>	<b>D</b>	<b>L</b>
66AMP101	63/A	HSK63/A DIN69893 H100 CM1 PUNTE	1	25	100
66AMP102	63/A	HSK63/A DIN69893 H120 CM2 PUNTE	2	32	120
66AMP103	63/A	HSK63/A DIN69893 H140 CM3 PUNTE	3	40	140
66AMP104	63/A	HSK63/A DIN69893 H160 CM4 PUNTE	4	48	160

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	MORSE	D	L
66AMF101	63/A	HSK63/A DIN69893 H100 CM1 FRESE	1	25	100
66AMF102	63/A	HSK63/A DIN69893 H120 CM2 FRESE	2	32	120
66AMF103	63/A	HSK63/A DIN69893 H140 CM3 FRESE	3	40	140
66AMF104	63/A	HSK63/A DIN69893 H160 CM4 FRESE	4	48	160

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    HSK    **VITE (1)**    Q.tà    **BOCCOLA (2)**    Q.tà



HSK63/A	CM	VITE (1)	Q.tà	BOCCOLA (2)	Q.tà
	CM1	110603001	1	-	1
	CM2	111003014	1	121500802	1
	CM3	111204003	1	122000903	1
	CM4	111604514	1	122501204	1

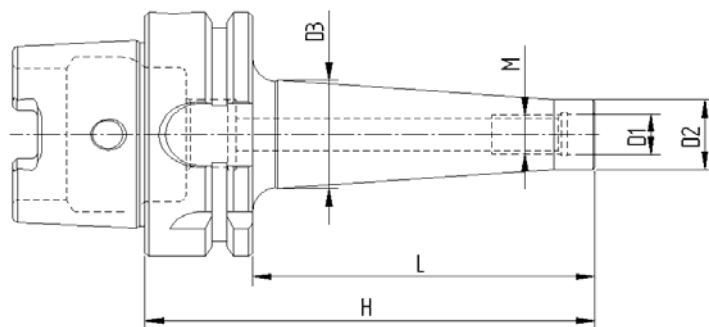
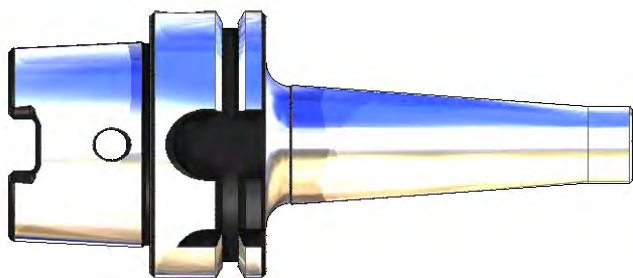


MANDRINI PER FRESE CON ATTACCO FILETTATO  
MILLING CUTTER ARBORs FOR SCREW-ON TYPE MILLING CUTTERS  
MANDRINS POUR FRAISES A VISSER  
SPANFUTTER FUR EINSCHRAUBFRAESER



**DIN 69893**

**Bilanciato G.2,5 20.000 RPM**



**L = 59**

Codice	HSK	Descrizione	D1	D2	D3	H	L	M
66AAF108	63/A	HSK63/A DIN69893 P/F AT.FIL.M8x59	8,5	13	15	59	33	M8
66AAF110	63/A	HSK63/A DIN69893 P/F AT.FIL.M10x59	10,5	18	19,5	59	33	M10
66AAF112	63/A	HSK63/A DIN69893 P/F AT.FIL.M12x59	12,5	21	24	59	33	M12
66AAF116	63/A	HSK63/A DIN69893 P/F AT.FIL.M16x59	17	29	34	59	33	M16

**L = 84**

Codice	HSK	Descrizione	D1	D2	D3	H	L	M
66AAF208	63/A	HSK63/A DIN69893 P/F AT.FIL.M8x84	8,5	13	23	84	58	M8
66AAF210	63/A	HSK63/A DIN69893 P/F AT.FIL.M10x84	10,5	18	25	84	58	M10
66AAF212	63/A	HSK63/A DIN69893 P/F AT.FIL.M12x84	12,5	21	24	84	58	M12
66AAF216	63/A	HSK63/A DIN69893 P/F AT.FIL.M16x84	17	29	34	84	58	M16

**L = 109**

Codice	HSK	Descrizione	D1	D2	D3	H	L	M
66AAF308	63/A	HSK63/A DIN69893 P/F AT.FIL.M8x109	8,5	13	23	109	83	M8
66AAF310	63/A	HSK63/A DIN69893 P/F AT.FIL.M10x109	10,5	18	28	109	83	M10
66AAF312	63/A	HSK63/A DIN69893 P/F AT.FIL.M12x109	12,5	21	31	109	83	M12
66AAF316	63/A	HSK63/A DIN69893 P/F AT.FIL.M16x109	17	29	34	109	83	M16

**L = 134**

Codice	HSK	Descrizione	D1	D2	D3	H	L	M
66AAF408	63/A	HSK63/A DIN69893 P/F AT.FIL.M8x134	8,5	13	25	134	108	M8
66AAF410	63/A	HSK63/A DIN69893 P/F AT.FIL.M10x134	10,5	18	28	134	108	M10
66AAF412	63/A	HSK63/A DIN69893 P/F AT.FIL.M12x134	12,5	21	31	134	108	M12
66AAF416	63/A	HSK63/A DIN69893 P/F AT.FIL.M16x134	17	29	39	134	108	M16

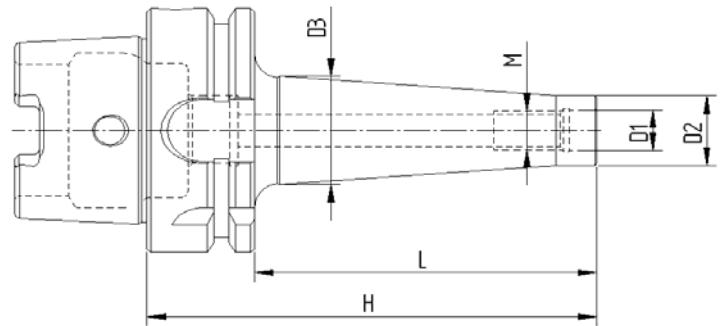
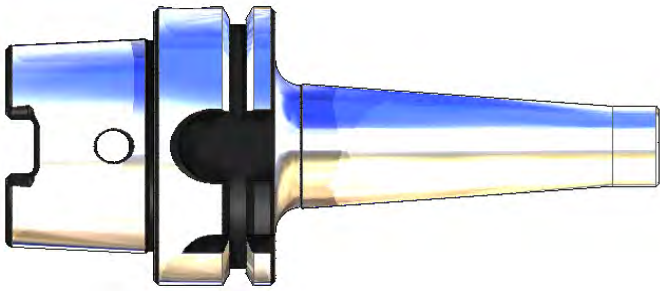


MANDRINI PER FRESE CON ATTACCO FILETTATO  
 MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
 MANDRINS POUR FRAISES A VISSER  
 SPANFUTTER FUR EINSCHRAUBFRAESER



**DIN 69893**

**Bilanciato G.2,5 20.000 RPM**



**L = 159**

Codice	HSK	Descrizione	D1	D2	D3	H	L	M
66AAF510	63/A	HSK63/A DIN69893 P/F AT.FIL.M10x159	10,5	18	31	159	133	M10
66AAF512	63/A	HSK63/A DIN69893 P/F AT.FIL.M12x159	12,5	21	34	159	133	M12
66AAF516	63/A	HSK63/A DIN69893 P/F AT.FIL.M16x159	17	29	39	159	133	M16

**L = 184**

Codice	HSK	Descrizione	D1	D2	D3	H	L	M
66AAF612	63/A	HSK63/A DIN69893 P/F AT.FIL.M12x184	12,5	21	34	184	158	M12
66AAF616	63/A	HSK63/A DIN69893 P/F AT.FIL.M16x184	17	29	39	184	158	M16

**L = 209**

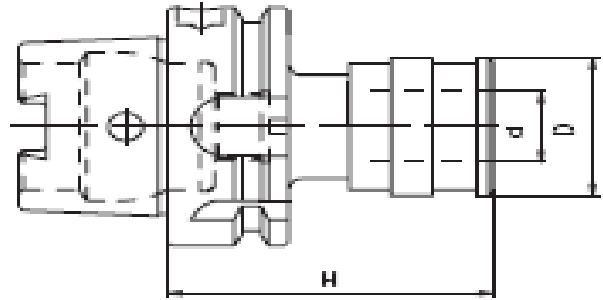
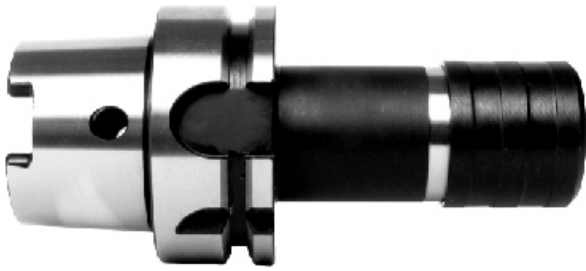
Codice	HSK	Descrizione	D1	D2	D3	H	L	M
66AAF712	63/A	HSK63/A DIN69893 P/F AT.FIL.M12x209	12,5	21	42	209	183	M12
66AAF716	63/A	HSK63/A DIN69893 P/F AT.FIL.M16x209	17	29	42	209	183	M16



MANDRINI PORTAMASCHI A CAMBIO RAPIDO  
 QUICK CHANGE TAP HOLDER  
 MANDRINS DE TARAUDAGE A CHANGEMENT RAPID  
 GEWINDE -SCHNELLWECHSELFUTTER



**DLN 69893**



Codice	HSK	Descrizione	H	D	d
66APCRM1	63/A	HSK63/A M/PORTAM/C/R H72 GR.1	72	38	19
66APCRM2	63/A	HSK63/A M/PORTAM/C/R H110 GR.2	110	54	31

**ACCESSORI - ACCESSORIES - ACCESSIRES - ZUBEHOR**

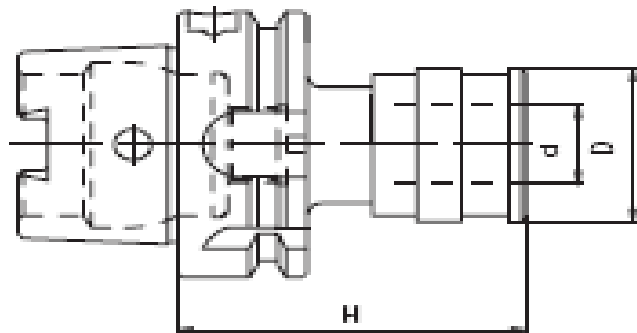
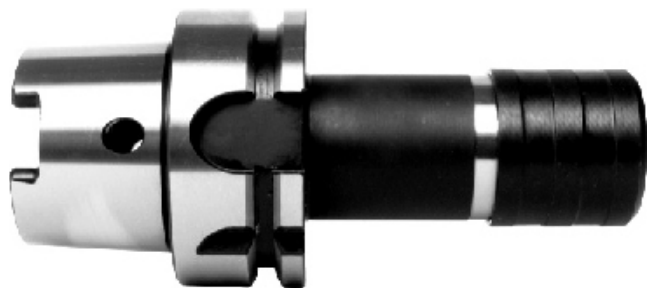




MANDRINI PORTAMASCHI A CAMBIO RAPIDO RIGIDI  
 QUICK CHANGE TAP HOLDER  
 MANDRINS DE TARAUDAGE A CHANGEMENT RAPID  
 GEWINDE -SCHNELLWECHSELFUTTER



**DLN 69893**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>H</b>	<b>D</b>	<b>d</b>
66APRRM1	63/A	HSK63/A M/PORTAM/C/R/R H72 GR.1	72	38	19
66APRRM2	63/A	HSK63/A M/PORTAM/C/R/R H110 GR.2	110	54	31

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**







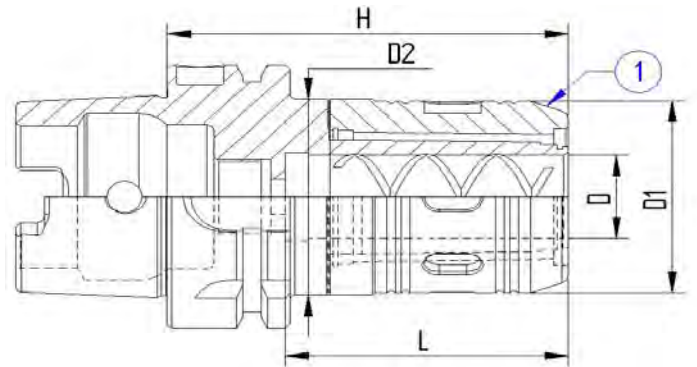
MANDRINI A FORTE SERRAGGIO  
MILLING CHUCK  
MANDRINS A FORT SERRAGE  
KRAFTSPANNFUTTER



**DIN 69893**

**DIN 1835 E**

**Bilanciato G.6,3 12.000 RPM**



Codice	HSK	Descrizione	H	D	D1	D2	L
66AFS120	63/A	HSK 63/A FORTE SERRAGGIO Ø20 H85	85	20	46	47	60
66AFS232	63/A	HSK 63/A FORTE SERRAGGIO Ø32 H110	110	32	62	63	80

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**

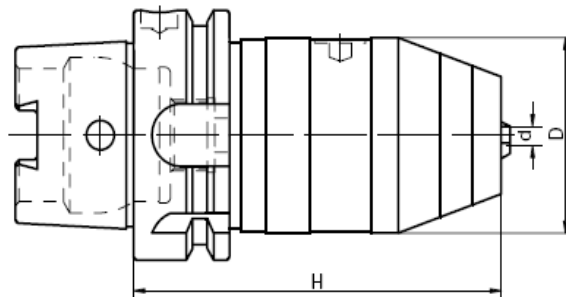




MANDRINI INTEGRALI CON CHIAVE ESAGONALE  
 DRILL CHUCK WITH EXAG-KEY LOCK SYSTEM  
 MANDRINS MONBLOC-SERRAGE PAR CLE 6 PANS  
 NC-KURZBOHRFUTTER-SPANNEN DURCH 6 - KANTSCHLUSSEL



**DIN 69893**



**CON REFRIGERANTE CENTRALE - WITH INTERNAL COOLANT SUPPLY -  
 AVEC ARROSAGE INTERNE - MIT ZENTRALEM KUHLMITTELLOCH**

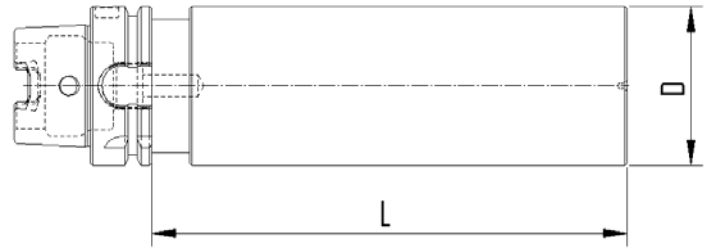
<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>H</b>	<b>D</b>	<b>d</b>
66AMAZ13	63/A	HSK63/A M/AUTOS./FORI H111 D13	111	50	1 - 13
66AMAZ16	63/A	HSK63/A M/AUTOS./FORI H111 D16	111	57	3 - 16



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDER WITH SOFT SHANK  
 BARRES D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SCHAFT



**DIN 69893**

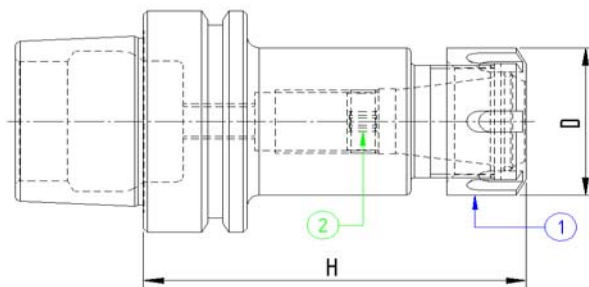
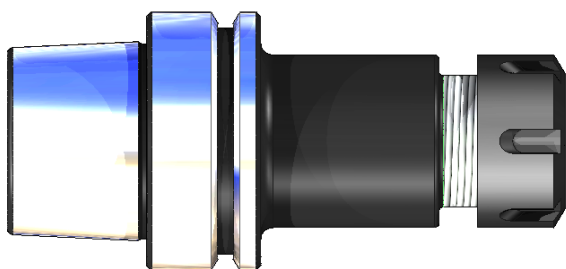


<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>D</b>	<b>L</b>
66AST363	63/A	HSK63/A DIN69893 ST.TENERO D.63x250	63	250
66AST380	63/A	HSK63/A DIN69893 ST.TENERO D.80x250	80	250

HSK 63/E

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



### STANDARD

Codice	HSK	Descrizione	ER	D	H
66EPP110	63/E	HSK63/E DIN69893 P/P H75 ER16	16	32	75
66EPP116	63/E	HSK63/E DIN69893 P/P H75 ER25	25	42	75
66EPP120	63/E	HSK63/E DIN69893 P/P H75 ER32	32	50	75
66EPP126	63/E	HSK63/E DIN69893 P/P H75 ER40	40	63	75

### L=100

Codice	HSK	Descrizione	ER	D	H
66EPP210	63/E	HSK63/E DIN69893 P/P H100 ER16	16	32	100
66EPP216	63/E	HSK63/E DIN69893 P/P H100 ER25	25	42	100
66EPP220	63/E	HSK63/E DIN69893 P/P H100 ER32	32	50	100
66EPP226	63/E	HSK63/E DIN69893 P/P H100 ER40	40	63	100

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

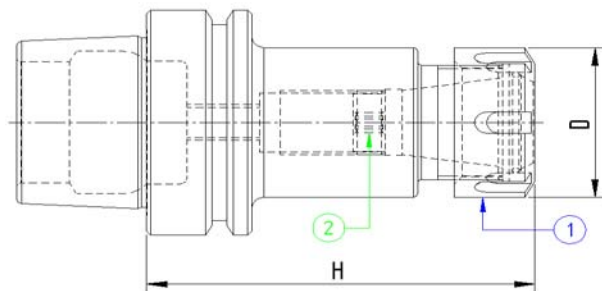
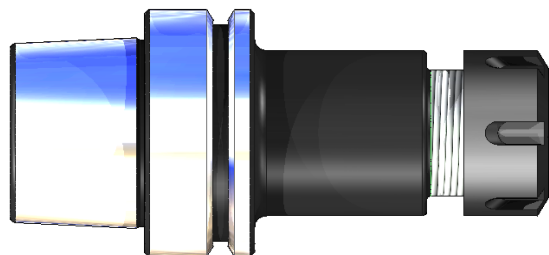
Tipo Cono | ER | **GHIERA INT.** | Q.tà | **GHIERA** | Q.tà



HSK/63 E	ER	101001601	1	916GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=120**

Codice	HSK	Descrizione	ER	D	H
66EPP310	63/E	HSK63/E DIN69893 P/P H120 ER16	16	32	120
66EPP316	63/E	HSK63/E DIN69893 P/P H120 ER25	25	42	120
66EPP320	63/E	HSK63/E DIN69893 P/P H120 ER32	32	50	120
66EPP326	63/E	HSK63/E DIN69893 P/P H120 ER40	40	63	120

**L=160**

Codice	HSK	Descrizione	ER	D	H
66EPP410	63/E	HSK63/E DIN69893 P/P H160 ER16	16	32	160
66EPP416	63/E	HSK63/E DIN69893 P/P H160 ER25	25	42	160
66EPP420	63/E	HSK63/E DIN69893 P/P H160 ER32	32	50	160
66EPP426	63/E	HSK63/E DIN69893 P/P H160 ER40	40	63	160

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

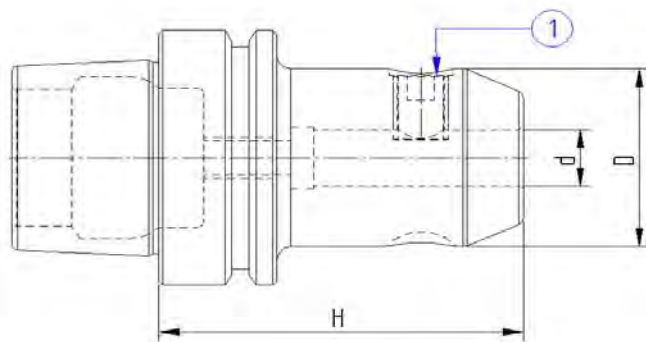
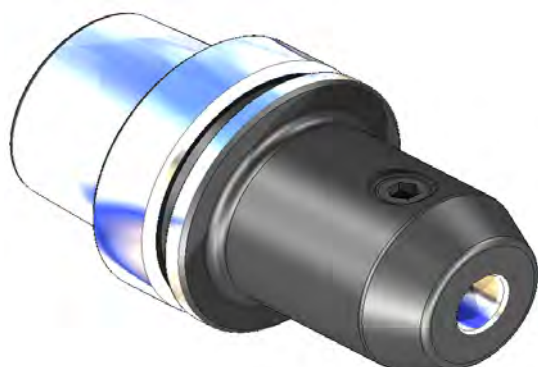
Tipo Cono    ER    **GHIERA INT.**    Q.tà    **GHIERA**    Q.tà



HSK/63 E	ER	101001601	1	916GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
66EWLD06	63/E	HSK63/E DIN69893 WELDON H65 D06	6	25	65
66EWLD08	63/E	HSK63/E DIN69893 WELDON H65 D08	8	28	65
66EWLD10	63/E	HSK63/E DIN69893 WELDON H70 D10	10	35	70
66EWLD12	63/E	HSK63/E DIN69893 WELDON H80 D12	12	42	80
66EWLD14	63/E	HSK63/E DIN69893 WELDON H80 D14	14	44	80
66EWLD16	63/E	HSK63/E DIN69893 WELDON H80 D16	16	48	80
66EWLD18	63/E	HSK63/E DIN69893 WELDON H80 D18	18	50	80
66EWLD20	63/E	HSK63/E DIN69893 WELDON H80 D20	20	52	80
66EWLD25	63/E	HSK63/E DIN69893 WELDON H105 D25	25	65	105
66EWLD32	63/E	HSK63/E DIN69893 WELDON H110 D32	32	72	110

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono    Ø WLD    **GRANO 1**    Q.tà



HSK63/E	Ø WLD	GRANO 1	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32	102002002	2



MANDRINO PORTAFRESE CON ATTACCO TIPO WISTHLE NOTCH  
 END MILL HOLDERS WISTHLE NOTCH  
 MANDRINS POUR OUTIL TYPE WISTHLE NOTCH  
 ZYLINDERSHAFTAUFAHME WISTHLE NOTCH

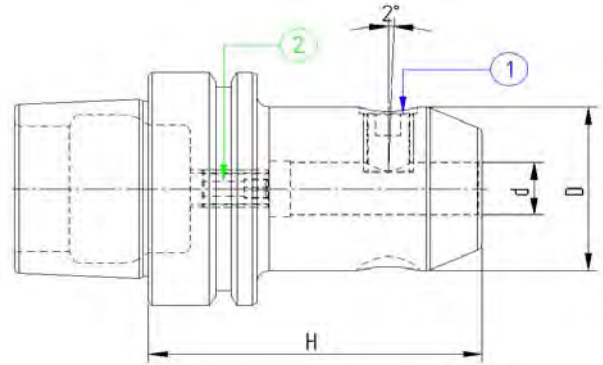


**DIN 69893**

**DIN 1835 E**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	L
66EWHN06	63/E	HSK63/E DIN69893 W/NOTCH H65 D06	6	25	65
66EWHN08	63/E	HSK63/E DIN69893 W/NOTCH H65 D08	8	28	65
66EWHN10	63/E	HSK63/E DIN69893 W/NOTCH H65 D10	10	35	65
66EWHN12	63/E	HSK63/E DIN69893 W/NOTCH H80 D12	12	42	80
66EWHN14	63/E	HSK63/E DIN69893 W/NOTCH H80 D14	14	44	80
66EWHN16	63/E	HSK63/E DIN69893 W/NOTCH H80 D16	16	48	80
66EWHN18	63/E	HSK63/E DIN69893 W/NOTCH H80 D18	18	50	80
66EWHN20	63/E	HSK63/E DIN69893 W/NOTCH H80 D20	20	52	80
66EWHN25	63/E	HSK63/E DIN69893 W/NOTCH H100 D25	25	65	100
66EWHN32	63/E	HSK63/E DIN69893 W/NOTCH H100 D32	32	72	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    **GRANO 1**    Q.tà    **GRANO INTERNO**    Q.tà



HSK63/E	Ø WLD	GRANO 1	Q.tà	GRANO INTERNO	Q.tà
	6	100601004	1	100501607	1
	8	100801004	1	100601607	1
	10	101001204	1	100801601	1
	12 - 14	101201604	1	101001601	1
	16 - 18	101401604	1	101001601	1
	20	101601604	1	101001801	1
	25	101802002	2	101001801	1
	32	102002002	2	101001801	1





MANDRINI PORTAFRESA TRASCINAMENTO FISSO  
 FACE MILL HOLDERS-TENONS DRIVE WITH INTERNAL COOLANT  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FÜR FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

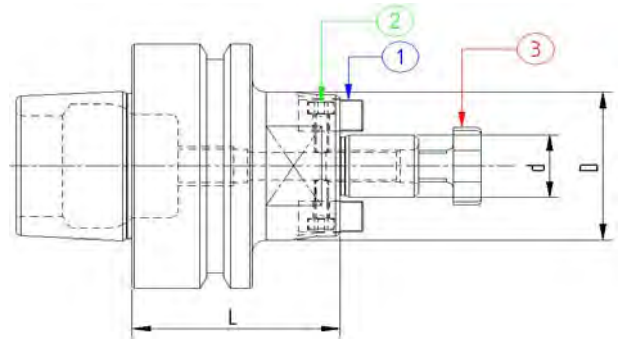
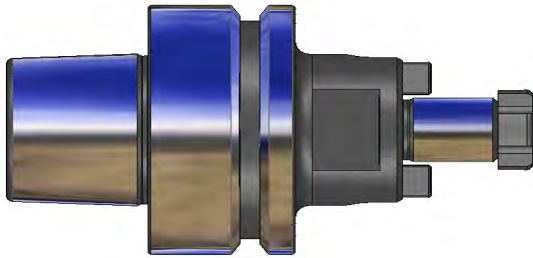


**DIN 69893**

**ISO 3937**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**STANDARD**

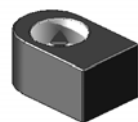
Codice	HSK	Descrizione	d	D	L
66EPF116	63/E	HSK63/E DIN69893 P/F FISSO H50 D16	16	38	50
66EPF122	63/E	HSK63/E DIN69893 P/F FISSO H50 D22	22	48	50
66EPF127	63/E	HSK63/E DIN69893 P/F FISSO H60 D27	27	58	60
66EPF132	63/E	HSK63/E DIN69893 P/F FISSO H60 D32	32	66	60
66EPF140	63/E	HSK63/E DIN69893 P/F FISSO H65 D40	40	80	65

**L=100**

Codice	HSK	Descrizione	d	D	L
66EPF216	63/E	HSK63/E DIN69893 P/F FISSO H100 D16	16	38	100
66EPF222	63/E	HSK63/E DIN69893 P/F FISSO H100 D22	22	48	100
66EPF227	63/E	HSK63/E DIN69893 P/F FISSO H100 D27	27	58	100
66EPF232	63/E	HSK63/E DIN69893 P/F FISSO H100 D32	32	66	100
66EPF240	63/E	HSK63/E DIN69893 P/F FISSO H100 D40	40	80	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø    **TASSELLO**    Q.tà    **VITE TASSELLO**    Q.tà    **VITE A CROCE**    Q.tà



HSK	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE A CROCE	Q.tà
16		916TSL01	2	110301001	2	916VTC02	1
22		922TSL01	2	110301201	2	922VTC02	1
27		927TSL01	2	110401601	2	927VTC02	1
32		932TSL01	2	110601601	2	932VTC02	1
40		940TSL01	2	110601601	2	940VTC02	1



MANDRINI PORTAFRESA TRASCINAMENTO FISSO  
 FACE MILL HOLDERS-TENONS DRIVE WITH INTERNAL COOLANT  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FÜR FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

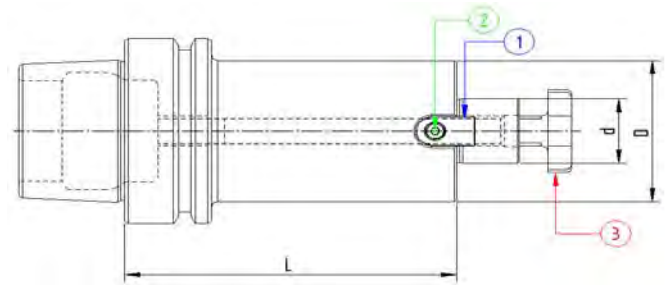
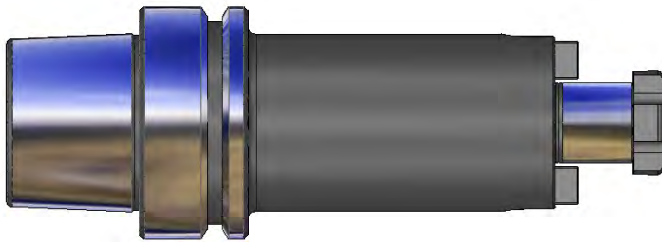


**DIN 69893**

**ISO 3937**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=130**

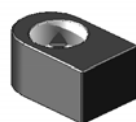
Codice	HSK	Descrizione	d	D	L
66EPF316	63/E	HSK63/E DIN69893 P/F FISSO H130 D16	16	38	130
66EPF322	63/E	HSK63/E DIN69893 P/F FISSO H130 D22	22	48	130
66EPF327	63/E	HSK63/E DIN69893 P/F FISSO H130 D27	27	58	130
66EPF332	63/E	HSK63/E DIN69893 P/F FISSO H130 D32	32	66	130
66EPF340	63/E	HSK63/E DIN69893 P/F FISSO H130 D40	40	80	130

**L=160**

Codice	HSK	Descrizione	d	D	L
66EPF416	63/E	HSK63/E DIN69893 P/F FISSO H160 D16	16	38	160
66EPF422	63/E	HSK63/E DIN69893 P/F FISSO H160 D22	22	48	160
66EPF427	63/E	HSK63/E DIN69893 P/F FISSO H160 D27	27	58	160
66EPF432	63/E	HSK63/E DIN69893 P/F FISSO H160 D32	32	66	160
66EPF440	63/E	HSK63/E DIN69893 P/F FISSO H160 D40	40	80	160

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

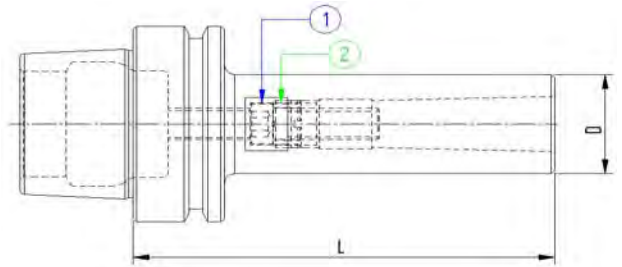
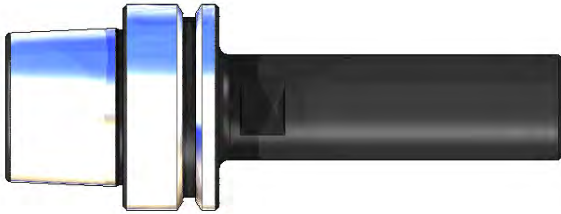
Tipo Cono    Ø    TASSELLO    Q.tà    VITE TASSELLO    Q.tà    VITE A CROCE    Q.tà



HSK	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE A CROCE	Q.tà
16		916TSL01	2	110301001	2	916VTC02	1
22		922TSL01	2	110301201	2	922VTC02	1
27		927TSL01	2	110401601	2	927VTC02	1
32		932TSL01	2	110601601	2	932VTC02	1
40		940TSL01	2	110601601	2	940VTC02	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**




Codice	HSK	Descrizione	MORSE	D	L
66EMF101	63/E	HSK63/E DIN69893 H100 CM1FRESE	1	25	100
66EMF102	63/E	HSK63/E DIN69893 H125 CM2FRESE	2	32	125
66EMF103	63/E	HSK63/E DIN69893 H145 CM3FRESE	3	40	145
66EMF104	63/E	HSK63/E DIN69893 H165 CM4FRESE	4	48	165

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono   HSK   VITE (1)   Q.tà   BOCCOLA (2)   Q.tà



HSK63/A	CM	Part Number	Q.tà	Part Number	Q.tà
	CM1	110603001	1	-	1
	CM2	111003014	1	121500802	1
	CM3	111204003	1	122000903	1
	CM4	111604514	1	122501204	1


**MANDRINI PORTAPUNTE ATTACCO CONO MORSE**  
**MORSE TAPER ADAPTORS FOR DRILLS**  
**DOUILLES POUR CONE MORSE A TENON**  
**ZWISCHENHULSEN FÜR MORSEKEGEL MIT AUSTREIBLAPPEN**

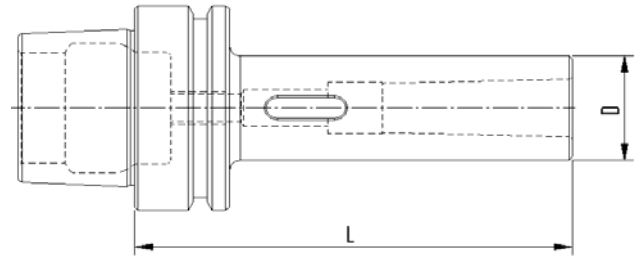
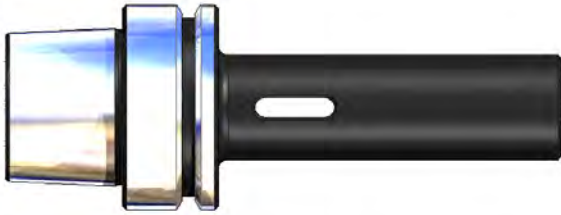


**DIN 69893**

**DIN 228 - 2**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>MORSE</b>	<b>D</b>	<b>L</b>
66EMP101	63/E	HSK63/E DIN69893 H100 CM1PUNTE	1	25	100
66EMP102	63/E	HSK63/E DIN69893 H120 CM2PUNTE	2	32	120
66EMP103	63/E	HSK63/E DIN69893 H140 CM3PUNTE	3	40	140
66EMP104	63/E	HSK63/E DIN69893 H165 CM4PUNTE	4	48	165

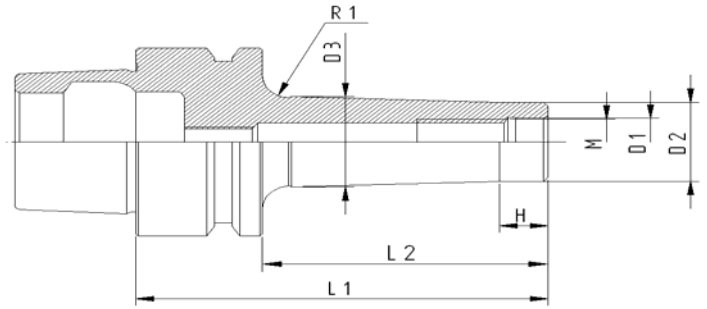
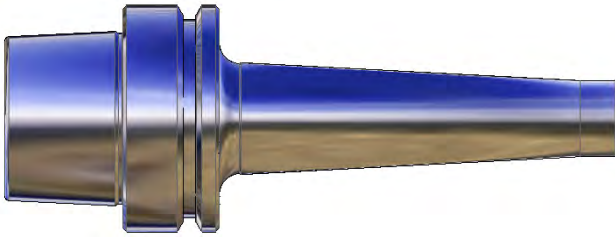


MANDRINI PER FRESE CON ATTACCO FILETTATO  
MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
MANDRINS POUR FRAISES A VISSER  
SPANFUTTER FÜR EINSCHRAUBFRAESER



**DIN 69893**

**Bilanciato G.2,5 20.000 RPM**



**L = 59**

Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66EAF106	63/E	HSK63/E DIN69893 P/F AT.FIL.M6x59	6,5	9,7	9,7	-	59	33	M6
66EAF108	63/E	HSK63/E DIN69893 P/F AT.FIL.M8x59	8,5	13	15	10	59	33	M8
66EAF110	63/E	HSK63/E DIN69893 P/F AT.FIL.M10x59	10,5	18	20	10	59	33	M10
66EAF112	63/E	HSK63/E DIN69893 P/F AT.FIL.M12x59	12,5	21	24	10	59	33	M12
66EAF116	63/E	HSK63/E DIN69893 P/F AT.FIL.M16x59	17,0	29	34	10	59	33	M16

**L = 84**

Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66EAF206	63/E	HSK63/E DIN69893 P/F AT.FIL.M6x84	6,5	9,7	20	10	84	58	M6
66EAF208	63/E	HSK63/E DIN69893 P/F AT.FIL.M8x84	8,5	13	23	10	84	58	M8
66EAF210	63/E	HSK63/E DIN69893 P/F AT.FIL.M10x84	10,5	18	25	10	84	58	M10
66EAF212	63/E	HSK63/E DIN69893 P/F AT.FIL.M12x84	12,5	21	24	10	84	58	M12
66EAF216	63/E	HSK63/E DIN69893 P/F AT.FIL.M16x84	17,0	29	34	10	84	58	M16

**L = 109**

Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66EAF306	63/E	HSK63/E DIN69893 P/F AT.FIL.M6x109	6,5	9,7	23	10	109	83	M6
66EAF308	63/E	HSK63/E DIN69893 P/F AT.FIL.M8x109	8,5	13	23	10	109	83	M8
66EAF310	63/E	HSK63/E DIN69893 P/F AT.FIL.M10x109	10,5	18	28	10	109	83	M10
66EAF312	63/E	HSK63/E DIN69893 P/F AT.FIL.M12x109	12,5	21	31	10	109	83	M12
66EAF316	63/E	HSK63/E DIN69893 P/F AT.FIL.M16x109	17,0	29	34	10	109	83	M16

**L = 134**

Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66EAF408	63/E	HSK63/E DIN69893 P/F AT.FIL.M8x134	8,5	13	25	10	134	108	M8
66EAF410	63/E	HSK63/E DIN69893 P/F AT.FIL.M10x134	10,5	18	30	10	134	108	M10
66EAF412	63/E	HSK63/E DIN69893 P/F AT.FIL.M12x134	12,5	21	31	10	134	108	M12
66EAF416	63/E	HSK63/E DIN69893 P/F AT.FIL.M16x134	17,0	29	39	10	134	108	M16

**L = 159**

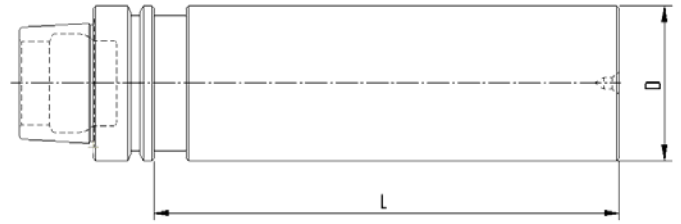
Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66EAF512	63/E	HSK63/E DIN69893 P/F AT.FIL.M12x159	12,5	21	31	10	159	133	M12
66EAF516	63/E	HSK63/E DIN69893 P/F AT.FIL.M16x159	17,0	29	39	10	159	133	M16



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDER WITH SOFT SHANK  
 BARRES D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SCHAFT



**DIN 69893**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>D</b>	<b>L</b>
66EST263	63/E	HSK63/E DIN69893 ST.TENERO D.63x200	63	200
66EST380	63/E	HSK63/E DIN69893 ST.TENERO D.80x250	80	250

HSK 63/F



MANDRINI PORTAPINZA TIPO ER MINI  
ER MINI COLLET CHUCK  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER MINI

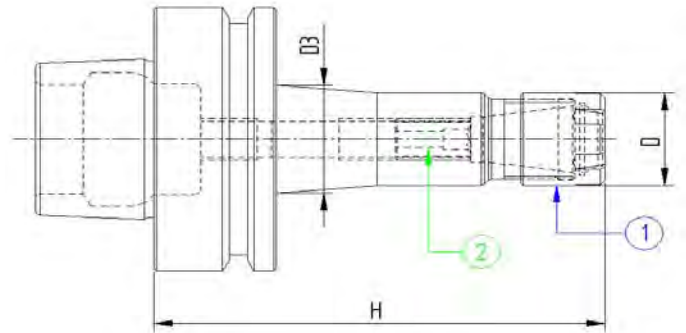


**DIN 69893**

**DIN 6499**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	H	D	D3
66FPM207	63/F	HSK63/F DIN69893 P/P H100 ER11MINI	11	100	16	19,5
66FPM210	63/F	HSK63/F DIN69893 P/P H100 ER16MINI	16	100	22	25
66FPM213	63/F	HSK63/F DIN69893 P/P H100 ER20MINI	20	100	28	32
66FPM216	63/F	HSK63/F DIN69893 P/P H100 ER25MINI	25	100	35	39

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    ER    **GHIERA INT.**    Q.tà    **GHIERA**    Q.tà

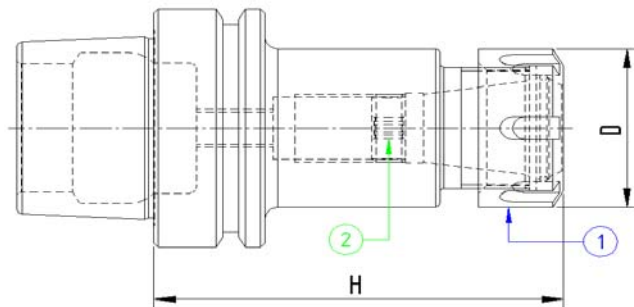
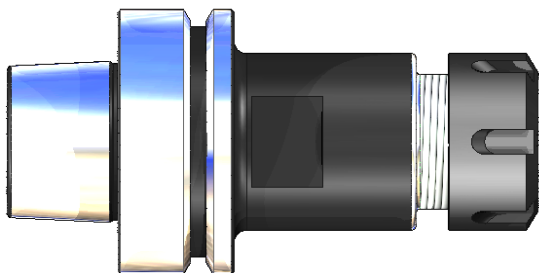


HSK	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
11		100601004	1	911GHRMN	1
16		101001601	1	916GHRMN	1
20		101001601	1	920GHRMN	1
25		101815801	1	925GHRMN	1



**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	ER	D	H
66FPP110	63/F	HSK63/F DIN69893 P/P H70 ER16	16	32	70
66FPP113	63/F	HSK63/F DIN69893 P/P H70 ER20	20	35	70
66FPP116	63/F	HSK63/F DIN69893 P/P H70 ER25	25	42	70
66FPP120	63/F	HSK63/F DIN69893 P/P H70 ER32	32	50	70
66FPP126	63/F	HSK63/F DIN69893 P/P H70 ER40	40	63	70

**L=100**

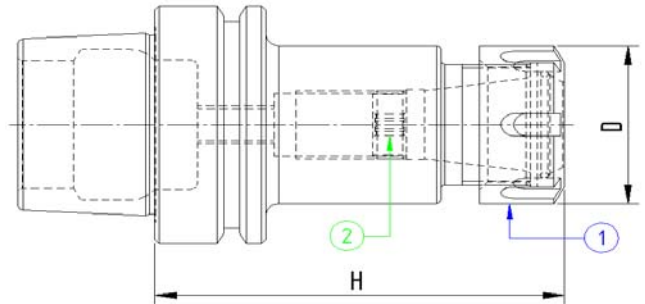
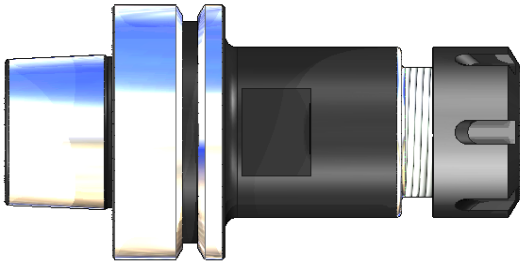
Codice	HSK	Descrizione	ER	D	H
66FPP210	63/F	HSK63/F DIN69893 P/P H100 ER16	16	32	100
66FPP213	63/F	HSK63/F DIN69893 P/P H100 ER20	20	35	100
66FPP216	63/F	HSK63/F DIN69893 P/P H100 ER25	25	42	100
66FPP220	63/F	HSK63/F DIN69893 P/P H100 ER32	32	50	100
66FPP226	63/F	HSK63/F DIN69893 P/P H100 ER40	40	63	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
HSK	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=120**

Codice	HSK	Descrizione	ER	D	H
66FPP310	63/F	HSK63/F DIN69893 P/P H120 ER16	16	32	120
66FPP313	63/F	HSK63/F DIN69893 P/P H120 ER20	20	35	120
66FPP316	63/F	HSK63/F DIN69893 P/P H120 ER25	25	42	120
66FPP320	63/F	HSK63/F DIN69893 P/P H120 ER32	32	50	120
66FPP326	63/F	HSK63/F DIN69893 P/P H120 ER40	40	63	120

**L=160**

Codice	HSK	Descrizione	ER	D	H
66FPP410	63/F	HSK63/F DIN69893 P/P H160 ER16	16	32	160
66FPP413	63/F	HSK63/F DIN69893 P/P H160 ER20	20	35	160
66FPP416	63/F	HSK63/F DIN69893 P/P H160 ER25	25	42	160
66FPP420	63/F	HSK63/F DIN69893 P/P H160 ER32	32	50	160
66FPP426	63/F	HSK63/F DIN69893 P/P H160 ER40	40	63	160

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

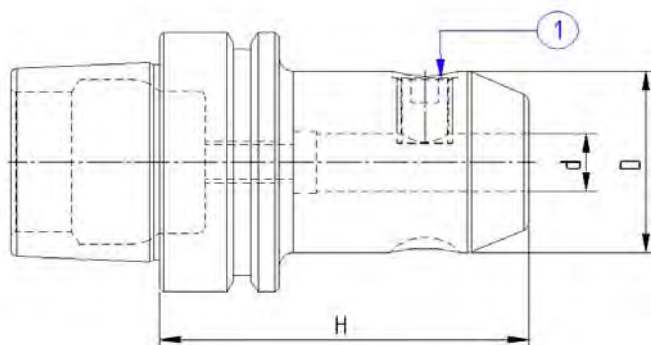
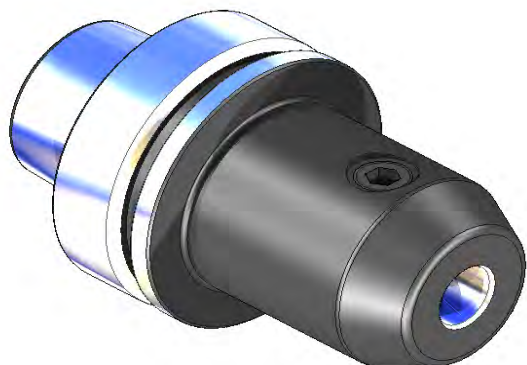
Tipo Cono    ER    **GHIERA INT.**    Q.tà    **GHIERA**    Q.tà



HSK	ER	GHIERA INT.	Q.tà	GHIERA	Q.tà
16		101001601	1	916GHREQ	1
20		101001601	1	920GHREQ	1
25		101815801	1	925GHREQ	1
32		102215901	1	932GHREQ	1
40		103015901	1	940GHREQ	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
66FWLD06	63/F	HSK63/F DIN69893 WELDON H.65 D.6	6	25	65
66FWLD08	63/F	HSK63/F DIN69893 WELDON H.65 D.8	8	28	65
66FWLD10	63/F	HSK63/F DIN69893 WELDON H.65 D.10	10	35	65
66FWLD12	63/F	HSK63/F DIN69893 WELDON H.80 D.12	12	42	80
66FWLD14	63/F	HSK63/F DIN69893 WELDON H.80 D.14	14	44	80
66FWLD16	63/F	HSK63/F DIN69893 WELDON H.80 D.16	16	48	80
66FWLD18	63/F	HSK63/F DIN69893 WELDON H.80 D.18	20	50	80
66FWLD20	63/F	HSK63/F DIN69893 WELDON H.80 D.20	24	52	80
66FWLD25	63/F	HSK63/F DIN69893 WELDON H110 D25	25	65	110
66FWLD32	63/F	HSK63/F DIN69893 WELDON H110 D32	32	72	110

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    GRANO 1    Q.tà



HSK63/F	d	Part Number	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	1
	32	102002002	1



MANDRINI PORTA FRESA TIPO WELDON - SERIE LUNGA  
 END MILL HOLDERS WELDON - LONG PROJECTION  
 MANDRINS POUR OUTILS TYPE WELDON - SERIE LONGUE  
 ZYLINDERSCHAFTAUFNAHME WELDON - LANGE

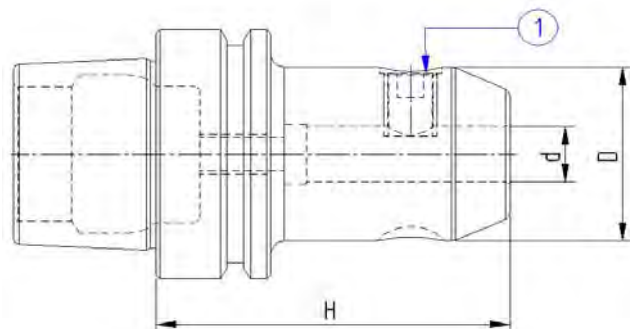
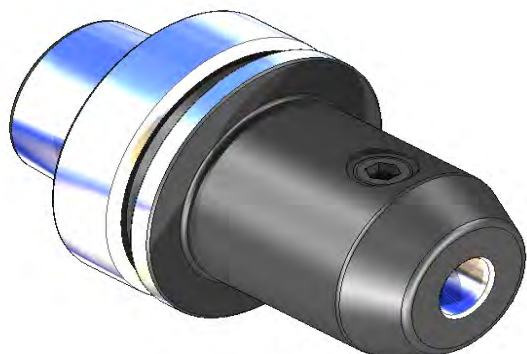


**DIN 69893**

**DIN 1835 B**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=100**

Codice	HSK	Descrizione	d	D	H
66FWE206	63/F	HSK63/F DIN69893 WELDON H100 D.6	6	25	100
66FWE208	63/F	HSK63/F DIN69893 WELDON H100 D.8	8	28	100
66FWE210	63/F	HSK63/F DIN69893 WELDON H100 D.10	10	35	100
66FWE212	63/F	HSK63/F DIN69893 WELDON H100 D.12	12	42	100
66FWE214	63/F	HSK63/F DIN69893 WELDON H100 D.14	14	44	100
66FWE216	63/F	HSK63/F DIN69893 WELDON H100 D.16	16	48	100
66FWE218	63/F	HSK63/F DIN69893 WELDON H100 D.18	18	50	100
66FWE220	63/F	HSK63/F DIN69893 WELDON H100 D.20	20	52	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

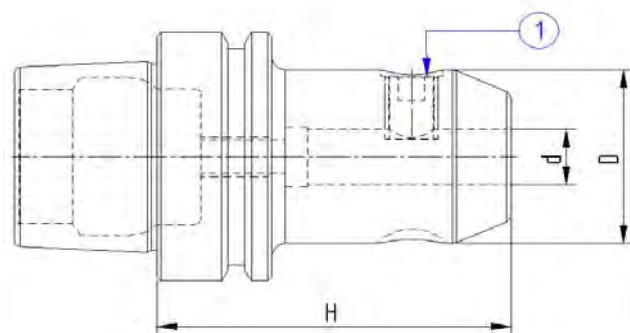
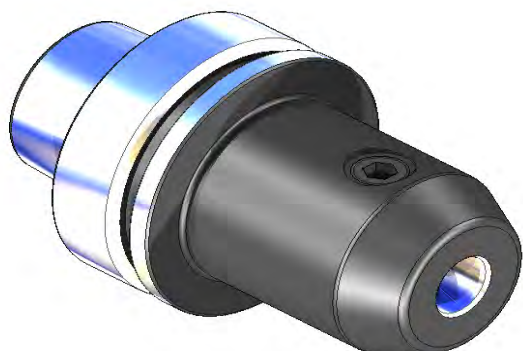
Tipo Cono    Ø WLD    **GRANO 1**    Q.tà



HSK63/F	d	Part Number	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=160**

Codice	HSK	Descrizione	d	D	H
66FWE406	63/F	HSK63/F DIN69893 WELDON H.160 D.6	6	25	160
66FWE408	63/F	HSK63/F DIN69893 WELDON H.160 D.8	8	28	160
66FWE410	63/F	HSK63/F DIN69893 WELDON H.160 D.10	10	35	160
66FWE412	63/F	HSK63/F DIN69893 WELDON H.160 D.12	12	42	160
66FWE414	63/F	HSK63/F DIN69893 WELDON H.160 D.14	14	44	160
66FWE416	63/F	HSK63/F DIN69893 WELDON H.160 D.16	16	48	160
66FWE418	63/F	HSK63/F DIN69893 WELDON H.160 D.18	18	50	160
66FWE420	63/F	HSK63/F DIN69893 WELDON H.160 D.20	20	52	160
66FWE425	63/F	HSK63/F DIN69893 WELDON H.160 D.25	25	65	160
66FWE432	63/F	HSK63/F DIN69893 WELDON H.160 D.32	32	72	160
66FWE440	63/F	HSK63/F DIN69893 WELDON H.160 D.40	40	-	160

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    GRANO 1    Q.tà



HSK63/F	d	Part Number	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32 - 40	102002002	2



MANDRINO PORTAFRESE CON ATTACCO TIPO WISTHLE NOTCH  
 END MILL HOLDERS WISTHLE NOTCH  
 MANDRINS POUR OUTIL TYPE WISTHLE NOTCH  
 ZYLINDERSHAFTAUFAHME WISTHLE NOTCH

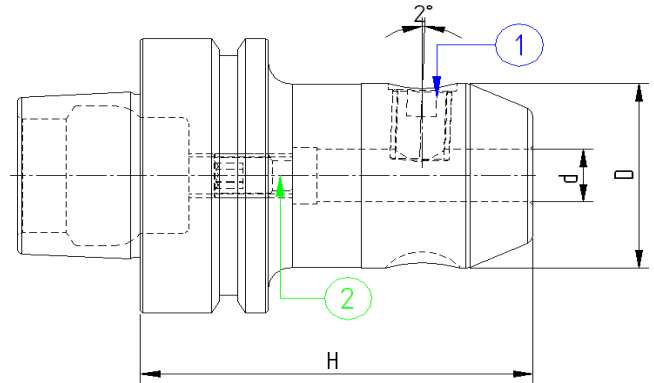
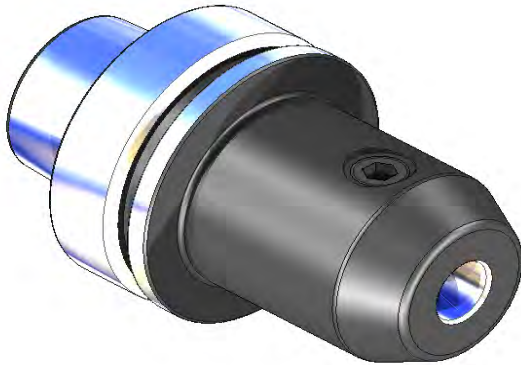


**DIN 69893**

**DIN 1835 E**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
66FWhN06	63/F	HSK63/F DIN69893 W/NOTCH H80 D.06	6	25	80
66FWhN08	63/F	HSK63/F DIN69893 W/NOTCH H80 D.08	8	28	80
66FWhN10	63/F	HSK63/F DIN69893 W/NOTCH H80 D.10	10	35	80
66FWhN12	63/F	HSK63/F DIN69893 W/NOTCH H90 D.12	12	42	90
66FWhN14	63/F	HSK63/F DIN69893 W/NOTCH H90 D.14	14	44	90
66FWhN16	63/F	HSK63/F DIN69893 W/NOTCH H100 D.16	16	48	100
66FWhN18	63/F	HSK63/F DIN69893 W/NOTCH H100 D.18	18	50	100
66FWhN20	63/F	HSK63/F DIN69893 W/NOTCH H100 D.20	20	52	100
66FWhN25	63/F	HSK63/F DIN69893 W/NOTCH H110 D.25	25	65	110
66FWhN32	63/F	HSK63/F DIN69893 W/NOTCH H115 D.32	32	72	115

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WHN    **GRANO 1**    Q.tà    **GRANO INTERNO**    Q.tà



HSK63/F	Ø WHN	GRANO 1	Q.tà	GRANO INTERNO	Q.tà
	6	100601004	1	100501607	1
	8	100801004	1	100601607	1
	10	101001204	1	100801601	1
	12 - 14	101201604	1	101001606	1
	16 - 18	101401604	1	101002507	1
	20	101401604	1	101002507	1
	25	101802002	2	101002507	1
	32	101802002	2	101002507	1



MANDRINI PORTAFRESA TRASCINAMENTO FISSO  
 FACE MILL HOLDERS-TENONS DRIVE WITH INTERNAL COOLANT  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FÜR FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

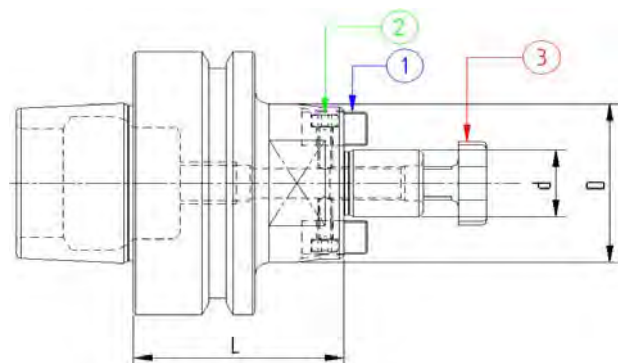
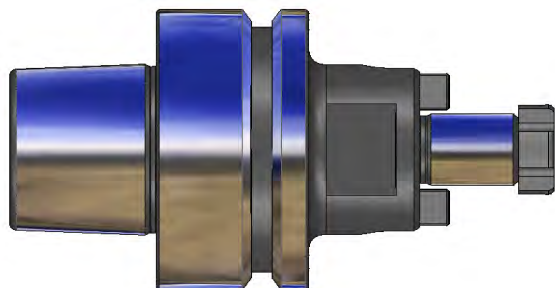


**DIN 69893**

**ISO 3937**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**STANDARD**

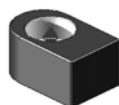
Codice	HSK	Descrizione	d	D	L
66FPF116	63/F	HSK63/F DIN69893 P/F FISSO H50 D16	16	32	50
66FPF122	63/F	HSK63/F DIN69893 P/F FISSO H50 D22	22	40	50
66FPF127	63/F	HSK63/F DIN69893 P/F FISSO H60 D27	27	48	60
66FPF132	63/F	HSK63/F DIN69893 P/F FISSO H60 D32	32	58	60
66FPF140	63/F	HSK63/F DIN69893 P/F FISSO H60 D40	40	70	60

**L = 100**

Codice	HSK	Descrizione	d	D	L
66FPF216	63/F	HSK63/F DIN69893 P/F FISSO H100 D16	16	32	100
66FPF222	63/F	HSK63/F DIN69893 P/F FISSO H100 D22	22	40	100
66FPF227	63/F	HSK63/F DIN69893 P/F FISSO H100 D27	27	48	100
66FPF232	63/F	HSK63/F DIN69893 P/F FISSO H100 D32	32	58	100
66FPF240	63/F	HSK63/F DIN69893 P/F FISSO H100 D40	40	70	100

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

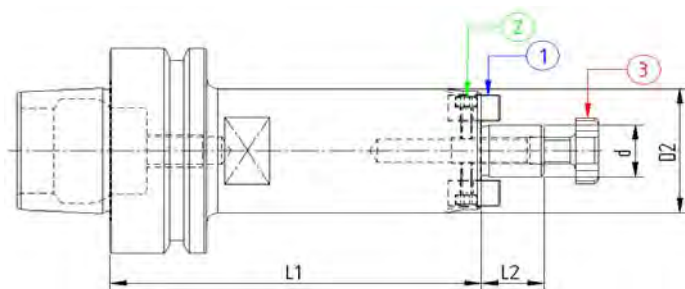
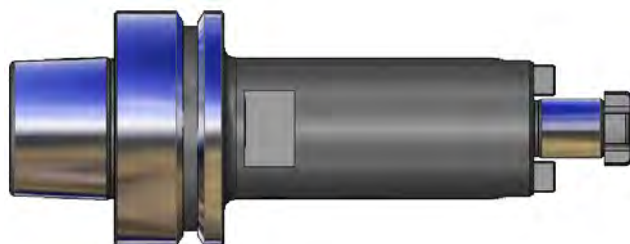
Tipo Cono    Ø    TASSELLO    Q.tà    VITE TASSELLO    Q.tà    VITE A CROCE    Q.tà



HSK 63/F	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L = 130**

Codice	HSK	Descrizione	d	D	L1	L2
66FPF316	63/F	HSK63/F DIN69893 P/F FISSO H130 D16	16	32	130	17
66FPF322	63/F	HSK63/F DIN69893 P/F FISSO H130 D22	22	40	130	19
66FPF327	63/F	HSK63/F DIN69893 P/F FISSO H130 D27	27	48	130	21
66FPF332	63/F	HSK63/F DIN69893 P/F FISSO H130 D32	32	58	130	24
66FPF340	63/F	HSK63/F DIN69893 P/F FISSO H130 D40	40	70	130	27

**L = 160**

Codice	HSK	Descrizione	d	D	L1	L2
66FPF416	63/F	HSK63/F DIN69893 P/F FISSO H160 D16	16	32	160	17
66FPF422	63/F	HSK63/F DIN69893 P/F FISSO H160 D22	22	40	160	19
66FPF427	63/F	HSK63/F DIN69893 P/F FISSO H160 D27	27	48	160	21
66FPF432	63/F	HSK63/F DIN69893 P/F FISSO H160 D32	32	58	160	24
66FPF440	63/F	HSK63/F DIN69893 P/F FISSO H160 D40	40	70	160	27

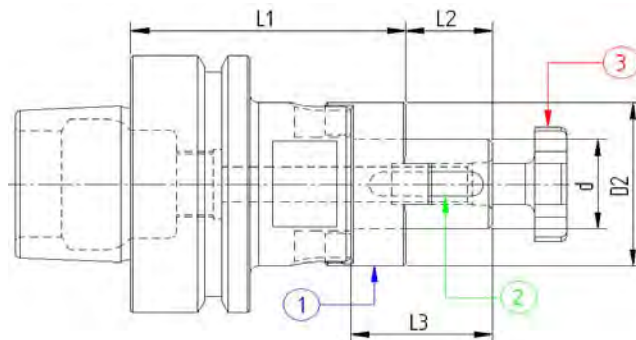
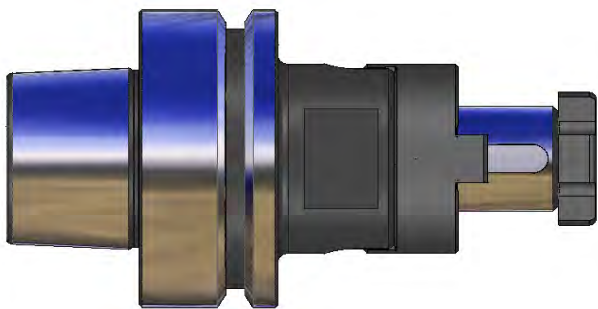
**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE A CROCE	Q.tà
HSK 63/F	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1



**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**STANDARD**

Codice	HSK	Descrizione	d	L1	L2	L3	D2
66FPU116	63/F	HSK63/F DIN69893 P/F UNIV.H60 D16	16	60	17	27	32
66FPU122	63/F	HSK63/F DIN69893 P/F UNIV.H60 D22	22	60	19	31	40
66FPU127	63/F	HSK63/F DIN69893 P/F UNIV.H60 D27	27	60	21	33	48
66FPU132	63/F	HSK63/F DIN69893 P/F UNIV.H60 D32	32	60	24	38	58
66FPU140	63/F	HSK63/F DIN69893 P/F UNIV.H70 D40	40	70	27	41	70

**L = 160**


Codice	HSK	Descrizione	d	L1	L2	L3	D2
66FPU416	63/F	HSK63/F DIN69893 P/F UNIV.H160 D16	16	160	17	27	32
66FPU422	63/F	HSK63/F DIN69893 P/F UNIV.H160 D22	22	160	19	31	40
66FPU427	63/F	HSK63/F DIN69893 P/F UNIV.H160 D27	27	160	21	33	48
66FPU432	63/F	HSK63/F DIN69893 P/F UNIV.H160 D32	32	160	24	38	58
66FPU440	63/F	HSK63/F DIN69893 P/F UNIV.H160 D40	40	160	27	41	70

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono   HSK   VITE A CROCE   Q.tà   DISTANZIALE   Q.tà   LINGUETTA   Q.tà



HSK63/F							
16	916VTC02	1	916GNT01	1	170402004	1	
22	922VTC02	1	922GNT01	1	170602506	1	
27	927VTC02	1	927GNT01	1	170702507	1	
32	932VTC02	1	932GNT01	1	170802807	1	
40	940VTC02	1	940GNT01	1	171003208	1	

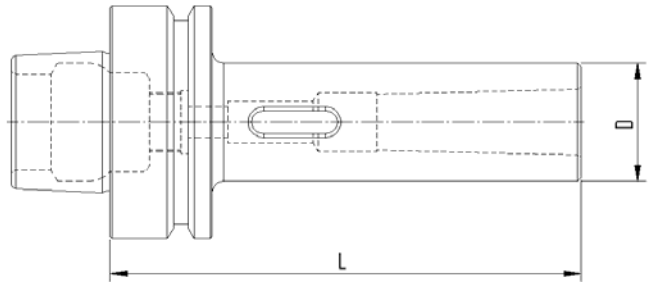

**MANDRINI PORTAPUNTE ATTACCO CONO MORSE**  
**MORSE TAPER ADAPTORS FOR DRILLS**  
**DOUILLES POUR CONE MORSE A TENON**  
**ZWISCHENHULSEN FÜR MORSEKEGEL MIT AUSTREIBLAPPEN**



**DIN 69893**  
**DIN 228 - 2**

**Bilanciato G.6,3 20.000 RPM**

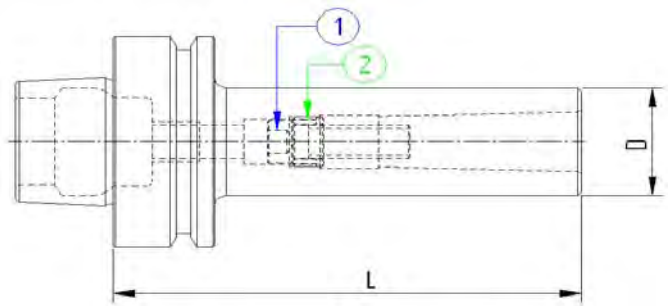
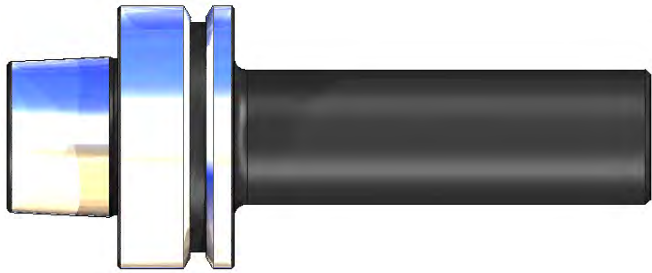
**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>MORSE</b>	<b>D</b>	<b>L</b>
66FMP101	63/F	HSK63/F DIN69893 H.100 CM1 PUNTE	1	25	100
66FMP102	63/F	HSK63/F DIN69893 H.120 CM2 PUNTE	2	32	120
66FMP103	63/F	HSK63/F DIN69893 H.140 CM3 PUNTE	3	40	140
66FMP104	63/F	HSK63/F DIN69893 H.160 CM4 PUNTE	4	48	160

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	MORSE	D	L
66FMF101	63/F	HSK63/F DIN69893 H.100 CM1 FRESE	1	25	100
66FMF102	63/F	HSK63/F DIN69893 H.120 CM2 FRESE	2	32	120
66FMF103	63/F	HSK63/F DIN69893 H.140 CM3 FRESE	3	40	140
66FMF104	63/F	HSK63/F DIN69893 H.160 CM4 FRESE	4	48	160

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	CM	GHIERA INT.	Q.tà	VITE	Q.tà
HSK 63/F	1	-	-	110603501	1
	2	121500802	1	111003014	1
	3	122000903	1	111204003	1
	4	122501204	1	111604514	1

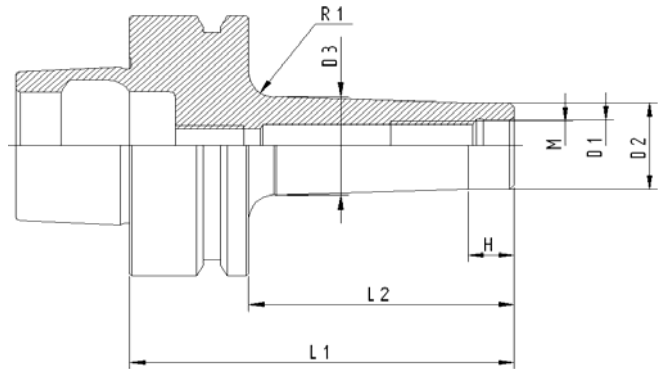
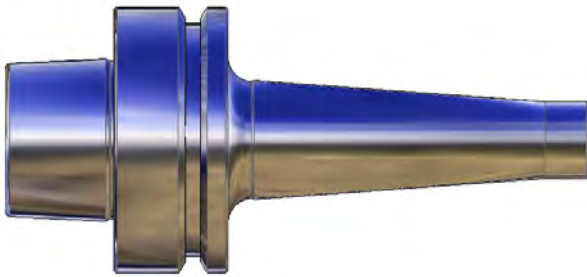


MANDRINI PER FRESE CON ATTACCO FILETTATO  
MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
MANDRINS POUR FRAISES A VISSER  
SPANFUTTER FUR EINSCHRAUBFRAESER



**DIN 69893**

**Bilanciato G.2,5 20.000 RPM**



**STANDARD**

Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66FAF106	63/F	HSK63/F DIN69893 P/F AT.FIL.M6x59	6,5	9,7	9,7	-	59	33	M6
66FAF108	63/F	HSK63/F DIN69893 P/F AT.FIL.M8x59	8,5	13	15	10	59	33	M8
66FAF110	63/F	HSK63/F DIN69893 P/F AT.FIL.M10x59	10,5	18	20	10	59	33	M10
66FAF112	63/F	HSK63/F DIN69893 P/F AT.FIL.M12x59	12,5	21	24	10	59	33	M12
66FAF116	63/F	HSK63/F DIN69893 P/F AT.FIL.M16x59	17,0	29	34	10	59	33	M16

**L = 84**

Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66FAF206	63/F	HSK63/F DIN69893 P/F AT.FIL.M6x84	6,5	9,7	20	10	84	58	M6
66FAF208	63/F	HSK63/F DIN69893 P/F AT.FIL.M8x84	8,5	13	23	10	84	58	M8
66FAF210	63/F	HSK63/F DIN69893 P/F AT.FIL.M10x84	10,5	18	25	10	84	58	M10
66FAF212	63/F	HSK63/F DIN69893 P/F AT.FIL.M12x84	12,5	21	24	10	84	58	M12
66FAF216	63/F	HSK63/F DIN69893 P/F AT.FIL.M16x84	17,0	29	34	10	84	58	M16

**L = 109**

Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66FAF306	63/F	HSK63/F DIN69893 P/F AT.FIL.M6x109	6,5	9,7	23	10	109	83	M6
66FAF308	63/F	HSK63/F DIN69893 P/F AT.FIL.M8x109	8,5	13	23	10	109	83	M8
66FAF310	63/F	HSK63/F DIN69893 P/F AT.FIL.M10x109	10,5	18	28	10	109	83	M10
66FAF312	63/F	HSK63/F DIN69893 P/F AT.FIL.M12x109	12,5	21	31	10	109	83	M12
66FAF316	63/F	HSK63/F DIN69893 P/F AT.FIL.M16x109	17,0	29	34	10	109	83	M16

**L = 134**

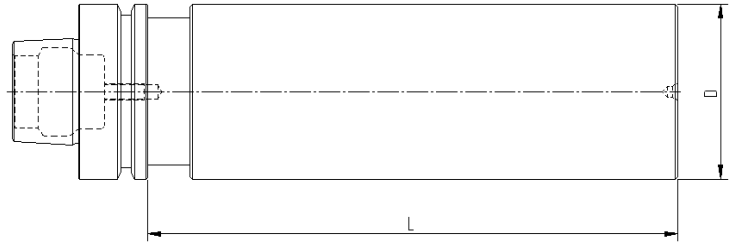
Codice	HSK	Descrizione	D1	D2	D3	H	L1	L2	M
66FAF408	63/F	HSK63/F DIN69893 P/F AT.FIL.M8x134	8,5	13	25	10	134	108	M8
66FAF410	63/F	HSK63/F DIN69893 P/F AT.FIL.M10x134	10,5	18	30	10	134	108	M10
66FAF412	63/F	HSK63/F DIN69893 P/F AT.FIL.M12x134	12,5	21	31	10	134	108	M12
66FAF416	63/F	HSK63/F DIN69893 P/F AT.FIL.M16x134	17,0	29	39	10	134	108	M16



MANDRINI SEMILAVORATI A STELO TENERO  
 BLANK TOOLHOLDER WITH SOFT SHANK  
 BARRES D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SCHAFT



**DIN 69893**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>D</b>	<b>L</b>
66FST263	63/F	HSK63/F DIN69893 ST.TENERO D.63x200	63	200
66FST380	63/F	HSK63/F DIN69893 ST.TENERO D.80x250	80	250

HSK 1000/A



MANDRINI PORTAPINZA TIPO ER MINI  
ER COLLET CHUCK MINI  
MANDRINS A PINCES TYPE ER MINI  
SPANNZANGENFUTTER ER TYP MINI

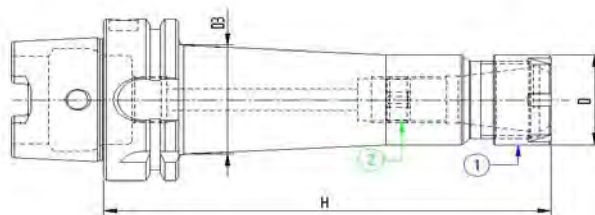
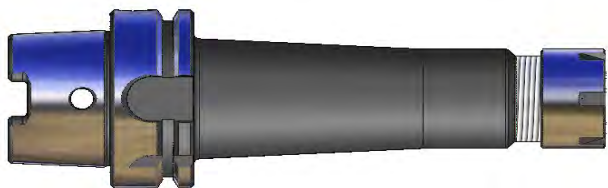


**DIN 69893**

**DIN 6499**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



## STANDARD

Codice	HSK	Descrizione	ER	D	H	D3
61APM210	100/A	HSK100/A DIN69893 P/P H100 ER16MINI	16	22	100	25
61APM213	100/A	HSK100/A DIN69893 P/P H100 ER20MINI	20	28	100	-
61APM216	100/A	HSK100/A DIN69893 P/P H100 ER25MINI	25	35	100	-

## L=160

Codice	HSK	Descrizione	ER	D	H	D3
61APM410	100/A	HSK100/A DIN69893 P/P H160 ER16MINI	16	22	160	29
61APM413	100/A	HSK100/A DIN69893 P/P H160 ER20MINI	20	28	160	34
61APM416	100/A	HSK100/A DIN69893 P/P H160 ER25MINI	25	35	160	48

## L=200

Codice	HSK	Descrizione	ER	D	H	D3
61APM510	100/A	HSK100/A DIN69893 P/P H200 ER16MINI	16	22	200	32
61APM513	100/A	HSK100/A DIN69893 P/P H200 ER20MINI	20	28	200	35,8
61APM516	100/A	HSK100/A DIN69893 P/P H200 ER25MINI	25	35	200	49,7

## COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

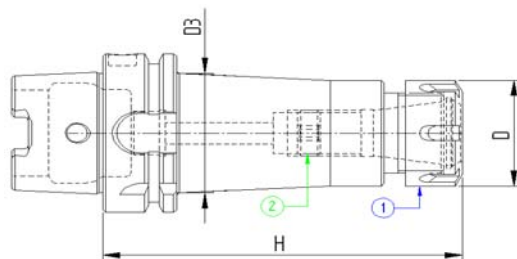
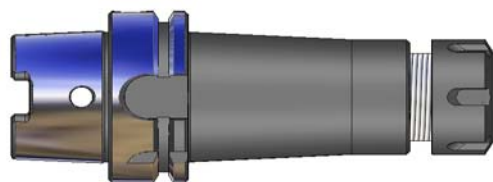
Tipo Cono    ER MINI    GRANO INT.    Q.tà    GHIERA    Q.tà



HSK 100/A	ER	GRANO INT.	Q.tà	GHIERA	Q.tà
	16	101001601	1	916GHRMN	1
	20	101001601	1	920GHRMN	1
	25	101815801	1	925GHRMN	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**STANDARD**

Codice	HSK	Descrizione	ER	D	H	D3
61APP113	100/A	HSK100/A DIN69893 P/P H.70 ER20	20	35	70	-
61APP116	100/A	HSK100/A DIN69893 P/P H.75 ER25	25	42	75	-
61APP120	100/A	HSK100/A DIN69893 P/P H.80 ER32	32	50	80	-
61APP126	100/A	HSK100/A DIN69893 P/P H.90 ER40	40	63	90	-

**L=100**

Codice	HSK	Descrizione	ER	D	H	D3
61APP210	100/A	HSK100/A DIN69893 P/P H.100 ER16	16	32	100	-
61APP213	100/A	HSK100/A DIN69893 P/P H.100 ER20	20	35	100	-
61APP216	100/A	HSK100/A DIN69893 P/P H.100 ER25	25	42	100	-
61APP220	100/A	HSK100/A DIN69893 P/P H.100 ER32	32	50	100	-
61APP226	100/A	HSK100/A DIN69893 P/P H.100 ER40	40	63	100	-

**L=120**

Codice	HSK	Descrizione	ER	D	H	D3
61APP310	100/A	HSK100/A DIN69893 P/P H120 ER16	16	32	120	37
61APP313	100/A	HSK100/A DIN69893 P/P H120 ER20	20	35	120	40
61APP316	100/A	HSK100/A DIN69893 P/P H120 ER25	25	42	120	-
61APP320	100/A	HSK100/A DIN69893 P/P H120 ER32	32	50	120	-
61APP326	100/A	HSK100/A DIN69893 P/P H120 ER40	40	63	120	-

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    ER    GRANO INT.    Q.tà    GHIERA    Q.tà



HSK 100/A	ER	GRANO INT.	Q.tà	GHIERA	Q.tà
	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1





MANDRINI PORTAPINZA TIPO ER-SERIE LUNGA  
ER COLLET CHUCK - LONG  
MANDRINS A PINCES TYPE ER - SERIE LONGUE  
SPANNZANGENFUTTER ER TYP - LANGE AUSFUHRUNG

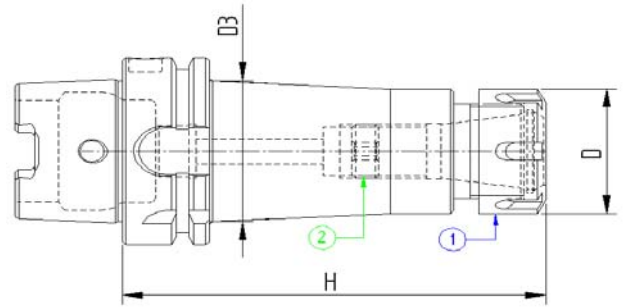
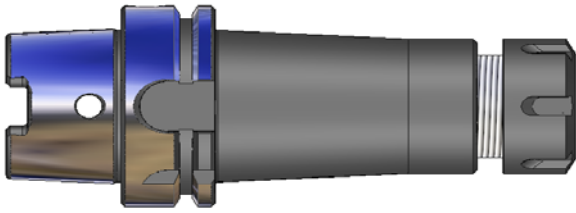


**DIN 69893**

**DIN 6499**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=160**

Codice	HSK	Descrizione	ER	D	H	D3
61APP410	100/A	HSK100/A DIN69893 P/P H160 ER16	16	32	160	38,2
61APP413	100/A	HSK100/A DIN69893 P/P H160 ER20	20	35	160	41
61APP416	100/A	HSK100/A DIN69893 P/P H160 ER25	25	42	160	48
61APP420	100/A	HSK100/A DIN69893 P/P H160 ER32	32	50	160	50
61APP426	100/A	HSK100/A DIN69893 P/P H160 ER40	40	63	160	63

**L=200**

Codice	HSK	Descrizione	ER	D	H	D3
61APP510	100/A	HSK100/A DIN69893 P/P H200 ER16	16	32	200	40
61APP513	100/A	HSK100/A DIN69893 P/P H200 ER20	20	35	200	42,8
61APP516	100/A	HSK100/A DIN69893 P/P H200 ER25	25	42	200	49,7
61APP520	100/A	HSK100/A DIN69893 P/P H200 ER32	32	50	200	50
61APP526	100/A	HSK100/A DIN69893 P/P H200 ER40	40	63	200	63

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    ER    GRANO INT.    Q.tà    GHIERA    Q.tà



HSK 100/A	ER	GRANO INT.	Q.tà	GHIERA	Q.tà
	16	101001601	1	916GHREQ	1
	20	101001601	1	920GHREQ	1
	25	101815801	1	925GHREQ	1
	32	102215901	1	932GHREQ	1
	40	103015901	1	940GHREQ	1



MANDRINI PORTAPINZA TIPO EOC  
EOC COLLET CHUCK  
MANDRINS A PINCES TYPE ER  
SPANNZANGENFUTTER EOC TYP

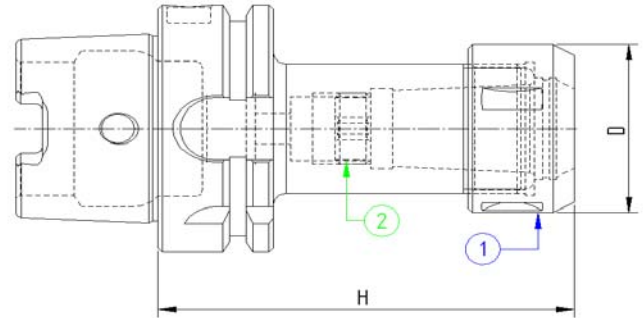
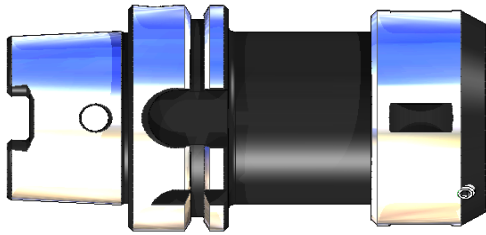


**DIN 69893**

**DIN 6388**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



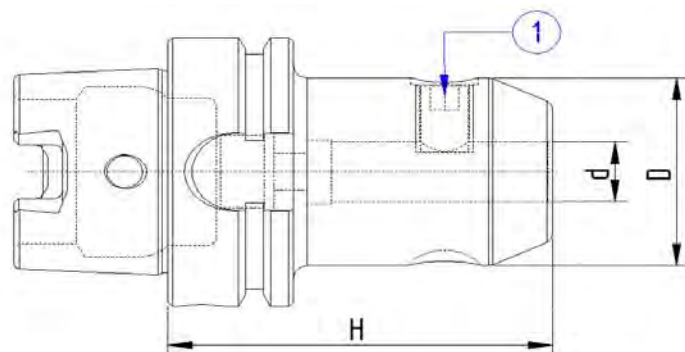
Codice	HSK	Descrizione	EOC	D	H
61APO216	100/A	HSK100/A DIN69893 P/P H110 EOC16	16	43	110
61APO225	100/A	HSK100/A DIN69893 P/P H120 EOC25	25	60	120
61APO232	100/A	HSK100/A DIN69893 P/P H130 EOC32	32	72	130

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	EOC	GRANO INT.	Q.tà	GHIERA	Q.tà
HSK 100/A	16	101815801	1	916GHROS	1
	25	102715901	1	925GHROS	1
	32	102715901	1	932GHROS	1

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
61AWLD06	100/A	HSK100/A DIN69893 WELDON H.80 D6	6	25	80
61AWLD08	100/A	HSK100/A DIN69893 WELDON H.80 D8	8	28	80
61AWLD10	100/A	HSK100/A DIN69893 WELDON H.80 D10	10	35	80
61AWLD12	100/A	HSK100/A DIN69893 WELDON H.80 D12	12	42	80
61AWLD14	100/A	HSK100/A DIN69893 WELDON H.80 D14	14	44	80
61AWLD16	100/A	HSK100/A DIN69893 WELDON H.100 D16	16	48	100
61AWLD18	100/A	HSK100/A DIN69893 WELDON H.100 D18	18	50	100
61AWLD20	100/A	HSK100/A DIN69893 WELDON H.100 D20	20	52	100
61AWLD25	100/A	HSK100/A DIN69893 WELDON H.100 D25	25	65	100
61AWLD32	100/A	HSK100/A DIN69893 WELDON H.100 D32	32	72	100
61AWLD40	100/A	HSK100/A DIN69893 WELDON H.105 D40	40	80	105
61AWLD50	100/A	HSK100/A DIN69893 WELDON H.160 D50	50	100	160

### COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

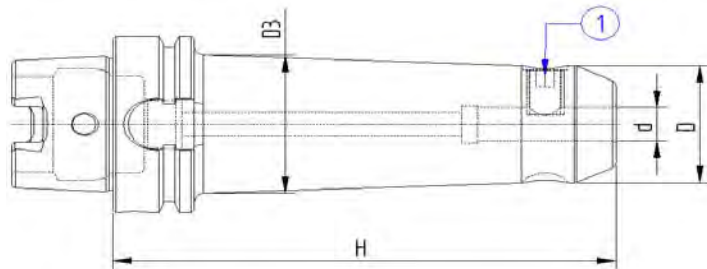
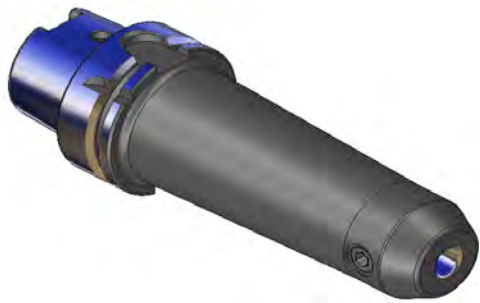
Tipo Cono    Ø WLD    **GRANO 1**    Q.tà



HSK100/A	d	Part Number	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32 - 40	102002002	2
	50	102422504	2

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=160**

Codice	HSK	Descrizione	d	D	H	D3
61AWE406	100/A	HSK100/A DIN69893 WELDON H.160 D6	6	25	160	32
61AWE408	100/A	HSK100/A DIN69893 WELDON H.160 D8	8	28	160	35
61AWE410	100/A	HSK100/A DIN69893 WELDON H.160 D10	10	35	160	42
61AWE412	100/A	HSK100/A DIN69893 WELDON H.160 D12	12	42	160	49
61AWE414	100/A	HSK100/A DIN69893 WELDON H.160 D14	14	44	160	52
61AWE416	100/A	HSK100/A DIN69893 WELDON H.160 D16	16	48	160	55
61AWE418	100/A	HSK100/A DIN69893 WELDON H.160 D18	18	50	160	57
61AWE420	100/A	HSK100/A DIN69893 WELDON H.160 D20	20	52	160	60
61AWE425	100/A	HSK100/A DIN69893 WELDON H.160 D25	25	65	160	72
61AWE432	100/A	HSK100/A DIN69893 WELDON H.160 D32	32	72	160	80
61AWE440	100/A	HSK100/A DIN69893 WELDON H.160 D40	40	80	160	88

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

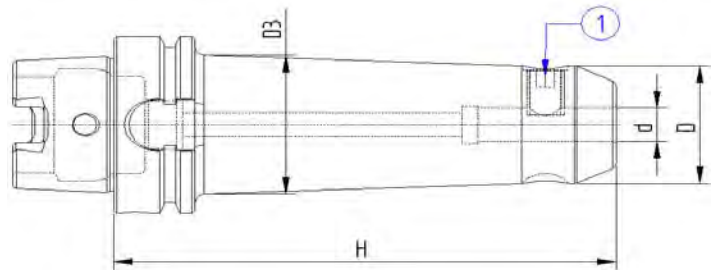
Tipo Cono
Ø WLD
GRANO 1
Q.tà



HSK100/A	d	Part Number	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32 - 40	102002002	2

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=200**


Codice	HSK	Descrizione	d	D	H	D3
61AWE506	100/A	HSK100/A DIN69893 WELDON H200 D6	6	25	200	34
61AWE508	100/A	HSK100/A DIN69893 WELDON H200 D8	8	28	200	37
61AWE510	100/A	HSK100/A DIN69893 WELDON H200 D10	10	35	200	44
61AWE512	100/A	HSK100/A DIN69893 WELDON H200 D12	12	42	200	51
61AWE514	100/A	HSK100/A DIN69893 WELDON H200 D14	14	44	200	53
61AWE516	100/A	HSK100/A DIN69893 WELDON H200 D16	16	48	200	57
61AWE518	100/A	HSK100/A DIN69893 WELDON H200 D18	18	50	200	59
61AWE520	100/A	HSK100/A DIN69893 WELDON H200 D20	20	52	200	61
61AWE525	100/A	HSK100/A DIN69893 WELDON H200 D25	25	65	200	74
61AWE532	100/A	HSK100/A DIN69893 WELDON H200 D32	32	72	200	82
61AWE540	100/A	HSK100/A DIN69893 WELDON H200 D40	40	80	200	-
61AWE550	100/A	HSK100/A DIN69893 WELDON H200 D50	50	100	200	-

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    GRANO 1    Q.tà



HSK100/A	d	Part Number	Q.tà
	6	100601004	1
	8	100801004	1
	10	101001204	1
	12 - 14	101201604	1
	16 - 18	101401604	1
	20	101601604	1
	25	101802002	2
	32 - 40	102002002	2
	50	102422504	2


**MANDRINO PORTAFRESE CON ATTACCO TIPO WELDON CON CANALI**  
**END MILL HOLDERS WELDON WITH COOLANT CHANNELS**  
**MANDRINS POUR OUTIL TYPE WELDON AVEC CANAL**  
**ZYLINDERSHAFTAUFNAHME WELDON MIT KANAL**

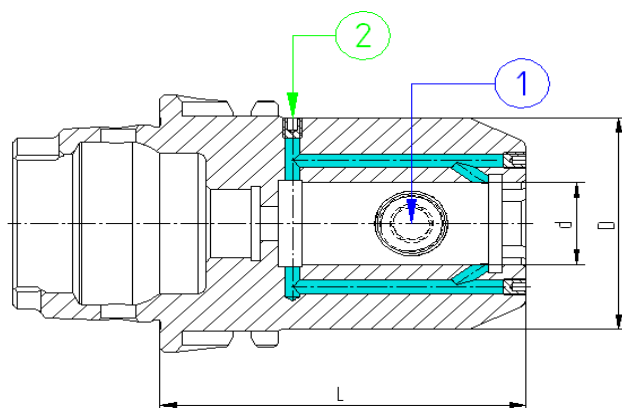


**DIN 69893**

**DIN 1835 B**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	L
61AWLK06	100/A	HSK100/A DIN69893 WELDON/C H80 D.6	6	25	80
61AWLK08	100/A	HSK100/A DIN69893 WELDON/C H80 D.8	8	28	80
61AWLK10	100/A	HSK100/A DIN69893 WELDON/C H80 D.10	10	35	80
61AWLK12	100/A	HSK100/A DIN69893 WELDON/C H80 D.12	12	42	80
61AWLK14	100/A	HSK100/A DIN69893 WELDON/C H80 D.14	14	44	80
61AWLK16	100/A	HSK100/A DIN69893 WELDON/C H100 D.16	16	48	100
61AWLK18	100/A	HSK100/A DIN69893 WELDON/C H100 D.18	18	50	100
61AWLK20	100/A	HSK100/A DIN69893 WELDON/C H100 D.20	20	52	100
61AWLK25	100/A	HSK100/A DIN69893 WELDON/C H100 D.25	25	65	100
61AWLK32	100/A	HSK100/A DIN69893 WELDON/C H100 D.32	32	72	100
61AWLK40	100/A	HSK100/A DIN69893 WELDON/C H105 D.40	40	80	105

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    **GRANO 1**    Q.tà    **GRANO 2**    Q.tà



HSK100/A	d	GRANO 1	Q.tà	GRANO 2	Q.tà
	6	100601004	1	100300404 M3x4	2
	8	100801004	1	100400504 M4x5	2
	10	101001204	1	100400504 M4x5	2
	12 - 14	101201604	1	100400504 M4x5	2
	16 - 18	101401604	1	100400504 M4x5	3
	20	101601604	1	100400504 M4x5	3
	25	101802002	2	100400504 M4x5	3
	32 - 40	102002002	2	100400504 M4x5	3



MANDRINO PORTAFRESE CON ATTACCO TIPO WISTHLE NOTCH  
 END MILL HOLDERS WISTHLE NOTCH  
 MANDRINS POUR OUTIL TYPE WISTHLE NOTCH  
 ZYLINDERSHAFTAUFNAHME WISTHLE NOTCH

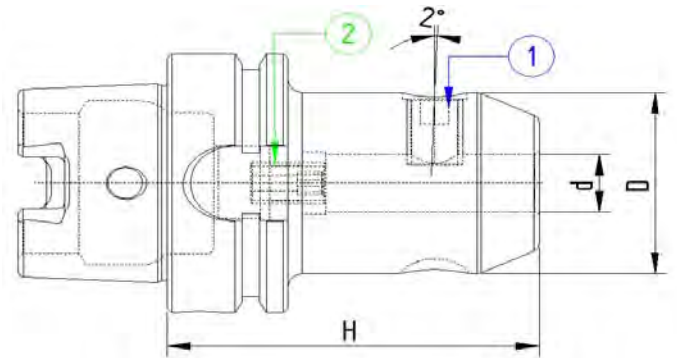


**DIN 69893**

**DIN 1835 E**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	d	D	H
61AWHN06	100/A	HSK100/A DIN69893 W/NOTCH H90 D6	6	25	90
61AWHN08	100/A	HSK100/A DIN69893 W/NOTCH H90 D8	8	28	90
61AWHN10	100/A	HSK100/A DIN69893 W/NOTCH H90 D10	10	35	90
61AWHN12	100/A	HSK100/A DIN69893 W/NOTCH H100 D12	12	42	100
61AWHN14	100/A	HSK100/A DIN69893 W/NOTCH H100 D14	14	44	100
61AWHN16	100/A	HSK100/A DIN69893 W/NOTCH H100 D16	16	48	100
61AWHN18	100/A	HSK100/A DIN69893 W/NOTCH H100 D18	18	50	100
61AWHN20	100/A	HSK100/A DIN69893 W/NOTCH H110 D20	20	52	110
61AWHN25	100/A	HSK100/A DIN69893 W/NOTCH H120 D25	25	65	120
61AWHN32	100/A	HSK100/A DIN69893 W/NOTCH H120 D32	32	72	120
61AWHN40	100/A	HSK100/A DIN69893 W/NOTCH H120 D40	40	80	120

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø WLD    GRANO 1    Q.tà    GRANO INTERNO    Q.tà



HSK100/A	Ø WLD	GRANO 1	Q.tà	GRANO INTERNO	Q.tà
	6	100601004	1	100501607	1
	8	100801004	1	100601607	1
	10	101001204	1	100801601	1
	12 - 14	101201604	1	101001601	1
	16 - 18	101401604	1	101001601	1
	20	101601604	1	101001801	1
	25	101802002	2	101001801	1
	32 - 40	102002002	2	101001801	1



MANDRINI PORTAFRESE A TRASCINAMENTO FISSO CON PASAGGIO REFRIGERANTE  
 FACE MILL HOLDERS-TENONS DRIVE-WITH INTERNAL COOLANT SUPPLY  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FUER FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

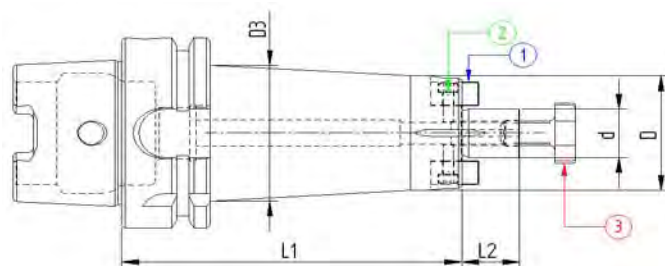
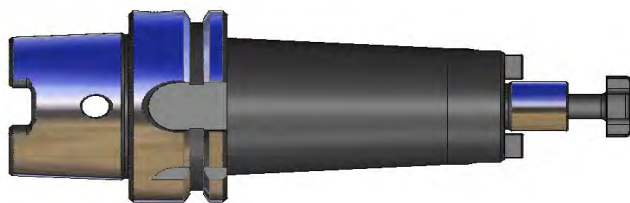


**DIN 69893**

**ISO 3937**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**STANDARD**

Codice	HSK	Descrizione	d	L1	L2	D2	D3
61APF116	100/A	HSK100/A DIN69893 P/F FISSO H50 D16	16	50	17	38	-
61APF122	100/A	HSK100/A DIN69893 P/F FISSO H50 D22	22	50	19	48	-
61APF127	100/A	HSK100/A DIN69893 P/F FISSO H50 D27	27	50	21	58	-
61APF132	100/A	HSK100/A DIN69893 P/F FISSO H50 D32	32	50	24	66	-
61APF140	100/A	HSK100/A DIN69893 P/F FISSO H60 D40	40	60	27	80	-
61APF150	100/A	HSK100/A DIN69893 P/F FISSO H70 D50	50	70	-	-	-

**L = 100**

Codice	HSK	Descrizione	d	L1	L2	D2	D3
61APF216	100/A	HSK100/A DIN69893 P/F FISSO H100 D16	16	100	17	38	43
61APF222	100/A	HSK100/A DIN69893 P/F FISSO H100 D22	22	100	19	48	53
61APF227	100/A	HSK100/A DIN69893 P/F FISSO H100 D27	27	100	21	58	-
61APF232	100/A	HSK100/A DIN69893 P/F FISSO H100 D32	32	100	24	66	-
61APF240	100/A	HSK100/A DIN69893 P/F FISSO H100 D40	40	100	27	80	-
61APF250	100/A	HSK100/A DIN69893 P/F FISSO H100 D50	50	100	-	-	-

**L = 130**

Codice	HSK	Descrizione	d	L1	L2	D2	D3
61APF316	100/A	HSK100/A DIN69893 P/F FISSO H130 D16	16	130	17	38	44
61APF322	100/A	HSK100/A DIN69893 P/F FISSO H130 D22	22	130	19	48	55
61APF327	100/A	HSK100/A DIN69893 P/F FISSO H130 D27	27	130	21	58	65
61APF332	100/A	HSK100/A DIN69893 P/F FISSO H130 D32	32	130	24	66	73
61APF340	100/A	HSK100/A DIN69893 P/F FISSO H130 D40	40	130	27	80	-
61APF350	100/A	HSK100/A DIN69893 P/F FISSO H130 D50	50	130	-	-	-

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE CROCE	Q.tà
HSK 100/A	16	916TSL01	2	110301001	2	916VTC02	1
	22	922TSL01	2	110301201	2	922VTC02	1
	27	927TSL01	2	110401601	2	927VTC02	1
	32	932TSL01	2	110601601	2	932VTC02	1
	40	940TSL01	2	110601601	2	940VTC02	1
	50	950TSL01	2	110601601	2	-	-





MANDRINI PORTAFRESE A TRASCINAMENTO FISSO CON PASAGGIO REFRIGERANTE  
 FACE MILL HOLDERS-TENONS DRIVE-WITH INTERNAL COOLANT SUPPLY  
 MANDRINS PORTE-FRAISE-ENTRAINEMENT PAR TENONS AVEC ARROSAGE INTERNE  
 AUFSTECKFRAESDORNE FUER FRAESER MIT QUERNUT UND KUEHLMITTELZUFUHR

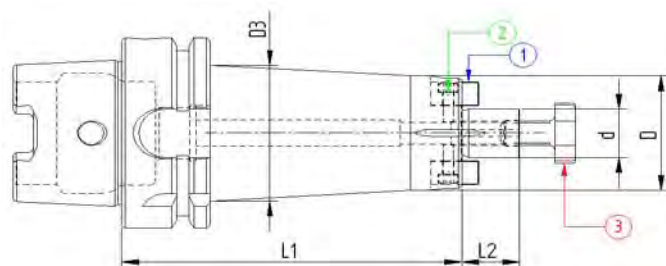
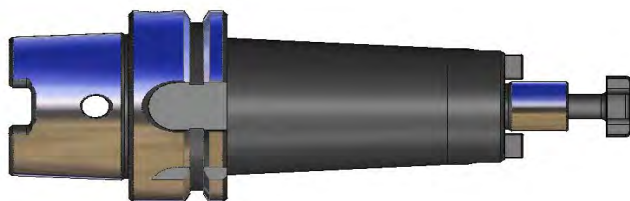


**DIN 69893**

**ISO 3937**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L=160**

Codice	HSK	Descrizione	d	L1	L2	D	D3
61APF416	100/A	HSK100/A DIN69893 P/F FISSO H160 D16	16	160	17	38	43
61APF422	100/A	HSK100/A DIN69893 P/F FISSO H160 D22	22	160	19	48	56
61APF427	100/A	HSK100/A DIN69893 P/F FISSO H160 D27	27	160	21	58	66
61APF432	100/A	HSK100/A DIN69893 P/F FISSO H160 D32	32	160	24	66	74
61APF440	100/A	HSK100/A DIN69893 P/F FISSO H160 D40	40	160	27	80	-
61APF450	100/A	HSK100/A DIN69893 P/F FISSO H160 D50	50	160	-	-	-

**L = 200**

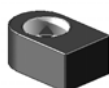
Codice	HSK	Descrizione	d	L1	L2	D	D3
61APF516	100/A	HSK100/A DIN69893 P/F FISSO H200 D16	16	200	17	38	47
61APF522	100/A	HSK100/A DIN69893 P/F FISSO H200 D22	22	200	19	48	58
61APF527	100/A	HSK100/A DIN69893 P/F FISSO H200 D27	27	200	21	58	67
61APF532	100/A	HSK100/A DIN69893 P/F FISSO H200 D32	32	200	24	66	75
61APF540	100/A	HSK100/A DIN69893 P/F FISSO H200 D40	40	200	27	80	-
61APF550	100/A	HSK100/A DIN69893 P/F FISSO H200 D50	50	200	-	-	-

**L = 250**

Codice	HSK	Descrizione	d	L1	L2	D	D3
61APF616	100/A	HSK100/A DIN69893 P/F FISSO H250 D16	16	250	17	38	48
61APF622	100/A	HSK100/A DIN69893 P/F FISSO H250 D22	22	250	19	48	58
61APF627	100/A	HSK100/A DIN69893 P/F FISSO H250 D27	27	250	21	58	68
61APF632	100/A	HSK100/A DIN69893 P/F FISSO H250 D32	32	250	24	66	77
61APF640	100/A	HSK100/A DIN69893 P/F FISSO H250 D40	40	250	27	80	-
61APF650	100/A	HSK100/A DIN69893 P/F FISSO H250 D50	50	250	-	-	-

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono    Ø    TASSELLO    Q.tà    VITE TASSELLO    Q.tà    VITE CROCE    Q.tà



HSK 100/A	Ø	TASSELLO	Q.tà	VITE TASSELLO	Q.tà	VITE CROCE	Q.tà
16		916TSL01	2	110301001	2	916VTC02	1
22		922TSL01	2	110301201	2	922VTC02	1
27		927TSL01	2	110401601	2	927VTC02	1
32		932TSL01	2	110601601	2	932VTC02	1
40		940TSL01	2	110601601	2	940VTC02	1
50		950TSL01	2	110601601	2	-	-



MANDRINI PORTAFRESA COMBINATI  
 KOMBI-SHELL MILL ADAPTOR  
 MANDRINS PORTE-FRAISES A DOUBLE USAGE  
 KOMBI AUFSTECKFRAESDORNE

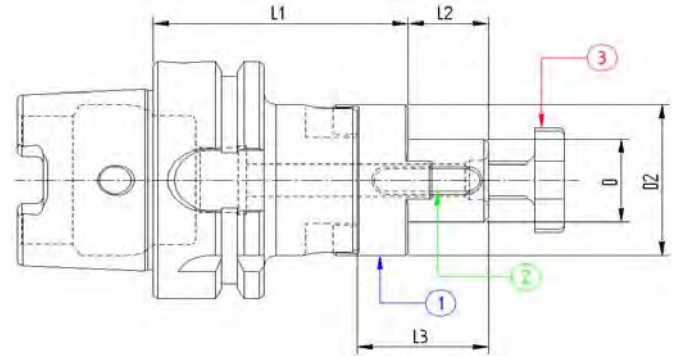
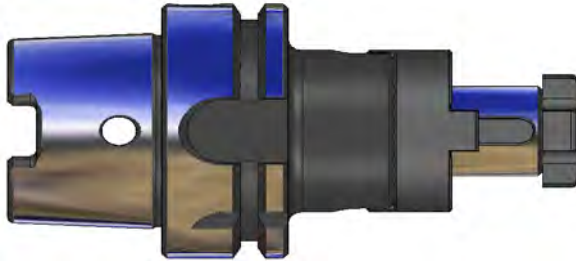


**DIN 69893**

**DIN 6358**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	D	L1	L2	L3	D2
61APU116	100/A	HSK100/A DIN69893 P/F UNIV.H60 D16	16	60	17	27	32
61APU122	100/A	HSK100/A DIN69893 P/F UNIV.H60 D22	22	60	19	31	40
61APU127	100/A	HSK100/A DIN69893 P/F UNIV.H60 D27	27	60	21	33	48
61APU132	100/A	HSK100/A DIN69893 P/F UNIV.H60 D32	32	60	24	38	58
61APU140	100/A	HSK100/A DIN69893 P/F UNIV.H70 D40	40	70	27	41	70

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	VITE CROCE	Q.tà	GIUNTO	Q.tà	LINGUETTA	Q.tà
HSK 100/A	16	916VTC02	1	916GNT01	1	170402004	1
	22	922VTC02	1	922GNT01	1	170602506	1
	27	927VTC02	1	927GNT01	1	170702507	1
	32	932VTC02	1	932GNT01	1	170802807	1
	40	940VTC02	1	940GNT01	1	171003208	1



MANDRINI PORTAFRESA COMBINATI PROLUNGATI  
 KOMBI-SHELL MILL ADAPTOR LONG  
 MANDRINS PORTE-FRAISES A DOUBLE USAGE, SERIE LONGUE  
 KOMBI AUFSTECKFRAESDORNE LANG

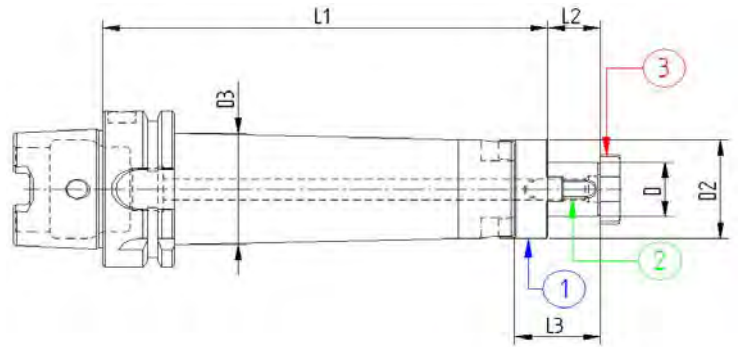


**DIN 69893**

**DIN 6358**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



**L = 100**

Codice	HSK	Descrizione	D	L1	L2	L3	D2	D3
61APU216	100/A	HSK100/A DIN69893 P/F UNIV.H100 D16	16	100	17	27	32	37
61APU222	100/A	HSK100/A DIN69893 P/F UNIV.H100 D22	22	100	19	31	40	45
61APU227	100/A	HSK100/A DIN69893 P/F UNIV.H100 D27	27	100	21	33	48	-
61APU232	100/A	HSK100/A DIN69893 P/F UNIV.H100 D32	32	100	24	38	58	-
61APU240	100/A	HSK100/A DIN69893 P/F UNIV.H100 D40	40	100	27	41	70	-

**L = 160**

Codice	HSK	Descrizione	D	L1	L2	L3	D2	D3
61APU416	100/A	HSK100/A DIN69893 P/F UNIV.H160 D16	16	160	17	27	32	40
61APU422	100/A	HSK100/A DIN69893 P/F UNIV.H160 D22	22	160	19	31	40	48
61APU427	100/A	HSK100/A DIN69893 P/F UNIV.H160 D27	27	160	21	33	48	57
61APU432	100/A	HSK100/A DIN69893 P/F UNIV.H160 D32	32	160	24	38	58	67
61APU440	100/A	HSK100/A DIN69893 P/F UNIV.H160 D40	40	160	27	41	70	79

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	VITE CROCE	Q.tà	GIUNTO	Q.tà	LINGUETTA	Q.tà
HSK 100/A	16	916VTC02	1	916GNT01	1	170402004	1
	22	922VTC02	1	922GNT01	1	170602506	1
	27	927VTC02	1	927GNT01	1	170702507	1
	32	932VTC02	1	932GNT01	1	170802807	1
	40	940VTC02	1	940GNT01	1	171003208	1



MANDRINI PORTAPUNTE ATTACCO CONO MORSE  
 MORSE TAPER ADAPTERS FOR DRILLS  
 DOUILLES POUR CONE MORSE A TENON  
 ZWISCHENHULSEN FÜR MORSEKEGEL MIT AUSTREIBLAPPEN

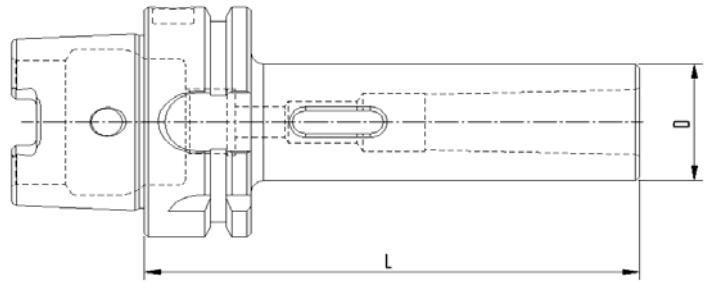
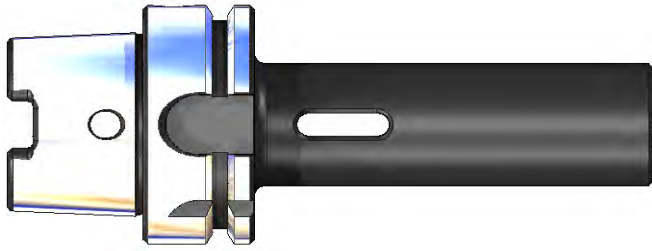


**DIN 69893**

**DIN 228 - 2**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



<b>Codice</b>	<b>HSK</b>	<b>Descrizione</b>	<b>D</b>	<b>L</b>
61AMP101	100/A	HSK100/A DIN69893 H.110 CM1 PUNTE	25	110
61AMP102	100/A	HSK100/A DIN69893 H.120 CM2 PUNTE	32	120
61AMP103	100/A	HSK100/A DIN69893 H.150 CM3 PUNTE	40	150
61AMP104	100/A	HSK100/A DIN69893 H.170 CM4 PUNTE	48	170
61AMP105	100/A	HSK100/A DIN69893 H.200 CM5 PUNTE	63	200



MANDRINI PORTAFRESE ATTACCO CONO MORSE CON REFRIGERAZIONE INTERNA  
 MORSE TAPER MILL ADAPTERS WITH INTERNAL COOLANT  
 DOUILLES POUR CONE MORSE AVEC TARAUDAGE  
 ZWISCHENHULSEN FÜR MORSEKEGEL MIT ZENTRALER KÜHLMITTELZUFUHR

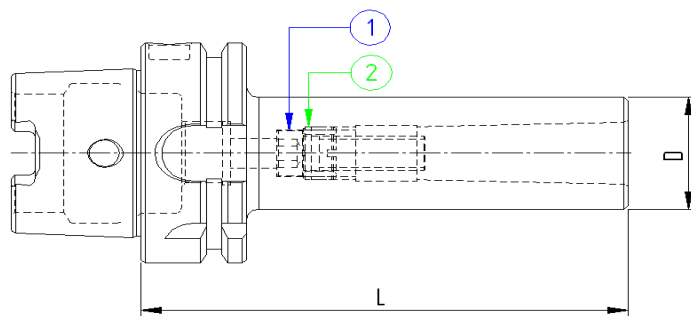
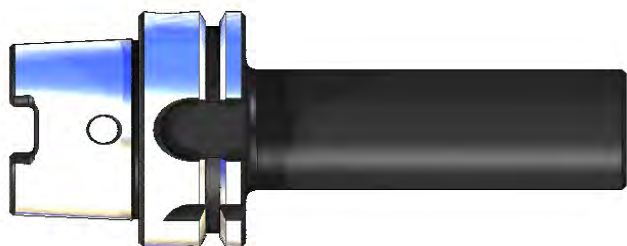


**DIN 69893**

**DIN 228 - 2**

**Bilanciato G.6,3 20.000 RPM**

**Su richiesta Bilanciature G.2,5 con EXTRA PREZZO**



Codice	HSK	Descrizione	D	L
61AMF101	100/A	HSK100/A DIN69893 H.110 CM1 FRESE	25	110
61AMF102	100/A	HSK100/A DIN69893 H.120 CM2 FRESE	32	120
61AMF103	100/A	HSK100/A DIN69893 H.150 CM3 FRESE	40	150
61AMF104	100/A	HSK100/A DIN69893 H.170 CM4 FRESE	48	170
61AMF105	100/A	HSK100/A DIN69893 H.200 CM5 FRESE	63	200

**COMPONENTI - SPARE PARTS - PIÈCES DETACHÉES - ERSATZTEILE**

Tipo Cono    HSK    VITE (1)    Q.tà    BOCCOLA (2)    Q.tà



HSK100/A	CM1	110603001	1	-	1
	CM2	111003014	1	121500802	1
	CM3	111204003	1	122000903	1
	CM4	111604514	1	122501204	1
	CM5	112005003	1	123301205	1

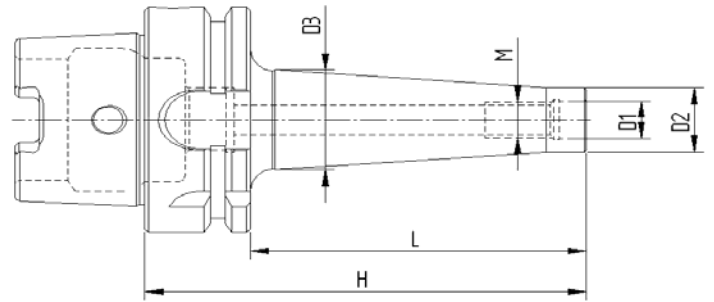
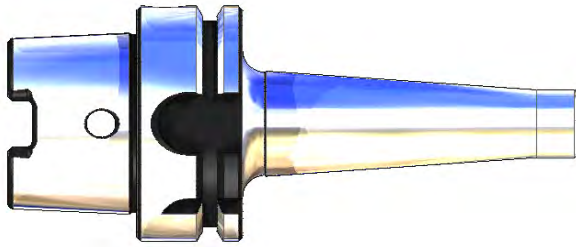


MANDRINI PER FRESE CON ATTACCO FILETTATO  
MILLING CUTTER ARBORS FOR SCREW-ON TYPE MILLING CUTTERS  
MANDRINS POUR FRAISES A VISSER  
SPANFUTTER FÜR EINSCHRAUBFRAESER



**DIN 69893**

**Bilanciato G.2,5 20.000 RPM**



**L = 87**

Codice	HSK	Descrizione	D1	D2	H	L	M
61AAF212	100/A	HSK100/A DIN69893 P/F AT.FIL.M12X87	12,5	21	87	58	12
61AAF216	100/A	HSK100/A DIN69893 P/F AT.FIL.M16X87	17	29	87	58	16

**L = 137**

Codice	HSK	Descrizione	D1	D2	H	L	M
61AAF312	100/A	HSK100/A DIN69893 P/F AT.FIL.M12X137	12,5	21	137	108	12
61AAF316	100/A	HSK100/A DIN69893 P/F AT.FIL.M16X137	17	29	137	108	16

**L = 187**

Codice	HSK	Descrizione	D1	D2	H	L	M
61AAF412	100/A	HSK100/A DIN69893 P/F AT.FIL.M12X187	12,5	21	187	158	12
61AAF416	100/A	HSK100/A DIN69893 P/F AT.FIL.M16X187	17	29	187	158	16

**L = 237**

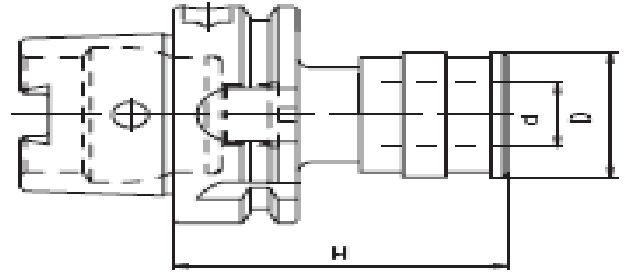
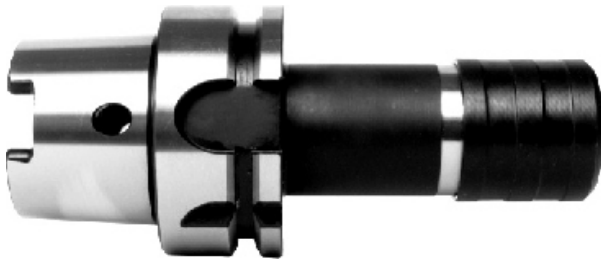
Codice	HSK	Descrizione	D1	D2	H	L	M
61AAF516	100/A	HSK100/A DIN69893 P/F AT.FIL.M16X237	17	29	237	208	16



PORTAMASCHI A CAMBIO RAPIDO  
 QUICK CHANGE TAP HOLDER  
 MANDRINS DE TARAUDAGE A CHANGEMENT RAPIDE  
 GEWINDE-SCHNELLWECHSELFUTTER



**DIN 69893**



Codice	HSK	Descrizione	D	d	H
61APCRM1	100/A	HSK100/A M/PORTAM/C/R H80 GR.1	36	19	80
61APCRM2	100/A	HSK100/A M/PORTAM/C/R H100 GR.2	53	31	100

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**

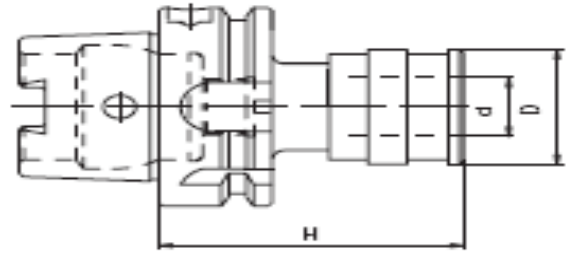
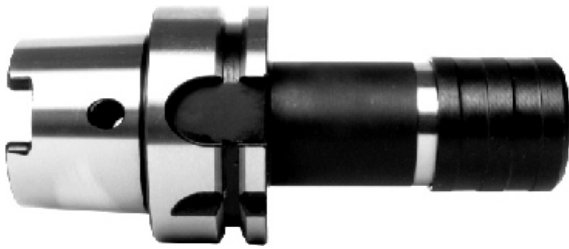




PORTAMASCHI A CAMBIO RAPIDO PER MASCHIATURA RIGIDA  
 QUICK CHANGE TAP HOLDER FOR RIGID TAPPING  
 MANDRINS A CHANGEMENT RAPIDE POUR TARAUDAGE SYNCHRONISE  
 GEWINDE-SCHNELLWECHSELFUTTER FÜR SYNCHRONISATION



**DIN 69893**



Codice	HSK	Descrizione	D	d	H
61APRRM1	100/A	HSK100/A M/PORTAM/C/R/R H80 GR.1	48	19	80
61APRRM2	100/A	HSK100/A M/PORTAM/C/R/R H100 GR.2	60	31	100

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**





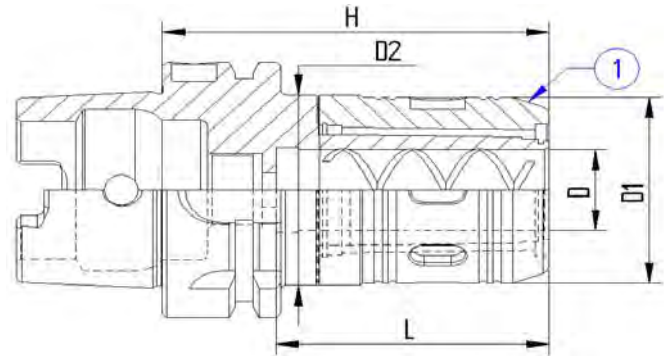


MANDRINI A FORTE SERRAGGIO  
MILLING CHUCK  
MANDRINS A FORT SERRAGE  
KRAFTSPANNFUTTER



**DIN 69893**

**Bilanciato G.6,3 12.000 RPM**



Codice	HSK	Descrizione	H	D	D1	D2	L
61AFS220	100/A	HSK100/A FORTE SERRAGGIO Ø20 H105	105	20	46	47	60
61AFS232	100/A	HSK100/A FORTE SERRAGGIO Ø32 H115	115	32	62	63	80

**ACCESSORI - ACCESSORIES - ACCESSOIRES - ZUBEHÖR**

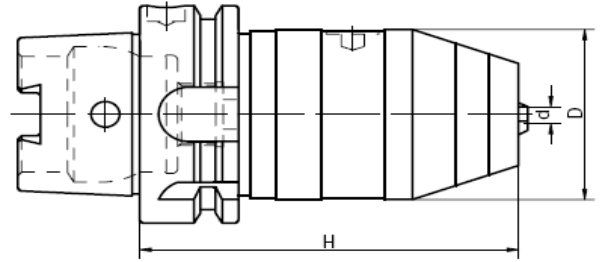




MANDRINI INTEGRALI CON CHIAVE ESAGONALE  
 DRILL CHUCK WITH EXAG-KEY LOCK SYSTEM  
 MANDRINS MONOBLOC-SERRAGE PAR CLE 6 PANS  
 NC-KURZBOHRFUTTER-SPANNEN DURCH 6 - KANTSCHLUSSEL



**DIN 69893**



**CON REFRIGERANTE CENTRALE - WITH INTERNAL COOLANT SUPPLY -  
 AVEC ARROSAGE INTERNE - MIT ZENTRALEM KUHLMITTELLOCH**

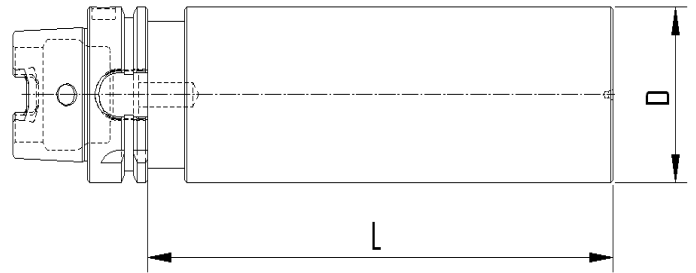
Codice	HSK	Descrizione	D	H	d
61AMAZ13	100/A	HSK100/A M/AUTOS./FORI H111 D13	50	111	1-13
61AMAZ16	100/A	HSK100/A M/AUTOS./FORI H111 D16	57	111	3-16



MANDRINI SEMILAVORATI CON STELO TENERO  
 BLANK TOOLHOLDERS WITH SOFT SHANK  
 BARRE D'ALEPAGE SEMI-FINIES  
 ROHLINGE MIT WEICHEM SHAFT



**DIN 69893**



Codice	HSK	Descrizione	D	L
61AST397	100/A	HSK100/A DIN69893 ST. TENERO D97x315	97	315

**HSK 63/A**

**ATTACCHI BASE MODULARI**

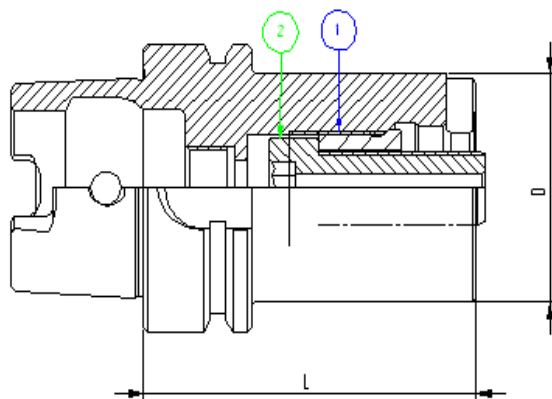
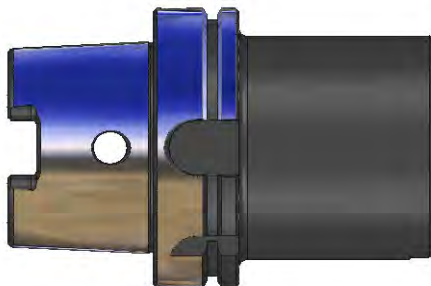


ATTACCHI BASE MODULARI HSK63/A  
 MODULAR BASIC HOLDERS HSK63/A  
 MODULE DE BASE HSK63/A  
 GRUNDAUFNAHMEN HSK63/A





**DIN 69893**

**Bilanciato G.6,3 20.000 RPM**



Codice	Descrizione	L	D
66AVL150	HSK63/A DIN69893 MODULARE H.80 D.50	80	50
66AVL163	HSK63/A DIN69893 MODULARE H.90 D.63	90	63
66AVL180	HSK63/A DIN69893 MODULARE H.90 D.80	90	80

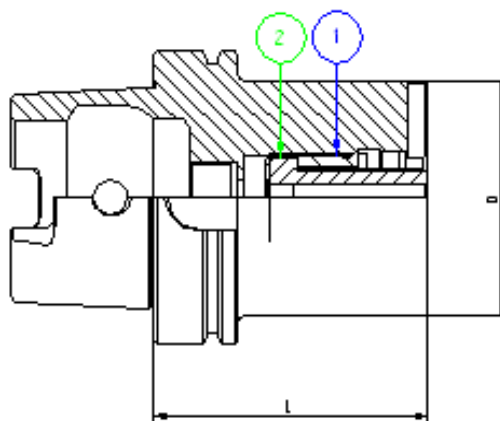
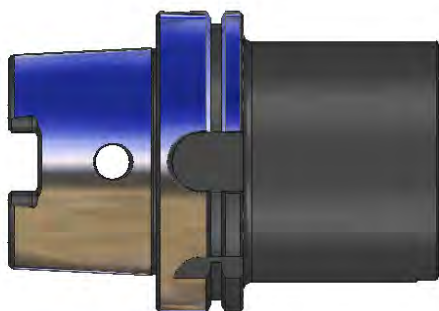
**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Tipo Cono	Ø	VITE	Q.tà	GHIERA	Q.tà
					
HSK63/A	50	111604011	1	122502007	1
	63	112005011	1	123002408	1
	80	112005011	1	123002408	1

**HSK 100/A**



**ATTACCHI BASE MODULARI**

**Bilanciato G.6,3 20.000 RPM**



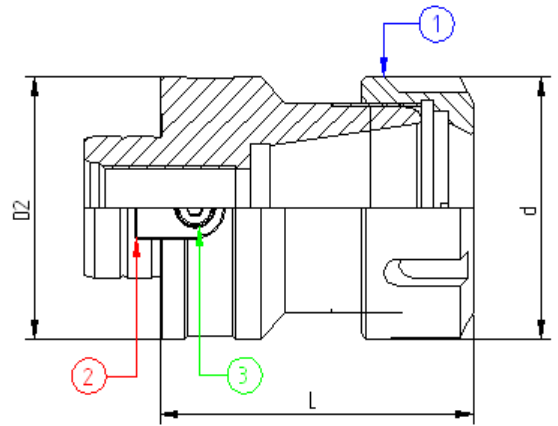
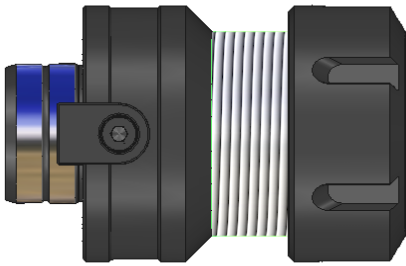
Codice	Descrizione	L	D
61AVL150	HSK100/A DIN69893 MODULARE H.85 D.50	85	50
61AVL163	HSK100/A DIN69893 MODULARE H.95 D.63	95	63
61AVL180	HSK100/A DIN69893 MODULARE H.95 D.80	95	80

## COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE

Tipo Cono	Ø	VITE	Q.tà	GHIERA	Q.tà
					
HSK100/A	50	111604011	1	122502007	1
	63	112005011	1	123002408	1
	80	112004511	1	123002408	1



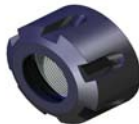
# INSERTI MODULARI 50





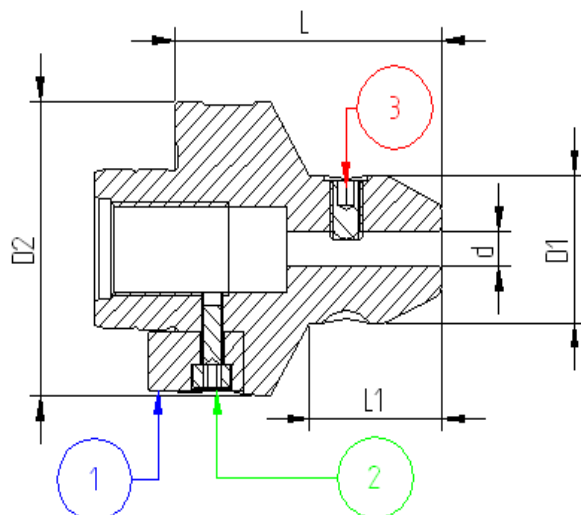
Codice	Descrizione	D2	L	d
VL5PP113	MODULARE D50 P/PINZE ER20 H=60	50	60	35
VL5PP116	MODULARE D50 P/PINZE ER25 H=63	50	63	42
VL5PP120	MODULARE D50 P/PINZE ER32 H=65	50	65	50

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	VITE	Q.tà	TASSELLO	Q.tà	GHIERA	Q.tà
						
20	110401601	1	927TSL03	1	920GHREQ	1
25	110401601	1	927TSL03	1	925GHREQ	1
32	110401601	1	927TSL03	1	932GHREQ	1



ADATTATORI PER FRESE TIPO WELDON  
 END MILL HOLDER  
 MANDRIN WELDON  
 FRASERAUFNAHMEN WELDON



Codice	Descrizione	D2	L	d	L1	D1
VL5WLD06	MOD. D50 WELDON D.6 H=50	50	50	6	25	25
VL5WLD08	MOD. D50 WELDON D.8 H=50	50	50	8	26	28
VL5WLD10	MOD. D50 WELDON D.10 H=50	50	50	10	28	35
VL5WLD12	MOD. D50 WELDON D.12 H=60	50	60	12	36	42
VL5WLD14	MOD. D50 WELDON D.14 H=60	50	60	14	37	44
VL5WLD16	MOD. D50 WELDON D.16 H=60	50	60	16	39	48
VL5WLD18	MOD. D50 WELDON D.18 H=60	50	60	18	45	50
VL5WLD20	MOD. D50 WELDON D.20 H=60	50	60	20	47	52
VL5WLD25	MOD. D50 WELDON D.25 H=80	50	80	25	66	65

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

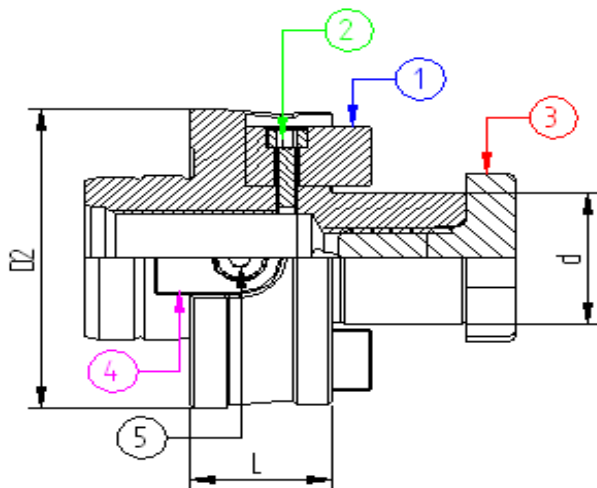
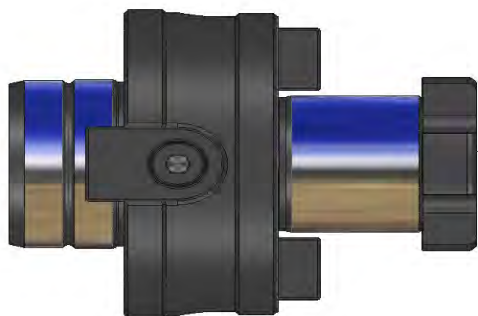
Ø      **VITE**      Q.tà      **TASSELLO**      Q.tà      **GRANO**      Q.tà



6	110401201	1	927TSL03	1	100601004	1
8	110401201	1	927TSL03	1	100801004	1
10	110401201	1	927TSL03	1	101001204	1
12	110401201	1	927TSL03	1	101201604	1
14	110401201	1	927TSL03	1	101201604	1
16	110401201	1	927TSL03	1	101401604	1
18	110401201	1	927TSL03	1	101401604	1
20	110401201	1	927TSL03	1	101601604	1
25	110401201	1	927TSL03	1	101802002	2








ADATTATORE PORTA FRESA  
MILLING CUTTERS HOLDER ADAPTERS  
ADAPTATEURS POTE FRAISE  
ADAPTER FUER FRASER



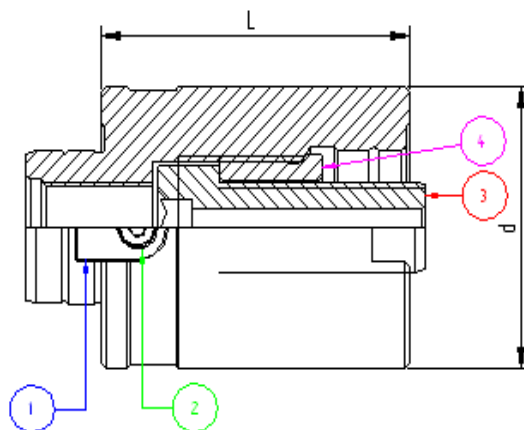
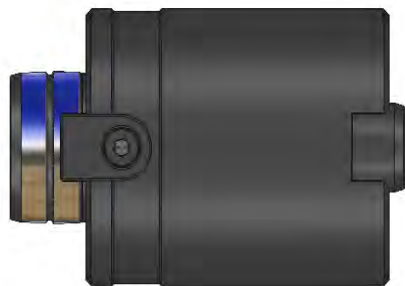
Codice	Descrizione	D2	L	d
VL5PF116	MODULARE D50 P/FRESA D.16 H=30	50	30	16
VL5PF122	MODULARE D50 P/FRESA D.22 H=20	50	20	22
VL5PF127	MODULARE D50 P/FRESA D.27 H=20	50	20	27
VL5PF132	MODULARE D50 P/FRESA D.32 H=25	50	25	32

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	VITE (n°5)	Q.tà	TASSELLO (n°4)	Q.tà	VITE CROCE	Q.tà
						
16	110401201	1	927TSL03	1	916VTC02	1
22	110401201	1	927TSL03	1	922VTC02	1
27	110401201	1	927TSL03	1	927VTC02	1
32	110401201	1	927TSL03	1	932VTC02	1
Ø	VITE (n°2)	Q.tà	TASSELLO (n°1)	Q.tà		
						
16	110301001	2	916TSL01	2		
22	110301001	2	922TSL01	2		
27	110401601	2	927TSL01	2		
32	110601601	2	932TSL01	2		







ADATTATORI DI ESTENSIONE  
EXTENSION ADAPTER  
ADAPTEUR DE RALLONGE  
VERLÄNGERUNGEN

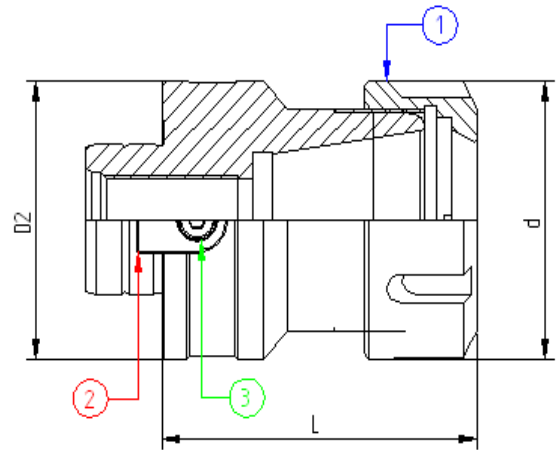
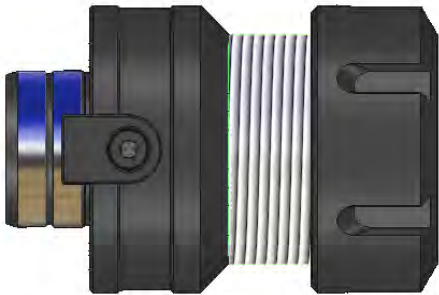


Codice	Descrizione	L	d
VL5PR060	MODULARE D50 PROLUNGA H=60	60	50
VL5PR080	MODULARE D50 PROLUNGA H=80	80	50
VL5PR100	MODULARE D50 PROLUNGA H=100	100	50

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**




L	VITE	Q.tà	GHIERA	Q.tà	VITE	Q.tà	TASSELLO	Q.tà
								
60	111604011	1	122502007	1	110401201	1	927TSL03	1
80	111604011	1	122502007	1	110401201	1	927TSL03	1
100	111604011	1	122502007	1	110401201	1	927TSL01	1

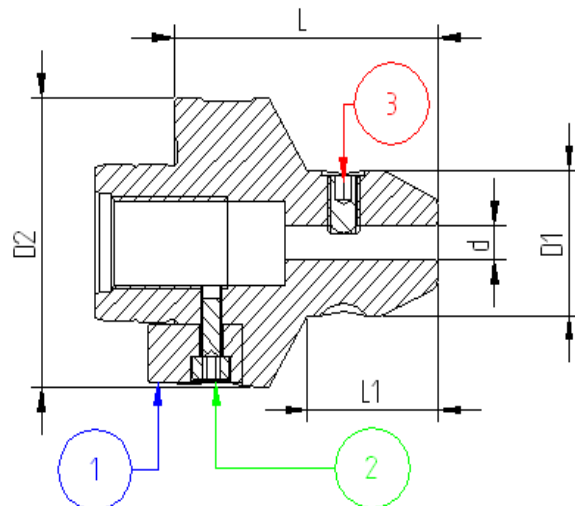
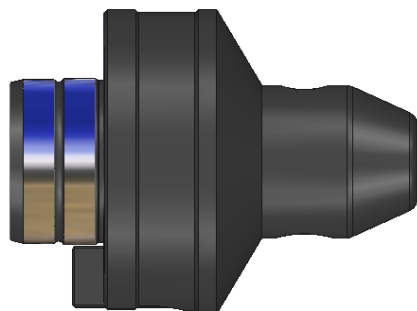
# INSERTI MODULARI 63



Codice	Descrizione	D2	L	d
VL6PP120	MODULARE D63 P/PINZE ER32 H=77	63	77	50
VL6PP126	MODULARE D63 P/PINZE ER40 H=86	63	86	63

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	VITE	Q.tà	TASSELLO	Q.tà	GHIERA	Q.tà
						
32	110601201	1	940TSL06	1	932GHREQ	1
40	110601201	1	940TSL06	1	940GHREQ	1



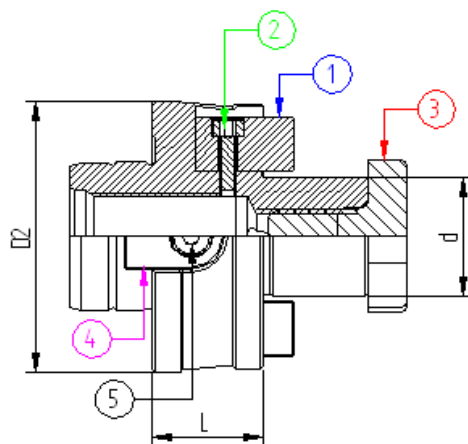
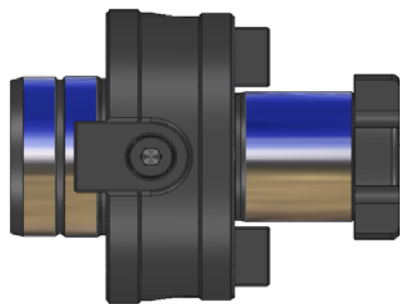
Codice	Descrizione	D2	L	d	L1	D1
VL6WLD10	MOD. D63 WELDON D.10 H=70	63	70	10	36	35
VL6WLD12	MOD. D63 WELDON D.12 H=70	63	70	12	39,5	42
VL6WLD14	MOD. D63 WELDON D.14 H=70	63	70	14	40,5	44
VL6WLD16	MOD. D63 WELDON D.16 H=70	63	70	16	42,5	48
VL6WLD18	MOD. D63 WELDON D.18 H=70	63	70	18	43,5	50
VL6WLD20	MOD. D63 WELDON D.20 H=70	63	70	20	44,5	52
VL6WLD25	MOD. D63 WELDON D.25 H=80	63	80	25	59,5	62
VL6WLD32	MOD. D63 WELDON D.32 H=80	63	80	32	64,5	63
VL6WLD40	MOD. D63 WELDON D.40 H=95	63	95	40	70	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	VITE	Q.tà	TASSELLO	Q.tà	GRANO	Q.tà
10	110601201	1	940TSL06	1	101001204	1
12	110601201	1	940TSL06	1	101201604	1
14	110601201	1	940TSL06	1	101201604	1
16	110601201	1	940TSL06	1	101401604	1
18	110601201	1	940TSL06	1	101401604	1
20	110601201	1	940TSL06	1	101601604	1
25	110601201	1	940TSL06	1	101802002	2
32	110601201	1	940TSL06	1	102002002	2
40	110601201	1	940TSL06	1	102002002	2



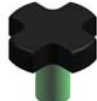




ADATTATORE PORTA FRESA  
MILLING CUTTERS HOLDER ADAPTERS  
ADAPTATEURS PORTE FRAISES  
ADAPTER FUER FRASER



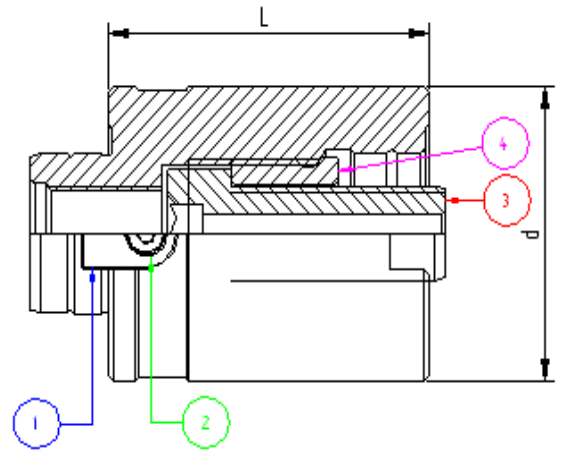
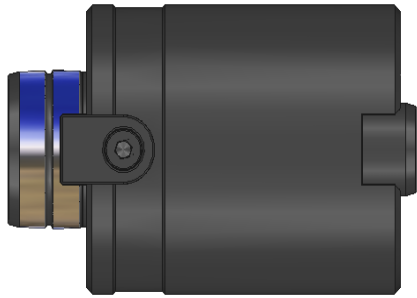
Codice	Descrizione	D2	L	d
VL6PF122	MODULARE D63 P/FRESA D.22 H=30	63	30	22
VL6PF127	MODULARE D63 P/FRESA D.27 H=30	63	30	27
VL6PF132	MODULARE D63 P/FRESA D.32 H=30	63	30	32
VL6PF140	MODULARE D63 P/FRESA D.40 H=30	63	30	40

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	VITE	Q.tà	TASSELLO	Q.tà	VITE CROCE	Q.tà
						
22	110601401	1	940TSL06	1	922VTC02	1
27	110601201	1	940TSL06	1	927VTC02	1
32	110601201	1	940TSL06	1	932VTC02	1
40	110601201	1	940TSL06	1	940VTC02	1





Ø	VITE	Q.tà	TASSELLO	Q.tà
				
22	110301201	2	922TSL01	2
27	110401601	2	927TSL01	2
32	110601601	2	932TSL01	2
40	110601601	2	940TSL01	2

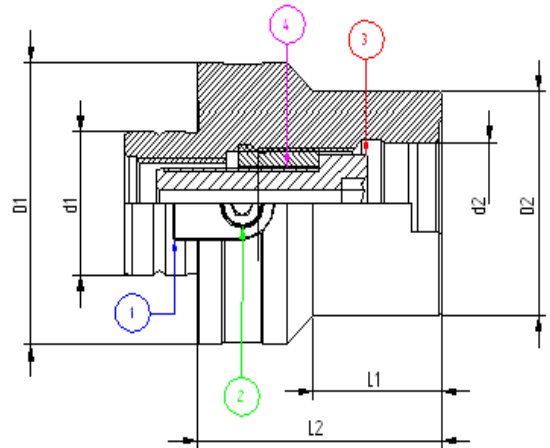
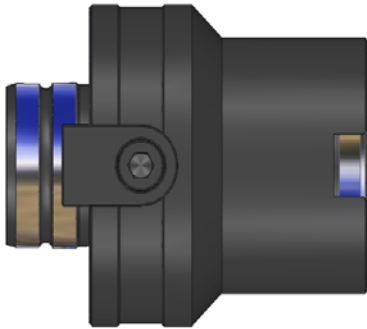




Codice	Descrizione	L	d
VL6PR080	MODULARE D63 PROLUNGA H=80	80	63
VL6PR120	MODULARE D63 PROLUNGA H=120	120	63

**COMPONENTI - SPARE PARTS - PIÈCES DETACHÉES - ERSATZTEILE**

L	VITE (n° 3)	Q.tà	GHIERA (n° 4)	Q.tà	VITE (n° 2)	Q.tà	TASSELLO (n° 1)	Q.tà
								
80	112005012	1	123002408	1	110601201	1	940TSL06	1
120	112005012	1	123002408	1	110601201	1	940TSL06	1



Codice	Descrizione	D1	d1	L2	L1	d2	D2
VL6RD050	MODULARE D63 RIDUZIONE D.50 H=60	63	32	60	31,5	27	50

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

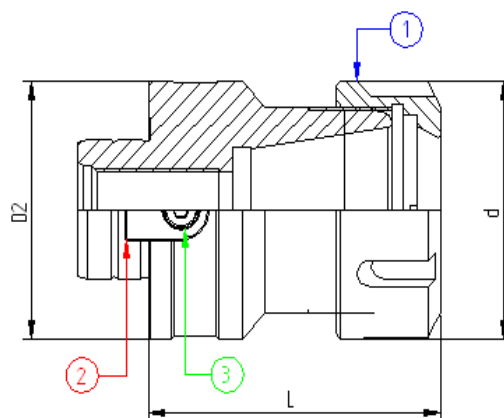
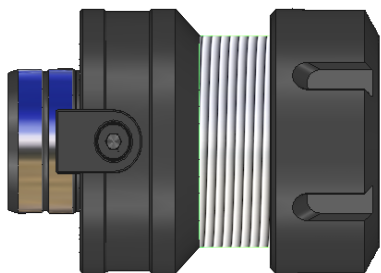
D	VITE (n° 3)	Q.tà	GHIERA (n° 4)	Q.tà	VITE (n° 2)	Q.tà	TASSELLO (n° 1)	Q.tà
50	111604011	1	122502007	1	110601201	1	940TSL03	1

# INSERTI MODULARI 80


 PORTAPINZE MODULARI  
 COLLET CHUCK  
 MANDRIN A' PINCES  
 SPANNZANGENFUTTER






**DIN 6499**



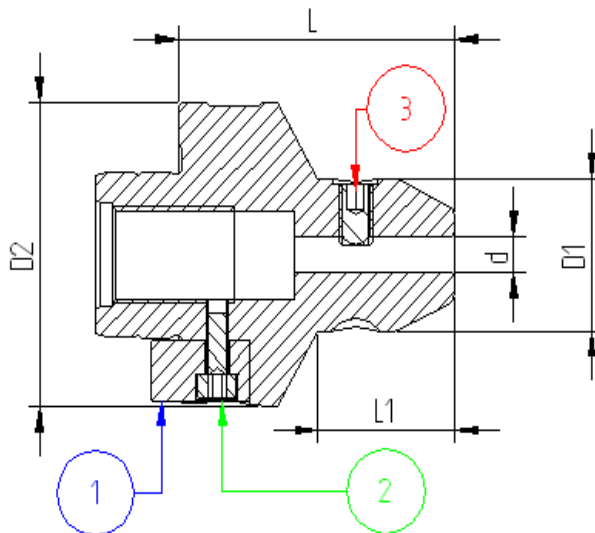
Codice	Descrizione	D2	L	d
VL8PP126	MODULARE D80 P/PINZE ER40 H=90	80	90	63

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

ER	VITE	Q.tà	TASSELLO	Q.tà	GHIERA	Q.tà
						
40	110601601	1	940TSL01	1	940GHREQ	1






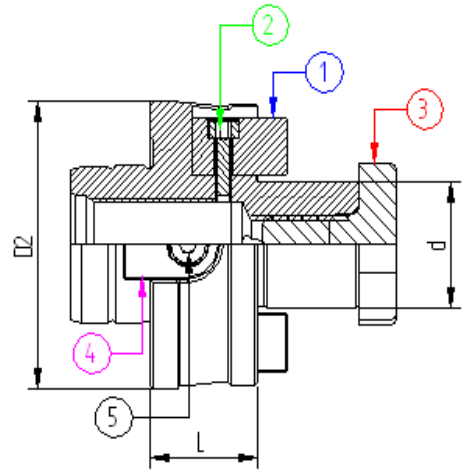
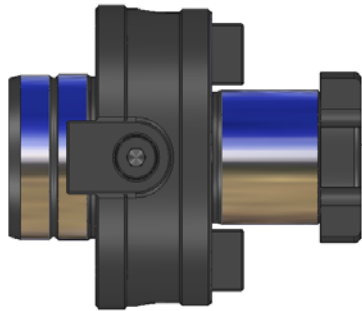
ADATTATORE PER FRESE TIPO WELDON  
 END MILL HOLDER  
 MANDRIN WELDON  
 FRASERAUFNAHMEN WELDON



Codice	Descrizione	D2	L	d	L1	D1
VL8WLD16	MOD. D80 WELDON D.16 H=70	80	70	16	32	48
VL8WLD20	MOD. D80 WELDON D.20 H=70	80	70	20	34	52
VL8WLD25	MOD. D80 WELDON D.25 H=80	80	80	25	50,5	65
VL8WLD32	MOD. D80 WELDON D.32 H=80	80	80	32	54	72
VL8WLD40	MOD. D80 WELDON D.40 H=90	80	90	40	67,5	79



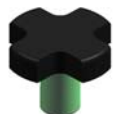


**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

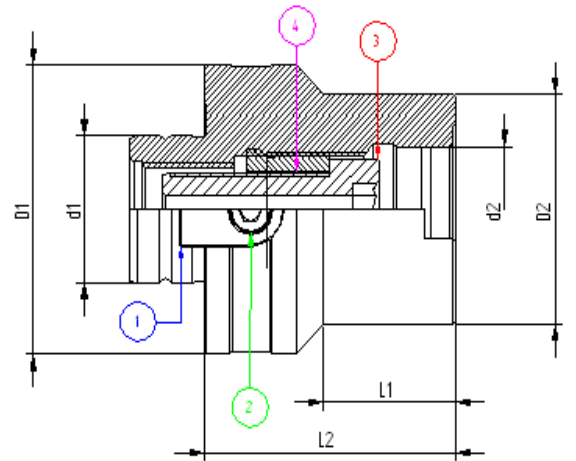
Ø	VITE	Q.tà	TASSELLO	Q.tà	GRANO	Q.tà
						
16	110601601	1	940TSL01	1	101401604	1
20	110601601	1	940TSL01	1	101601604	1
25	110601601	1	940TSL01	1	101802002	2
32	110601601	1	940TSL01	1	102002002	2
40	110601601	1	940TSL01	1	102002002	2



Codice	Descrizione	D2	L	d
VL8PF127	MODULARE D80 P/FRESA D.27 H=30	80	30	27
VL8PF132	MODULARE D80 P/FRESA D.32 H=30	80	30	32
VL8PF140	MODULARE D80 P/FRESA D.40 H=30	80	30	40





**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

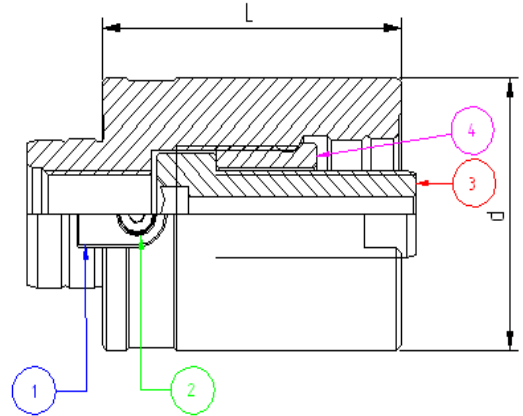
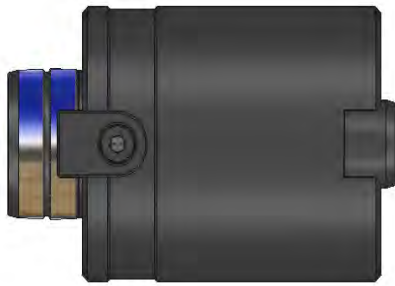
Ø	VITE (n° 5)	Q.tà	TASSELLO (n° 4)	Q.tà	VITE CROCE (n°3)	Q.tà
						
27	110601601	1	940TSL01	1	927VTC02	1
32	110601601	1	940TSL01	1	932VTC02	1
40	110601601	1	940TSL01	1	940VTC02	1
Ø	VITE (n° 2)	Q.tà	TASSELLO (n°1)	Q.tà		
						
27	110401201	2	927TSL01	2		
32	110601601	2	932TSL01	2		
40	110601601	2	940TSL01	2		



Codice	Descrizione	D1	d1	L2	L1	d2	D2
VL8RD163	MODULARE D80 RIDUZIONE D.63 H=80	80	32	80	49,5	32	63





**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

Ø	VITE (n° 3)	Q.tà	GHIERA (n° 4)	Q.tà	VITE (n° 2)	Q.tà	TASSELLO (n° 1)	Q.tà
								
63	112005011	1	123002408	1	110601601	1	940TSL01	1



Codice	Descrizione	L	d
VL8PR080	MODULARE D80 PROLUNGA H=80	80	80
VL8PR100	MODULARE D80 PROLUNGA H=100	100	80
VL8PR120	MODULARE D80 PROLUNGA H=120	120	80
VL8PR140	MODULARE D80 PROLUNGA H=140	140	80
VL8PR160	MODULARE D80 PROLUNGA H=160	160	80

**COMPONENTI - SPARE PARTS - PIECES DETACHEES - ERSATZTEILE**

L	VITE (n° 3)	Q.tà	GHIERA (n° 4)	Q.tà	VITE (n° 2)	Q.tà	TASSELLO (n° 1)	Q.tà
								
80	112005011	1	123002408	1	110601601	1	940TSL01	1
100	112005011	1	123002408	1	110601601	1	940TSL01	1
120	112005011	1	123002408	1	110601601	1	940TSL01	1
140	112005011	1	123002408	1	110601601	1	940TSL01	1
160	112005011	1	123002408	1	110601601	1	940TSL01	1



**BUSSOLE**  
**PER MASCHIATORI**  
**E MANDRINI**  
**A FORTE SERRAGGIO**



BUSSOLA PER MASCHIARE SENZA FRIZIONE

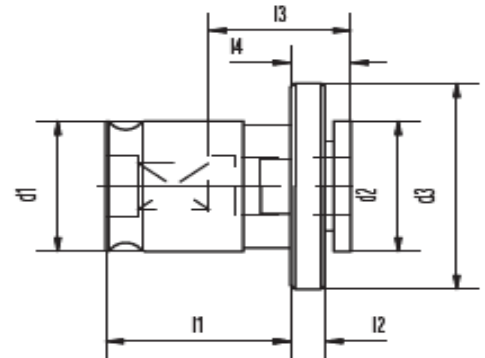
QUICK CHANGE TAPPING ADAPTERS WITHOUT SAFETY COUPLING

ADAPTEURS A CHANGEMENT RAPIDE SANS COUPLAGE DE SECURITE

SCHNELLWECHSELEINSAATZ OHNE SICHERHEITSKUPPLUNG



**DLN 6499**



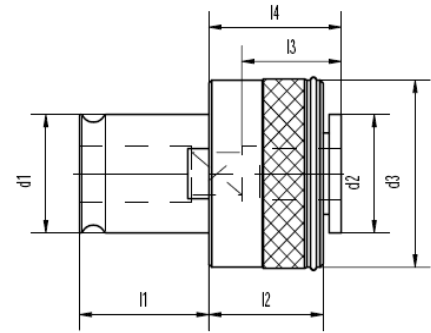
Codice	Descrizione	d1	d2	d3	l1	l2	l3
BSF1-2.8	BUSSOLA PORTA/M/S/F 2,8X2,1 GR.1	19	19	30	21,5	4	17
BSF1-3.5	BUSSOLA PORTA/M/S/F 3,5X2,7 GR.1	19	19	30	21,5	4	17
BSF1-4.0	BUSSOLA PORTA/M/S/F 4X3,0 GR.1	19	19	30	21,5	4	17
BSF1-4.5	BUSSOLA PORTA/M/S/F 4,5X3,4 GR.1	19	19	30	21,5	4	17
BSF1-5.0	BUSSOLA PORTA/M/S/F 5X4,0 GR.1	19	19	30	21,5	4	17
BSF1-6.0	BUSSOLA PORTA/M/S/F 6X4,9 GR.1	19	19	30	21,5	4	17
BSF1-7.0	BUSSOLA PORTA/M/S/F 7X5,5 GR.1	19	19	30	21,5	4	17
BSF1-8.0	BUSSOLA PORTA/M/S/F 8X6,2 GR.1	19	19	30	21,5	4	17
BSF1-9.0	BUSSOLA PORTA/M/S/F 9X7,0 GR.1	19	19	30	21,5	4	17
BSF1-10.0	BUSSOLA PORTA/M/S/F 10X8,0 GR.1	19	19	30	21,5	4	17
BSF1-11.0	BUSSOLA PORTA/M/S/F 11X9,0GR.1	19	19	30	21,5	4	17
BSF2-6.0	BUSSOLA PORTA/M/S/F 6X4,9 GR.2	31	30	48	35	5	30
BSF2-7.0	BUSSOLA PORTA/M/S/F 7X5,5 GR.2	31	30	48	35	5	30
BSF2-8.0	BUSSOLA PORTA/M/S/F 8X6,2 GR.2	31	30	48	35	5	30
BSF2-9.0	BUSSOLA PORTA/M/S/F 9X7,0 GR.2	31	30	48	35	5	30
BSF2-10.0	BUSSOLA PORTA/M/S/F 10X8,0 GR.2	31	30	48	35	5	30
BSF2-11.0	BUSSOLA PORTA/M/S/F 11X9,0 GR.2	31	30	48	35	5	30
BSF2-12.0	BUSSOLA PORTA/M/S/F 12X9,0 GR.2	31	30	48	35	5	30
BSF2-14.0	BUSSOLA PORTA/M/S/F 14X11,0 GR.2	31	30	48	35	5	30
BSF2-16.0	BUSSOLA PORTA/M/S/F 16X12,0 GR.2	31	30	48	35	5	30
BSF2-18.0	BUSSOLA PORTA/M/S/F 18X14,6 GR.2	31	30	48	35	5	30
BSF2-20.0	BUSSOLA PORTA/M/S/F 20X16,0 GR.2	31	30	48	35	5	30



BUSSOLA PER MASCHIARE CON FRIZIONE  
 QUICK CHANGE TAPPING ADAPTERS WITH SAFETY COUPLING  
 ADAPTEURS A CHANGEMENT RAPIDE AVEC COUPLAGE DE SECURITE  
 SCHNELLWECHSELEINSETZE MIT SICHERHEITSKUPPLUNG



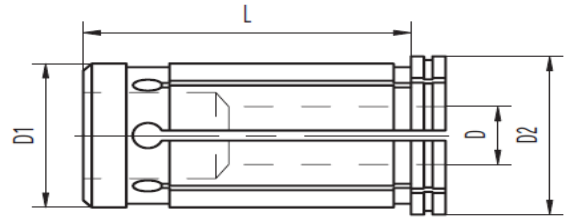
**DLN 6499**



Codice	Descrizione	d1	d2	d3	l1	l2	l3
BCF1-3.5	BUSSOLA PORTA/M/C/F 3,5X2,7 GR.1	19	19	32	21,5	25	17
BCF1-4.5	BUSSOLA PORTA/M/C/F 4,5X3,4 GR.1	19	19	32	21,5	25	17
BCF1-5.5	BUSSOLA PORTA/M/C/F 5,5X4,3 GR.1	19	19	32	21,5	25	17
BCF1-6.0	BUSSOLA PORTA/M/C/F 6X4,9 GR.1	19	19	32	21,5	25	17
BCF1-7.0	BUSSOLA PORTA/M/C/F 7X5,5 GR.1	19	19	32	21,5	25	17
BCF1-8.0	BUSSOLA PORTA/M/C/F 8X6,2 GR.1	19	19	32	21,5	25	17
BCF1-9.0	BUSSOLA PORTA/M/C/F 9X7,0 GR.1	19	19	32	21,5	25	17
BCF1-10.0	BUSSOLA PORTA/M/C/F 10X8,0 GR.1	19	19	32	21,5	25	17
BCF1-11.0	BUSSOLA PORTA/M/C/F 11X9,0 GR.1	19	19	32	21,5	25	17
BCF2-6.0	BUSSOLA PORTA/M/C/F 6X4,9 GR.2	31	30	50	35,0	31	30
BCF2-7.0	BUSSOLA PORTA/M/C/F 7X5,5 GR.2	31	30	50	35,0	31	30
BCF2-8.0	BUSSOLA PORTA/M/C/F 8X6,2 GR.2	31	30	50	35,0	31	30
BCF2-9.0	BUSSOLA PORTA/M/C/F 9X7,0 GR.2	31	30	50	35,0	31	30
BCF2-10.0	BUSSOLA PORTA/M/C/F 10X8,0 GR.2	31	30	50	35,0	31	30
BCF2-11.0	BUSSOLA PORTA/M/C/F 11X9,0 GR.2	31	30	50	35,0	31	30
BCF2-12.0	BUSSOLA PORTA/M/C/F 12X9,0 GR.2	31	30	50	35,0	31	30
BCF2-14.0	BUSSOLA PORTA/M/C/F 14X11,0 GR.2	31	30	50	35,0	31	30
BCF2-16.0	BUSSOLA PORTA/M/C/F 16X12,0 GR.2	31	30	50	35,0	31	30
BCF2-18.0	BUSSOLA PORTA/M/C/F 18X14,6 GR.2	31	30	50	35,0	31	30

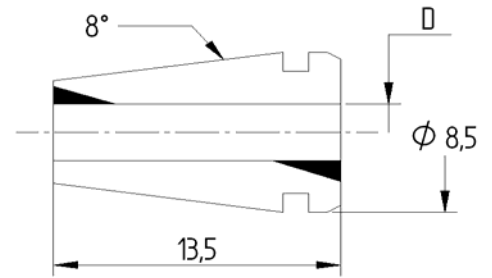


PINZE PER MANDRINI A FORTE SERRAGGIO  
COLLETS FOR MILLING CHUCK  
PINCES POUR MANDRINS A FORT SERRAGE  
SPANNZANGEN FÜR KRAFTSPANNFUTTER

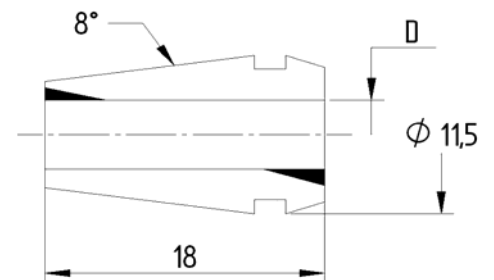


Codice	Descrizione	D1	D2	L	D
920BFS06	PINZA PER FORTE SERR. Ø20 X 6	20	25	50	6
920BFS08	PINZA PER FORTE SERR. Ø20 X 8	20	25	50	8
920BFS10	PINZA PER FORTE SERR. Ø20 X 10	20	25	50	10
920BFS12	PINZA PER FORTE SERR. Ø20 X 12	20	25	50	12
920BFS16	PINZA PER FORTE SERR. Ø20 X 16	20	25	50	16
932BFS06	PINZA PER FORTE SERR. Ø32 X 6	32	37	60	6
932BFS08	PINZA PER FORTE SERR. Ø32 X 8	32	37	60	8
932BFS10	PINZA PER FORTE SERR. Ø32 X 10	32	37	60	10
932BFS12	PINZA PER FORTE SERR. Ø32 X 12	32	37	60	12
932BFS16	PINZA PER FORTE SERR. Ø32 X 16	32	37	60	16
932BFS20	PINZA PER FORTE SERR. Ø32 X 20	32	37	60	20
932BFS25	PINZA PER FORTE SERR. Ø32 X 25	32	37	60	25

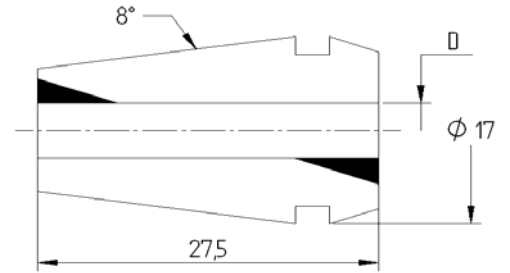
PINZE



Codice	ER	D
908ER010	8	1
908ER015	8	1,5
908ER020	8	2
908ER025	8	2,5
908ER030	8	3
908ER035	8	3,5
908ER040	8	4
908ER045	8	4,5
908ER050	8	5

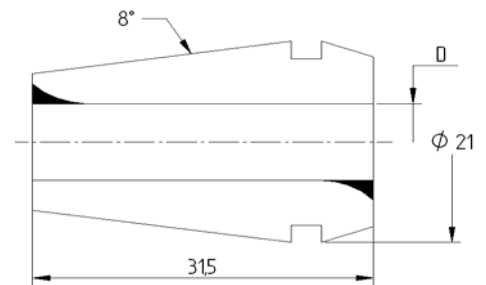


Codice	ER	D
911ER010	11	1
911ER015	11	1,5
911ER020	11	2
911ER025	11	2,5
911ER030	11	3
911ER035	11	3,5
911ER040	11	4
911ER045	11	4,5
911ER050	11	5
911ER055	11	5,5
911ER060	11	6
911ER065	11	6,5
911ER070	11	7



Codice	ER	D
916ER010	16	1
916ER015	16	1,5
916ER020	16	2
916ER025	16	2,5
916ER030	16	3
916ER035	16	3,5
916ER040	16	4
916ER045	16	4,5

Codice	ER	D
916ER050	16	5
916ER055	16	5,5
916ER060	16	6
916ER065	16	6,5
916ER070	16	7
916ER080	16	8
916ER090	16	9
916ER100	16	10

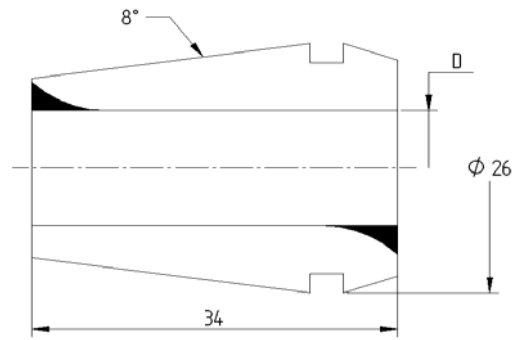


Codice	ER	D
920ER010	20	1
920ER015	20	1,5
920ER020	20	2
920ER025	20	2,5
920ER030	20	3
920ER035	20	3,5
920ER040	20	4
920ER050	20	5
920ER060	20	6
920ER070	20	7
920ER080	20	8
920ER090	20	9
920ER100	20	10
920ER110	20	11
920ER120	20	12
920ER130	20	13


 PINZE TIPO ER  
 COLLETS ER TYPE  
 PINCES TYPE ER  
 ER TYP SPANNZANGEN

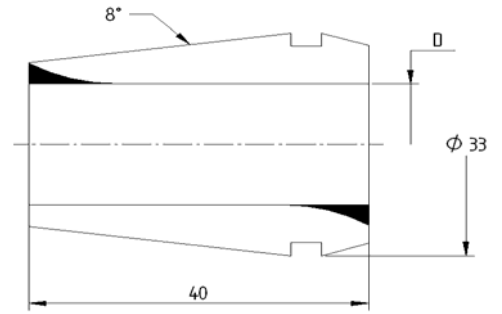


# DIN 6499/B

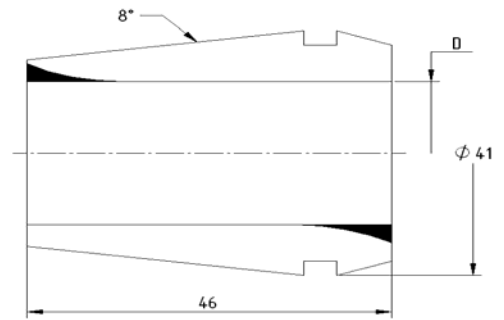


Codice	ER	D
925ER010	25	1
925ER015	25	1,5
925ER020	25	2
925ER025	25	2,5
925ER030	25	3
925ER035	25	3,5
925ER040	25	4
925ER050	25	5
925ER060	25	6
925ER070	25	7
925ER080	25	8
925ER090	25	9
925ER100	25	10
925ER110	25	11
925ER120	25	12
925ER130	25	13
925ER140	25	14
925ER150	25	15
925ER160	25	16

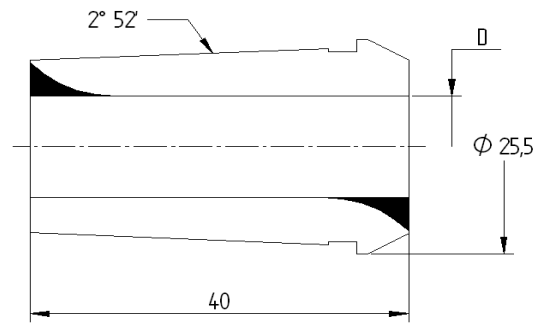




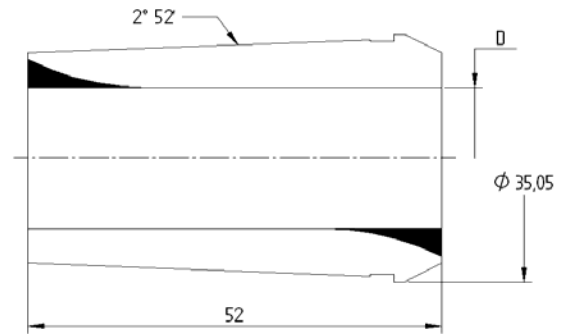
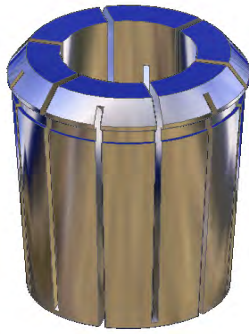
<b>Codice</b>	<b>ER</b>	<b>D</b>
932ER030	32	3
932ER040	32	4
932ER050	32	5
932ER060	32	6
932ER070	32	7
932ER080	32	8
932ER090	32	9
932ER100	32	10
932ER110	32	11
932ER120	32	12
932ER130	32	13
932ER140	32	14
932ER150	32	15
932ER160	32	16
932ER170	32	17
932ER180	32	18
932ER190	32	19
932ER200	32	20



<b>Codice</b>	<b>ER</b>	<b>D</b>
940ER030	40	3
940ER040	40	4
940ER050	40	5
940ER060	40	6
940ER070	40	7
940ER080	40	8
940ER090	40	9
940ER100	40	10
940ER110	40	11
940ER120	40	12
940ER130	40	13
940ER140	40	14
940ER150	40	15
940ER160	40	16
940ER170	40	17
940ER180	40	18
940ER190	40	19
940ER200	40	20
940ER210	40	21
940ER220	40	22
940ER230	40	23
940ER240	40	24
940ER250	40	25
940ER260	40	26
940ER270	40	27
940ER280	40	28
940ER290	40	29
940ER300	40	30

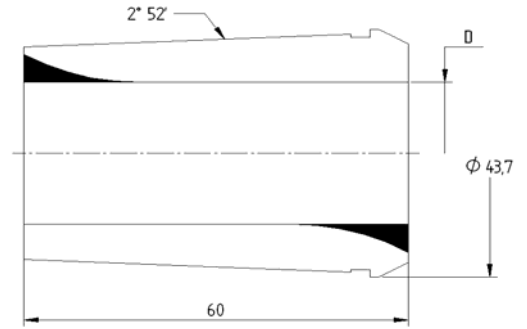


Codice	EOC	D
916EO010	16	1
916EO015	16	1,5
916EO020	16	2
916EO025	16	2,5
916EO030	16	3
916EO035	16	3,5
916EO040	16	4
916EO045	16	4,5
916EO050	16	5
916EO055	16	5,5
916EO060	16	6
916EO065	16	6,5
916EO070	16	7
916EO075	16	7,5
916EO080	16	8
916EO085	16	8,5
916EO090	16	9
916EO095	16	9,5
916EO100	16	10
916EO105	16	10,5
916EO110	16	11
916EO115	16	11,5
916EO120	16	12
916EO125	16	12,5
916EO130	16	13
916EO135	16	13,5
916EO140	16	14
916EO145	16	14,5
916EO150	16	15
916EO155	16	15,5
916EO160	16	16



Codice	EOC	D
925EO020	25	2
925EO025	25	2,5
925EO030	25	3
925EO035	25	3,5
925EO040	25	4
925EO045	25	4,5
925EO050	25	5
925EO055	25	5,5
925EO060	25	6
925EO065	25	6,5
925EO070	25	7
925EO075	25	7,5
925EO080	25	8
925EO085	25	8,5
925EO090	25	9
925EO095	25	9,5
925EO100	25	10
925EO105	25	10,5
925EO110	25	11
925EO115	25	11,5
925EO120	25	12
925EO125	25	12,5
925EO130	25	13
925EO135	25	13,5
925EO140	25	14
925EO145	25	14,5
925EO150	25	15

Codice	EOC	D
925EO155	25	15,5
925EO160	25	16
925EO165	25	16,5
925EO170	25	17
925EO175	25	17,5
925EO180	25	18
925EO185	25	18,5
925EO190	25	19
925EO195	25	19,5
925EO200	25	20
925EO205	25	20,5
925EO210	25	21
925EO215	25	21,5
925EO220	25	22
925EO225	25	22,5
925EO230	25	23
925EO235	25	23,5
925EO240	25	24
925EO245	25	24,5
925EO250	25	25



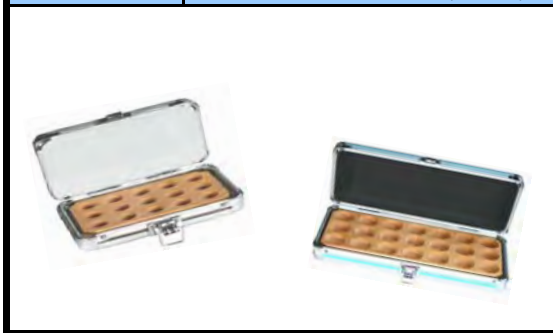
Codice	EOC	D
932EO030	32	3
932EO035	32	3,5
932EO040	32	4
932EO045	32	4,5
932EO050	32	5
932EO055	32	5,5
932EO060	32	6
932EO065	32	6,5
932EO070	32	7
932EO075	32	7,5
932EO080	32	8
932EO085	32	8,5
932EO090	32	9
932EO095	32	9,5
932EO100	32	10
932EO105	32	10,5
932EO110	32	11
932EO115	32	11,5
932EO120	32	12
932EO125	32	12,5
932EO130	32	13
932EO135	32	13,5
932EO140	32	14
932EO145	32	14,5
932EO150	32	15
932EO155	32	15,5
932EO160	32	16
932EO165	32	16,5
932EO170	32	17
932EO175	32	17,5
932EO180	32	18
932EO185	32	18,5
932EO190	32	19

Codice	EOC	D
932EO195	32	19,5
932EO200	32	20
932EO205	32	20,5
932EO210	32	21
932EO215	32	21,5
932EO220	32	22
932EO225	32	22,5
932EO230	32	23
932EO235	32	23,5
932EO240	32	24
932EO245	32	24,5
932EO250	32	25
932EO255	32	25,5
932EO260	32	26
932EO265	32	26,5
932EO270	32	27
932EO275	32	27,5
932EO280	32	28
932EO285	32	28,5
932EO290	32	29
932EO295	32	29,5
932EO300	32	30
932EO305	32	30,5
932EO310	32	31
932EO315	32	31,5
932EO320	32	32

## Tipo " ER "

Codice	Num. di pinze	Capacità
908ERS09	9 Pinze (1 - 5)	Ø 1-1,5-2-2,5-3-3,5-4-4,5-5
911ERS13	13 Pinze (1 - 7)	Ø 1-1,5-2-2,5-3-3,5-4-4,5-5-5,5-6-6,5-7
916ERS10	10 Pinze (1 - 10)	Ø 1-2-3-4-5-6-7-8-9-10
920ERS12	12 Pinze (2 - 13)	Ø 2-3-4-5-6-7-8-9-10-11-12-13
925ERS15	15 Pinze (2 - 16)	Ø 2-3-4-5-6-7-8-9-10-11-12-13-14-15-16
932ERS18	18 Pinze (3 - 20)	Ø 3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20
940ERS23	23 Pinze (4 - 26)	Ø 4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26
940ERS28	28 Pinze (3 - 30)	Ø 3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30

SPPER08	SCATOLA PINZE ER 8 (15 sedi)
SPPER11	SCATOLA PINZE ER 11 (15 sedi)
SPPER16	SCATOLA PINZE ER 16 (15 sedi)
SPPER20	SCATOLA PINZE ER 20 (15 sedi)
SPPER25	SCATOLA PINZE ER 25 (21 sedi)
SPPER32	SCATOLA PINZE ER 32 (21 sedi)
SPPER40	SCATOLA PINZE ER 40 (30 sedi)



## Tipo " EOC "

Codice	Num. di pinze	Capacità
916EOS15	15 Pinze (2 - 16)	Ø 2-3-4-5-6-7-8-9-10-11-12-13-14-15-16
925EOS24	24 Pinze (2 - 25)	Ø 2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25
932EOS29	29 Pinze (4 - 32)	Ø 4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32

SPPEOC16	SCATOLA PINZE EOC 16 (21 sedi)
SPPEOC25	SCATOLA PINZE EOC 25 (30 sedi)
SPPEOC32	SCATOLA PINZE EOC 32 (30 sedi)

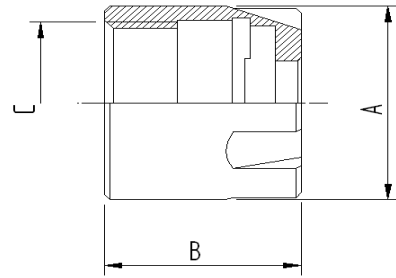
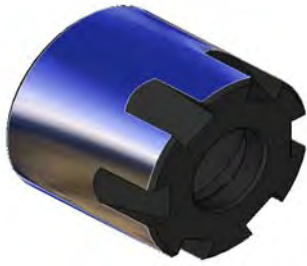


GHIERE


 GHIERA MINI  
 MINI NUT  
 ECROU MINI  
 MINI SPANNMUTTER




**DIN 6499**



Codice	ER	A	B	C
908GHRMN	8M	12	10,8	M10X0,75
911GHRMN	11M	16	12,0	M13X0,75
916GHRMN	16M	22	18	M19X1
920GHRMN	20M	28	19	M24X1
925GHRMN	25M	35	20	M30X1

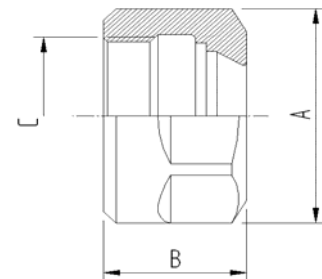


908ER	908CHVMN
911ER	911CHVMN
916ER	916CHVMN
920ER	920CHVMN
925ER	925CHVMN


 GHIERA ER TIPO ESAGONALE  
 ER CLAMPING NUTS HEXAGONAL TYPE  
 ECROU ER HEXAGONAL TYPE  
 SECHSKANTMUTTER TYP ER



**DIN 6499**




Codice	ER	A	B	C
911GHRES	11	19	14	M14X0,75
916GHRES	16	28	17,5	M22X1,5
920GHRES	20	34	19	M25X1,5



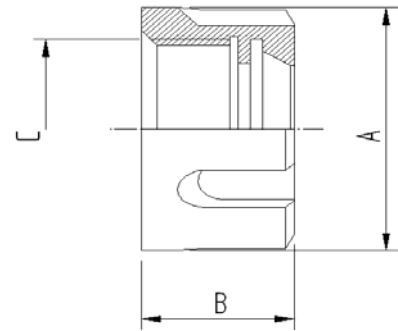
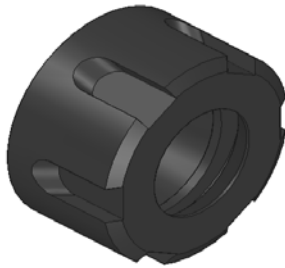
911ER	911CHVES
916ER	916CHVES
920ER	920CHVES




**GHIERA BILANCIATA STANDARD**  
**BALANCED NUT**  
**ECROU EQUILIBRE**  
**GEWUCHTETE SPANNMUTTER**



## DIN 6499



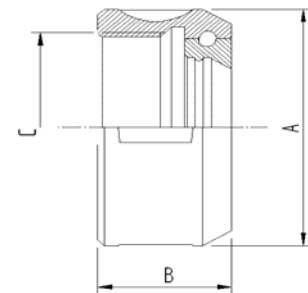
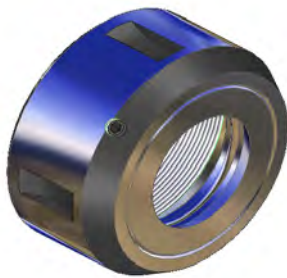
Codice	ER	A	B	C		
916GHREQ	16	32	17	M22X1,5	916ER	916CHVST
920GHREQ	20	35	19	M25X1,5	920ER	920CHVST
925GHREQ	25	42	20	M32X1,5	925ER	925CHVST
932GHREQ	32	50	22,5	M40X1,5	932ER	932CHVST
940GHREQ	40	63	25,5	M50X1,5	940ER	940CHVST
950GHREQ	50	78	35,3	M64X2	950ER	950CHVST




**GHIERA EOC**  
**EOC NUT**  
**ECROU EOC**  
**EOC SPANNMUTTER**




## DIN 6388

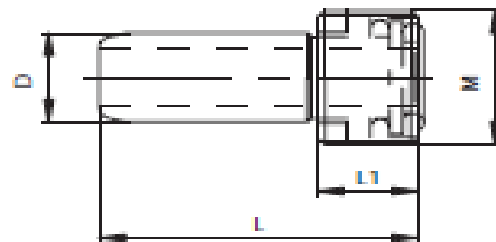


Codice	EOC	A	B	C		
916GHROS	16	43	24	M33X1,5	916EO	916CHVOC
925GHROS	25	60	30	M48X2	925EO	925CHVOC
932GHROS	32	72	33,5	M60X2,5	932EO	932CHVOC



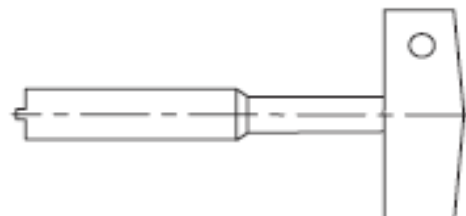
# ADDUZIONE REFRIGERANTE


**SET ADDUZIONE REFRIGERANTE**  
**COOLANT SUPPLY UNIT**  
**DISPOSITIF DE TRANSFERT DE LIQUIDE DE LUBRIFICATION**  
**KUEHLMITTELUEBERGABEROHR**



<b>CODICE</b>	<b>HSK</b>	<b>M</b>	<b>D</b>	<b>L1</b>	<b>L</b>
950APR02	50/F	12 x 1	8	7,5	29,3
950APR01	50/A - 50/E - 63/F	16 x 1	10	9,5	33
963APR01	63/A - 63/E	18 x 1	12	11,5	36,6
910APR01	100/A	24 x 1,5	16	15,5	44

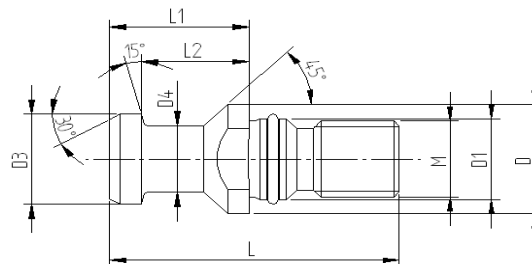

**CHIAVE PER ADDUTTORE REFRIGERANTE**  
**KEY FOR COOLANT SUPPLY UNIT**  
**CLE' POUR LE DISPOSITIF DE TRANSFERT DE LIQUIDE DE LUBRIFICATION**  
**SCHLUESSEL FUER KUEHLMITTELUEBERGABESATZ**



<b>CODICE</b>	<b>HSK</b>
950CHVAR	50
963CHVAR	63
910CHVAR	100

CODOLI

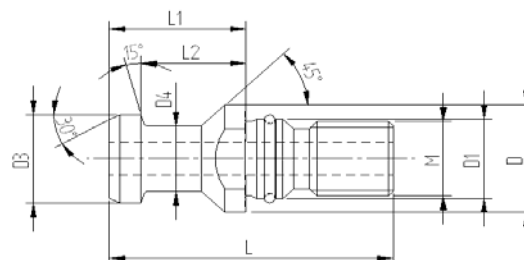
**Ohne boh rung - Not drilled - Non percée - Non forato**  
**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	ISO	M	D	D1	D3	D4	L	L1	L2
940TIR01	40	M16	23	17	19	14	54	26	20
950TIR01	50	M24	36	25	28	21	74	34	25

**Gebohrt - Drilled - Percée - Forato**

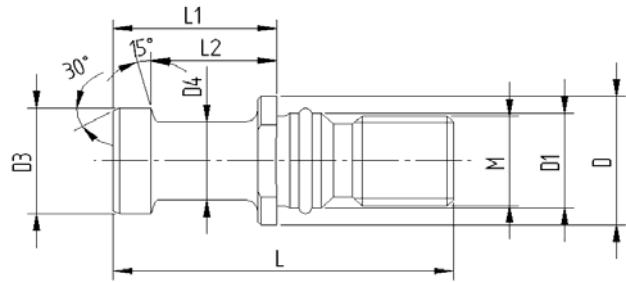
**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	ISO	M	D	D1	D3	D4	L	L1	L2	Foro
940TIR02	40	M16	23	17	19	14	54	26	20	7
950TIR02	50	M24	36	25	28	21	74	34	25	11,5

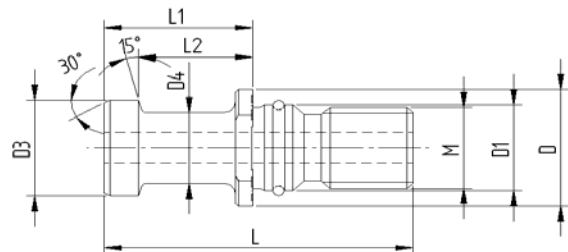
**----- N.B. Codoli disponibili anche per coni ISO 30 -----**

**Ohne bohrung - Not drilled - Non percée - Non forato**  
**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	ISO	M	D	D1	D3	D4	L	L1	L2
940TIR11	40	M16	23	17	19	14	54	26	20
950TIR11	50	M24	36	25	28	21	74	34	25

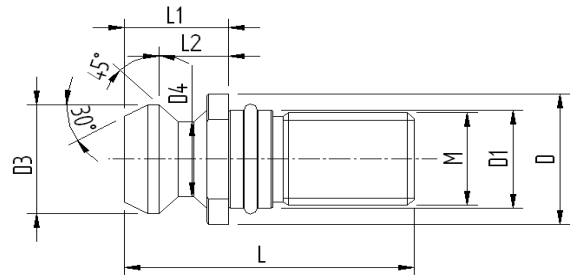
**Gebohrt - Drilled - Percée - Forato**  
**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	ISO	M	D	D1	D3	D4	L	L1	L2	Foro
940TIR12	40	M16	23	17	19	14	54	26	20	7
950TIR12	50	M24	36	25	28	21	74	34	25	11,5

**----- N.B. Codoli disponibili anche per coni ISO 30 -----**

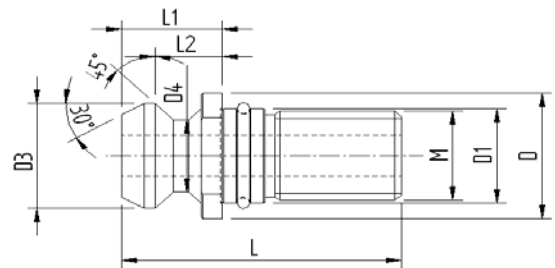
**Ohne bohrung - Not drilled - Non percée - Non forato**  
**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	ISO	M	D	D1	D3	D4	L	L1	L2
940TIR21	40	M16	22,5	17	18,9	12,9	44,5	16,4	11,1
950TIR21	50	M24	37	25	29,1	19,6	65,5	25,5	17,9

**Gebohrt - Drilled - Percée - Forato**

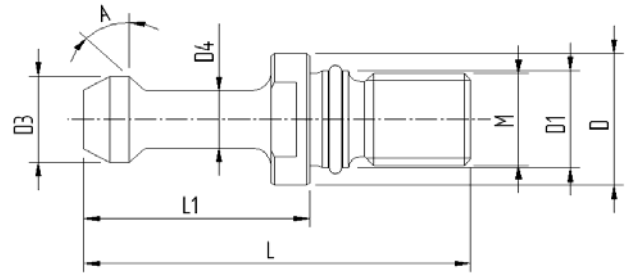
**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	ISO	M	D	D1	D3	D4	L	L1	L2	Foro
940TIR22	40	M16	22,5	17	18,9	12,9	44,5	16,4	11,1	7,3
950TIR22	50	M24	37	25	29,1	19,6	65,5	25,5	17,9	11,5

**----- N.B. Codoli disponibili anche per coni ISO 30 -----**

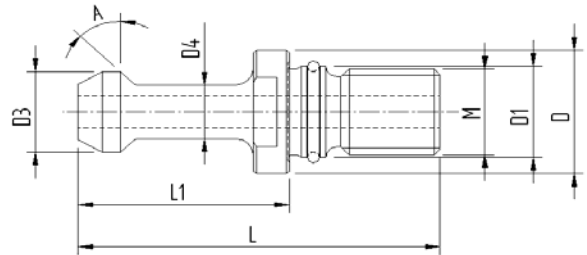
**Ohne bohrtung - Not drilled - Non percée - Non forato**  
**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	BT	A	M	L	L1	D	D1	D3	D4
940TIR51	40	30°	M16	60	35	23	17	15	10
940TIR52	40	45°	M16	60	35	23	17	15	10
940TIR50	40	90°	M16	60	35	23	17	15	10
950TIR51	50	30°	M24	85	45	38	25	23	17
950TIR52	50	45°	M24	85	45	38	25	23	17
950TIR50	50	90°	M24	85	45	38	25	23	17

**Gebohrt - Drilled - Percée - Forato**

**Mit o'ring - With o'ring - Avec joint torique - Con OR di tenuta**



Codice	BT	A	M	L	L1	D	D1	D3	D4	Foro
940TIR55	40	30°	M16	60	35	23	17	15	10	4
940TIR53	40	45°	M16	60	35	23	17	15	10	4
940TIR54	40	90°	M16	60	35	23	17	15	10	4
950TIR55	50	30°	M24	85	45	38	25	23	17	6
950TIR53	50	45°	M24	85	45	38	25	23	17	6
950TIR54	50	90°	M24	85	45	38	25	23	17	6

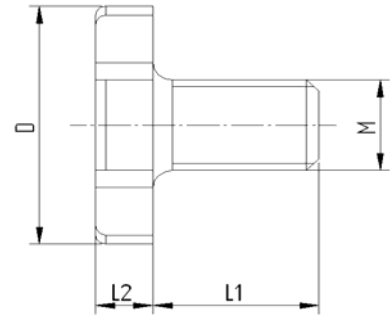
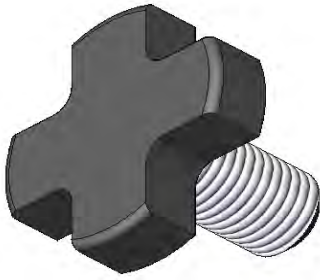
**----- N.B. Codoli disponibili anche per coni ISO 30 -----**



VITI TESTA

A

CROCE



<b>CODICE</b>	<b>M</b>	<b>D</b>	<b>L1</b>	<b>L2</b>
916VTC02	M8	20	16	6
922VTC02	M10	28	18	7
927VTC02	M12	35	22	8
932VTC02	M16	42	26	9
940VTC02	M20	52	30	10

CHIAVI



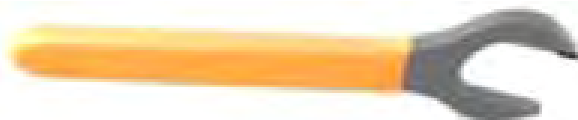
CHIAVI PER GHIERA MINI  
 WRENCHES FOR MINI NUT  
 CLES DE SERRAGE POUR ECROU MINI  
 SPANNSCHLUESSEL FUER MINI SPANNMUTTER



Codice	ER
908CHVMN	8M
911CHVMN	11M
916CHVMN	16M
920CHVMN	20M
925CHVMN	25M



CHIAVI PER GHIERE ESAGONALI  
 WRENCHES FOR EXAGONAL CLAMPING NUTS  
 CLES POUR HEXAGONAL ECROU  
 SPANNSCHLUESSEL FUER SECHSKANTMUTTER



Codice	ER
911CHVES	11
916CHVES	16
920CHVES	20



CHIAVI PER GHIERA STANDARD  
 WRENCHES FOR STANDARD NUT  
 CLES DE SERRAGE POUR ECROU STANDARD  
 SPANNSCHLUESSEL FUER STANDARD SPANNMUTTER




Codice	ER
916CHVST	16
920CHVST	20
925CHVST	25
932CHVST	32
940CHVST	40
950CHVST	50


**CHIAVI CON PRESA LATERALE**  
**WRENCHES WITH SIDE GRIP**  
**CLES AVEC PRISES LATERAL**  
**HAKENSCHLUESSEL**



Codice	EOC
916CHVOC	16
925CHVOC	25
932CHVOC	32


**CHIAVE PER VITE TESTA A CROCE**  
**WRENCHES FOR TOOLS RETAINING SCREW**  
**CLES A VIS A CROSSE**  
**SPANNSCHLUESSEL FUER FRAESERANZUGSSCHRAUBEN**



Codice	Vite	Ø
916CHVTC	16	M8
922CHVTC	22	M10
927CHVTC	27	M12
932CHVTC	32	M16
940CHVTC	40	M20

Progetto grafico,



Stampa,







Ph. Michael Carrara



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