



Werkzeugaufnahmen
DIN ISO 10889
DIN 69880 (VDI 3425)
HAAS BMT 65

Toolholders
DIN ISO 10889
DIN 69880 (VDI 3425)
HAAS BMT 65

Porte-outils
DIN ISO 10889
DIN 69880 (VDI 3425)
HAAS BMT 65

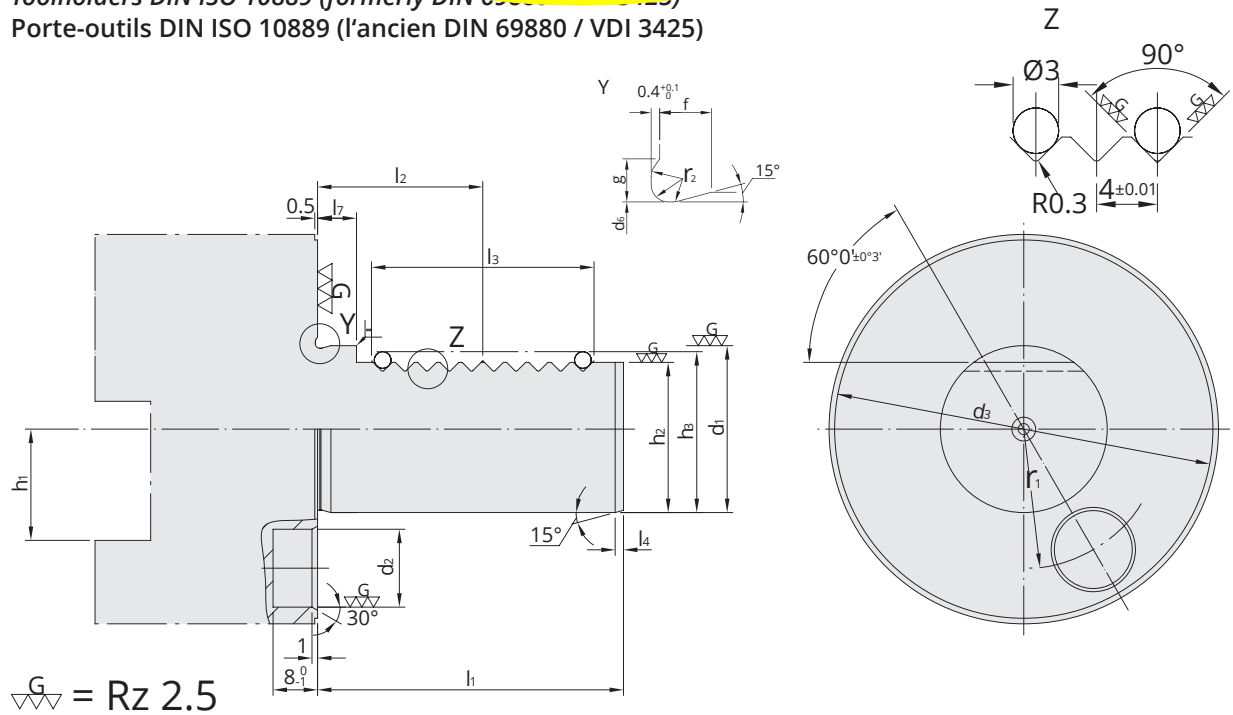
DISCOUNT
P&GE 20%
DIN 69889

HAAS BMT 65



Toolholders DIN ISO 10889 (formerly DIN 69880 / VDI 3425)
 Porte-outils DIN ISO 10889 (l'ancien DIN 69880 / VDI 3425)

(DIN 69880)



| d ₁ h ₆ | b | h ₁ max. | d ₂ | d ₃ | h ₂ ± 0,1 | r ± 0,02 | l ₁ max. | l ₂ ± 0,05 | l ₃ max. | l ₄ max. | l ₅ |
|----------------------------------|-----|------------------------|----------------|----------------|-------------------------|-------------|------------------------|--------------------------|------------------------|------------------------|----------------|
| 16 | 42 | 12 | 8 | 40 | 15,0 | 14,5 | 32 | 12,7 | 16 | 2 | 3,5 |
| 20 | 52 | 16 | 10 | 50 | 18,0 | 18,0 | 40 | 21,7 | 24 | 2 | 7,0 |
| 25 | 60 | 16 | 10 | 58 | 23,5 | 21,0 | 48 | 21,7 | 24 | 2 | 7,0 |
| 30 | 70 | 20 | 14 | 68 | 27,0 | 25,0 | 55 | 29,7 | 40 | 2 | 7,0 |
| 40 | 85 | 25 | 14 | 83 | 36,0 | 32,0 | 63 | 29,7 | 40 | 3 | 7,0 |
| 50 | 100 | 32 | 16 | 98 | 45,0 | 37,0 | 78 | 35,7 | 48 | 3 | 8,0 |

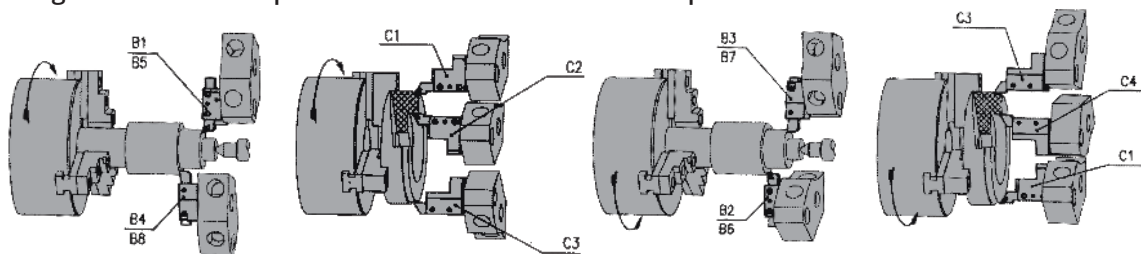
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- Werkstoff:** Legierter Einsatzstahl mit einer Zugfestigkeit im Kern von min. 950 N / mm². Einsatzgehärtet HRC 60 ± 2 (HV 700 ± 50), Härtetiefe 0,8 mm ± 0,2 mm, brüniert und präzisionsgeschliffen.
- Ausführung:** Mit innerer Kühlmittelzufuhr bzw. mit Gewindeanschluss für externe Kühlmittelzufuhr.
- Material:** Alloyed case-hardened steel, tensile core strength of min. 950 N / mm². Case hardened HRC 60 ± 2 (HV 700 ± 50), hardening depth 0.8 mm ± 0.2 mm, black-finished and precisely grinded.
- Version:** With internal coolant resp. with threaded connection for external coolant.
- Matière:** Acier de cémentation allié. Résistance à la traction dans le noyau de min 950 N / mm². Cémentation à HRC 60 ± 2 (HV 700 ± 50), profondeur de cémentation 0,8 mm ± 0,2 mm, bruni et rectifié précisément.
- Version:** Avec arrosage interne respectivement avec raccord fileté pour arrosage externe.

Werkzeugzuordnung für Scheibenrevolver

Tool assignment for disc turrets

Assignation des outils pour machines avec tourelle à disque



Einsatz von Werkzeughaltern bei linker Spindeldrehrichtung
 Application of tool holders with anti-clockwise spindle rotation
 Utilisation d'attachements avec la broche en sens anti-horaire

Einsatz von Werkzeughaltern bei rechter Spindeldrehrichtung
 Application of tool holders with clockwise spindle rotation
 Utilisation d'attachements avec la broche en sens horaire



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| 7.58 HAAS BMT 65 | 7.58 HAAS BMT 65 | 7.58 HAAS BMT 65 | 7.58 HAAS BMT 65 |

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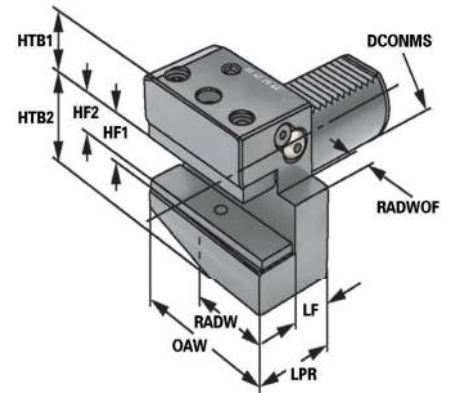
Radial toolholders form B1 right, short
Porte-outils radials forme B1 droite, court



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.

DIN ISO
10889

B1

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|------|------|-----|----|-----|------|--------|------|------|--------|
| 169.31.12 | B1 - 16 × 12 × 24 | 16 | 12 | - | 24 | 13 | 42 | 23 | 5 | 20 | 22 | 60,00 |
| 209.31.16 | B1 - 20 × 16 × 30 | 20 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 25 | 30 | 65,00 |
| 259.31.16 | B1 - 25 × 16 × 30 | 25 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 25 | 30 | 80,00 |
| 309.31.20 | B1 - 30 × 20 × 40 | 30 | 24,5 | 20,5 | 40 | 22 | 70 | 35 | 10 | 23,5 | 42,5 | 79,00 |
| 409.31.25 | B1 - 40 × 25 × 44 | 40 | 28 | 23 | 44 | 22 | 85 | 42,5 | 12,5 | 30 | 50 | 85,00 |
| 509.31.32 | B1 - 50 × 32 × 55 | 50 | 33 | 26 | 55 | 30 | 100 | 50 | 16 | 35 | 60 | 119,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



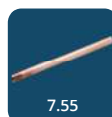
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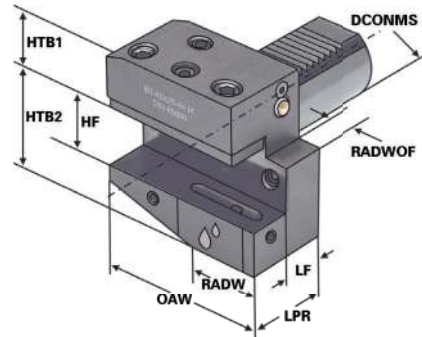
Radial toolholders form B1 right, short - for tools with internal coolant
Porte-outils radials forme B1 droite, pour - outils avec arrosage interne



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|----|-----|------|--------|------|------|--------|
| 309.31.20.IK | B1 - 30 × 20 × 40 | 30 | 20 | 40 | 22 | 70 | 35 | 10 | 28 | 38 | 136,00 |
| 409.31.25.IK | B1 - 40 × 25 × 44 | 40 | 25 | 44 | 22 | 85 | 42,5 | 12,5 | 32,5 | 48 | 149,00 |
| 509.31.32.IK | B1 - 50 × 32 × 55 | 50 | 32 | 55 | 30 | 100 | 50 | 16 | 35 | 60 | 178,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable



Übergabe für Kühlmittel
Coolant supply
Jonction d'arrosage

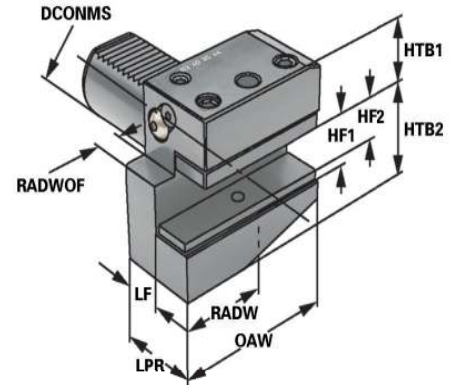




Radial toolholders form B2 left, short
Porte-outils radials forme B2 gauche, court



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.



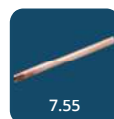
DIN ISO
10889

B2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|------|------|-----|----|-----|------|--------|------|------|--------|
| 169.32.12 | B2 - 16 × 12 × 24 | 16 | 12 | - | 24 | 13 | 42 | 23 | 5 | 20 | 22 | 60,00 |
| 209.32.16 | B2 - 20 × 16 × 30 | 20 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 25 | 30 | 65,00 |
| 259.32.16 | B2 - 25 × 16 × 30 | 25 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 25 | 30 | 80,00 |
| 309.32.20 | B2 - 30 × 20 × 40 | 30 | 24,5 | 20,5 | 40 | 22 | 70 | 35 | 10 | 23,5 | 42,5 | 79,00 |
| 409.32.25 | B2 - 40 × 25 × 44 | 40 | 28 | 23 | 44 | 22 | 85 | 42,5 | 12,5 | 30 | 50 | 85,00 |
| 509.32.32 | B2 - 50 × 32 × 55 | 50 | 33 | 26 | 55 | 30 | 100 | 50 | 16 | 35 | 60 | 119,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



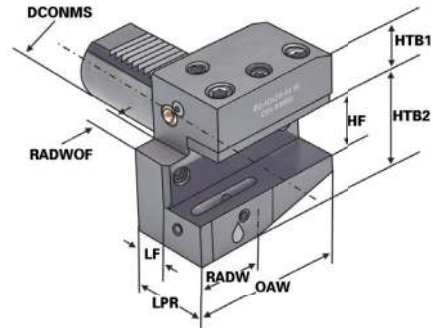
Radial toolholders form B2 left, short - for tools with internal coolant
 Porte-outils radials forme B2 gauche, court - pour outils avec arrosage interne



Verwendung:
 Vorwiegend für Außenbearbeitung.
 Zum Plan Einstechen.

Application:
 Mainly for external machining.
 For face machining.

Application:
 Principalement pour usinage extérieur.
 Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|----|-----|------|--------|------|------|--------|
| 309.32.20.IK | B2 - 30 × 20 × 40 | 30 | 20 | 40 | 22 | 70 | 35 | 10 | 28 | 38 | 136,00 |
| 409.32.25.IK | B2 - 40 × 25 × 44 | 40 | 25 | 44 | 22 | 85 | 42,5 | 12,5 | 32,5 | 48 | 149,00 |
| 509.32.32.IK | B2 - 50 × 32 × 55 | 50 | 32 | 55 | 30 | 100 | 50 | 16 | 35 | 60 | 178,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable



Übergabe für Kühlmittel
 Coolant supply
 Jonction d'arrosage





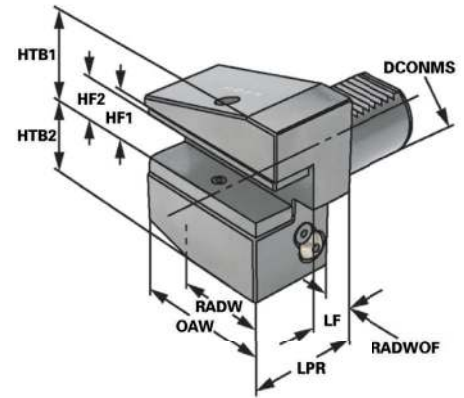
Radial toolholders form B3 overhead
Porte-outils radials forme B3 inversés droite, court



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usage extérieur.
Pour carottage.

DIN ISO
10889

B3

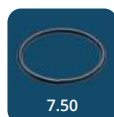
| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|-----|----|-----|------|--------|------|------|--------|
| 169.33.12 | B3 - 16 × 12 × 24 | 16 | 12 | - | 24 | 13 | 42 | 23 | 5 | 20 | 22 | 60,00 |
| 209.33.16 | B3 - 20 × 16 × 30 | 20 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 25 | 30 | 65,00 |
| 259.33.16 | B3 - 25 × 16 × 30 | 25 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 25 | 30 | 80,00 |
| 309.33.20 | B3 - 30 × 20 × 40 | 30 | 25 | 20,5 | 40 | 22 | 70 | 35 | 10 | 30 | 43 | 79,00 |
| 409.33.25 | B3 - 40 × 25 × 44 | 40 | 29 | 23 | 44 | 22 | 85 | 42,5 | 12,5 | 39,5 | 51 | 88,00 |
| 509.33.32 | B3 - 50 × 32 × 55 | 50 | 34 | 26 | 55 | 30 | 100 | 50 | 16 | 49 | 61 | 129,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



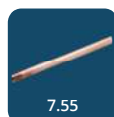
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7.52



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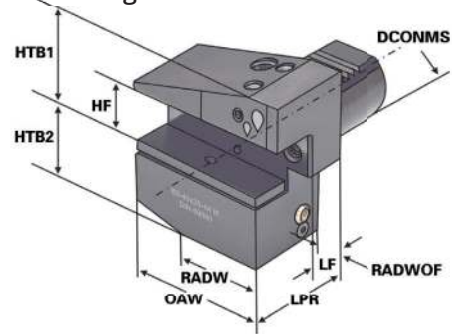
Radial toolholders form B3 overhead right, short - for tools with internal coolant
 Porte-outils radials forme B3 inversés droite, court - pour outils avec arrosage interne



Verwendung:
 Vorwiegend für Außenbearbeitung.
 Zum Plan Einstechen.

Application:
 Mainly for external machining.
 For face machining.

Application:
 Principalement pour usinage extérieur.
 Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|----|-----|------|--------|------|------|--------|
| 309.33.20.IK | B3 - 30 × 20 × 40 | 30 | 20 | 40 | 22 | 70 | 35 | 10 | 35 | 38 | 136,00 |
| 409.33.25.IK | B3 - 40 × 25 × 44 | 40 | 25 | 44 | 22 | 85 | 42,5 | 12,5 | 42,5 | 48 | 149,00 |
| 509.33.32.IK | B3 - 50 × 32 × 55 | 50 | 32 | 55 | 30 | 100 | 50 | 16 | 50 | 60 | 178,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable



Übergabe für Kühlmittel
 Coolant supply
 Jonction d'arrosage



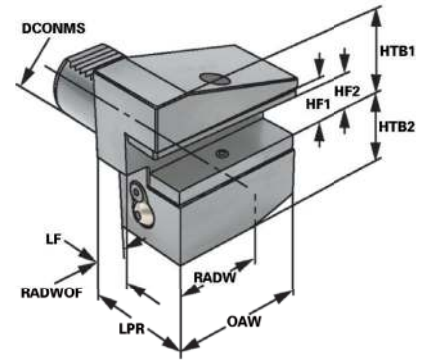
Radial toolholders form B4 overhead type
Porte-outils radials forme B4 inversés gauche, court



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



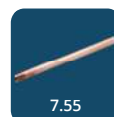
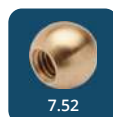
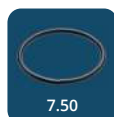
DIN ISO
10889

B4

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|-----|----|-----|------|--------|------|------|--------|
| 169.34.12 | B4 - 16 × 12 × 24 | 16 | 12 | - | 24 | 13 | 42 | 23 | 5 | 20 | 22 | 60,00 |
| 209.34.16 | B4 - 20 × 16 × 30 | 20 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 35 | 30 | 65,00 |
| 259.34.16 | B4 - 25 × 16 × 30 | 25 | 16 | 12 | 30 | 16 | 55 | 30 | 7 | 35 | 30 | 80,00 |
| 309.34.20 | B4 - 30 × 20 × 40 | 30 | 25 | 20,5 | 40 | 22 | 70 | 35 | 10 | 30 | 42,5 | 79,00 |
| 409.34.25 | B4 - 40 × 25 × 44 | 40 | 29 | 23 | 44 | 22 | 85 | 42,5 | 12,5 | 39,5 | 51 | 88,00 |
| 509.34.32 | B4 - 50 × 32 × 55 | 50 | 34 | 26 | 55 | 30 | 100 | 50 | 16 | 49 | 61 | 129,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



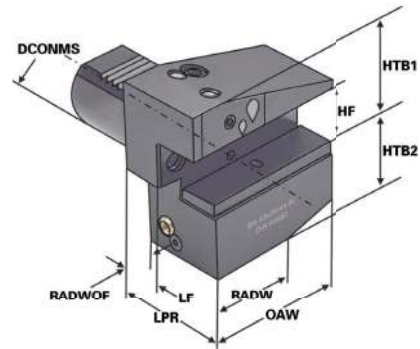
Radial toolholders form B4 overhead left, short - for tools with internal coolant
Porte-outils radials forme B4 inversés gauche, court - pour outils avec arrosage interne



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | LPR | LF | OAW | RADW | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|----|-----|------|--------|------|------|--------|
| 309.34.20.IK | B4 - 30 × 20 × 40 | 30 | 20 | 40 | 22 | 70 | 35 | 10 | 35 | 38 | 136,00 |
| 409.34.25.IK | B4 - 40 × 25 × 44 | 40 | 25 | 44 | 22 | 85 | 42,5 | 12,5 | 42,5 | 48 | 149,00 |
| 509.34.32.IK | B4 - 50 × 32 × 55 | 50 | 32 | 55 | 30 | 100 | 50 | 16 | 50 | 60 | 178,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable



Übergabe für Kühlmittel
Coolant supply
Jonction d'arrosage





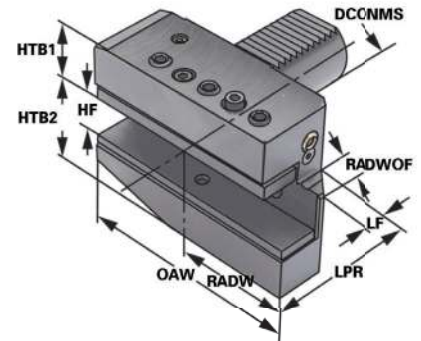
Radial toolholders form B5 right, long
Porte-outils radials forme B5 droite, long



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstecken.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.

DIN ISO
10889

B5

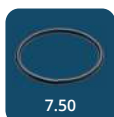
| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | RADW | RADWOF | LF | LPR | HF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|--------|----|-----|----|------|------|--------|
| 169.35.12 | B5 - 16 × 12 × 24 | 16 | 58 | 39 | 5 | 13 | 24 | 12 | 22 | 20 | 88,00 |
| 209.35.16 | B5 - 20 × 16 × 30 | 20 | 75 | 50 | 7 | 16 | 30 | 16 | 25 | 30 | 92,00 |
| 259.35.16 | B5 - 25 × 16 × 30 | 25 | 75 | 50 | 7 | 16 | 30 | 16 | 25 | 30 | 95,00 |
| 309.35.20 | B5 - 30 × 20 × 40 | 30 | 100 | 65 | 10 | 22 | 40 | 20 | 28 | 38 | 120,00 |
| 409.35.25 | B5 - 40 × 25 × 44 | 40 | 118 | 75,5 | 12,5 | 22 | 44 | 25 | 32,5 | 48 | 140,00 |
| 509.35.32 | B5 - 50 × 32 × 55 | 50 | 130 | 85 | 16 | 30 | 55 | 32 | 35 | 60 | 182,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



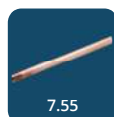
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7.50



7.52



7.55

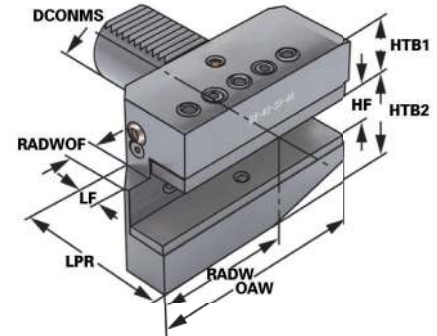
Radial toolholders form B6 left, long
Porte-outils radials forme B6 gauche, long



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstecken.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.

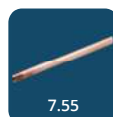
DIN ISO
10889

B6

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | RADW | RADWOF | LF | LPR | HF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|--------|----|-----|----|------|------|--------|
| 169.36.12 | B6 - 16 × 12 × 24 | 16 | 58 | 39 | 5 | 13 | 24 | 12 | 22 | 20 | 88,00 |
| 209.36.16 | B6 - 20 × 16 × 30 | 20 | 75 | 50 | 7 | 16 | 30 | 16 | 25 | 30 | 92,00 |
| 259.36.16 | B6 - 25 × 16 × 30 | 25 | 75 | 50 | 7 | 16 | 30 | 16 | 25 | 30 | 95,00 |
| 309.36.20 | B6 - 30 × 20 × 40 | 30 | 100 | 65 | 10 | 22 | 40 | 20 | 28 | 38 | 120,00 |
| 409.36.25 | B6 - 40 × 25 × 44 | 40 | 118 | 75,5 | 12,5 | 22 | 44 | 25 | 32,5 | 48 | 140,00 |
| 509.36.32 | B6 - 50 × 32 × 55 | 50 | 130 | 80 | 16 | 30 | 55 | 32 | 35 | 60 | 182,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle

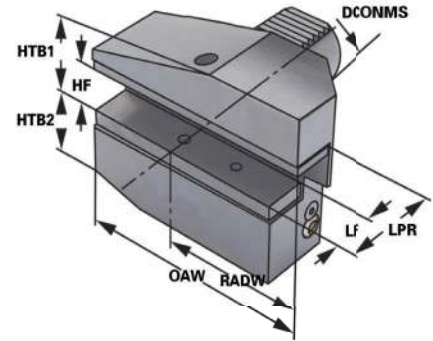




Radial toolholders form B7 overhead
Porte-outils radials forme B7 inversé droite, long



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.

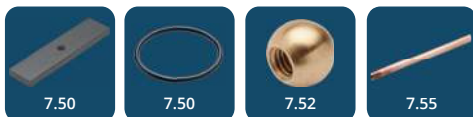


DIN ISO 10889 B7

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | RADW | RADWOF | LF | LPR | HF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|--------|----|-----|----|------|------|--------|
| 169.37.12 | B7 - 16 × 12 × 24 | 16 | 58 | 39 | 5 | 13 | 24 | 12 | 20 | 22 | 88,00 |
| 209.37.16 | B7 - 20 × 16 × 30 | 20 | 75 | 50 | 7 | 16 | 30 | 16 | 30 | 25 | 92,00 |
| 259.37.16 | B7 - 25 × 16 × 30 | 25 | 75 | 50 | 7 | 16 | 30 | 16 | 30 | 25 | 95,00 |
| 309.37.20 | B7 - 30 × 20 × 40 | 30 | 100 | 65 | 10 | 22 | 40 | 20 | 42 | 30 | 120,00 |
| 409.37.25 | B7 - 40 × 25 × 44 | 40 | 118 | 75,5 | 12,5 | 22 | 44 | 25 | 48 | 42,5 | 140,00 |
| 509.37.32 | B7 - 50 × 32 × 55 | 50 | 130 | 80 | 16 | 30 | 55 | 32 | 60 | 50 | 182,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



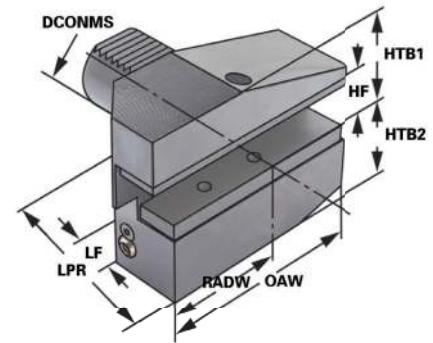
Radial toolholders form B8 overhead left, long
 Porte-outils radiaux forme B8 inversé gauche, long



Verwendung:
 Vorwiegend für Außenbearbeitung.
 Zum Plan Einstechen.

Application:
 Mainly for external machining.
 For face machining.

Application:
 Principalement pour usinage extérieur.
 Pour carottage.

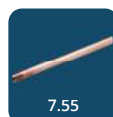
DIN ISO
10889

B8

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | RADW | RADWOF | LF | LPR | HF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|--------|----|-----|----|------|------|--------|
| 169.38.12 | B8 - 16 × 12 × 24 | 16 | 58 | 39 | 5 | 13 | 24 | 12 | 20 | 22 | 88,00 |
| 209.38.16 | B8 - 20 × 16 × 30 | 20 | 75 | 50 | 7 | 16 | 30 | 16 | 30 | 25 | 92,00 |
| 259.38.16 | B8 - 25 × 16 × 30 | 25 | 75 | 50 | 7 | 16 | 30 | 16 | 30 | 25 | 95,00 |
| 309.38.20 | B8 - 30 × 20 × 40 | 30 | 100 | 65 | 10 | 22 | 40 | 20 | 38 | 35 | 120,00 |
| 409.38.25 | B8 - 40 × 25 × 44 | 40 | 118 | 75,5 | 12,5 | 22 | 44 | 25 | 48 | 42,5 | 140,00 |
| 509.38.32 | B8 - 50 × 32 × 55 | 50 | 130 | 80 | 16 | 30 | 55 | 32 | 60 | 50 | 182,00 |

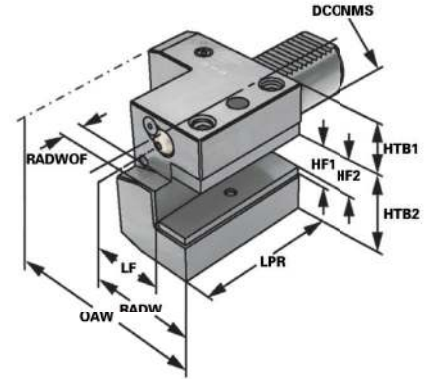
Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle

7





Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.



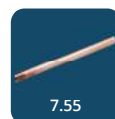
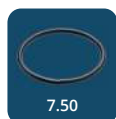
DIN ISO
10889

C1

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|-----|-----|------|----|-----|--------|------|------|--------|
| 169.41.12 | C1 - 16 × 12 | 16 | 12 | 10 | 43 | 24 | 13 | 44 | 5 | 20 | 22 | 88,00 |
| 209.41.16 | C1 - 20 × 16 | 20 | 16 | 12 | 52 | 27 | 13 | 50 | 7 | 25 | 30 | 88,00 |
| 259.41.16 | C1 - 25 × 16 | 25 | 16 | 12 | 58 | 33 | 19 | 55 | 7 | 25 | 30 | 96,00 |
| 309.41.20 | C1 - 30 × 20 | 30 | 20 | 16 | 70 | 35 | 17 | 70 | 10 | 28 | 38 | 92,00 |
| 409.41.25 | C1 - 40 × 25 | 40 | 25 | 20 | 85 | 42,5 | 21 | 85 | 12,5 | 32,5 | 48 | 116,00 |
| 509.41.32 | C1 - 50 × 32 | 50 | 32 | 25 | 100 | 50 | 26 | 100 | 16 | 35 | 60 | 160,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



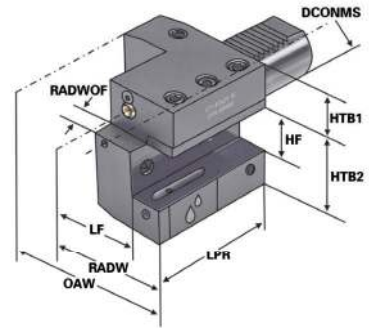
Axial toolholders form C1 right - for tools with internal coolant
Porte-outils axials forme C1 droite - pour outils avec arrosage interne



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|------|----|-----|--------|------|------|--------|
| 309.41.20.IK | C1 - 30 × 20 | 30 | 20 | 76 | 49 | 31 | 70 | 10 | 24 | 42 | 152,00 |
| 409.41.25.IK | C1 - 40 × 25 | 40 | 25 | 90 | 55 | 33 | 85 | 12,5 | 32,5 | 48 | 168,00 |
| 509.41.32.IK | C1 - 50 × 32 | 50 | 32 | 105 | 62 | 38 | 100 | 16 | 35 | 60 | 199,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable



Übergabe für Kühlmittel
Coolant supply
Jonction d'arrosage

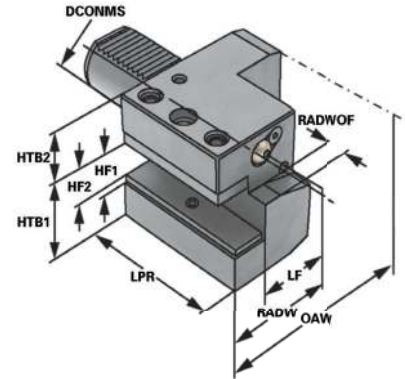




Axial toolholders form C2 left
Porte-outils axials forme C2 gauche



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.



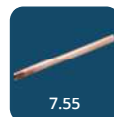
DIN ISO
10889

C2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|-----|-----|------|------|-----|--------|------|------|--------|
| 169.42.12 | C2 - 16 × 12 | 16 | 12 | - | 43 | 24 | 13 | 44 | 5 | 20 | 22 | 88,00 |
| 209.42.16 | C2 - 20 × 16 | 20 | 16 | 12 | 65 | 40 | 26 | 50 | 7 | 25 | 30 | 88,00 |
| 259.42.16 | C2 - 25 × 16 | 25 | 16 | 12 | 58 | 33 | 26 | 55 | 7 | 20 | 30 | 96,00 |
| 309.42.20 | C2 - 30 × 20 | 30 | 20 | 16 | 76 | 41 | 23 | 70 | 10 | 28 | 38 | 92,00 |
| 409.42.25 | C2 - 40 × 25 | 40 | 25 | 20 | 90 | 47,5 | 25,5 | 85 | 12,5 | 32,5 | 48 | 116,00 |
| 509.42.32 | C2 - 50 × 32 | 50 | 32 | 25 | 105 | 55 | 30,5 | 100 | 16 | 35 | 60 | 160,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



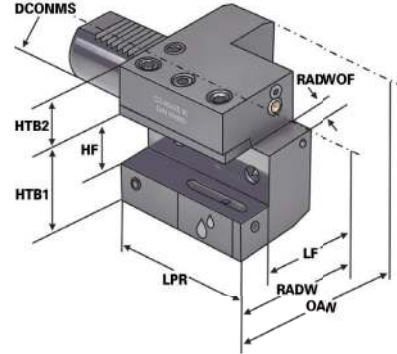
Axial toolholders form C2 left - for tools with internal coolant
Porte-outils axials forme C2 gauche - pour outils avec arrosage interne



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|------|----|-----|--------|------|------|--------|
| 309.42.20.IK | C2 - 30 × 20 | 30 | 20 | 76 | 49 | 31 | 70 | 10 | 24 | 42 | 152,00 |
| 409.42.25.IK | C2 - 40 × 25 | 40 | 25 | 90 | 55 | 33 | 85 | 12,5 | 32,5 | 48 | 168,00 |
| 509.42.32.IK | C2 - 50 × 32 | 50 | 32 | 105 | 62 | 38 | 100 | 16 | 35 | 60 | 199,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable



Übergabe für Kühlmittel
Coolant supply
Jonction d'arrosage

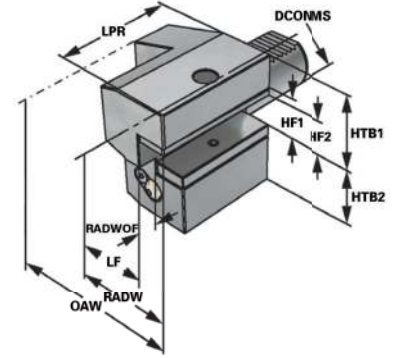




Axial toolholders form C3 overhead right
Porte-outils axials forme C3 inversés droite, court



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.



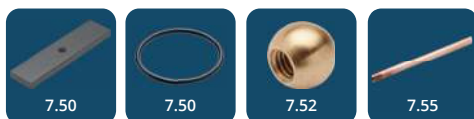
DIN ISO 10889

C3

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|-----|-----|------|----|-----|--------|------|------|--------|
| 169.43.12 | C3 - 16 x 12 | 16 | 12 | 10 | 43 | 24 | 13 | 44 | 5 | 20 | 22 | 88,00 |
| 209.43.16 | C3 - 20 x 16 | 20 | 16 | 12 | 52 | 27 | 13 | 55 | 7 | 30 | 25 | 88,00 |
| 259.43.16 | C3 - 25 x 16 | 25 | 16 | 12 | 58 | 33 | 19 | 55 | 7 | 30 | 25 | 96,00 |
| 309.43.20 | C3 - 30 x 20 | 30 | 20 | 16 | 70 | 35 | 17 | 70 | 10 | 38 | 35 | 92,00 |
| 409.43.25 | C3 - 40 x 25 | 40 | 25 | 20 | 85 | 42,5 | 21 | 85 | 12,5 | 48 | 42,5 | 116,00 |
| 509.43.32 | C3 - 50 x 32 | 50 | 32 | 25 | 100 | 50 | 26 | 100 | 16 | 60 | 50 | 166,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



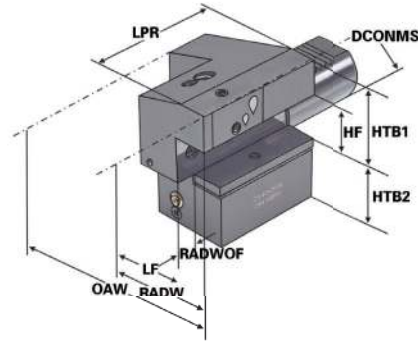
Axial toolholders form C3 overhead right - for tools with internal coolant
Porte-outils axials forme C3 inversés droite - pour outils avec arrosage interne



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|------|----|-----|--------|------|------|--------|
| 309.43.20.IK | C3 - 30 × 20 | 30 | 20 | 70 | 35 | 17 | 70 | 10 | 38 | 35 | 152,00 |
| 409.43.25.IK | C3 - 40 × 25 | 40 | 25 | 85 | 42,5 | 21 | 85 | 12,5 | 48 | 42,5 | 168,00 |
| 509.43.32.IK | C3 - 50 × 32 | 50 | 32 | 100 | 50 | 26 | 100 | 16 | 60 | 50 | 199,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable



Übergabe für Kühlmittel
Coolant supply
Jonction d'arrosage

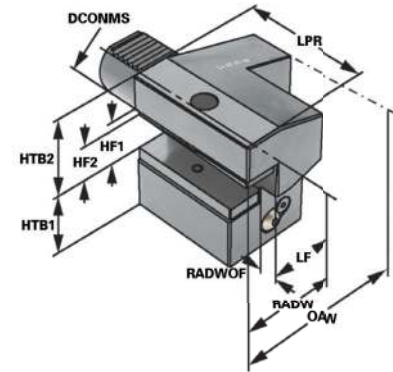




Axial toolholders form C4 overha...
Porte-outils axials forme C4 inversés gauche, court



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.



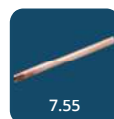
DIN ISO 10889

C4

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF1 | HF2 | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|-----|-----|-----|------|------|-----|--------|------|------|--------|
| 169.44.12 | C4 - 16 × 12 | 16 | 12 | 10 | 43 | 24 | 13 | 44 | 5 | 22 | 20 | 88,00 |
| 209.44.16 | C4 - 20 × 16 | 20 | 16 | 12 | 65 | 40 | 26 | 50 | 7 | 30 | 25 | 88,00 |
| 259.44.16 | C4 - 25 × 16 | 25 | 16 | 12 | 58 | 33 | 19 | 55 | 7 | 30 | 25 | 96,00 |
| 309.44.20 | C4 - 30 × 20 | 30 | 20 | 16 | 76 | 41 | 23 | 70 | 10 | 38 | 35 | 92,00 |
| 409.44.25 | C4 - 40 × 25 | 40 | 25 | 20 | 90 | 47,5 | 25,5 | 85 | 12,5 | 48 | 42,5 | 116,00 |
| 509.44.32 | C4 - 50 × 32 | 50 | 32 | 25 | 105 | 55 | 30,5 | 100 | 16 | 60 | 50 | 166,00 |

7

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle



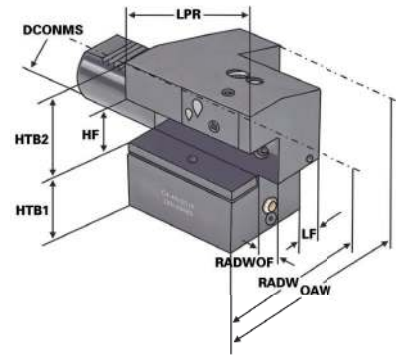
Axial toolholders form C4 overhead left - for tools with internal coolant
Porte-outils axials forme C4 inversés gauche - pour outils avec arrosage interne



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | HF | OAW | RADH | LF | LPR | RADWOF | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|------|----|-----|--------|------|------|--------|
| 309.44.20.IK | C4 - 30 × 20 | 30 | 20 | 70 | 35 | 17 | 70 | 10 | 38 | 35 | 152,00 |
| 409.44.25.IK | C4 - 40 × 25 | 40 | 25 | 85 | 42,5 | 21 | 85 | 12,5 | 48 | 42,5 | 168,00 |
| 509.44.32.IK | C4 - 50 × 32 | 50 | 32 | 100 | 50 | 26 | 100 | 16 | 60 | 50 | 199,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable

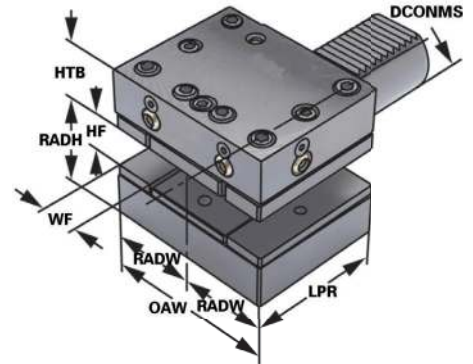


Übergabe für Kühlmittel
Coolant supply
Jonction d'arrosage





Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.



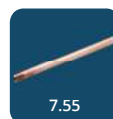
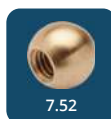
DIN ISO 10889

D1

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | RADW | WF | LPR | HF | HTB | RADH | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|------|-----|----|------|------|--------|
| 309.89.12 | D1 - 30 x 20 x 60 | 30 | 76 | 41 | 18 | 60 | 20 | 28 | 38 | 175,00 |
| 409.89.16 | D1 - 40 x 25 x 72 | 40 | 90 | 47,5 | 22 | 72 | 25 | 32,5 | 48 | 210,00 |
| 509.89.20 | D1 - 50 x 32 x 85 | 50 | 105 | 55 | 24,5 | 85 | 32 | 35 | 60 | 260,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle

7





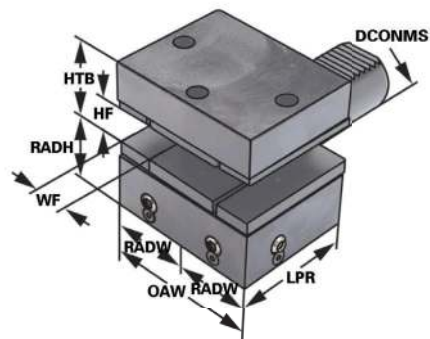
Rectangular toolholders with multiple seats, with
Porte-outils, multiple, inversés forme D2



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



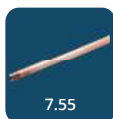
DIN ISO
10889

D2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | RADW | WF | LPR | HF | HTB | RADH | EUR |
|---------------------------------------|--------------------------------|--------|-----|------|------|-----|----|------|------|--------|
| 309.90.12 | D2 - 30 × 20 × 60 | 30 | 76 | 41 | 18 | 60 | 20 | 35 | 38 | 175,00 |
| 409.90.16 | D2 - 40 × 25 × 72 | 40 | 90 | 47,5 | 22 | 72 | 25 | 42,5 | 48 | 210,00 |
| 509.90.20 | D2 - 50 × 32 × 85 | 50 | 105 | 55 | 24,5 | 85 | 32 | 50 | 60 | 260,00 |

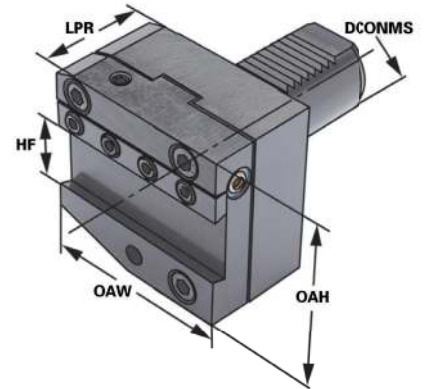
Ausführung: Mit einstellbarer Kugelspritzdüse und Unterlegplatte
Version: With adjustable spray nozzle and shim
Version: Avec gicleur ajustable et semelle

7





Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.
Application:
Mainly for external machining.
For face machining.
Application:
Principalement pour usinage extérieur.
Pour carottage.



DIN ISO 10889

AR

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | OAH | LPR | HF | EUR |
|---------------------------------------|--------------------------------|--------|-----|-----|-----|----|--------|
| 309.65.26 | AR - 30 × 26 | 30 | 70 | 70 | 50 | 26 | 409,00 |
| 409.65.32 | AR - 40 × 32 | 40 | 85 | 80 | 50 | 32 | 433,00 |
| 509.65.32 | AR - 50 × 32 | 50 | 100 | 80 | 50 | 32 | 460,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable

7





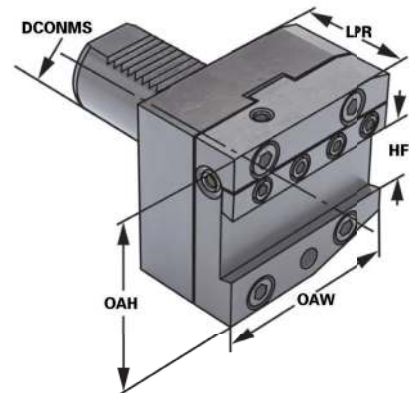
Parting-off toolholders left height adjustable
Porte-lames de tronçonnage gauche réglage en hauteur



Verwendung:
Vorwiegend für Außenbearbeitung.
Zum Plan Einstechen.

Application:
Mainly for external machining.
For face machining.

Application:
Principalement pour usinage extérieur.
Pour carottage.



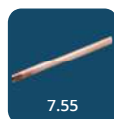
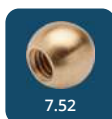
DIN ISO
10889

AL

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | OAW | OAH | LPR | HF | EUR |
|---------------------------------------|--------------------------------|--------|-----|-----|-----|----|--------|
| 309.66.26 | AL - 30 × 26 | 30 | 70 | 70 | 50 | 26 | 409,00 |
| 409.66.32 | AL - 40 × 32 | 40 | 85 | 80 | 50 | 32 | 433,00 |
| 509.66.32 | AL - 50 × 32 | 50 | 100 | 80 | 50 | 32 | 460,00 |

Ausführung: Mit einstellbarer Kugelspritzdüse
Version: With adjustable spray nozzle
Version: Avec gicleur ajustable

7

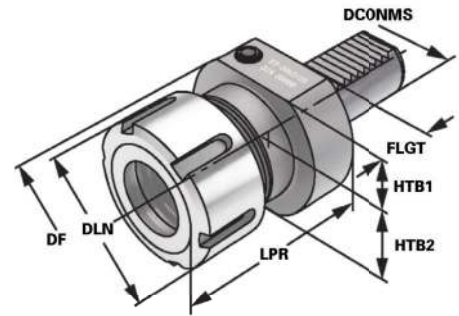




Collet chucks form E3 DIN 6391 for collets ISO 10897 (DIN 6388) OZ-system
Mandrins à pinces forme E3 DIN 6391 pour pinces ISO 10897 (DIN 6388) système OZ



Verwendung:
Zur Aufnahme von Werkzeugen mit
Zylinderschaft in Spannzangen.
Application:
For mounting straight-shank tools in
collets.
Application:
Pour le serrage d'outils avec queue
cylindrique dans des pinces de serrage.



DIN ISO
10889

E3

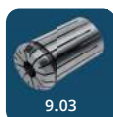
ISO
10897

i
13.04

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | Typ | DF | DLN | HTB1 | HTB2 | LPR | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|--------|--------------|----|-----|------|------|-----|------|--------|
| 309.01.16 | E3 - 30 × 2 - 16 | 30 | 2 - 16 | 415E OZ 16 | 68 | 43 | 28 | 30 | 57 | 22 | 130,00 |
| 309.01.25 | E3 - 30 × 2 - 25 | 30 | 2 - 25 | 462E OZ 25 | 68 | 60 | 28 | 30 | 75 | 22 | 130,00 |
| 409.01.25 | E3 - 40 × 2 - 25 | 40 | 2 - 25 | 462E OZ 25 | 83 | 60 | 32,5 | 41,5 | 75 | 22 | 130,00 |
| 409.01.32 | E3 - 40 × 3 - 32 | 40 | 3 - 32 | 467E OZ 32 | 83 | 72 | 32,5 | 41,5 | 90 | 22 | 138,00 |
| 509.01.25 | E3 - 50 × 2 - 25 | 50 | 2 - 25 | 462E OZ 25 | 98 | 60 | 35 | 49 | 75 | 30 | 157,00 |
| 509.01.32 | E3 - 50 × 3 - 32 | 50 | 3 - 32 | 467E OZ 32 | 98 | 72 | 35 | 49 | 90 | 30 | 164,00 |

7

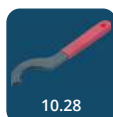
Lieferumfang: Mit kugellagerter Spannmutter
Delivery: With ball bearing clamping nut
Livraison: Avec écrou de serrage à roulement à billes



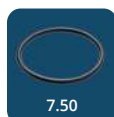
9.03



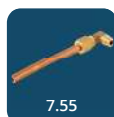
10.09



10.28



7.50



7.55

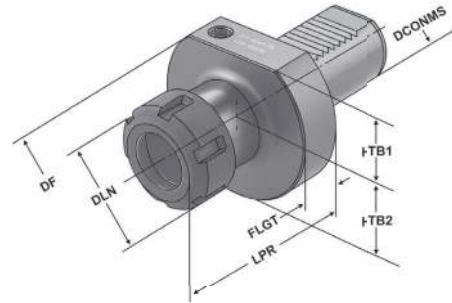
Collet chucks form E4 for collets ISO 15488 (DIN 6499) ER-system
Mandrins à pinces forme E4 pour pinces ISO 15488 (DIN 6499) système ER



Verwendung:
Zur Aufnahme von Werkzeugen mit
Zylinderschaft in Spannzangen.

Application:
For mounting straight-shank tools in
collets.

Application:
Pour le serrage d'outils avec queue
cylindrique dans des pinces de serrage.



DIN ISO
10889

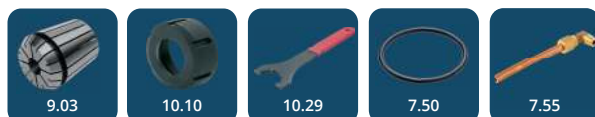
E4

ISO
15488

i
13.04

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | Typ | DF | DLN | HTB1 | HTB2 | LPR | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|--------|--------------|----|-----|------|------|-----|------|--------|
| 169.02.10 | E4 - 16 × 1 - 10 | 16 | 1 - 10 | 426E ER 16 | 40 | 28 | 18 | 18 | 40 | 13 | 105,00 |
| 209.02.10 | E4 - 20 × 1 - 10 | 20 | 1 - 10 | 426E ER 16 | 50 | 28 | 25 | 23 | 42 | 18 | 115,00 |
| 209.02.16 | E4 - 20 × 2 - 16 | 20 | 2 - 16 | 430E ER 25 | 50 | 42 | 25 | 23 | 46 | 18 | 115,00 |
| 259.02.16 | E4 - 25 × 2 - 16 | 25 | 2 - 16 | 430E ER 25 | 58 | 42 | 25 | 25 | 55 | 18 | 130,00 |
| 259.02.20 | E4 - 25 × 2 - 20 | 25 | 2 - 20 | 470E ER 32 | 58 | 50 | 25 | 25 | 55 | 18 | 130,00 |
| 309.02.16 | E4 - 30 × 2 - 16 | 30 | 2 - 16 | 430E ER 25 | 68 | 42 | 28 | 30 | 57 | 22 | 110,00 |
| 309.02.20 | E4 - 30 × 2 - 20 | 30 | 2 - 20 | 470E ER 32 | 68 | 50 | 28 | 30 | 75 | 22 | 110,00 |
| 309.02.26 | E4 - 30 × 3 - 26 | 30 | 3 - 26 | 472E ER 40 | 68 | 63 | 28 | 30 | 75 | 22 | 110,00 |
| 409.02.16 | E4 - 40 × 2 - 16 | 40 | 2 - 16 | 430E ER 25 | 83 | 42 | 32,5 | 41,5 | 75 | 22 | 115,00 |
| 409.02.20 | E4 - 40 × 2 - 20 | 40 | 2 - 20 | 470E ER 32 | 83 | 50 | 32,5 | 41,5 | 75 | 22 | 115,00 |
| 409.02.26 | E4 - 40 × 3 - 26 | 40 | 3 - 26 | 472E ER 40 | 83 | 63 | 32,5 | 41,5 | 75 | 22 | 115,00 |
| 509.02.26 | E4 - 50 × 3 - 26 | 50 | 3 - 26 | 472E ER 40 | 98 | 63 | 35 | 49 | 75 | 30 | 157,00 |

Lieferumfang: Mit gewichteter Spannmutter
Delivery: With balanced clamping nut
Livraison: Avec écrou de serrage équilibré



**Verwendung:**

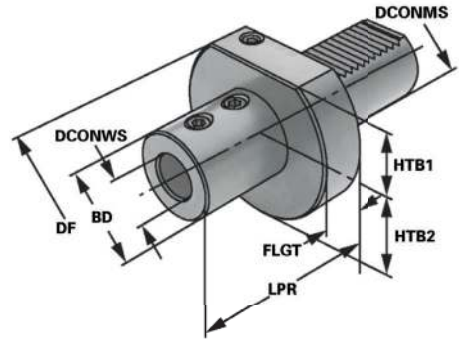
Zur Aufnahme von allen nach DIN 6595 genormten Vollbohrern mit Zylinder-schaft.

Application:

For all solid drills with cylindrical shank according to DIN 6595.

Application:

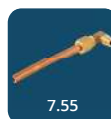
Pour le serrage de forets à queue cylindrique suivant DIN 6595.

DIN ISO
10889

E1

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | BD | DF | HTB1 | HTB2 | LPR | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|--------|----|----|------|------|-----|------|--------|
| 209.51.16 | E1 - 20 × 16 | 20 | 16 | 40 | 50 | 22 | 22 | 67 | 18 | 75,00 |
| 209.51.20 | E1 - 20 × 20 | 20 | 20 | 40 | 50 | 22 | 22 | 67 | 18 | 75,00 |
| 209.51.25 | E1 - 20 × 25 | 20 | 25 | 45 | 50 | 22 | 22 | 71 | 18 | 75,00 |
| 259.51.16 | E1 - 25 × 16 | 25 | 16 | 40 | 58 | 25 | 25 | 67 | 18 | 79,00 |
| 259.51.20 | E1 - 25 × 20 | 25 | 20 | 40 | 58 | 25 | 25 | 67 | 18 | 79,00 |
| 259.51.25 | E1 - 25 × 25 | 25 | 25 | 45 | 58 | 25 | 25 | 71 | 18 | 79,00 |
| 259.51.32 | E1 - 25 × 32 | 25 | 32 | 58 | 58 | 25 | 25 | 78 | - | 79,00 |
| 309.51.16 | E1 - 30 × 16 | 30 | 16 | 36 | 68 | 28 | 30 | 64 | 22 | 85,00 |
| 309.51.20 | E1 - 30 × 20 | 30 | 20 | 40 | 68 | 28 | 30 | 67 | 22 | 85,00 |
| 309.51.25 | E1 - 30 × 25 | 30 | 25 | 45 | 68 | 28 | 30 | 71 | 22 | 85,00 |
| 309.51.32 | E1 - 30 × 32 | 30 | 32 | 52 | 68 | 28 | 30 | 75 | 22 | 85,00 |
| 309.51.40 | E1 - 30 × 40 | 30 | 40 | 60 | 68 | 28 | 30 | 95 | 22 | 85,00 |
| 409.51.16 | E1 - 40 × 16 | 40 | 16 | 36 | 83 | 32,5 | 41,5 | 64 | 22 | 88,00 |
| 409.51.20 | E1 - 40 × 20 | 40 | 20 | 40 | 83 | 32,5 | 41,5 | 67 | 22 | 88,00 |
| 409.51.25 | E1 - 40 × 25 | 40 | 25 | 45 | 83 | 32,5 | 41,5 | 75 | 22 | 88,00 |
| 409.51.32 | E1 - 40 × 32 | 40 | 32 | 52 | 83 | 32,5 | 41,5 | 75 | 22 | 88,00 |
| 409.51.40 | E1 - 40 × 40 | 40 | 40 | 65 | 83 | 32,5 | 41,5 | 90 | 22 | 88,00 |
| 509.51.16 | E1 - 50 × 16 | 50 | 16 | 40 | 98 | 35 | 49 | 66 | 30 | 128,00 |
| 509.51.20 | E1 - 50 × 20 | 50 | 20 | 40 | 98 | 35 | 49 | 66 | 30 | 128,00 |
| 509.51.25 | E1 - 50 × 25 | 50 | 25 | 45 | 98 | 35 | 49 | 80 | 30 | 128,00 |
| 509.51.32 | E1 - 50 × 32 | 50 | 32 | 52 | 98 | 35 | 49 | 80 | 30 | 128,00 |
| 509.51.40 | E1 - 50 × 40 | 50 | 40 | 65 | 98 | 35 | 49 | 90 | 30 | 128,00 |
| 509.51.50 | E1 - 50 × 50 | 50 | 50 | 75 | 98 | 35 | 49 | 100 | 30 | 128,00 |

Lieferumfang: Mit Spanschrauben
Delivery: With clamping screws
Livraison: Avec vis de serrage



Drill chuck adaptors DIN 238

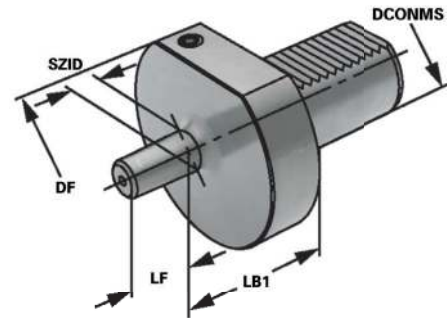
Arbres pour mandrins de perçage DIN 238



Verwendung:
Zur Aufnahme von Bohrfuttern.

Application:
For mounting drill chucks.

Application:
Pour le serrage de mandrins de perçage.

DIN ISO
10889DIN
238

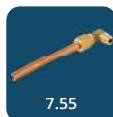
| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | SZID | DF | LB1 | LF | EUR |
|---------------------------------------|--------------------------------|--------|------|----|-----|----|--------|
| 309.14.16 | 30 – B16 | 30 | B16 | 68 | 27 | 24 | 79,00 |
| 409.14.16 | 40 – B16 | 40 | B16 | 83 | 27 | 24 | 81,00 |
| 509.14.16 | 50 – B16 | 50 | B16 | 98 | 35 | 24 | 103,00 |



10.93



7.50



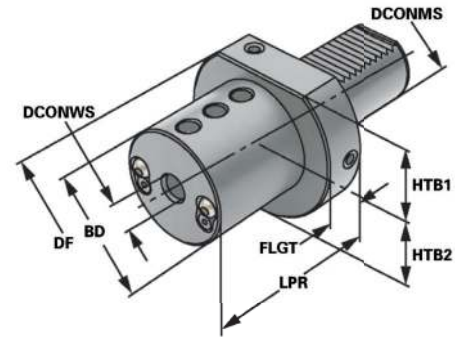
7.55



10.78



Verwendung:
Für Innenbearbeitung mit Bohrstangen.
Application:
For internal machining with boring bars.
Application:
Pour l'usinage intérieur avec barres d'alésage.



DIN ISO
10889

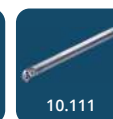
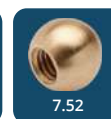
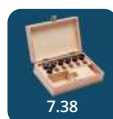
E2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | DF | BD | HTB1 | HTB2 | LPR | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|--------|----|----|------|------|-----|------|-------|
| 169.52.06 | E2 - 16 × 06 | 16 | 6 | 40 | 32 | 18 | 20 | 44 | 13 | 67,00 |
| 169.52.08 | E2 - 16 × 08 | 16 | 8 | 40 | 32 | 18 | 20 | 44 | 13 | 67,00 |
| 169.52.10 | E2 - 16 × 10 | 16 | 10 | 40 | 32 | 18 | 20 | 44 | 13 | 67,00 |
| 169.52.12 | E2 - 16 × 12 | 16 | 12 | 40 | 32 | 18 | 20 | 44 | 13 | 67,00 |
| 169.52.16 | E2 - 16 × 16 | 16 | 16 | 40 | 32 | 18 | 20 | 44 | 13 | 67,00 |
| 209.52.08 | E2 - 20 × 08 | 20 | 8 | 50 | 40 | 23 | 25 | 50 | 18 | 71,00 |
| 209.52.10 | E2 - 20 × 10 | 20 | 10 | 50 | 40 | 23 | 25 | 50 | 18 | 71,00 |
| 209.52.12 | E2 - 20 × 12 | 20 | 12 | 50 | 40 | 23 | 25 | 50 | 18 | 71,00 |
| 209.52.16 | E2 - 20 × 16 | 20 | 16 | 50 | 40 | 23 | 25 | 50 | 18 | 71,00 |
| 209.52.20 | E2 - 20 × 20 | 20 | 20 | 50 | 40 | 23 | 25 | 50 | 18 | 71,00 |
| 259.52.08 | E2 - 25 × 08 | 25 | 8 | 58 | 40 | 25 | 25 | 50 | 18 | 75,00 |
| 259.52.10 | E2 - 25 × 10 | 25 | 10 | 58 | 40 | 25 | 25 | 50 | 18 | 75,00 |
| 259.52.12 | E2 - 25 × 12 | 25 | 12 | 58 | 40 | 25 | 25 | 50 | 18 | 75,00 |
| 259.52.16 | E2 - 25 × 16 | 25 | 16 | 58 | 40 | 25 | 25 | 50 | 18 | 75,00 |
| 259.52.20 | E2 - 25 × 20 | 25 | 20 | 58 | 58 | 25 | 25 | 50 | - | 75,00 |
| 259.52.25 | E2 - 25 × 25 | 25 | 25 | 58 | 58 | 25 | 25 | 60 | - | 75,00 |

7

Ausführung: Mit einstellbaren Kugelspritzdüsen
Version: With adjustable spray nozzles
Version: Avec gicleurs ajustables

Lieferumfang: Mit Spannschrauben
Delivery: With clamping screws
Livraison: Avec vis de serrage



Boring bar holders form E2

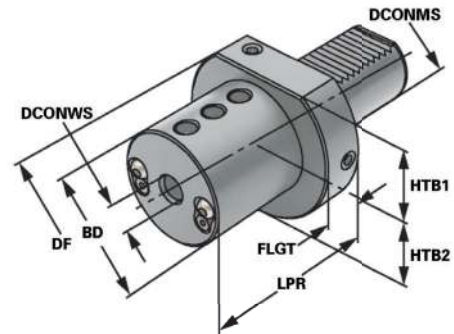
Porte-outils pour barres d'alésage forme E2



Verwendung:
Für Innenbearbeitung mit Bohrstangen.

Application:
For internal machining with boring bars.

Application:
Pour l'usinage intérieur avec barres d'alésage.

DIN ISO
10889

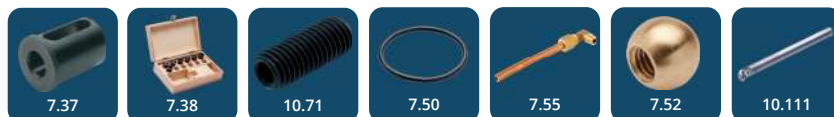
E2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | DF | BD | HTB1 | HTB2 | LPR | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|--------|----|----|------|------|-----|------|--------|
| 309.52.08 | E2 - 30 × 08 | 30 | 8 | 68 | 55 | 28 | 30 | 60 | 22 | 82,00 |
| 309.52.10 | E2 - 30 × 10 | 30 | 10 | 68 | 55 | 28 | 30 | 60 | 22 | 82,00 |
| 309.52.12 | E2 - 30 × 12 | 30 | 12 | 68 | 55 | 28 | 30 | 60 | 22 | 82,00 |
| 309.52.16 | E2 - 30 × 16 | 30 | 16 | 68 | 55 | 28 | 30 | 60 | 22 | 82,00 |
| 309.52.20 | E2 - 30 × 20 | 30 | 20 | 68 | 55 | 28 | 30 | 60 | 22 | 82,00 |
| 309.52.25 | E2 - 30 × 25 | 30 | 25 | 68 | 55 | 28 | 30 | 60 | 22 | 82,00 |
| 309.52.32 | E2 - 30 × 32 | 30 | 32 | 68 | 68 | 28 | 30 | 75 | - | 82,00 |
| | | | | | | | | | | |
| 409.52.08 | E2 - 40 × 08 | 40 | 8 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 85,00 |
| 409.52.10 | E2 - 40 × 10 | 40 | 10 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 85,00 |
| 409.52.12 | E2 - 40 × 12 | 40 | 12 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 85,00 |
| 409.52.16 | E2 - 40 × 16 | 40 | 16 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 85,00 |
| 409.52.20 | E2 - 40 × 20 | 40 | 20 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 85,00 |
| 409.52.25 | E2 - 40 × 25 | 40 | 25 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 85,00 |
| 409.52.32 | E2 - 40 × 32 | 40 | 32 | 83 | 83 | 32,5 | 41,5 | 75 | - | 85,00 |
| 409.52.40 | E2 - 40 × 40 | 40 | 40 | 83 | 83 | 32,5 | 41,5 | 90 | - | 85,00 |
| | | | | | | | | | | |
| 509.52.12 | E2 - 50 × 12 | 50 | 12 | 98 | 68 | 35 | 49 | 90 | 30 | 124,00 |
| 509.52.16 | E2 - 50 × 16 | 50 | 16 | 98 | 68 | 35 | 49 | 90 | 30 | 124,00 |
| 509.52.20 | E2 - 50 × 20 | 50 | 20 | 98 | 68 | 35 | 49 | 90 | 30 | 124,00 |
| 509.52.25 | E2 - 50 × 25 | 50 | 25 | 98 | 68 | 35 | 49 | 90 | 30 | 124,00 |
| 509.52.32 | E2 - 50 × 32 | 50 | 32 | 98 | 68 | 35 | 49 | 90 | 30 | 124,00 |
| 509.52.40 | E2 - 50 × 40 | 50 | 40 | 98 | 98 | 35 | 49 | 90 | - | 124,00 |
| 509.52.50 | E2 - 50 × 50 | 50 | 50 | 98 | 98 | 35 | 49 | 100 | - | 124,00 |

7

Ausführung: Mit einstellbaren Kugelspritzdüsen
Version: With adjustable spray nozzles
Version: Avec gicleurs ajustables

Lieferumfang: Mit Spannschrauben
Delivery: With clamping screws
Livraison: Avec vis de serrage

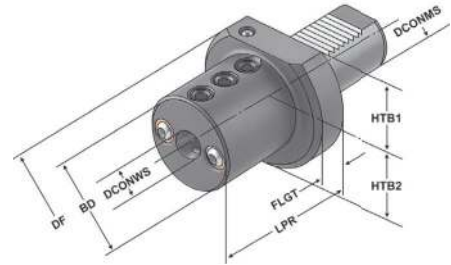




DISCOUNT P&GE 20%



Verwendung:
Für Innenbearbeitung mit Bohrstangen.
Application:
For internal machining with boring bars.
Application:
Pour l'usinage intérieur avec barres d'alésage.



DIN ISO 10889

E2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | DF | BD | HTB1 | HTB2 | LPR | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|--------|----|----|------|------|-----|------|--------|
| 309.53.10 | E2 - 30 x 10 | 30 | 10 | 68 | 50 | 28 | 30 | 60 | 22 | 144,00 |
| 309.53.12 | E2 - 30 x 12 | 30 | 12 | 68 | 50 | 28 | 30 | 60 | 22 | 144,00 |
| 309.53.16 | E2 - 30 x 16 | 30 | 16 | 68 | 55 | 28 | 30 | 60 | 22 | 144,00 |
| 309.53.20 | E2 - 30 x 20 | 30 | 20 | 68 | 55 | 28 | 30 | 60 | 22 | 144,00 |
| 309.53.25 | E2 - 30 x 25 | 30 | 25 | 68 | 55 | 28 | 30 | 60 | 22 | 144,00 |
| 309.53.32 | E2 - 30 x 32 | 30 | 32 | 68 | 68 | 28 | 30 | 65 | - | 144,00 |

7

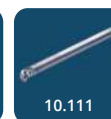
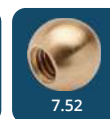
| | | | | | | | | | | |
|-----------|--------------|----|----|----|----|------|------|----|----|--------|
| 409.53.08 | E2 - 40 x 08 | 40 | 8 | 83 | 50 | 32,5 | 41,5 | 75 | 22 | 159,00 |
| 409.53.10 | E2 - 40 x 10 | 40 | 10 | 83 | 50 | 32,5 | 41,5 | 75 | 22 | 159,00 |
| 409.53.12 | E2 - 40 x 12 | 40 | 12 | 83 | 50 | 32,5 | 41,5 | 75 | 22 | 159,00 |
| 409.53.16 | E2 - 40 x 16 | 40 | 16 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 159,00 |
| 409.53.20 | E2 - 40 x 20 | 40 | 20 | 83 | 55 | 32,5 | 41,5 | 75 | 22 | 159,00 |
| 409.53.25 | E2 - 40 x 25 | 40 | 25 | 83 | 60 | 32,5 | 41,5 | 75 | 22 | 159,00 |
| 409.53.32 | E2 - 40 x 32 | 40 | 32 | 83 | 72 | 32,5 | 41,5 | 75 | - | 159,00 |
| 409.53.40 | E2 - 40 x 40 | 40 | 40 | 83 | 83 | 32,5 | 41,5 | 85 | - | 159,00 |

Ausführung: Mit einstellbaren Kugelspritzdüsen
Version: With adjustable spray nozzles
Version: Avec gicleurs ajustables

Lieferumfang: Mit Spannschrauben
Delivery: With clamping screws
Livraison: Avec vis de serrage



Spannmöglichkeit beidseitig
Clamping possible on both sides
Possibilité de serrage des deux côtés



Boring bar holders form E2 slotted

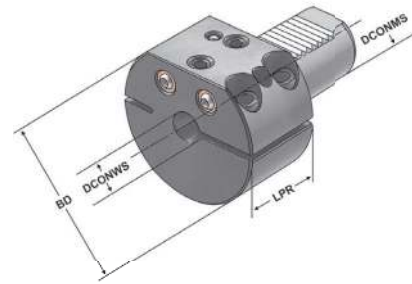
Porte-outils pour barres d'alésage forme E2 pour barre d'alésage fendu



Verwendung:
Für Innenbearbeitung mit Bohrstan- gen.

Application:
For internal machining with boring bars.

Application:
Pour l'usinage intérieur avec barres d'alésage.

DIN ISO
10889

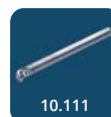
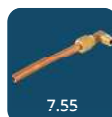
E2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | BD | LPR | EUR |
|---------------------------------------|--------------------------------|--------|--------|----|-----|--------|
| 309.55.16 | E2 - 30 × 16 | 30 | 16 | 68 | 42 | 270,00 |
| 309.55.20 | E2 - 30 × 20 | 30 | 20 | 68 | 42 | 270,00 |
| 409.55.16 | E2 - 40 × 16 | 40 | 16 | 83 | 46 | 299,00 |
| 409.55.20 | E2 - 40 × 20 | 40 | 20 | 83 | 46 | 299,00 |
| 409.55.25 | E2 - 40 × 25 | 40 | 25 | 83 | 46 | 299,00 |
| 409.55.32 | E2 - 40 × 32 | 40 | 32 | 83 | 90 | 420,00 |

Ausführung: Mit einstellbaren Kugelspritzdüsen
Version: With adjustable spray nozzles
Version: Avec gicleurs ajustables

Lieferumfang: Mit Spannschrauben
Delivery: With clamping screws
Livraison: Avec vis de serrage

7





Form 1



Form 2

Verwendung:

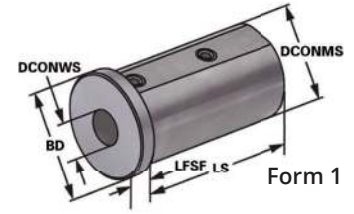
Reduzierung zum Spannen von Werkzeugen mit Zylinderschaft, wie z. B. Feindreh-Bohrstangen.

Application:

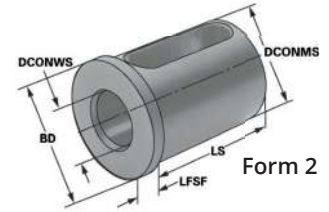
Reduction for mounting tools with straight-shank, such as precision boring bars.

Application:

Réduction pour le serrage d'outils avec queue cylindrique, p. ex. barres d'alésage pour tournage de finition.



Form 1



Form 2



| Bestell-Nr. Order no. Référence | Form form forme | DCONMS | DCONWS | LS | LFSF | BD | OAL | EUR |
|---------------------------------------|-----------------------|--------|--------|----|------|----|-----|-------|
| 709.25.06 | 1 | 25 | 6 | 46 | 5 | 29 | 51 | 31,00 |
| 709.25.08 | 1 | 25 | 8 | 46 | 5 | 29 | 51 | 31,00 |
| 709.25.10 | 1 | 25 | 10 | 46 | 5 | 29 | 51 | 31,00 |
| 709.25.12 | 1 | 25 | 12 | 46 | 5 | 29 | 51 | 31,00 |
| 709.25.14 | 1 | 25 | 14 | 46 | 5 | 29 | 51 | 31,00 |
| 709.25.16 | 2 | 25 | 16 | 46 | 5 | 29 | 51 | 31,00 |
| 709.25.18 | 2 | 25 | 18 | 46 | 5 | 29 | 51 | 31,00 |
| 709.25.20 | 2 | 25 | 20 | 46 | 5 | 29 | 51 | 31,00 |
| 709.32.06 | 1 | 32 | 6 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.08 | 1 | 32 | 8 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.10 | 1 | 32 | 10 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.12 | 1 | 32 | 12 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.14 | 1 | 32 | 14 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.16 | 2 | 32 | 16 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.18 | 2 | 32 | 18 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.20 | 2 | 32 | 20 | 55 | 5 | 36 | 60 | 32,00 |
| 709.32.25 | 2 | 32 | 25 | 55 | 5 | 36 | 60 | 32,00 |
| 709.40.06 | 1 | 40 | 6 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.08 | 1 | 40 | 8 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.10 | 1 | 40 | 10 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.12 | 1 | 40 | 12 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.14 | 1 | 40 | 14 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.16 | 2 | 40 | 16 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.18 | 2 | 40 | 18 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.20 | 2 | 40 | 20 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.25 | 2 | 40 | 25 | 71 | 5 | 44 | 76 | 34,00 |
| 709.40.32 | 2 | 40 | 32 | 71 | 5 | 44 | 76 | 34,00 |

Hinweis:

Note:

Observation:

Geeignet für Innenkühlung (nicht geschlitzt)

Suitable for through-coolant (not slotted)

Convenable pour arrosage interne (non fendu)



10.111



Reduction sleeves set for boring bar holders
 Douilles de réduction jeux pour barres d'alésage forme E2



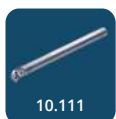
Verwendung:
 Reduzierung zum Spannen von Werkzeugen mit Zylinderschaft, wie z. B. Feindreh-Bohrstangen.

Application:
 Reduction for mounting tools with straight-shank, such as precision boring bars.

Application:
 Réduction pour le serrage d'outils avec queue cylindrique, p. ex. barres d'alésage pour tournage de finition.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | OAL | OAW | OAH | EUR |
|---------------------------------------|--|-----|-----|-----|--------|
| 701.709.25-S | Ø 25 Set 6 St. 06-08-10-12-16-20 | 360 | 235 | 70 | 255,00 |
| 701.709.32-S | Ø 32 Set 7 St. 06-08-10-12-16-20-25 | 360 | 235 | 70 | 293,00 |
| 701.709.40-S | Ø 40 Set 8 St. 06-08-10-12-16-20-25-32 | 360 | 235 | 70 | 341,00 |





Adaptor sleeves for MT, tanged, form B
 Douilles de réduction pour CM à tenon forme F1

**Verwendung:**

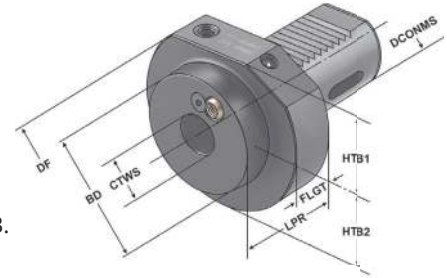
Zur Aufnahme von Werkzeugen mit Morsekegelschaft und Austreibblenden nach DIN 228-1 Form B.

Application:

For holding tools with Morse taper shank and tang according to DIN 228-1 form B.

Application:

Pour le serrage d'outils avec queue cône Morse et tenon suivant DIN 228-1 forme B.

DIN ISO
10889

F1

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | CTWS | BD | DF | LPR | FLGT | HTB1 | HTB2 | EUR |
|---------------------------------------|--------------------------------|--------|------|----|----|-----|------|------|------|--------|
| 169.07.01 | F1 - 16 × MK 1 | 16 | 1 | 32 | 40 | 32 | 13 | 18 | 18 | 89,00 |
| 209.07.01 | F1 - 20 × MK 1 | 20 | 1 | - | 50 | 23 | - | 22 | 23 | 99,00 |
| 209.07.02 | F1 - 20 × MK 2 | 20 | 2 | 40 | 50 | 90 | - | 22 | 23 | 99,00 |
| 259.07.01 | F1 - 25 × MK 1 | 25 | 1 | - | 58 | 23 | - | 25 | 25 | 99,00 |
| 259.07.02 | F1 - 25 × MK 2 | 25 | 2 | - | 58 | 27 | - | 25 | 25 | 99,00 |
| 309.07.01 | F1 - 30 × MK 1 | 30 | 1 | - | 68 | 27 | - | 28 | 30 | 90,00 |
| 309.07.02 | F1 - 30 × MK 2 | 30 | 2 | - | 68 | 27 | - | 28 | 30 | 90,00 |
| 309.07.03 | F1 - 30 × MK 3 | 30 | 3 | 58 | 68 | 75 | 22 | 28 | 30 | 90,00 |
| 409.07.02 | F1 - 40 × MK 2 | 40 | 2 | 55 | 83 | 36 | 22 | 32,5 | 50,5 | 90,00 |
| 409.07.03 | F1 - 40 × MK 3 | 40 | 3 | 55 | 83 | 36 | 22 | 32,5 | 50,5 | 90,00 |
| 409.07.04 | F1 - 40 × MK 4 | 40 | 4 | 68 | 83 | 80 | 22 | 32,5 | 50,5 | 90,00 |
| 509.07.02 | F1 - 50 × MK 2 | 50 | 2 | 55 | 98 | 36 | 30 | 35 | 49 | 120,00 |
| 509.07.03 | F1 - 50 × MK 3 | 50 | 3 | 58 | 98 | 36 | 30 | 35 | 49 | 120,00 |
| 509.07.04 | F1 - 50 × MK 4 | 50 | 4 | 68 | 98 | 50 | 30 | 35 | 49 | 120,00 |
| 509.07.05 | F1 - 50 × MK 5 | 50 | 5 | 98 | 98 | 168 | - | 35 | 49 | 147,00 |

7

Ausführung: Mit einstellbaren Kugelspritzdüsen
Version: With adjustable spray nozzles
Version: Avec gicleurs ajustables

Hinweis: DCONMS 30, 40 und 50 werden mit einer Kugelspritzdüse geliefert.

Note: DCONMS 30, 40 and 50 are supplied with a ball spray nozzle.

Observation: Les DCONMS 30, 40 et 50 sont livrés avec une buse de pulvérisation à bille.



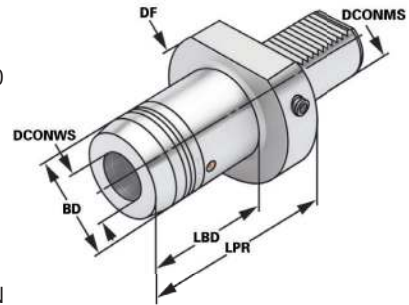
Hydraulic expansion chucks
Mandrins expansibles hydrauliques



Verwendung:
Zur Aufnahme von Werkzeugen mit Zylinderschaft nach DIN 1835 Form A+B+E und DIN 6535 Form HA+HB+HE (größer Ø 20 mm nur mit Reduzierung).

Application:
For mounting straight-shank tools acc. DIN 1835 form A+B+E and DIN 6535 form HA+HB+HE (larger than Ø 20 mm only with reduction sleeve).

Application:
Pour le serrage d'outils avec queue cylindrique suivant DIN 1835 forme A+B+E et DIN 6535 forme HA+HB+HE (à partir de Ø 20 mm seulement avec réduction).



DIN ISO 10889

13.04

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DCONWS | BD | LPR | LBD | DF | LSCX | ADJRG | EUR |
|---------------------------------------|--------------------------------|--------|--------|----|-----|-----|----|------|-------|--------|
| 309.H12 | 30 - 12 | 30 | 12 | 32 | 54 | 38 | 68 | 47 | 10 | 560,00 |
| 309.H20 | 30 - 20 | 30 | 20 | 42 | 89 | 73 | 68 | 52 | 10 | 560,00 |
| 409.H12 | 40 - 12 | 40 | 12 | 32 | 60 | 38 | 83 | 47 | 10 | 580,00 |
| 409.H20 | 40 - 20 | 40 | 20 | 42 | 95 | 73 | 83 | 52 | 10 | 580,00 |

LSCX = Einspannlänge, max. ADJRG = Verstellweg, max.
LSCX = Clamping depth, max. ADJRG = Length adjustment range, max.
LSCX = Profondeur d'insertion, max. ADJRG = Course de réglage, max.

Lieferumfang: Ohne Spannschlüssel
Delivery: Without wrench
Livraison: Sans clé de serrage

7



Spannkraft-Prüfgerät für Hydrodehnspannfutter - Seite 12.61
Clamping force proofing instrument for hydraulic chucks - page 12.61
Appareil de contrôle des forces de serrage pour mandrin expansibles hydrauliques - page 12.61

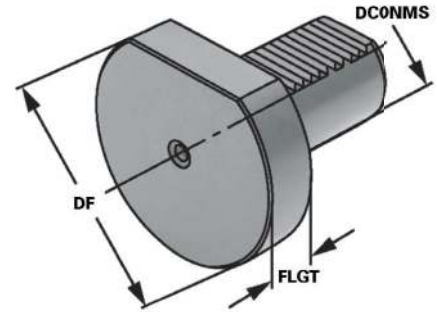




Verwendung:
Zum Verschließen der Aufnahmebohrung
am Werkzeugrevolver.

Application:
For sealing the spindle of the turret.

Application:
Pour boucher la broche du tour.



DIN ISO
10889

Z2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DF | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|----|------|-------|
| 169.29.13 | Z2 - 16 × 13 | 16 | 40 | 13 | 41,00 |
| 209.29.16 | Z2 - 20 × 16 | 20 | 50 | 16 | 45,00 |
| 259.29.16 | Z2 - 25 × 16 | 25 | 58 | 16 | 45,00 |
| 309.29.20 | Z2 - 30 × 16 | 30 | 68 | 16 | 46,00 |
| 409.29.20 | Z2 - 40 × 20 | 40 | 83 | 20 | 47,00 |
| 509.29.20 | Z2 - 50 × 20 | 50 | 98 | 20 | 55,00 |



Protection plastic plugs form Z2

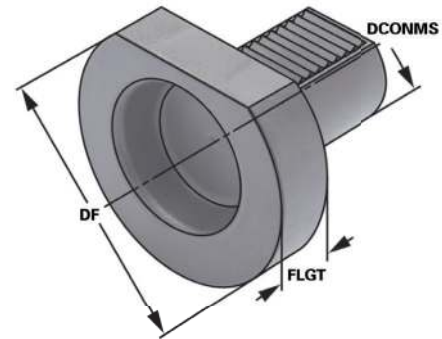
Bouchons de protection en plastique forme Z2



Verwendung:
Zum Verschließen der Aufnahmebohrung
am Werkzeugrevolver.

Application:
For sealing the spindle of the turret.

Application:
Pour boucher la broche du tour.

DIN ISO
10889

Z2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DF | FLGT | EUR |
|---------------------------------------|--------------------------------|--------|----|------|-------|
| 169.30.13 | Z2 – 16 × 13 | 16 | 40 | 13 | 17,00 |
| 209.30.16 | Z2 – 20 × 16 | 20 | 50 | 16 | 15,00 |
| 259.30.16 | Z2 – 25 × 16 | 25 | 58 | 16 | 19,00 |
| 309.30.16 | Z2 – 30 × 16 | 30 | 68 | 16 | 15,00 |
| 409.30.20 | Z2 – 40 × 20 | 40 | 83 | 20 | 15,00 |
| 509.30.20 | Z2 – 50 × 20 | 50 | 98 | 20 | 30,00 |



**Verwendung:**

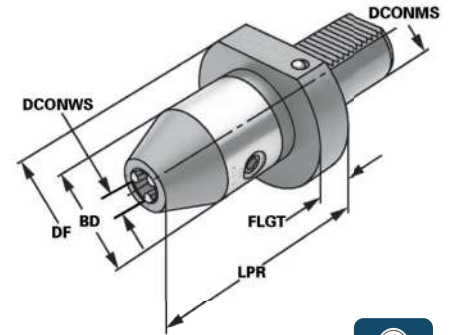
Zur Aufnahme von Werkzeugen mit Zylinderschaft.

Application:

For mounting tools with straight shank.

Application:

Pour le serrage d'outils avec queue cylindrique.

DIN ISO
10889

≤ 30µm



13.04

| Bestell-Nr. Order no. Référence | DCONMS | DCONWS Spannbereich Capacity Capacité | BD | DF | LPR | FLGT | DRVS | EUR |
|---------------------------------------|--------|---|----|----|-----|------|------|--------|
| 209.15.13 | 20 | 1,0 – 13 | 50 | 50 | 90 | 17 | 6 | 268,00 |
| 309.15.13 | 30 | 1,0 – 13 | 50 | 68 | 93 | 22 | 6 | 268,00 |
| 309.15.16 | 30 | 2,5 – 16 | 50 | 68 | 98 | 22 | 6 | 279,00 |
| 409.15.13 | 40 | 1,0 – 13 | 50 | 83 | 93 | 22 | 6 | 268,00 |
| 409.15.16 | 40 | 2,5 – 16 | 50 | 83 | 98 | 22 | 6 | 279,00 |
| 509.15.13 | 50 | 1,0 – 13 | 50 | 98 | 101 | 30 | 6 | 320,00 |
| 509.15.16 | 50 | 2,5 – 16 | 50 | 98 | 106 | 30 | 6 | 330,00 |

7

Hinweis:

Hohe Präzision und Rundlaufgenauigkeit von ≤ 0,03 mm. Kein selbständiges Lösen der Spannung während der Bearbeitung bei Links- oder Rechtslauf. Spannen und Lösen mit Sechskantschlüssel.

Note:*High precision and accurate concentricity of ≤ 0.03 mm. No automatic slacking of the clamping force while machining with either clockwise or counter clockwise rotation. Clamping and releasing effected by means of an Allen wrench.***Observation:**

Précision élevée et exactitude de circularité de ≤ 0,03 mm. Pas de desserrage intempestif en cours d'usinage lors de la rotation la gauche ou la droite. Serrage et desserrage en utilisant un clé sur à fourche.

Lieferumfang:

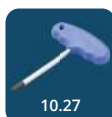
Ohne Spannschlüssel

Delivery:

Without wrench

Livraison:

Sans clé de serrage



10.27



7.50



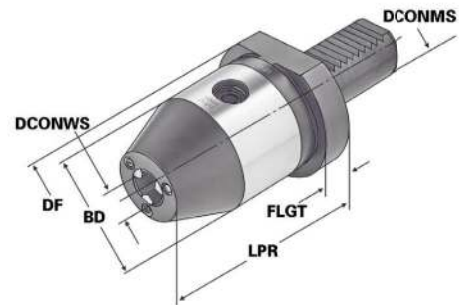
10.78

CNC-Drill chucks with coolant supply via spray
Mandrins de perçage CNC avec arrosage par gicleurs

(DIN 69880)



Verwendung:
Zur Aufnahme von Werkzeugen mit
Zylinderschaft.
Application:
For mounting tools with straight shanks.
Application:
Pour le serrage d'outils à queue
cylindrique.



| Bestell-Nr. Order no. Référence | DCONMS | DCONWS Spannbereich Capacity Capacité | BD | DF | LPR | FLGT | DRVS | EUR |
|---------------------------------------|--------|---|----|----|------|------|------|--------|
| 169.15.10.K | 16 | 1,0 - 13 | 57 | 40 | 87 | 5 | 6 | 420,00 |
| 209.15.10.K | 20 | 1,0 - 13 | 57 | 50 | 87 | 5 | 6 | 420,00 |
| 259.15.13.K | 25 | 1,0 - 13 | 57 | 58 | 87 | 15 | 6 | 490,00 |
| 309.15.13.K | 30 | 1,0 - 13 | 57 | 68 | 87 | 22 | 6 | 361,00 |
| 309.15.16.K | 30 | 2,5 - 16 | 57 | 68 | 92 | 22 | 6 | 388,00 |
| 409.15.13.K | 40 | 1,0 - 13 | 57 | 83 | 87 | 22 | 6 | 369,00 |
| 409.15.16.K | 40 | 2,5 - 16 | 57 | 83 | 92 | 22 | 6 | 392,00 |
| 509.15.13.K | 50 | 1,0 - 13 | 57 | 98 | 92 | 20 | 6 | 520,00 |
| 509.15.16.K | 50 | 2,5 - 16 | 57 | 98 | 96,9 | 20 | 6 | 540,00 |

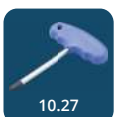
7

Hinweis: Hohe Präzision und Rundlaufgenauigkeit von $\leq 0,03$ mm. Kein selbständiges Lösen der Spannung während der Bearbeitung bei Links- oder Rechtslauf. Spannen und Lösen mit Sechskantschlüssel.

Note: High precision and accurate concentricity of ≤ 0.03 mm. No automatic slackening of the clamping force while machining with either clockwise or counter clockwise rotation. Clamping and releasing effected by means of an Allen wrench.

Observation: Précision élevée et exactitude de circularité de $\leq 0,03$ mm. Pas de desserrage intempestif en cours d'usinage lors de la rotation la gauche ou la droite. Serrage et desserrage en utilisant un clé sur à fourche.

Lieferumfang: Ohne Spannschlüssel
Delivery: Without wrench
Livraison: Sans clé de serrage



Quick change tapping chucks with length compensation on compression and expansion

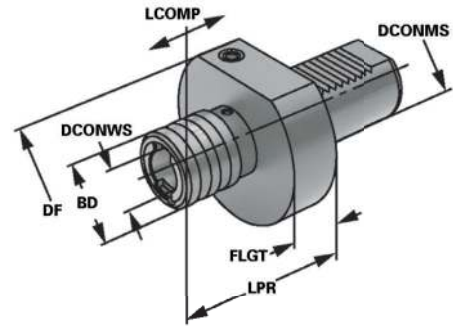
Mandrins de taraudage à changement rapide avec compensation longitudinale à la compression et traction



Verwendung:
Zur Aufnahme von Schnellwechsel-Einsätzen für Gewindebohrer.

Application:
For the chucking of Quick change taps for threading taps.

Application:
Pour le serrage des inserts de changement rapide pour tarauds.



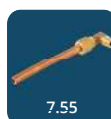
DIN ISO
10889



13.04

| Bestell-Nr. Order no. Référence | DCONMS | Spannbereich Capacity Capacité | SZID | DF | LPR | BD | DCONWS | LCOMP | FLGT | EUR |
|---------------------------------------|--------|--------------------------------------|------|----|-----|----|--------|-------|------|--------|
| 209.16.12 | 20 | M3 - M14 | 1 | 50 | 67 | 38 | 19 | 7 | 17 | 380,00 |
| 259.16.12 | 25 | M3 - M14 | 1 | 58 | 55 | 38 | 19 | 7 | 18 | 385,00 |
| 309.16.12 | 30 | M3 - M14 | 1 | 68 | 58 | 36 | 19 | 7 | 16 | 268,00 |
| 309.16.20 | 30 | M5 - M22 | 2 | 68 | 81 | 53 | 31 | 12 | 16 | 353,00 |
| 409.16.12 | 40 | M3 - M14 | 1 | 83 | 58 | 36 | 19 | 7 | 16 | 290,00 |
| 409.16.20 | 40 | M5 - M22 | 2 | 83 | 81 | 53 | 31 | 12 | 16 | 349,00 |
| 509.16.12 | 50 | M3 - M14 | 1 | 98 | 56 | 36 | 19 | 7 | 30 | 418,00 |
| 509.16.20 | 50 | M5 - M22 | 2 | 98 | 80 | 53 | 31 | 12 | 30 | 634,00 |

7



Quick change tapping chucks without length compensation on compression and expansion

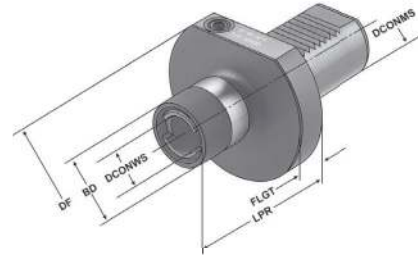
Mandrins de taraudage à changement rapide sans compensation longitudinale à la compression et traction



Verwendung:
Für Bearbeitungszentren mit Synchrospindel. Zur Aufnahme von Schnellwechsel-Einsätzen für Gewindebohrer.

Application:
On machining centres with synchronised spindles. For the chucking of Quick change taps for threading taps.

Application:
Sur centres d'usinage avec axe synchrone. Pour le serrage des inserts de changement rapide pour tarauds.

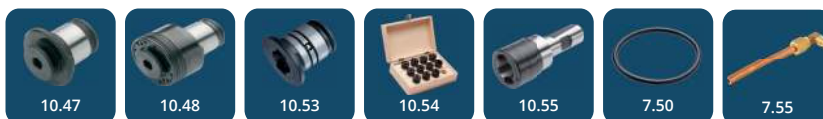


DIN ISO 10889

13.04

| Bestell-Nr. Order no. Référence | DCONMS | Spannbereich Capacity Capacité | SZID | DF | LPR | BD | DCONWS | FLGT | EUR |
|---------------------------------------|--------|--------------------------------------|------|----|-----|----|--------|------|--------|
| 309.16.12.1 | 30 | M3 - M14 | 1 | 68 | 55 | 36 | 19 | 16 | 217,00 |
| 309.16.20.1 | 30 | M5 - M22 | 2 | 68 | 77 | 53 | 31 | 16 | 231,00 |
| 409.16.12.1 | 40 | M3 - M14 | 1 | 83 | 55 | 36 | 19 | 16 | 207,00 |
| 409.16.20.1 | 40 | M5 - M22 | 2 | 83 | 77 | 53 | 31 | 16 | 221,00 |

7

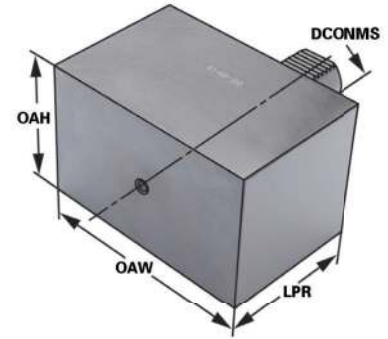




Soft blank fomr A1, rectangular
Porte-outils ebauche forme A1, rectangle



Verwendung:
Zur Herstellung von Sonderwerkzeugen.
Application:
For the manufacturing of special tools.
Application:
Pour la fabrication d'outils spéciaux.

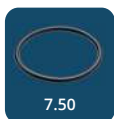


DIN ISO 10889

A1

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | LPR | OAH | OAW | EUR |
|---------------------------------------|--------------------------------|--------|-----|-----|-----|--------|
| 169.17.12 | A1 - 16 - 78 - 44 - 44 | 16 | 44 | 44 | 78 | 70,00 |
| 209.17.16 | A1 - 20 - 100 - 60 - 65 | 20 | 65 | 60 | 100 | 79,00 |
| 259.17.16 | A1 - 25 - 100 - 60 - 75 | 25 | 75 | 60 | 100 | 120,00 |
| 309.17.20 | A1 - 30 - 130 - 76 - 85 | 30 | 85 | 76 | 130 | 120,00 |
| 409.17.25 | A1 - 40 - 151 - 96 - 100 | 40 | 100 | 96 | 151 | 169,00 |
| 509.17.32 | A1 - 50 - 160 - 120 - 125 | 50 | 125 | 120 | 160 | 240,00 |

7



Soft blank form A2, round

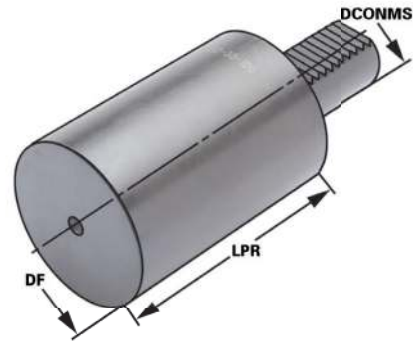
Porte-outils ebauche forme A2, ronde



Verwendung:
Zur Herstellung von Sonderwerkzeugen.

Application:
For the manufacturing of special tools.

Application:
Pour la fabrication d'outils spéciaux.

DIN ISO
10889

A2

| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | DF | LPR | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|--------|
| 169.19.12 | A2 - 16 - 40 - 60 | 16 | 40 | 60 | 60,00 |
| 209.19.16 | A2 - 20 - 50 - 70 | 20 | 50 | 70 | 65,00 |
| 259.19.16 | A2 - 25 - 58 - 80 | 25 | 58 | 80 | 80,00 |
| 259.19.17 | A2 - 25 - 58 - 200 | 25 | 58 | 200 | 99,00 |
| 309.19.20 | A2 - 30 - 68 - 100 | 30 | 68 | 100 | 70,00 |
| 309.19.21 | A2 - 30 - 68 - 240 | 30 | 68 | 240 | 80,00 |
| 409.19.20 | A2 - 40 - 83 - 120 | 40 | 83 | 120 | 75,00 |
| 409.19.21 | A2 - 40 - 83 - 320 | 40 | 83 | 320 | 118,00 |
| 509.19.32 | A2 - 50 - 98 - 135 | 50 | 98 | 135 | 120,00 |
| 509.19.33 | A2 - 50 - 98 - 400 | 50 | 98 | 400 | 260,00 |

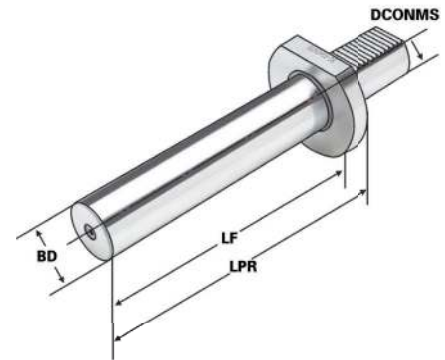




Verwendung:
Zur Abnahme von Werkzeugmaschinen gemäß ISO-Empfehlung R230 oder zur Überprüfung der Werkzeugspindel.

Application:
For the inspection of machine tools according to ISO recommendation R230 or for testing the tool spindle.

Application:
Pour l'inspection de machine-outils suite à la recommandation ISO R230 ou pour la vérification de la broche.



| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | DCONMS | BD | LPR | LF | EUR |
|---------------------------------------|--------------------------------|--------|----|-----|-----|--------|
| 169.18.30 | 16 - 30 - 120 | 16 | 30 | 120 | 107 | 320,00 |
| 209.18.40 | 20 - 40 - 150 | 20 | 40 | 150 | 132 | 320,00 |
| 259.18.40 | 25 - 40 - 150 | 25 | 40 | 150 | 135 | 396,00 |
| 309.18.40 | 30 - 40 - 200 | 30 | 40 | 230 | 214 | 330,00 |
| 409.18.40 | 40 - 40 - 200 | 40 | 40 | 200 | 184 | 340,00 |
| 509.18.40 | 50 - 40 - 200 | 50 | 40 | 200 | 185 | 469,00 |

7

Lieferumfang: Auslieferung mit Prüfprotokoll
Delivery: Delivery with test certificate
Livraison: Livraison avec rapport d'essais

Holzkasten für Kontrolldorne

Wooden box for test arbors
Coffret en bois pour mandrins de contrôle



Verwendung:
Zur Aufbewahrung von Kontrolldornen.

Application:
For the storage of test arbors.

Application:
Pour la conservation de mandrins de contrôle.

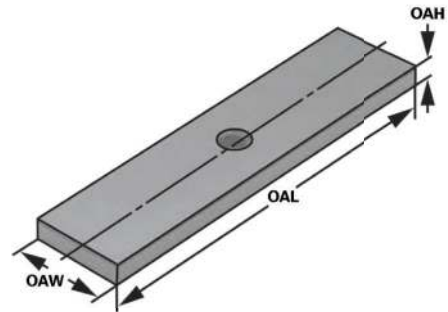


| Bestell-Nr. Order no. Référence | Abmessung Size Dimension | für Kegelgrößen for cones pour cônes | EUR |
|---------------------------------------|--------------------------------|--|-------|
| 701.18 | 460×130×115 | VDI 16 / 20 / 25 / 30 / 40 / 50 | 96,00 |

Shims
Sous-plaquettes



Verwendung:
Unterlegplatten für VDI Werkzeughalter
Application:
Shims for VDI toolholder
Application:
Assiettes pour porte-outils VDI



| Bestell-Nr. Order no. Référence | OAW | OAH | OAL | EUR |
|---------------------------------------|------|-----|-----|-------|
| 209.16.01 | 14 | 4 | 54 | 9,00 |
| 259.16.01 | 13,5 | 4 | 49 | 10,00 |
| 309.20.01 | 16 | 4 | 69 | 11,00 |
| 409.25.01 | 20 | 5 | 84 | 11,00 |
| 509.32.01 | 23 | 7 | 99 | 13,00 |

7

O-Ringe

O-ring
Joints torique



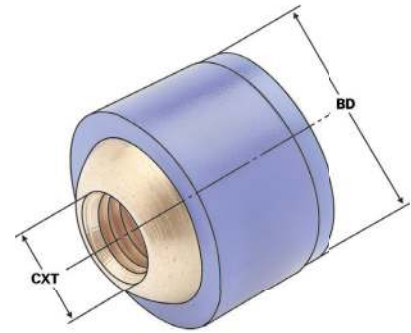
Verwendung:
O-Ringe zum abdichten des VDI Schaftes
Application:
O-Rings for sealing VDI shanks
Application:
Joints toriques pour étancher des queues VDI



| Bestell-Nr. Order no. Référence | D | EUR |
|---------------------------------------|----|------|
| Z.169.RING | 16 | 4,00 |
| Z.209.RING | 20 | 4,00 |
| Z.259.RING | 25 | 4,00 |
| Z.309.RING | 30 | 4,00 |
| Z.409.RING | 40 | 4,00 |
| Z.509.RING | 50 | 4,00 |



Verwendung:
Spritzdüsen für Kühlmittelzufuhr für
VDI Werkzeughalter
Application:
Sprayer nozzles for cooling for VDI toolholders
Application:
Gicleurs pour l'alimentation en
refroidissement pour porte-outils VDI



| Bestell-Nr. Order no. Référence | BD | CXT | EUR |
|---------------------------------------|----|-----|------|
| 703.08 | 8 | - | 7,00 |
| 703.10 | 10 | M4 | 6,00 |
| 703.12 | 12 | M5 | 6,00 |
| 703.14 | 14 | M6 | 7,00 |



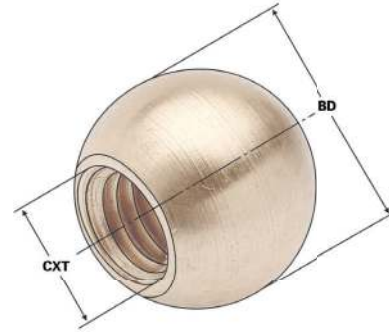
Ball sprayer nozzles (brass) - DIN 69880 Part 8
Gicleurs (laiton) - DIN 69880 partie 8



Verwendung:
Spritzdüsen für Kühlmittelzufuhr für VDI Werkzeughalter

Application:
Sprayer nozzles for cooling for VDI toolholders

Application:
Gicleurs pour l'alimentation en refroidissement pour porte-outils VDI



| Bestell-Nr. Order no. Référence | BD | CXT | VDI | EUR |
|---------------------------------------|----|-----|-------------------|-------|
| 703.08.ME | 8 | M5 | 16 | 9,00 |
| 703.10.ME | 10 | M6 | 16 + 25 + 30 + 40 | 10,00 |
| 703.12.ME | 12 | M6 | 50 | 10,00 |
| 703.14 .ME | 14 | M8 | - | 10,00 |





Kugel mit Düse (Messing)

**DISCOUNT
P&GE 20%**

DIN ISO 10889

(DIN 69880)

Ball sprayer nozzles with coolant tube
Bille avec gicleur (laiton)



Verwendung:

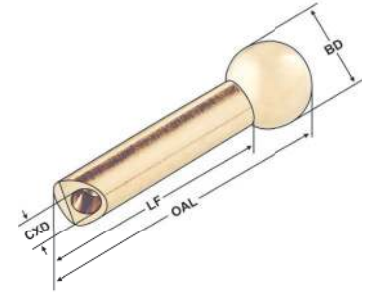
Spritzdüsen für Kühlmittelzufuhr für VDI
Werkzeughalter

Application:

Sprayer nozzles for cooling for VDI toolholders

Application:

Gicleurs pour l'alimentation en refroidissement pour porte-outils VDI



| Bestell-Nr. Order no. Référence | BD | OAL | CXD | LF | EUR |
|---------------------------------------|----|-----|-----|----|-------|
| Z.VDI.100.010 | 10 | 35 | 3 | 26 | 11,00 |
| Z.VDI.100.012 | 12 | 38 | 4 | 28 | 12,00 |
| Z.VDI.100.014 | 14 | 40 | 4 | 28 | 13,00 |

7

Kugelspritzdüsen (Messing)

Ball sprayer nozzles (brass)
Gicleurs (laiton)



Verwendung:

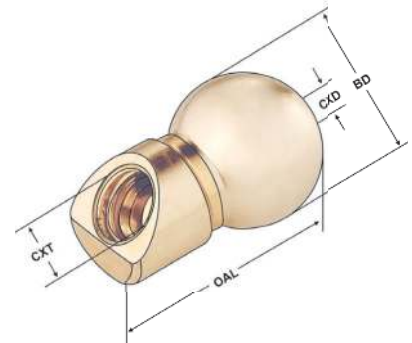
Spritzdüsen für Kühlmittelzufuhr für VDI
Werkzeughalter

Application:

Sprayer nozzles for cooling for VDI toolholders

Application:

Gicleurs pour l'alimentation en refroidissement pour porte-outils VDI



| Bestell-Nr. Order no. Référence | BD | OAL | CXD | CXT | EUR |
|---------------------------------------|----|------|-----|-----|------|
| Z.VDI.200.010 | 10 | 15,8 | 5 | M5 | 9,00 |
| Z.VDI.200.012 | 12 | 19 | 5,5 | M6 | 9,00 |
| Z.VDI.200.014 | 14 | 19 | 6 | M6 | 9,00 |

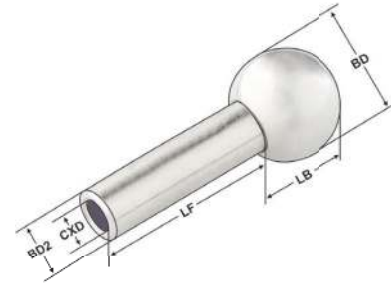
Ball sprayer nozzles with coolant tube
Bille avec gicleur



Verwendung:
Spritzdüsen für Kühlmittelzufuhr für VDI
Werkzeughalter

Application:
Sprayer nozzles for cooling for VDI toolholders

Application:
Gicleurs pour l'alimentation en refroidissement pour porte-outils VDI



| Bestell-Nr. Order no. Référence | BD | LB | LF | BD2 | CXD | EUR |
|---------------------------------------|----|------|----|-----|-----|------|
| Z.VDI.300.010 | 10 | 8,5 | 10 | 6 | 4 | 6,00 |
| Z.VDI.300.020 | 10 | 8,5 | 20 | 6 | 4 | 7,00 |
| Z.VDI.300.040 | 10 | 8,5 | 40 | 6 | 4 | 8,00 |
| Z.VDI.310.010 | 12 | 10,5 | 10 | 6 | 4 | 6,00 |
| Z.VDI.310.020 | 12 | 10,5 | 20 | 6 | 4 | 7,00 |
| Z.VDI.310.040 | 12 | 10,5 | 40 | 6 | 4 | 8,00 |

Material: Edelstahl AISI 304

Material: *Stainless steel AISI 304*

Matériel: Acier inoxydable AISI 304

7

Einschraub Kühlmittel Düse

Screw-in coolant nozzle

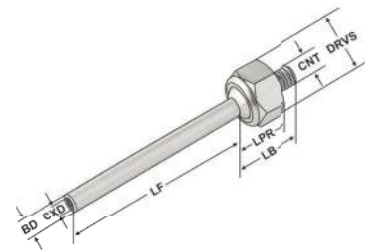
Gicleur a visser



Verwendung:
Spritzdüsen für Kühlmittelzufuhr für VDI
Werkzeughalter

Application:
Sprayer nozzles for cooling for VDI toolholders

Application:
Gicleurs pour l'alimentation en refroidissement pour porte-outils VDI



| Bestell-Nr. Order no. Référence | CXD | BD | CNT | DRVS | LB | LF | LPR | EUR |
|---------------------------------------|-----|----|------|------|----|-----|-----|-------|
| Z.VDI.400.015 | 3 | 5 | M5 | 14 | 16 | 15 | 10 | 15,00 |
| Z.VDI.400.050 | 3 | 5 | M5 | 14 | 16 | 50 | 10 | 15,00 |
| Z.VDI.400.100 | 3 | 5 | M5 | 14 | 16 | 100 | 10 | 15,00 |
| Z.VDI.410.015 | 3 | 5 | M6 | 14 | 16 | 15 | 10 | 15,00 |
| Z.VDI.410.050 | 3 | 5 | M6 | 14 | 16 | 50 | 10 | 15,00 |
| Z.VDI.410.100 | 3 | 5 | M6 | 14 | 16 | 100 | 10 | 15,00 |
| Z.VDI.420.015 | 3 | 5 | 1/8" | 14 | 16 | 15 | 10 | 15,00 |

Material: Edelstahl AISI 304

Material: *Stainless steel AISI 304*

Matériel: Acier inoxydable AISI 304



Kühlmittelrohr (Kupfer)

**DISCOUNT
P&GE 20%**

DIN ISO 10889

(DIN 69880)

Coolant tube (copper)

Canule de lubrification (cuivre)



Verwendung:

Spritzdüsen für Kühlmittelzufuhr für VDI Werkzeughalter

Application:

Sprayer nozzles for cooling for VDI toolholders

Application:

Gicleurs pour l'alimentation en refroidissement pour porte-outils VDI



Bestell-Nr.

Order no.

Référence

OAL

CNT

Ø

EUR

Z.VDI.700.200

100

M5

Ø 3mm

12,00

Z.VDI.700.100

100

M6

Ø 3mm

12,00

7

Kühlmittelrohr (Messing) incl. 1/8" Adapter

Coolant tube (brass) incl. 1/8" adapter

Canule de lubrification (laiton) incl. 1/8" adaptateur



Verwendung:

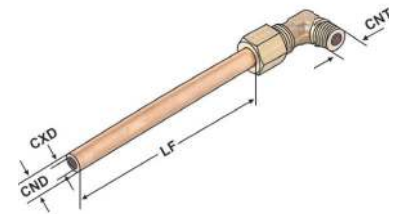
Kühlmittelrohr für Kühlmittelzufuhr für VDI Werkzeughalter

Application:

Coolant tube for cooling for VDI toolholders

Application:

Canule de lubrification pour l'alimentation en refroidissement pour porte-outils VDI



Bestell-Nr.

Order no.

Référence

CND

CNT

CXD

LF

EUR

Z.VDI.K

8

1/8"

4,5

150

25,00

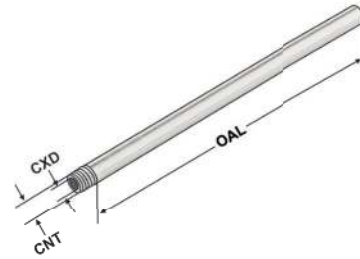
Coolant tube
Canule de lubrification



Verwendung:
Spritzdüsen für Kühlmittelzufuhr für
VDI Werkzeughalter

Application:
Sprayer nozzles for cooling for VDI toolholders

Application:
Gicleurs pour l'alimentation en
refroidissement pour porte-outils VDI

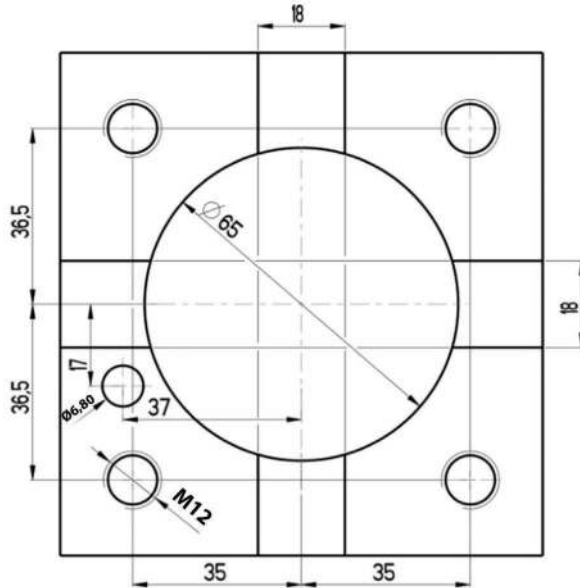


| Bestell-Nr. Order no. Référence | CNT | CXD | OAL | EUR |
|---------------------------------------|-----|-----|-----|------|
| Z.VDI.710.015 | M4 | 2 | 15 | 9,00 |
| Z.VDI.710.100 | M4 | 2 | 100 | 9,00 |
| Z.VDI.710.200 | M4 | 2 | 200 | 9,00 |
| Z.VDI.711.015 | M5 | 3 | 15 | 9,00 |
| Z.VDI.711.100 | M5 | 3 | 100 | 9,00 |
| Z.VDI.711.200 | M5 | 3 | 200 | 9,00 |
| Z.VDI.712.015 | M6 | 4 | 15 | 9,00 |
| Z.VDI.712.100 | M6 | 4 | 100 | 9,00 |
| Z.VDI.712.200 | M6 | 4 | 200 | 9,00 |

Material: Edelstahl AISI 304
Material: *Stainless steel AISI 304*
Matériel: Acier inoxydable AISI 304

Static and power-driven tools for CNC lathes with HAAS/Doosan BMT interface

Porte-outils statiques ou rotatifs pour tours CNC avec HAAS/Doosan interface BMT



7

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series Hi-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |

ADINTMS (Adapterschnittstelle Maschinenrichtung): BMT driven turret interface -size BT65A

ADINTMS (Adaptive interface machine direction): BMT driven turret interface -size BT65A

ADINTMS (Interface adaptative direction machine): BMT driven turret interface -size BT65A

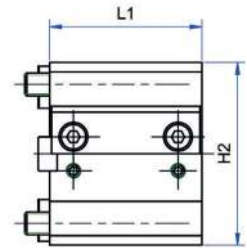
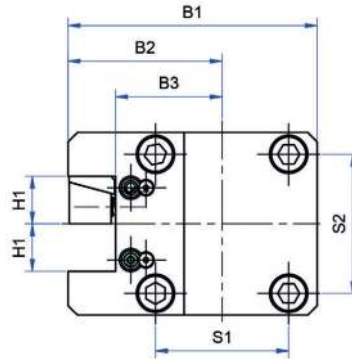
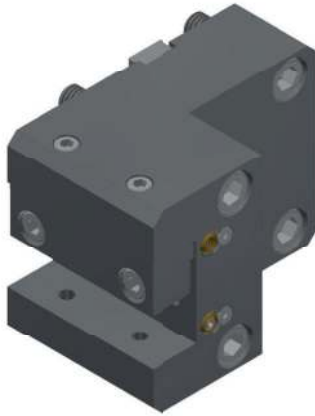
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| 7.59 | 7.60 | 7.61 | 7.62 |
| | | | |
| 7.63 | 7.64 | 7.65 | 7.66 |
| | | | |
| 7.67 - 7.68 | 7.69 - 7.70 | 7.71 | 7.72 |
| | | | |
| | | | |





Toolholder with square-longitudinal recep
 Manche à outils avec porte-outils longitudinal carré double



Doosan

HAAS

BMT
65

Bestell-Nr.
 Order no.
 Référence

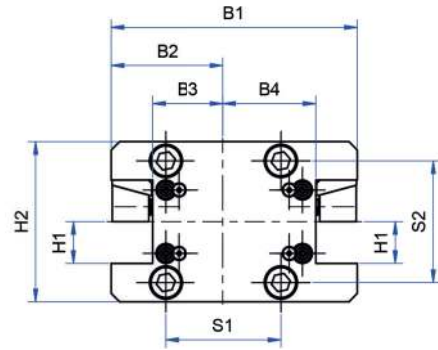
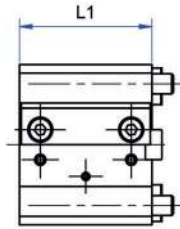
| | H1 | H2 | B1 | B2 | B3 | L1 | S1 | S2 | EUR |
|-------------------|----|----|-----|----|----|----|----|----|--------|
| AW.102.065.25.755 | 25 | 96 | 131 | 81 | 56 | 80 | 70 | 73 | 523,00 |

7

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |

Toolholder with square-multi-receptacle

Manche à outils avec porte-outils multiple carré



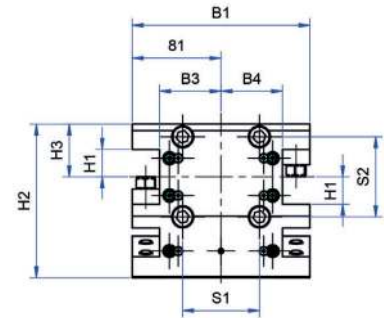
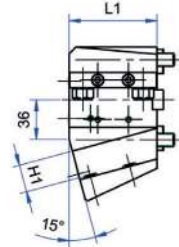
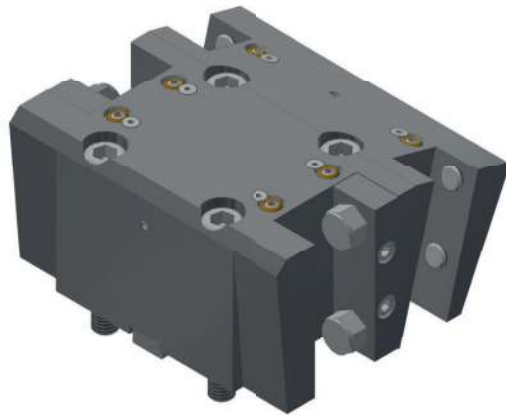
| Bestell-Nr. Order no. Référence | H1 | H2 | B1 | B2 | B3 | B4 | L1 | S1 | S2 | EUR |
|---------------------------------------|----|----|-----|----|----|----|----|----|----|--------|
| AW.103.065.25.755 | 25 | 96 | 149 | 68 | 43 | 56 | 80 | 70 | 73 | 625,00 |

7

| BMT | BMT65 |
|--------------|--|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST) PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |



Toolholder with square-multi-receptacle
Manche à outils avec porte-outils multiple carré

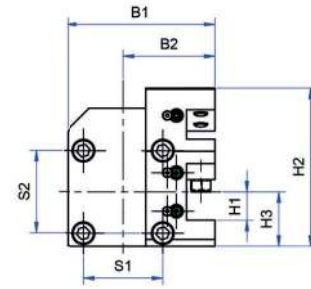
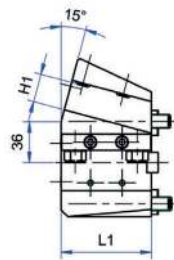
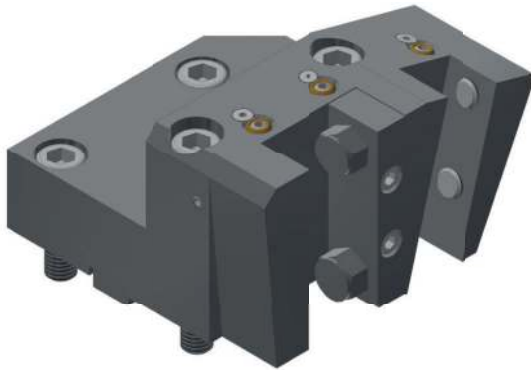


| Bestell-Nr. Order no. Référence | H1 | H2 | H3 | B1 | B2 | B3 | B4 | L1 | S1 | S2 | EUR |
|---------------------------------------|----|---------|----|-----|----|----|----|----|----|----|---------|
| AW.103.065.25.756 | 25 | 139,873 | 48 | 162 | 81 | 56 | 56 | 80 | 70 | 73 | 1084,00 |

7

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/HI-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |

Toolholder with square-multi-receptacle
Manche à outils avec porte-outils multiple carré



| Bestell-Nr. Order no. Référence | H1 | H2 | H3 | B1 | B2 | L1 | S1 | S2 | EUR |
|---------------------------------------|----|---------|----|-----|----|----|----|----|--------|
| AW.103.065.25.753 | 25 | 139,873 | 48 | 132 | 81 | 80 | 70 | 73 | 887,00 |

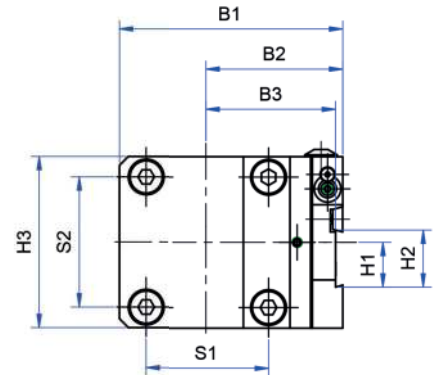
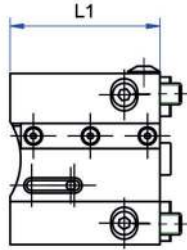
7

| BMT | BMT65 |
|--------------|--|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST) PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series Hi-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |



Front cut-off toolholder

Porte-outils de tronçonnage frontal

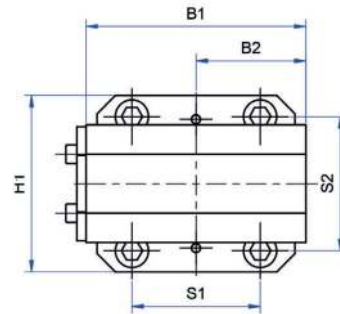
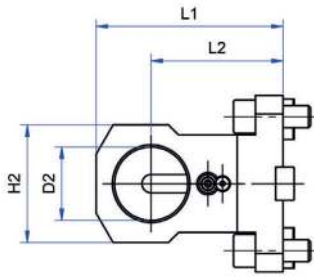


| Bestell-Nr. Order no. Référence | H1 | H2 | H3 | B1 | B2 | B3 | L1 | S1 | S2 | EUR |
|---------------------------------------|----|----|----|-------|------|------|----|----|----|--------|
| AW.105.065.26.753 | 25 | 32 | 96 | 126,5 | 76,5 | 72,5 | 84 | 70 | 73 | 987,00 |

7

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/HI-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |

Cylindrical shank receptacle
Support de tige cylindrique

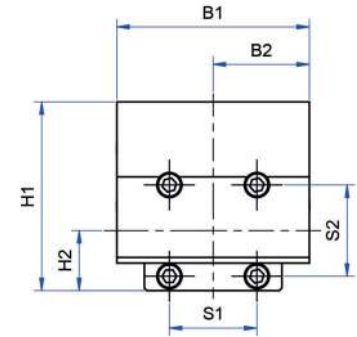
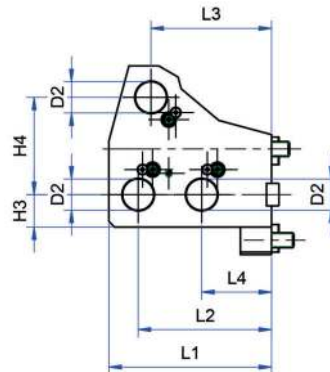


| Bestell-Nr. Order no. Référence | D2 | H1 | H2 | B1 | B2 | L1 | L2 | S1 | S2 | EUR |
|---------------------------------------|----|----|----|-----|----|-----|----|----|----|--------|
| AW.107.265.40.750 | 40 | 96 | 64 | 120 | 60 | 102 | 72 | 70 | 73 | 480,00 |

7

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |





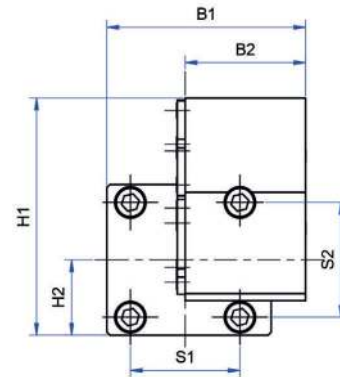
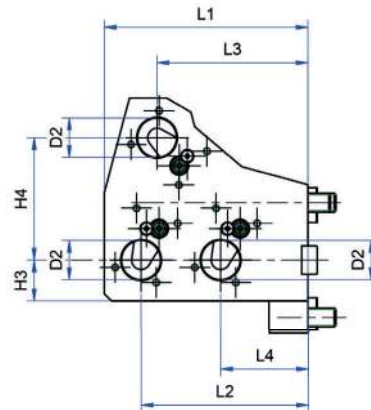
| Bestell-Nr. Order no. Référence | D2 | H1 | H2 | H3 | H4 | B1 | B2 | L1 | L2 | L3 | L4 | S1 | S2 | EUR |
|---------------------------------------|----|-----|----|----|-------|-----|----|-------|-----|--------|----|----|----|----------|
| AW.107.265.25.756 | 25 | 151 | 48 | 26 | 77,82 | 154 | 77 | 130,5 | 107 | 96,755 | 56 | 70 | 73 | 1.084,00 |

7

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series Hi-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |



Cylindrical shank receptacle
Support de tige cylindrique



| Bestell-Nr. Order no. Référence | D2 | H1 | H2 | H3 | H4 | B1 | B2 | L1 | L2 | L3 | L4 | S1 | S2 | EUR |
|---------------------------------------|----|-----|----|----|-------|-----|----|-------|-----|--------|----|----|----|----------|
| AW.107.265.25.753 | 25 | 151 | 48 | 26 | 77,82 | 127 | 77 | 130,5 | 107 | 96,755 | 56 | 70 | 73 | 1.084,00 |

7

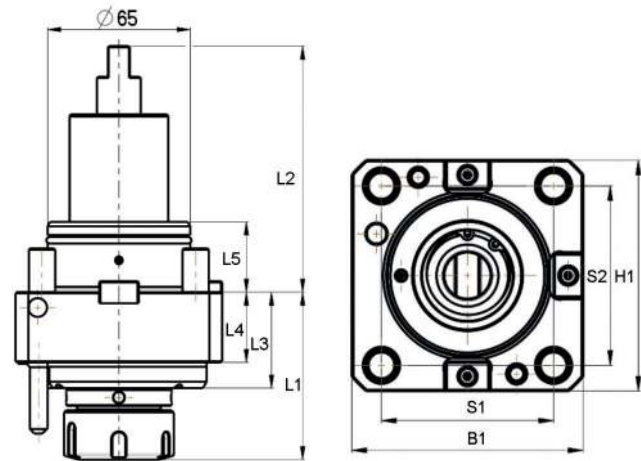
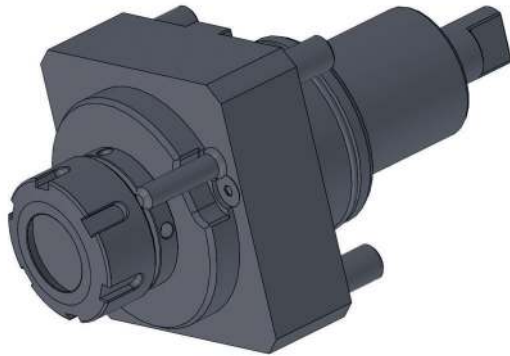
| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series Hi-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |





Axial drilling and milling head for external cooling

Tête d'alésage et de fraisage axiale pour refroidissement externe

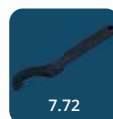
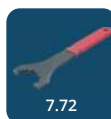


| Bestell-Nr. Order no. Référence | B1 | H1 | S1 | S2 | L1 | L2 | L3 | L4 | L5 | n max. min-1 | T max. Nm | EUR |
|---------------------------------------|----|----|----|----|------|-----|------|----|----|--------------------|--------------|----------|
| AW.221.065.20.751 | 94 | 94 | 70 | 73 | 76,3 | 112 | 43,7 | 32 | 32 | 6000 | 70 | 1.481,00 |

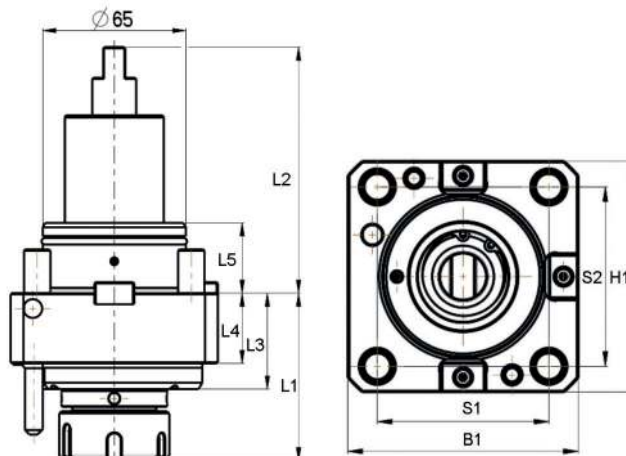
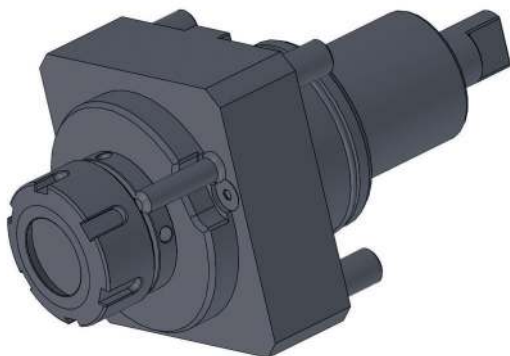
7

Typ: 470E | ER 32
 DCONWS: 2 - 20
 CP: 20 bar

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |



Axial drilling and milling head for internal and external cooling
Tête d'alésage et de fraisage axiale pour refroidissement interne et externe



| Bestell-Nr. Order no. Référence | B1 | H1 | S1 | S2 | L1 | L2 | L3 | L4 | L5 | n max. min-1 | T max. Nm | EUR |
|---------------------------------------|----|----|----|----|------|-----|------|----|----|--------------------|--------------|----------|
| AW.221.065.20.756 | 94 | 94 | 70 | 73 | 76,3 | 112 | 43,7 | 32 | 32 | 6000 | 70 | 1.590,00 |

Typ: 470E | ER 32
DCONWS: 2 - 20
CP: 20 bar

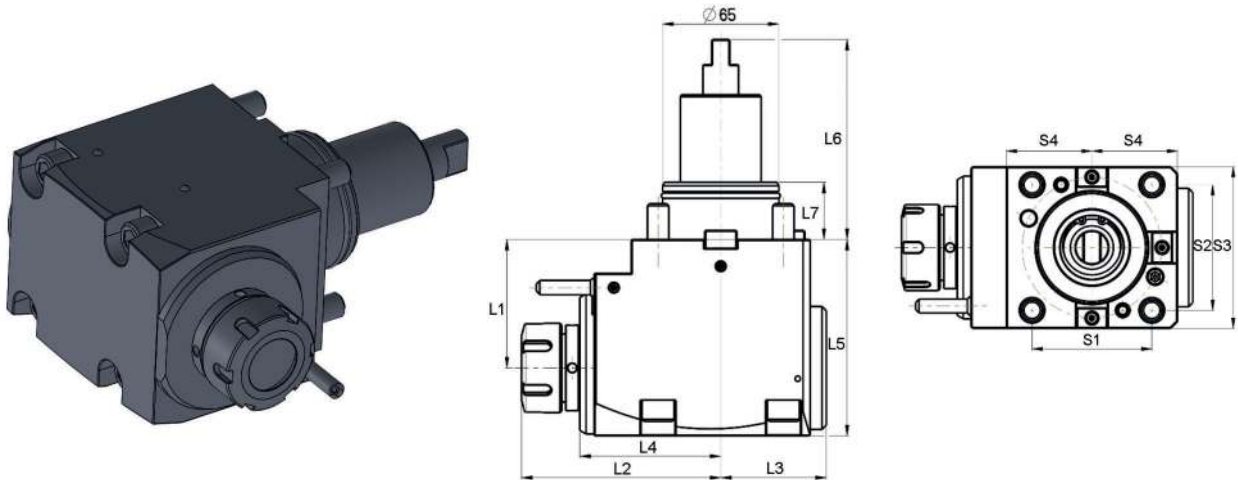


| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |





Radial drilling and milling head for external cooling
Tête d'alésage et de fraise radiale pour refroidissement externe

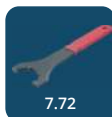


| Bestell-Nr. Order no. Référence | S1 | S2 | S3 | S4 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | n max. min-1 | T max. Nm | EUR |
|---------------------------------------|----|----|----|----|----|-------|----|------|-----|-----|----|-----------------|--------------|----------|
| AW.221.265.20.751 | 70 | 73 | 94 | 50 | 72 | 111,3 | 59 | 78,7 | 110 | 112 | 32 | 6000 | 70 | 2.437,00 |

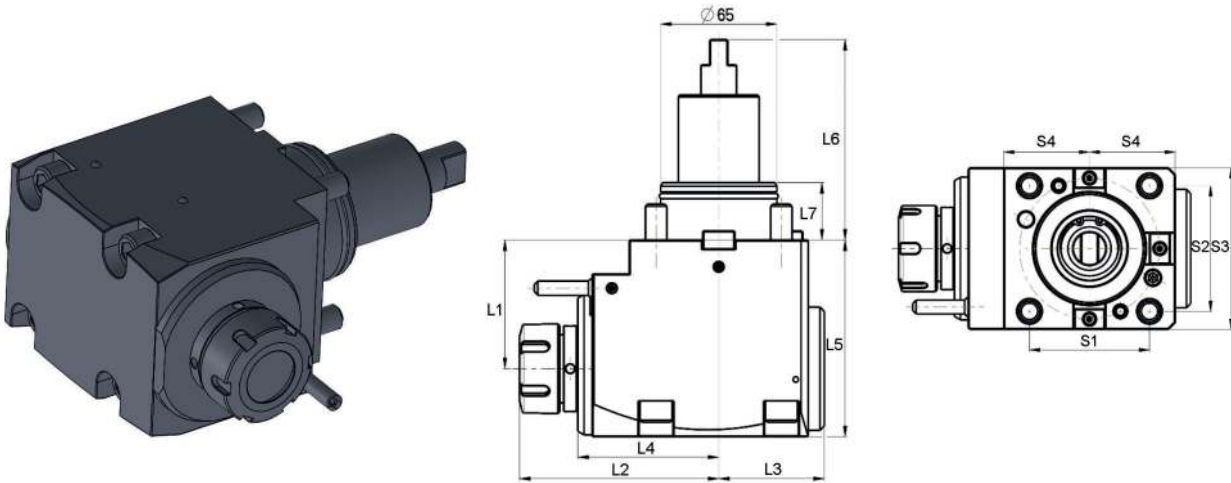
7

Typ: 470E | ER 32
D'CONWS: 2 - 20
CP: 20 bar

| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/HI-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |



Axial drilling and milling head for internal and external cooling
Tête d'alésage et de fraisage axiale pour refroidissement interne et externe



| Bestell-Nr. Order no. Référence | S1 | S2 | S3 | S4 | L1 | L2 | L3 | L4 | L5 | L6 | L7 | n max. min-1 | T max. Nm | EUR |
|---------------------------------------|----|----|----|----|----|-------|----|------|-----|-----|----|-----------------|--------------|----------|
| AW.221.265.20.756 | 70 | 73 | 94 | 50 | 72 | 111,3 | 59 | 78,7 | 110 | 112 | 32 | 6000 | 70 | 2.592,00 |

Typ: 470E | ER 32
DCONWS: 2 - 20
CP: 20 bar



| BMT | BMT65 |
|--------------|---|
| Doosan | PUMA 2100/2600 (M,LM,MS,LMS) PUMA 2100/2600 (Y,LY,SY,LSY) PUMA 300 (M,MS,MB,MC) PUMA 3100 (M,LM,LY,XLM,XLY,ULM,ULY) PUMA MX2000/2500 PUMA MX2600 (T,ST), PUMA TT2500 (MS/SY) PUMA V400 (M) PUMA VT450 (M,2SP) |
| Haas | ST 20Y, ST 35Y, DS-30Y |
| Hwacheon | Cutex-240/Hi-TECH200/T2-Series HI-TECH300/400 VT-450 |
| Hyundai | L2100SY SKT-200/250TTSY SKT-250/300 (L,M) SKT-250/300 (MS) |
| Maxsin | BMT65 |
| SMEC/Samsung | SL 25/SL 35 |
| Tongtai | TMT2000 |
| Victor | Vturn-A26 (YSCM) |



**DISCOUNT
P&GE 20%**

ISO 15488 (DIN 6499) System ER

Collet chucks with straight shank with with clamping surface for collets ISO 15488 (DIN 6499) ER-system
Mandrins à pinces à queue cylindrique avec surface de serrage pour pinces ISO 15488 (DIN 6499) système ER

**Verwendung:**

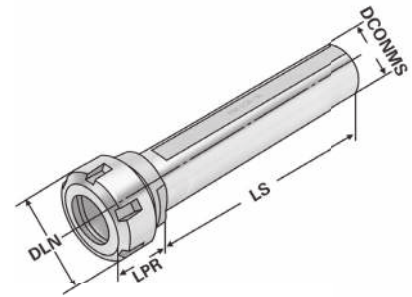
Zur Aufnahme von Werkzeugen mit Zylinderschaft in Spannzangen.

Application:

For mounting straight-shank tools in collets.

Application:

Pour le serrage d'outils avec queue cylindrique dans des pinces de serrage.



| Bestell-Nr. Order no. Référence | DCONMS | DCONWS | Typ | LS | LPR | DLN | DRVS | CND | THID | EUR |
|---------------------------------------|--------|--------|--------------|-----|-----|-----|------|-----|-----------|-------|
| 120.02.04.10 | 16 | 1 - 10 | 426E ER 16 | 150 | 30 | 32 | 19 | 9 | M10 x 1,5 | 73,00 |
| 120.02.04.16 | 20 | 1 - 16 | 430E ER 25 | 150 | 40 | 42 | 27 | 11 | M12 x 1,5 | 75,00 |
| 120.02.04.20 | 32 | 2 - 20 | 470E ER 32 | 150 | 35 | 50 | 32 | 19 | M20 x 1,5 | 81,00 |
| 120.02.04.20.1 | 40 | 2 - 20 | 470E ER 32 | 120 | 35 | 50 | 36 | 19 | M20 x 1,5 | 90,00 |

Durchgangsbohrung für Innenkühlung vorhanden.
Through hole for internal cooling provided.
Trou débouchant disponible pour arrosage interne.

Lieferumfang: Inkl. Spannmutter
Delivery: with Clamping nut
Livraison: Avec Ecrou de serrage

7

Spannfutter mit Zylinderschaft für Spannzangen

ISO 15488 (DIN 6499) System ER

Collet chucks with straight shank for collets ISO 15488 (DIN 6499) ER-system
Mandrins à pinces à queue cylindrique pour pinces ISO 15488 (DIN 6499) système ER

**Verwendung:**

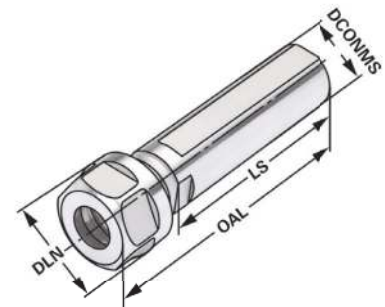
Zur Aufnahme von Werkzeugen mit Zylinderschaft in Spannzangen.

Application:

For mounting straight-shank tools in collets.

Application:

Pour le serrage d'outils avec queue cylindrique dans des pinces de serrage.



| Bestell-Nr. Order no. Référence | DCONMS | DCONWS | Typ | DLN | LS | OAL | DRVS | CND | THID | EUR |
|---------------------------------------|--------|--------|---------------|-----|----|------|------|-----|--------------|-------|
| 120.02.A.07 | 20 | 1 - 07 | 4008E ER 11 | 19 | 50 | 67,5 | 17 | 7 | - | 71,00 |
| 120.02.A.07.1 | 20 | 1 - 07 | 4008E ER 11 | 19 | 70 | 87,5 | 17 | 7 | - | 71,00 |
| 120.02.A.10 | 20 | 1 - 10 | 426E ER 16 | 28 | 70 | 96,0 | 17 | 10 | 7/16" 20 UNF | 71,00 |
| 120.02.A.13 | 25 | 1 - 13 | 428E ER 20 | 34 | 50 | 74,0 | 22 | 13 | 9/16" 18 UNF | 71,00 |

Sechskantmutter
Hexagonal clamping nut
Ecrous hexagonal

Durchgangsbohrung für Innenkühlung vorhanden.
Through hole for internal cooling provided.
Trou débouchant disponible pour arrosage interne.

Hook wrench with pin 45-50 | ER32 | 2-20 |
Clé à ergot rond 45-50 | ER32 | 2-20 |



| Bestell-Nr. Order no. Référence | Spannbereich Capacity Capacité | EUR |
|---------------------------------------|--------------------------------------|-------|
| AW.SE5862 | 2 – 20 (ER 32) | 26,80 |

Spannschlüssel für Spannmuttern System ER

Wrenches for clamping nuts ER-system
Clés de serrage pour écrous de serrage système ER



| Bestell-Nr. Order no. Référence | Spannbereich Capacity Capacité | EUR |
|---------------------------------------|--------------------------------------|-------|
| 02.20 | 2 – 20 (ER 32) | 18,00 |

