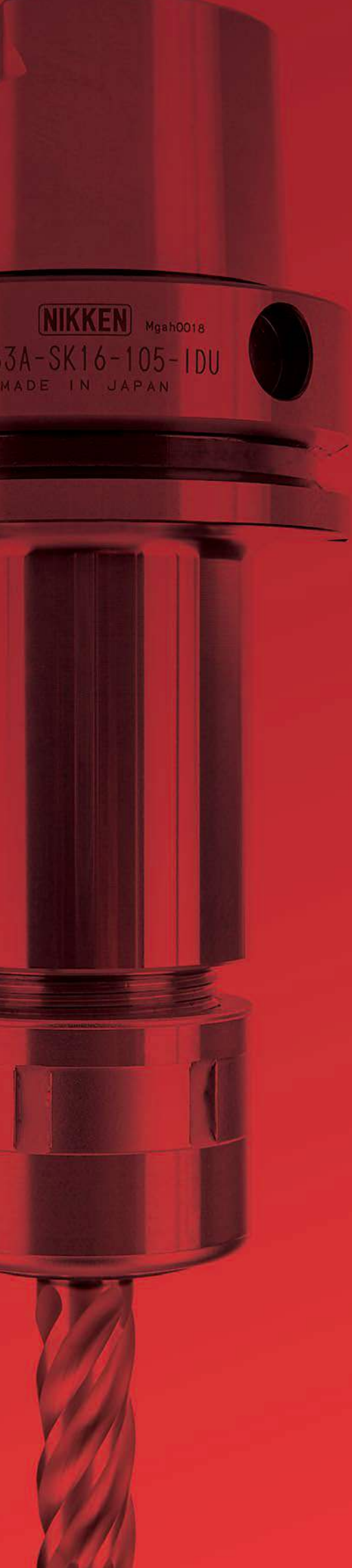




NIKKEN

Mgah0018

3A-SK16-105-IDU  
MADE IN JAPAN

# CATALOGO PORTA UTENSILI TOOL HUB



The Spirit of Innovation

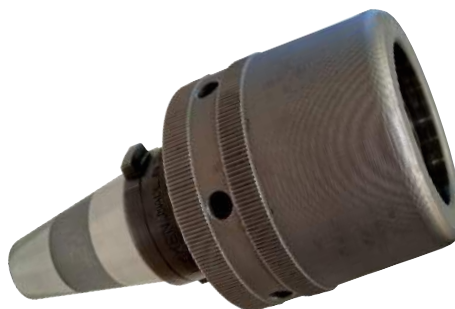


# Informazioni aziendali

NIKKEN Kosakusho Limited è stata fondata nel 1958 a Osaka, in Giappone. Oggi NIKKEN ha attività commerciali in tre continenti e uffici in oltre 70 paesi. Per NIKKEN lavorano circa 100 dipendenti in Europa e oltre 700 nel mondo, che costituiscono il cuore dell'azienda, e contribuiscono a mantenere gli standard unici di qualità e prestazioni del prodotto. La gamma di prodotti comprende più di 15000 articoli.

Le soluzioni leader nel mercato di NIKKEN comprendono:

- Portautensili di alta precisione
- Sistema di barenatura modulare
- Preset per utensili
- potenti tavole rotanti CNC
- Soluzioni per l'ottimizzazione del mandrino



L'ampia gamma di soluzioni ad alta precisione e di lunga durata viene utilizzata in ambiti produttivi esigenti nei settori aerospaziale, medicale, petrolifero del gas, automobilistico, energetico, e della costruzione di utensili e stampi.

NIKKEN Kosakusho è costantemente impegnata a migliorare le proprie tecnologie attraverso la ricerca e lo sviluppo, l'innovazione e l'esperienza industriale, per garantire che i propri clienti diventino ancora più competitivi e abbiano successo nei loro esigenti settori di mercato. NIKKEN Kosakusho Europe, vicino a nei pressi di Sheffield (Regno Unito), è una consociata di NIKKEN Kosakusho Works LTD in Giappone, con la responsabilità principale di assicurare l'importazione e la distribuzione dell'intera gamma di prodotti NIKKEN in Europa.

NIKKEN gestisce un centro di ricerca e sviluppo leader del settore, il NIKKEN Innovation Centre Europe (NiCe), situato nel cuore della produzione avanzata a Rotherham (Regno Unito).

## L'IMPEGNO DI NIKKEN PER LA SOSTENIBILITÀ

Fin dall'inizio NIKKEN si è impegnata per uno sviluppo sostenibile. L'obiettivo finale è quello di ridurre al minimo l'impatto ambientale, garantendo che ogni soluzione e prodotto NIKKEN offra la massima longevità, prestazioni e durata.



# Tipologie di interfaccia

## HSK - ISO 12164-1/DIN69893 1/10

### HSK Forma A

- Contatto cono-flangia
- Scanalature di guida sul cono



### HSK Forma E

- Design simmetrico
- Progettato per le alte velocità



## IT - ISO DIN 69871

- Molto comune in Europa
- Richiede il codolo di trascinamento
- Designazione IT, DV o SK
- NIKKEN Denominazione con doppio contatto NIT/ MIT



Scanalature  
del driver non  
uni Formai

Orientamento

## BT - JIS B 6339

- Richiede codolo di trascinamento
- Designazione BT
- NIKKEN Designazione con doppio contatto NBT/ MBT



Slot di guida  
simmetrici

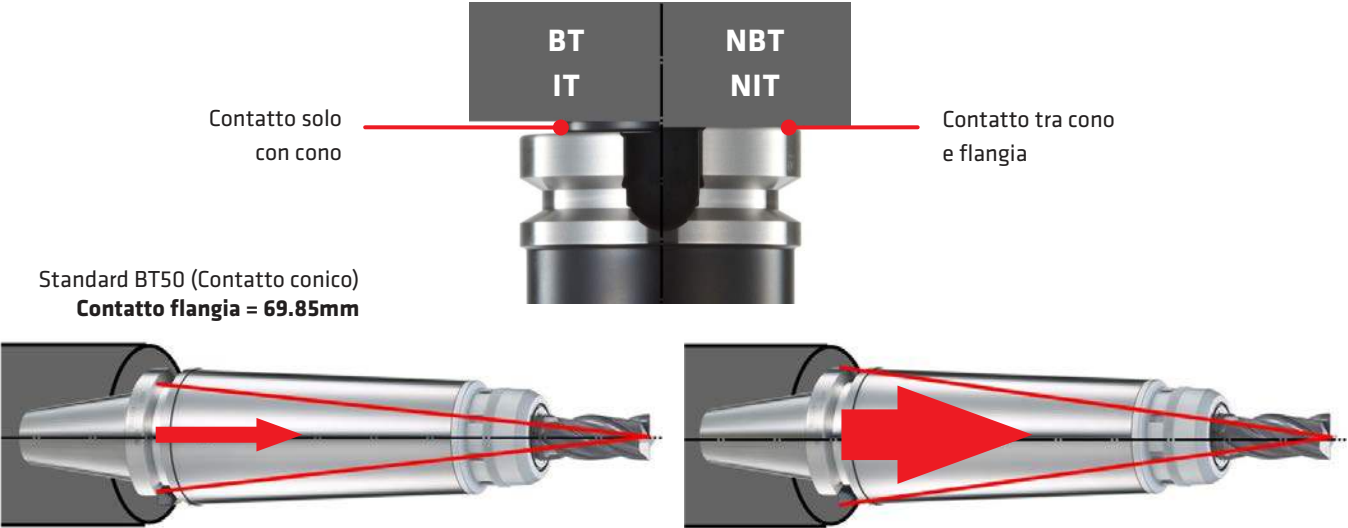
## POLIGONALE - ISO/DIS 26623

- Poligonale
- Contatto simultaneo tra flangia e cono
- Scanalatura di orientamento

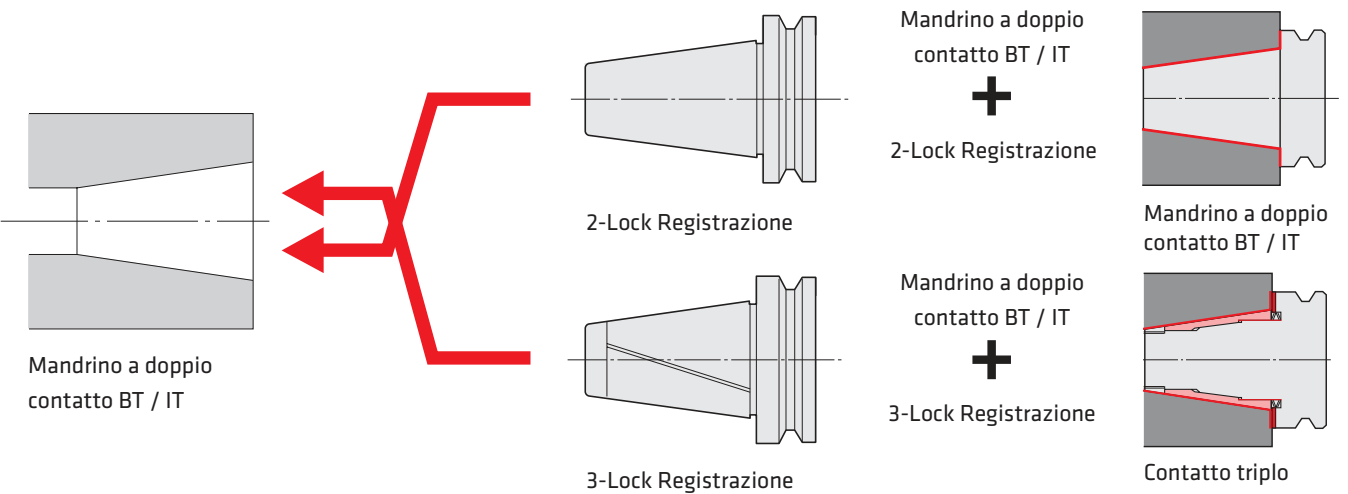


PANORAMICA DELLE INTERFACCE PIÙ COMUNI

| Diametro della flangia | HSK (DIN) | IT/SK (DIN) | IT/SK (DIN)<br>2-Lock /<br>Doppio<br>Contatto | IT/SK (DIN)<br>3-Lock | BT (JIS) | BT 2-Lock/<br>Doppio<br>Contatto | BT<br>3-Lock | Poligonale |
|------------------------|-----------|-------------|-----------------------------------------------|-----------------------|----------|----------------------------------|--------------|------------|
| 25mm                   | HSK25     | -           | -                                             | -                     | -        | -                                | -            | -          |
| 32mm                   | HSK32     | -           | -                                             | -                     | -        | -                                | -            | C3         |
| 40mm                   | HSK40     | -           | -                                             | -                     | -        | -                                | -            | C4         |
| 46mm                   | -         | -           | -                                             | -                     | BT30     | NBT30                            | -            | -          |
| 50mm                   | HSK50     | -           | -                                             | -                     | -        | -                                | -            | C5         |
| 63mm                   | HSK63     | IT40        | NIT40                                         | MIT40                 | BT40     | NBT40                            | MBT40        | C6         |
| 100mm                  | HSK100    | IT50        | NIT40                                         | MIT50                 | BT50     | NBT50                            | MBT50        | C10        |



Il termine comune nell'industria delle macchine utensili per questa opzione sul mandrino è spesso chiamato "BIG+" o "Dual Contact". I prodotti e le soluzioni NIKKEN completamente compatibili si basano sui nostri supporti per doppio contatto 2-LOCK (NBT/NIT) e 3-LOCK (MBT/MIT). I coni 2-Lock possono essere utilizzati anche nei mandrini convenzionali. I coni 3-Lock richiedono un mandrino BIG+ o Dual Contact.



# Panoramica del sistema

| Sistema   | Slim Chuck     | Slim Chuck Alta Velocita | Mini Mini Chuck | Major Dream Holder |
|-----------|----------------|--------------------------|-----------------|--------------------|
| Pinza     | SK             | SK-P                     | MMC             | MD                 |
| Accessori | Pag.<br>8 - 15 | Pag.<br>8 - 15           | Pag.<br>16 - 17 | Pag.<br>18         |

La tabella fa riferimento ai rispettivi numeri di pagina.



|                                                            | Interfaccia |         |         |         |         |
|------------------------------------------------------------|-------------|---------|---------|---------|---------|
| HSK<br>DIN 69893<br>Forma A                                | HSK40A      | 28 - 29 | 30 - 31 |         |         |
|                                                            | HSK63A      | 28 - 29 | 30 - 31 | 32 - 33 | 32 - 33 |
|                                                            | HSK100A     | 28 - 29 | 32 - 33 | 32 - 33 | 32 - 33 |
| HSK<br>DIN 69893<br>Forma E                                | HSK25E      |         | 30 - 31 |         |         |
|                                                            | HSK32E      |         | 30 - 31 |         |         |
|                                                            | HSK40E      |         | 30 - 31 |         |         |
| IT<br>Gambo cono 7/24<br>DIN 69871                         | IT40        | 40 - 41 |         | 40 - 41 |         |
|                                                            | IT50        | 40 - 41 |         | 40 - 41 |         |
|                                                            | NIT40       | 40 - 41 |         | 40 - 41 |         |
|                                                            | NIT50       | 40 - 41 |         | 40 - 41 |         |
| BT<br>JIS B6339<br>MAS 403                                 | BT30        | 48 - 49 | 50 - 51 | 52 - 53 | 52 - 53 |
|                                                            | BT40        | 48 - 49 | 50 - 51 | 52 - 53 | 52 - 53 |
|                                                            | BT50        | 48 - 49 | 50 - 51 | 52 - 53 | 52 - 53 |
|                                                            | NBT30       | 48 - 49 | 50 - 51 |         |         |
|                                                            | NBT40       | 48 - 49 | 50 - 51 |         |         |
|                                                            | NBT50       | 48 - 49 | 50 - 51 |         |         |
| Gambo poligonale Cono cavo<br>poligonale Gambo ISO 26223-1 | C4          | 62 - 63 |         |         |         |
|                                                            | C6          | 62 - 63 |         |         | 62 - 65 |
|                                                            | C8          | 62 - 63 |         |         |         |
| Gambo cilindrico<br>(estensione Multi-Lock)                | K20         |         |         | 64 - 65 |         |
|                                                            | K22         |         |         |         |         |
|                                                            | K25         |         |         |         |         |
|                                                            | K32         |         |         | 64 - 65 |         |
|                                                            | K42         |         |         |         |         |

|                          |         |
|--------------------------|---------|
| Accessori                | 66 - 69 |
| Connessioni del mandrino | 70 - 71 |
| Inserti di barenatura    | 72      |

| Multi-Lock<br>Milling Chuck                                                       | Multi-Lock Milling Chuck<br>Alta Velocita                                         | Zero Fit<br>Slim Chuck                                                            | Zero Fit<br>Multi-Lock Milling Chuck                                                | Arbors                                                                              |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| C                                                                                 | C-G                                                                               | SZF                                                                               | CZF                                                                                 | Vari                                                                                |
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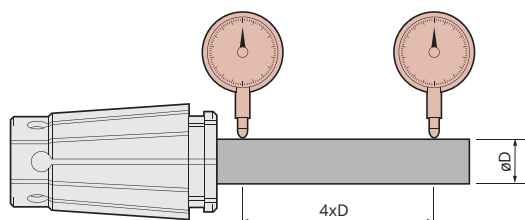
Lo Slim Chuck include l'esclusiva tecnologia del disco con cuscinetto TiN (nitruro di titanio) di NIKKEN. Ciò consente un miglior bloccaggio dell'utensile con una concentricità molto elevata.



## FEATURES

- Corpo e ghiera di serraggio sottili e compatti
- Pinza da 8° con contatto piatto nella ghiera di serraggio
- Elevato bloccaggio
- Esclusivo disco cuscinetto TiN brevettato
- Semplice compatto versatile
- Opzione jet e refrigerante interno
- Range di bloccaggio: diam. 0.7-25.4

## CONCENTRICITÀ DELLA PINZA (SK)



| Tipo di pinza | Run-out Max.  |     |
|---------------|---------------|-----|
|               | Naso mandrino | 4xD |
| Standard      | 1 µ           | 5 µ |
| P             | 1 µ           | 3 µ |
| A/AC          | 1 µ           | 3 µ |

Standard = universale

P = pinza di precisione

A = pinza di precisione per gambi in h8

AC = pinza di precisione per gambi h8 con tenuta per il lubrificante

## GHIERA CON CUSCINETTO AL TIN

Design semplice e compatto per la rotazione ad alta velocità

Ghiera con Cuscinetto al TiN

Pinza ad 8° per precisione e coppia di serraggio

Rivestimento speciale per alta efficienza





| Standard Slim Chuck / Alta Velocita Slim Chuck-P |                    |                      |
|--------------------------------------------------|--------------------|----------------------|
| Dimensione                                       | ø Diametro esterno | ø Campo di serraggio |
| SK6                                              | 19.5               | 0.7-6.0              |
| SK10                                             | 27.5               | 1.75-10.0            |
| SK16                                             | 40                 | 2.75-16.0            |
| SK20                                             | 48.5               | 3.5-20.0             |

**NIKKEN SLIM CHUCK**  
 Pressione sulla spalla piatta

Semplice e ghiera rigido

- Elevata precisione di ripetizione grazie a pressatura piatta
- Elevata forza di bloccaggio grazie al cono a 8°

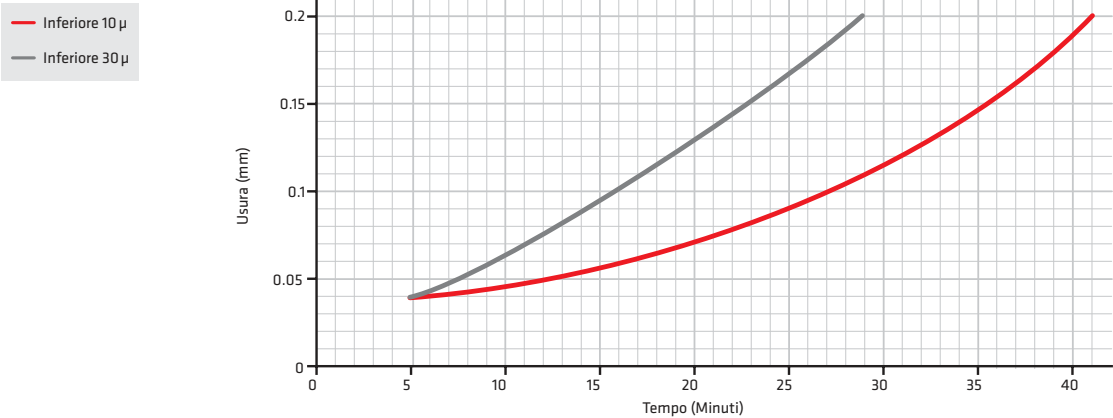
**Altro**  
 Pressione sul cono

Ghiera grossa con scanalature profonde

- Scarsa ripetibilità della concentricità a causa di pressioni e torsioni sul cono superiore
- Forza di serraggio ridotta grazie alla conicità di 12°/16°

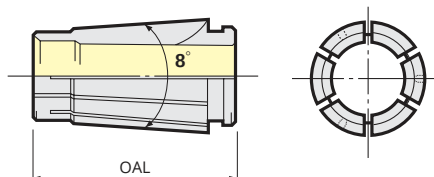
### DIAGRAMMA RAPPORTO CONCENTRICITA-DURATA UTENSILE

Il diagramma seguente mostra la dipendenza della durata utile dalla variazione di concentricità. Per renderlo chiaro Il nostro mandrino Zero Fit Slim Chuck è stato utilizzato per la fresatura di profili di titanio (Ti6Al-4V) e la concentricità è stata appositamente modificata.

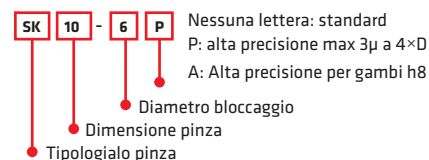


SKT-P design conico solo in combinazione con 2-Lock e 3-Lock

## PINZE SLIM CHUCK



## Codifica

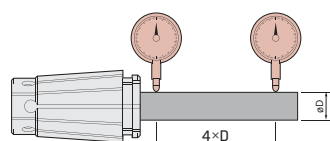


| Articolo  | Range Bloccaggio |
|-----------|------------------|
| SK6-0.8   | 0.7-0.8          |
| SK6-1     | 0.9-1.0          |
| SK6-1.25  | 1.15-1.25        |
| SK6-1.5   | 1.3-1.5          |
| SK6-1.75  | 1.55-1.75        |
| SK6-2     | 1.8-2.0          |
| SK6-2.25  | 2.05-2.25        |
| SK6-2.5   | 2.3-2.5          |
| SK6-2.75  | 2.55-2.75        |
| SK6-3     | 2.8-3.0          |
| SK6-3.5   | 3.0-3.5          |
| SK6-4     | 3.5-4.0          |
| SK6-4.5   | 4.0-4.5          |
| SK6-5     | 4.5-5.0          |
| SK6-5.5   | 5.0-5.5          |
| SK6-6     | 5.5-6.0          |
| SK10-1    | 0.9-1.0          |
| SK10-1.25 | 1.15-1.25        |
| SK10-1.5  | 1.3-1.5          |
| SK10-1.75 | 1.55-1.75        |
| SK10-2    | 1.75-2.0         |
| SK10-2.25 | 2.0-2.25         |
| SK10-2.5  | 2.25-2.5         |
| SK10-2.75 | 2.5-2.75         |
| SK10-3    | 2.75-3.0         |
| SK10-3.5  | 3.0-3.5          |
| SK10-4    | 3.5-4.0          |
| SK10-4.5  | 4.0-4.5          |
| SK10-5    | 4.5-5.0          |
| SK10-5.5  | 5.0-5.5          |
| SK10-6    | 5.5-6.0          |
| SK10-6.5  | 6.0-6.5          |
| SK10-7    | 6.5-7.0          |
| SK10-7.5  | 7.0-7.5          |
| SK10-8    | 7.5-8.0          |
| SK10-8.5  | 8.0-8.5          |
| SK10-9    | 8.5-9.0          |
| SK10-9.5  | 9.0-9.5          |
| SK10-10   | 9.5-10.0         |

| Articolo  | Range Bloccaggio |
|-----------|------------------|
| SK16-3    | 2.75-3.0         |
| SK16-3.5  | 3.0-3.5          |
| SK16-4    | 3.5-4.0          |
| SK16-4.5  | 4.0-4.5          |
| SK16-5    | 4.5-5.0          |
| SK16-5.5  | 5.0-5.5          |
| SK16-6    | 5.5-6.0          |
| SK16-6.5  | 6.0-6.5          |
| SK16-7    | 6.5-7.0          |
| SK16-7.5  | 7.0-7.5          |
| SK16-8    | 7.5-8.0          |
| SK16-8.5  | 8.0-8.5          |
| SK16-9    | 8.5-9.0          |
| SK16-9.5  | 9.0-9.5          |
| SK16-10   | 9.5-10.0         |
| SK16-10.5 | 10.0-10.5        |
| SK16-11   | 10.5-11.0        |
| SK16-11.5 | 11.0-11.5        |
| SK16-12   | 11.5-12.0        |
| SK16-12.5 | 12.0-12.5        |
| SK16-13   | 12.5-13.0        |
| SK16-13.5 | 13.0-13.5        |
| SK16-14   | 13.5-14.0        |
| SK16-14.5 | 14.0-14.5        |
| SK16-15   | 14.5-15.0        |
| SK16-15.5 | 15.0-15.5        |
| SK16-16   | 15.5-16.0        |

| Articolo  | Range Bloccaggio |
|-----------|------------------|
| SK20-4    | 3.5-4.0          |
| SK20-4.5  | 4.0-4.5          |
| SK20-5    | 4.5-5.0          |
| SK20-5.5  | 5.0-5.5          |
| SK20-6    | 5.5-6.0          |
| SK20-6.5  | 6.0-6.5          |
| SK20-7    | 6.5-7.0          |
| SK20-7.5  | 7.0-7.5          |
| SK20-8    | 7.5-8.0          |
| SK20-8.5  | 8.0-8.5          |
| SK20-9    | 8.5-9.0          |
| SK20-9.5  | 9.0-9.5          |
| SK20-10   | 9.5-10.0         |
| SK20-10.5 | 10.0-10.5        |
| SK20-11   | 10.5-11.0        |
| SK20-11.5 | 11.0-11.5        |
| SK20-12   | 11.5-12.0        |
| SK20-12.5 | 12.0-12.5        |
| SK20-13   | 12.5-13.0        |
| SK20-13.5 | 13.0-13.5        |
| SK20-14   | 13.5-14.0        |
| SK20-14.5 | 14.0-14.5        |
| SK20-15   | 14.5-15.0        |
| SK20-15.5 | 15.0-15.5        |
| SK20-16   | 15.5-16.0        |
| SK20-16.5 | 16.0-16.5        |
| SK20-17   | 16.5-17.0        |
| SK20-17.5 | 17.0-17.5        |
| SK20-18   | 17.5-18.0        |
| SK20-18.5 | 18.0-18.5        |
| SK20-19   | 18.5-19.0        |
| SK20-19.5 | 19.0-19.5        |
| SK20-20   | 19.5-20.0        |

SK6 OAL = 25  
 SK10 OAL = 30.5  
 SK16 OAL = 45  
 SK20 OAL = 54.2



| Tipo di pinza | Run-out Max.  |     |
|---------------|---------------|-----|
|               | Naso mandrino | 4×D |
| Standard      | 1 μ           | 5 μ |
| P             | 1 μ           | 3 μ |
| A/AC          | 1 μ           | 3 μ |

Standard = universale

P = pinza di precisione

A = pinza di precisione per gambi in h8 (specifiche per fresatura)

AC = pinza di precisione per gambi h8 con tenuta per il lubrificante

## Specifiche per fresatura

SK6-3A, 4A, 5A, 6A

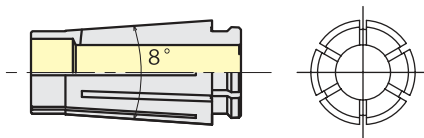
SK10-3A, 4A, 5A, 6A, 8A, 10A

SK16-3A, 4A, 5A, 6A, 8A, 10A, 12A, 14A, 16A

SK20-4A, 5A, 6A, 8A, 10A, 12A, 16A, 20A

Altre dimensioni su richiesta

PINZE DI PRECISIONE PER GAMBI H8 CON LUBRIFICAZIONE INTERNA



Codifica

SK

10

-

6

AC

Tipologia pinza

Dimensione

Max bloccaggio

Lubrificazione interna

Le pinze sk-ac vanno utilizzate con gambi in h8.  
La precisione è di max 3µ a 4×D

| Dimensione | Articolo  | Diametro Bloccaggio |
|------------|-----------|---------------------|
| SK6        | SK6-3AC   | 3.0                 |
|            | SK6-4AC   | 4.0                 |
|            | SK6-5AC   | 5.0                 |
|            | SK6-6AC   | 6.0                 |
| SK10       | SK10-3AC  | 3.0                 |
|            | SK10-4AC  | 4.0                 |
|            | SK10-5AC  | 5.0                 |
|            | SK10-6AC  | 6.0                 |
|            | SK10-7AC  | 7.0                 |
|            | SK10-8AC  | 8.0                 |
|            | SK10-9AC  | 9.0                 |
| SK16       | SK10-10AC | 10.0                |
|            | SK16-6AC  | 6.0                 |
|            | SK16-7AC  | 7.0                 |
|            | SK16-8AC  | 8.0                 |
|            | SK16-9AC  | 9.0                 |
|            | SK16-10AC | 10.0                |
|            | SK16-11AC | 11.0                |
|            | SK16-12AC | 12.0                |
|            | SK16-13AC | 13.0                |
|            | SK16-14AC | 14.0                |
| SK20       | SK16-15AC | 15.0                |
|            | SK16-16AC | 16.0                |
|            | SK20-12AC | 12.0                |
|            | SK20-16AC | 16.0                |
|            | SK20-20AC | 20.0                |

Soluzione semplice e affidabile per lbrificazione interna

Slim Chuck  
Major Dream

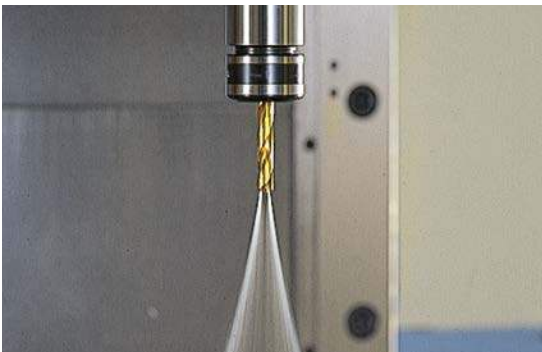
Ghiera SK standard  
Ghiera SKT-MDSK standard



Pinze SK-AC



**ATTENZIONE!**  
Il liquido refrigerante potrebbe fuoriuscire in caso di utilizzo di utensili con piani Weldon/Whistle-Notch



Disponibile box  
per pinze SK

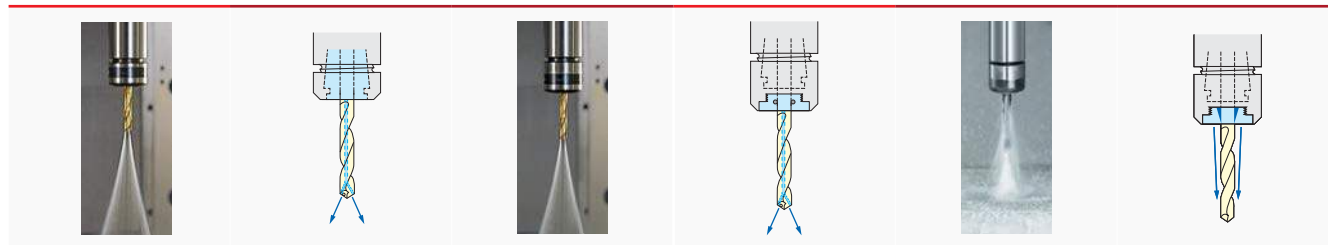


| Articolo  | Dimensione | Quantita Articoli | Dimensione                 |
|-----------|------------|-------------------|----------------------------|
| SKBX-10   | SK10       | 60                | W 300 × H 100 ×<br>D 200mm |
| SKBX-16   | SK16       | 24                |                            |
| SKBX-610  | SK6        | 26                |                            |
| SKBX-610  | SK10       | 40                |                            |
| SKBX-1316 | SK16       | 14                |                            |

## SOLUZIONE GESTIONE REFRIGERANTE SLIM CHUCK

## UTENSILI CON FORI DI LUBRIFICAZIONE

## SISTEMA LUBRIFICAZIONE JET

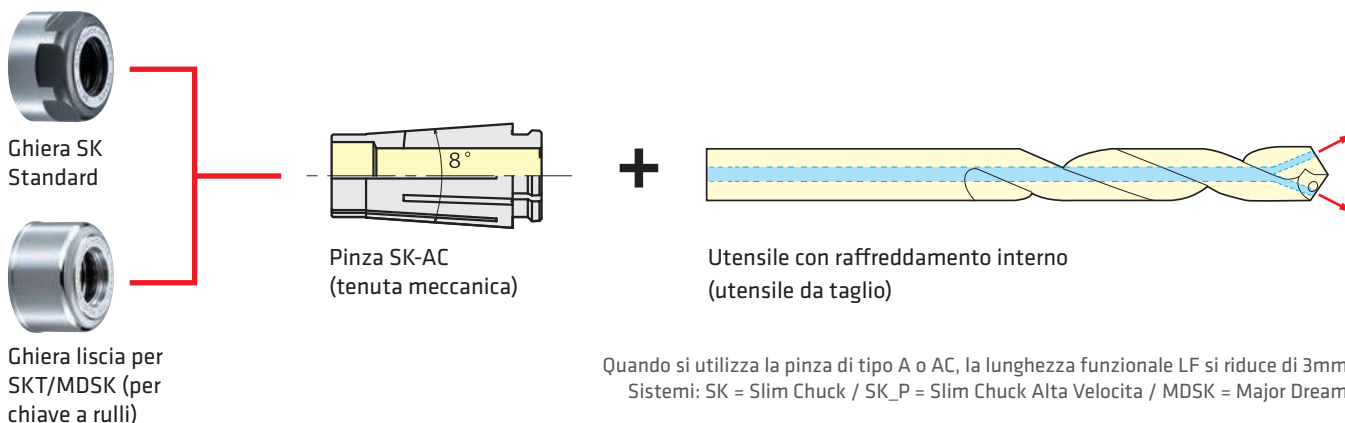


**1** Ghiera standard con pinza SK-AC

**2** Ghiera standard tipo J con cappuccio O-ring

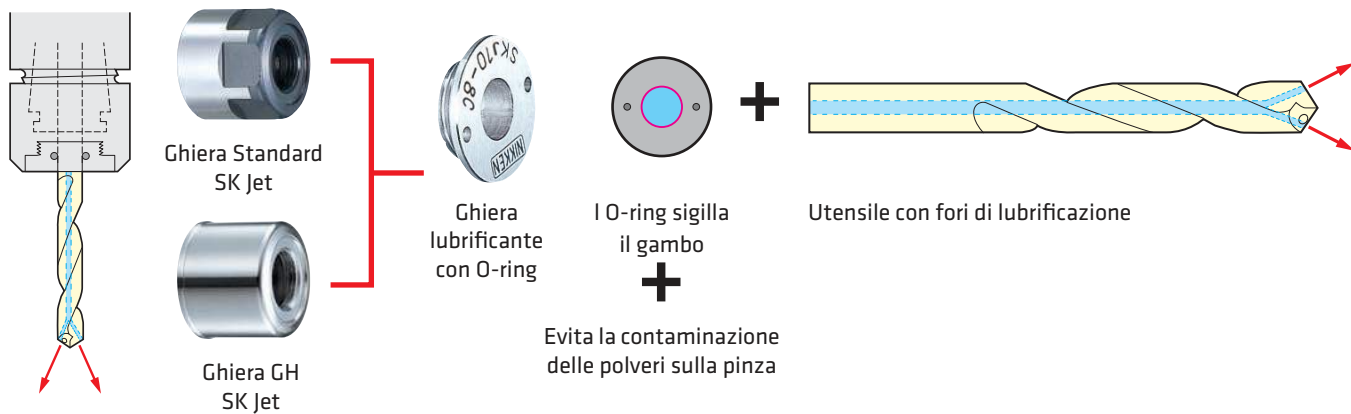
**3** Ghiera standard tipo J con ghiera lubrificante per adduzione periferica

**1** Utensile da taglio con raffreddamento interno  
GHIERA STANDARD SK E PINZA SK-AC



| Tipologia                | Ghiera standard (chiave standard) |                                                                                     | Ghiera liscia (chiave a rullini)         |                                                                                       | Pinza AC (opzionale)                                              |
|--------------------------|-----------------------------------|-------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------|
|                          | Codice ghiera std                 | Codice chiave (opzionale)                                                           | Codice ghiera liscia (chiave a rulli GH) | Chiave a rulli (opzionale)                                                            |                                                                   |
| <b>SK6<br/>SK6 (P)</b>   | SKN-6WK                           | SKL-6W                                                                              | SKN-6WK (GH)                             | GH6                                                                                   | SK6-3AC, 4AC, 5AC, 6AC                                            |
| <b>SKT6<br/>MDSK6</b>    | SKTN-6K                           |  | MDSKN-6K                                 |  |                                                                   |
| <b>SK10<br/>SK10 (P)</b> | SKN-10K                           | SKL-10                                                                              | SKN-10K (GH)                             | GH10                                                                                  | SK10-3AC, 4AC, 5AC, 6AC, 7AC, 8AC, 9AC, 10AC                      |
| <b>SKT10<br/>MDSK10</b>  | SKTN-10K                          |  | MDSKN-10K                                |  |                                                                   |
| <b>SK16<br/>SK16 (P)</b> | SKN-16B                           | 9HC16                                                                               | SKN-16B (GH)                             | GH16                                                                                  | SK16-6AC, 7AC, 8AC, 9AC, 10AC, 11AC, 12AC, 13AC, 14AC, 15AC, 16AC |
| <b>SKT16<br/>MDSK16</b>  | SKTN-16B                          |  | MDSKN-16B                                |  |                                                                   |
| <b>SK20<br/>SK20 (P)</b> | SKN-20B                           | 9HC22                                                                               | SKN-20B (GH)                             | GH20                                                                                  | SK20-12AC, 16AC, 20AC, 25AC                                       |
| <b>SKT20<br/>MDSK20</b>  | SKTN-20B                          |  | MDSKN-20B                                |  |                                                                   |

**2** Per utensili con lubrificazione interna  
**GHIERA CON SEDE PER DISCHETTO TENUTA LUBRIFICANTE CON O-RING**



La ghiera Jet è 6mm piu lunga dello standard.  
 Quando si utilizza il la pinza di tipo A o AC riduce la lunghezza funzionale LF di 3 mm.

| Tipologia                                            | Tipologia di pinza                 | Gli accessori mostrati sono opzionali                                                             |                                                                                                |                                                                                             |                                                                                       |                                                                                       |
|------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                      |                                    | Tipologia ghiera<br>SK, SK-P                                                                      | Tipologia ghiera<br>SKT, MDSK                                                                  | Chiave                                                                                      | Ghiera lubrificante<br>con O-ring                                                     | Chiave per serraggio<br>ghiera lubrificante                                           |
| SK6, SK6 (P)<br>(Alta Velocita)<br>MDSK6<br>SKT6     | SK6-□.□<br>SK6-□.□P<br>SK6-□.□A    |  SKN-6WKJ      |  SKTN-6KJ   |  SKL-6W |  |  |
|                                                      |                                    |  SKN-6WKJ (GH) |  MDSKN-6KJ  |  GH6    |                                                                                       |                                                                                       |
| SK10, SK10 (P)<br>(Alta Velocita)<br>MDSK10<br>SKT10 | SK10-□.□<br>SK10-□.□P<br>SK10-□.□A |  SKN-10KJ      |  SKTN-10KJ  |  SKL-10 |  |  |
|                                                      |                                    |  SKN-10KJ (GH) |  MDSKN-10KJ |  GH10   |                                                                                       |                                                                                       |
| SK16, SK16 (P)<br>(Alta Velocita)<br>MDSK16<br>SKT16 | SK16-□.□<br>SK16-□.□P<br>SK16-□.□A |  SKN-16BJ      |  MDSKN-16BJ |  9HC16  |  |  |
|                                                      |                                    |  SKN-16BJ (GH) |  MDSKN-16BJ |  GH16   |                                                                                       |                                                                                       |
| SK20, SK20 (P)<br>(Alta Velocita)<br>MDSK20<br>SKT20 | SK20-□.□<br>SK20-□.□P<br>SK20-□.□A |  SKN-20BJ      |  SKTN-20BJ  |  9HC22  |  |  |
|                                                      |                                    |  SKN-20BJ (GH) |  MDSKN-20BJ |  GH20   |                                                                                       |                                                                                       |



## 3 Utensili da taglio senza fori di lubrificazione interna GHIERA CON CAPPUCCIO CON LUBRIFICAZIONE PERIFERICA TIPO JET



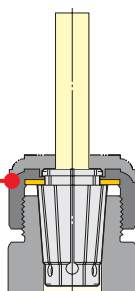
La ghiera Jet è 6mm più lunga dello standard.  
Quando si utilizza la pinza di tipo A o AC riduce la lunghezza funzionale LF di 3mm.

| Tipologia                                                                        | Tipologia di pinza                 | Gli accessori mostrati sono opzionali                                                             |                                                                                                |                                                                                             |                                                                                       |                                                                                       |
|----------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                  |                                    | Tipologia di ghiera<br>SK, SK-P                                                                   | Tipologia di ghiera<br>SKT, MDSK                                                               | Chiave                                                                                      | Ghiera jet                                                                            | Chiave per ghiera<br>lubrificante jet                                                 |
| <b>SK6, SK6 (P)</b><br><b>(Alta Velocità)</b><br><b>MDSK6</b><br><b>SKT6</b>     | SK6-□.□<br>SK6-□.□P<br>SK6-□.□A    |  SKN-6WKJ      |  SKTN-6KJ   |  SKL-6W |  |  |
|                                                                                  |                                    |  SKN-6WKJ (GH) |  MDSKN-6KJ  |  GH6    | SKJ 6-3, 3.3,<br>4, 4.2, 5, 6                                                         | SKJL-6                                                                                |
| <b>SK10, SK10 (P)</b><br><b>(Alta Velocità)</b><br><b>MDSK10</b><br><b>SKT10</b> | SK10-□.□<br>SK10-□.□P<br>SK10-□.□A |  SKN-10KJ      |  SKTN-10KJ  |  SKL-10 |  |  |
|                                                                                  |                                    |  SKN-10KJ (GH) |  MDSKN-10KJ |  GH10   | SKJ10-3, 4, 5, 5.5, 6,<br>6.2, 6.8, 7, 8,<br>8.5, 10                                  | SKJL-10                                                                               |
| <b>SK16, SK16 (P)</b><br><b>(Alta Velocità)</b><br><b>MDSK16</b><br><b>SKT16</b> | SK16-□.□<br>SK16-□.□P<br>SK16-□.□A |  SKN-16BJ      |  MDSKN-16BJ |  9HC16  |  |  |
|                                                                                  |                                    |  SKN-16BJ (GH) |  MDSKN-16BJ |  GH16   | SKJ16-7, 8, 8.5, 10,<br>10.3, 12, 12.5,<br>14, 15, 16                                 | SKJL-16                                                                               |
| <b>SK20, SK20 (P)</b><br><b>(Alta Velocità)</b><br><b>MDSK20</b><br><b>SKT20</b> | SK20-□.□<br>SK20-□.□P<br>SK20-□.□A |  SKN-20BJ      |  SKTN-20BJ  |  9HC22  |  |  |
|                                                                                  |                                    |  SKN-20BJ (GH) |  MDSKN-20BJ |  GH20   | SKJ25-8, 10, 12, 16,<br>17.5, 20                                                      | SKJL-25                                                                               |

### NIKKEN SLIM CHUCK

Contatto/ghiera pinza piatto

Ghiera compatta e rigida

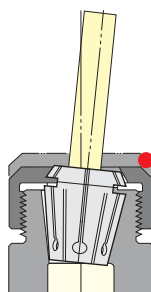


- Elevata ripetibilità grazie al contatto piatto
- Elevata forza di bloccaggio grazie alla pinza 8°

### Concorrente

Contatto sul cono

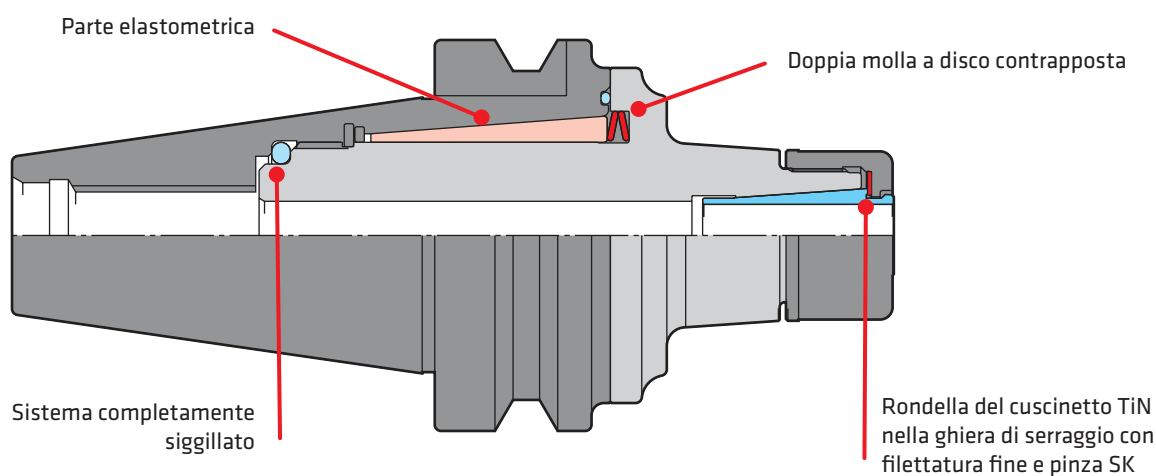
Ghiera non compatta con scanalature profonde



- Scarsa ripetibilità causa della rotazione/pressione sul cono della ghiera
- Scarsa forza di serraggio causa doppio angolo 12°/16°

| Nikken |      | ER   |      |
|--------|------|------|------|
| SK6    | 25   | ER11 | 18   |
| SK10   | 30.5 | ER16 | 27.5 |
| SK16   | 45   |      | 34   |
| SK20   | 54.2 |      | 40   |

## SISTEMA SMORZANTE INTERNO



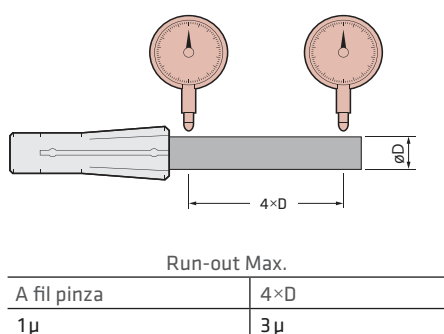
Il nuovo mandrino NIKKEN Mini Mini Advanced Alpha è il prodotto più efficace per lavorare con i piccoli diametri e per applicazioni con spazio limitato o contorni con interferenza problematica.



## CARATTERISTICHE

- Design compatto senza ghiera di serraggio
- Meccanismo interno migliorato
- Bloccaggio e sbloccaggio con unica chiave
- Pinza 8° con guida
- Nuova versione AT con bloccaggio tramite tirante centrale
- Pinze a tenuta e jet disponibili
- Range da 1-12mm

## TIPOLOGIE DI PINZE (PMK, VMK)



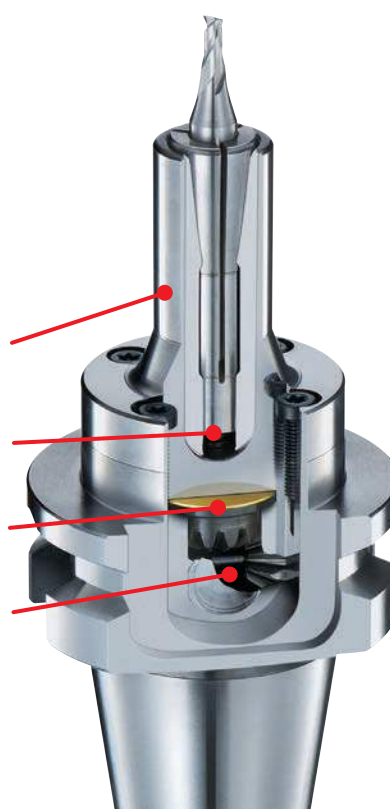
## ULTIMA GENERAZIONE BLOCCAGGIO ALPHA

Miglioramento dei materiali e trattamento termico

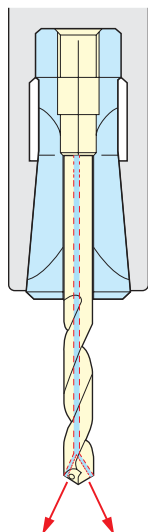
Guida migliorata e costruita in un unico pezzo

Ingranaggio di blocca/sblocca con rondella TiN

Ingranaggio con rondella TiN

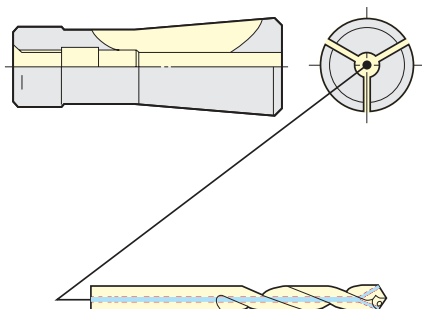


**Per utensili da taglio con raffreddamento interno**



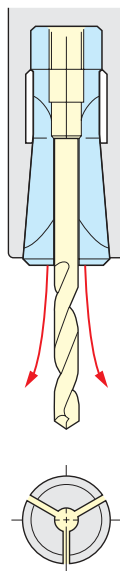
La versione VMK è sigillata quindi è progettato per utensili da taglio con raffreddamento interno

Pinza VMK



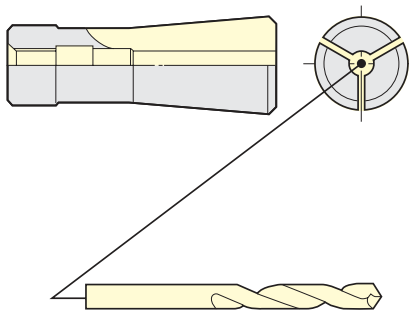
Utensile da taglio con raffreddamento interno

**Per utensili da taglio senza raffreddamento interno (punte/frese)**

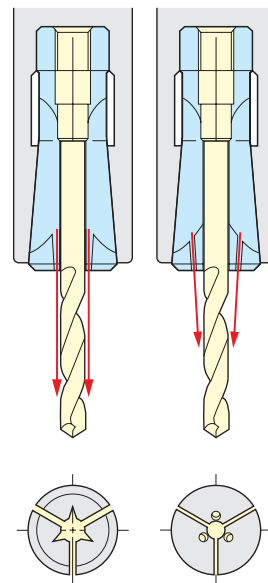


PMK sono Pinze standard

Pinza PMK (MMC8,12)

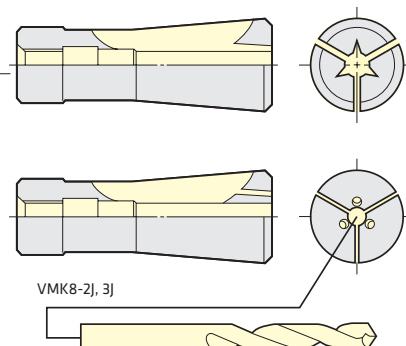


Utensili da taglio senza raffreddamento interno



Le pinze VMK-J hanno Canali jet o fori jet per uno efficace raffreddamento periferico per utensili non forati

Pinza VMK-J



Utensile da taglio senza raffreddamento interno

**PINZE MINI MINI**

**Pinze Mini Mini**

| Versioni | Dimensioni           |
|----------|----------------------|
| PMK8-□   | 2/3/4/5/6/7/8        |
| PMK12-□  | 4/5/6/8/10/12        |
| VMK8-□   | 2/3/4/5/6/7/8        |
| VMK8-□   | 2J/3J/4J/5J/6J/7J/8J |

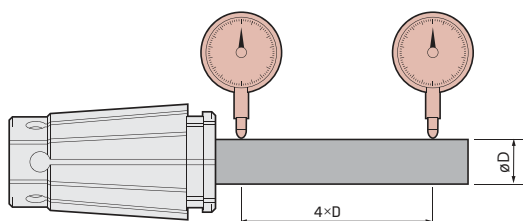
Il sistema NIKKEN Major Dream è la soluzione ottimale per la fresatura con smorzamento delle vibrazioni. Attraverso L'uso del rivoluzionario sistema di micro-smorzamento rende il sistema ideale per HSC e adatto per fresatura HPC.



## CARATTERISTICHE

- Concentricita' garantita di  $3\mu$  a  $4 \times D$
- Esclusivo disco cuscinetto TiN brevettato
- La costruzione interna unica fornisce Smorzamento e antivibrazione "integrati".
- Pinze  $8^\circ$
- Opzioni ad alta velocità fino a 30.000 giri disponibili su G2.5
- Pinze a tenuta e jet disponibili
- Range: da  $\varnothing 3$  - 25,4mm

## RUN OUT DELLE PINZA (SK)



| Tipo di pinza | Run-out Max.  |              |
|---------------|---------------|--------------|
|               | Naso mandrino | $4 \times D$ |
| A/AC          | $1\mu$        | $3\mu$       |

## MAJOR DREAM SISTEMA

- Alta stabilità di precisione
- Ghiera liscia alta velocità
- Rondella cuscinetto TiN (HV2.200)
- Pinza  $8^\circ$  con maggiore rigidità per una precisione migliore e più elevata forza di bloccaggio
- Filetto rivestito per miglior scorrevolezza



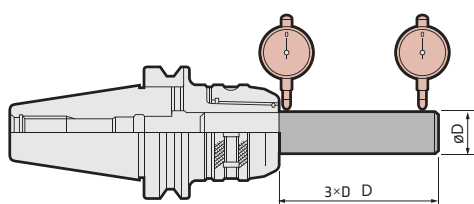
Multi-Lock è senza dubbio una soluzione di fresatura efficiente e variabile per soddisfare le esigenze di molti nelle varie applicazioni. Il mandrino autocentrante può essere utilizzato come eccezionale supporto base la nostra vasta selezione di bussole di riduzione, ma anche per applicazioni con un'ampia varietà. I diametri degli utensili possono essere utilizzati senza alcuna perdita di forza di serraggio.



## CARATTERISTICHE

- Elevata precisione e stabilità
- Altissima forza di serraggio
- Bloccaggio sull'intera parte del gambo utensile
- Nessun gioco assiale
- Perfetto per qualsiasi applicazione
- Pinze a tenuta e jet disponibili
- Range  $\varnothing 2-42\text{mm}$

## RUN OUT DEL CORPO



| Run-out Max. |              |
|--------------|--------------|
| A filo pinza | $3 \times D$ |
| 1 $\mu$      | 5 $\mu$      |

## MULTI-LOCK MILLING CHUCK

Scanalature profondita variabile per maggiore forza di serraggio

Sistema di rullini brevettati

Piano corpo rettificato per un contatto piatto di precisione

Innovativo trattamento termico brevettato per un'ottima durata e precisione nel tempo





MULTI-LOCK (VERSIONE ALTA VELOCITA')

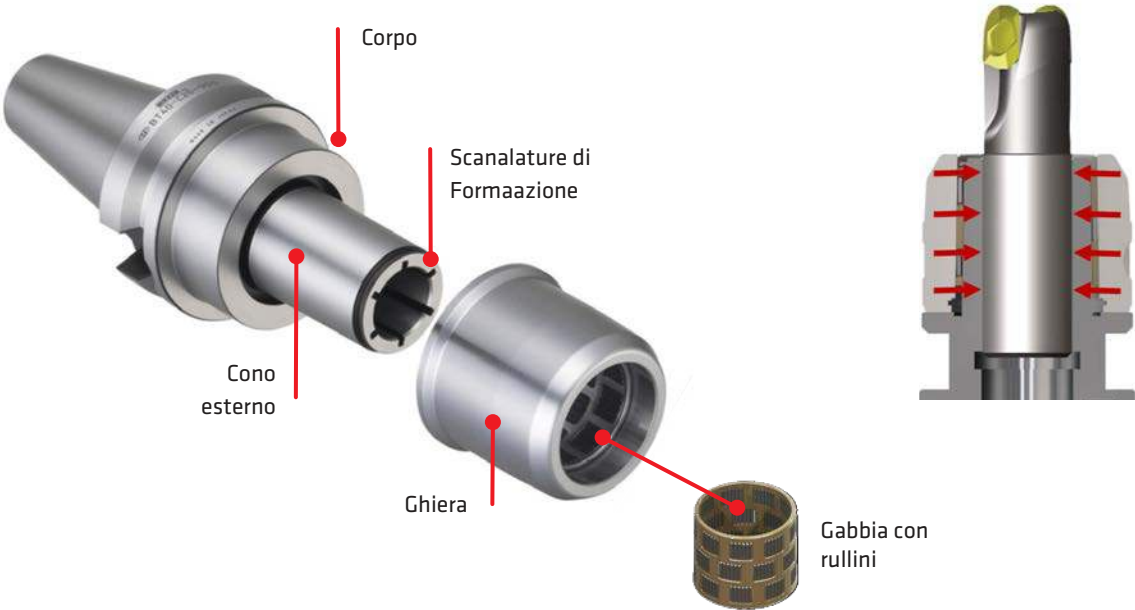
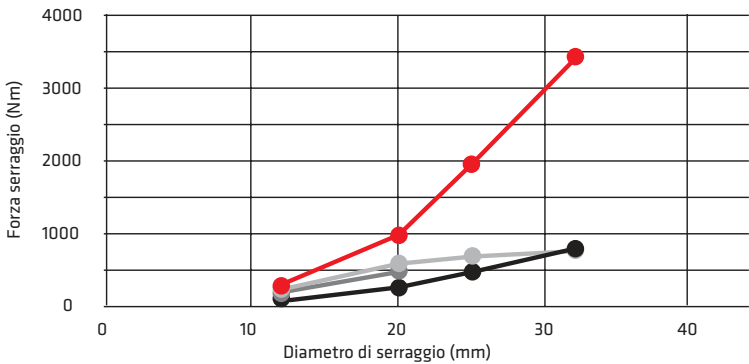


GRAFICO FORZA DI SERRAGGIO

- NIKKEN Multi-Lock
- Porta utensile idraulico
- Porta utensile a calettamento a caldo
- Forte serraggio concorrente



| Standard Multi-Lock |                    |                      |
|---------------------|--------------------|----------------------|
| Dimensione          | Ø Diametro esterno | Ø Range di serraggio |
| C20                 | 52                 | 2.0-20.0             |
| C25                 | 55/60              | 3.0-25.0             |
| C32                 | 64/69              | 3.0-32.0             |
| C42                 | 86                 | 3.0-42.0             |

| Alta Velocita Multi-Lock |                    |                      |
|--------------------------|--------------------|----------------------|
| Dimensione               | Ø Diametro esterno | Ø Range di serraggio |
| C20G                     | 48                 | 2.0-20.0             |
| C25G                     | 55                 | 3.0-25.0             |
| C32G                     | 68                 | 3.0-32.0             |

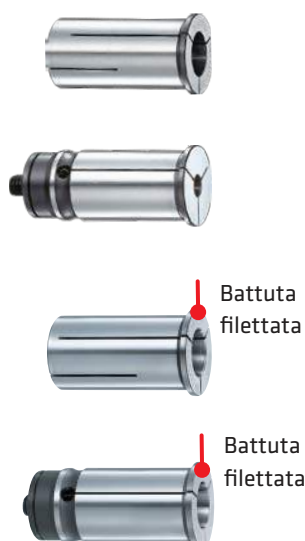


| Multi-Lock | Codice chiave serraggio |
|------------|-------------------------|
| C20        | 9HC22                   |
| C25 ø55    | 9HC22                   |
| C25 ø60    | 9HC25                   |
| C32 ø64    | 9HC25                   |
| C32 ø69    | 9HC32                   |
| C42        | 9HC42                   |



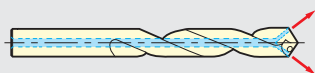
| Alta Velocita Multi-Lock | Codice chiave serraggio a rulli |
|--------------------------|---------------------------------|
| C20-G                    | GH20                            |
| C25-G                    | GH25                            |
| C32-G ø62                | GH32S                           |
| C32-G ø68                | GH32                            |

Il Multi-Lock è più efficace se l'utensile viene bloccato direttamente. Tuttavia, una serie di bussole di riduzione consentono la flessibilità di utilizzo mantenendo ottima precisione e forza di bloccaggio.



| Tipologia | Caratteristiche                                                                                                                                                 |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KM        | Bussola di riduzione standard (es.: KM20-12)                                                                                                                    |
| NK        | Bussole di riduzione con regolazione della lunghezza (es.: NK20-12)                                                                                             |
| CCK       | Bussole di riduzione con filettatura per gestione lubrificante utilizzabile anche senza tappo di copertura (es.: CCK20-10 con coperchio CKFN20-12 o CKFN20-12C) |
| CCNK      | Bussola di riduzione con filettatura per gestione lubrificante - utilizzabile con regolazione battuta (es.: CCK20-10 con coperchio CKFN20-12 oppure CKFN20-12C) |

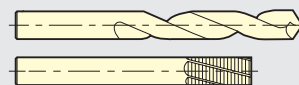
Utensile da taglio con raffreddamento interno (punta, fresca)



Bloccaggio diretto \*

Con bussola di riduzione

Lubrificazione Jet



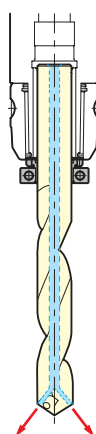
Bloccaggio diretto \*

Con bussola di riduzione

Anello di copertura con O-ring per bloccaggio diretto sul gambo utensile



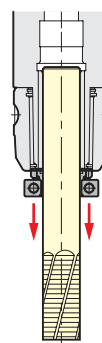
CKFN-DC



Anello di copertura con getto per bloccaggio diretto sul gambo utensile



CKFN-D (con uscita jet)



Bussole con O-ring



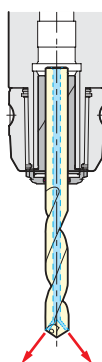
Bussola CCNK



Bussola CCK



CKFN-C



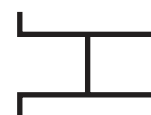
Tipologie di bussola con possibilità gestione lubrificante



Bussola CCNK



Bussola CCK



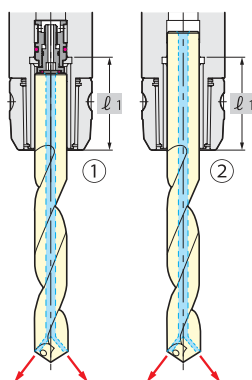
CKFN-MN (Con ugelli di raffreddamento)



CKFN (con Canali V)

Multi-Lock Standard  
BT□□-C□□  
BT□□-C□□

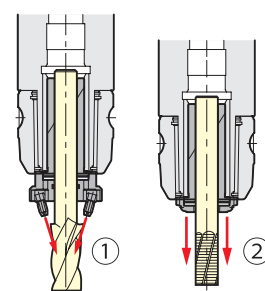
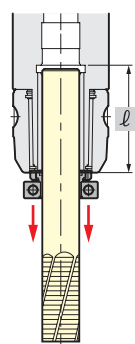
- ① Se l'utensile da taglio è più corto di L1, consigliato un tappo
- ② Se l'utensile da taglio è più lungo di L1, non sono richiesti accessori.



Anello di copertura per diretto bloccaggio con raffreddamento a getto - se la lunghezza di serraggio dall'utensile da taglio è più corto di L1.



CKFN-D (con canali jet)



- ① Il diametro degli ugelli è maggiore del diametro del foro
- ② Piastra di copertura con canali di getto

Blocco multiplo nel Versione C: ad es. B  
IT□□-C□□C  
BT□□-C□□C  
MBT□□-C□□C  
NBT□□-C□□C  
HSK□□-C□□C

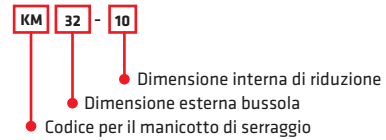
\* Bloccaggio diretto: quando un Multi Lock C32 viene bloccato in un utensile da taglio con D32.

\* Per il raffreddamento ad alta pressione si consiglia una vite di regolazione sigillata.

## KM PINZA



L'immagine mostra: manicotto adattatore KM tipo Anniversario



| Dimensione | OAL  | Bussole KM - dimensione                                                                |
|------------|------|----------------------------------------------------------------------------------------|
| KM20       | 53   | KM20-2, 3, 4, 5, 6, 8, 10, <b>12</b> , 16                                              |
| KM25       | 59   | KM25-3, 4, 5, 6, 8, 10, <b>12</b> , <b>16</b> , <b>20</b> , 22                         |
| KM32       | 64.5 | KM32-3, 4, 5, 6, 8, 10, <b>12</b> , <b>16</b> , <b>20</b> , <b>22</b> , <b>25</b> , 30 |

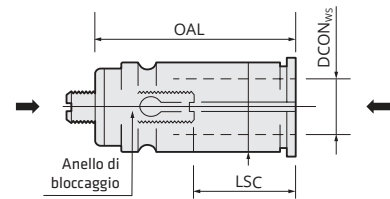
Il numero in rosso significa con scanalature nel foro, versione Anniversary, Q alla fine della designazione, scanalature ottimizzate

- Sono disponibili altre dimensioni in pollici
- Si consiglia una tolleranza del gambo da h6 a h7
- ( ) Misurazione OAL per KM42-12 e dimensioni
- L utensile di estrazione è disponibile opzionalmente (9CKR)

## BUSSOLE NK



La regolazione della lunghezza avviene dalla parte anteriore ed è possibile anche da dietro



Regolazione possibile da entrambi i lati

| Dimensione | OAL | LSC   | Bussole KM - dimensione                                                                              |
|------------|-----|-------|------------------------------------------------------------------------------------------------------|
| NK20       | 63  | 20-40 | NK20-3, 4, 5, 6, 7, 8, 9, 10, 11, <b>12</b> , 13, 14, 15, 16                                         |
| NK25       | 68  | 30-55 | NK25-3, 4, 5, 6, 7, 8, 9, 10, 11, <b>12</b> , 13, 14, 15, <b>16</b> , 17, 18, 19, <b>20</b> , 21, 22 |
| NK32       | 75  | 30-60 | NK32-3, 4, 5, 6, 8, 10, <b>12</b> , <b>16</b> , <b>20</b> , 22, <b>25</b>                            |

Il numero in rosso significa con scanalature nel foro, versione Anniversary, Q alla fine della designazione, scanalature ottimizzate

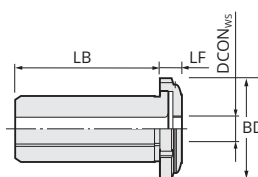
- Sono disponibili altre dimensioni in pollici
- Si consiglia gambni in h6 h7
- ( ) Misura OAL per KM42-12
- L utensile di estrazione bussole è disponibile opzionalmente (9CKR)



## BUSSOLE KM



L'immagine mostra: manicotto adattatore KM tipo Anniversario



CCK 32 - 10

- Dimensione interna di riduzione
- Dimensione esterna bussola
- Tipo Bussola

| Dimensione | Diam. | BD       | LB   | LF  | Bussole CCNK - Dimensioni                                     | Ghiere gestione lubrificante |
|------------|-------|----------|------|-----|---------------------------------------------------------------|------------------------------|
| CCK20      | 20    | 33       | 50.5 | 8   | CCK20-6, 8, 10, <b>12</b> , 16                                | CKFN20                       |
| CCK25      | 25    | 39       | 56   | 8.5 | CCK25-6, 8, 10, <b>12</b> , <b>16</b> , <b>20</b>             | CKFN25                       |
| CCK32      | 32    | 46.5, 43 | 61.5 | 9   | CCK32-6, 8, 10, <b>12</b> , <b>16</b> , <b>20</b> , <b>25</b> | CKFN32, CKFN32T              |

Il numero in rosso significa con scanalature nel foro, versione Anniversary, Q alla fine della designazione, scanalature ottimizzate

- Si consiglia gambi utensile h6 h7
- Sono disponibili altre dimensioni in pollici
- I tappi di copertura e la chiave di serraggio sono opzionale
- La chiave di estrazione bussola è opzionale (9CKR)
- Utilizzabile anche come bussola adattatore standard senza cappuccio di copertura

## BUSSOLE CCNK



Esempio foto bussola con cappuccio

CCNK 32 - 10

- Dimensione interna
- Dimensione esterna bussola
- Tipo bussola

| Dimensione | Bussole CCNK - dimensioni                                      | Ghiere gestione lubrificante |
|------------|----------------------------------------------------------------|------------------------------|
| CCNK20     | CCNK20-6, 8, 10, <b>12</b> , <b>16</b>                         | CKFN20                       |
| CCNK25     | CCNK25-6, 8, 10, <b>12</b> , <b>16</b> , <b>20</b>             | CKFN25                       |
| CCNK32     | CCNK32-6, 8, 10, <b>12</b> , <b>16</b> , <b>20</b> , <b>25</b> | CKFN32, CKFN32T              |

Il numero in rosso significa con scanalature nel foro, versione Anniversary, Q alla fine della designazione, scanalature ottimizzate

- Consigliato gambo utensile in h6-h7
- Sono disponibili altre dimensioni in pollici
- I tappi di copertura e la chiave sono opzionali
- La chiave di estrazione Bussola è opzionale (9CKR)
- La lunghezza può essere regolata sia davanti che dietro
- Utilizzabile anche come Bussola adattatore standard senza cappuccio di copertura

## GHIERE GESTIONE LUBRIFICANTE



Ghiere lub. (CKFN)

CKFN 32 - 10 C

- Senza simbolo = Raffreddamento a getto
- C = con O-ring
- Diametro interno
- Diametro esterno
- Tipologia ghiera

| Dimensione | BD   | LF  | Ghiere gestione lubrificante     | Chiave |
|------------|------|-----|----------------------------------|--------|
| CKFN20     | 33   | 8   | CKFN20-6, 8, 10, 12, 16          | CCKL20 |
| CKFN25     | 39   | 8.5 | CKFN25-6, 8, 10, 12, 16, 20      | CCKL25 |
| CKFN32     | 46.5 | 9   | CKFN32-6, 8, 10, 12, 16, 20, 25  | CCKL32 |
| CKFN32T    | 43   | 9   | CKFN32T-6, 8, 10, 12, 16, 20, 25 | CCKL25 |

- Sono disponibili due dimensioni per C32: Diametro esterno 69mm = CKFN32 per diametro esterno 64mm = CKFN32T
- Altre dimensioni in pollici sono disponibili



Coperchio per serraggio diretto: D, DC (CKFN-D,DC)

CKFN 32 - 32 D

- D = con canali a getto
- DC = con O-ring
- Diametro interno
- Diametro esterno
- Tipologia ghiera
- Codice cover cap

| Dimensione | Tappo di copertura per il serraggio diretto | Chiave |
|------------|---------------------------------------------|--------|
| CKFN20     | CKFN20-20D, 20DC                            | CCKL20 |
| CKFN25     | CKFN25-25D, 25DC                            | CCKL25 |
| CKFN32     | CKFN32-32D, 32DC                            | CCKL32 |
| CKFN32T    | CKFN32T-32D, 32DC                           | CCKL25 |

- Sono disponibili due dimensioni per C32: Diametro esterno 69mm = CKFN32 per diametro esterno 64mm = CKFN32T

Se una macchina rimane in funzione per 2-3 anni, la concentricità del mandrino potrebbe deteriorarsi. Il sistema NIKKEN Zero Fit consente che questo errore del mandrino sia sempre nell'ordine di pochi micron.

Una tipica oscillazione del mandrino è di circa 21 µm, se questo valore può essere ridotto a 3 µm può, la durata dell'utensile aumenta di circa 5 volte.



## CARATTERISTICHE

- 2 varianti: Slim Chuck (SZF) e Multi-Lock (CZF)
- Facile regolazione tramite camma e sistema di sicurezza
- Disponibile con una camma o come nuovo sistema a camme multiple
- Facile regolazione per utensili lunghi
- Disponibile con tenuta lubrificante o Jet
- Campo di serraggio SZF:  $\varnothing 0,7-25,4\text{mm}$
- Campo di serraggio CZF:  $\varnothing 2-42\text{mm}$

## CAMMA MULTIPLA - SISTEMA DI REGOLAZIONE

- Doppia chiusura a vite
- Ghiera di regolazione bilanciata
- Regolazione fine della camma
- Camma principale





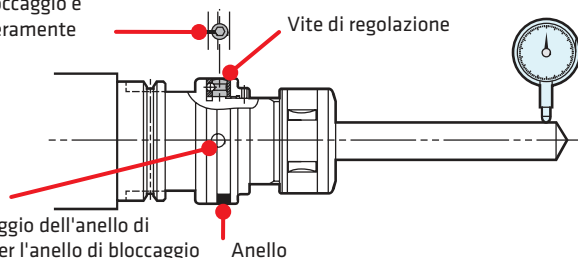


Campo di regolazione con lunghezza di serraggio di 100mm.  
A 200mm la portata è doppia.

|       |         |
|-------|---------|
| SZF6  | 0.050mm |
| SZF10 | 0.050mm |
| SZF16 | 0.040mm |
| SZF25 | 0.025mm |
| CZF20 | 0.050mm |
| CZF25 | 0.050mm |
| CZF32 | 0.030mm |

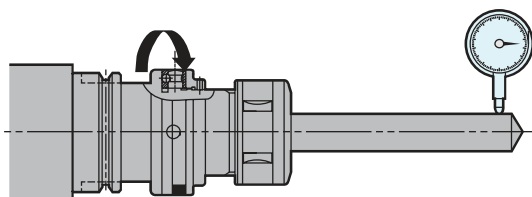
L'anello di bloccaggio è  
allentato, liberamente  
ruotabile

1



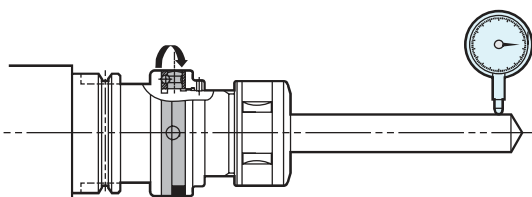
Allentare le viti sull'anello di regolazione finché l'anello di bloccaggio può ruotare liberamente.

2



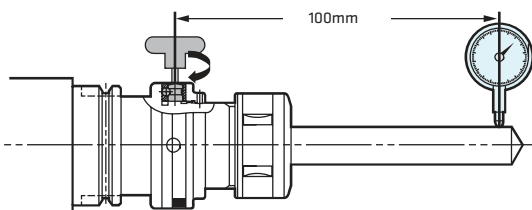
Utilizzare il comparatore e trovare l'errore di concentricità più alto. Mantieni questa posizione.

3



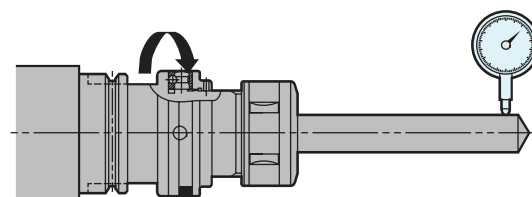
Ruotare l'anello di regolazione nella stessa posizione.

4



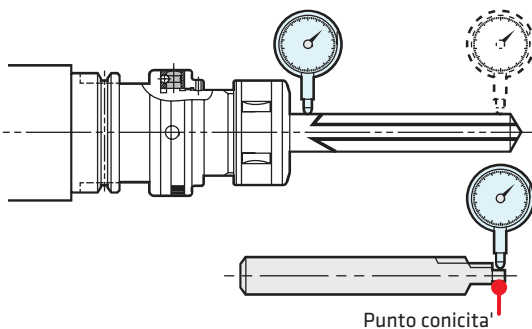
Utilizzando la vite eccentrica sull'anello di regolazione, regolare l'errore di concentricità al centro dal più piccolo al più piccolo impostare l'errore di concentricità più alto.

5



Controllare la concentricità, altrimenti ripetere dal punto 2. Non appena viene raggiunta la concentricità desiderata.

6



Se non è possibile regolare il comparatore sui taglienti, si può in alternativa misurare sulla parte cilindrica dell'utensile da taglio. Consigliato per utensili speciali macinazione di un ausilio di regolazione (cono).

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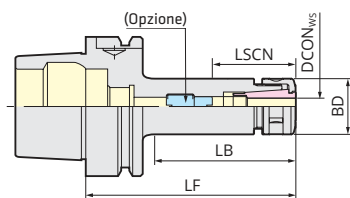
SLIM CHUCK – HSK FORMA A

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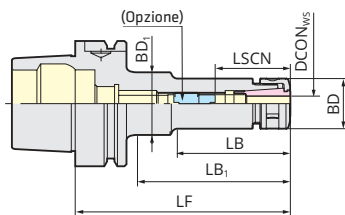


Forma A

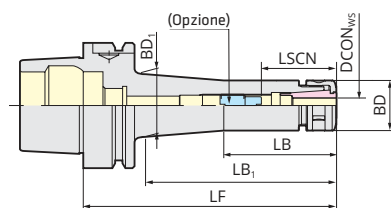
| Codice            | LF            | Range     | LSCN  | LSCX               | LB                 | LB1                  | BD   | BD1                      | Max. G/min |
|-------------------|---------------|-----------|-------|--------------------|--------------------|----------------------|------|--------------------------|------------|
| HSK40A-SK6-60     | 60            | 0.7-6.0   | 40    | 40                 | 37                 | -                    | 19.5 | -                        | 15,000     |
| HSK40A-SK6C-80    | 80            | 0.7-6.0   | 26-31 | 46                 | 57                 | -                    | 19.5 | -                        | 15,000     |
| HSK40A-SK10-60    | 60            | 1.75-10.0 | 40    | 40                 | 39                 | -                    | 27.5 | -                        | 15,000     |
| HSK40A-SK10-75    | 75            | 1.75-10.0 | 29-36 | 43                 | 52                 | -                    | 27.5 | -                        | 15,000     |
| HSK40A-SK10C-100  | 100           | 1.75-10.0 | 33-41 | 58                 | 77                 | -                    | 27.5 | -                        | 15,000     |
| HSK40A-SK16-80    | 80            | 2.75-16.0 | 60    | 60                 | 59                 | -                    | 40   | -                        | 10,000     |
| HSK40A-SK16-120   | 120           | 2.75-16.0 | 45-52 | 77                 | 99                 | -                    | 40   | -                        | 10,000     |
| HSK63A-SK6-60     | 60            | 0.7-6.0   | 38    | 38                 | 31                 | -                    | 19.5 | -                        | 15,000     |
| HSK63A-SK6-80     | 80            | 0.7-6.0   | 21-35 | 58                 | 51                 | -                    | 19.5 | -                        | 15,000     |
| HSK63A-SK6C-□     | 100, 120, 150 | 0.7-6.0   | 26-35 | 46                 | 62, 62, 60         | 71, 91, 121          | 19.5 | 32, 32, 25               | 15,000     |
| HSK63A-SK10-60    | 60            | 1.75-10.0 | 35    | 35                 | 31                 | -                    | 27.5 | -                        | 15,000     |
| HSK63A-SK10C-□    | 90, 105, 120  | 1.75-10.0 | 33-41 | 53, 58, 58, 58, 58 | 59, 74, 60, 75, 73 | 59, 74, 91, 106, 121 | 27.5 | 27.5, 27.5, 32, 40, 34.5 | 15,000     |
| HSK63A-SK16-80    | 80            | 2.75-16.0 | 52    | 52                 | 51                 | -                    | 40   | -                        | 10,000     |
| HSK63A-SK16-105   | 105           | 2.75-16.0 | 50-58 | 65                 | 76                 | -                    | 40   | -                        | 10,000     |
| HSK63A-SK16C-120  | 120           | 2.75-16.0 | 45-52 | 77                 | 91                 | -                    | 40   | -                        | 10,000     |
| HSK63A-SK16C-150  | 150           | 2.75-16.0 | 45-57 | 84                 | 121                | -                    | 40   | -                        | 10,000     |
| HSK63A-SK20-90    | 90            | 3.5-20.0  | 59    | 59                 | 63                 | -                    | 48.5 | -                        | 12,000     |
| HSK63A-SK20-105   | 105           | 3.5-20.0  | 50-57 | 64                 | 78                 | -                    | 48.5 | -                        | 12,000     |
| HSK63A-SK20C-□    | 120, 135      | 3.5-20.0  | 50-55 | 74                 | 93, 108            | -                    | 48.5 | -                        | 12,000     |
| HSK100A-SK10C-□   | 105, 120      | 1.75-10.0 | 33-41 | 58                 | 57, 74             | 71, 86               | 27.5 | 40                       | 15,000     |
| HSK100A-SK10C-150 | 150           | 1.75-10.0 | 33-41 | 58                 | 80, 75             | 116, 166             | 27.5 | 40, 39                   | 12,000     |
| HSK100A-SK16-105  | 105           | 2.75-16.0 | 45-60 | 63                 | 71                 | -                    | 40   | -                        | 15,000     |
| HSK100A-SK16C-120 | 120           | 2.75-16.0 | 45-52 | 77                 | 86                 | -                    | 40   | -                        | 15,000     |
| HSK100A-SK16C-150 | 150           | 2.75-16.0 | 45-52 | 84                 | 90                 | 116                  | 40   | 50                       | 15,000     |
| HSK100A-SK20C-120 | 120           | 3.5-20.0  | 50-55 | 74                 | 86                 | -                    | 48.5 | -                        | 12,000     |
| HSK100A-SK20C-150 | 150           | 3.5-20.0  | 47-63 | 82                 | 116                | -                    | 48.5 | -                        | 12,000     |



Rif. 1



Rif. 2



Rif. 3

| Chiave | Pinza  | Vite di arresto | Ghiera di serraggio TiN (Standard) | Ghiera di serraggio di tipo jet | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio | Rif.          |
|--------|--------|-----------------|------------------------------------|---------------------------------|---------------|----------------------|------------------|---------------|
| SKL-6W | SK6-□  | -               | SKN-6WK                            | SKN-6WKJ                        | SKJ6-□        | SKJ6-□C              | SKJL-6           | 1             |
| SKL-6W | SK6-□  | SKG6-6HG        | SKN-6WK                            | SKN-6WKJ                        | SKJ6-□        | SKJ6-□C              | SKJL-6           | 1             |
| SKL-10 | SK10-□ | -               | SKN-10K                            | SKN-10KJ                        | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1             |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                            | SKN-10KJ                        | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1             |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                            | SKN-10KJ                        | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1             |
| 9HC16  | SK16-□ | -               | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| 9HC16  | SK16-□ | SKG16-10HG      | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| SKL-6W | SK6-□  | -               | SKN-6WK                            | SKN-6WKJ                        | SKJ6-□        | SKJ6-□C              | SKJL-6           | 1             |
| SKL-6W | SK6-□  | SKG6-6HG        | SKN-6WK                            | SKN-6WKJ                        | SKJ6-□        | SKJ6-□C              | SKJL-6           | 1             |
| SKL-6W | SK6-□  | SKG6-6HG        | SKN-6WK                            | SKN-6WKJ                        | SKJ6-□        | SKJ6-□C              | SKJL-6           | 2, 2, 3       |
| SKL-10 | SK10-□ | -               | SKN-10K                            | SKN-10KJ                        | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1             |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                            | SKN-10KJ                        | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1, 1, 2, 2, 3 |
| 9HC16  | SK16-□ | -               | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| 9HC16  | SK16-□ | SKG16-10HG      | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| 9HC16  | SK16-□ | SKG16-10HG      | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| 9HC16  | SK16-□ | SKG16-10HG      | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| 9HC22  | SK20-□ | -               | SKN-20B                            | SKN-20BJ                        | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1             |
| 9HC22  | SK20-□ | SKG20-12MFHG    | SKN-20B                            | SKN-20BJ                        | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1             |
| 9HC22  | SK20-□ | SKG20-12MFHG    | SKN-20B                            | SKN-20BJ                        | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1             |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                            | SKN-10KJ                        | SKJ10-□       | SKJ10-□C             | SKJL-10          | 2             |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                            | SKN-10KJ                        | SKJ10-□       | SKJ10-□C             | SKJL-10          | 2             |
| 9HC16  | SK16-□ | SKG16-12HG      | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| 9HC16  | SK16-□ | SKG16-12HG      | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1             |
| 9HC16  | SK16-□ | SKG16-12HG      | SKN-16B                            | SKN-16BJ                        | SKJ16-□       | SKJ16-□C             | SKJL-16          | 2             |
| 9HC22  | SK20-□ | SKG20-12MFHG    | SKN-20B                            | SKN-20BJ                        | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1             |
| 9HC22  | SK20-□ | SKG20-12HG      | SKN-20B                            | SKN-20BJ                        | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1             |

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## SLIM CHUCK ALTA VELOCITA – HSK FORMA A

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Forma A

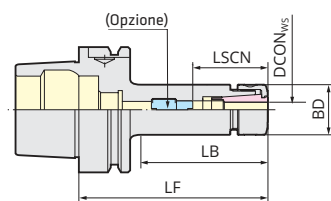
| Codice             | LF         | Range     | LSCN  | LSCX   | LB      | LB1    | BD   | BD1      | Max. G/min |
|--------------------|------------|-----------|-------|--------|---------|--------|------|----------|------------|
| HSK40A-SK6-60P     | 60P        | 0.7-6.0   | 40    | 40     | 37      | -      | 19.5 | -        | 40,000     |
| HSK40A-SK10-75P    | 75P        | 1.75-10.0 | 29-36 | 43     | 52      | -      | 27.5 | -        | 40,000     |
| HSK40A-SK16-80P    | 80P        | 2.75-16.0 | 60    | 60     | 59      | -      | 40   | -        | 30,000     |
| HSK50A-SK6-60P     | 60P        | 0.7-6.0   | 37    | 37     | 31      | -      | 19.5 | -        | 30,000     |
| HSK63A-SK6-□       | 60P, 80P   | 0.7-6.0   | 38    | 38, 58 | 31, 51  | -      | 19.5 | -        | 30,000     |
| HSK63A-SK6C-□      | 100P, 120P | 0.7-6.0   | 26-31 | 46     | 62      | 71, 91 | 19.5 | 32       | 30,000     |
| HSK63A-SK10-60P    | 60P        | 1.75-10.0 | 35    | 35     | 31      | -      | 27.5 | -        | 30,000     |
| HSK63A-SK10C-90P   | 90P        | 1.75-10.0 | 33-36 | 53     | 53      | -      | 27.5 | -        | 30,000     |
| HSK63A-SK10C-□     | 105P, 120P | 1.75-10.0 | 33-41 | 58     | 74, 60  | 74, 91 | 27.5 | 27.5, 32 | 30,000     |
| HSK63A-SK16-80P    | 80P        | 2.75-16.0 | 52    | 52     | 51      | -      | 40   | -        | 25,000     |
| HSK63A-SK16-105P   | 105P       | 2.75-16.0 | 50-58 | 65     | 76      | -      | 40   | -        | 25,000     |
| HSK63A-SK16C-120P  | 120P       | 2.75-16.0 | 45-52 | 77     | 91      | -      | 40   | -        | 25,000     |
| HSK63A-SK20-90P    | 90P        | 3.5-20.0  | 59    | 59     | 63      | -      | 48.5 | -        | 25,000     |
| HSK63A-SK20-105P   | 105P       | 3.5-20.0  | 50-57 | 64     | 78      | -      | 48.5 | -        | 25,000     |
| HSK63A-SK20C-□     | 120P, 135P | 3.5-20.0  | 50-55 | 74     | 93, 108 | -      | 48.5 | -        | 25,000     |
| HSK100A-SK10C-□    | 105P, 120P | 1.75-10.0 | 33-41 | 58     | 57, 74  | 71, 86 | 27.5 | 40       | 20,000     |
| HSK100A-SK10C-150P | 150P       | 1.75-10.0 | 33-41 | 58     | 80      | 116    | 27.5 | 40       | 20,000     |
| HSK100A-SK16-105P  | 105P       | 2.75-16.0 | 45-60 | 63     | 71      | -      | 40   | -        | 20,000     |
| HSK100A-SK16C-120P | 120P       | 2.75-16.0 | 45-52 | 77     | 86      | -      | 40   | -        | 20,000     |
| HSK100A-SK16C-150P | 150P       | 2.75-16.0 | 45-52 | 84     | 90      | 116    | 40   | 50       | 20,000     |
| HSK100A-SK20C-120P | 120P       | 3.5-20.0  | 50-55 | 74     | 86      | -      | 48.5 | -        | 20,000     |
| HSK100A-SK20C-150P | 150P       | 3.5-20.0  | 47-63 | 82     | 116     | -      | 48.5 | -        | 20,000     |

## SLIM CHUCK ALTA VELOCITA – HSK FORMA E / F

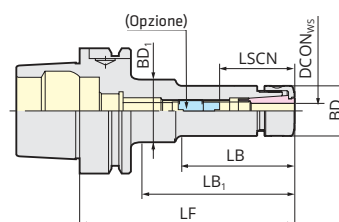


Forma E

| Codice          | LF       | Range     | LSCN     | LSCX   | LB     | LB1 | BD   | BD1 | Max. G/min |
|-----------------|----------|-----------|----------|--------|--------|-----|------|-----|------------|
| HSK25E-SK6-45P  | 45P      | 0.7-6.0   | 30.5     | 30.5   | 35     | -   | 19.5 | -   | 50,000     |
| HSK25E-SK10-55P | 55P      | 1.75-10.0 | 41       | 41     | 35     | -   | 27.5 | -   | 40,000     |
| HSK32E-SK6-50P  | 50P      | 0.7-6.0   | 30.5     | 32     | 29     | -   | 19.5 | -   | 50,000     |
| HSK32E-SK10-□   | 60P, 75P | 1.75-10.0 | 44.29-36 | 44, 43 | 41, 54 | -   | 27.5 | -   | 40,000     |
| HSK40E-SK6-60P  | 60P      | 0.7-6.0   | 40       | 40     | 37     | -   | 19.5 | -   | 40,000     |
| HSK40E-SK10-□   | 60P, 75P | 1.75-10.0 | 29-36    | 40, 43 | 39, 54 | -   | 27.5 | -   | 40,000     |
| HSK40E-SK16-80P | 80P      | 2.75-16.0 | 60       | 59     | 59     | -   | 40   | -   | 30,000     |

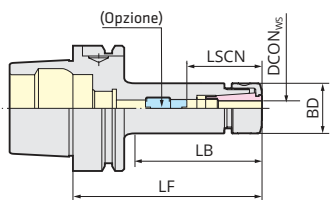


Rif. 1

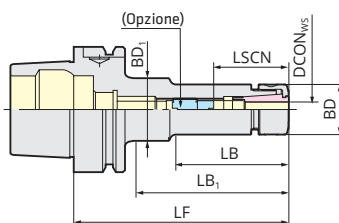


Rif. 2

| Chiave a rulli | Pinza  | Vite di arresto | Ghiera di serraggio<br>TiN (Standard) | Ghiera di serraggio<br>di tipo jet | Cappuccio Jet | Cappuccio con<br>O-ring | Chiave cappuccio | Rif. |
|----------------|--------|-----------------|---------------------------------------|------------------------------------|---------------|-------------------------|------------------|------|
| GH6            | SK6-□  | -               | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1    |
| GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1    |
| GH16           | SK16-□ | -               | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| GH6            | SK6-□  | -               | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1    |
| GH6            | SK6-□  | -               | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1    |
| GH6            | SK6-□  | SKG6-6HG        | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 2    |
| GH10           | SK10-□ | -               | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1    |
| GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1    |
| GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1, 2 |
| GH16           | SK16-□ | -               | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| GH16           | SK16-□ | SKG16-10HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| GH16           | SK16-□ | SKG16-10HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| GH16           | SK16-□ | SKG16-10HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| GH20           | SK20-□ | -               | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1    |
| GH20           | SK20-□ | SKG20-12MFHG    | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1    |
| GH20           | SK20-□ | SKG20-12MFHG    | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1    |
| GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 2    |
| GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 2    |
| GH16           | SK16-□ | SKG16-12HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| GH16           | SK16-□ | SKG16-12HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| GH16           | SK16-□ | SKG16-12HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 2    |
| GH20           | SK20-□ | SKG20-12MFHG    | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1    |
| GH20           | SK20-□ | SKG20-12HG      | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1    |



Rif. 1



Rif. 2

| Chiave a rulli | Pinza  | Vite di arresto | Ghiera di serraggio<br>TiN (Standard) | Ghiera di serraggio<br>di tipo jet | Cappuccio Jet | Cappuccio con<br>O-ring | Chiave cappuccio | Rif. |
|----------------|--------|-----------------|---------------------------------------|------------------------------------|---------------|-------------------------|------------------|------|
| GH6            | ±      | -               | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1    |
| GH10           | SK10-□ | -               | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1    |
| GH6            | SK6-□  | -               | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1    |
| GH10           | SK10-□ | -               | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1    |
| GH6            | SK6-□  | -               | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1    |
| GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1    |
| GH16           | SK16-□ | -               | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |

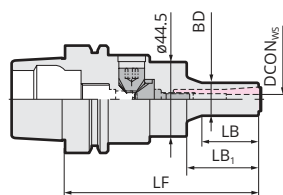
# HSK DIN69893 Forma A / E / F

MINI MINI CHUCK – HSK FORMA A / E / F

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Forma A - Tipologia AT



| Codice              | LF             | Range    | LSCN      | LB         | LB1     | BD |
|---------------------|----------------|----------|-----------|------------|---------|----|
| HSK63A-MMC8C-□-AA   | 115, 145, 175  | 2.0-8.0  | 9.4-15.0  | 33, 40, 40 | -       | 20 |
| HSK63A-MMC8C-□      | 107-AT, 135-AT | 2.0-8.0  | 9.4-15.0  | 36, 64     | 78, 106 | 20 |
| HSK63A-MMC12C-□-AA  | 117, 147       | 4.0-12.0 | 20.0-31.0 | 35, 60, 70 | -       | 30 |
| HSK63A-MMC12C-□     | 110-AT, 135-AT | 4.0-12.0 | 20.0-31.0 | 43, 68     | 83, 108 | 30 |
| HSK100A-MMC8C-□-AA  | 130, 160       | 2.0-8.0  | 9.4-15.0  | 33, 40, 40 | -       | 20 |
| HSK100A-MMC8C-□     | 117-AT, 145-AT | 2.0-8.0  | 9.4-15.0  | 36, 64     | 85, 113 | 20 |
| HSK100A-MMC12C-□-AA | 130, 160       | 4.0-12.0 | 20.0-31.0 | 35, 60, 70 | -       | 30 |
| HSK100A-MMC12C-□    | 120-AT, 145-AT | 4.0-12.0 | 20.0-31.0 | 43, 63     | 90, 115 | 30 |

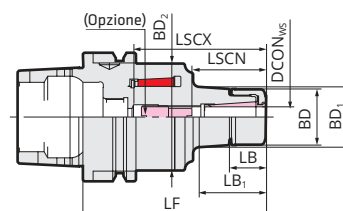
# HSK DIN69893 Forma A / E / F

MAJOR DREAM HOLDER – HSK FORMA A

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Forma A



| Codice             | LF                 | Range    | LSCN  | LSCX             | LB   | LB1            | BD   | BD1                    | BD2  |
|--------------------|--------------------|----------|-------|------------------|------|----------------|------|------------------------|------|
| HSK63A-MDSK6-75    | 75                 | 3.0-6.0  | 21-28 | 50               | 16.2 | 18             | 19.5 | -                      | 54.2 |
| HSK63A-MDSK6-□     | 90, 105, 120       | 3.0-6.0  | 21-35 | 65, 80, 95       | 16.2 | 33, 48, 63     | 19.5 | 21.9, 24, 26.1         | 54.2 |
| HSK63A-MDSK10-105  | 105                | 3.0-10.0 | 31-50 | 79               | 18.2 | 48             | 27.5 | 31.7                   | 54.2 |
| HSK63A-MDSK10-□    | 120, 135           | 3.0-10.0 | 30-50 | 94, 109          | 18.2 | 63, 79         | 27.5 | 33.8, 36               | 54.2 |
| HSK63A-MDSK16-80   | 80                 | 3.0-16.0 | 54    | 54               | 23   | 24             | 40   | 40                     | 54.2 |
| HSK63A-MDSK16-90   | 90                 | 3.0-16.0 | 64    | 64               | 23   | 34.2           | 40   | 41.6                   | 54.2 |
| HSK63A-MDSK16-□    | 105, 120           | 3.0-16.0 | 45-60 | 79               | 23   | 49.3, 64.3     | 40   | 43.7, 45.8             | 54.2 |
| HSK63A-MDSK16-135  | 135                | 3.0-16.0 | 45-60 | 85               | 23   | 79             | 40   | 47.9                   | 54.2 |
| HSK63A-MDSK20-90   | 90                 | 4.0-20.0 | 64    | 105              | 25.2 | 40.9           | 48   | 51.2                   | 54.2 |
| HSK63A-MDSK20-105  | 105                | 4.0-20.0 | 79    | 64               | 25.2 | 54.3           | 48   | 51.1                   | 54.2 |
| HSK63A-MDSK20-□    | 120, 135           | 4.0-20.0 | 47-70 | 79               | 25.2 | 70, 85.8       | 48   | 50.6, 51.2             | 54.2 |
| HSK100A-MDSK10-□   | 110, 125, 140, 165 | 3.0-10.0 | 30-50 | 80, 95, 110, 135 | 18.2 | 33, 48, 63, 89 | 27.5 | 29.8, 31.7, 33.8, 37.4 | 54   |
| HSK100A-MDSK16-125 | 125                | 3.0-16.0 | 45-65 | 87               | 23   | 51             | 40   | 44                     | 54   |
| HSK100A-MDSK16-140 | 140                | 3.0-16.0 | 45-70 | 104              | 23   | 66             | 40   | 46.1                   | 54   |
| HSK100A-MDSK16-165 | 165                | 3.0-16.0 | 40-70 | 129              | 23   | 91             | 40   | 49.6                   | 54   |
| HSK100A-MDSK20-140 | 140                | 4.0-20.0 | 47-70 | 104              | 25.2 | 42             | 48   | 51.4                   | 84   |
| HSK100A-MDSK20-165 | 165                | 4.0-20.0 | 47-80 | 129              | 25.2 | 67             | 48   | 54.9                   | 84   |

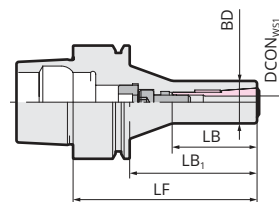




Forma A - Tipologia AA



Forma E - Tipologia AA



| Max. G/min | Pinza   | Pinza a tenuta | Pinza Jet |
|------------|---------|----------------|-----------|
| 30,000     | PMK8-□  | VMK8-□         | VMK8-□J   |
| 30,000     | PMK8-□  | VMK8-□         | VMK8-□J   |
| 30,000     | PMK12-□ | VMK12-□        | VMK12-□J  |
| 30,000     | PMK12-□ | VMK12-□        | VMK12-□J  |
| 20,000     | PMK8-□  | VMK8-□         | VMK8-□J   |
| 20,000     | PMK8-□  | VMK8-□         | VMK8-□J   |
| 20,000     | PMK12-□ | VMK12-□        | VMK12-□J  |
| 20,000     | PMK12-□ | VMK12-□        | VMK12-□J  |

| Max. G/min | Chiave a rulli | Pinza   | Vite di arresto | Ghiera di serraggio di tipo jet | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|------------|----------------|---------|-----------------|---------------------------------|---------------|----------------------|------------------|
| 20,000     | GH6            | SK6-□A  | SKG-8           | MDSKN-6KJ                       | SKJ6-□        | SKJ6-□C              | SKJL-6           |
| 20,000     | GH6            | SK6-□A  | SKG-8           | MDSKN-6KJ                       | SKJ6-□        | SKJ6-□C              | SKJL-6           |
| 20,000     | GH10           | SK10-□A | SKG-12S         | MDSKN-10KJ                      | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| 20,000     | GH10           | SK10-□A | SKG-12L         | MDSKN-10KJ                      | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| 20,000     | GH16           | SK16-□A | -               | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 20,000     | GH16           | SK16-□A | -               | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 20,000     | GH16           | SK16-□A | SKG-18S         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 20,000     | GH16           | SK16-□A | SKG-18L         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 20,000     | GH20           | SK20-□A | -               | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 20,000     | GH20           | SK20-□A | -               | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 20,000     | GH20           | SK20-□A | SKG20-22        | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 20,000     | GH10           | SK10-□A | SKG-12L         | MDSKN-10KJ                      | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| 20,000     | GH16           | SK16-□A | SKG-18S         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 20,000     | GH16           | SK16-□A | SKG-18S         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 20,000     | GH16           | SK16-□A | SKG-18L         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 20,000     | GH20           | SK20-□A | SKG-22          | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 20,000     | GH20           | SK20-□A | SKG-22          | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |

Opzionalmente tutti i supporti nella versione  
 È possibile ordinare "Alta velocità" - Inserire la designazione "P" alla fine

# HSK DIN69893 Forma A / E / F

## STANDARD MULTI-LOCK MILLING CHUCK – HSK FORMA A

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Forma A

| Codice          | LF            | Range    | LSCN | LSCX           | BD | Max. G/min | Chiave |
|-----------------|---------------|----------|------|----------------|----|------------|--------|
| HSK63A-C20-85   | 85            | 2.0-20.0 | -    | 60             | 52 | 8,000      | 9HC22  |
| HSK63A-C20-□    | 95, 110, 135  | 2.0-20.0 | 58   | 68, 80, 80, 80 | 52 | 8,000      | 9HC22  |
| HSK63A-C25-90   | 90            | 3.0-25.0 | 59   | 65             | 60 | 8,000      | 9HC25  |
| HSK63A-C25-□    | 130, 150      | 3.0-25.0 | 61   | 75, 80, 80     | 60 | 8,000      | 9HC25  |
| HSK63A-C32-110  | 110           | 3.0-32.0 | 66   | 83             | 69 | 6,000      | 9HC32  |
| HSK63A-C32-130  | 130, 150      | 3.0-32.0 | 70   | 107            | 69 | 6,000      | 9HC32  |
| HSK100A-C20-□   | 115, 135, 165 | 2.0-20.0 | 58   | 80             | 52 | 8,000      | 9HC22  |
| HSK100A-C25-□   | 115, 135, 165 | 3.0-25.0 | 61   | 80             | 60 | 8,000      | 9HC25  |
| HSK100A-C32-115 | 115           | 3.0-32.0 | 66   | 83             | 69 | 6,000      | 9HC32  |
| HSK100A-C32-□   | 135, 165      | 3.0-32.0 | 70   | 107            | 69 | 6,000      | 9HC32  |

Per i modelli: HSK40A-C20-100, HSK50A-C20-95, HSK63A-C16-75, HSK63A-C20-85, HSK63A-C25-90 e HSK63A-C32-110 non si può usare bussole NK e CCNK

# HSK DIN69893 Forma A / E / F

## ALTA VELOCITA MULTI-LOCK MILLING CHUCK – HSK FORMA A / E / F

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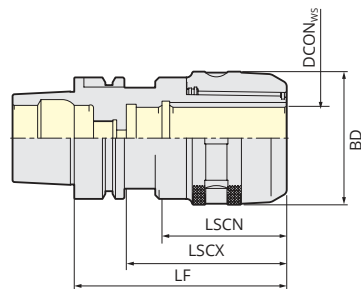
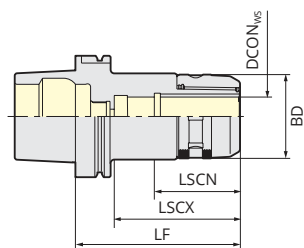
Forma A



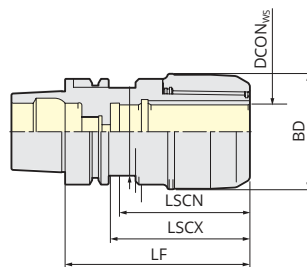
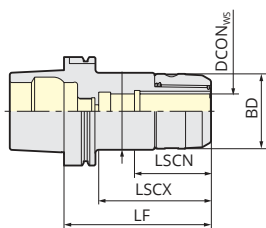
Forma E

| Codice          | LF               | Range    | LSCN | LSCX           | BD | Max. G/min | Chiave a rulli |
|-----------------|------------------|----------|------|----------------|----|------------|----------------|
| HSK40A-C16-80G  | 80G              | 2.0-16.0 | 51   | 60             | 40 | 30,000     | GH16           |
| HSK40A-C20-100G | 100G             | 2.0-20.0 | -    | 57             | 48 | 30,000     | GH20           |
| HSK40E-C16-80G  | 80G              | 2.0-16.0 | 51   | 60             | 40 | 30,000     | GH16           |
| HSK40E-C20-100G | 100G             | 2.0-20.0 | -    | 57             | 48 | 30,000     | GH20           |
| HSK63A-C20-85G  | 85G              | 2.0-20.0 | -    | 60             | 48 | 25,000     | GH20           |
| HSK63A-C20-□    | 95G, 110G        | 2.0-20.0 | 58   | 68, 80, 80, 80 | 48 | 25,000     | GH20           |
| HSK63A-C25-90G  | 90G              | 3.0-25.0 | 59   | 65             | 55 | 20,000     | GH25           |
| HSK63A-C25-130G | 130G             | 3.0-25.0 | 61   | 75, 80         | 55 | 20,000     | GH25           |
| HSK63A-C32-□    | 110G, 130G       | 3.0-32.0 | 66   | 83, 103, 107   | 68 | 20,000     | GH32           |
| HSK100A-C20-□   | 115G, 135G, 165G | 2.0-20.0 | 58   | 80             | 48 | 20,000     | GH20           |
| HSK100A-C25-□   | 115G, 135G, 165G | 3.0-25.0 | 61   | 80             | 55 | 15,000     | GH25           |

Per i modelli: HSK40A-C20-100G, HSK40E-C20-100G, HSK50A-C20-95G, HSK63A-C16-75G, HSK63A-C20-85G e HSK63A-C20-110G NON si possono usare NK e Manicotti adattatori CCNK



| Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|-----------------------------------|---------------|----------------------|------------------|
| CCK20-□, KM20-□                   | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, KM25-□                   | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, KM32-□                   | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |



| Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|-----------------------------------|---------------|----------------------|------------------|
| CCK16-□, KM16-□                   | CKFN16-□      | CKFN16-□C            | CCKLN16          |
| CCK20-□, KM20-□                   | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK16-□, KM16-□                   | CKFN16-□      | CKFN16-□C            | CCKLN16          |
| CCK20-□, KM20-□                   | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK20-□, KM20-□                   | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, KM25-□                   | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, KM32-□                   | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |

# HSK DIN69893 Forma A / E / F

## ZERO FIT SLIM CHUCK – HSK FORMA A

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Forma A

| Codice             | LF       | Range     | LSCN  | LB     | LB1 | BD   | BD1   | Max. G/min |
|--------------------|----------|-----------|-------|--------|-----|------|-------|------------|
| HSK40A-SZF6C-105   | 105      | 0.7-6.0   | 26-31 | 32     | 70  | 19.5 | 40.5  | 15,000     |
| HSK40A-SZF10C-105  | 105      | 1.75-10.0 | 35-41 | 32     | 70  | 27.5 | 48.5  | 15,000     |
| HSK40A-SZF16C-120  | 120      | 2.75-16.0 | 45-57 | 48     | 85  | 40   | 59.5  | 12,000     |
| HSK63A-SZF6C-120   | 120      | 0.7-6.0   | 26-31 | 68     | -   | 19.5 | 40.5  | 15,000     |
| HSK63A-SZF10C-□    | 105, 150 | 1.75-10.0 | 35-41 | 53, 98 | -   | 27.5 | 48.35 | 15,000     |
| HSK63A-SZF16C-150  | 150      | 2.75-16.0 | 45-57 | 76     | 93  | 40   | 59.5  | 12,000     |
| HSK63A-SZF25C-135  | 135      | 7.5-25.4  | 60-65 | 57     | -   | 55   | 66.5  | 10,000     |
| HSK100A-SZF6C-120  | 120      | 0.7-6.0   | 26-31 | 54     | -   | 19.5 | 40.5  | 15,000     |
| HSK100A-SZF10C-150 | 150      | 1.75-10.0 | 35-41 | 85     | -   | 27.5 | 48.5  | 15,000     |
| HSK100A-SZF16C-150 | 150      | 2.75-16.0 | 45-57 | 85     | -   | 40   | 59.5  | 12,000     |
| HSK100A-SZF25C-150 | 150      | 7.5-25.4  | 60-65 | 95     | -   | 55   | 66.5  | 10,000     |

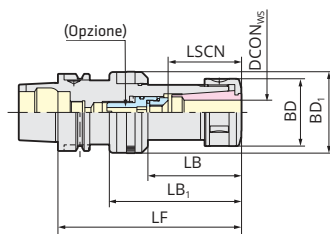
## ZERO FIT MULTI-LOCK – HSK FORMA A

Panoramica | Pag. 25 - 27

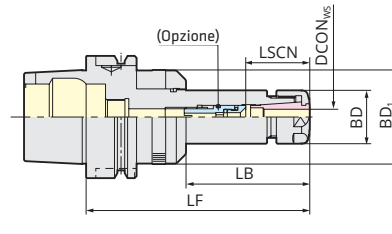


Forma A

| Codice            | LF  | Range    | LSCN | LSCX | LB | LB1 | BD   | BD1  | Max. G/min |
|-------------------|-----|----------|------|------|----|-----|------|------|------------|
| HSK63A-CZF20-110  | 110 | 2.0-20.0 | 58   | 80   | 35 | 68  | 51.5 | 66.5 | 8,000      |
| HSK63A-CZF25-110  | 110 | 3.0-25.0 | 59   | 80   | 35 | 68  | 59.5 | 74.5 | 8,000      |
| HSK63A-CZF32-130  | 130 | 3.0-32.0 | 66   | 105  | 42 | 88  | 69   | 80.5 | 6,000      |
| HSK100A-CZF20-115 | 115 | 2.0-20.0 | 58   | 80   | 35 | -   | 51.5 | 66.5 | 8,000      |
| HSK100A-CZF25-115 | 115 | 3.0-25.0 | 61   | 80   | 35 | -   | 59.5 | 74.5 | 8,000      |
| HSK100A-CZF32-115 | 115 | 3.0-32.0 | 66   | 83   | 42 | -   | 69   | 80.5 | 6,000      |

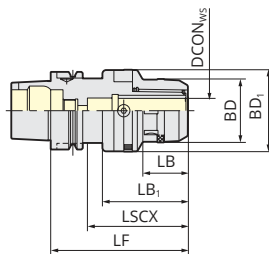


Rif. 1

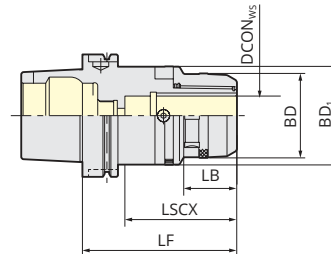


Rif. 2

| Chiave | Pinza  | Vite di arresto | Ghiera di serraggio<br>TiN (Standard) | Ghiera di serraggio di<br>tipo jet | Cappuccio Jet | Cappuccio con<br>O-ring | Chiave cappuccio | Rif. |
|--------|--------|-----------------|---------------------------------------|------------------------------------|---------------|-------------------------|------------------|------|
| SKL-6W | SK6-□  | SKG6-6HG        | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1    |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1    |
| 9HC16  | SK16-□ | SKG16-10HG      | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1    |
| SKL-6W | SK6-□  | SKG6-6HG        | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 2    |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C                | SKJL-10          | 2    |
| 9HC16  | SK16-□ | SKG16-10HG      | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C                | SKJL-16          | 2    |
| 9HC25  | SK25-□ | SKG25-18HGE     | SKN-25B                               | SKN-25BJ                           | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1    |
| SKL-6W | SK6-□  | SKG6-6HG        | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 2    |
| SKL-10 | SK10-□ | SKG10-10HG      | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C                | SKJL-10          | 2    |
| 9HC16  | SK16-□ | SKG16-12HG      | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C                | SKJL-16          | 2    |
| 9HC25  | SK25-□ | SKG25-18HGE     | SKN-25B                               | SKN-25BJ                           | SKJ25-□       | SKJ25-□C                | SKJL-25          | 2    |



Rif. 1



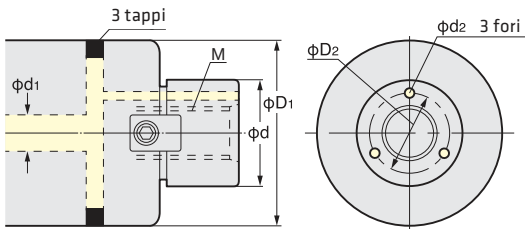
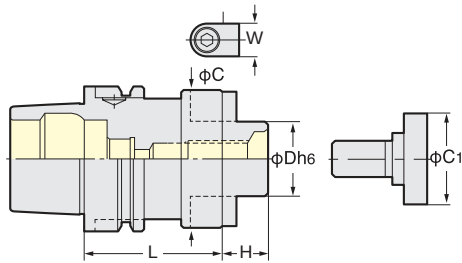
Rif. 2

| Chiave | Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio | Rif. |
|--------|-----------------------------------|---------------|----------------------|------------------|------|
| 9HC22  | CCK20-□, KM20-□                   | CKFN20-□      | CKFN20-□C            | CCKLN20          | 1    |
| 9HC25  | CCK25-□, KM25-□                   | CKFN25-□      | CKFN25-□C            | CCKLN25          | 1    |
| 9HC32  | CCK32-□, KM32-□                   | CKFN32-□      | CKFN32-□C            | CCKLN32          | 1    |
| 9HC22  | CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          | 2    |
| 9HC25  | CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          | 2    |
| 9HC32  | CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          | 2    |

# HSK FMH Face Mill Arbor



■ Per frese con passaggio  
lubrificazione interna



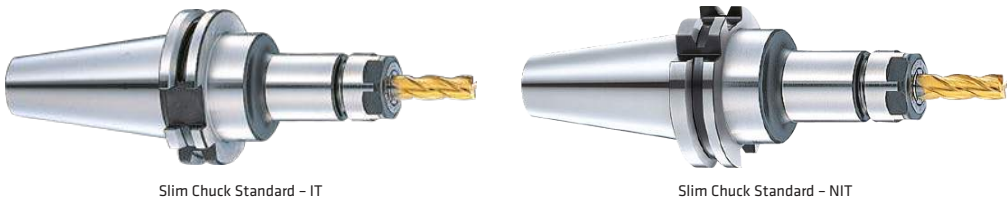
| Codice | Diametro della<br>fresa | $\phi d$ | $\phi D1$ | M         | Foro per il refrigerante |           |           |
|--------|-------------------------|----------|-----------|-----------|--------------------------|-----------|-----------|
|        |                         |          |           |           | $\phi D2$                | $\phi d1$ | $\phi d2$ |
| FMH22  | $\phi 50, \phi 52$      | 22       | 47        | M10 P1.5  | 16                       | 6 ~ 8     | 3         |
|        | $\phi 63, \phi 66$      |          | 60        |           |                          |           |           |
| FMH27  | $\phi 80$               | 27       | 76        | M12 P1.75 | 19.5                     | 8 ~ 10    | 3.5       |

## Serie metrica FMH

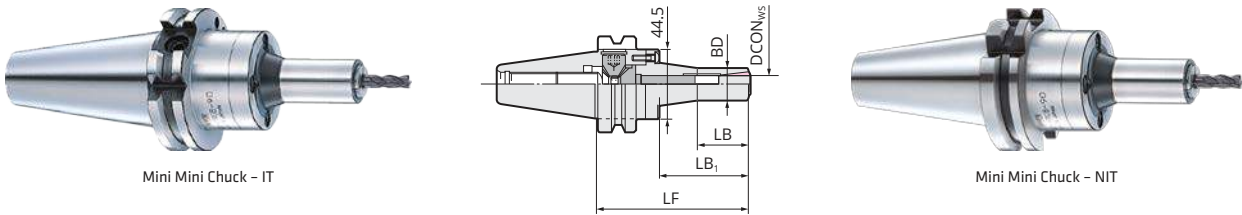
|               |        |       |        | Arbor |     |    |    |    | Chiave di<br>azionamento | Bullone di<br>bloccaggio | G Bullone di<br>chiusura | Peso (kg) |     |
|---------------|--------|-------|--------|-------|-----|----|----|----|--------------------------|--------------------------|--------------------------|-----------|-----|
|               |        |       | Codice | D     | L   | H  | C  | C1 |                          |                          |                          |           | W   |
| HSK 63A-FMH16 | - 37   | - 45  | 16     | 45    | 17  | 37 | 20 | 8  | FW 3                     | FM 8                     | -                        | 1.0       |     |
|               | -FMH22 | - 47  | - 45   | 22    | 45  | 18 | 47 | 16 | 10                       | FW 8                     | -                        | 9GM10-30  | 1.1 |
|               |        | - 60  | - 60   | 22    | 60  | 18 | 60 | 16 | 10                       | FW 8                     | -                        | 9GM10-30  | 1.3 |
|               | -FMH27 | - 60  | - 60   | 27    | 60  | 20 | 60 | 18 | 12                       | FW11                     | -                        | 9GM12-35  | 1.6 |
|               |        | - 90  | - 90   | 27    | 90  | 20 | 60 | 18 | 12                       | FW11                     | -                        | 9GM12-35  | 2.3 |
| HSK100A-FMH22 | - 47   | - 105 | 22     | 105   | 18  | 47 | 16 | 10 | FW 8                     | -                        | 9GM10-30                 | 3.4       |     |
|               | -FMH22 | - 60  | - 60   | 22    | 60  | 18 | 60 | 16 | 10                       | FW 8                     | -                        | 9GM10-30  | 2.9 |
|               |        | - 105 | - 105  | 22    | 105 | 18 | 60 | 16 | 10                       | FW 8                     | -                        | 9GM10-30  | 3.9 |
|               | -FMH27 | - 60  | - 60   | 27    | 60  | 20 | 60 | 18 | 12                       | FW 11                    | -                        | 9GM12-35  | 2.9 |
|               |        | - 90  | - 90   | 27    | 90  | 20 | 60 | 18 | 12                       | FW 11                    | -                        | 9GM12-35  | 3.7 |
|               | -FMH27 | - 76  | - 60   | 27    | 60  | 20 | 76 | 18 | 12                       | FW 11                    | -                        | 9GM12-35  | 3.2 |
|               |        | - 90  | - 90   | 27    | 90  | 20 | 76 | 18 | 12                       | FW 11                    | -                        | 9GM12-35  | 4.3 |



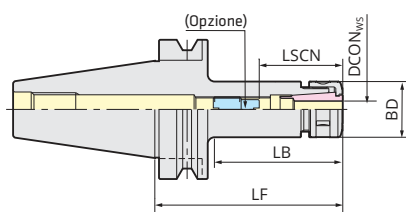




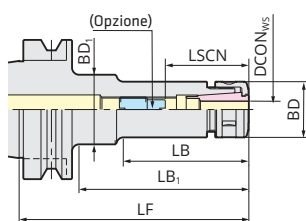
| Codice        | LF               | Range     | LSCN  | LB             | LB1             | BD   | BD1                  | Max. G/min |
|---------------|------------------|-----------|-------|----------------|-----------------|------|----------------------|------------|
| IT40-SK6-□    | 60, 90, 120, 150 | 0.7-6.0   | 21-35 | 38, 48, 62, 60 | 38, 48, 62, 82  | 19.5 | 19.5, 19.5, 32, 25   | 12,000     |
| IT40-SK10-□   | 60, 90, 120, 150 | 1.75-10.0 | 30-50 | 40, 50, 60, 73 | 40, 50, 82, 114 | 27.5 | 27.5, 27.5, 32, 33.5 | 12,000     |
| IT40-SK16-60  | 60               | 2.75-16.0 | 50-65 | 40             | -               | 40   | -                    | 12,000     |
| IT40-SK16-□   | 90, 120, 150     | 2.75-16.0 | 45-70 | 54, 84, 114    | -               | 40   | -                    | 12,000     |
| IT40-SK20-□   | 90, 120          | 3.5-20.0  | 47-80 | 70, 100        | -               | 48.5 | -                    | 10,000     |
| IT50-SK10-□   | 105, 135, 165    | 1.75-10.0 | 30-50 | 65, 70, 75     | 65, 95, 125     | 27.5 | 27.5, 32, 32         | 12,000     |
| IT50-SK20-□   | 105, 135, 165    | 3.5-20.0  | 47-80 | 65, 95, 125    | -               | 48.5 | -                    | 10,000     |
| NIT40-SK6C-□  | 60, 90, 120      | 0.7-6.0   | 21-35 | 38, 48, 62, 60 | 38, 48, 62, 82  | 19.5 | 19.5, 19.5, 32, 25   | 12,000     |
| NIT40-SK10C-□ | 60, 90, 120, 150 | 1.75-10.0 | 30-50 | 40, 50, 60, 73 | 40, 50, 82, 114 | 27.5 | 27.5, 27.5, 32, 33.5 | 12,000     |
| NIT40-SK16C-□ | 90, 120, 150     | 2.75-16.0 | 45-70 | 54, 84, 114    | -               | 40   | -                    | 12,000     |
| NIT40-SK20C-□ | 90, 120          | 3.5-20.0  | 47-80 | 70, 100        | -               | 48.5 | -                    | 10,000     |
| NIT50-SK6C-□  | 135, 165         | 0.7-6.0   | 21-35 | 60, 62, 62     | 60, 93, 117     | 19.5 | 19.5, 32, 32         | 12,000     |
| NIT50-SK10C-□ | 105, 135, 165    | 1.75-10.0 | 30-50 | 65, 70, 75     | 65, 95, 125     | 27.5 | 27.5, 32, 32         | 12,000     |
| NIT50-SK16C-□ | 105, 135, 165    | 2.75-16.0 | 40-70 | 65, 95, 92     | 65, 95, 125     | 40   | 40, 40, 50           | 12,000     |
| NIT50-SK20C-□ | 105, 135, 165    | 3.5-20.0  | 47-80 | 65, 95, 125    | -               | 48.5 | -                    | 10,000     |



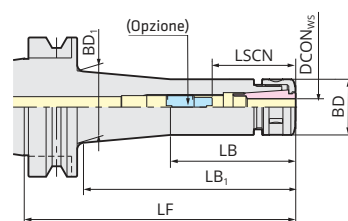
| Codice            | LF            | Range    | LSCN      | LB         | BD | Max. G/min | Pinza Standard | Pinza a tenuta | Pinza Jet |
|-------------------|---------------|----------|-----------|------------|----|------------|----------------|----------------|-----------|
| IT40X-MMC8C-□-AA  | 90, 120       | 2.0-8.0  | 9.4-15.0  | 33, 40     | 20 | 30,000     | PMK8-□         | VMK8-□         | VMK8-□J   |
| IT40X-MMC12C-□-AA | 90, 120       | 4.0-12.0 | 20.0-31.0 | 35, 60     | 30 | 30,000     | PMK12-□        | VMK12-□        | VMK12-□J  |
| IT50X-MMC8C-□-AA  | 105, 135, 165 | 2.0-8.0  | 9.4-15.0  | 33, 40, 40 | 20 | 20,000     | PMK8-□         | VMK8-□         | VMK8-□J   |
| IT50X-MMC12C-□-AA | 105, 135, 165 | 4.0-12.0 | 20.0-31.0 | 35, 60, 70 | 30 | 20,000     | PMK12-□        | VMK12-□        | VMK12-□J  |
| NIT40-MMC8C-□-AA  | 90, 120       | 2.0-8.0  | 9.4-15.0  | 33, 40     | 20 | 30,000     | PMK8-□         | VMK8-□         | VMK8-□J   |
| NIT40-MMC12C-□-AA | 90, 120       | 4.0-12.0 | 20.0-31.0 | 35, 60     | 30 | 30,000     | PMK12-□        | VMK12-□        | VMK12-□J  |
| NIT50-MMC8C-□-AA  | 105, 135, 165 | 2.0-8.0  | 9.4-15.0  | 33, 40, 40 | 20 | 20,000     | PMK8-□         | VMK8-□         | VMK8-□J   |
| NIT50-MMC12C-□-AA | 105, 135, 165 | 4.0-12.0 | 20.0-31.0 | 35, 60, 70 | 30 | 20,000     | PMK12-□        | VMK12-□        | VMK12-□J  |



Rif. 1



Rif. 2



Rif. 3

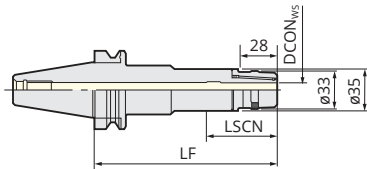
| Chiave | Pinza  | Vite di arresto | Ghiera di serraggio<br>TiN (Standard) | Ghiera di serraggio<br>di tipo jet | Cappuccio Jet | Cappuccio con<br>O-ring | Chiave cappuccio | Rif.       |
|--------|--------|-----------------|---------------------------------------|------------------------------------|---------------|-------------------------|------------------|------------|
| SKL-6W | SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1, 1, 2, 3 |
| SKL-10 | SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1, 1, 2, 3 |
| 9HC16  | SK16-□ | SKG-18S         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1          |
| 9HC16  | SK16-□ | SKG-18L         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1          |
| 9HC22  | SK20-□ | SKG-22          | SKN-20B                               | SKN-20BJ                           | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1          |
| SKL-10 | SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1, 2, 2    |
| 9HC22  | SK20-□ | SKG-22          | SKN-20B                               | SKN-20BJ                           | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1          |
| SKL-6W | SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1, 1, 2, 3 |
| SKL-10 | SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1, 1, 2, 3 |
| 9HC16  | SK16-□ | SKG-18L         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1          |
| 9HC22  | SK20-□ | SKG-22          | SKN-20B                               | SKN-20BJ                           | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1          |
| SKL-6W | SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C                 | SKJL-6           | 1, 2, 2    |
| SKL-10 | SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C                | SKJL-10          | 1, 2, 2    |
| 9HC16  | SK16-□ | SKG-18L         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C                | SKJL-16          | 1, 1, 2    |
| 9HC22  | SK20-□ | SKG-22          | SKN-20B                               | SKN-20BJ                           | SKJ25-□       | SKJ25-□C                | SKJL-25          | 1          |



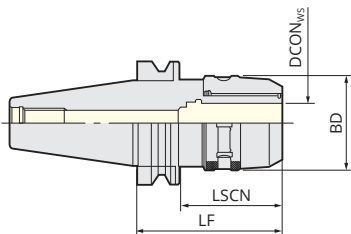
Standard Multi-Lock Milling Chuck - IT



Standard Multi-Lock Milling Chuck - NIT



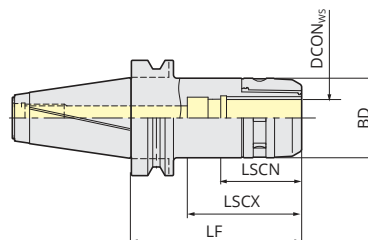
Multi-Lock Milling Chuck C12



| Codice       | LF            | Range    | LSCN | LSCX        | BD | Max. G/min | Chiave |
|--------------|---------------|----------|------|-------------|----|------------|--------|
| IT40-C20-□   | 80, 90        | 2.0-20.0 | 53   | 80          | 52 | 7,000      | 9HC22  |
| IT40-C20-120 | 120           | 2.0-20.0 | 53   | 80          | 52 | 7,000      | 9HC22  |
| IT40-C25-□   | 85, 105, 120  | 3.0-25.0 | 59   | 80          | 60 | 6,000      | 9HC25  |
| IT40-C32-□   | 95, 105, 120  | 3.0-32.0 | 64.5 | 82, 95, 105 | 64 | 6,000      | 9HC25  |
| IT50-C20-□   | 105, 135, 165 | 2.0-20.0 | 53   | 80          | 52 | 8,000      | 9HC22  |
| IT50-C25-□   | 105, 135      | 3.0-25.0 | 59   | 80          | 60 | 8,000      | 9HC25  |
| IT50-C32-□   | 105, 120, 135 | 3.0-32.0 | 64.5 | 105         | 69 | 6,000      | 9HC32  |



Multi-Lock Standard – MIT



| Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|-----------------------------------|---------------|----------------------|------------------|
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK20-□, KM20-□                   | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32T-□     | CKFN32-□C            | CCKLN32          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |

Per i modelli C20-120, C42-95 e C42-95P il

Non è possibile utilizzare bussole adattatrici NK e CCNK



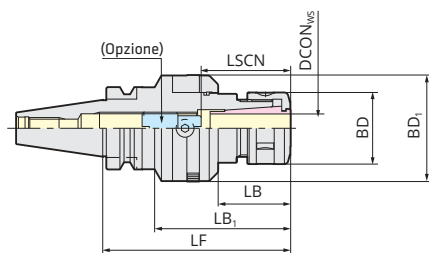
Zero Fit Slim Chuck – IT

| Codice       | LF       | Range     | LSCN  | LB      | LB1     | BD   | BD1        | Max. G/min |
|--------------|----------|-----------|-------|---------|---------|------|------------|------------|
| IT40-SZF6-□  | 90, 150  | 0.7-6.0   | 21-35 | 45, 89  | -       | 19.5 | 40.5       | 15,000     |
| IT40-SZF10-□ | 120, 150 | 1.75-10.0 | 30-50 | 57, 87  | -       | 27.5 | 48.5       | 15,000     |
| IT40-SZF16-□ | 120, 150 | 2.75-16.0 | 45-65 | 51, 81  | -       | 40   | 59.5       | 12,000     |
| IT40-SZF25-□ | 120, 150 | 7.5-25.4  | 55-85 | 49, 79  | 85, 115 | 55   | 66.5       | 10,000     |
| IT50-SZF6-□  | 105, 165 | 0.7-6.0   | 21-35 | 60, 67  | -       | 19.5 | 40.5, 59.5 | 15,000     |
| IT50-SZF10-□ | 105, 165 | 1.75-10.0 | 30-50 | 60, 65  | -       | 27.5 | 48.5, 59.5 | 15,000     |
| IT50-SZF16-□ | 105, 165 | 2.75-16.0 | 45-65 | 60, 120 | -       | 40   | 59.5       | 12,000     |
| IT50-SZF25-□ | 120, 165 | 7.5-25.4  | 55-85 | 75, 120 | -       | 55   | 66.5       | 10,000     |

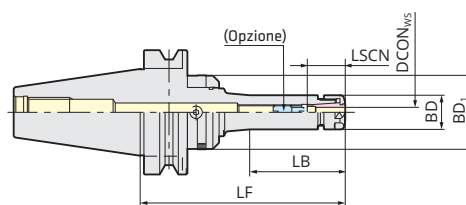


Zero Fit Multi-Lock – IT

| Codice         | LF  | Range    | LSCN | LSCX | LB | LB1 | BD   | BD1  | Max. G/min |
|----------------|-----|----------|------|------|----|-----|------|------|------------|
| IT40-CZF20-105 | 105 | 2.0-20.0 | 53   | 80   | 35 | 70  | 51.5 | 66.5 | 7,000      |
| IT40-CZF25-105 | 105 | 3.0-25.0 | 59   | 80   | 35 | 70  | 59.5 | 47.5 | 8,000      |
| IT40-CZF32-120 | 120 | 3.0-32.0 | 64.5 | 105  | 42 | 85  | 69   | 80.5 | 6,000      |
| IT50-CZF20-105 | 105 | 2.0-20.0 | 53   | 80   | 35 | -   | 51.5 | 66.5 | 8,000      |
| IT50-CZF25-105 | 105 | 3.0-25.0 | 59   | 80   | 35 | -   | 59.5 | 74.5 | 8,000      |
| IT50-CZF32-120 | 120 | 3.0-32.0 | 64.5 | 105  | 42 | -   | 69   | 80.5 | 6,000      |

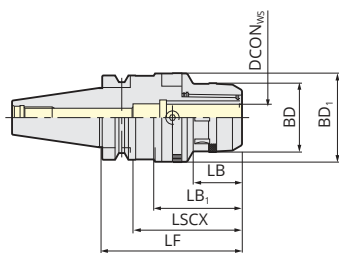


Rif. 1

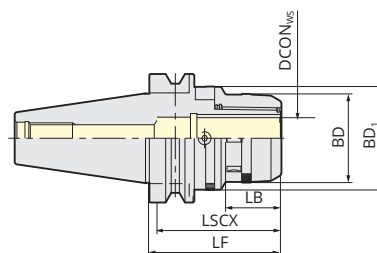


Rif. 2

| Chiave | Pinza  | Vite di arresto | Ghiera di serraggio<br>TiN (Standard) | Ghiera di serraggio<br>di tipo jet | Cappuccio Jet | O-ring<br>Cover Cap | Chiave cappuccio | Rif. |
|--------|--------|-----------------|---------------------------------------|------------------------------------|---------------|---------------------|------------------|------|
| SKL-6W | SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C             | SKJL-6           | 2    |
| SKL-10 | SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C            | SKJL-10          | 2    |
| 9HC16  | SK16-□ | SKG-18L         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C            | SKJL-16          | 2    |
| 9HC25  | SK25-□ | SKG-28          | SKN-25B                               | SKN-25BJ                           | SKJ25-□       | SKJ25-□C            | SKJL-25          | 1    |
| SKL-6W | SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C             | SKJL-6           | 2    |
| SKL-10 | SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C            | SKJL-10          | 2    |
| 9HC16  | SK16-□ | SKG-18L         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C            | SKJL-16          | 2    |
| 9HC25  | SK25-□ | SKG-28          | SKN-25B                               | SKN-25BJ                           | SKJ25-□       | SKJ25-□C            | SKJL-25          | 2    |



Rif. 1



Rif. 2

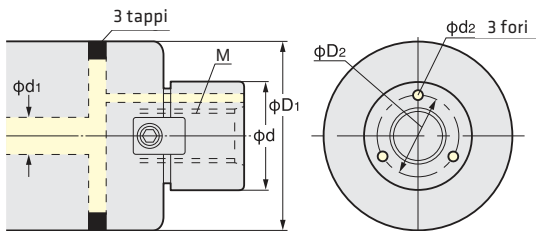
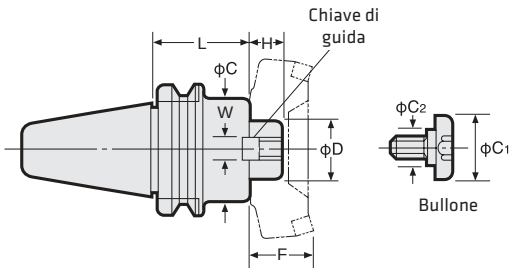
| Chiave | Pinza           | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio | Rif. |
|--------|-----------------|---------------|----------------------|------------------|------|
| 9HC22  | CCK20-□, KM20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          | 1    |
| 9HC25  | CCK25-□, KM25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          | 1    |
| 9HC32  | CCK32-□, KM32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          | 1    |
| 9HC22  | CCK20-□, KM20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          | 2    |
| 9HC25  | CCK25-□, KM25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          | 2    |
| 9HC32  | CCK32-□, KM32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          | 2    |

# NBT FMH Face Mill Arbor



FMH

■ Per frese con passaggio  
lubrificazione interna



| Codice | Diametro della<br>fresa | φd | φD1    | M         | Foro per il refrigerante |        |     |
|--------|-------------------------|----|--------|-----------|--------------------------|--------|-----|
|        |                         |    |        |           | φD2                      | φd1    | φd2 |
| FMH16  | φ40                     | 16 | 37     | M8 P1.25  | 12                       | 6      | 2   |
| FMH22  | φ50, φ52                | 22 | 47     | M10 P1.5  | 16                       | 6 ~ 8  | 3   |
|        | φ63, φ66                |    | 60     |           |                          |        |     |
| FMH27  | φ80                     | 27 | 60, 76 | M12 P1.75 | 18.5                     | 8 ~ 10 | 3.5 |

## Serie metrica FMH

| Codice                 | Arbor |     |    |    |    |    | Chiave di<br>azionamento | Bullone di<br>bloccaggio | C Bullone di<br>chiusura | Peso (kg) |
|------------------------|-------|-----|----|----|----|----|--------------------------|--------------------------|--------------------------|-----------|
|                        | D     | L   | H  | C  | C1 | W  |                          |                          |                          |           |
| NBT30-FMH16- 37 - 35   | 16    | 35  | 17 | 37 | 20 | 8  | FW 3                     | FM 8                     | -                        | 0.6       |
| -FMH22- 47 - 45        | 22    | 45  | 18 | 47 | 16 | 10 | FW 8                     | -                        | 9GM10-30                 | 0.8       |
| -FMH27- 60 - 45        | 27    | 45  | 20 | 60 | 18 | 12 | FW 11                    | -                        | 9M12-35                  | 1.0       |
| NBT40-FMH16- 37 - 40   | 16    | 40  | 17 | 37 | 20 | 8  | FW 3                     | FM 8                     | -                        | 1.1       |
| (NIT40)-FMH22- 47 - 45 | 22    | 45  | 18 | 47 | 16 | 10 | FW 8                     | -                        | 9M10-30                  | 1.3       |
| - 60                   |       | 60  |    |    |    |    |                          |                          |                          | 1.5       |
| -FMH22- 60 - 45        | 22    | 45  | 18 | 60 | 16 | 10 | FW 8                     | -                        | 9M10-30                  | 1.5       |
| - 60                   |       | 60  |    |    |    |    |                          |                          |                          | 1.8       |
| -FMH27- 60 - 45        | 27    | 45  | 20 | 60 | 18 | 12 | FW 11                    | -                        | 9M12-35                  | 1.5       |
| - 60                   |       | 60  |    |    |    |    |                          |                          |                          | 1.8       |
| -FMH27- 76 - 60        | 27    | 60  | 20 | 76 | 18 | 12 | FW 11                    | -                        | 9M12-35                  | 2.1       |
| - 90                   |       | 90  |    |    |    |    |                          |                          |                          | 2.8       |
| NBT50-FMH16- 37 - 60   | 16    | 60  | 17 | 37 | 20 | 8  | FW 3                     | FM 8                     | -                        | 3.8       |
| (NIT50) -105           |       | 105 |    |    |    |    |                          |                          |                          | 4.1       |
| -FMH22- 47 - 60        | 22    | 60  | 18 | 47 | 16 | 10 | FW 8                     | -                        | 9GM10-30                 | 4.1       |
| - 105                  |       | 105 |    |    |    |    |                          |                          |                          | 4.7       |
| -FMH22- 60 - 60        | 22    | 60  | 18 | 60 | 16 | 10 | FW 8                     | -                        | 9GM10-30                 | 4.2       |
| - 105                  |       | 105 |    |    |    |    |                          |                          |                          | 5.2       |
| -FMH27- 60 - 45        | 27    | 45  | 20 | 60 | 18 | 12 | 9FWE27                   | -                        | 9GM12-35                 | 3.9       |
| - 90                   |       | 90  |    |    |    |    | FW 8                     |                          |                          | 5.0       |
| -FMH27- 76 - 45        |       | 45  | 20 | 76 | 18 | 12 | FW 10                    |                          |                          | 4.0       |
| - 90                   | 27    | 90  |    |    |    |    | FW 11                    | -                        | 9GM12-35                 | 5.6       |







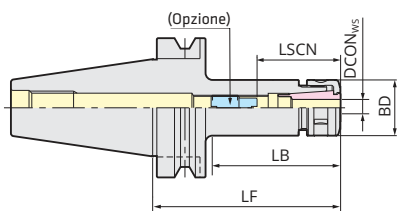
Slim Chuck Standard – BT

| Codice        | LF           | Range     | LSCN  | LB             | LB1             | BD   | BD1                |
|---------------|--------------|-----------|-------|----------------|-----------------|------|--------------------|
| BT30-SK6-□    | 60, 90, 120  | 0.7-6.0   | 21-35 | 33, 56, 62     | 33, 65, 95      | 19.5 | 19.5, 32, 32       |
| BT30-SK10-□   | 60, 90, 120  | 1.75-10.0 | 30-50 | 35, 50, 65, 95 | -               | 27.5 | -                  |
| BT30-SK16-60  | 60           | 2.75-16.0 | 45-60 | 37             | -               | 40   | -                  |
| BT30-SK16-90  | 90           | 2.75-16.0 | 45-65 | 67             | -               | 40   | -                  |
| BT30-SK16-120 | 120          | 2.75-16.0 | 40-70 | 97             | -               | 40   | -                  |
| BT40-SK6-□    | 60, 90, 120  | 0.7-6.0   | 21-35 | 30, 51, 60, 60 | 30, 60, 90, 120 | 19.5 | 19.5, 32, 32, 25   |
| BT40-SK10-□   | 60, 90, 120  | 1.75-10.0 | 30-50 | 32, 45, 48, 73 | 32, 45, 60, 90  | 27.5 | 27.5, 27.5, 40, 40 |
| BT40-SK10-150 | 150          | 1.75-10.0 | 30-50 | 73, 73         | 118, 148        | 27.5 | 34.5, 39           |
| BT40-SK16-60  | 60           | 2.75-16.0 | 50-65 | 32             | -               | 40   | -                  |
| BT40-SK16-□   | 90, 120, 150 | 2.75-16.0 | 45-60 | 58, 88, 118    | -               | 40   | -                  |
| BT40-SK20-60  | 60           | 3.5-20.0  | 47-60 | 32             | -               | 48.5 | -                  |
| BT40-SK20-□   | 90, 120      | 3.5-20.0  | 47-80 | 60, 90         | -               | 48.5 | -                  |
| BT50-SK10-□   | 105, 135     | 1.75-10.0 | 30-50 | 57, 70         | 57, 92          | 27.5 | 27.5, 32           |
| BT50-SK10-165 | 165          | 1.75-10.0 | 30-50 | 75, 75         | 114, 151        | 27.5 | 32, 36             |
| BT50-SK16-□   | 105, 135     | 2.75-16.0 | 45-70 | 62, 92         | -               | 40   | -                  |

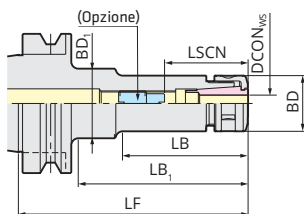


Slim Chuck Standard – BT, NBT

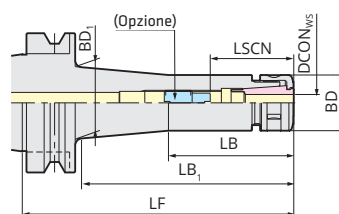
|                 |              |           |       |                    |                 |      |                    |
|-----------------|--------------|-----------|-------|--------------------|-----------------|------|--------------------|
| BT50-SK16-165   | 165          | 2.75-16.0 | 45-70 | 90, 90             | 122, 157        | 40   | 50, 52             |
| NBT30-SK6C-□    | 60, 90, 120  | 0.7-6.0   | 26-31 | 33, 56, 62         | 33, 65, 95      | 19.5 | 19.5, 32, 32       |
| NBT30-SK10C-□   | 60, 90, 120  | 1.75-10.0 | 33-41 | 22, 35, 50, 65, 95 | -               | 27.5 | -                  |
| NBT30-SK16C-60  | 60           | 2.75-16.0 | 47-52 | 37                 | -               | 40   | -                  |
| NBT30-SK16C-75  | 75           | 2.75-16.0 | 45-52 | 52                 | -               | 40   | -                  |
| NBT30-SK16C-□   | 90, 120      | 2.75-16.0 | 45-57 | 67, 97             | -               | 40   | -                  |
| NBT30-SK20-60   | 60           | 3.5-20.0  | 65-70 | 37                 | -               | 48.5 | -                  |
| NBT30-SK20C-75  | 75           | 3.5-20.0  | 55-55 | 52                 | -               | 48.5 | -                  |
| NBT40-SK6C-□    | 60, 90, 120  | 0.7-6.0   | 26-31 | 30, 51, 60, 60     | 30, 60, 90, 120 | 19.5 | 19.5, 32, 32, 25   |
| NBT40-SK10C-□   | 60, 90, 120  | 1.75-10.0 | 33-41 | 32, 45, 48, 75     | 32, 45, 60, 90  | 27.5 | 27.5, 27.5, 40, 40 |
| NBT40-SK10C-150 | 150          | 1.75-10.0 | 33-41 | 75                 | 118, 148        | 27.5 | 34.5, 39           |
| NBT40-SK16C-60  | 60           | 2.75-16.0 | 45-52 | 32                 | -               | 40   | -                  |
| NBT40-SK16C-□   | 90, 120, 150 | 2.75-16.0 | 45-57 | 43, 58, 88, 118    | -               | 40   | -                  |
| NBT40-SK20C-60  | 60           | 3.5-20.0  | 57-63 | 32                 | -               | 48.5 | -                  |
| NBT50-SK10C-□   | 105, 135     | 1.75-10.0 | 33-41 | 57, 70             | 57, 92          | 27.5 | 27.5, 32           |
| NBT50-SK16C-□   | 105, 135     | 2.75-16.0 | 45-57 | 62, 92             | -               | 40   | -                  |
| NBT50-SK16C-165 | 165          | 2.75-16.0 | 45-57 | 90                 | 122, 157        | 40   | 50, 52             |



Rif. 1

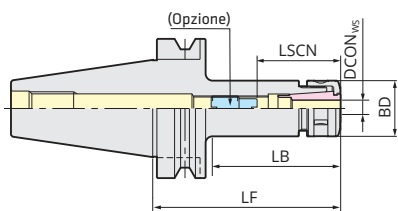


Rif. 2

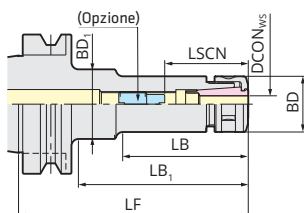


Rif. 3

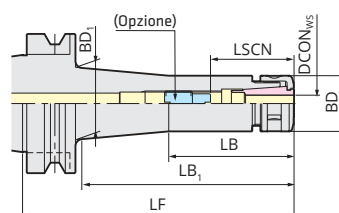
| Max. G/min | Chiave a rulli | Pinza  | Vite di arresto | Ghiera di serraggio TiN (Standard) | Jet Type Clamping Nut | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio | Rif.       |
|------------|----------------|--------|-----------------|------------------------------------|-----------------------|---------------|----------------------|------------------|------------|
| 15,000     | SKL-6W         | SK6-□  | SKG-8           | SKN-6WK                            | SKN-6WKJ              | SKJ6-□        | SKJ6-□C              | SKJL-6           | 1, 2, 2    |
| 15,000     | SKL-10         | SK10-□ | SKG-12L         | SKN-10K                            | SKN-10KJ              | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1          |
| 10,000     | 9HC16          | SK16-□ | SKG-12L         | SKN-16B                            | SKN-16BJ              | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1          |
| 10,000     | 9HC16          | SK16-□ | SKG-12          | SKN-16B                            | SKN-16BJ              | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1          |
| 10,000     | 9HC16          | SK16-□ | SKG-18L         | SKN-16B                            | SKN-16BJ              | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1          |
| 15,000     | SKL-6W         | SK6-□  | SKG-8           | SKN-6WK                            | SKN-6WKJ              | SKJ6-□        | SKJ6-□C              | SKJL-6           | 1, 2, 2, 3 |
| 15,000     | SKL-10         | SK10-□ | SKG-12L         | SKN-10K                            | SKN-10KJ              | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1, 1, 2, 2 |
| 12,000     | SKL-10         | SK10-□ | SKG-12L         | SKN-10K                            | SKN-10KJ              | SKJ10-□       | SKJ10-□C             | SKJL-10          | 3          |
| 12,000     | 9HC16          | SK16-□ | SKG-18S         | SKN-16B                            | SKN-16BJ              | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1          |
| 12,000     | 9HC16          | SK16-□ | SKG-18L         | SKN-16B                            | SKN-16BJ              | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1          |
| 12,000     | 9HC22          | SK20-□ | SKG-22          | SKN-20B                            | SKN-20BJ              | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1          |
| 12,000     | 9HC22          | SK20-□ | SKG-22          | SKN-20B                            | SKN-20BJ              | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1          |
| 15,000     | SKL-10         | SK10-□ | SKG-12L         | SKN-10K                            | SKN-10KJ              | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1, 2       |
| 12,000     | SKL-10         | SK10-□ | SKG-12L         | SKN-10K                            | SKN-10KJ              | SKJ10-□       | SKJ10-□C             | SKJL-10          | 2, 3       |
| 12,000     | 9HC16          | SK16-□ | SKG-18L         | SKN-16B                            | SKN-16BJ              | SKJ16-□       | SKJ16-□C             | SKJL-16          | 1          |



Rif. 1



Rif. 2



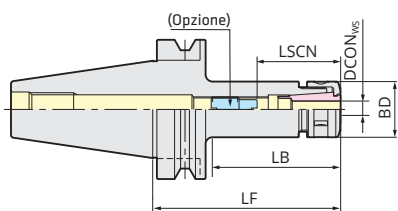
Rif. 3

|        |        |        |             |         |          |         |          |         |            |
|--------|--------|--------|-------------|---------|----------|---------|----------|---------|------------|
| 10,000 | 9HC16  | SK16-□ | SKG-18L     | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 2, 3       |
| 15,000 | SKL-6W | SK6-□  | SKG6-6HG    | SKN-6WK | SKN-6WKJ | SKJ6-□  | SKJ6-□C  | SKJL-6  | 1, 2, 2    |
| 15,000 | SKL-10 | SK10-□ | SKG10-10HG  | SKN-10K | SKN-10KJ | SKJ10-□ | SKJ10-□C | SKJL-10 | 1          |
| 10,000 | 9HC16  | SK16-□ | SKG16-12HGE | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 1          |
| 10,000 | 9HC16  | SK16-□ | SKG16-10HG  | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 1          |
| 10,000 | 9HC16  | SK16-□ | SKG16-12HG  | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 1          |
| 10,000 | 9HC22  | SK20-□ | SKG-12S     | SKN-20B | SKN-20BJ | SKJ25-□ | SKJ25-□C | SKJL-25 | 1          |
| 10,000 | 9HC22  | SK20-□ | SKG20-12HGE | SKN-20B | SKN-20BJ | SKJ25-□ | SKJ25-□C | SKJL-25 | 1          |
| 15,000 | SKL-6W | SK6-□  | SKG6-6HG    | SKN-6WK | SKN-6WKJ | SKJ6-□  | SKJ6-□C  | SKJL-6  | 1, 2, 2, 3 |
| 15,000 | SKL-10 | SK10-□ | SKG10-10HG  | SKN-10K | SKN-10KJ | SKJ10-□ | SKJ10-□C | SKJL-10 | 1, 1, 2, 2 |
| 12,000 | SKL-10 | SK10-□ | SKG10-10HG  | SKN-10K | SKN-10KJ | SKJ10-□ | SKJ10-□C | SKJL-10 | 3          |
| 12,000 | 9HC16  | SK16-□ | SKG16-10HG  | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 1          |
| 12,000 | 9HC16  | SK16-□ | SKG16-12HG  | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 1          |
| 12,000 | 9HC22  | SK20-□ | SKG20-16HG  | SKN-20B | SKN-20BJ | SKJ25-□ | SKJ25-□C | SKJL-25 | 1          |
| 15,000 | SKL-10 | SK10-□ | SKG10-10HG  | SKN-10K | SKN-10KJ | SKJ10-□ | SKJ10-□C | SKJL-10 | 1, 2       |
| 12,000 | 9HC16  | SK16-□ | SKG16-12HG  | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 1          |
| 10,000 | 9HC16  | SK16-□ | SKG16-12HG  | SKN-16B | SKN-16BJ | SKJ16-□ | SKJ16-□C | SKJL-16 | 2, 3       |

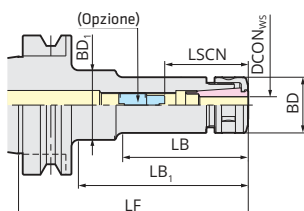


Slim Chuck Alta Velocita – BT

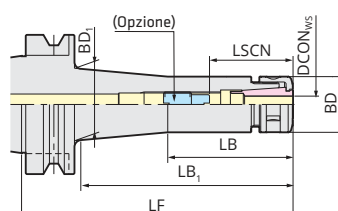
| Codice           | LF              | Range     | LSCN  | LB              | LB1             | BD   | BD1                |
|------------------|-----------------|-----------|-------|-----------------|-----------------|------|--------------------|
| BT30-SK6-□       | 60P, 90P, 120P  | 0.7-6.0   | 21-35 | 33, 56, 62      | 33, 65, 95      | 19.5 | 19.5, 32, 32       |
| BT30-SK10-□      | 60P, 90P, 120P  | 1.75-10.0 | 30-50 | 35, 50, 65, 95  | -               | 27.5 | -                  |
| BT30-SK16-60P    | 60P             | 2.75-16.0 | 45-60 | 37              | -               | 40   | -                  |
| BT30-SK16-90P    | 90P             | 2.75-16.0 | 45-65 | 67              | -               | 40   | -                  |
| BT30-SK16-120P   | 120P            | 2.75-16.0 | 40-70 | 97              | -               | 40   | -                  |
| BT30-SK20-60P    | 60P             | 3.5-20.0  | 65-70 | 37              | -               | 48.5 | -                  |
| BT30-SK20-75P    | 75P             | 3.5-20.0  | 70-75 | 52              | -               | 48.5 | -                  |
| BT30-SK20-90P    | 90P             | 3.5-20.0  | 65-75 | 67              | -               | 48.5 | -                  |
| BT30-SK25-90P    | 90P             | 7.5-25.4  | 55-75 | 67              | -               | 55   | -                  |
| BT40-SK6-□       | 60P, 90P, 120P  | 0.7-6.0   | 21-35 | 30, 51, 60, 60  | 30, 60, 90, 120 | 19.5 | 19.5, 32, 32, 25   |
| BT40-SK10-□      | 60P, 90P, 120P  | 1.75-10.0 | 30-50 | 32, 45, 48, 73  | 32, 45, 60, 90  | 27.5 | 27.5, 2735, 40, 40 |
| BT40-SK10-150P   | 150P            | 1.75-10.0 | 30-50 | 73              | 118, 148        | 27.5 | 34.5, 39           |
| BT40-SK16-60P    | 60P             | 2.75-16.0 | 50-65 | 32              | -               | 40   | -                  |
| BT40-SK16-75P    | 75P             | 2.75-16.0 | 40-67 | 43              | -               | 40   | -                  |
| BT40-SK16-□      | 90P, 120P, 150P | 2.75-16.0 | 45-60 | 58, 88, 118     | -               | 40   | -                  |
| BT40-SK20-60P    | 60P             | 3.5-20.0  | 47-60 | 32              | -               | 48.5 | -                  |
| BT40-SK20-□      | 90P, 120P       | 3.5-20.0  | 47-80 | 60, 90          | -               | 48.5 | -                  |
| BT50-SK10-□      | 105P, 135P      | 1.75-10.0 | 30-50 | 57, 70          | 57, 92          | 27.5 | 27.5, 32           |
| BT50-SK10-165P   | 165P            | 1.75-10.0 | 30-50 | 75              | 114, 151        | 27.5 | 32, 36             |
| BT50-SK16-□      | 105P, 135P      | 2.75-16.0 | 45-70 | 62, 92          | -               | 40   | -                  |
| BT50-SK16-165P   | 165P            | 2.75-16.0 | 45-70 | 90              | 122, 157        | 40   | 50, 52             |
| NBT30-SK6C-□     | 60P, 90P        | 0.7-6.0   | 26-31 | 33, 56          | -               | 19.5 | 19.5, 32           |
| NBT30-SK10C-□    | 60P, 90P        | 1.75-10.0 | 33-41 | 22, 35, 50, 65  | -               | 27.5 | -                  |
| NBT30-SK16C-60P  | 60P             | 2.75-16.0 | 47-52 | 37              | -               | 40   | -                  |
| NBT30-SK16C-75P  | 75P             | 2.75-16.0 | 45-52 | 52              | -               | 40   | -                  |
| NBT30-SK16C-90P  | 90P             | 2.75-16.0 | 45-57 | 67              | -               | 40   | -                  |
| NBT40-SK6C-□     | 60P, 90P, 120P  | 0.7-6.0   | 26-31 | 33, 51, 60      | 30, 60, 90      | 19.5 | 19.5, 32, 32       |
| NBT40-SK10C-□    | 60P, 90P, 120P  | 1.75-10.0 | 33-41 | 32, 45, 48, 73  | 32, 45, 60, 90  | 27.5 | 27.5, 27.5, 40, 40 |
| NBT40-SK10C-150P | 150P            | 1.75-10.0 | 33-41 | 73              | 118             | 27.5 | 34, 5              |
| NBT40-SK16C-60P  | 60P             | 2.75-16.0 | 45-52 | 32              | -               | 40   | -                  |
| NBT40-SK16C-□    | 90P, 120P, 150P | 2.75-16.0 | 45-57 | 43, 58, 88, 118 | -               | 40   | -                  |
| NBT40-SK20C-60P  | 60P             | 3.5-20.0  | 57-63 | 32              | -               | 48.5 | -                  |
| NBT40-SK20C-□    | 90P, 120P       | 3.5-20.0  | 47-63 | 45, 60, 90      | -               | 48.5 | -                  |
| NBT50-SK10C-□    | 105P, 135P      | 1.75-10.0 | 33-41 | 57, 70          | 57, 92          | 27.5 | 27.5, 32           |
| NBT50-SK10C-165P | 165P            | 1.75-10.0 | 33-41 | 75              | 114             | 27.5 | 32                 |
| NBT50-SK16C-□    | 105P, 135P      | 2.75-16.0 | 45-57 | 62, 92          | -               | 40   | -                  |
| NBT50-SK16C-165P | 165P            | 2.75-16.0 | 45-57 | 90              | 112             | 40   | 50                 |



Rif. 1



Rif. 2



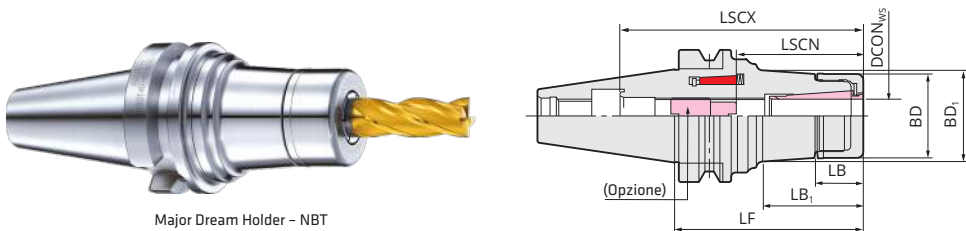
Rif. 3

| Max. G/min | Chiave a rulli | Pinza  | Vite di arresto | Ghiera di serraggio<br>TiN (Standard) | Ghiera di serraggio<br>di tipo jet | Cappuccio Jet | Cappuccio con<br>O-ring | Chiave cappuccio |
|------------|----------------|--------|-----------------|---------------------------------------|------------------------------------|---------------|-------------------------|------------------|
| 40,000     | GH6            | SK6-□  | SKG-8           | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           |
| 40,000     | GH10           | SK10-□ | SKG-12L         | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 30,000     | GH16           | SK16-□ | SKG-12L         | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 30,000     | GH16           | SK16-□ | SKG-12          | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 30,000     | GH16           | SK16-□ | SKG-18L         | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 30,000     | GH20           | SK20-□ | SKG-12S         | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 30,000     | GH20           | SK20-□ | SKG-12L         | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 30,000     | GH20           | SK20-□ | SKG-12          | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 30,000     | GH25           | SK25-□ | SKG-12          | SKN-25B(GH)                           | SKN-25BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 30,000     | GH6            | SK6-□  | SKG-8           | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           |
| 30,000     | GH10           | SK10-□ | SKG-12L         | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 30,000     | GH10           | SK10-□ | SKG-12L         | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 25,000     | GH16           | SK16-□ | SKG-18S         | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 25,000     | GH16           | SK16-□ | SKG-18L         | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 25,000     | GH16           | SK16-□ | SKG-18L         | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 25,000     | GH20           | SK20-□ | SKG-22          | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 25,000     | GH20           | SK20-□ | SKG-22          | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 20,000     | GH10           | SK10-□ | SKG-12L         | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 20,000     | GH10           | SK10-□ | SKG-12L         | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 20,000     | GH16           | SK16-□ | SKG-18L         | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 20,000     | GH16           | SK16-□ | SKG-18L         | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 40,000     | GH6            | SK6-□  | SKG6-6HG        | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           |
| 40,000     | GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 30,000     | GH16           | SK16-□ | SKG16-12HGE     | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 30,000     | GH16           | SK16-□ | SKG16-10HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 30,000     | GH16           | SK16-□ | SKG16-12HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 30,000     | GH6            | SK6-□  | SKG6-6HG        | SKN-6WK(GH)                           | SKN-6WKJ(GH)                       | SKJ6-□        | SKJ6-□C                 | SKJL-6           |
| 30,000     | GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 30,000     | GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 25,000     | GH16           | SK16-□ | SKG16-10HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 25,000     | GH16           | SK16-□ | SKG16-12HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 25,000     | GH20           | SK20-□ | SKG20-16HG      | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 25,000     | GH20           | SK20-□ | SKG20-18HG      | SKN-20B(GH)                           | SKN-20BJ(GH)                       | SKJ25-□       | SKJ25-□C                | SKJL-25          |
| 20,000     | GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 20,000     | GH10           | SK10-□ | SKG10-10HG      | SKN-10K(GH)                           | SKN-10KJ(GH)                       | SKJ10-□       | SKJ10-□C                | SKJL-10          |
| 20,000     | GH16           | SK16-□ | SKG16-12HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |
| 20,000     | GH16           | SK16-□ | SKG16-12HG      | SKN-16B(GH)                           | SKN-16BJ(GH)                       | SKJ16-□       | SKJ16-□C                | SKJL-16          |



Mini Mini Chuck – BT, NBT

| Codice              | LF                 | Range    | LSCN      | LB              | LB1              |
|---------------------|--------------------|----------|-----------|-----------------|------------------|
| NBT30-MMC8C-105-AA  | 105                | 2.0-8.0  | 9.4-15.0  | 33              | 42               |
| NBT30-MMC12C-105-AA | 105                | 4.0-12.0 | 20.0-31.0 | 35              | 44               |
| NBT40-MMC8C-□-AA    | 90, 120, 150       | 2.0-8.0  | 9.4-15.0  | 33, 40, 40, 70  | 42, 72, 102, 132 |
| NBT40-MMC12C-□-AA   | 90, 120, 150       | 4.0-12.0 | 20.0-31.0 | 35, 60, 70, 100 | 44, 74, 104, 134 |
| NBT50-MMC8C-□-AA    | 105, 135, 165, 195 | 2.0-8.0  | 9.4-15.0  | 33, 40, 40, 70  | 42, 72, 102, 132 |

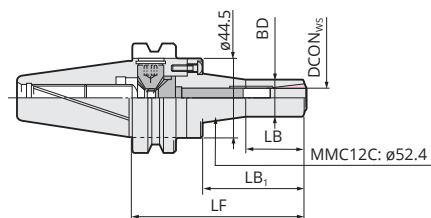


Major Dream Holder – NBT

| Codice           | LF                   | Range    | LSCN  | LSCX                        | LB   | LB1                          | BD   |
|------------------|----------------------|----------|-------|-----------------------------|------|------------------------------|------|
| NBT30-MDSK6-□    | 50, 60, 75, 90       | 3.0-6.0  | 21-35 | 73, 83, 98, 113             | 16.2 | 19.5, 25.5, 40.5, 55.5       | 19.5 |
| NBT30-MDSK10-□   | 60, 90               | 3.0-10.0 | 30-50 | 72, 82, 97, 112             | 18   | 19, 25.7, 42.9, 58.7         | 27.5 |
| NBT30-MDSK16-75  | 75                   | 3.0-16.0 | 45-60 | 60                          | 23   | 47.5                         | 40   |
| NBT30-MDSK16-90  | 90                   | 3.0-16.0 | 45-70 | 75                          | 23   | 62.5                         | 40   |
| NBT40-MDSK6-□    | 60, 75, 90, 105, 120 | 3.0-6.0  | 21-35 | 86, 101, 116, 131, 146      | 16.2 | 18, 33, 48, 63, 78           | 19.5 |
| NBT40-MDSK10-□   | 60, 90, 120, 150     | 3.0-10.0 | 30-50 | 86, 101, 116, 131, 146, 176 | 18   | 19, 33, 48, 63, 78, 110      | 27.5 |
| NBT40-MDSK16-65  | 65                   | 3.0-16.0 | 45-60 | 91                          | 23   | 24                           | 40   |
| NBT40-MDSK16-□   | 90, 120, 150         | 3.0-16.0 | 45-70 | 101, 116, 131, 146, 176     | 23   | 33, 48, 64, 80, 113          | 40   |
| NBT40-MDSK20-75  | 75                   | 4.0-20.0 | 50-73 | 80                          | 25.2 | 41.2                         | 48   |
| NBT40-MDSK20-90  | 90                   | 4.0-20.0 | 50-73 | 95                          | 25.2 | 55                           | 48   |
| NBT40-MDSK20-105 | 105                  | 4.0-20.0 | 50-73 | 110                         | 25.2 | 70                           | 48   |
| NBT40-MDSK20-120 | 120                  | 4.0-20.0 | 50-73 | 125                         | 25.2 | 85                           | 48   |
| NBT50-MDSK10-□   | 105, 120, 135, 165   | 3.0-10.0 | 30-50 | 116, 131, 146, 176, 206     | 18.2 | 48, 63.2, 78.2, 110.2, 141.2 | 27.5 |
| NBT50-MDSK16-□   | 105, 120, 135, 165   | 3.0-16.0 | 45-70 | 116, 131, 146, 176, 206     | 23   | 48, 64, 80.1, 114.7, 144.6   | 40   |
| NBT50-MDSK20-□   | 105, 135, 165, 195   | 4.0-20.0 | 47-80 | 159, 175, 205, 235          | 25.2 | 42.3, 72, 102, 132           | 48   |



Mini Mini Chuck - MBT



| BD | Max. G/min | Pinza (Standard) | Pinza a tenuta | Pinza Jet |
|----|------------|------------------|----------------|-----------|
| 20 | 30,000     | PMK8-□           | VMK8-□J        | VMK8-□    |
| 30 | 30,000     | PMK12-□          | VMK12-□J       | VMK12-□   |
| 20 | 30,000     | PMK8-□           | VMK8-□J        | VMK8-□    |
| 30 | 30,000     | PMK12-□          | VMK12-□J       | VMK12-□   |
| 20 | 20,000     | PMK8-□           | VMK8-□J        | VMK8-□    |

| BD1                                | Max. G/min | Chiave a rulli | Pinza   | Vite di arresto | Ghiera di serraggio di tipo jet | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|------------------------------------|------------|----------------|---------|-----------------|---------------------------------|---------------|----------------------|------------------|
| 20, 20.8, 22.9, 25                 | 40,000     | GH6            | SK6-□A  | SKG-8           | MDSKN-6KJ                       | SKJ6-□        | SKJ6-□C              | SKJL-6           |
| 27.5, 28.6, 31, 33.2               | 40,000     | GH10           | SK10-□A | SKG-12L         | MDSKN-10KJ                      | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| 40                                 | 40,000     | GH16           | SK16-□A | SKG-12L         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 40                                 | 40,000     | GH16           | SK16-□A | SKG-12          | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 19.5, 21.9, 24, 26.1, 28.2         | 30,000     | GH6            | SK6-□A  | SKG-8           | MDSKN-6KJ                       | SKJ6-□        | SKJ6-□C              | SKJL-6           |
| 27.5, 29.6, 31.7, 33.8, 35.9, 40.4 | 30,000     | GH10           | SK10-□A | SKG-12L         | MDSKN-10KJ                      | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| 40                                 | 30,000     | GH16           | SK16-□A | SKG-18L         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 41.4, 43.5, 45.8, 48, 52.6         | 30,000     | GH16           | SK16-□A | SKG-18L         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 51.3                               | 30,000     | GH20           | SK20-□A | SKG-12          | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 53.2                               | 30,000     | GH20           | SK20-□A | SKG-12-55L      | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 52.2                               | 30,000     | GH20           | SK20-□A | SKG-12-70L      | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 53.2                               | 30,000     | GH20           | SK20-□A | SKG-12-85L      | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| 31, .7, 33.8, 35.9, 40.4, 44.8     | 20,000     | GH10           | SK10-□A | SKG-12L         | MDSKN-10KJ                      | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| 43.5, 45.8, 48, 52.6, 52.8         | 20,000     | GH16           | SK16-□A | SKG-18L         | MDSKN-16BJ                      | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| 51.4, 55.6, 59.8, 64               | 20,000     | GH20           | SK20-□A | SKG-22          | MDSKN-20BJ                      | SKJ25-□       | SKJ25-□C             | SKJL-25          |

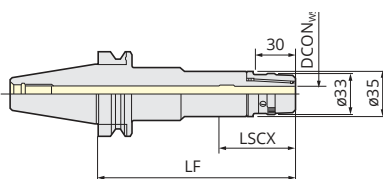
**BT JIS B6339 / MAS 403**

MULTI-LOCK MILLING CHUCK - BT / NBT / MBT Panoramica | Pag. 8 - 15

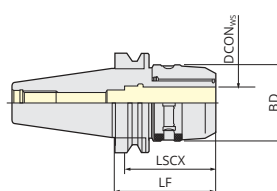
MULTI-LOCK MILLING CHUCK - BT / NBT / MBT Panoramica | Pag. 8 - 15



### Multi-Lock Milling Chuck – BT



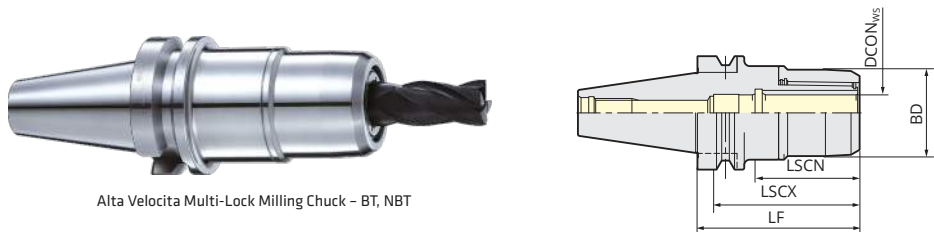
## Multi-Lock Milling Chuck C12



| Codice        | LF                     | Range    | LSCN | LSCX           | BD | Max. G/min |
|---------------|------------------------|----------|------|----------------|----|------------|
| BT30-C16-55   | 55                     | 2.0-16.0 | 47.5 | 65             | 44 | 10,000     |
| BT30-C20-65   | 65                     | 2.0-20.0 | 53   | 80             | 52 | 6,000      |
| BT30-C25-75   | 75                     | 3.0-25.0 | 59   | 68             | 55 | 5,000      |
| BT40-C20-□    | 70, 90, 120            | 2.0-20.0 | 53   | 80             | 52 | 7,000      |
| BT40-C25-□    | 70, 90, 120            | 3.0-25.0 | 59   | 80             | 60 | 6,000      |
| BT40-C32-120  | 120                    | 3.0-32.0 | 64.5 | 77, 90, 105    | 69 | 6,000      |
| BT50-C20-□    | 105, 135, 165          | 2.0-20.0 | 53   | 80             | 52 | 8,000      |
| BT50-C25-□    | 105, 135, 165          | 3.0-25.0 | 59   | 80             | 60 | 8,000      |
| BT50-C32-□    | 90, 105, 120, 135, 165 | 3.0-32.0 | 64.5 | 105            | 69 | 6,000      |
| NBT30-C12-55  | 55                     | 2.0-12.0 | 40   | 58             | 33 | 15,000     |
| NBT30-C16-□   | 55, 70                 | 2.0-16.0 | 47.5 | 65             | 44 | 10,000     |
| NBT30-C20-□   | 65, 75                 | 2.0-20.0 | 53   | 80             | 52 | 6,000      |
| NBT30-C25-□   | 75, 90                 | 3.0-25.0 | 59   | 68, 68, 80     | 55 | 6,000      |
| NBT30-C32-100 | 100                    | 3.0-32.0 | 64.5 | 68, 72         | 64 | 5,000      |
| NBT40-C20-□   | 70, 90, 120            | 2.0-20.0 | 53   | 80             | 52 | 7,000      |
| NBT40-C25-□   | 70, 90, 120            | 3.0-25.0 | 59   | 80             | 60 | 6,000      |
| NBT40-C32-□   | 85, 105, 120, 135      | 3.0-32.0 | 64.5 | 77, 81, 81, 81 | 69 | 6,000      |
| NBT50-C20-□   | 105, 135, 165          | 2.0-20.0 | 53   | 80             | 52 | 8,000      |
| NBT50-C25-□   | 105, 135, 165          | 3.0-25.0 | 59   | 80             | 60 | 8,000      |
| NBT50-C32-□   | 105, 120, 135, 165     | 3.0-32.0 | 64.5 | 81             | 69 | 6,000      |

| Chiave | Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|--------|-----------------------------------|---------------|----------------------|------------------|
| 9HC16  | CCK16-□, KM16-□                   | CKFN16-□      | CKFN16-□C            | CCKLN16          |
| 9HC22  | CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| 9HC22  | CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| 9HC22  | CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| 9HC25  | CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| 9HC32  | CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| 9HC22  | CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| 9HC25  | CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| 9HC32  | CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| 9HC12A | CCK12-□, KM12-□                   | CKFN12-□      | CKFN12-□C            | CCKLN12          |
| 9HC16  | CCK16-□, KM16-□                   | CKFN16-□      | CKFN16-□C            | CCKLN16          |
| 9HC22  | CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| 9HC22  | CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| 9HC25  | CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32T-□     | CKFN32-□C            | CCKLN32          |
| 9HC22  | CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| 9HC25  | CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| 9HC32  | CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| 9HC22  | CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| 9HC25  | CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| 9HC32  | CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |

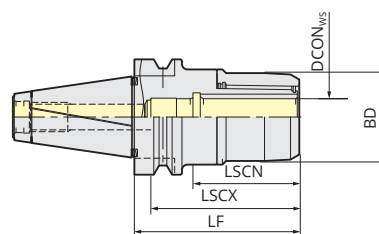




| Codice          | LF                   | Range    | LSCN | LSCX       | BD | Max. G/min | Chiave a rulli |
|-----------------|----------------------|----------|------|------------|----|------------|----------------|
| BT30-C16-55G    | 55G                  | 2.0-16.0 | 47.5 | 65         | 40 | 40,000     | GH16           |
| BT30-C20-□      | 65G, 75G             | 2.0-20.0 | 53   | 80         | 48 | 30,000     | GH20           |
| BT30-C25-□      | 75G, 80G             | 3.0-25.0 | 59   | 68         | 55 | 25,000     | GH25           |
| BT30-C32-□      | 90G, 100G            | 3.0-32.0 | 64.5 | 68, 76     | 62 | 10,000     | GH32S          |
| BT40-C20-□      | 70G, 90G             | 2.0-20.0 | 53   | 80         | 48 | 25,000     | GH20           |
| BT40-C25-□      | 70G, 90G             | 3.0-25.0 | 59   | 80         | 55 | 20,000     | GH25           |
| BT40-C32-□      | 85G, 105G            | 3.0-32.0 | 64.5 | 77, 90     | 68 | 20,000     | GH32           |
| BT50-C20-□      | 105G, 135G           | 2.0-20.0 | 53   | 80         | 48 | 20,000     | GH20           |
| BT50-C25-□      | 105G, 135G           | 3.0-25.0 | 59   | 80         | 55 | 15,000     | GH25           |
| NBT30-C12-55G   | 55G                  | 2.0-12.0 | 40   | 58         | 33 | 40,000     | GH12           |
| NBT30-C16-55G-□ | 55G, 70G             | 2.0-16.0 | 47.5 | 65         | 40 | 40,000     | GH16           |
| NBT30-C20-65G   | 65G                  | 2.0-20.0 | 53   | 80         | 48 | 30,000     | GH20           |
| NBT30-C25-□     | 75G, 90G             | 3.0-25.0 | 59   | 68, 68, 80 | 55 | 25,000     | GH25           |
| NBT40-C20-□     | 70G, 90G, 105G, 120G | 2.0-20.0 | 53   | 80         | 48 | 25,000     | GH20           |
| NBT40-C25-□     | 70G, 90G, 120G       | 3.0-25.0 | 59   | 80         | 55 | 20,000     | GH25           |
| NBT50-C20-□     | 105G, 135G           | 2.0-20.0 | 53   | 80         | 48 | 20,000     | GH20           |
| NBT50-C25-□     | 105G, 135G, 165G     | 3.0-25.0 | 59   | 80         | 55 | 15,000     | GH25           |



Alta Velocita Multi-Lock Milling Chuck – MBT



| Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Vite di arresto | Chiave cappuccio |
|-----------------------------------|---------------|----------------------|-----------------|------------------|
| CCK16-□, KM16-□                   | CKFN16-□      | CKFN16-□C            | -               | CCKLN16          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | 9MC20H          | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | 9MC25H          | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32T-□     | CKFN32-□C            | 9MC32H          | CCKLN32          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | 9MC20H          | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | 9MC25H          | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | 9MC32H          | CCKLN32          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | -               | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | -               | CCKLN25          |
| CCK12-□, KM12-□                   | CKFN12-□      | CKFN12-□C            | -               | CCKLN12          |
| CCK16-□, KM16-□                   | CKFN16-□      | CKFN16-□C            | -               | CCKLN16          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | 9MC20H          | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | 9MC25H          | CCKLN25          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | 9MC20H          | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | 9MC25H          | CCKLN25          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | 9MC20H          | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | 9MC25H          | CCKLN25          |

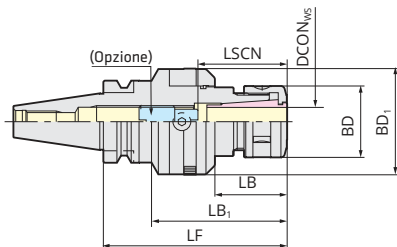


Zero Fit Slim Chuck – BT, NBT

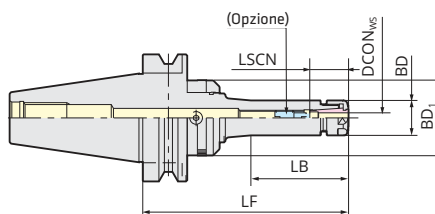


Zero Fit Slim Chuck – MBT

| Codice         | LF       | Range     | LSCN  | LB      | LB1     | BD   | BD1        | Max. G/min | Chiave |
|----------------|----------|-----------|-------|---------|---------|------|------------|------------|--------|
| BT30-SZF6-90   | 90       | 0.7-6.0   | 21-35 | 42      | -       | 19.5 | 40.5       | 15,000     | SKL-6W |
| BT30-SZF10-90  | 90       | 1.75-10.0 | 30-50 | 35      | 61      | 27.5 | 48.5       | 15,000     | SKL-10 |
| BT30-SZF16-105 | 105      | 2.75-16.0 | 45-65 | 40      | 76      | 40   | 59.5       | 10,000     | 9HC16  |
| BT40-SZF6-□    | 90, 150  | 0.7-6.0   | 21-35 | 37, 60  | -       | 19.5 | 40.5, 48.5 | 15,000     | SKL-6W |
| BT40-SZF10-□   | 90, 150  | 1.75-10.0 | 30-50 | 37, 97  | -       | 27.5 | 48.5       | 15,000     | SKL-10 |
| BT40-SZF16-□   | 90, 150  | 2.75-16.0 | 45-65 | 37, 97  | -       | 40   | 59.5       | 12,000     | 9HC16  |
| BT40-SZF25-□   | 120, 150 | 7.5-25.4  | 55-85 | 55, 86  | 84, 114 | 55   | 66.5       | 10,000     | 9HC25  |
| BT50-SZF6-□    | 105, 165 | 0.7-6.0   | 21-35 | 41, 63  | -       | 19.5 | 40.5, 59.5 | 15,000     | SKL-6W |
| BT50-SZF10-□   | 105, 165 | 1.75-10.0 | 30-50 | 41, 101 | -       | 27.5 | 48.5       | 15,000     | SKL-10 |
| BT50-SZF16-□   | 105, 165 | 2.75-16.0 | 45-65 | 41, 101 | -       | 40   | 59.5       | 12,000     | 9HC16  |
| BT50-SZF25-□   | 135, 165 | 7.5-25.4  | 55-85 | 71, 101 | -       | 55   | 66.5       | 10,000     | 9HC25  |



Rif. 1



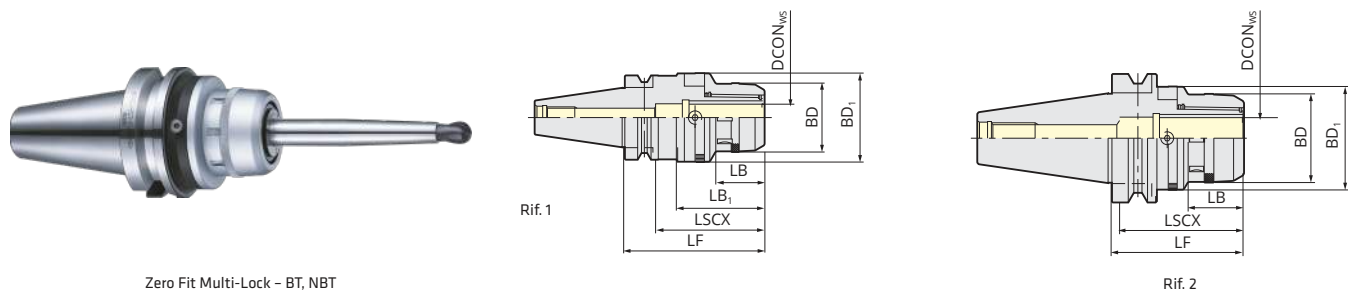
Rif. 2

| Pinza  | Vite di arresto | Ghiera di serraggio<br>TiN (Standard) | Ghiera di serraggio di<br>tipo jet | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio | Rif. |
|--------|-----------------|---------------------------------------|------------------------------------|---------------|----------------------|------------------|------|
| SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C              | SKJL-6           | 2    |
| SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C             | SKJL-10          | 1    |
| SK16-□ | SKG-28          | SKN-16B                               | SKN-16BJ                           | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1    |
| SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C              | SKJL-6           | 2    |
| SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C             | SKJL-10          | 2    |
| SK16-□ | SKG-18L         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C             | SKJL-16          | 2    |
| SK25-□ | SKG-28          | SKN-25B                               | SKN-25BJ                           | SKJ25-□       | SKJ25-□C             | SKJL-25          | 1    |
| SK6-□  | SKG-8           | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C              | SKJL-6           | 2    |
| SK10-□ | SKG-12L         | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C             | SKJL-10          | 2    |
| SK16-□ | SKG-18L         | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C             | SKJL-16          | 2    |
| SK25-□ | SKG-28          | SKN-25B                               | SKN-25BJ                           | SKJ25-□       | SKJ25-□C             | SKJL-25          | 2    |

# BT JIS B6339 / MAS 403

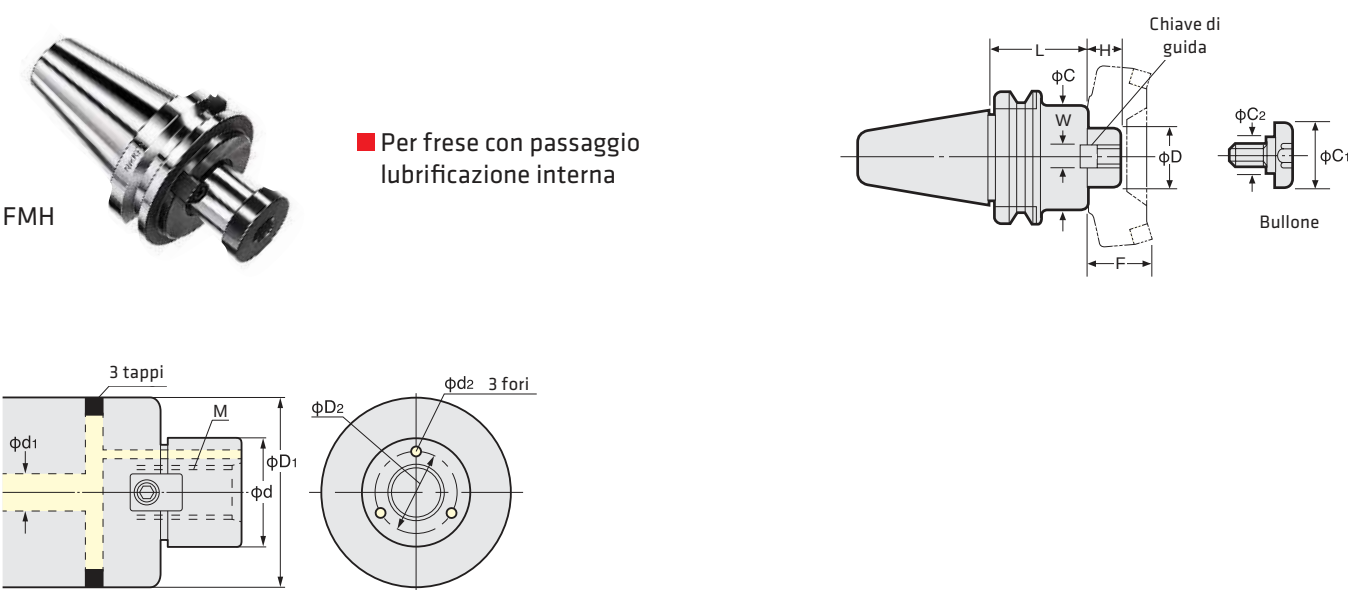
ZERO FIT MULTI-LOCK – BT / NBT / MBT

Panoramica | Pag. 25 - 27



| Codice         | LF       | Range    | LSCN | LSCX | LB | LB1  | BD   | BD1  | Max. G/min |
|----------------|----------|----------|------|------|----|------|------|------|------------|
| BT30-CZF20-100 | 100      | 2.0-20.0 | 53   | 80   | 35 | 68   | 51.5 | 66.5 | 6,000      |
| BT30-CZF25-100 | 100      | 3.0-25.0 | 59   | 80   | 35 | 68   | 59.5 | 74.5 | 5,000      |
| BT40-CZF20-□   | 105, 120 | 2.0-20.0 | 53   | 80   | 35 | 64.5 | 51.5 | 66.5 | 7,000      |
| BT40-CZF25-□   | 105, 120 | 3.0-25.0 | 59   | 80   | 35 | 68   | 59.5 | 74.5 | 6,000      |
| BT40-CZF32-120 | 120      | 3.0-32.0 | 64.5 | 105  | 42 | 78   | 69   | 80.5 | 6,000      |
| BT50-CZF20-□   | 105, 165 | 2.0-20.0 | 53   | 80   | 35 | -    | 51.5 | 66.5 | 8,000      |
| BT50-CZF25-□   | 105, 165 | 3.0-25.0 | 59   | 80   | 35 | -    | 59.5 | 74.5 | 8,000      |
| BT50-CZF32-□   | 105, 165 | 3.0-32.0 | 64.5 | 105  | 42 | -    | 69   | 80.5 | 6,000      |

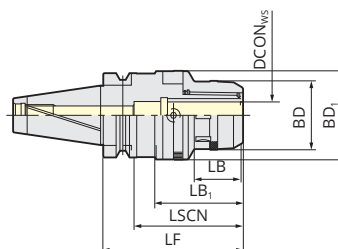
# BT FMH Face Mill Arbor



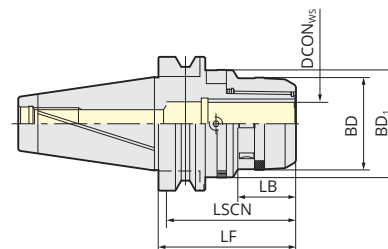
| Codice | Diametro della fresa | φd | φD1    | M         | Foro per il refrigerante |        |     |
|--------|----------------------|----|--------|-----------|--------------------------|--------|-----|
|        |                      |    |        |           | φD2                      | φd1    | φd2 |
| FMH16  | φ40                  | 16 | 37     | M8 P1.25  | 12                       | 6      | 2   |
| FMH22  | φ50, φ52             | 22 | 47     | M10 P1.5  | 16                       | 6 ~ 8  | 3   |
|        | φ63, φ66             |    | 60     |           |                          |        |     |
| FMH27  | φ80                  | 27 | 60, 76 | M12 P1.75 | 18.5                     | 8 ~ 10 | 3.5 |



Zero Fit Multi-Lock - MBT



Rif. 1



Rif. 2

| Chiave | Pinza           | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio | Rif. |
|--------|-----------------|---------------|----------------------|------------------|------|
| 9HC22  | CCK20-□, KM20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          | 1    |
| 9HC25  | CCK25-□, KM25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          | 1    |
| 9HC22  | CCK20-□, KM20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          | 1    |
| 9HC25  | CCK25-□, KM25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          | 1    |
| 9HC32  | CCK32-□, KM32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          | 1    |
| 9HC22  | CCK20-□, KM20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          | 2    |
| 9HC25  | CCK25-□, KM25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          | 2    |
| 9HC32  | CCK32-□, KM32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          | 2    |

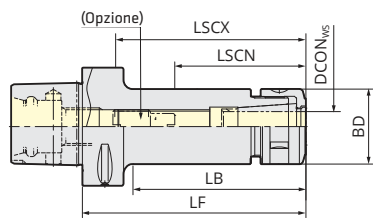
## Serie metrica FMH

| Codice                | Arbor |     | H  | C  | C1 | W  | Chiave di azionamento | Bullone di bloccaggio | G Bullone di chiusura | Peso (kg) |
|-----------------------|-------|-----|----|----|----|----|-----------------------|-----------------------|-----------------------|-----------|
|                       | D     | L   |    |    |    |    |                       |                       |                       |           |
| BT30-FMH16- 37 - 35   | 16    | 35  | 17 | 37 | 20 | 8  | FW 3                  | FM 8                  | -                     | 0.56      |
| -FMH22- 47 - 45       | 22    | 45  | 18 | 47 | 16 | 10 | FW 8                  | -                     | 9GM10-30              | 0.76      |
| -FMH27- 60 - 45       | 27    | 45  | 20 | 60 | 18 | 12 | FW 11                 | -                     | 9GM12-35              | 0.91      |
| BT40-FMH16- 37 - 40   | 16    | 40  | 17 | 37 | 20 | 8  | FW 3                  | FM 8                  | -                     | 1.1       |
| (IT40)-FMH22- 47 - 45 | 22    | 45  | 18 | 47 | 16 | 10 | FW 8                  | -                     | 9GM10-30              | 1.3       |
| - 60                  |       | 60  |    |    |    |    |                       |                       |                       | 1.5       |
| -FMH22- 60 - 45*1     | 22    | 45  | 18 | 60 | 16 | 10 | FW 8                  | -                     | 9GM10-30              | 1.5       |
| - 60                  |       | 60  |    |    |    |    |                       |                       |                       | 1.8       |
| -FMH27- 60 - 45       | 27    | 45  | 20 | 60 | 18 | 12 | FW 11                 | -                     | 9GM12-35              | 1.5       |
| - 60                  |       | 60  |    |    |    |    |                       |                       |                       | 1.8       |
| -FMH27- 76 - 60       | 27    | 60  | 20 | 76 | 18 | 12 | FW 11                 | -                     | 9GM12-35              | 2.1       |
| - 90                  |       | 90  |    |    |    |    |                       |                       |                       | 2.8       |
| BT50-FMH16- 37 - 60   | 16    | 60  | 17 | 37 | 20 | 8  | FW 3                  | FM 8                  | -                     | 3.8       |
| (IT50) -105           |       | 105 |    |    |    |    |                       |                       |                       | 4.1       |
| -FMH22- 47 - 60       | 22    | 60  | 18 | 47 | 16 | 10 | FW 8                  | -                     | 9GM10-30              | 4.1       |
| - 105                 |       | 105 |    |    |    |    |                       |                       |                       | 4.7       |
| -FMH22- 60 - 60       | 22    | 60  | 18 | 60 | 16 | 10 | FW 8                  | -                     | 9GM10-30              | 4.2       |
| - 105                 |       | 105 |    |    |    |    |                       |                       |                       | 5.2       |
| -FMH27- 60 - 45       | 27    | 45  | 20 | 60 | 18 | 12 | 9FWE27                | -                     | 9GM12-35              | 3.9       |
| - 90                  |       | 90  |    |    |    |    | FW 8                  |                       |                       | 5.0       |
| -FMH27- 76 - 45       | 27    | 45  | 20 | 76 | 18 | 12 | FW 10                 | -                     | 9GM12-35              | 4.0       |
| - 90                  |       | 90  |    |    |    |    | FW 11                 |                       |                       | 5.6       |

\*1 IT40-FMH27-60-45 non è disponibile.



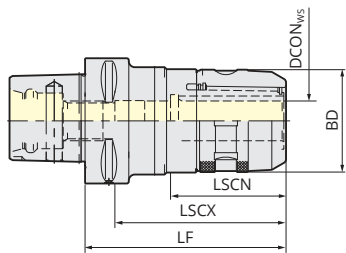
Slim Chuck



| Codice     | LF          | Range     | LSCN  | LB          | BD   | Max. G/min | Chiave |
|------------|-------------|-----------|-------|-------------|------|------------|--------|
| C4-SK6-60  | 60          | 0.7-6.0   | 30    | 40          | 19.5 | 15,000     | SKL-6W |
| C4-SK10-60 | 60          | 1.75-10.0 | 35.1  | 40          | 27.5 | 15,000     | SKL-10 |
| C4-SK16-60 | 60          | 2.75-16.0 | 51.3  | 39.3        | 40   | 15,000     | 9HC16  |
| C4-SK20-75 | 75          | 3.5-20.0  | 61    | 55          | 48.5 | 12,000     | 9HC22  |
| C6-SK6-□   | 60, 90, 120 | 0.7-6.0   | 21-35 | 33, 63, 88  | 19.5 | 15,000     | SKL-6W |
| C6-SK10-□  | 60, 90, 120 | 1.75-10.0 | 30-51 | 33, 63, 93  | 27.5 | 15,000     | SKL-10 |
| C6-SK16-□  | 60, 90, 120 | 2.75-16.0 | 40-70 | 35, 63, 93  | 40   | 15,000     | 9HC16  |
| C6-SK20-□  | 70, 90, 120 | 3.5-20.0  | 47-80 | 45, 65, 95  | 48.5 | 12,000     | 9HC22  |
| C8-SK10-□  | 120, 165    | 1.75-10.0 | 30-50 | 50, 75, 120 | 27.5 | 15,000     | SKL-10 |
| C8-SK16-□  | 120, 165    | 2.75-16.0 | 40-70 | 50, 80, 125 | 40   | 15,000     | 9HC16  |
| C8-SK20-□  | 120, 165    | 3.5-20.0  | 47-80 | 50, 80, 125 | 48.5 | 12,000     | 9HC22  |



Multi-Lock Major Dream



| Codice       | LF  | Range    | LSCN | BD | Max. C/min | Chiave |
|--------------|-----|----------|------|----|------------|--------|
| C6-MDC20-100 | 100 | 2.0-20.0 | 57   | 52 | 8,000      | 9HC22  |
| C6-MDC25-110 | 110 | 3.0-25.0 | 58   | 60 | 8,000      | 9HC25  |
| C6-MDC32-130 | 130 | 3.0-32.0 | 70   | 68 | 8,000      | 9HC32  |

| Pinza  | Vite di arresto | Ghiera di serraggio TiN<br>(Standard) | Ghiera di serraggio di<br>tipo jet | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|--------|-----------------|---------------------------------------|------------------------------------|---------------|----------------------|------------------|
| SK6-□  | SKG6-6HG        | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C              | SKJL-6           |
| SK10-□ | SKG10-10HG      | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| SK16-□ | SKG16-12HG      | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| SK20-□ | SKG20-12MFHG    | SKN-20B                               | SKN-20BJ                           | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| SK6-□  | SKG6-6HG        | SKN-6WK                               | SKN-6WKJ                           | SKJ6-□        | SKJ6-□C              | SKJL-6           |
| SK10-□ | SKG10-10HG      | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| SK16-□ | SKG16-12HG      | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| SK20-□ | SKG20-12MFHG    | SKN-20B                               | SKN-20BJ                           | SKJ25-□       | SKJ25-□C             | SKJL-25          |
| SK10-□ | SKG10-10HG      | SKN-10K                               | SKN-10KJ                           | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| SK16-□ | SKG16-12HG      | SKN-16B                               | SKN-16BJ                           | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| SK20-□ | SKG20-12MFHG    | SKN-20B                               | SKN-20BJ                           | SKJ25-□       | SKJ25-□C             | SKJL-25          |

| Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|-----------------------------------|---------------|----------------------|------------------|
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |



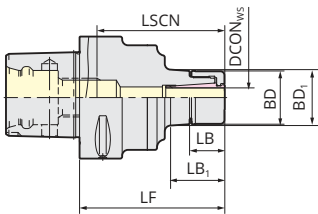
# Poligonale ISO 26223-1

MAJOR DREAM HOLDER - POLIGONALE

Panoramica | Pag. 18



Major Dream Holder



| Codice      | LF     | Range    | LSCN  | LB   | LB1        | BD   | BD1      | Max. G/min | Chiave a rulli |
|-------------|--------|----------|-------|------|------------|------|----------|------------|----------------|
| C6-MDSK10-□ | 65, 90 | 3.0-10.0 | 30-50 | 18.2 | 19.43      | 27.5 | 27.5, 31 | 20,000     | GH10           |
| C6-MDSK16-□ | 70, 90 | 3.0-16.0 | 45-60 | 22   | 24.43      | 40   | 40, 42.8 | 20,000     | GH16           |
| C6-MDSK20-□ | 80, 90 | 4.0-20.0 | 47-70 | 25.2 | 39.3, 50.7 | 48   | 51, 52.6 | 20,000     | GH20           |

STANDARD MULTI-LOCK MILLING CHUCK - POLIGONALE

Panoramica | Pag. 19 - 24



Standard Multi-Lock Milling Chuck

| Codice   | LF                | Range    | LSCN | LSCX               | BD | Max. G/min | Chiave |
|----------|-------------------|----------|------|--------------------|----|------------|--------|
| C6-C20-□ | 75, 90, 120       | 2.0-20.0 | 66   | 66, 80, 80         | 52 | 8,000      | 9HC22  |
| C6-C25-□ | 75, 90, 120,      | 3.0-25.0 | 66   | 66, 80, 80         | 60 | 8,000      | 9HC25  |
| C6-C32-□ | 80, 120           | 3.0-32.0 | 71   | 71, 107            | 69 | 6,000      | 9HC32  |
| C8-C20-□ | 105, 135, 165     | 2.0-20.0 | 58   | 80                 | 52 | 8,000      | 9HC22  |
| C8-C25-□ | 75, 105, 135, 165 | 3.0-25.0 | 60   | 80                 | 60 | 8,000      | 9HC25  |
| C8-C32-□ | 90, 105, 135, 165 | 3.0-32.0 | 70   | 100, 105, 105, 105 | 69 | 6,000      | 9HC32  |

# Attacco cilindrico

MINI MINI CHUCK - CILINDRICO

Panoramica | Pag. 16 - 17

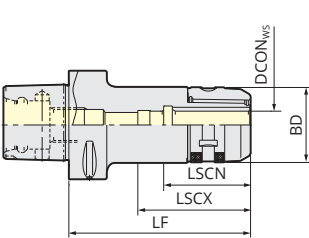


Mini Mini Chuck

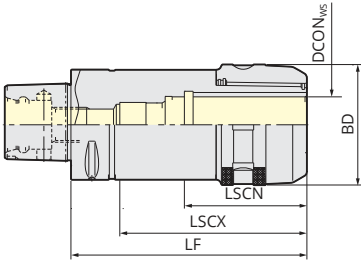


| Codice         | OAL      | DCONMS | LB1 | LB2 | Range    | LSCN      | BD |
|----------------|----------|--------|-----|-----|----------|-----------|----|
| K20-MMC-8-100  | 100      | 20     | 80  | 20  | 2.0-8.0  | 9.4-15.0  | 20 |
| K32-MMC8-□     | 122, 160 | 32     | 67  | 40  | 2.0-8.0  | 9.4-15.0  | 20 |
| K32-MMC12-170S | 170      | 32     | 120 | 50  | 4.0-12.0 | 20.0-31.0 | 30 |

| Pinza   | Vite di arresto | Jet Type Clamping Nut | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|---------|-----------------|-----------------------|---------------|----------------------|------------------|
| SK10-□A | SKG-12L         | MDSKN-10KJ            | SKJ10-□       | SKJ10-□C             | SKJL-10          |
| SK16-□A | SKG-18S         | MDSKN-16BJ            | SKJ16-□       | SKJ16-□C             | SKJL-16          |
| SK20-□A | SKG20-22        | MDSKN-20BJ            | SKJ20-□       | SKJ20-□C             | SKJL-25          |



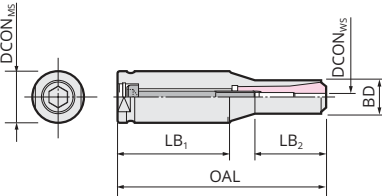
Rif. 1



Rif. 2

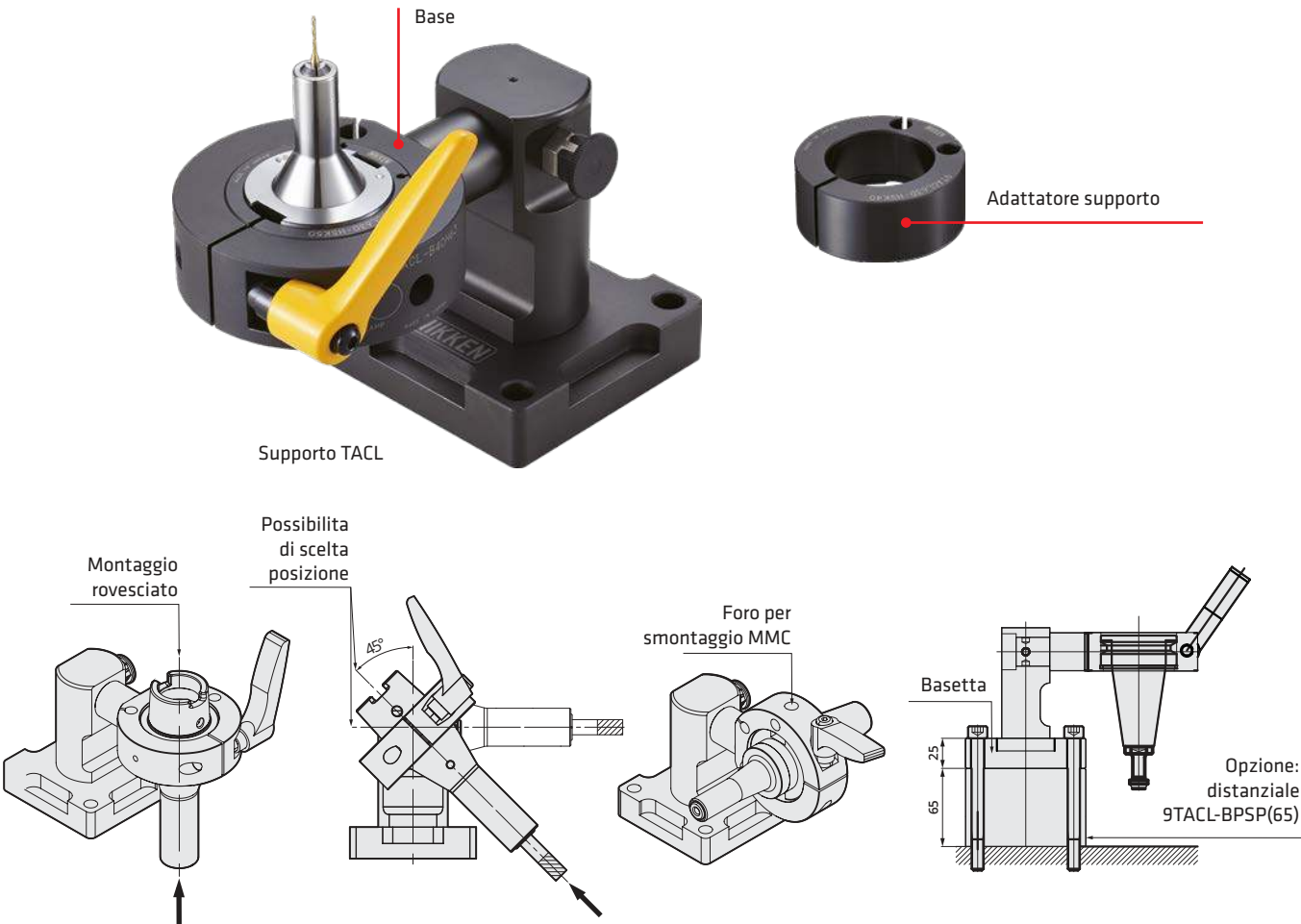
| Pinza                             | Cappuccio Jet | Cappuccio con O-ring | Chiave cappuccio |
|-----------------------------------|---------------|----------------------|------------------|
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |
| CCK20-□, CCNK20-□, KM20-□, NK20-□ | CKFN20-□      | CKFN20-□C            | CCKLN20          |
| CCK25-□, CCNK25-□, KM25-□, NK25-□ | CKFN25-□      | CKFN25-□C            | CCKLN25          |
| CCK32-□, CCNK32-□, KM32-□, NK32-□ | CKFN32-□      | CKFN32-□C            | CCKLN32          |

Per la versione alta velocita' la miglior scelta è la pinza versione P



| Pinza (Standard) | Pinza Jet | Pinza a tenuta | Peso (kg) |
|------------------|-----------|----------------|-----------|
| PMK8-□           | VMK8-□J   | VMK8-□         | 0.2       |
| PMK8-□           | VMK8-□J   | VMK8-□         | 0.5, 0.7  |
| PMK12-□          | VMK12-□J  | VMK12-□        | 1         |

SUPPORTO DI MONTAGGIO



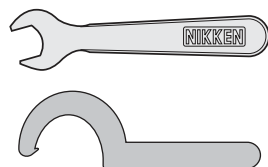
| Codice supporto | HSK63 | HSK100 | IT40 | BT40 | BT50 | C6 |
|-----------------|-------|--------|------|------|------|----|
| TACL-B40H63     | ○     | -      | -    | ○    | -    | ○  |
| TACL-B50H100    | -     | ○      | -    | -    | ○    | -  |
| TACL-ICAT40     | -     | -      | ○    | -    | -    | -  |

| TACL-B40H63<br>codice adattatore | Attacco   |
|----------------------------------|-----------|
| 9TACL63D-B30N46                  | BT30      |
| 9TACL63D-HSK40                   | HSK40, C4 |
| 9TACL63D-HSK32                   | HSK32     |
| 9TACL63D-HSK25                   | HSK25     |

| TACL-B50H100<br>codice adattatore | Attacco           |
|-----------------------------------|-------------------|
| 9TACL100D-B40H63                  | BT40<br>HSK63, C6 |
| 9TACL100D-IT50                    | IT50              |
| 9TACL100D-HSK80                   | HSK80, C8         |

| TACL-B40H63<br>codice adattatore | Attacco       |
|----------------------------------|---------------|
| 9TACL63D-S5/8                    | K5/8CM        |
| 9TACL63D-S3/4                    | K3/4CM, ST3/4 |
| 9TACL63D-S20                     | K20CM, ST20   |
| 9TACL63D-S25                     | K25CM, ST25   |
| 9TACL63D-S1                      | K1CM, ST1     |

CHIAVE



| Dimensione      | Codice | Slim Chuck       | Codice |
|-----------------|--------|------------------|--------|
| C20             | 9HC22  | SK6 (C=Ø 18mm)   | SKL-6  |
| C25 (C1=Ø 55mm) | 9HC22  | SK6 (C=Ø 19.5mm) | SKL-6W |
| C25 (C1=Ø 60mm) | 9HC25  | SK10             | SKL-10 |
| C32 (C1=Ø 64mm) | 9HC25  | SK16             | 9HC16  |
| C32 (C1=Ø 69mm) | 9HC32  | SK20             | 9HC22  |

CHIAVE A RULLI

La chiave a rullini GH è dotata di una leva per il cambio di bloccaggio/rilascio. In questo modo è possibile cambiare facilmente gli utensili.



| Codice | Milling Chuck                     | Slim Chuck     | Major Dream | VC Holder |
|--------|-----------------------------------|----------------|-------------|-----------|
| GH6*   | –                                 | SK 6-P / SKT 6 | MDSK 6      | –         |
| GH10*  | –                                 | SK10-P / SKT10 | MDSK10      | VC6       |
| GH20*  | C20-G                             | SK20-P / SKT20 | MDSK20      | –         |
| GH25*  | C25-G                             | SK25-P / SKT25 | MDSK25      | –         |
| GH32S  | C32-G (Dado di serraggio: Ø 62mm) | –              | –           | –         |
| GH32   | C32-G (Dado di serraggio: Ø 68mm) | –              | –           | –         |

\* I tipi sono disponibili come opzione con regolazione della coppia: GH6-TLS, GH10-TLS, GH16-TLS, GH20-TLS, GH25-TLS

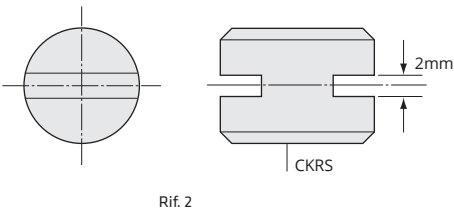
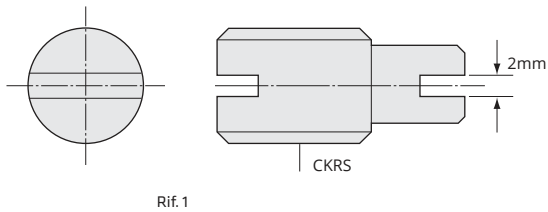
HSK TUBETTI LUBRIFICANTE



| Attacco | Tipologia di tubetto lubrificazione |            | Chiave     |
|---------|-------------------------------------|------------|------------|
|         | Mobile                              | Fisso      |            |
| HSK40A  | HSK40-LP                            | HSK40-LPS  | HSK40-LPL  |
| HSK63A  | HSK63-LP                            | HSK63-LPS  | HSK63-LPL  |
| HSK100A | HSK100-LP                           | HSK100-LPS | HSK100-LPL |

Tappo a vite per HSK63 - HSK63-LPGP disponibile come opzionale

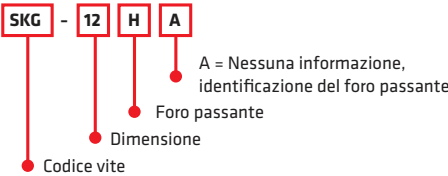
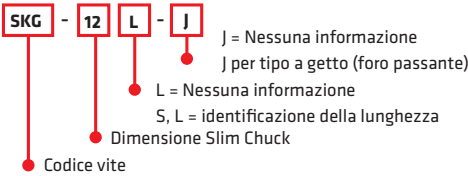
VITI DI ARRESTO



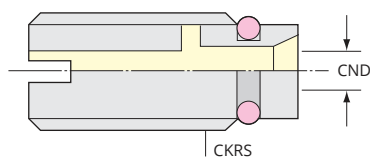
| Modello | Filetto | Codice vite | Rif. | Tipologia Slim Chuck                         |
|---------|---------|-------------|------|----------------------------------------------|
| SK6     | M6      | SKG- 8      | 1    | Tutti i SK6 Slim Chucks                      |
| SK10    | M12     | SKG-12L     | 1    | Tutti gli SK10 Slim Chucks tranne:           |
|         |         | SKG-12S     | 2    | BT30-SK10-45, HSK50A-SK10-90, HSK63F-SK10-90 |
| SK16    | M18x1.5 | SKG-18L     | 1    | Tutti i SK16 Slim Chucks tranne:             |
|         | M12     | SKG-12      | 2    | BT30-SK16-90                                 |
|         |         | SKG-12L     | 1    | BT30-SK16-60                                 |
|         | M18x1.5 | SKG-18S     | 2    | BT40-SK16-60                                 |
| SK20    | M22x1.5 | SKG-22      | 1    | Tutti i SK20 Slim Chucks tranne:             |
|         | M12     | SKG-12      | 2    | BT30-SK20-90                                 |
|         |         | SKG-12L     | 1    | BT30-SK20-75                                 |
|         | M12     | SKG-12S     | 2    | BT30-SK20-60                                 |

| Modello | Filetto | Codice vite | Rif. | Diam. fine utensile | Diam. Utensile |
|---------|---------|-------------|------|---------------------|----------------|
| SK10    | M12     | SKG-12H     | 3    | Ø 4                 | Ø 6-           |
|         |         | SKG-12HA    | 3    | Ø 2.5               | Ø 4-           |
| SK16    | M12     | SKG-12H     | 3    | Ø 4                 | Ø 6-           |
|         |         | SKG-12HA    | 3    | Ø 2.5               | Ø 4-           |
|         | M18x1.5 | SKG-18H     | 3    | Ø 7.2               | Ø 10-          |
|         |         | SKG-18HA    | 3    | Ø 3.5               | Ø 5-           |
| SK20    | M12     | SKG-12H     | 3    | Ø 4                 | Ø 6-           |
|         |         | SKG-12HA    | 3    | Ø 2.5               | Ø 4-           |
|         | M22x1.5 | SKG-22H     | 3    | Ø 8                 | Ø 10-          |

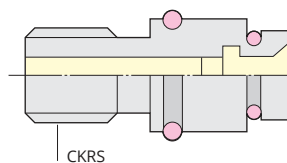
Tutti i modelli possono essere ordinati con foro passante.  
Aggiungi J alla fine del nome.



Ulteriori versioni sono disponibili su richiesta.

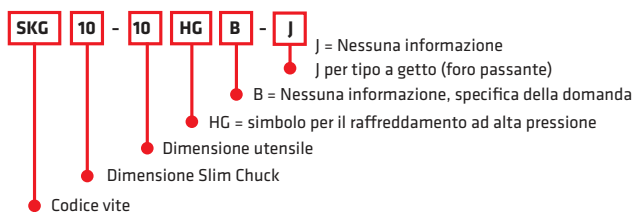


Rif. 3



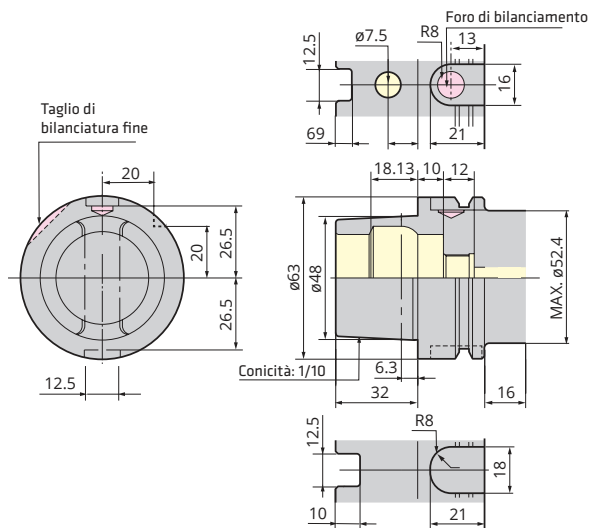
Rif. 4

| Tipologia   | Filetto | Codice vite  | Rif. | Diam. fine utensile | Diam. utensile | Codici per Slim Chuck                                                                                            |
|-------------|---------|--------------|------|---------------------|----------------|------------------------------------------------------------------------------------------------------------------|
| <b>SK6</b>  | M6      | SKG 6- 6HG   | 4    | Ø 2.5               | Ø 4-           | Tutti i Slim Chucks SK6C/SK6F                                                                                    |
| <b>SK10</b> | M10     | SKG10-10HG   | 4    | Ø 4                 | Ø 6-           | Tutti i Slim Chucks SK10C/SK10F                                                                                  |
|             | M10     | SKG10-10HGA  | 4    | Ø 2.5               | Ø 4-           |                                                                                                                  |
| <b>SK16</b> | M12     | SKG16-12HG   | 4    | Ø 7.2               | Ø 10-          | Tutti i Slim Chucks SK16C/SK16F, tranne:                                                                         |
|             | M12     | SKG16-12HGB  | 4    |                     |                | BT40-SK16F-90                                                                                                    |
|             | M10     | SKG16-10HG   | 4    |                     |                | HSK40A-SK16C-120, HSK50A-SK16C-120<br>HSK63A-SK16C-120, 150, HSK100A-SK16C-120<br>NBT40-SK16C-60, NBT30-SK16C-75 |
|             | M12     | SKG16-12HGE  | 4    |                     |                | NBT30-SK16C-60                                                                                                   |
|             | M12     | SKG16-12HGA  | 4    | Ø 3.5               | Ø 5-           | Tutti i Slim Chucks SK16C/SK16F, tranne:                                                                         |
|             | M12     | SKG16-12HGBA | 4    |                     |                | BT40-SK16F-90                                                                                                    |
|             | M10     | SKG16-10HGA  | 4    |                     |                | HSK40A-SK16C-120, HSK50A-SK16C-120<br>HSK63A-SK16C-120, 150, HSK100A-SK16C-120<br>NBT40-SK16C-60, NBT30-SK16C-75 |
|             | M18x1.5 | SKG20-18HG   | 4    | Ø 6.8               | Ø 10-          | Tutti i Slim Chucks SK20C/SK20F, tranne:                                                                         |
| <b>SK20</b> | M12     | SKG20-12MFHG | 4    |                     |                | HSK63A-SK20C-120, -135                                                                                           |
|             | M12     | SKG20-12HG   | 4    |                     |                | NBT30-SK20C-90<br>HSK100A-SK20C-150, -200                                                                        |
|             | M10     | SKG20-12HGE  | 4    |                     |                | NBT30-SK20C-75                                                                                                   |
|             | M16     | SKG20-16HG   | 4    |                     |                | NBT40-SK20C-60                                                                                                   |
|             | M18x1.5 | SKG20-18HGB  | 4    |                     |                | BT40-SK20F-90                                                                                                    |

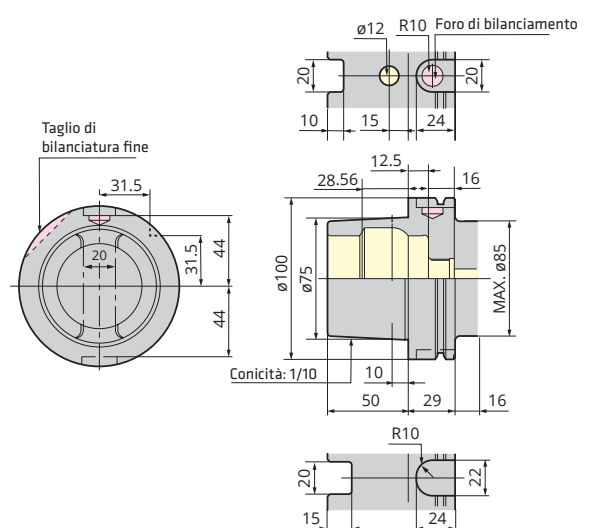




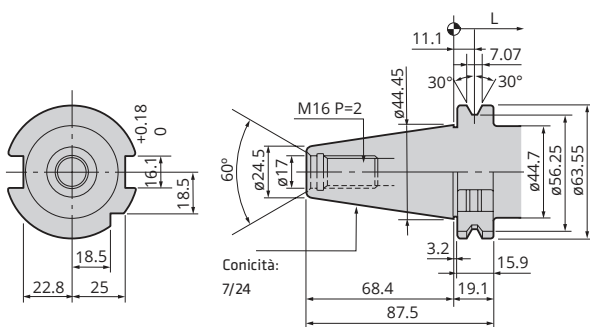
HSK63A (ISO 12164-1)



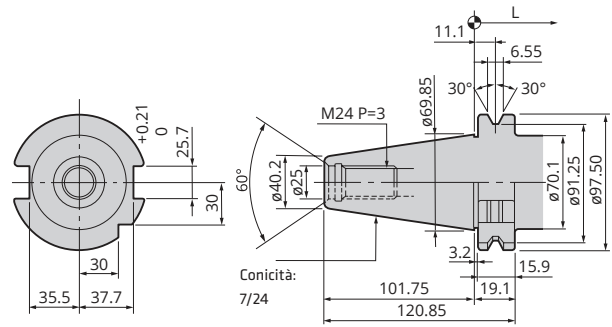
HSK100A (ISO 12164-1)



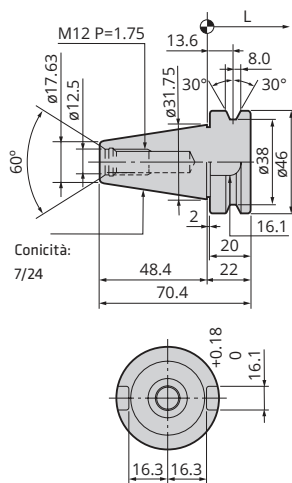
## IT40 (ISO7388, DIN69871-'85)



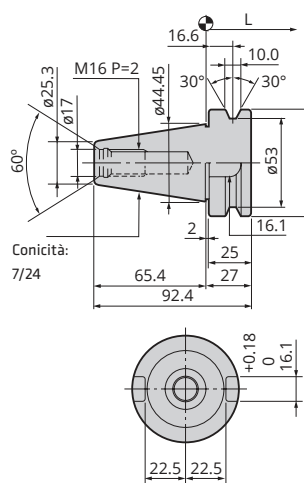
## IT50 (ISO7388, DIN69871-'85)



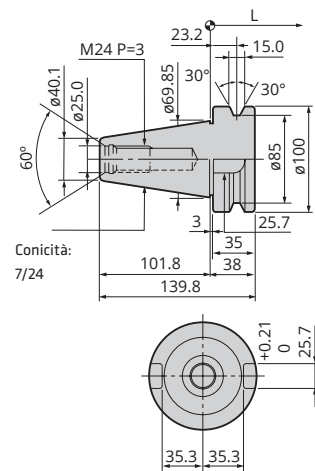
## BT30



## BT40



## BT50







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