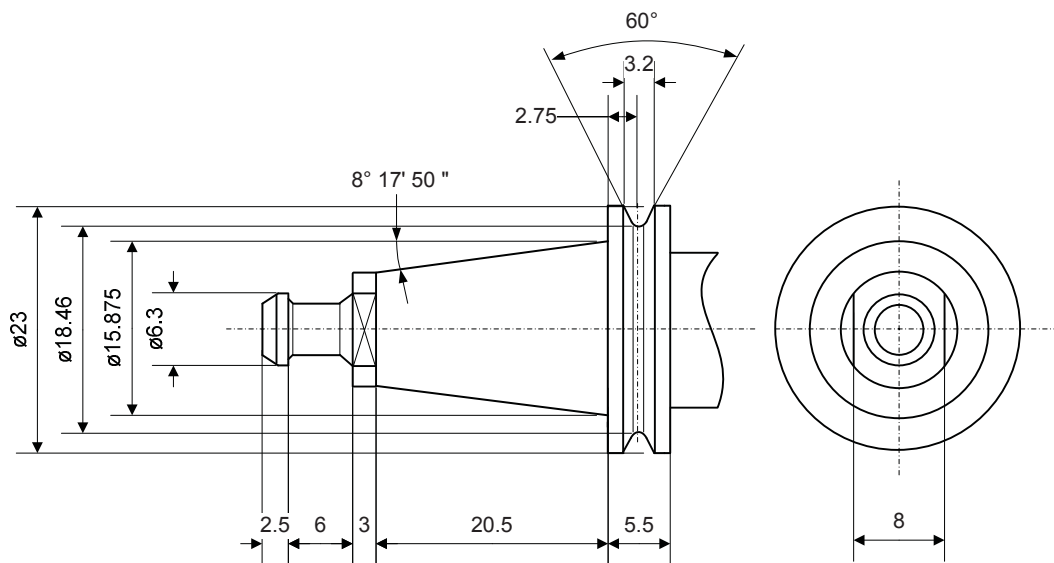
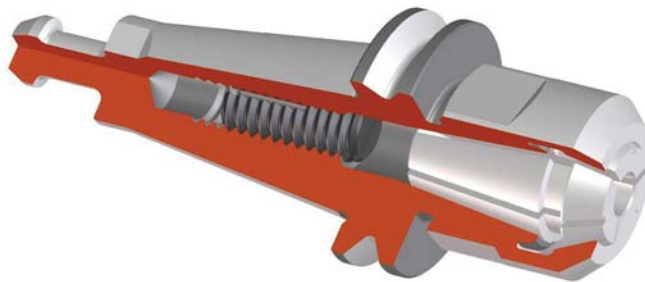


Dimensions - Abmessungen - Dimensions



porte-outils court et compact
kurze und kompakte Werkzeughalter
short and compact tool holders

système cône-face pour une grande rigidité à une vitesse de rotation élevée
Plananlage-System für eine hohe Steifigkeit bei grossen Drehzahlen
taper and face system for high stability at high rpm

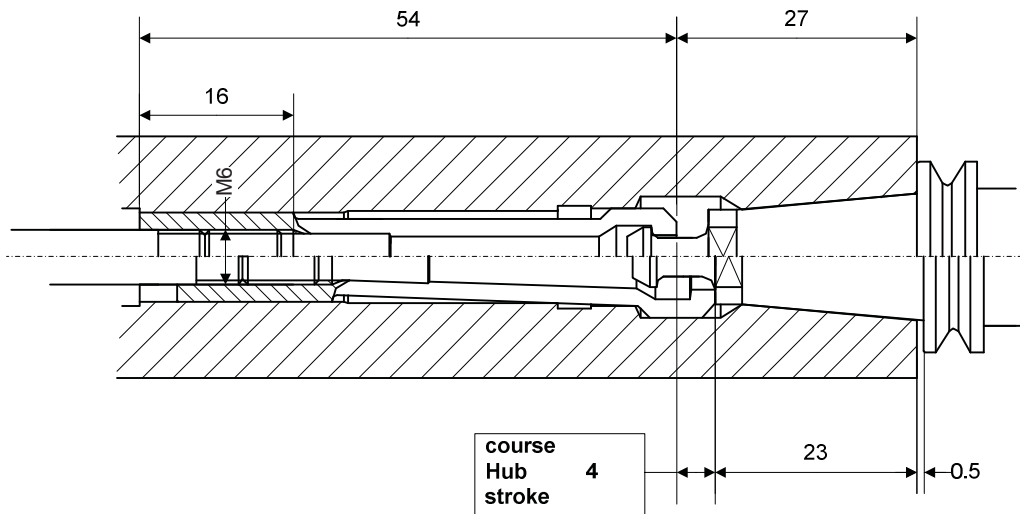
serrage et changement automatique des porte-outils
automatisches Spannen und Wechseln der Werkzeughalter
automatic clamping and changing of the tool holders

sans arrosage par le centre
ohne zentrale Kühlmittelzufuhr
without cooling through centre

ISO 10

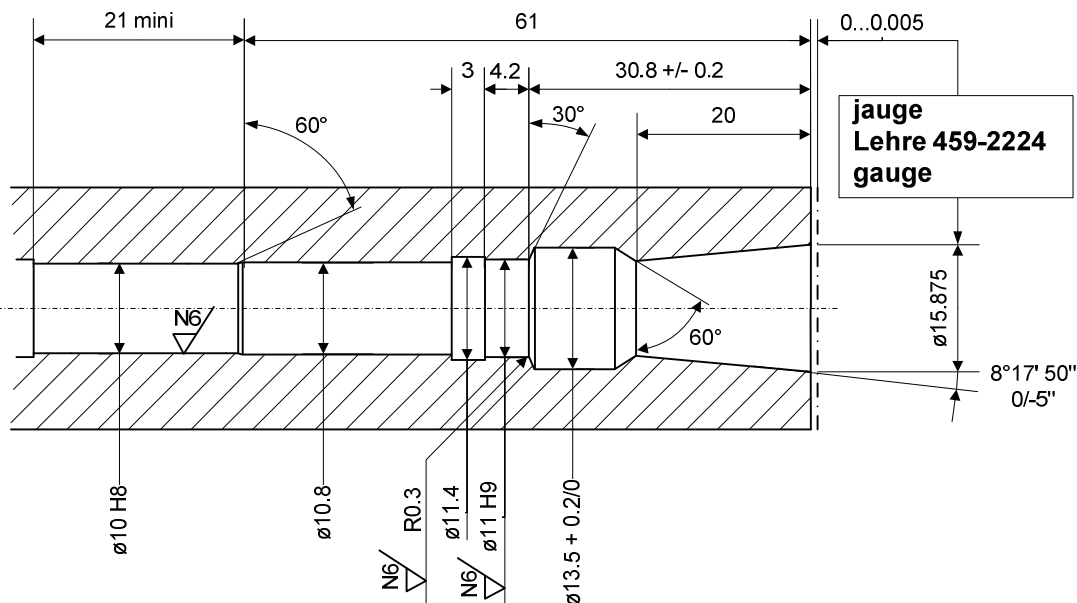
la meilleure solution pour petites broches à grande vitesse
die beste Lösung für kleine, schnell laufende Spindeln
the best solution for small high-speed spindles

Pince et logement pour fixation automatique des porte-outils
Spannzange und Aufnahme für automatisches Spannen der Werkzeughalter
Collet and seat for automatic setting of toolholders



montage de la pince possible par derrière ou devant
 Montage der Spannzange von vorne oder hinten möglich
 collet assembly from either end

force de serrage axiale : 1750 N
 achsiale Spannkraft : 1750 N
 axial clamping force : 1750 N



Pince - Spannzange - Collet

| Gr. | Art. |
|--------|----------|
| ISO 10 | 74-60030 |

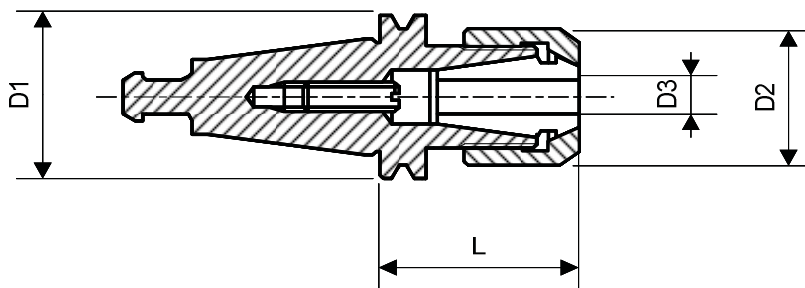


Jauge - Lehre - Gauge

| Gr. | Art. |
|--------|----------|
| ISO 10 | 459-2224 |

Jauge de rectification pour cône - face
 Schleiflehre für Kegel-Plananlage
 Grinding gauge for taper - face system

Porte-pinces E court - Spannzangenhalter E kurz - Collet chucks E short



équilibré
ausgewuchtet
balanced

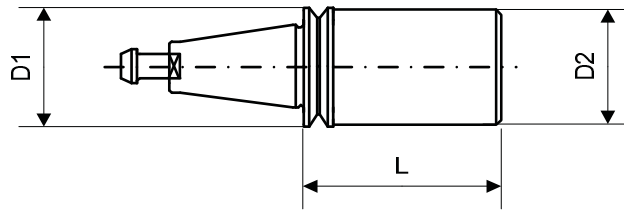
voir page 105.2
nach Seite 105.2
see page 105.2

caractères gras : inclus dans la livraison
Fettschrift : im Lieferumfang inbegriffen
bold script : included in delivery

| | | | |
|---|--------------|---|----------|
| M | DIN 6499 A+B | pince Spannzange collet | Page 221 |
| N | DIN 6499 D | écrou Mutter nut | Page 223 |
| | | écrou équilibré ausgewuchtete Mutter balanced nut | Page 224 |
| O | | vis de réglage Anschlagschraube adjusting screw | |

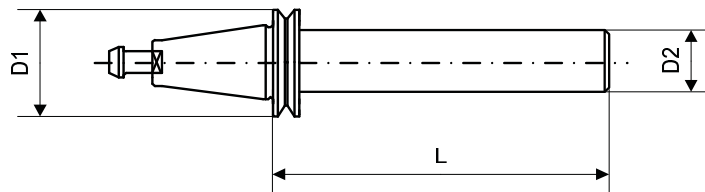
| Gr. | Art. | D1 | D2 | D3 | L | M | N | O |
|--------|-----------------|----|------|--------|----|-----------------------------------|----------------------|-----------------|
| ISO 10 | 61-12405 | 23 | 16.7 | 0.5-7 | 25 | 75-12200 75-12300 ET1-12... | 61-12710 61-12721 | 87-90016 |
| | 61-16420 | 23 | 25 | 0.5-10 | 34 | 75-16200 75-16300 ET1-16... | 61-16710 61-16721 | 87-90016 |

Tasseau ébauché - Rohling - Blank



| Gr. | Art. | D1 | D2 | L |
|--------|-----------------|----|------|----|
| ISO 10 | 89-10000 | 23 | 22.7 | 38 |

Mandrin de contrôle - Kontrollhorn - Checking arbor

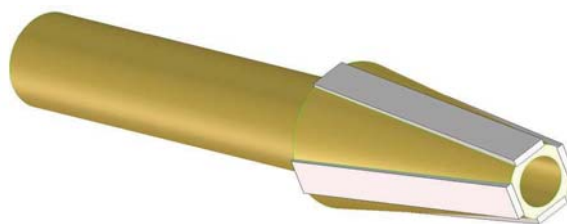


dans coffret en bois
in Holzkasten
in wooden box

avec protocole de contrôle
mit Prüfprotokoll
with inspection report

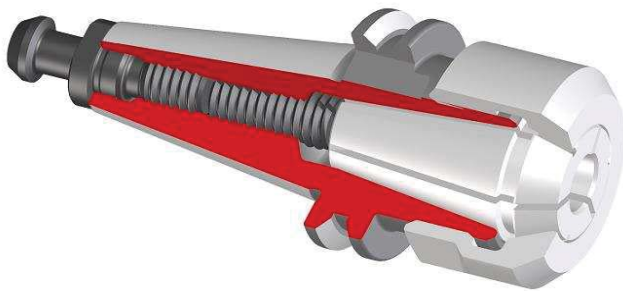
| Gr. | Art. | D1 | D2 | L |
|--------|-----------------|----|----|----|
| ISO 10 | 89-10001 | 23 | 14 | 53 |

Poignée de nettoyage - Reinigungsdorn - Cleaning handle

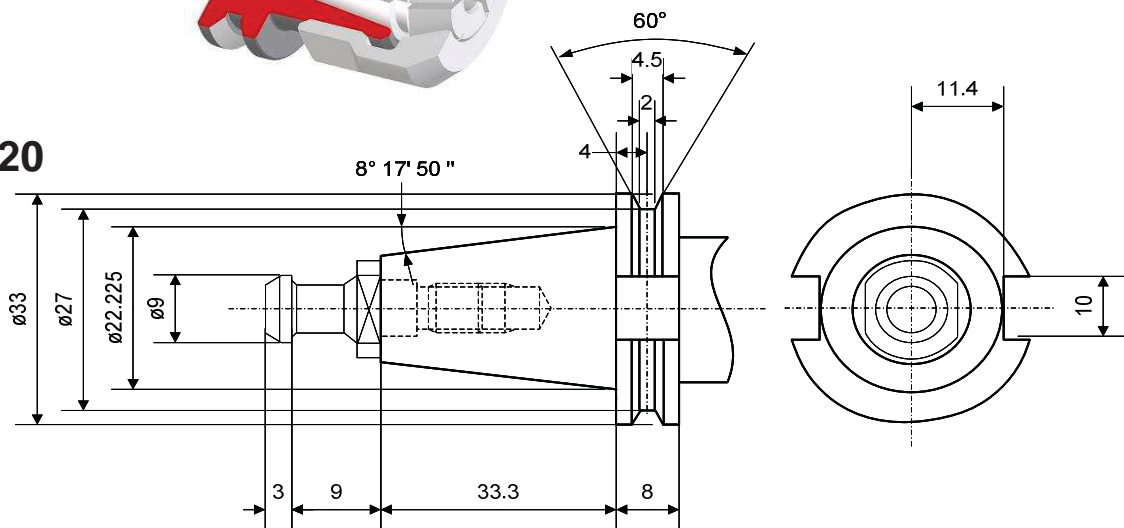


| Gr. | Art. |
|--------|-----------------|
| ISO 10 | 89-10900 |

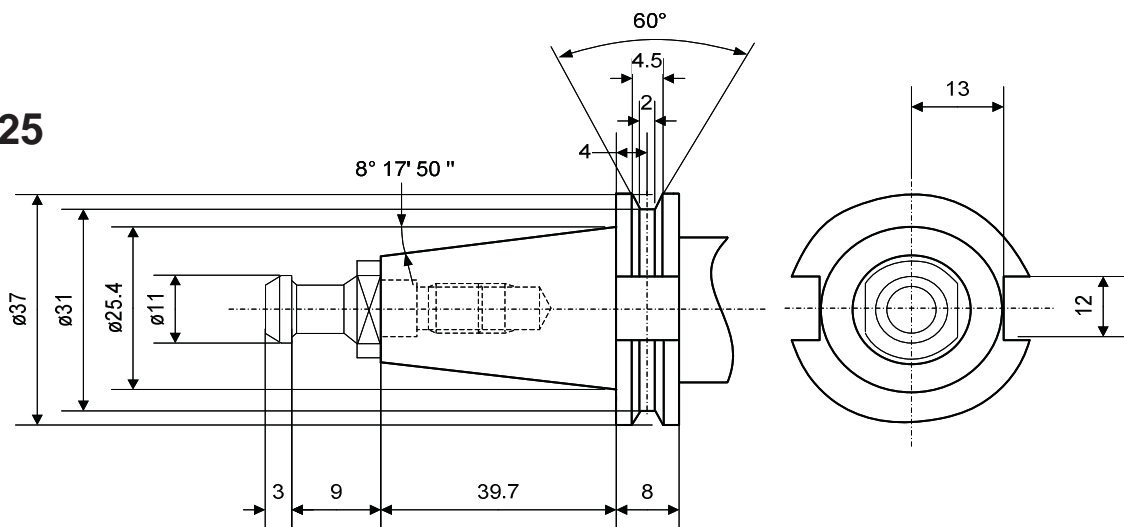
Dimensions - Abmessungen - Dimensions



ISO 20



ISO 25



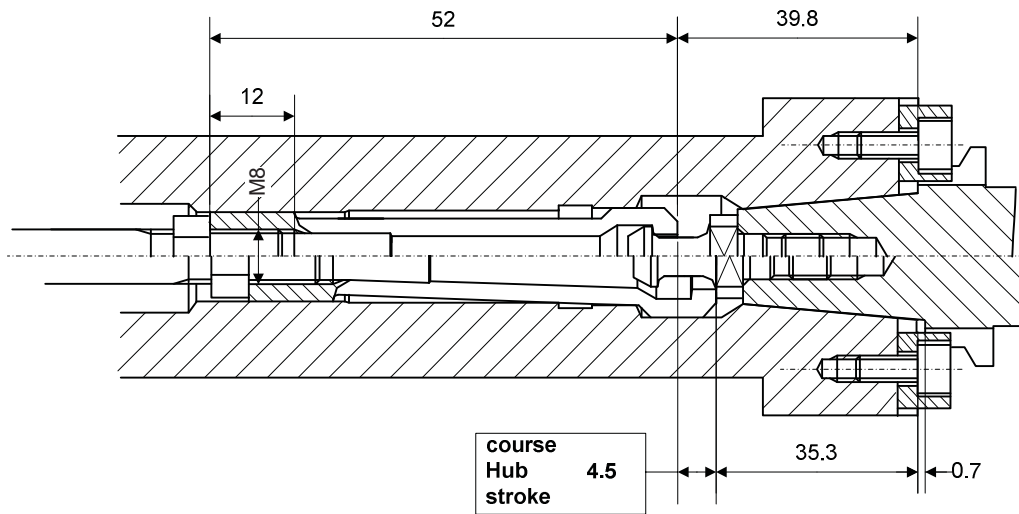
porte-outils court et compact
kurze und kompakte Werkzeughalter
short and compact toolholders

système cône-face pour une grande rigidité à une vitesse de rotation élevée
Plananlage-System für eine hohe Steifigkeit bei grossen Drehzahlen
taper and face system for high stability at high rpm

serrage et changement automatique des porte-outils
automatisches Spannen und Wechseln der Werkzeughalter
automatic clamping and changing of the toolholders

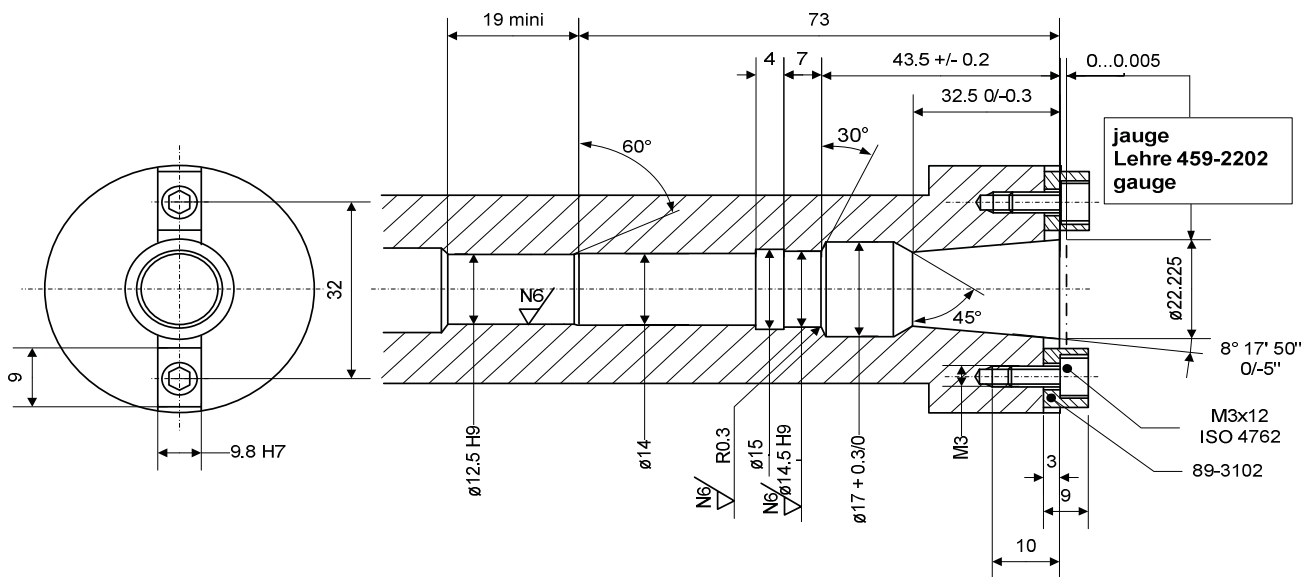
avec possibilité d'arroser par le centre
zentrale Kühlmittelzufuhr möglich
with possibility to cool through center

Pince et logement pour fixation automatique des porte-outils
Spannzange und Aufnahme für automatisches Spannen der Werkzeughalter
Collet and seat for automatic setting of toolholders



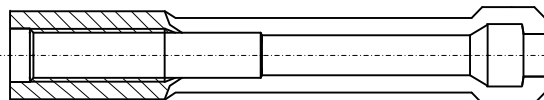
montage de la pince possible par derrière ou devant
Montage der Spannzange von vorne oder hinten möglich
collet assembly from either end

force de serrage axiale : 3000 N
achsiale Spannkraft : 3000 N
axial clamping force : 3000 N



Pince - Spannzange - Collet

| Gr. | Art. |
|--------|----------|
| ISO 20 | 74-60012 |

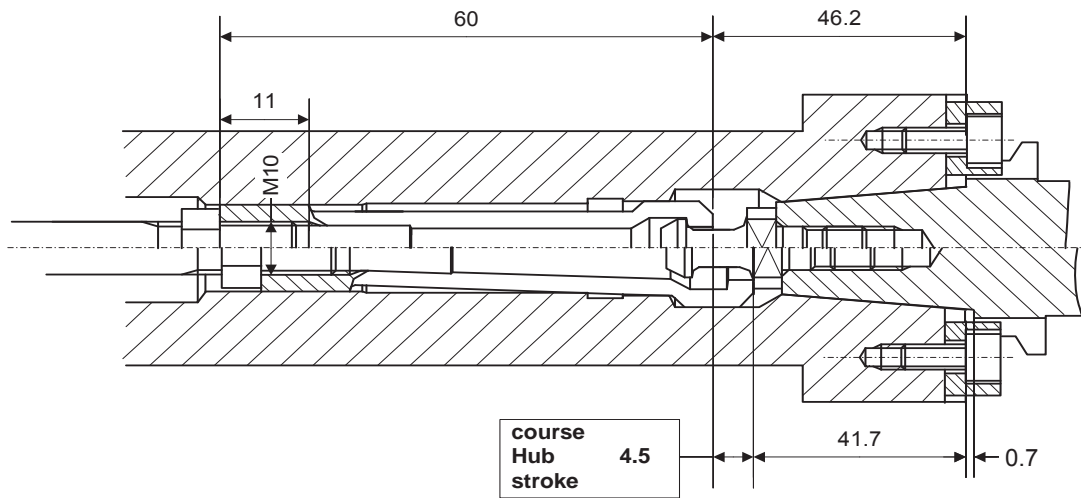


Jauge - Lehre - Gauge

| Gr. | Art. |
|--------|----------|
| ISO 20 | 459-2202 |

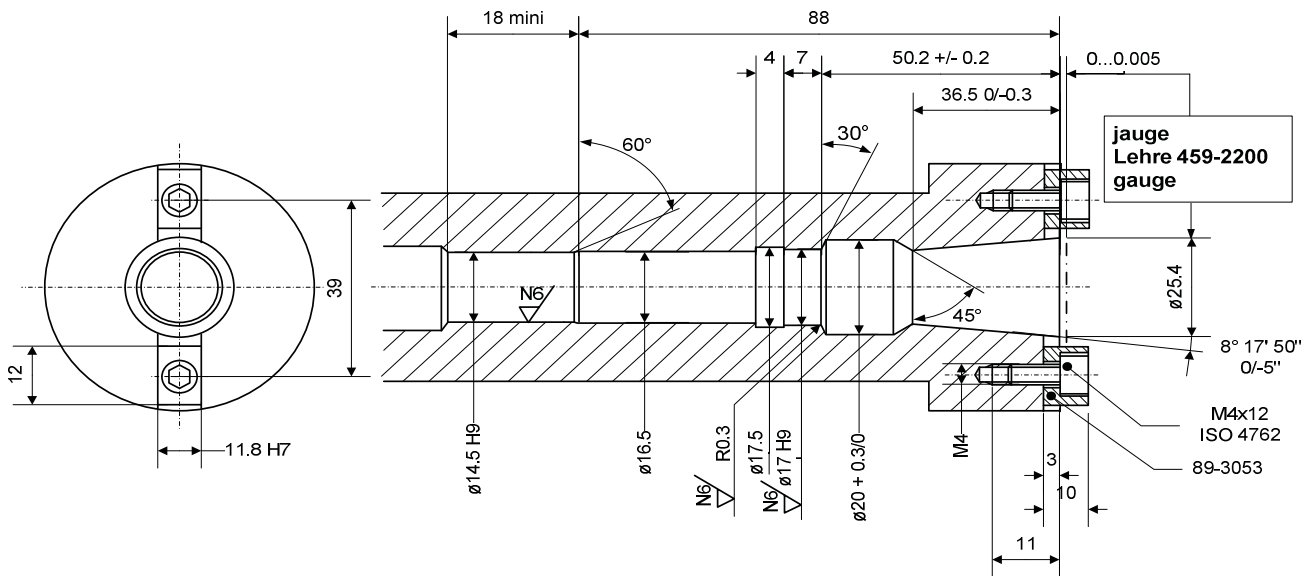
Jauge de rectification pour cône - face
Schleiflehre für Kegel-Plananlage
Grinding gauge for taper - face system

Pince et logement pour fixation automatique des porte-outils
Spannzange und Aufnahme für automatisches Spannen der Werkzeughalter
Collet and seat for automatic setting of toolholders



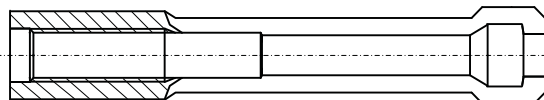
montage de la pince possible par derrière ou devant
Montage der Spannzange von vorne oder hinten möglich
collet assembly from either end

force de serrage axiale : 4000 N
achsiale Spannkraft : 4000 N
axial clamping force : 4000 N



Pince - Spannzange - Collet

| Gr. | Art. |
|--------|----------|
| ISO 25 | 74-60009 |

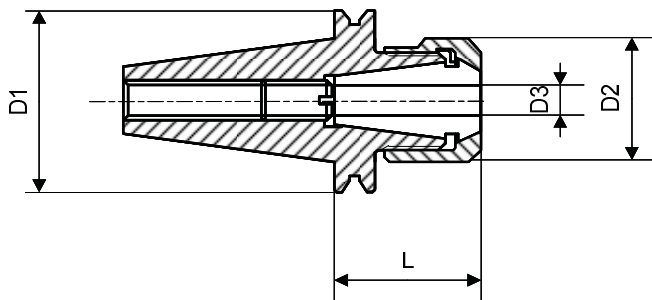


Jauge - Lehre - Gauge

| Gr. | Art. |
|--------|----------|
| ISO 25 | 459-2200 |

Jauge de rectification pour cône - face
Schleiflehre für Kegel-Plananlage
Grinding gauge for taper - face system

Porte-pinces E court - Spannzangenhalter E kurz - Collet chucks E short




ISO 20 : équilibré voir page 105.2
 ausgewuchtet nach Seite 105.2
 balanced see page 105.2


ISO 25 : équilibré sur demande (page 105.2)
 ausgewuchtet auf Anfrage (Seite 105.2)
 balanced on request (page 105.2)

caractères gras : inclus dans la livraison
 Fettschrift : im Lieferumfang inbegriffen
 bold script : included in delivery


M DIN 6499 A+B pince
 Spannzange
 collet Page 221



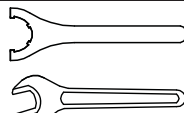
N DIN 6499 D écrou
 Mutter
 nut Page 223




écrou équilibré
 ausgewuchtete Mutter
 balanced nut Page 224




O clé pour l'écrou
 Mutternschlüssel
 spanner for the nut Page 223



P vis de réglage
 Anschlagsschraube
 adjusting screw



Q tirant
 Zugbolzen
 retention knob Page 156

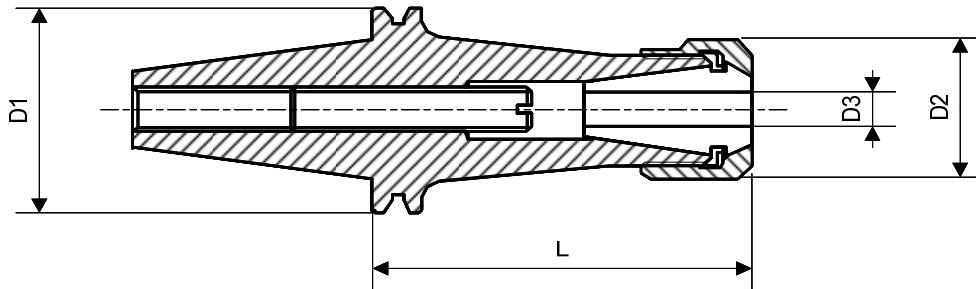


| Gr. | Art. | D1 | D2 | D3 | L | M | N | O | P | Q |
|--------|------------------------|----|------|--------|------|-----------------------------------|--------------------------|----------|-----------------|----------|
| ISO 20 | 61-9401 1) | 33 | 13.5 | 0.5-5 | 40.7 | 75-09200 75-09300 | 61-9710 61-9721 | - | 87-90022 | 61-99119 |
| | 61-12400 | 33 | 19 | 0.5-7 | 31.7 | 75-12200 75-12300 ET1-12... | 61-12730 61-12720 | - | 87-90022 | 61-99119 |
| | 61-16403 | 33 | 25 | 0.5-10 | 31.7 | 75-16200 75-16300 ET1-16... | 61-16710 61-16721 | - | 87-90027 | 61-99119 |
| | 61-16413 23) | 33 | 25 | 0.5-10 | 31.7 | 75-16200 75-16300 ET1-16... | 61-16710 61-16721 | - | 87-90027 | 61-99119 |
| | 61-20407 | 33 | 30.5 | 0.5-13 | 34.7 | 75-20200 75-20300 ET1-20... | 61-20710 61-20721 | - | 87-90027 | 61-99119 |
| ISO 25 | 61-9400 | 37 | 13.5 | 0.5-5 | 41.3 | 75-09200 75-09300 | 61-9710 61-9721 | - | 87-90022 | 61-99103 |
| | 61-16400 | 37 | 25 | 0.5-10 | 32.3 | 75-16200 75-16300 ET1-16... | 61-16710 61-16721 | - | 87-90027 | 61-99103 |
| | 61-20401 | 37 | 30.5 | 0.5-13 | 32.8 | 75-20200 75-20300 ET1-20... | 61-20710 61-20721 | - | 87-90027 | 61-99103 |
| | 61-25401 | 37 | 42 | 0.5-16 | 46.3 | 75-25200 75-25300 ET1-25... | 61-25730 61-25720 | 61-25800 | 87-90007 | 61-99103 |

1) Jusqu'à épuisement du stock
 Solange Vorrat
 While stocks last






23) Sans fraisage d'entraînement sur la collerette
 Ohne Mitnehmernuten auf dem Bund
 Without guide groove on flange

Porte-pinces E long - Spannzangenhalter E lang - Collet chucks E long



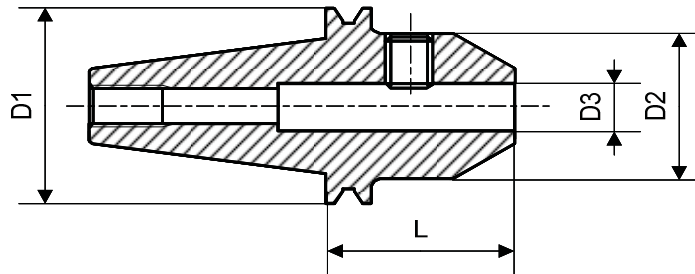
équilibré sur demande voir page 105.2
ausgewuchtet auf Anfrage nach Seite 105.2
balanced on request see page 105.2

caractères gras : inclus dans la livraison
Fettschrift : im Lieferumfang inbegriffen
bold script : included in delivery

| | | | | |
|---|--------------|---|--|----------|
| M | DIN 6499 A+B | pince Spannzange collet |  | Page 221 |
| N | DIN 6499 D | écrou Mutter nut |  | Page 223 |
| | | écrou équilibré ausgewuchtete Mutter balanced nut | | Page 224 |
| O | | clé pour l'écrou Mutternschlüssel spanner for the nut |  | Page 223 |
| P | | vis de réglage Anschlagschraube adjusting screw |  | |
| Q | | tirant Zugbolzen retention knob |  | Page 156 |

| Gr. | Art. | D1 | D2 | D3 | L | M | N | O | P | Q |
|--------|-----------------|----|----|--------|------|-----------------------------------|----------------------|----------|-----------------|----------|
| ISO 25 | 61-16401 | 37 | 25 | 0.5-10 | 62.3 | 75-16200 75-16300 ET1-16... | 61-16710 61-16721 | - | 61-16903 | 61-99103 |
| | 61-25405 | 37 | 42 | 0.5-16 | 63.3 | 75-25200 75-25300 ET1-25... | 61-25730 61-25720 | 61-25800 | 61-16903 | 61-99103 |

Porte-fraises pour queue cylindrique et méplat (Weldon)
Fräserhalter für zylindrische Schäfte mit Mitnahmefläche (Weldon)
Millholder for round shank with flat (Weldon)



équilibré sur demande
 ausgewuchtet auf Anfrage
 balanced on request

voir page 105.2
 nach Seite 105.2
 see page 105.2

caractères gras : inclus dans la livraison
 Fettschrift : im Lieferumfang inbegriffen
 bold script : included in delivery

M  vis de blocage
 Spanschraube
 stop screw

N  tirant
 Zugbolzen
 retention knob

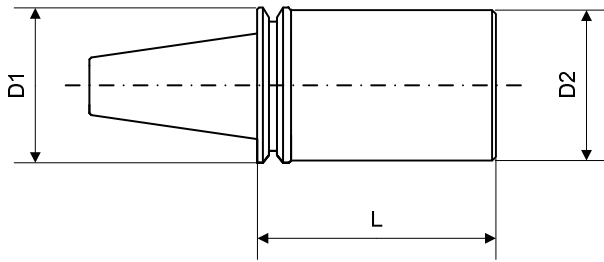
Page 156

| Gr. | Art. | D1 | D2 | D3 | L | M | N |
|--------|------------------------|----|----|----|------|-----------------|----------|
| ISO 25 | 69-25403 26) | 37 | 20 | 3 | 23.3 | 69-99012 | 61-99103 |
| | 69-25404 26) | 37 | 22 | 4 | 24.3 | 69-99011 | 61-99103 |
| | 69-25405 26) | 37 | 22 | 5 | 24.3 | 69-99011 | 61-99103 |
| | 69-25406 26) | 37 | 25 | 6 | 31.3 | 62-20310 | 61-99103 |
| | 69-25408 26) | 37 | 28 | 8 | 32.3 | 62-20311 | 61-99103 |
| | 69-25410 26) | 37 | 35 | 10 | 35.3 | 62-25316 | 61-99103 |
| | 69-25412 26) | 37 | 37 | 12 | 38.3 | 62-25317 | 61-99103 |
| | 69-25414 26) | 37 | 37 | 14 | 38.3 | 62-25317 | 61-99103 |
| | 69-25416 26) | 37 | 45 | 16 | 47.3 | 62-32320 | 61-99103 |

26) Sur demande
 Auf Anfrage
 On request

Battement et couple de serrage voir page 104.2
 Rundlauf und Spannmomente nach Seite 104.2
 Radial runout and clamping torque see page 104.2

Tasseau ébauché - Rohling - Blank

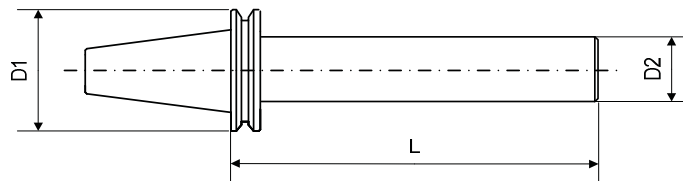


tirant
Zugbolzen
retention knob

Page 156

| Gr. | Art. | D1 | D2 | L | M |
|--------|-----------------|----|------|------|----------|
| ISO 20 | 89-20401 | 33 | 32.7 | 55.7 | 61-99119 |
| ISO 25 | 89-25402 | 37 | 36.5 | 60.3 | 61-99103 |

Mandrin de contrôle - Kontrolldorn - Checking arbor



dans coffret en bois
in Holzkasten
in wooden box

avec protocole de contrôle
mit Prüfprotokoll
with inspection report

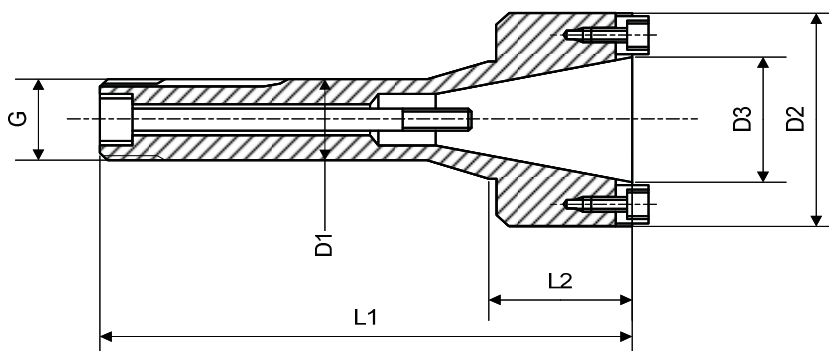


tirant
Zugbolzen
retention knob

Page 156

| Gr. | Art. | D1 | D2 | L | M |
|--------|-----------------|----|----|------|----------|
| ISO 20 | 89-20400 | 33 | 20 | 70.7 | 61-99119 |
| ISO 25 | 89-25401 | 37 | 20 | 75.3 | 61-99103 |

Tasseau - Dorn - Arbor W20



| Gr. | Art. | D1 | D2 | D3 | L1 | L2 | G |
|--------|----------------|----|----|------|-----|----|------------|
| ISO 25 | 89-3069 | 20 | 53 | 25.4 | 101 | 32 | 19.7x1.666 |

Tirant - Zugbolzen - Retention knob

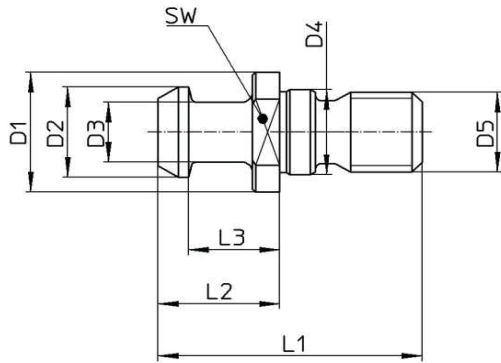


fig. 1

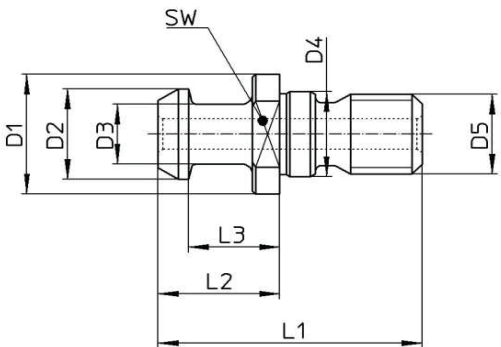


fig. 2

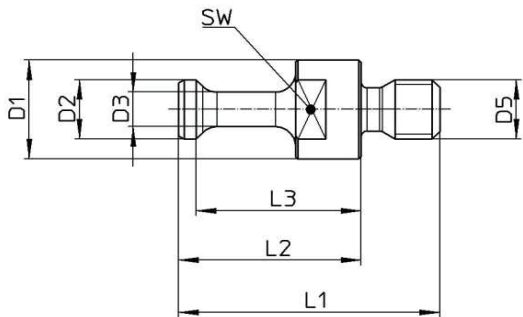
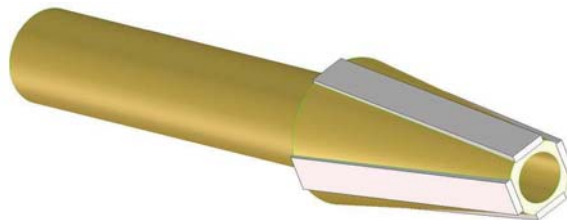


fig. 3



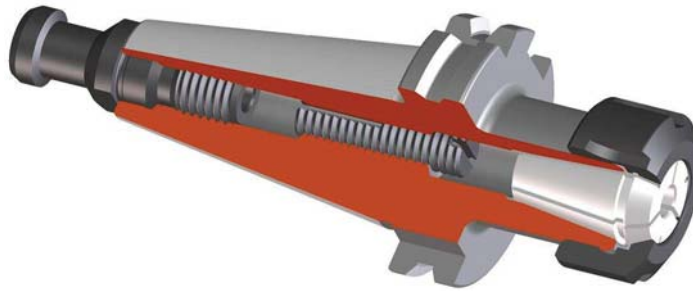
| Gr. | Art. | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | SW | Fig. |
|------------------|-----------------|----|----|-----|-----|----|----|-------|------|----|------|
| ISO 20 | 61-99119 | 12 | 9 | 6 | 8.5 | M8 | 26 | 12 | 9 | 10 | 1 |
| | 89-12028 | 12 | 9 | 6 | 8.5 | M8 | 26 | 12 | 9 | 10 | 2 |
| ISO 20 HAUSER | 89-12808 | 10 | 6 | 3.5 | - | M6 | 26 | 18.15 | 16.4 | 8 | 3 |
| ISO 25 | 61-99103 | 13 | 11 | 7 | 8.5 | M8 | 28 | 12 | 9 | 11 | 1 |
| | 89-12027 | 13 | 11 | 7 | 8.5 | M8 | 28 | 12 | 9 | 11 | 2 |

Poignée de nettoyage - Reinigungsdorn - Cleaning handle

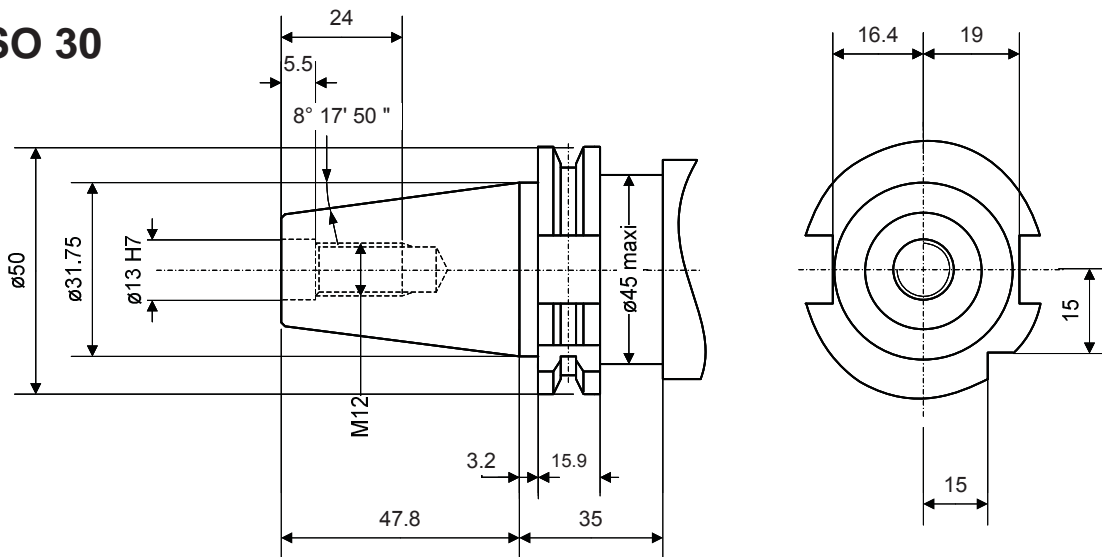


| Gr. | Art. |
|--------|----------------|
| ISO 20 | 89-3132 |
| ISO 25 | 89-3054 |

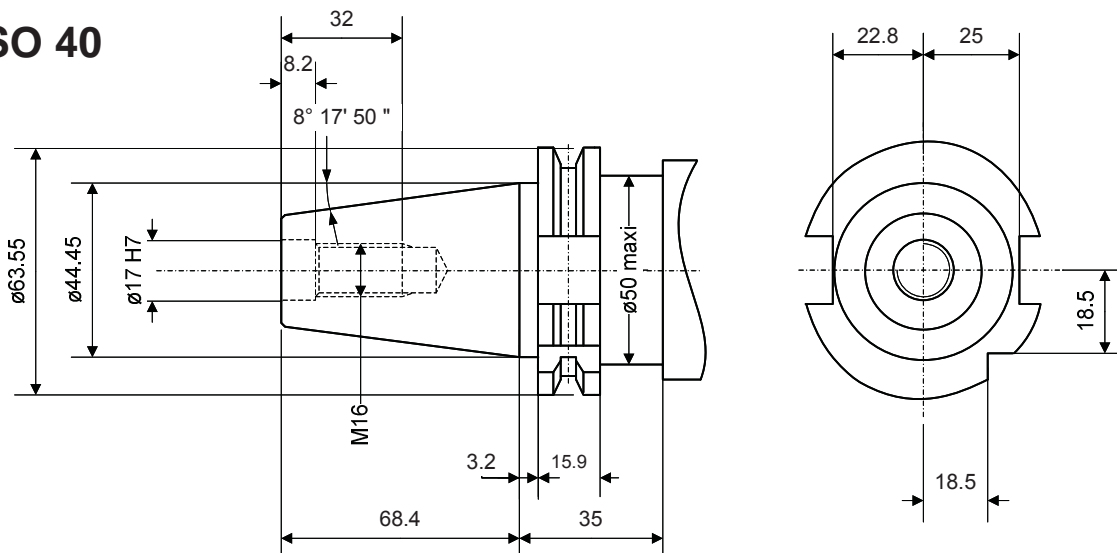
Dimensions - Abmessungen - Dimensions



ISO 30



ISO 40

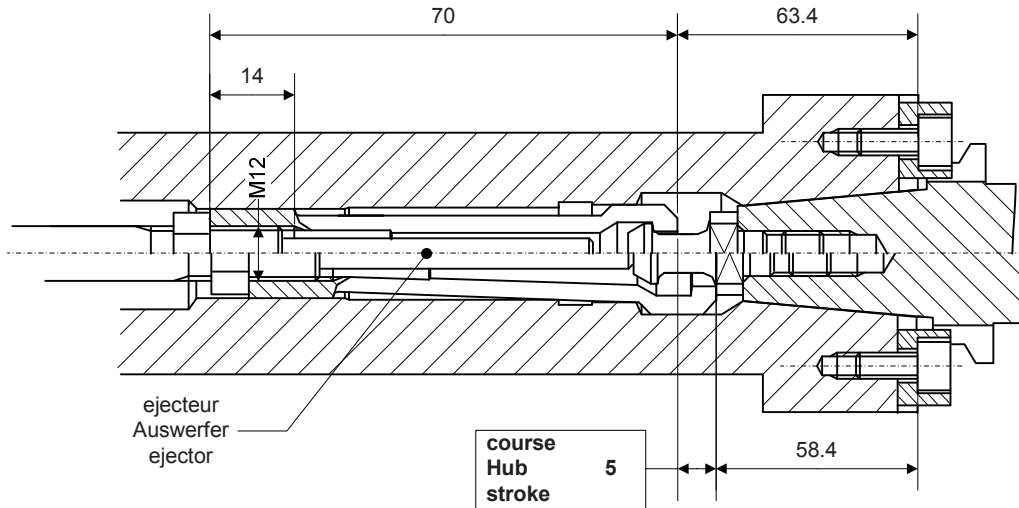


serrage et changement automatique des porte-outils
 automatisches Spannen und Wechseln der Werkzeughalter
 automatic clamping and changing of the toolholders

équilibré sur demande
 ausgewuchtet auf Anfrage
 balanced on request

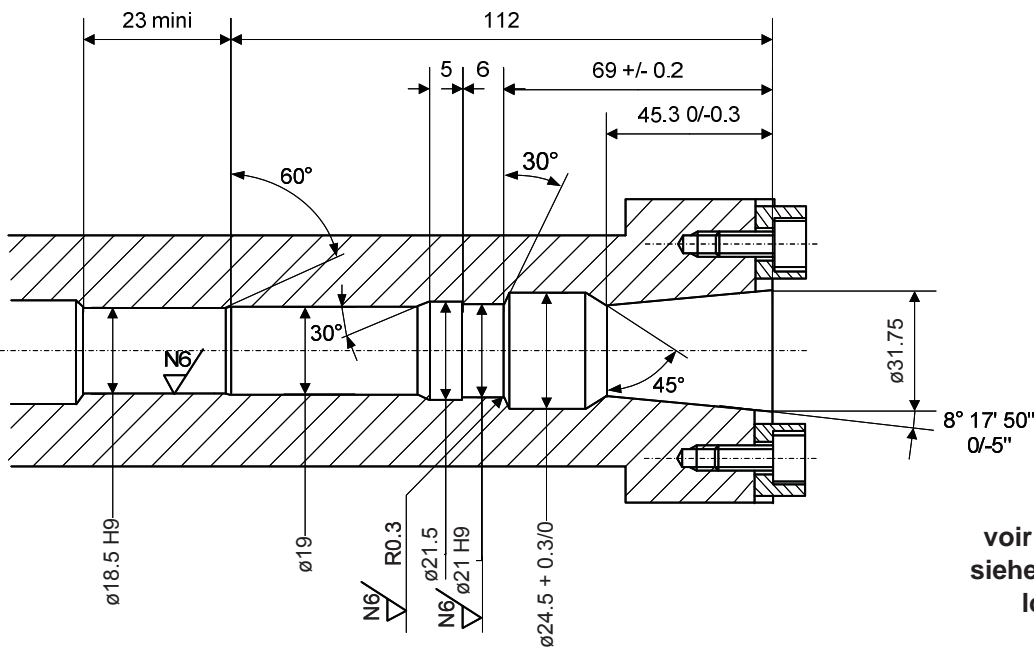
avec possibilité d'arroser par le centre
 zentrale Kühlmittelzufuhr möglich
 with capability to cool through center

Pince et logement pour fixation automatique des porte-outils
Spannzange und Aufnahme für automatisches Spannen der Werkzeughalter
Collet and seat for automatic setting of toolholders



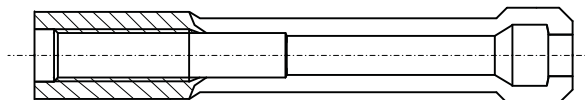
montage de la pince possible par derrière ou devant
Montage der Spannzange von vorne oder hinten möglich
collet assembly from either end

force de serrage axiale : 6000 N
achsiale Spannkraft : 6000 N
axial clamping force : 6000 N



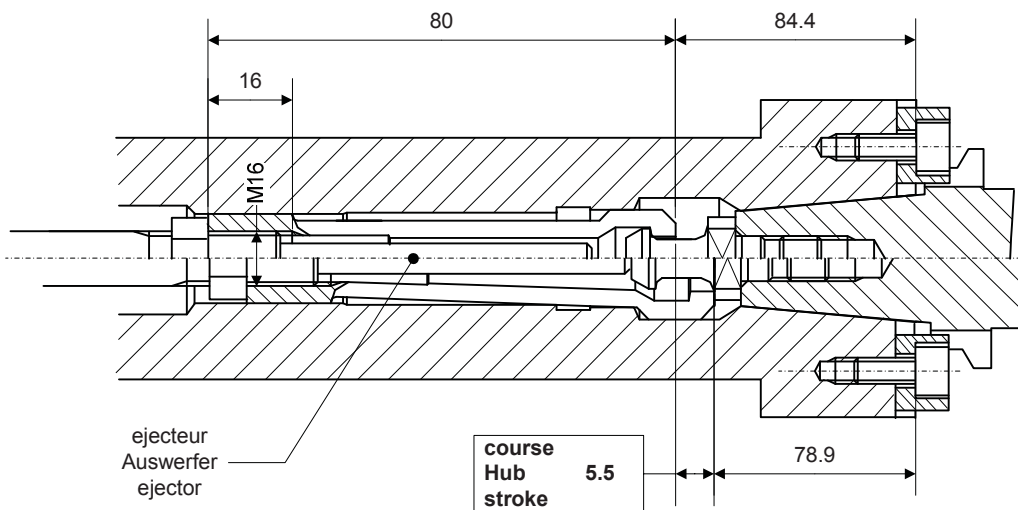
voir aussi DIN 2079
siehe auch DIN 2079
look at DIN 2079

Pince - Spannzange - Collet



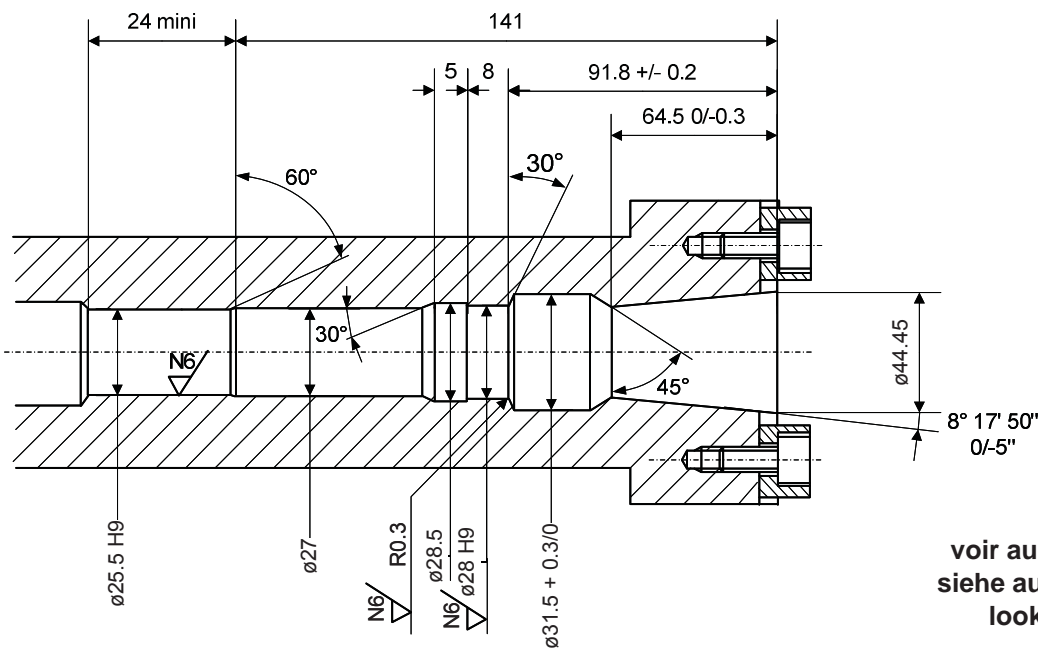
| Gr. | Art. |
|--------|----------|
| ISO 30 | 74-60025 |

Pince et logement pour fixation automatique des porte-outils
Spannzange und Aufnahme für automatisches Spannen der Werkzeughalter
Collet and seat for automatic setting of toolholders



montage de la pince possible par derrière ou devant
 Montage der Spannzange von vorne oder hinten möglich
 collet assembly from either end

force de serrage axiale : 6000 N
 achsiale Spannkraft : 6000 N
 axial clamping force : 6000 N



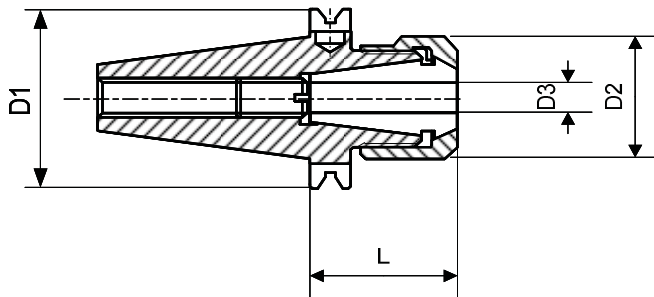
voir aussi DIN 2079
 siehe auch DIN 2079
 look at DIN 2079

Pince - Spannzange - Collet



| Gr. | Art. |
|--------|----------|
| ISO 40 | 74-60014 |



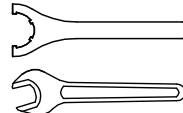


Porte-pinces E court - Spannzangenhalter E kurz - Collet chucks E short



équilibré sur demande
ausgewuchtet auf Anfrage
balanced on request

voir page 105.2
nach Seite 105.2
see page 105.2

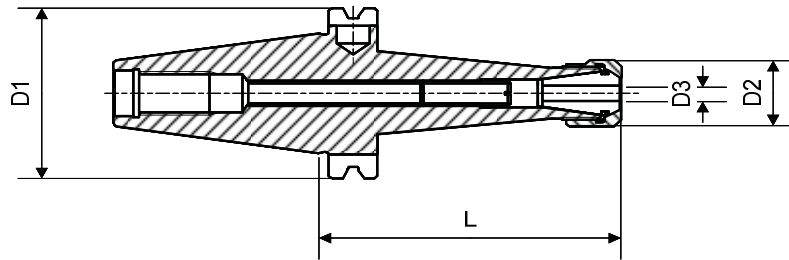
arrosage par le centre
Kühlung durch das Zentrum
cooling through center

| | | | | |
|---|---|---|--|----------|
| M | DIN 6499 A+B | pince Spannzange collet |  | Page 221 |
| N | DIN 6499 D | écrou Mutter nut |  | Page 223 |
| O | | clé pour l'écrou Mutternschlüssel spanner for the nut |  | Page 223 |
| P | | vis de réglage Anschlagschraube adjusting screw |  | |
| Q | DIN 69872-A 13 tirant DIN 69872-A 19 Zugbolzen | retention knob |  | Page 167 |

| Gr. | Art. | D1 | D2 | D3 | L | M | N | O | P | Q |
|--------|-----------------|-------|------|--------|----|-----------------------------------|----------|----------|-----------------|----------|
| ISO 30 | 61-16375 | 50 | 25 | 0.5-10 | 50 | 75-16200 75-16300 ET1-16... | 61-16710 | - | 87-90015 | 89-12030 |
| | 61-20375 | 50 | 30.5 | 0.5-13 | 50 | 75-20200 75-20300 ET1-20... | 61-20710 | - | 61-25902 | 89-12030 |
| | 61-25375 | 50 | 42 | 0.5-16 | 60 | 75-25200 75-25300 ET1-25... | 61-25730 | 61-25800 | 61-25902 | 89-12030 |
| | 61-32375 | 50 | 50 | 1.5-20 | 65 | 75-32200 75-32300 ET1-32... | 61-32730 | 61-32800 | 87-90014 | 89-12030 |
| ISO 40 | 61-16305 | 63.55 | 25 | 0.5-10 | 65 | 75-16200 75-16300 ET1-16... | 61-16710 | - | 87-90015 | 61-99121 |
| | 61-20305 | 63.55 | 30.5 | 0.5-13 | 65 | 75-20200 75-20300 ET1-20... | 61-20710 | - | 87-90014 | 61-99121 |
| | 61-25305 | 63.55 | 42 | 0.5-16 | 65 | 75-25200 75-25300 ET1-25... | 61-25730 | 61-25800 | 87-90014 | 61-99121 |
| | 61-32305 | 63.55 | 50 | 1.5-20 | 65 | 75-32200 75-32300 ET1-32... | 61-32730 | 61-32800 | 87-90014 | 61-99121 |
| | 61-40305 | 63.55 | 63 | 2-26 | 65 | 75-40200 75-40300 ET1-40... | 61-40730 | 61-40800 | 87-90014 | 61-99121 |

caractères gras : inclus dans la livraison
Fettschrift : im Lieferumfang inbegriffen
bold script : included in delivery

Porte-pinces E long - Spannzangenhalter E lang - Collet chucks E long



équilibré sur demande
ausgewuchtet auf Anfrage
balanced on request

voir page 105.2
nach Seite 105.2
see page 105.2

arrosage par le centre
Kühlung durch das Zentrum
cooling through center

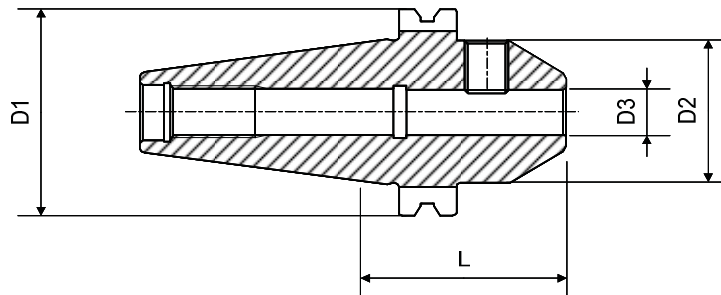
caractères gras : inclus dans la livraison
Fettschrift : im Lieferumfang inbegriffen
bold script : included in delivery

| | | | |
|---|---|---|----------|
| M | DIN 6499 A+B | pince Spannzange collet | Page 221 |
| N | DIN 6499 D | écrou Mutter nut | Page 223 |
| O | | clé pour l'écrou Mutternschlüssel spanner for the nut | Page 223 |
| P | | vis de réglage Anschlagschraube adjusting screw | |
| Q | DIN 69872-A 13 tirant DIN 69872-A 19 Zugbolzen | retention knob | Page 167 |

| Gr. | Art. | D1 | D2 | D3 | L | M | N | O | P | Q |
|--------|------------------------|-------|------|--------|-----|-----------------------------------|----------|----------|-----------------|----------|
| ISO 30 | 61-16376 | 50 | 25 | 0.5-10 | 80 | 75-16200 75-16300 ET1-16... | 61-16710 | - | 61-16903 | 89-12030 |
| ISO 40 | 61-16306 | 63.55 | 25 | 0.5-10 | 100 | 75-16200 75-16300 ET1-16... | 61-16710 | - | 87-90015 | 61-99121 |
| | 61-20306 | 63.55 | 30.5 | 0.5-13 | 100 | 75-20200 75-20300 ET1-20... | 61-20710 | - | 61-25902 | 61-99121 |
| | 61-25306 | 63.55 | 42 | 0.5-16 | 100 | 75-25200 75-25300 ET1-25... | 61-25730 | 61-25800 | 87-90014 | 61-99121 |
| | 61-32306 | 63.55 | 50 | 1.5-20 | 100 | 75-32200 75-32300 ET1-32... | 61-32730 | 61-32800 | 87-90014 | 61-99121 |
| | 61-40306 26) | 63.55 | 63 | 2-26 | 100 | 75-40200 75-40300 ET1-40... | 61-40730 | 61-40800 | 87-90014 | 61-99121 |

26) Sur demande
Auf Anfrage
On request

Porte-fraises pour queue cylindrique et méplat (Weldon)
Fräserhalter für zylindrische Schäfte mit Mitnahmefläche (Weldon)
Millholder for round shank with flat (Weldon)



équilibré sur demande
 ausgewuchtet auf Anfrage
 balanced on request

voir page 105.2
 nach Seite 105.2
 see page 105.2

caractères gras : inclus dans la livraison
 Fettschrift : im Lieferumfang inbegriffen
 bold script : included in delivery

M  vis de blocage
 Spannschraube
 stop screw

N  DIN 69872-A 19 tirant
 Zugbolzen
 retention knob

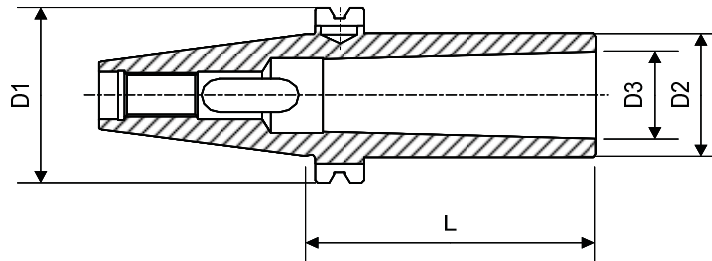
Page 167

| Gr. | Art. | D1 | D2 | D3 | L | M | N |
|--------|------------------------|-------|----|----|-----|-----------------|----------|
| ISO 40 | 69-40106 26) | 63.55 | 25 | 6 | 50 | 62-20310 | 61-99121 |
| | 69-40108 26) | 63.55 | 28 | 8 | 50 | 62-20311 | 61-99121 |
| | 69-40110 26) | 63.55 | 35 | 10 | 50 | 62-25316 | 61-99121 |
| | 69-40112 26) | 63.55 | 42 | 12 | 50 | 69-99000 | 61-99121 |
| | 69-40114 26) | 63.55 | 46 | 14 | 50 | 69-99000 | 61-99121 |
| | 69-40116 26) | 63.55 | 48 | 16 | 63 | 62-32320 | 61-99121 |
| | 69-40118 26) | 63.55 | 50 | 18 | 63 | 62-32320 | 61-99121 |
| | 69-40120 26) | 63.55 | 52 | 20 | 70 | 62-40330 | 61-99121 |
| | 69-40125 26) | 63.55 | 65 | 25 | 100 | 62-60331 | 61-99121 |
| | 69-40132 26) | 63.55 | 72 | 32 | 100 | 62-60332 | 61-99121 |

26) Sur demande
 Auf Anfrage
 On request

Battement et couple de serrage voir page 104.2
 Rundlauf und Spannmomente nach Seite 104.2
 Radial runout and clamping torque see page 104.2

Porte-outils pour cône Morse à tenon ou queue filetée
Morsehalter für Lappen oder Anzugsgewinde
Morseholder with tang or drawbar thread



caractères gras : inclus dans la livraison
Fettschrift : im Lieferumfang inbegriffen
bold script : included in delivery

M DIN 912 12.9 vis de blocage
 Spannschraube
 stop screw



N DIN 69872-A 19 tirant
 Zugbolzen
 retention knob

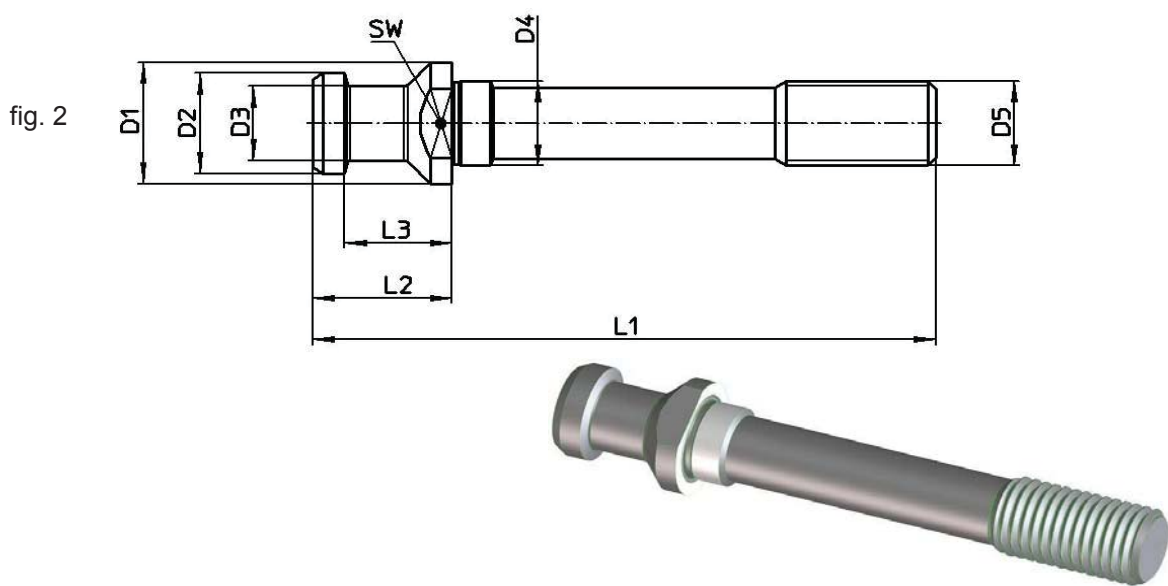
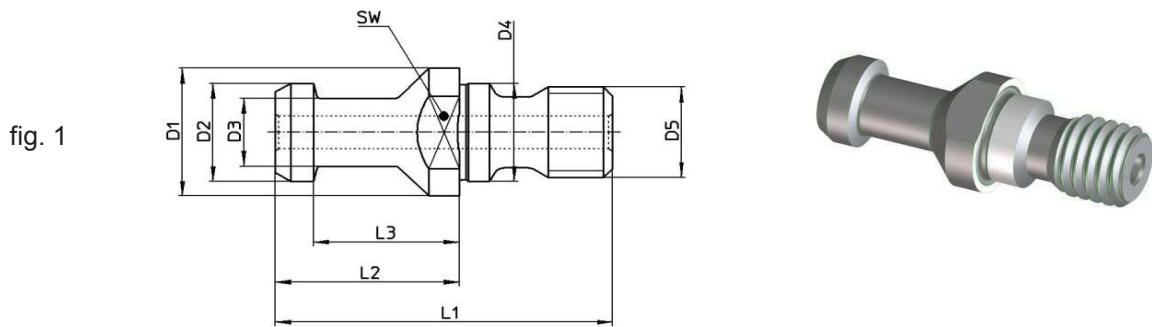


Page 167

| Gr. | Art. | D1 | D2 | D3 | L | M | N |
|--------|------------------------|-------|----|---------|----|-------------------|----------|
| ISO 40 | 89-40075 26) | 63.55 | 32 | Morse 1 | 45 | 2020.06020 | 61-99121 |
| | 89-40076 26) | 63.55 | 40 | Morse 2 | 50 | 2020.06020 | 61-99121 |
| | 89-40077 26) | 63.55 | 45 | Morse 3 | 65 | - | 89-40807 |
| | 89-40078 26) | 63.55 | 45 | Morse 4 | 92 | - | 89-40809 |

26) Sur demande
 Auf Anfrage
 On request

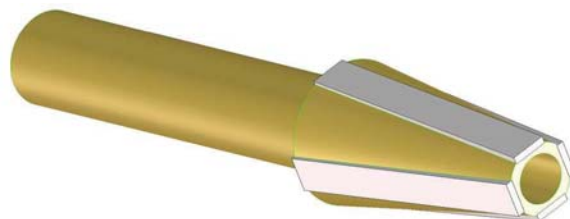
Tirant - Zugbolzen - Retention knob



| Gr. | Art. | D1 | D2 | D3 | D4 | D5 | L1 | L2 | L3 | SW | Fig. |
|------------------------|------------------------|----|----|----|----|-----|-----|----|----|----|------|
| ISO 30 DIN69872-A13 | 89-12030 | 17 | 13 | 9 | 13 | M12 | 44 | 24 | 19 | 14 | 1 |
| ISO 40 DIN69872-A19 | 61-99121 | 23 | 19 | 14 | 17 | M16 | 54 | 26 | 20 | 19 | 1 |
| | 89-40807 26) | 23 | 19 | 14 | 17 | M12 | 104 | 26 | 20 | 19 | 2 |
| | 89-40809 26) | 23 | 19 | 14 | 17 | M16 | 116 | 26 | 20 | 19 | 2 |

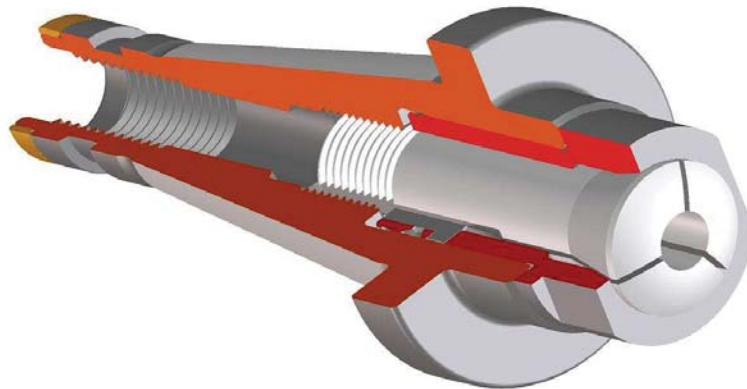
26) Sur demande
Auf Anfrage
On request

Poignée de nettoyage - Reinigungsdorn - Cleaning handle

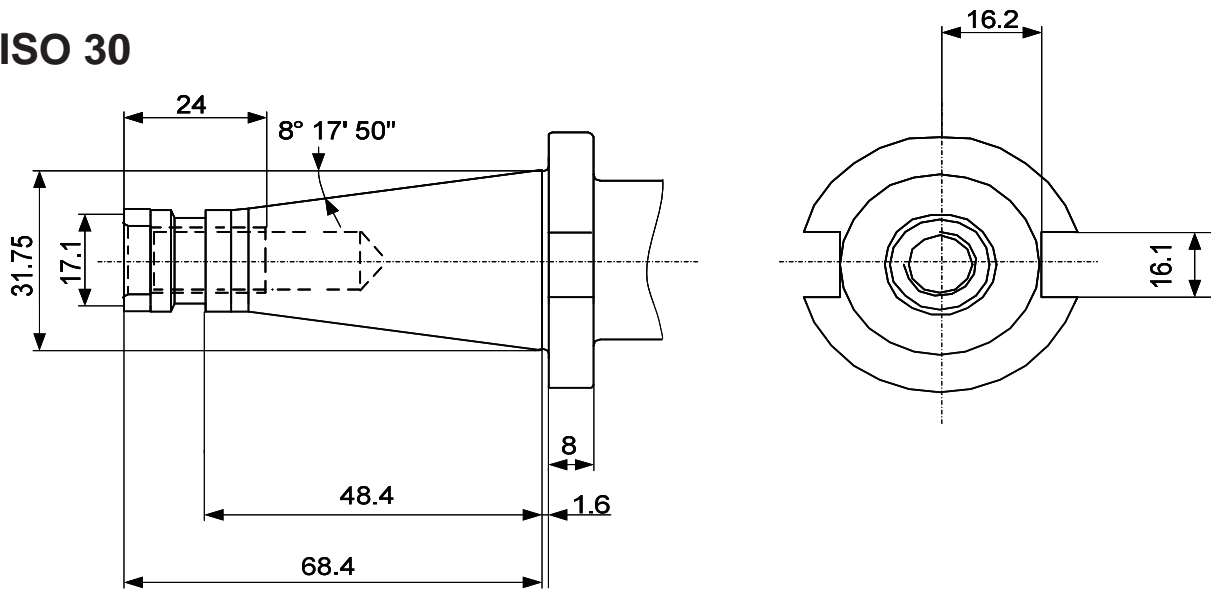


| Gr. | Art. |
|--------|----------------|
| ISO 30 | 89-3130 |
| ISO 40 | 89-3140 |

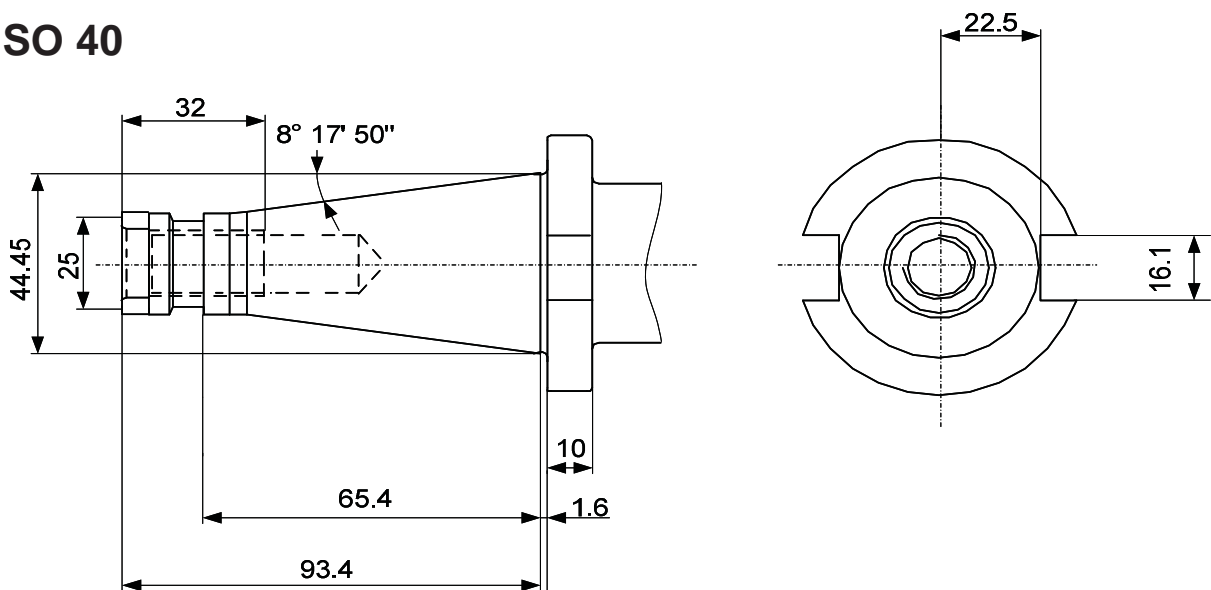
Dimensions - Abmessungen - Dimensions



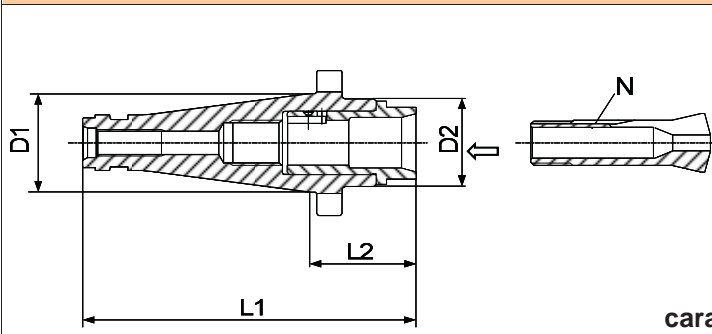
ISO 30



ISO 40



Porte-pinces pour pinces diverses Spannzangen-Halter für diverse Spannzangen Colletholders for various collets

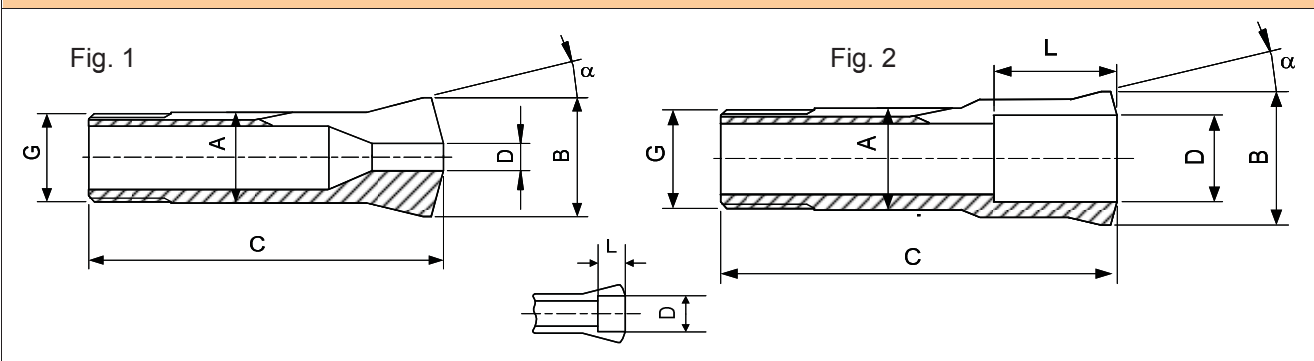


| | | |
|---|--|-------------------------------|
| M | | douille Hülse sleeve |
| N | | pince Spannzange collet |

caractères gras : **inclus dans la livraison**
 Fettschrift : **im Lieferumfang inbegriffen**
 bold script : **included in delivery**

| D1 | Art. | D2 | L1 | L2 | M | N |
|--------|--------------|----|-----|------|--------------|----------------|
| ISO 30 | 68-10 | 37 | 128 | 59.6 | 68-12 | 80-4 80-107 |
| ISO 40 | 68-20 | 39 | 135 | 41.6 | 68-12 | 80-4 80-107 |

Pince - Spannzange - Collet



| Type | Art. | A | B | C | G | α | D min-max | L | Fig. |
|---------------|---------------|----|------|----|---|------------|-------------------|------|------|
| W 20 | 80-4 | 20 | 26.3 | 73 | $\emptyset 19.7 \times 1.666 \curvearrowright 45^\circ$ | 15° | 0.30...14.50 | - | 1 |
| | | | | | | | 14.51...16.00 | 28 | |
| | | | | | | | 20) 16.01...16.50 | 13.5 | |
| | | | | | | | 20) 16.51...17.00 | 13 | |
| | | | | | | | 20) 17.01...17.50 | 12.2 | |
| | | | | | | | 20) 17.51...18.00 | 11.5 | |
| | | | | | | | 20) 18.01...18.50 | 10.7 | |
| | | | | | | | 20) 18.51...19.00 | 10 | |
| | | | | | | | 20) 19.01...19.50 | 8.7 | |
| | | | | | | | 20) 19.51...20.00 | 7.5 | |
| | | | | | | | 20.01...20.50 | 6.5 | |
| | | | | | | | 20.51...21.00 | 5.5 | |
| | | | | | | | 21.01...21.50 | 4.7 | |
| | | | | | | | 21.51...22.00 | 4 | |
| | | | | | | | 22.01...22.50 | 3 | |
| 22.51...23.00 | 2 | | | | | | | | |
| | 80-107 | 20 | 26.3 | 73 | $\emptyset 19.7 \times 1.666 \curvearrowright 45^\circ$ | 15° | 16.01...20.00 | 24 | 2 |

Alésages standards selon liste de prix - Standardbohrungen gemäss Preisliste - Standard bores according to price list
 Autres alésages sur demande - Andere Bohrungen auf Anfrage - Other bores on request

20) Dimensions non standard, voir 80-107 - Keine Standardabmessung, siehe 80-107
 Non standard bores, see 80-107