**HELMUTH A. JENSEN A/S**
Islevdalvej 187 • 2610 Rødovre • Denmark • Tel. +45 44 91 11 77 • Telefax +45 44 92 13 53
E-mail: info@viking1913.dk • Website: www.viking1913.dk

# Spanntechnik
# *Clamping Tools* 2017/18

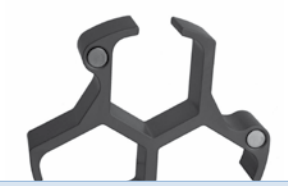


# NEU/*NEW*



**MACK Basic Futter**
***MACK Basic chucks***

Seite / *Page* **28-29**



**Drehfutteranschlag**
***Work piece stops***

Seite / *Page* **47**



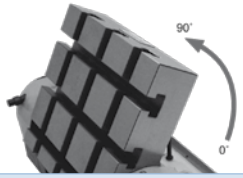
**Zwei-/Dreibacken-Kraftspannfutter**
***Two-/ Three-jaw combined power chucks***

Seite / *Page* **50**



**Dreibacken-Keilstangen-Kraftspannfutter**
***Three-jaw wedge type power chucks***

Seite / *Page* **58**



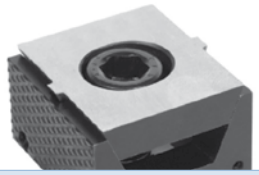

**Schwenkbarer Spanntisch**
***Heavy duty tilting plates***

Seite / *Page* **76**



**Prismenblöcke**
***V-blocks***

Seite / *Page* **80-82**



**Keilspanner**
***Wedge clamps***

Seite / *Page* **85**




**Angetriebene Koordinatentische**
***Driven cross tables***

Seite / *Page* **89**



**Rasterwürfel**
***Locator-grid cubes***

Seite / *Page* **92**



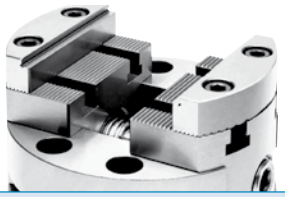
**Gewindebohrerhalter**
***Tap holders***

Seite / *Page* **99**



**Stirnmitnehmer**
***Hydraulic face drivers***

Seite / *Page* **124-125**



**Zentrischspanner**
***Self-centering vices***

Seite / *Page* **145**



**Endmaßsätze**
***Gauge block sets***

Seite / *Page* **261**



**Messuhren**
***Dial indicators***

Seite / *Page* **257 - 258**



**Schutzeinrichtung mit Magnetfuß**
***Safety guards with magnetic base***

Seite / *Page* **288**

AUSZUG **NEUE** Produkte 2017 / *EXCERPT **NEW** products 2017*

# Index


**1**

7-68

**Drehfutter, Planscheiben, Kraftspannfutter, Spannzangenfutter und Zubehör**

***Lathe chucks, independent chucks, power chucks, collet chucks and accessories***



12-27 Planspiral-Drehfutter, Backen und Zubehör / *Lathe chucks, jaws and accessories*

28-29 Planspiral-Drehfutter und Backen BASIC / *Lathe chucks and jaws BASIC*

30-31 Keilstangen-Drehfutter und Backen / *Wedge bar lathe chucks and jaws*

32-33 Wescott-Drehfutter und Backen / *Wescott lathe chucks and jaws*

34-38 Planscheiben / *Independent chucks*

39-43 Flansche / *Adaptor plates*

44-45 Drehfutter und Planscheiben mit großem Durchmesser / *Big diameter chucks*

46-47 Backenausdrehringe / *Jaw turning rings*

47 Drehfutteranschläge / *Work piece stops*

48-65 Kraftspannfutter / *Power chucks*

66-68 Spannzangenfutter / *Collet chucks*

**2**

69-92

**Aufspannvorrichtungen, Prismenblöcke und Winkelprismen, Magnetspannplatten, Klauenkästen, Keilspanner, Kreuz- und Schiebetische, Aufspannwinkel und Aufspannwürfel**

***Clamping fixtures, v-blocks and angle prisms, magnetic plates, box jaws, wedge clamps, cross and slide tables, angle plates and clamping cubes***



70-79 Aufspannvorrichtungen / *Clamping fixtures*

80-82 Prismenblöcke und Winkelprismen / *V-blocks and angle prisms*

83 Magnetspannplatten / *Magnetic plates*

84 Klauenkästen / *Box jaws*

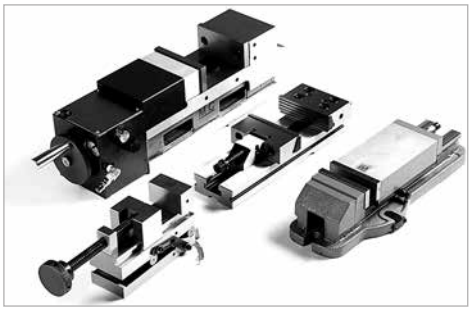
85 Keilspanner / *Wedge clamps*

86-89 Kreuz- und Schiebetische / *Cross and slide tables*

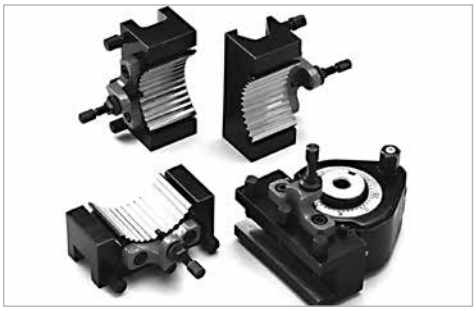
90-91 Aufspannwinkel / *Angle plates*

92 Aufspannwürfel / *Clamping cubes*

# Index


| | | |
|---|---|---|
| 3<br>93-102 | **Hülsen und Dorne**<br>***Sleeves and arbors*** |  |
| 4<br>103-108 | **Bohrfutter**<br>***Drill chucks*** |  |
| 5<br>109-126 | **Körnerspitzen**<br>***Tailstock centres*** |  |
| 6<br>127-152 | **Schraubstöcke**<br>***Vices*** |  |
| 7<br>153-170 | **VDI-Werkzeughalter für CNC-Drehmaschinen**<br>***VDI-tool holders for CNC lathes*** |  |
| 8<br>171-178 | **Angetriebene Werkzeuge**<br>***Driven tools*** |  |

# Index


| | | |
|---|---|---|
| 9<br>179-192 | **Spannzangen**<br>***Collets*** |  |
| 10<br>193-200 | **Schnellwechselstahlhalter**<br>***Quick-change tool holders*** |  |
| 11<br>201-232 | **Werkzeugaufnahmen für Fräsmaschinen**<br>***Tool holders for milling machines*** |  |

| | |
|---|---|
| 202 | Werkzeugaufnahmen-Sätze / *Tool holder sets* |
| 203-204 | Morsekegelaufnahmen / *Morse taper tooling* |
| 205-208 | DIN 2080 / *DIN 2080* |
| 209-215 | DIN 69871 / *DIN 69871* |
| 216-221 | MAS BT / *MAS BT* |
| 222-224 | Aufnahmen mit Zylinderschaft / *Straight shank tooling* |
| 225-229 | DIN 69893 HSK - A / *DIN 69893 HSK - A* |
| 230-232 | Anzugsbolzen / *Pull studs* |

# Index


**12** 233-240

**Ausdreh- und Fräsköpfe, Gewindeschneidfutter**

***Boring and milling heads, tapping chucks***



234 Ausdrehkopf-Sätze / *Boring head sets*

235-237 Gewindeschneid-Schnellwechselfutter / *Quick-change tapping chucks*

238 Gewindeschneidapparate mit automatischem Rücklauf / *Reversal tapping chucks*

239-240 Synchron-Gewindeschneidfutter / *Synchro-tapping chucks*

**13** 241-252

**Zubehör**

***Accessories***



242 Zubehör für Drehfutter und Planscheiben / *Accessories for lathe and independent chucks*

243 Zubehör für Schraubstöcke / *Accessories for vices*

244-252 Zubehör für Steilkegelaufnahmen / *Accessories for SK tooling*

**14** 253-268

**Messen - Prüfen - Einstellen Parallelunterlagen, Endmaßsätze, Aufspannsätze und Fräserkassetten**

***Measuring - Testing - Positioning Parallels, gauge block sets, clamping sets and milling cutters***



254-259 Messen - Prüfen - Einstellen / *Measuring - Testing - Positioning*

260 Parallelunterlagen / *Parallels*

261 Endmaßsätze / *Gauge block sets*

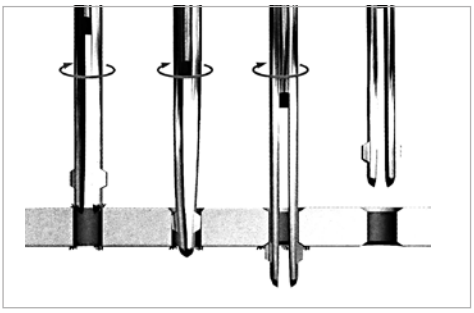
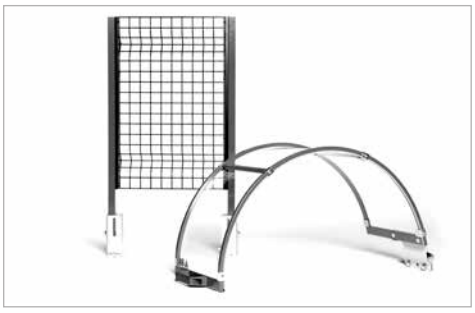
262-265 Grenz- und Gewindelehrdorne und Ringe / *Plain and thread plug gauges and rings*

266 Spannkraftmessgeräte / *Clamping force meters*

267 Anzugskraftmessgeräte / *Tigthening force meters*

267 Aufspannsätze und Fräserkassetten / *Clamping sets and milling cutters*

# Index


| | | |
|---|---|---|
| **15**<br>269-272 | **Entgratwerkzeug X-Grat**<br>***Deburring tool X-Grat*** |  |
| **16**<br>273-292 | **Schutzeinrichtungen und Schutzzäune**<br>***Safety guards and safety panels*** |  |
| 274-289 | Schutzeinrichtungen / *Safety guards* | |
| 290-292 | Schutzzäune / *Safety panels* | |
| 293-298 | **Stichwortverzeichnis**<br>***Keyword index*** | |
| 299-300 | **Allgemeine Geschäftsbedingungen**<br>***Terms and conditions*** | |

# Drehfutter, Planscheiben, Kraftspannfutter, Spannzangenfutter und Zubehör

## *Lathe chucks, independent chucks, power chucks, collet chucks and accessories*





## Inhalt:

1.1 | Planspiral-Drehfutter, Backen und Zubehör
1.2 | Planspiral-Drehfutter und Backen BASIC
1.3 | Keilstangen-Drehfutter und Backen
1.4 | Kombinierte Drehfutter Wescott und Backen
1.5 | Planscheiben
1.6 | Flansche
1.7 | Drehfutter und Planscheiben mit großem Ø
1.8 | Backen-Ausdrehvorrichtungen
1.9 | Drehfutteranschläge
1.10 | Kraftspannfutter
1.11 | Spannzangenfutter

## *Content:*

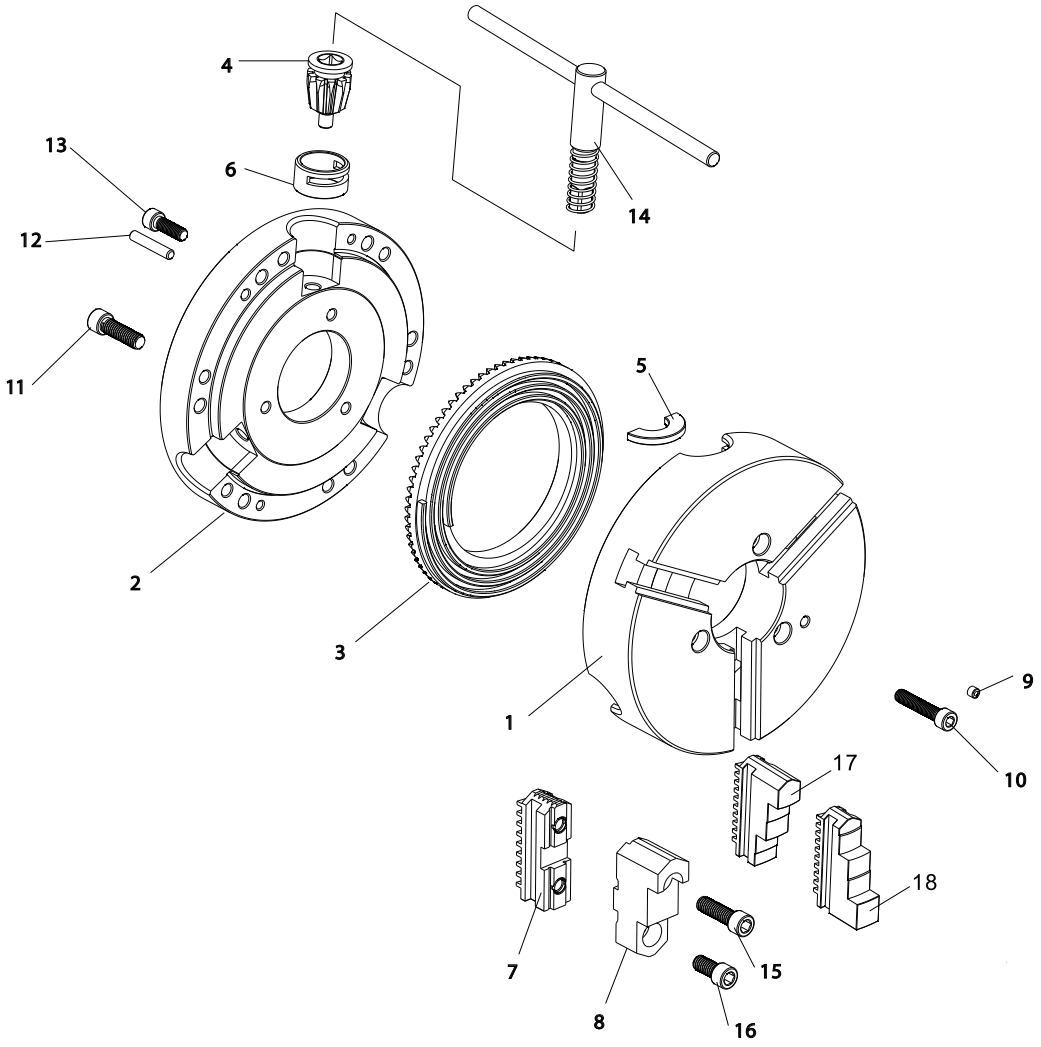
*1.1 | Lathe chucks, jaws and accessories*
*1.2 | Lathe chucks and jaws BASIC*
*1.3 | Wedge bar lathe chucks and jaws*
*1.4 | Combined lathe chucks Wescott and jaws*
*1.5 | Independent chucks*
*1.6 | Adaptor plates*
*1.7 | Big diameter chucks*
*1.8 | Jaw turning fixtures*
*1.9 | Work piece stops*
*1.10 | Power chucks*
*1.11 | Collet chucks*

## Planspiral-Drehfutter

DIN 6350 | DIN 55026 | DIN 55027 | DIN 55029
Dreh- und Bohrbacken | Grund- und Aufsatzbacken
Guss | Stahl

## *Lathe chucks*

*DIN 6350 | DIN 55026 | DIN 55027 | DIN 55029*
*One-piece jaws | Two-piece jaws*
*Cast iron | Steel*




| | | | |
|---|---|---|---|
| 1. | Futterkörper | *1.* | *Chuck body* |
| 2. | Futterdeckel | *2.* | *Back cover* |
| 3. | Planspirale | *3.* | *Scroll plate* |
| 4. | Ritzel | *4.* | *Pinion* |
| 5. | Halbscheibe | *5.* | *Pinion half ring* |
| 6. | Führungsbuchse | *6.* | *Pinion sleeve* |
| 7. | Grundbacke, hart | *7.* | *Hard master jaw* |
| 8. | Aufsatzbacke, hart | *8.* | *Hard top jaw* |
| 9. | Schmiernippel | *9.* | *Grease nipple* |
| 10. | Verschlussschraube | *10.* | *Back cover mounting bolt* |
| 11. | Befestigungsschraube | *11.* | *Chuck mounting bolt* |
| 12. | Passstift | *12.* | *Back cover mounting pin* |
| 13. | Passschraube | *13.* | *Back cover mounting bolts* |
| 14. | Schlüssel | *14.* | *Chuck wrench* |
| 15. | Schrauben für Backen | *15.* | *Jaw mounting bolts* |
| 16. | Schrauben für Backen | *16.* | *Jaw mounting bolts* |
| 17. | Bohrbacke | *17.* | *Hard solid outside jaw* |
| 18. | Drehbacke | *18.* | *Hard solid inside jaw* |

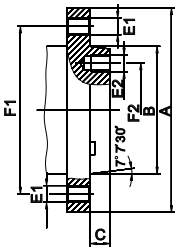
# Spindelnasen
# *Spindle types*

## DIN 55026 | Typ A1 & A2
## *DIN 55026 | Type A1 & A2*



Typ A1 mit Gewindebohrungen auf dem äußeren und inneren Lochkreisdurchmesser

*Type A1 with tapped holes on both inner and outer bolt circles*





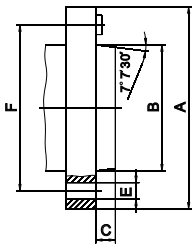

Typ A2 ohne Bohrungen auf dem inneren Lochkreisdurchmesser

*Type A2 without holes on the inner bolt circle*

| KK / *Taper* | F1 mm | F2 mm | B mm | C mm | E1 / *E2* |
|---|---|---|---|---|---|
| 4 | 82,6 | - | 63,521 | 11 | M10 |
| 5 | 104,8 | 61,9 | 82,573 | 14,288 | M10 |
| 6 | 133,4 | 82,6 | 106,385 | 15,875 | M12 |
| 8 | 171,4 | 111,1 | 139,731 | 17,462 | M16 |
| 11 | 235 | 165,1 | 196,883 | 19,05 | M20 |
| 15 | 330,2 | 247,6 | 285,791 | 20,638 | M24 |
| 20 | 463,6 | 368,3 | 412,795 | 22,225 | M24 |

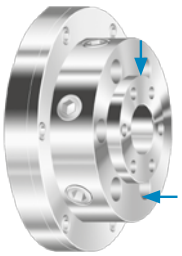
## DIN 55027 | Typ C
## *DIN 55027 | Type C*

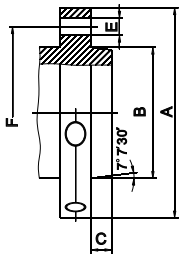





| KK / *Taper* | A mm | F mm | B mm | C mm | E mm | Bohrungen / *Holes* |
|---|---|---|---|---|---|---|
| 3 | 102 | 75 | 53,983 | 11 | 21 | 3 |
| 4 | 112 | 85 | 63,521 | 11 | 21 | 3 |
| 5 | 135 | 104,8 | 82,573 | 13 | 21 | 4 |
| 6 | 170 | 133,4 | 106,385 | 14 | 23 | 4 |
| 8 | 220 | 171,4 | 139,731 | 16 | 29 | 4 |
| 11 | 290 | 235 | 196,883 | 18 | 36 | 6 |
| 15 | 400 | 330,2 | 285,791 | 19 | 43 | 6 |

## DIN 55029 | Camlock Typ D1
## *DIN 55029 | Camlock Type D1*

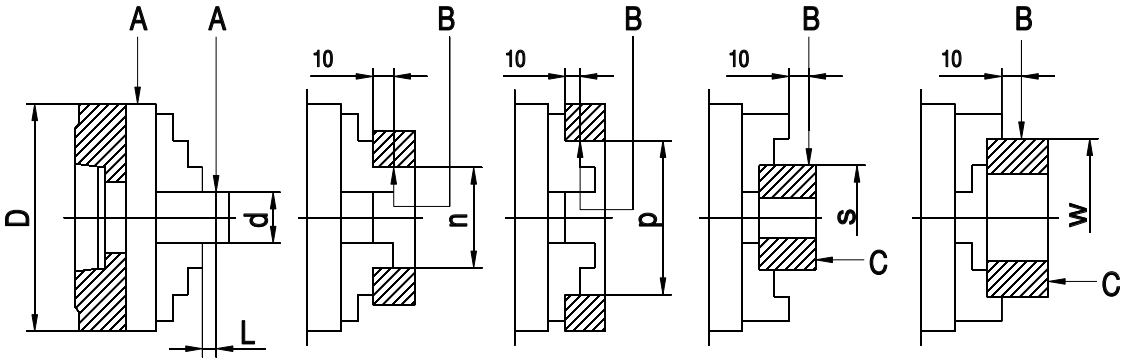





| KK / *Taper* | A mm | F mm | B mm | C mm | E mm | Bohrungen / *Holes* |
|---|---|---|---|---|---|---|
| 3 | 92 | 70,6 | 53,983 | 11 | 15,1 | 3 |
| 4 | 117 | 82,6 | 63,521 | 11 | 16,7 | 3 |
| 5 | 146 | 104,8 | 82,573 | 13 | 19,8 | 6 |
| 6 | 181 | 133,4 | 106,385 | 14 | 23 | 6 |
| 8 | 225 | 171,4 | 139,731 | 16 | 26,2 | 6 |
| 11 | 298 | 235 | 196,883 | 18 | 31 | 6 |
| 15 | 403 | 330,2 | 285,791 | 19 | 35,7 | 6 |

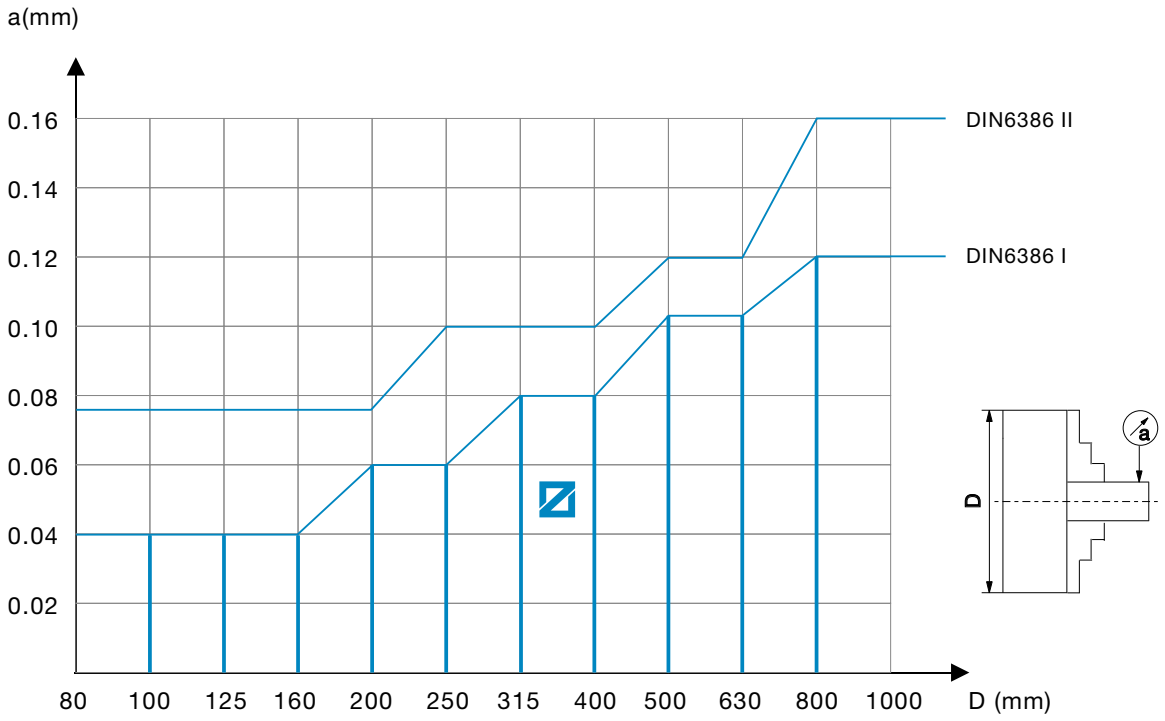
**Futter für Maschinen mit Langkegel oder Gewindespindel auf Anfrage lieferbar**
***Chucks for machines with long taper or threaded spindle available upon request***

# Rundlauf-Genauigkeit
## *Concentricity*




## Drehfutter, Guss und Stahl
## *Lathe chucks, cast iron and steel*

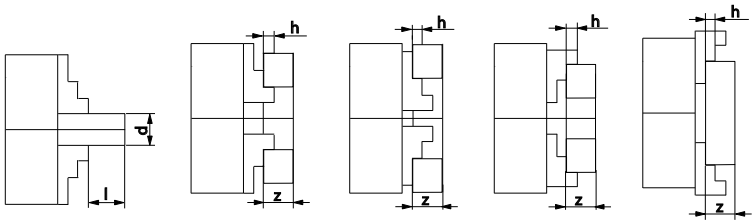
| Ø | d 1 | d 2 | d 3 | L | n | p | s | w | w | Rundlauf / *Radial runout* A | Rundlauf / *Radial runout* B | Planlauf / *Axial runout* C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 10 | - | 14 | 40 | 40 | 60 | 35 | 63 | - | 0,02 | 0,025 | 0,015 |
| 100 | 10 | 14 | 18 | 40 | 40 | 75 | 50 | 80 | - | 0,02 | 0,025 | 0,015 |
| 125 | 18 | 25 | 30 | 60 | 50 | 100 | 62 | 100 | 120 | 0,03 | 0,035 | 0,02 |
| 160 | 18 | 30 | 40 | 60 | 50 | 135 | 88 | 100 | 150 | 0,03 | 0,035 | 0,02 |
| 200 | 30 | 40 | 53 | 80 | 80 | 162 | 96 | 160 | 185 | 0,04 | 0,045 | 0,025 |
| 250 | 30 | 53 | 75 | 80 | 80 | 200 | 150 | 160 | 225 | 0,04 | 0,045 | 0,025 |
| 315 | 53 | 75 | 100 | 120 | 125 | 252 | 210 | 250 | 300 | 0,05 | 0,055 | 0,03 |
| 400 | 53 | 100 | 125 | 120 | 125 | 282 | 250 | 250 | 350 | 0,06 | 0,065 | 0,03 |
| 500 | 75 | 100 | 125 | 160 | 200 | 282 | 300 | 400 | 400 | 0,10 | 0,10 | 0,05 |
| 630 | 75 | 125 | 160 | 160 | 200 | 325 | 400 | 400 | 400 | 0,10 | 0,10 | 0,05 |
| 800 | 160 | 200 | 250 | 160 | 300 | 500 | 400 | 500 | 500 | 0,11 | 0,11 | 0,06 |




**Die Rundlauf-Genauigkeit unserer ZENTRA-Planspiral-Drehfutter entspricht DIN Klasse 1 oder besser**
***The concentricity of our ZENTRA lathe chucks is according to DIN class 1 or better***

# Technische Daten
# *Technical data*

## Werkstückparameter / *Work piece parameters*




| Ø | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| l | 1,2 x d | 1,2 x d | 1,2 x d | 1,2 x d | 1,2 x d | 1,2 x d | 1,5 x d | 1,5 x d | 1,5 x d | 1,0 x d | 1,0 x d |
| z | 4 x h | 4 x h | 4 x h | 4 x h | 4 x h | 4 x h | 4 x h | 4 x h | 4 x h | 4 x h | 4 x h |

## Maximale Spannkraft / *Total gripping force*

| Ø | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| daN | 1000 | 1700 | 2400 | 3100 | 3700 | 4600 | 5500 | 6500 | 7200 | 8000 | 9000 |

## Maximales Anzugsmoment / *Maximum torque*

| Ø | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nm | 35 | 50 | 75 | 120 | 160 | 180 | 200 | 280 | 360 | 460 | 500 |

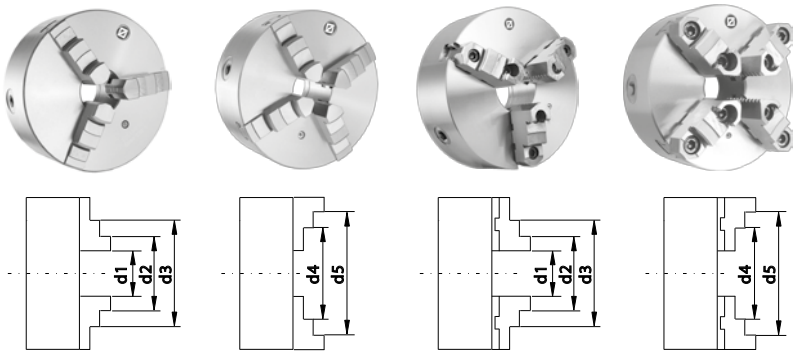
## Maximale Drehzahlen ($min^{-1}$) / *Maximum speed ($min^{-1}$)*

| Ø | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Drehfutter Guss / *Lathe chucks cast iron* | 4000 | 3500 | 3200 | 3000 | 2500 | 2000 | 1500 | 1000 | 700 | 500 | 300 |
| Drehfutter Stahl / *Lathe chucks steel* | 6000 | 5200 | 4800 | 4500 | 4000 | 3500 | 2800 | 2000 | 1200 | 1000 | 450 |
| Planscheiben / *Independent chucks* | 3000 | 3000 | 2500 | 2000 | 1800 | 1500 | 1200 | 800 | 500 | 400 | 300 |

## Unwucht (Stahl-Drehfutter) / *Unbalance (steel body lathe chucks)*

| Ø | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| gcm | 11 | 16 | 23 | 32 | 45 | 63 | 90 | 140 | 300 | 640 | - |

## Spannbereich / *Clamping range*




| Ø | d1 | | d2 | | d3 max. | | d4 max. | | d5 max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | solid | reversible | solid | reversible | solid | reversible | solid | reversible | solid | reversible |
| 80 | 2-27 | - | 22-46 | - | 45-69 | - | 25-50 | - | 48-71 | - |
| 100 | 3-33 | - | 25-56 | - | 56-87 | - | 32-62 | - | 62-83 | - |
| 125 | 3-50 | 3-50 | 34-74 | 34-76 | 72-115 | 75-118 | 39-83 | 52-96 | 80-125 | 95-125 |
| 160 | 4-64 | 3-64 | 42-100 | 42-97 | 94-154 | 88-146 | 50-107 | 62-121 | 98-160 | 115-160 |
| 200 | 4-90 | 4-90 | 52-135 | 50-130 | 120-202 | 105-190 | 60-145 | 72-156 | 130-200 | 133-200 |
| 250 | 5-118 | 5-118 | 62-174 | 58-165 | 145-256 | 125-235 | 77-188 | 86-197 | 160-250 | 160-250 |
| 315 | 10-131 | 10-131 | 78-200 | 65-182 | 172-299 | 145-265 | 90-215 | 103-226 | 190-315 | 190-315 |
| 400 | 10-180 | 10-180 | 85-252 | 72-228 | 210-380 | 165-329 | 103-272 | 127-294 | 230-400 | 230-400 |
| 500 | 20-235 | 20-235 | 120-335 | 120-410 | 245-476 | 200-485 | 140-357 | 110-400 | 276-500 | 190-500 |
| 630 | 30-335 | 30-335 | 160-465 | 140-590 | 325-630 | 210-665 | 180-487 | 120-570 | 345-630 | 200-630 |
| 800 | 150-482 | 150-482 | 282-614 | 252-736 | 448-780 | 328-812 | 302-634 | 240-724 | 468-800 | 316-800 |

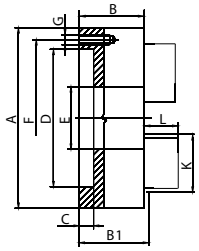
# Planspiral-Drehfutter
## *Lathe chucks*

- Geeignet für Drehmaschinen sowie alle Arten von Fräs- und Bohrvorrichtungen
- Lieferung mit je einem Satz Dreh- und Bohrbacken oder Grund- und Aufsatzbacken
- Zylindrisch oder mit Direktaufnahme
- Futterkörper aus Guss oder Stahl
- Führungen und Verschleißflächen geschliffen
- Planspiralring aus hochwertigem Legierungsstahl gesenkgeschmiedet und gehärtet

- *suitable for all types of lathes and different kinds of milling, drilling and CNC devices*
- *incl. one set of hard solid outside and inside jaws or two-piece hard reversible jaws*
- *available with plain back and direct mounting*
- *chuck body made from cast iron or steel*
- *guide ways and wear surfaces ground*
- *scroll plate is drop forged of fine-alloy steel, and case hardened*

# Zweibacken-Drehfutter
## *Two-jaw lathe chucks*






### Zylindrische Aufnahme nach DIN 6350
### *Centre mount according to DIN 6350*

Diese Drehfutter sind besonders geeignet zur Aufnahme von Mehrkant- oder Formdrehelementen, die in Drei- oder Vierbackenfuttern nicht zu spannen sind.

*Especially suitable for holding multicornered and form turned elements, which cannot be clamped by 3- or 4-jaw lathe chucks.*

**Guss / *Cast iron***

| A (Ø) mm | B mm | B1 mm | C mm | D mm | E mm | F mm | G mm | K mm | L mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 64 | 69,3 | 4 | 125 | 42 | 140 | 6xM10 | 67 | 43 | 3000 | 10 | ● | ZE-6252-160 |
| 200 | 75 | 79,8 | 4 | 160 | 55 | 176 | 6xM10 | 80 | 45 | 2500 | 17,5 | ● | ZE-6252-200 |
| 250 | 85 | 88,8 | 5 | 200 | 76 | 224 | 6xM12 | 95 | 53 | 2000 | 29 | ● | ZE-6252-250 |
| 315 | 94 | 99,1 | 5 | 260 | 103 | 286 | 6xM16 | 110 | 57 | 1500 | 50 | ● | ZE-6252-315 |
| 400 | 105 | 113,8 | 5 | 330 | 136 | 362 | 6xM16 | 127 | 67 | 1000 | 85 | ● | ZE-6252-400 |

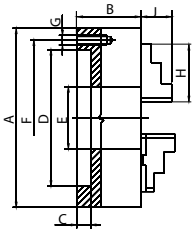
Inkl. je 1 Satz Grundbacken und weichen Umkehraufsatzbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set base jaws and soft reversible top jaws, wrench, fixing screws*



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Dreibacken-Drehfutter
# *Three-jaw lathe chucks*






## Zylindrische Aufnahme nach DIN 6350, einteilige Backen
## *Centre mount according to DIN 6350, one-piece jaws*

Diese Drehfutter gewährleisten eine gleichmäßige Spannkraft durch zentrisch spannende Backen sowie eine hohe Rundlaufgenauigkeit.

*These lathe chucks guarantee a homogeneous clamping force by self-centering clamping jaws as well as a high concentricity.*

### Guss / *Cast iron*

| A (Ø) mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | $RPM_{MAX}$ $min^{-1}$ | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 44 | 3 | 56 | 16 | 67 | 3xM6 | 32 | 13 | 4000 | 1,5 | ● | ZE-6353-080 |
| 100 | 50 | 3 | 70 | 20 | 83 | 3xM8 | 42 | 17 | 3500 | 2,8 | ● | ZE-6353-100 |
| 125 | 56 | 4 | 95 | 32 | 108 | 3xM8 | 51 | 20 | 3200 | 5 | ● | ZE-6353-125 |
| 160 | 64 | 4 | 125 | 42 | 140 | 6xM10 | 70 | 32 | 3000 | 10 | ● | ZE-6353-160 |
| 200 | 75 | 4 | 160 | 55 | 176 | 6xM10 | 85 | 29 | 2500 | 17,5 | ● | ZE-6353-200 |
| 250 | 85 | 5 | 200 | 76 | 224 | 6xM12 | 105 | 34 | 2000 | 29 | ● | ZE-6353-250 |
| 315 | 94 | 5 | 260 | 103 | 286 | 6xM16 | 125 | 43 | 1500 | 50 | ● | ZE-6353-315 |
| 400 | 105 | 5 | 330 | 136 | 362 | 6xM16 | 145 | 55 | 1000 | 85 | ● | ZE-6353-400 |
| 500 | 120 | 5 | 420 | 190 | 458 | 6xM16 | 180 | 60 | 700 | 145 | ● | ZE-6353-500 |
| 630 | 135 | 7 | 545 | 252 | 586 | 6xM16 | 225 | 70 | 500 | 250 | ● | ZE-6353-630 |
| 800 | 159 | 20 | 450 | 320 | 368,3 | - | 225 | 70 | 300 | 402 | ○ | ZE-6353-800 |

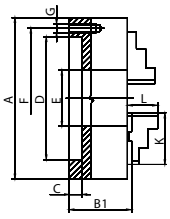
### Stahl / *Steel*

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 44 | 3 | 56 | 16 | 67 | 3xM6 | 32 | 13 | 6000 | 1,5 | ● | ZE-8353-080 |
| 100 | 50 | 3 | 70 | 20 | 83 | 3xM8 | 42 | 17 | 5200 | 2,8 | ● | ZE-8353-100 |
| 125 | 59,5 | 4 | 95 | 35,5 | 108 | 3xM8 | 51 | 20 | 4800 | 5 | ● | ZE-8353-125 |
| 160 | 68 | 4 | 125 | 42 | 140 | 6xM10 | 70 | 32 | 4500 | 10 | ● | ZE-8353-160 |
| 200 | 78 | 4 | 160 | 55 | 176 | 6xM10 | 85 | 29 | 4000 | 17,5 | ● | ZE-8353-200 |
| 250 | 89 | 5 | 200 | 76 | 224 | 6xM12 | 105 | 34 | 3500 | 29 | ● | ZE-8353-250 |
| 315 | 96,2 | 5 | 260 | 103 | 286 | 6xM16 | 125 | 43 | 2800 | 50 | ● | ZE-8353-315 |
| 400 | 108 | 5 | 330 | 136 | 362 | 6xM16 | 145 | 55 | 2000 | 85 | ● | ZE-8353-400 |
| 500 | 119 | 5 | 420 | 190 | 458 | 6xM16 | 180 | 60 | 1200 | 145 | ● | ZE-8353-500 |
| 630 | 129 | 7 | 545 | 252 | 586 | 6xM16 | 225 | 70 | 1000 | 250 | ● | ZE-8353-630 |
| 800 | 150 | 20 | 450 | 320 | 368,3 | - | 225 | 70 | 450 | 402 | ○ | ZE-8353-800 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*

# Dreibacken-Drehfutter
# *Three-jaw lathe chucks*






## Zylindrische Aufnahme nach DIN 6350, geteilte Backen
## *Centre mount according to DIN 6350, two-piece jaws*

### Guss / *Cast iron*

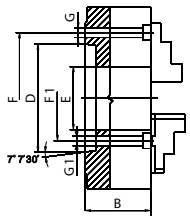
| A (Ø) mm | B1 mm | C mm | D mm | E mm | F mm | G mm | K mm | L mm | RPM$_{MAX}$ min$^{-1}$ | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 60,8 | 4 | 95 | 32 | 108 | 3xM8 | 56 | 40 | 3200 | 5 | ● | ZE-6363-125 |
| 160 | 69,3 | 4 | 125 | 42 | 140 | 6xM10 | 67 | 43 | 3000 | 10 | ● | ZE-6363-160 |
| 200 | 79,8 | 4 | 160 | 55 | 176 | 6xM10 | 80 | 45 | 2500 | 17,5 | ● | ZE-6363-200 |
| 250 | 88,8 | 5 | 200 | 76 | 224 | 6xM12 | 95 | 53 | 2000 | 29 | ● | ZE-6363-250 |
| 315 | 99,1 | 5 | 260 | 103 | 286 | 6xM16 | 110 | 57 | 1500 | 50 | ● | ZE-6363-315 |
| 400 | 113,8 | 5 | 330 | 136 | 362 | 6xM16 | 127 | 67 | 1000 | 85 | ● | ZE-6363-400 |
| 500 | 130,8 | 5 | 420 | 190 | 458 | 6xM16 | 127 | 79 | 700 | 145 | ● | ZE-6363-500 |
| 630 | 146,3 | 7 | 545 | 252 | 586 | 6xM16 | 127 | 87 | 500 | 250 | ● | ZE-6363-630 |
| 800 | 170,3 | 20 | 450 | 320 | 368,3 | - | 127 | 87 | 300 | 402 | ○ | ZE-6363-800 |

### Stahl / *Steel*

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 66,3 | 4 | 95 | 35,5 | 108 | 3xM8 | 56 | 40 | 4800 | 5 | ● | ZE-8363-125 |
| 160 | 72,8 | 4 | 125 | 42 | 140 | 6xM10 | 67 | 43 | 4500 | 10 | ● | ZE-8363-160 |
| 200 | 82,8 | 4 | 160 | 55 | 176 | 6xM10 | 80 | 45 | 4000 | 17,5 | ● | ZE-8363-200 |
| 250 | 92,8 | 5 | 200 | 76 | 224 | 6xM12 | 95 | 53 | 3500 | 29 | ● | ZE-8363-250 |
| 315 | 101,3 | 5 | 260 | 103 | 286 | 6xM16 | 110 | 57 | 2800 | 50 | ● | ZE-8363-315 |
| 400 | 116,8 | 5 | 330 | 136 | 362 | 6xM16 | 127 | 67 | 2000 | 85 | ● | ZE-8363-400 |
| 500 | 129,8 | 5 | 420 | 190 | 458 | 6xM16 | 127 | 79 | 1200 | 145 | ● | ZE-8363-500 |
| 630 | 140,3 | 7 | 545 | 252 | 586 | 6xM16 | 127 | 87 | 1000 | 250 | ● | ZE-8363-630 |
| 800 | 161,3 | 20 | 450 | 320 | 368,3 | - | 127 | 87 | 450 | 402 | ○ | ZE-8363-800 |

Inkl. je 1 Satz gehärteter Grund- und Umkehraufsatzbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of hardened base jaws and reversible top jaws, wrench, fixing screws*






## Kurzkegelaufnahme nach DIN 55026, einteilige Backen
## *According to DIN 55026, one-piece jaws*

### Stahl / *Steel*

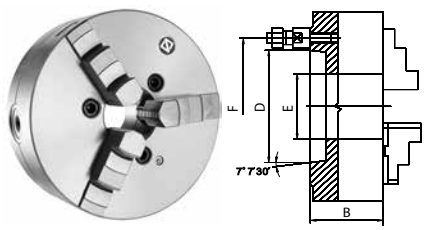
| Ø mm | KK Taper | Typ / *Type* | B mm | D mm | E mm | F mm | F1 mm | G mm | G1 mm | RPM$_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 5 | A1 | 68 | 82,6 | 42 | - | 62 | - | M10 | 4500 | 10 | ● | ZE-8356-165 |
| 200 | 5 | A1 | 78 | 82,6 | 42 | - | 62 | - | M10 | 4000 | 19 | ● | ZE-8356-205 |
| 200 | 6 | A1 | 78 | 106,4 | 55 | - | 82 | - | M12 | 4000 | 19 | ● | ZE-8356-206 |
| 250 | 5 | A2 | 89 | 82,6 | 76 | 104 | - | M10 | - | 3500 | 32 | ● | ZE-8356-255 |
| 250 | 6 | A1 | 89 | 106,4 | 55 | - | 82 | - | M12 | 3500 | 32 | ● | ZE-8356-256 |
| 250 | 8 | A1 | 89 | 139,7 | 76 | - | 111 | - | M16 | 3500 | 32 | ● | ZE-8356-258 |
| 315 | 6 | A2 | 96,2 | 106,4 | 103 | 133 | - | M12 | - | 2800 | 55 | ● | ZE-8356-316 |
| 315 | 8 | A1 | 96,2 | 139,7 | 80 | - | 111 | - | M16 | 2800 | 55 | ● | ZE-8356-318 |
| 400 | 8 | A2 | 108 | 139,7 | 136 | 171 | - | M16 | - | 2000 | 92 | ● | ZE-8356-408 |
| 400 | 11 | A1 | 108 | 196,9 | 130 | - | 165 | - | M20 | 2000 | 92 | ● | ZE-8356-411 |
| 500 | 8 | A2 | 119 | 139,7 | 136 | 171 | - | M16 | - | 1200 | 160 | ○ | ZE-8356-508 |
| 500 | 11 | A2 | 119 | 196,9 | 190 | 235 | - | M20 | - | 1200 | 160 | ● | ZE-8356-511 |
| 630 | 11 | A2 | 129 | 196,9 | 190 | 235 | - | M20 | - | 1000 | 285 | ○ | ZE-8356-611 |
| 630 | 15 | A2 | 129 | 285,8 | 252 | 330 | - | M24 | - | 1000 | 285 | ○ | ZE-8356-615 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing bolts*



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Dreibacken-Drehfutter
# *Three-jaw lathe chucks*

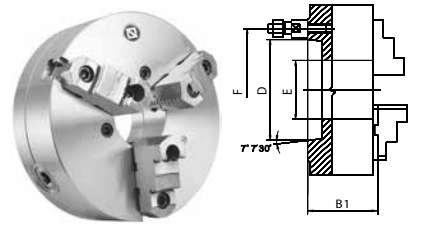



## Kurzkegelaufnahme nach DIN 55027, einteilige Backen
## *According to DIN 55027, one-piece jaws*

### Stahl / *Steel*

| Ø mm | KK Taper | B mm | D mm | E mm | F mm | RPM$_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 3 | 59,5 | 54 | 35,5 | 75 | 4800 | 5 | ● | ZE-8357-123 |
| 125 | 4 | 59,5 | 63,5 | 35,5 | 85 | 4800 | 5 | ● | ZE-8357-124 |
| 160 | 4 | 68 | 63,5 | 42 | 85 | 4500 | 9 | ● | ZE-8357-164 |
| 160 | 5 | 68 | 82,6 | 42 | 104,8 | 4500 | 9 | ● | ZE-8357-165 |
| 200 | 4 | 78 | 63,5 | 55 | 85 | 4000 | 19 | ● | ZE-8357-204 |
| 200 | 5 | 78 | 82,6 | 55 | 104,8 | 4000 | 19 | ● | ZE-8357-205 |
| 200 | 6 | 78 | 106,4 | 55 | 133,4 | 4000 | 19 | ● | ZE-8357-206 |
| 250 | 6 | 89 | 106,4 | 76 | 133,4 | 3500 | 32 | ● | ZE-8357-256 |
| 250 | 8 | 89 | 139,7 | 76 | 171,4 | 3500 | 32 | ● | ZE-8357-258 |
| 315 | 6 | 96,2 | 106,4 | 103 | 133,4 | 2800 | 51 | ● | ZE-8357-316 |
| 315 | 8 | 96,2 | 139,7 | 103 | 171,4 | 2800 | 51 | ● | ZE-8357-318 |
| 315 | 11 | 117,7 | 196,9 | 103 | 235 | 2800 | 51 | ● | ZE-8357-311 |
| 400 | 8 | 108 | 139,7 | 136 | 171,4 | 2000 | 101 | ● | ZE-8357-408 |
| 400 | 11 | 108 | 196,9 | 136 | 235 | 2000 | 101 | ● | ZE-8357-411 |
| 500 | 8 | 119 | 139,7 | 136 | 171,4 | 1200 | 150 | ○ | ZE-8357-508 |
| 500 | 11 | 119 | 196,9 | 190 | 235 | 1200 | 150 | ● | ZE-8357-511 |
| 630 | 11 | 129 | 196,9 | 190 | 235 | 1000 | 274 | ○ | ZE-8357-611 |
| 630 | 15 | 129 | 285,8 | 252 | 330,2 | 1000 | 274 | ○ | ZE-8357-615 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing bolts*




## Kurzkegelaufnahme nach DIN 55027, geteilte Backen
## *According to DIN 55027, two-piece jaws*

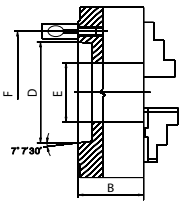
### Stahl / *Steel*

| Ø mm | KK *Taper* | B1 mm | D mm | E mm | F mm | RPM$_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 3 | 64,8 | 54 | 35,5 | 75 | 4800 | 5 | ● | ZE-8367-123 |
| 125 | 4 | 64,8 | 63,5 | 35,5 | 85 | 4800 | 5 | ● | ZE-8367-124 |
| 160 | 4 | 72,8 | 63,5 | 42 | 85 | 4500 | 9 | ● | ZE-8367-164 |
| 160 | 5 | 72,8 | 82,6 | 42 | 104,8 | 4500 | 9 | ● | ZE-8367-165 |
| 200 | 5 | 82,8 | 82,6 | 55 | 104,8 | 4000 | 19 | ● | ZE-8367-205 |
| 200 | 6 | 82,8 | 106,4 | 55 | 133,4 | 4000 | 19 | ● | ZE-8367-206 |
| 250 | 6 | 92,8 | 106,4 | 76 | 133,4 | 3500 | 32 | ● | ZE-8367-256 |
| 250 | 8 | 92,8 | 139,7 | 76 | 171,4 | 3500 | 32 | ● | ZE-8367-258 |
| 315 | 6 | 101,3 | 106,4 | 103 | 133,4 | 2800 | 51 | ● | ZE-8367-316 |
| 315 | 8 | 101,3 | 139,7 | 103 | 171,4 | 2800 | 51 | ● | ZE-8367-318 |
| 400 | 8 | 116,8 | 139,7 | 136 | 171,4 | 2000 | 101 | ● | ZE-8367-408 |
| 400 | 11 | 116,8 | 196,9 | 136 | 235 | 2000 | 101 | ● | ZE-8367-411 |
| 500 | 8 | 129,8 | 139,7 | 136 | 171,4 | 1200 | 150 | ○ | ZE-8367-508 |
| 500 | 11 | 129,8 | 196,9 | 190 | 235 | 1200 | 150 | ○ | ZE-8367-511 |
| 630 | 11 | 140,3 | 196,9 | 190 | 235 | 1000 | 274 | ○ | ZE-8367-611 |
| 630 | 15 | 140,3 | 285,8 | 252 | 330,2 | 1000 | 274 | ○ | ZE-8367-615 |

Inkl. je 1 Satz gehärteter Grund- und Umkehraufsatzbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set each of hardened base jaws and reversible top jaws, wrench, fixing bolts*

# Dreibacken-Drehfutter
# *Three-jaw lathe chucks*





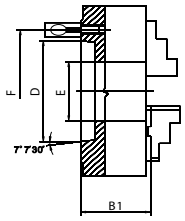

## Kurzkegelaufnahme DIN 55029 (Camlock), einteilige Backen
## *According to DIN 55029 (Camlock), one-piece jaws*

**Stahl / *Steel***

| Ø mm | KK Taper | B mm | D mm | E mm | F mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 3 | 59,5 | 54 | 35,5 | 70,6 | 4800 | 5 | ● | ZE-8359-123 |
| 125 | 4 | 59,5 | 63,5 | 35,5 | 82,6 | 4800 | 5 | ● | ZE-8359-124 |
| 160 | 3 | 68 | 54 | 42 | 70,6 | 4500 | 3 | ● | ZE-8359-163 |
| 160 | 4 | 68 | 63,5 | 42 | 82,6 | 4500 | 9 | ● | ZE-8359-164 |
| 160 | 5 | 68 | 82,6 | 42 | 104,8 | 4500 | 9 | ● | ZE-8359-165 |
| 200 | 4 | 78 | 63,5 | 55 | 82,6 | 4000 | 19 | ● | ZE-8359-204 |
| 200 | 5 | 78 | 82,6 | 55 | 104,8 | 4000 | 19 | ● | ZE-8359-205 |
| 200 | 6 | 78 | 106,4 | 55 | 133,4 | 4000 | 19 | ● | ZE-8359-206 |
| 250 | 6 | 89 | 106,4 | 76 | 133,4 | 3500 | 32 | ● | ZE-8359-256 |
| 250 | 8 | 89 | 139,7 | 76 | 171,4 | 3500 | 32 | ● | ZE-8359-258 |
| 315 | 6 | 96,2 | 106,4 | 103 | 133,4 | 2800 | 51 | ● | ZE-8359-316 |
| 315 | 8 | 96,2 | 139,7 | 103 | 171,4 | 2800 | 51 | ● | ZE-8359-318 |
| 315 | 11 | 140 | 196,9 | 103 | 235 | 2800 | 51 | ● | ZE-8359-311 |
| 400 | 8 | 108 | 139,7 | 136 | 171,4 | 2000 | 101 | ● | ZE-8359-408 |
| 400 | 11 | 108 | 196,9 | 136 | 235 | 2000 | 101 | ● | ZE-8359-411 |
| 500 | 8 | 119 | 139,7 | 136 | 171,4 | 1200 | 150 | ○ | ZE-8359-508 |
| 500 | 11 | 119 | 196,9 | 190 | 235 | 1200 | 150 | ● | ZE-8359-511 |
| 630 | 11 | 129 | 196,9 | 190 | 235 | 1000 | 274 | ○ | ZE-8359-611 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing bolts*






## Kurzkegelaufnahme DIN 55029 (Camlock), geteilte Backen
## *According to DIN 55029 (Camlock), two-piece jaws*

**Stahl / *Steel***

| Ø mm | KK Taper | B1 mm | D mm | E mm | F mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 3 | 64,8 | 54 | 35,5 | 70,6 | 4800 | 5 | ● | ZE-8369-123 |
| 125 | 4 | 64,8 | 63,5 | 35,5 | 82,6 | 4800 | 5 | ● | ZE-8369-124 |
| 160 | 3 | 72,8 | 54 | 42 | 70,6 | 4500 | 9 | ● | ZE-8369-163 |
| 160 | 4 | 72,8 | 63,5 | 42 | 82,6 | 4500 | 9 | ● | ZE-8369-164 |
| 160 | 5 | 72,8 | 82,6 | 42 | 104,8 | 4500 | 9 | ● | ZE-8369-165 |
| 200 | 4 | 82,8 | 63,5 | 55 | 82,6 | 4000 | 19 | ● | ZE-8369-204 |
| 200 | 5 | 82,8 | 82,6 | 55 | 104,8 | 4000 | 19 | ● | ZE-8369-205 |
| 200 | 6 | 82,8 | 106,4 | 55 | 133,4 | 4000 | 19 | ● | ZE-8369-206 |
| 250 | 6 | 92,8 | 106,4 | 76 | 133,4 | 3500 | 32 | ● | ZE-8369-256 |
| 250 | 8 | 92,8 | 139,7 | 76 | 171,4 | 3500 | 32 | ● | ZE-8369-258 |
| 315 | 6 | 101,3 | 106,4 | 103 | 133,4 | 2800 | 51 | ● | ZE-8369-316 |
| 315 | 8 | 101,3 | 139,7 | 103 | 171,4 | 2800 | 51 | ● | ZE-8369-318 |
| 315 | 11 | 145 | 196,9 | 103 | 235 | 2800 | 51 | ● | ZE-8369-311 |
| 400 | 8 | 116,8 | 139,7 | 136 | 171,4 | 2000 | 101 | ● | ZE-8369-408 |
| 400 | 11 | 116,8 | 196,9 | 136 | 235 | 2000 | 101 | ● | ZE-8369-411 |
| 500 | 8 | 129,8 | 139,7 | 136 | 171,4 | 1200 | 150 | ○ | ZE-8369-508 |
| 500 | 11 | 129,8 | 196,9 | 190 | 235 | 1200 | 150 | ○ | ZE-8369-511 |
| 630 | 11 | 140,3 | 196,9 | 190 | 235 | 1000 | 274 | ○ | ZE-8369-611 |

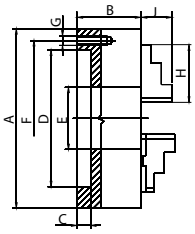
Inkl. je 1 Satz gehärteter Grund- und Umkehraufsatzbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set each of hardened base jaws and reversible top jaws, wrench, fixing bolts*



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Vierbacken-Drehfutter
# *Four-jaw lathe chucks*






## Zylindrische Aufnahme nach DIN 6350, einteilige Backen
## *Centre mount according to DIN 6350, one-piece jaws*

Diese Drehfutter gewährleisten eine gleichmäßige Spannkraft durch zentrisch spannende Backen sowie eine hohe Rundlaufgenauigkeit.

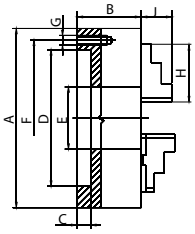
*These lathe chucks guarantee a homogeneous clamping force by self-centering clamping jaws as well as a high concentricity.*

### Guss / *Cast iron*

| A (Ø) mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 50 | 3 | 70 | 20 | 83 | 3xM8 | 42 | 17 | 3500 | 2,8 | ● | ZE-6454-100 |
| 125 | 56 | 4 | 95 | 32 | 108 | 3xM8 | 51 | 20 | 3200 | 5 | ● | ZE-6454-125 |
| 160 | 64 | 4 | 125 | 42 | 140 | 6xM10 | 70 | 32 | 3000 | 10 | ● | ZE-6454-160 |
| 200 | 75 | 4 | 160 | 55 | 176 | 6xM10 | 85 | 29 | 2500 | 17,5 | ● | ZE-6454-200 |
| 250 | 85 | 5 | 200 | 76 | 224 | 6xM12 | 105 | 34 | 2000 | 29 | ● | ZE-6454-250 |
| 315 | 94 | 5 | 260 | 103 | 286 | 6xM16 | 125 | 43 | 1500 | 50 | ● | ZE-6454-315 |
| 400 | 105 | 5 | 330 | 136 | 362 | 6xM16 | 145 | 55 | 1000 | 85 | ● | ZE-6454-400 |
| 500 | 120 | 5 | 420 | 190 | 458 | 6xM16 | 180 | 60 | 700 | 145 | ● | ZE-6454-500 |
| 630 | 135 | 7 | 545 | 252 | 586 | 6xM16 | 225 | 70 | 500 | 250 | ● | ZE-6454-630 |
| 800 | 159 | 20 | 450 | 320 | 368,3 | - | 225 | 70 | 300 | 402 | ○ | ZE-6454-800 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*





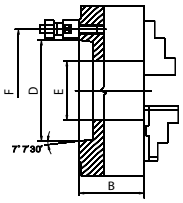

### Stahl / *Steel*

| A (Ø) mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 50 | 3 | 70 | 20 | 83 | 3xM8 | 42 | 17 | 5200 | 2,8 | ● | ZE-8454-100 |
| 125 | 59,5 | 4 | 95 | 35,5 | 108 | 3xM8 | 51 | 20 | 4800 | 5 | ● | ZE-8454-125 |
| 160 | 68 | 4 | 125 | 42 | 140 | 6xM10 | 70 | 32 | 4500 | 10 | ● | ZE-8454-160 |
| 200 | 78 | 4 | 160 | 55 | 176 | 6xM10 | 85 | 29 | 4000 | 17,5 | ● | ZE-8454-200 |
| 250 | 89 | 5 | 200 | 76 | 224 | 6xM12 | 105 | 34 | 3500 | 29 | ● | ZE-8454-250 |
| 315 | 96,2 | 5 | 260 | 103 | 286 | 6xM16 | 125 | 43 | 2800 | 50 | ● | ZE-8454-315 |
| 400 | 108 | 5 | 330 | 136 | 362 | 6xM16 | 145 | 55 | 2000 | 85 | ● | ZE-8454-400 |
| 500 | 119 | 5 | 420 | 190 | 458 | 6xM16 | 180 | 60 | 1200 | 145 | ● | ZE-8454-500 |
| 630 | 129 | 7 | 545 | 252 | 586 | 6xM16 | 225 | 70 | 1000 | 250 | ○ | ZE-8454-630 |
| 800 | 159 | 20 | 450 | 320 | 368,3 | - | 225 | 70 | 300 | 402 | ○ | ZE-8454-800 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*

# Vierbacken-Drehfutter
# *Four-jaw lathe chucks*





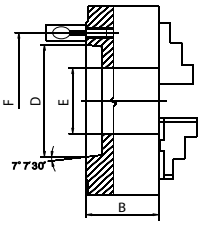

## Kurzkegelaufnahme nach DIN 55027, einteilige Backen
## *According to DIN 55027, one-piece jaws*

### Stahl / *Steel*

| Ø mm | KK Taper | B mm | D mm | E mm | F mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 3 | 59,5 | 54 | 35,5 | 75 | 4800 | 5 | ● | ZE-8457-123 |
| 125 | 4 | 59,5 | 63,5 | 35,5 | 85 | 4800 | 5 | ● | ZE-8457-124 |
| 160 | 4 | 68 | 63,5 | 42 | 85 | 4500 | 9 | ● | ZE-8457-164 |
| 160 | 5 | 68 | 82,6 | 42 | 104,8 | 4500 | 9 | ● | ZE-8457-165 |
| 200 | 4 | 78 | 63,5 | 55 | 85 | 4000 | 19 | ● | ZE-8457-204 |
| 200 | 5 | 78 | 82,6 | 55 | 104,8 | 4000 | 19 | ● | ZE-8457-205 |
| 200 | 6 | 78 | 106,4 | 55 | 133,4 | 4000 | 19 | ● | ZE-8457-206 |
| 250 | 6 | 89 | 106,4 | 76 | 133,4 | 3500 | 32 | ● | ZE-8457-256 |
| 250 | 8 | 89 | 139,7 | 76 | 171,4 | 3500 | 32 | ● | ZE-8457-258 |
| 315 | 6 | 96,2 | 106,4 | 103 | 133,4 | 2800 | 51 | ● | ZE-8457-316 |
| 315 | 8 | 96,2 | 139,7 | 103 | 171,4 | 2800 | 51 | ● | ZE-8457-318 |
| 315 | 11 | 96,2 | 196,9 | 103 | 171,4 | 2800 | 51 | ● | ZE-8457-311 |
| 400 | 8 | 108 | 139,7 | 136 | 171,4 | 2000 | 101 | ● | ZE-8457-408 |
| 400 | 11 | 108 | 196,9 | 136 | 235 | 2000 | 101 | ● | ZE-8457-411 |
| 500 | 8 | 119 | 139,7 | 136 | 171,4 | 1200 | 150 | ○ | ZE-8457-508 |
| 500 | 11 | 119 | 196,9 | 190 | 235 | 1200 | 150 | ○ | ZE-8457-511 |
| 630 | 11 | 129 | 196,9 | 190 | 235 | 1000 | 274 | ○ | ZE-8457-611 |
| 630 | 15 | 129 | 285,5 | 252 | 330,2 | 1000 | 274 | ○ | ZE-8457-615 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*






## Kurzkegelaufn. nach DIN 55029 (Camlock), einteilige Backen
## *According to DIN 55029 (Camlock), one-piece jaws*

### Stahl / *Steel*

| Ø mm | KK Taper | B mm | D mm | E mm | F mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 3 | 59,5 | 54 | 35,5 | 70,6 | 4800 | 5 | ● | ZE-8459-123 |
| 125 | 4 | 59,5 | 63,5 | 35,5 | 82,6 | 4800 | 5 | ● | ZE-8459-124 |
| 160 | 4 | 68 | 63,5 | 42 | 82,6 | 4500 | 9 | ● | ZE-8459-164 |
| 160 | 5 | 68 | 82,6 | 42 | 104,8 | 4500 | 9 | ● | ZE-8459-165 |
| 200 | 4 | 78 | 63,5 | 55 | 82,6 | 4000 | 19 | ● | ZE-8459-204 |
| 200 | 5 | 78 | 82,6 | 55 | 104,8 | 4000 | 19 | ● | ZE-8459-205 |
| 200 | 6 | 78 | 106,4 | 55 | 133,4 | 4000 | 19 | ● | ZE-8459-206 |
| 250 | 6 | 89 | 106,4 | 76 | 133,4 | 3500 | 32 | ● | ZE-8459-256 |
| 250 | 8 | 89 | 139,7 | 76 | 171,4 | 3500 | 32 | ● | ZE-8459-258 |
| 315 | 6 | 96,2 | 106,4 | 103 | 133,4 | 2800 | 51 | ● | ZE-8459-316 |
| 315 | 8 | 96,2 | 139,7 | 103 | 171,4 | 2800 | 51 | ● | ZE-8459-318 |
| 400 | 8 | 108 | 139,7 | 136 | 171,4 | 2000 | 101 | ● | ZE-8459-408 |
| 400 | 11 | 108 | 196,9 | 136 | 235 | 2000 | 101 | ● | ZE-8459-411 |
| 500 | 8 | 119 | 139,7 | 136 | 171,4 | 1200 | 150 | ○ | ZE-8459-508 |
| 500 | 11 | 119 | 196,9 | 190 | 235 | 1200 | 150 | ○ | ZE-8459-511 |
| 630 | 11 | 129 | 196,9 | 190 | 235 | 1000 | 274 | ○ | ZE-8459-611 |
| 630 | 15 | 129 | 285,5 | 252 | 330,2 | 1000 | 274 | ○ | ZE-8459-615 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*



● **Lagerstandard** / ***in stock***
◑ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

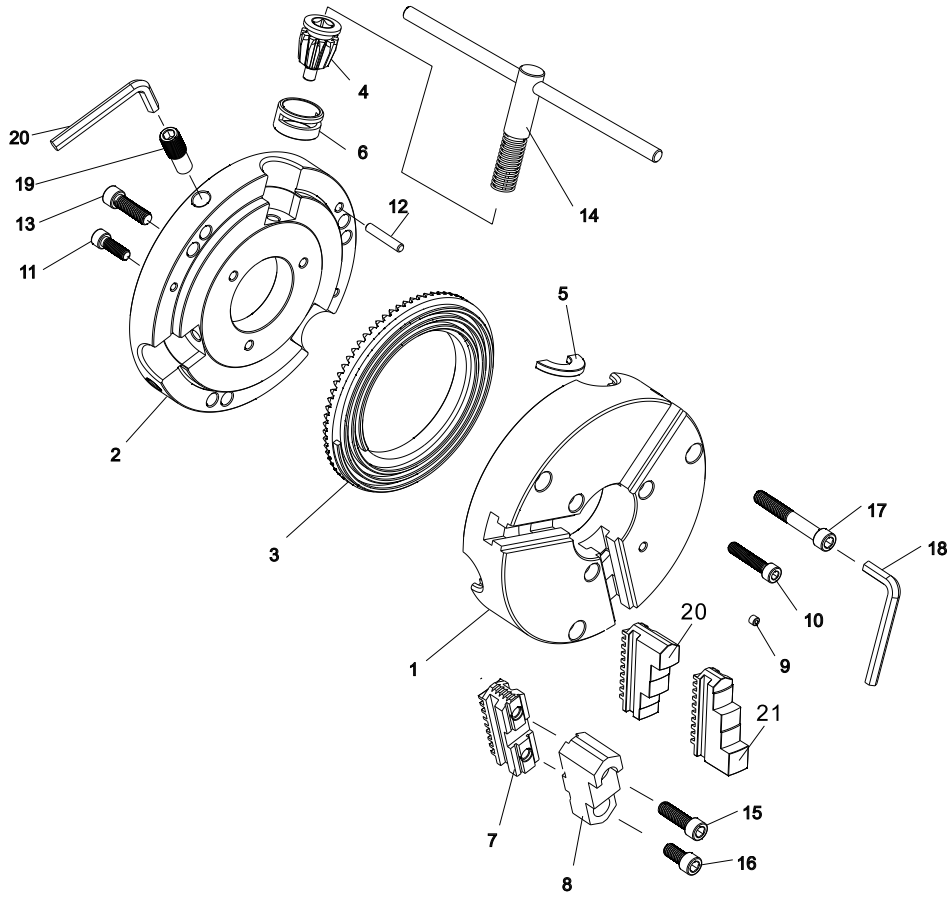
# Drehfutter mit radialer Feineinstellung
## *Lathe chucks with radial fine adjustment*

Drehfutter mit radialer Feineinstellung gewährleisten eine sehr hohe Rundlaufgenauigkeit.

- Einstellgenauigkeit 0,005 mm
- Wiederholgenauigkeit 0,015 mm

*Radial fine adjustment provides high concentricity.*

- *adjusting accuracy within 0,005 mm*
- *repeatability 0,015 mm*




| | | | |
|---|---|---|---|
| 1. | Futterkörper | *1.* | *Chuck body* |
| 2. | Futterdeckel | *2.* | *Back cover* |
| 3. | Planspirale | *3.* | *Scroll plate* |
| 4. | Ritzel | *4.* | *Pinion* |
| 5. | Halbscheibe | *5.* | *Pinion half ring* |
| 6. | Führungsbuchse | *6.* | *Pinion sleeve* |
| 7. | Grundbacke, hart | *7.* | *Hard master jaw* |
| 8. | Aufsatzbacke, hart | *8.* | *Hard top jaw* |
| 9. | Schmiernippel | *9.* | *Grease nipple* |
| 10. | Verschlussschraube | *10.* | *Back cover mounting bolt* |
| 11. | Verschlussschraube | *11.* | *Back cover mounting bolt* |
| 12. | Passstift | *12.* | *Spindle locating pin* |
| 13. | Verschlussschraube | *13.* | *Back cover mounting bolt* |
| 14. | Schlüssel | *14.* | *Chuck wrench* |
| 15. | Schrauben für Backe | *15.* | *Hard top jaw mounting bolt* |
| 16. | Schrauben für Backe | *16.* | *Hard top jaw mounting bolt* |
| 17. | Befestigungsschraube | *17.* | *Chuck mounting bolt* |
| 18. | Sechskant-Schlüssel | *18.* | *Hexagonal keys* |
| 19. | Einstellschraube | *19.* | *Fine adjustment screw* |
| 20. | Sechskant-Schlüssel | *20.* | *Hexagonal keys* |
| 20. | Bohrbacke | *20.* | *Hard solid outside stepped jaw* |
| 21. | Drehbacke | *21.* | *Hard solid inside stepped jaw* |

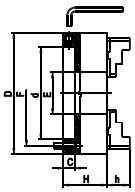
# Dreibacken-Drehfutter mit Feineinstellung
*Three-jaw lathe chucks with fine adjustment*



## Dreibacken-Drehfutter mit radialer Feineinstellung, einteilige Backen
## *Three-jaw lathe chucks with radial fine adjustment, one-piece jaws*

**Stahl / *Steel***

mit radialer Feineinstellung
*Geeignet für die Aufnahme von vorne*
*with fine adjustment*
*Suitable for admission from the front*




| D (Ø) mm | C mm | d mm | E mm | F mm | H mm | h mm | $RPM_{MAX}$ min-1 | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 15 | 55 | 35,5 | 108 | 71,5 | 20 | 3800 | ● | ZE-8353-125FE |
| 160 | 18 | 86 | 42 | 140 | 68 | 32 | 3500 | ● | ZE-8353-160FE |
| 200 | 20 | 110 | 55 | 176 | 78 | 29 | 3100 | ● | ZE-8353-200FE |
| 250 | 20 | 145 | 76 | 224 | 89 | 34 | 2700 | ● | ZE-8353-250FE |
| 315 | 20 | 180 | 103 | 286 | 96,2 | 43 | 2200 | ● | ZE-8353-315FE |
| 400 | 22 | 299,2 | 136 | 171,5 | 123 | 55 | 1800 | ● | ZE-8353-400FE |
| 500 | 30 | 407,7 | 190 | 235 | 144 | 60 | 1200 | ○ | ZE-8353-500FE |
| 630 | 30 | 407,1 | 252 | 330,2 | 150 | 70 | 1000 | ○ | ZE-8353-630FE |

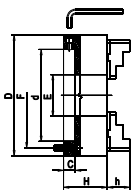
Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*



## Dreibacken-Drehfutter mit radialer Feineinstellung, geteilte Backen
## *Three-jaw lathe chucks with radial fine adjustment, two-piece jaws*

**Stahl / *Steel***

mit radialer Feineinstellung
*Geeignet für die Aufnahme von vorne*
*with fine adjustment*
*Suitable for admission from the front*




| D (Ø) mm | C mm | d mm | E mm | F mm | H mm | h mm | $RPM_{MAX}$ min-1 | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 15 | 55 | 35,5 | 108 | 71,5 | 40 | 3800 | ● | ZE-8363-125FE |
| 160 | 18 | 86 | 42 | 140 | 68 | 43 | 3500 | ● | ZE-8363-160FE |
| 200 | 20 | 110 | 55 | 176 | 78 | 45 | 3100 | ○ | ZE-8363-200FE |
| 250 | 20 | 145 | 76 | 224 | 89 | 53 | 2700 | ● | ZE-8363-250FE |
| 315 | 20 | 180 | 103 | 286 | 96,2 | 57 | 2200 | ○ | ZE-8363-315FE |
| 400 | 22 | 299,2 | 136 | 171,5 | 123 | 67 | 1800 | ○ | ZE-8363-400FE |
| 500 | 30 | 407,7 | 190 | 235 | 144 | 79 | 1200 | ○ | ZE-8363-500FE |
| 630 | 30 | 407,1 | 252 | 330,2 | 150 | 87 | 1000 | ○ | ZE-8363-630FE |

Inkl. je 1 Satz gehärteter Grund- und Umkehraufsatzbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of hardened base jaws and reversible top jaws, wrench, fixing screws*

**Achtung: Spezialflansche für diese Futter auf Anfrage**
***Attention: Special adaptor plates available upon request***



● **Lagerstandard / *in stock***
◑ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Sechsbacken-Drehfutter mit Feineinstellung
## *Six-jaw lathe chucks with fine adjustment*

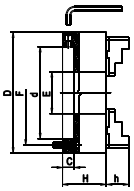
Die Drehfutter mit radialer Feineinstellung sind besonders geeignet zum Spannen von dünnwandigen Rohren und weichen Materialien.

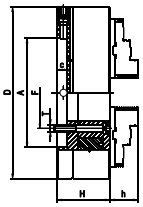
*These lathe chucks with radial fine adjustment are especially suitable for holding thin-sided tubes and soft materials.*

- Einstellgenauigkeit 0,005 mm
- Wiederholgenauigkeit 0,015 mm

*- adjusting accuracy within 0,005 mm*
*- repeatability 0,015 mm*







**Stahl / *Steel***

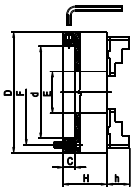
mit radialer Feineinstellung
*Geeignet für die Aufnahme von vorne*
*with fine adjustment*
*Suitable for admission from the front*

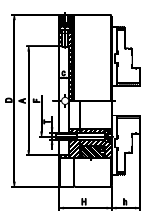
### Sechsbacken-Drehfutter mit radialer Feineinstellung, einteilige Backen
### *Six-jaw lathe chucks with radial fine adjustment, one-piece jaws*

| D (Ø) mm | A mm | C mm | d mm | E mm | F mm | H mm | h mm | RPM$_{MAX}$ min-1 | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 125 | - | 15 | 55 | 35,5 | 108 | 71,5 | 20 | 3000 | ● | ZE-8653-125 |
| 160 | - | 18 | 86 | 42 | 140 | 68 | 32 | 2500 | ● | ZE-8653-160 |
| 200 | - | 20 | 110 | 55 | 176 | 78 | 29 | 2200 | ● | ZE-8653-200 |
| 250 | - | 20 | 145 | 76 | 224 | 89 | 34 | 1900 | ● | ZE-8653-250 |
| 315 | - | 20 | 180 | 103 | 286 | 96,2 | 43 | 1500 | ● | ZE-8653-315 |
| 400 | 299,2 | 22 | - | 136 | 171,5 | 123 | 55 | 1300 | ● | ZE-8653-400 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*







**Stahl / *Steel***

mit radialer Feineinstellung
*Geeignet für die Aufnahme von vorne*
*with fine adjustment*
*Suitable for admission from the front*

### Sechsbacken-Drehfutter mit radialer Feineinstellung, geteilte Backen
### *Six-jaw lathe chucks with radial fine adjustment, two-piece jaws*

| D (Ø) mm | A mm | C mm | d mm | E mm | F mm | H mm | h mm | RPM$_{MAX}$ min-1 | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 125 | - | 15 | 55 | 35,5 | 108 | 71,5 | 40 | 3000 | ● | ZE-8663-125 |
| 160 | - | 18 | 86 | 42 | 140 | 68 | 43 | 2500 | ● | ZE-8663-160 |
| 200 | - | 20 | 110 | 55 | 176 | 78 | 45 | 2200 | ● | ZE-8663-200 |
| 250 | - | 20 | 145 | 76 | 224 | 89 | 53 | 1900 | ● | ZE-8663-250 |
| 315 | - | 20 | 180 | 103 | 286 | 96,2 | 57 | 1500 | ● | ZE-8663-315 |
| 400 | 299,2 | 22 | - | 136 | 171,5 | 123 | 67 | 1300 | ● | ZE-8663-400 |
| 500 | 407,7 | 30 | - | 190 | 235 | 144 | 79 | 800 | ○ | ZE-8663-500 |
| 630 | 407,1 | 30 | - | 252 | 330,2 | 150 | 87 | 700 | ○ | ZE-8663-630 |

*Inkl. je 1 Satz gehärteter Grund- und Umkehraufsatzbacken, Spannschlüssel, Befestigungsschrauben*
*Incl. 1 set each of hardened base jaws and reversible top jaws, wrench, fixing screws*

**Achtung: Spezialflansche für diese Futter auf Anfrage**
***Attention: Special adaptor plates available upon request***

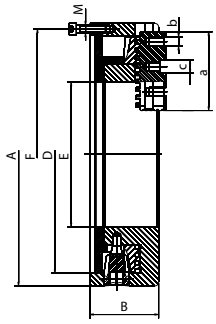
# Dreibacken-Drehfutter mit großer Bohrung
# *Three-jaw chucks with large through-hole*

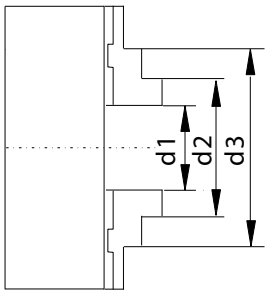


## Zylindrische Aufnahme, geteilte Backen
## *Centre mount, two-piece jaws*

Drehfutter mit großer Durchgangsbohrung für Rohrbearbeitung. Auch geeignet für den Einsatz auf Drehmaschinen, Rundtischen und Schweißvorrichtungen.

*Large through-hole chucks are designed for pipe machining or welding/cut off operations. They can also be used on lathes, rotary tables and welding devices.*




### Spannbereich / *Clamping range*

| Ø mm | d1 mm | | d2 mm | | d3 mm | |
|---|---|---|---|---|---|---|
| | Min. | Max. | Min. | Max. | Min. | Max. |
| 400 | 130 | 270 | 230 | 350 | 300 | 400 |
| 508 | 250 | 380 | 330 | 450 | 385 | 500 |
| 660 | 376 | 470 | 455 | 575 | 515 | 635 |
| 800 | 260 | 566 | 360 | 750 | 420 | 800 |

### Stahl / *Steel*

| A (Ø) mm | a mm | B mm | b mm | c mm | D mm | E mm | F mm | M mm | $RPM_{MAX}$ min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 400 | 120 | 105 | 5/8"-11 | 19,0 | 362 | 220 | 381 | 40xM12 | 650 | ● ZE-3595-400 |
| 508 | 120 | 120 | 3/4"-10 | 19,0 | 462 | 320 | 481,5 | 40xM16 | 460 | ● ZE-3595-508 |
| 660 | 127 | 135 | 3/4"-10 | 19,0 | 580 | 406 | 620 | 40xM16 | 325 | ● ZE-3595-660 |
| 800 | 225 | 151 | 3/4"-10 | 19,0 | 700 | 410 | 460 | 160xM24 | 260 | ○ ZE-3595-800 |

Inkl. je 1 Satz gehärteter Grund- und Umkehraufsatzbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of hardened base jaws and reversible top jaws, wrench, fixing screws*

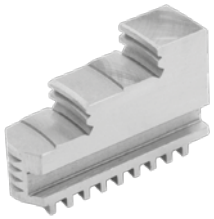
**Ersatzbacken auf Anfrage lieferbar**
***Spare jaws available upon request***

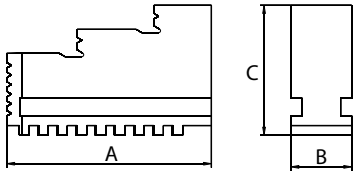


● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Backensätze für Planspiral-Drehfutter
*Jaws for lathe chucks*

## Drehbacken für Planspiral-Drehfutter
## *Internally stepped solid jaws for lathe chucks*

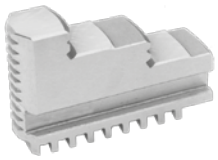


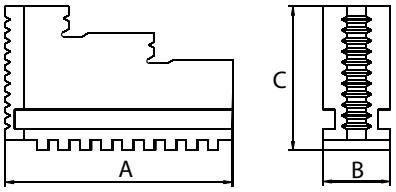



| Für / *for* Ø mm | A mm | B mm | C mm | 3-Ba. / *3-Jaw* Art.-Nr. / *Order no.* | 4-Ba. / *4-Jaw* Art.-Nr. / *Order no.* | 6-Ba. / *6-Jaw* Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 80 | 32 | 11 | 28 | ● ZE-DB35-080 | - | - |
| 100 | 42 | 15 | 32 | ● ZE-DB35-100 | ● ZE-DB36-100 | ○ ZE-DB38-100 |
| 125 | 51 | 20 | 40 | ● ZE-DB35-125 | ● ZE-DB36-125 | ○ ZE-DB38-125 |
| 160 | 70 | 20 | 53 | ● ZE-DB35-160 | ● ZE-DB36-160 | ○ ZE-DB38-160 |
| 200 | 85 | 25 | 54 | ● ZE-DB35-200 | ● ZE-DB36-200 | ○ ZE-DB38-200 |
| 250 | 105 | 28 | 63 | ● ZE-DB35-250 | ● ZE-DB36-250 | ○ ZE-DB38-250 |
| 315 | 125 | 32 | 73 | ● ZE-DB35-315 | ● ZE-DB36-315 | ○ ZE-DB38-315 |
| 400 | 145 | 36 | 92 | ● ZE-DB35-400 | ● ZE-DB36-400 | ○ ZE-DB38-400 |
| 500 | 180 | 40 | 100 | ● ZE-DB35-500 | ● ZE-DB36-500 | ○ ZE-DB38-500 |
| 630/800 | 225 | 50 | 110 | ● ZE-DB35-630/800 | ● ZE-DB36-630/800 | ○ ZE-DB38-630 |

Preis pro Satz / *Price per set*

## Bohrbacken für Planspiral-Drehfutter
## *Externally stepped solid jaws for lathe chucks*





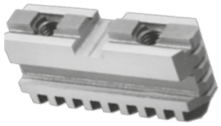

| Für / *for* Ø mm | A mm | B mm | C mm | 3-Ba. / *3-Jaw* Art.-Nr. / *Order no.* | 4-Ba. / *4-Jaw* Art.-Nr. / *Order no.* | 6-Ba. / *6-Jaw* Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 80 | 32 | 11 | 28 | ● ZE-BB35-080 | - | - |
| 100 | 42 | 15 | 32 | ● ZE-BB35-100 | ● ZE-BB36-100 | ○ ZE-BB38-100 |
| 125 | 51 | 20 | 40 | ● ZE-BB35-125 | ● ZE-BB36-125 | ○ ZE-BB38-125 |
| 160 | 70 | 20 | 53 | ● ZE-BB35-160 | ● ZE-BB36-160 | ○ ZE-BB38-160 |
| 200 | 85 | 25 | 54 | ● ZE-BB35-200 | ● ZE-BB36-200 | ○ ZE-BB38-200 |
| 250 | 105 | 28 | 63 | ● ZE-BB35-250 | ● ZE-BB36-250 | ○ ZE-BB38-250 |
| 315 | 125 | 32 | 73 | ● ZE-BB35-315 | ● ZE-BB36-315 | ○ ZE-BB38-315 |
| 400 | 145 | 36 | 92 | ● ZE-BB35-400 | ● ZE-BB36-400 | ○ ZE-BB38-400 |
| 500 | 180 | 40 | 100 | ● ZE-BB35-500 | ● ZE-BB36-500 | ○ ZE-BB38-500 |
| 630/800 | 225 | 50 | 110 | ● ZE-BB35-630/800 | ○ ZE-BB36-630/800 | ○ ZE-BB38-630 |

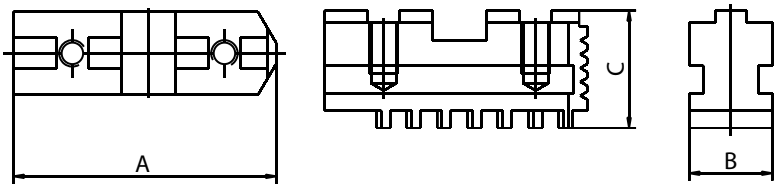
Preis pro Satz / *Price per set*

**Nachträglich bezogene harte Stufenbacken müssen im Futter ausgeschliffen werden**
***Hard jaws bought as spare parts have to be ground on the chuck***

# Backensätze für Planspiral-Drehfutter
*Jaws for lathe chucks*

## Harte Grundbacken für Planspiral-Drehfutter
## *Hard base jaws for lathe chucks*



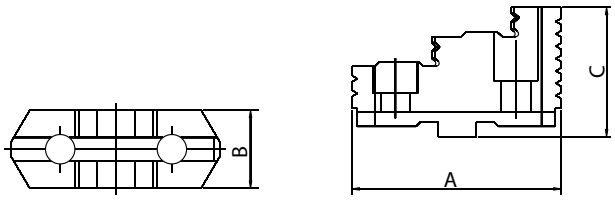



| Für / *for* Ø mm | A mm | B mm | C mm | 2-Ba. / *2-Jaw* Art.-Nr. / *Order no.* | 3-Ba. / *3-Jaw* Art.-Nr. / *Order no.* | 4-Ba. / *4-Jaw* Art.-Nr. / *Order no.* | 6-Ba. / *6-Jaw* Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 125 | 54 | 20 | 28 | - | ZE-GB35-125 | ZE-GB36-125 | ZE-GB38-125 |
| 160 | 65 | 20 | 29 | ZE-GB31-160 | ZE-GB35-160 | ZE-GB36-160 | ZE-GB38-160 |
| 200 | 79 | 25 | 33 | ZE-GB31-200 | ZE-GB35-200 | ZE-GB36-200 | ZE-GB38-200 |
| 250 | 92 | 28 | 36 | ZE-GB31-250 | ZE-GB35-250 | ZE-GB36-250 | ZE-GB38-250 |
| 315 | 110 | 32 | 40 | ZE-GB31-315 | ZE-GB35-315 | ZE-GB36-315 | ZE-GB38-315 |
| 400 | 130 | 36 | 49 | ZE-GB31-400 | ZE-GB35-400 | ZE-GB36-400 | ZE-GB38-400 |
| 500 | 166 | 40 | 54 | - | ZE-GB35-500 | ZE-GB36-500 | ZE-GB38-500 |
| 630 | 210 | 50 | 54,5 | - | ZE-GB35-630 | ZE-GB36-630 | ZE-GB38-630 |
| 800 | 225 | 50 | 54,5 | - | ZE-GB35-800 | ZE-GB36-800 | - |

Preis pro Satz / *Price per set*

## Harte, umkehrbare Aufsatzbacken für Planspiral-Drehfutter
## *Hard reversible top jaws for lathe chucks*






| Für / *for* Ø mm | A mm | B mm | C mm | 3-Ba. / *3-Jaw* Art.-Nr. / *Order no.* | 4-Ba. / *4-Jaw* Art.-Nr. / *Order no.* | 6-Ba. / *6-Jaw* Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 125 | 56 | 22 | 38,5 | ZE-HAB35-125 | ZE-HAB36-125 | ZE-HAB38-125 |
| 160 | 67 | 25 | 41,5 | ZE-HAB35-160 | ZE-HAB36-160 | ZE-HAB38-160 |
| 200 | 80 | 27 | 43,5 | ZE-HAB35-200 | ZE-HAB36-200 | ZE-HAB38-200 |
| 250 | 95 | 32,5 | 51,5 | ZE-HAB35-250 | ZE-HAB36-250 | ZE-HAB38-250 |
| 315 | 110 | 37 | 55 | ZE-HAB35-315 | ZE-HAB36-315 | ZE-HAB38-315 |
| 400 | 127 | 42 | 64,5 | ZE-HAB35-400 | ZE-HAB36-400 | ZE-HAB38-400 |
| 500 | 127 | 42 | 74,5 | ZE-HAB35-500 | ZE-HAB36-500 | ZE-HAB38-500 |
| 630/800 | 127 | 52 | 82 | ZE-HAB35-630/800 | ZE-HAB36-630/800 | ZE-HAB38-630 |

Preis pro Satz / *Price per set*

**Nachträglich bezogene harte Stufenbacken müssen im Futter ausgeschliffen werden**
***Hard jaws bought as spare parts have to be ground on the chuck***

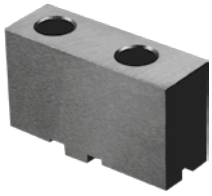


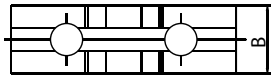
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

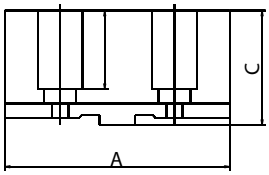
# Backensätze für Planspiral-Drehfutter
*Jaws for lathe chucks*

## Weiche Aufsatzbacken für Planspiral-Drehfutter
## *Soft top jaws for lathe chucks*

- Material C45 - *material C45*





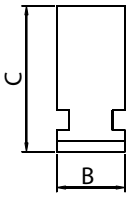

| Für / *for* Ø mm | A mm | B mm | C mm | 2-Ba. / *2-Jaw* Art.-Nr. / *Order no.* | 3-Ba. / *3-Jaw* Art.-Nr. / *Order no.* | 4-Ba. / *4-Jaw* Art.-Nr. / *Order no.* | 6-Ba. / *6-Jaw* Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 125 | 64 | 22 | 38,5 | - | ZE-WAB35-125 | ZE-WAB36-125 | ZE-WAB38-125 |
| 160 | 78 | 25 | 41,5 | ZE-WAB31-160 | ZE-WAB35-160 | ZE-WAB36-160 | ZE-WAB38-160 |
| 200 | 90 | 27 | 43,5 | ZE-WAB31-200 | ZE-WAB35-200 | ZE-WAB36-200 | ZE-WAB38-200 |
| 250 | 106 | 32 | 51,5 | ZE-WAB31-250 | ZE-WAB35-250 | ZE-WAB36-250 | ZE-WAB38-250 |
| 315 | 120 | 37 | 55 | ZE-WAB31-315 | ZE-WAB35-315 | ZE-WAB36-315 | ZE-WAB38-315 |
| 400 | 140 | 42 | 64,5 | ZE-WAB31-400 | ZE-WAB35-400 | ZE-WAB36-400 | ZE-WAB38-400 |
| 500 | 140 | 42 | 74,5 | - | ZE-WAB35-500 | ZE-WAB36-500 | ZE-WAB38-500 |
| 630/800 | 160 | 50 | 80 | - | ZE-WAB35-630/800 | ZE-WAB36-630/800 | ZE-WAB38-630 |

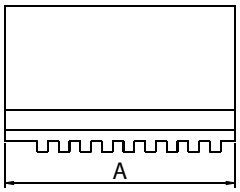
Preis pro Satz / *Price per set*

## Weiche Monoblockbacken für Planspiral-Drehfutter
## *Soft solid jaws for lathe chucks*

- Material C45 - *material C45*






| Für / *for* Ø mm | A mm | B mm | C mm | 3-Ba. / *3-Jaw* Art.-Nr. / *Order no.* | 4-Ba. / *4-Jaw* Art.-Nr. / *Order no.* | 6-Ba. / *6-Jaw* Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 80 | 32 | 11 | 28 | ZE-MB35-080 | - | - |
| 100 | 42 | 15 * | 32 | ZE-MB35-100 | ZE-MB36-100 | ZE-MB38-100* |
| 125 | 51 | 20 ** | 40 | ZE-MB35-125 | ZE-MB36-125 | ZE-MB38-125** |
| 160 | 70 | 20 | 53 | ZE-MB35-160 | ZE-MB36-160 | ZE-MB38-160 |
| 200 | 85 | 25 | 54 | ZE-MB35-200 | ZE-MB36-200 | ZE-MB38-200 |
| 250 | 105 | 28 | 63 | ZE-MB35-250 | ZE-MB36-250 | ZE-MB38-250 |
| 315 | 125 | 32 | 73 | ZE-MB35-315 | ZE-MB36-315 | ZE-MB38-315 |
| 400 | 145 | 36 | 92 | ZE-MB35-400 | ZE-MB36-400 | ZE-MB38-400 |
| 500 | 180 | 40 | 100 | ZE-MB35-500 | ZE-MB36-500 | - |
| 630/800 | 225 | 50 | 110 | ZE-MB35-630/800 | ZE-MB36-630/800 | - |

Preis pro Satz / *Price per set*

* ZE-MB38-100: abweichendes Maß B = 11 / * *Differing dimension B = 11*
** ZE-MB38-125: abweichendes Maß B = 15 / ** *Differing dimension B = 15*

# Zubehör und Ersatzteile für Planspiral-Drehfutter
*Accessories and spare parts for lathe chucks*



## Planspiralringe
## *Scroll plates*

| Für / *for* Ø mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 80 | ● | ZE-PLR32-080 |
| 100 | ● | ZE-PLR32-100 |
| 125 | ● | ZE-PLR32-125 |
| 160 | ● | ZE-PLR32-160 |
| 200 | ● | ZE-PLR32-200 |
| 250 | ● | ZE-PLR32-250 |
| 315 | ● | ZE-PLR32-315 |
| 400 | ● | ZE-PLR32-400 |
| 500 | ○ | ZE-PLR32-500 |
| 630 | ○ | ZE-PLR32-630 |
| 800 | ○ | ZE-PLR32-800 |

Preis pro Stück / *Price per piece*



## Ritzel für Gussfutter
## *Pinions for cast iron chucks*

| Für / *for* Ø mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 80 | ● | ZE-RI32-080 |
| 100 | ● | ZE-RI32-100 |
| 125 | ● | ZE-RI32-125 |
| 160 | ● | ZE-RI32-160 |
| 200 | ● | ZE-RI32-200 |
| 250 | ● | ZE-RI32-250 |
| 315 | ● | ZE-RI32-315 |
| 400 | ● | ZE-RI32-400 |
| 500 | ● | ZE-RI32-500 |
| 630 | ● | ZE-RI32-630 |
| 800 | ● | ZE-RI32-800 |

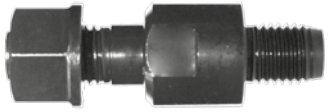
Preis pro Stück / *Price per piece*



## Ritzel für Stahlfutter
## *Pinions for steel chucks*

| Für / *for* Ø mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 125 | ● | ZE-RI35-125 |
| 160 | ● | ZE-RI35-160 |
| 200 | ● | ZE-RI35-200 |
| 250 | ● | ZE-RI35-250 |
| 315 | ● | ZE-RI35-315 |
| 400 | ● | ZE-RI35-400 |
| 500 | ○ | ZE-RI35-500 |
| 630 | ○ | ZE-RI35-630 |
| 800 | ○ | ZE-RI35-800 |

Preis pro Stück / *Price per piece*



## Ersatzbolzen, DIN 55027
## *Studs, DIN 55027*

| KK / *Taper* | Maß / *Measure* | Ben. Stückzahl / *Required quantity* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 3 | M10 x 34 | 3 | ● | ZE-SB-3 |
| 4 | M10 x 39 | 3 | ● | ZE-SB-4 |
| 5 | M10 x 43 | 4 | ● | ZE-SB-5 |
| 6 | M12 x 50 | 4 | ● | ZE-SB-6 |
| 8 | M16 x 60 | 4 | ● | ZE-SB-8 |
| 11 | M20 x 75 | 6 | ● | ZE-SB-11 |
| 15 | M24 x 90 | 6 | ● | ZE-SB-15 |

Preis pro Stück / *Price per piece*



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Zubehör und Ersatzteile für Planspiral-Drehfutter
*Accessories and spare parts for lathe chucks*



## Ersatzbolzen, DIN 55029 (Camlock)
## *Studs, DIN 55029 (Camlock)*

| KK / *Taper* | Maß / *Measure* | Ben. Stückzahl / *Required quantity* | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 3 | M10 x 1 | 3 | ZE-CB-3 |
| 4 | M10 x 1 | 3 | ZE-CB-4 |
| 5 | M12 x 1 | 6 | ZE-CB-5 |
| 6 | M16 x 1,5 | 6 | ZE-CB-6 |
| 8 | M20 x 1,5 | 6 | ZE-CB-8 |
| 11 | M22 x 1,5 | 6 | ZE-CB-11 |
| 15 | M24 x 1,5 | 6 | ZE-CB-15 |

Preis pro Stück / *Price per piece*



## Schlüssel für Drehfutter
## *Wrenches for lathe chucks*

| Für / *for* Ø mm | □ | Art.-Nr. / *Order no.* |
|---|---|---|
| 80 | 6 | ZE-SCH-080 |
| 100/125 | 9 | ZE-SCH-100/125 |
| 160/200 | 11 | ZE-SCH-160/200 |
| 250/315 | 14 | ZE-SCH-250/315 |
| 400 | 17 | ZE-SCH-400 |
| 500/630 | 19 | ZE-SCH-500/630 |
| 800 | 19 | ZE-SCH-800 |

Preis pro Stück / *Price per piece*



## Schraubensätze zu Grundbacken
## *Screw sets for base jaws*

| Ø / *Backen* Ø / *jaws* | Schrauben / *Screws* | Art.-Nr. / *Order no.* |
|---|---|---|
| 125/*3* | 3 x M8x25 / 6 x M8x20 | ZE-SATZ-125/3 |
| 125/*4* | 4 x M8x25 / 8 x M8x20 | ZE-SATZ-125/4 |
| 160/*3* | 3 x M10x30 / 6 x M10x20 | ZE-SATZ-160/3 |
| 160/*4* | 4 x M10x30 / 8 x M10x20 | ZE-SATZ-160/4 |
| 200/*3* | 3 x M10x30 / 6 x M10x20 | ZE-SATZ-200/3 |
| 200/*4* | 4 x M10x30 / 8 x M10x20 | ZE-SATZ-200/4 |
| 250/*3* | 3 x M12x40 / 6 x M12x25 | ZE-SATZ-250/3 |
| 250/*4* | 4 x M12x40 / 8 x M12x25 | ZE-SATZ-250/4 |
| 315/*3* | 3 x M12x40 / 6 x M12x25 | ZE-SATZ-315/3 |
| 315/*4* | 4 x M12x40 / 8 x M12x25 | ZE-SATZ-315/4 |
| 400/*3* | 3 x M16x45 / 6 x M16x30 | ZE-SATZ-400/3 |
| 400/*4* | 4 x M16x45 / 8 x M16x30 | ZE-SATZ-400/4 |

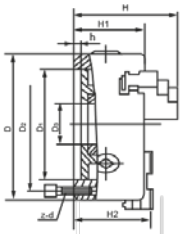
Für weiche und harte Aufsatzbacken / *For soft and hard top jaws*

**Für Sechsbacken-Planspiraldrehfutter werden jeweils 2 Schraubensätze benötigt**
***For six-jaw lathe chucks, please order 2 sets of screws for three-jaw lathe chucks***

# Planspiral-Drehfutter BASIC
*Lathe chucks BASIC*



*Guss / Cast iron*



## Dreibacken-Drehfutter BASIC
## *Three-jaw lathe chucks BASIC*

NEU *NEW* !

### Zylindrische Aufnahme, einteilige Backen
### *Centre mount, one-piece jaws*

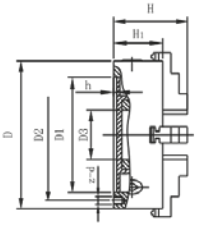
- zentrisch spannend - *self-centering*

| D (Ø) mm | D1 mm | D2 mm | D3 mm | H mm | H1 mm | h mm | z-d mm | Rundlauf / *Runout* Ø | $RPM_{MAX}$ $min^{-1}$ | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 55 | 66 | 16 | 66,5 | 50 | 4 | 3-M6 | 0,08 | 4000 | 2 | ● | WAT-D80/3-ZGE |
| 100 | 72 | 84 | 22 | 74,5 | 55 | 3 | 3-M8 | 0,08 | 3500 | 3 | ● | WAT-D100/3-ZGE |
| 125 | 95 | 108 | 30 | 84,5 | 58 | 4 | 3-M8 | 0,08 | 3000 | 5 | ● | WAT-D125/3-ZGE |
| 160 | 130 | 142 | 45 | 94 | 65 | 5 | 3-M8 | 0,08 | 2500 | 9 | ● | WAT-D160/3-ZGE |
| 200 | 165 | 180 | 65 | 109 | 75 | 5 | 3-M10 | 0,10 | 2000 | 16 | ● | WAT-D200/3-ZGE |
| 250 | 206 | 226 | 80 | 120 | 80 | 5 | 3-M12 | 0,10 | 1600 | 28 | ● | WAT-D250/3-ZGE |
| 315 | 260 | 285 | 100 | 147,5 | 90 | 6 | 3-M16 | 0,12 | 1200 | 47 | ● | WAT-D315/3-ZGE |
| 400 | 340 | 368 | 130 | 173.5 | 100 | 6 | 3-M16 | 0,12 | 1000 | 73 | ● | WAT-D400/3-ZGE |
| 500 | 440 | 465 | 210 | 202 | 115 | 6 | 6-M16 | 0,16 | 800 | 121 | ● | WAT-D500/3-ZGE |
| 630 | 545 | 586 | 252 | 220,5 | 135 | 7 | 6-M16 | 0,16 | 800 | 200 | ● | WAT-D630/3-ZGE |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*



*Guss / Cast iron*



## Vierbacken-Drehfutter BASIC
## *Four-jaw lathe chucks BASIC*

NEU *NEW* !

### Zylindrische Aufnahme, einteilige Backen
### *Centre mount, one-piece jaws*

- zentrisch spannend - *self-centering*

| D (Ø) mm | D1 mm | D2 mm | D3 mm | H mm | H1 mm | h mm | z-d mm | Rundlauf / *Runout* Ø | $RPM_{MAX}$ $min^{-1}$ | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 55 | 66 | 16 | 66,5 | 50 | 4 | 3-M6 | 0,08 | 4000 | 2 | ● | WAT-D80/4-ZGE |
| 100 | 72 | 84 | 22 | 74,5 | 53,5 | 3 | 3-M8 | 0,08 | 3500 | 3 | ● | WAT-D100/4-ZGE |
| 125 | 95 | 108 | 30 | 84,5 | 58 | 4 | 3-M8 | 0,08 | 3000 | 5 | ● | WAT-D125/4-ZGE |
| 160 | 130 | 142 | 45 | 94 | 65 | 5 | 3-M8 | 0,08 | 2500 | 9 | ● | WAT-D160/4-ZGE |
| 200 | 165 | 180 | 65 | 109 | 75 | 5 | 3-M10 | 0,10 | 2000 | 16 | ● | WAT-D200/4-ZGE |
| 250 | 206 | 226 | 80 | 120 | 80 | 5 | 3-M12 | 0,10 | 1600 | 28 | ● | WAT-D250/4-ZGE |
| 315 | 260 | 285 | 100 | 147,5 | 90 | 6 | 3-M16 | 0,12 | 1200 | 47 | ● | WAT-D315/4-ZGE |
| 400 | 340 | 368 | 130 | 173,5 | 100 | 6 | 3-M16 | 0,12 | 1000 | 85 | ● | WAT-D400/4-ZGE |
| 500 | 440 | 465 | 210 | 202 | 115 | 6 | 6-M16 | 0,16 | 800 | 119 | ● | WAT-D500/4-ZGE |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*

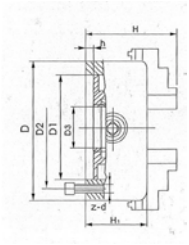


● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Planspiral-Drehfutter BASIC
*Lathe chucks BASIC*



*Guss / Cast iron*




## Sechsbacken-Drehfutter BASIC
## *Six-jaw lathe chucks BASIC*

NEU *NEW* !

### Zylindrische Aufnahme, einteilige Backen
### *Centre mount, one-piece jaws*

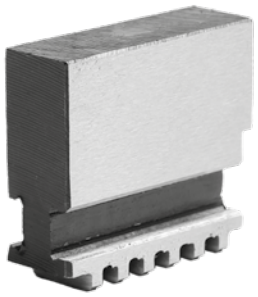
- zentrisch spannend
- *self-centering*

| D (Ø) mm | D1 mm | D2 mm | D3 mm | H mm | H1 mm | h mm | z-d mm | Rundlauf / *Runout* Ø | $RPM_{MAX}$ $min^{-1}$ | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 72 | 84 | 26 | 74,5 | 55 | 3 | 3-M6 | 0,08 | 3500 | 3 | ● | WAT-D100/6-ZGE |
| 130 | 100 | 115 | 35 | 86,5 | 58 | 5 | 3-M8 | 0,08 | 3000 | 6 | ● | WAT-D130/6-ZGE |
| 165 | 130 | 145 | 45 | 94 | 65 | 5 | 3-M8 | 0,08 | 2500 | 9 | ● | WAT-D165/6-ZGE |
| 200 | 165 | 180 | 65 | 109 | 75 | 6 | 3-M10 | 0,10 | 2000 | 16 | ● | WAT-D200/6-ZGE |
| 252 | 206 | 226 | 80 | 120 | 80 | 6 | 3-M12 | 0,10 | 1600 | 26 | ● | WAT-D252/6-ZGE |

Inkl. je 1 Satz Dreh- und Bohrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set each of solid jaws internally / externally stepped, wrench, fixing screws*

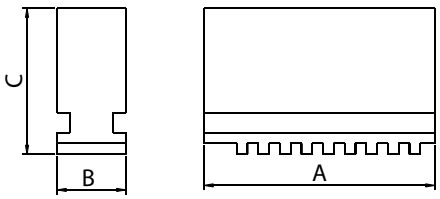
# Backensätze für Planspiral-Drehfutter BASIC
*Jaws for lathe chucks BASIC*

NEU *NEW* !



### Weiche Monoblockbacken für Planspiral-Drehfutter BASIC
### *Soft solid jaws for lathe chucks BASIC*

- Material C45
- *material C45*




| Für / *for* Ø mm | A mm | B mm | C mm | 3-Ba. / *3-Jaw* Art.-Nr. / *Order no.* | | 4-Ba. / *4-Jaw* Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|
| 80 | 32 | 12 | 33 | ● | D80/3-MB | | D80/4-MB |
| 100 | 42 | 15 | 38 | ● | D100/3-MB | ● | D100/4-MB ○ |
| 125 | 56 | 16 | 45 | ● | D125/3-MB | ● | D125/4-MB ● |
| 160 | 70 | 18,5 | 54 | ● | D160/3-MB | ● | D160/4-MB ● |
| 200 | 85 | 22 | 61 | ● | D200/3-MB | ● | D200/4-MB ● |
| 250 | 105 | 27 | 69 | ● | D250/3-MB | ● | D250/4-MB ● |
| 315 | 130 | 36 | 91 | ● | D315/3-MB | ● | D315/4-MB ● |
| 400 | 138 | 36 | 91 | ● | D400/3-MB | ● | D400/4-MB ● |

Preis pro Satz / *Price per set*

# Keilstangen-Drehfutter
# *Wedge bar lathe chucks*

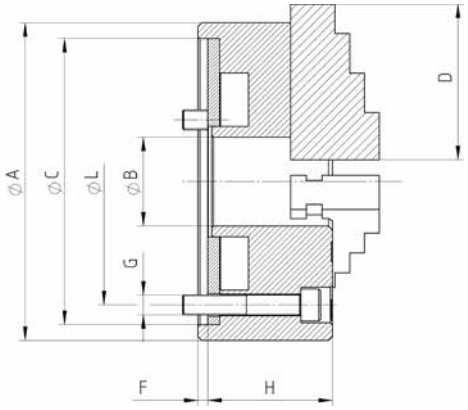
## Zylindrische Aufnahme, einteilige Backen
## *Centre mount, one-piece jaws*

FORKARDT

Mit Backen-Schnellwechselsystem. Das Drehfutter besitzt eine hohe Spannkraft bei geringem Kraftaufwand und einen präzisen Rundlauf. Lieferung Lieferung inkl. harter Stufenbacken.

*With quick-change jaw system. This chuck guarantees high clamping power at minimum force requirement and a high concentricity. Supplied with hard reversible stepped jaws.*






**Stahl / *Steel***

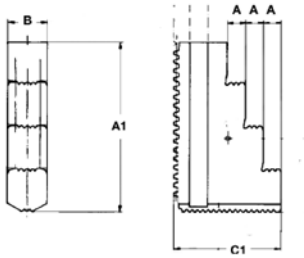
| Typ / *Type* | A (Ø) mm | B mm | C mm | D mm | F mm | G | H mm | L mm | Max. Spannkraft / *gripping force* daN | Max. Drehzahl / *speed* min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 125 | 35 | 115 | 47 | 4 | 3xM8 | 46,5 | 100 | 3700 | 6000 | 3,7 | ◗ | ZE-KS320-125 |
| 160 | 161 | 45 | 145 | 74 | 5 | 3xM10 | 63 | 125 | 8000 | 5200 | 8,6 | ◗ | ZE-KS320-160 |
| 200 | 206 | 55 | 185 | 90 | 5 | 3xM12 | 81,3 | 160 | 12000 | 4600 | 18,5 | ◗ | ZE-KS320-200 |
| 250 | 255 | 75 | 235 | 110 | 6 | 3xM16 | 92 | 200 | 17500 | 4000 | 32,5 | ◗ | ZE-KS320-250 |
| 315 | 318 | 100 | 300 | 125 | 6 | 3xM20 | 111 | 250 | 21500 | 3200 | 62 | ◗ | ZE-KS320-315 |
| 400 | 400 | 130 | 380 | 160 | 6 | 3xM24 | 118 | 315 | 23400 | 2200 | 102 | ○ | ZE-KS320-400 |
| 500 | 500 | 180 | 460 | 160 | 6 | 3xM24 | 119 | 400 | 23400 | 1500 | 159 | ○ | ZE-KS320-500 |
| 630 | 630 | 270 | 580 | 230 | 6 | 3xM24 | 143 | 520 | 28000 | 1000 | 293 | ○ | ZE-KS320-630 |

Inkl. je 1 Satz harter Stufenbacken, Kombi-Spannschlüssel, Befestigungsschrauben
*Incl. 1 set of hard stepped jaws, wrench, fixing screws*

Auf Anfrage auch mit geteilten Backen lieferbar / *Also available with two-piece jaws upon request*

# Backen für Keilstangen-Drehfutter
# *Jaws for wedge bar lathe chucks*






## Harte, gestufte Umkehrbacke, Stück
## *Hard reversible stepped jaw, piece*

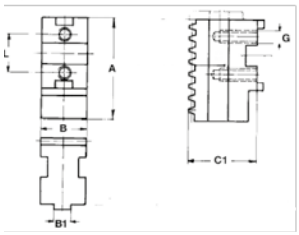
| Für / *for* Ø mm | A mm | A1 mm | B mm | C1 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 125 | 5 | 50 | 14 | 33,5 | ○ | ZE-KHUB3-125 |
| 160 | 7,5 | 79 | 20 | 45 | ○ | ZE-KHUB3-160 |
| 200 | 10 | 94 | 22 | 80 | ○ | ZE-KHUB3-200 |
| 250 | 14 | 115 | 26 | 70 | ○ | ZE-KHUB3-250 |
| 315 | 15 | 129 | 32 | 81 | ○ | ZE-KHUB3-315 |
| 400 | 20 | 167 | 45 | 93 | ○ | ZE-KHUB3-400 |



○ **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Backen für Keilstangen-Drehfutter
*Jaws for wedge bar lathe chucks*



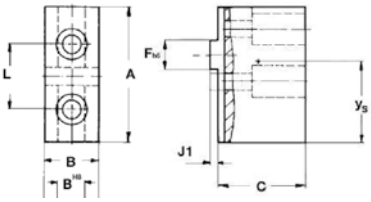



## Harte Grundbacke, Stück
## *Hard base jaw, piece*

| Für / *for* Ø mm | A mm | B mm | B1 mm | C1 mm | G mm | L mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 125* | 47 | 14 | 5 | 19,5 | M6 | 20 | ○ | ZE-KGB3-125 |
| 160 | 74 | 20 | 8 | 27 | M8 x 1 | 32 | ○ | ZE-KGB3-160 |
| 200 | 90 | 22 | 10 | 32 | M8 x 1 | 40 | ○ | ZE-KGB3-200 |
| 250 | 110 | 26 | 12 | 37 | M12 x 1,5 | 40 | ○ | ZE-KGB3-250 |
| 315 | 125 | 32 | 12 | 43 | M12 x 1,5 | 54 | ○ | ZE-KGB3-315 |
| 400 | 160 | 45 | 18 | 51 | M16 x 1,5 | 60 | ○ | ZE-KGB3-400 |
| 500 | 200 | 55 | 18 | 58 | M16 x 1,5 | 76 | ○ | ZE-KGB3-500 |
| 630 | 230 | 65 | 24 | 58 | M20 | 82 | ○ | ZE-KGB3-630 |

* abweichende Zeichung / * *differing drawing*



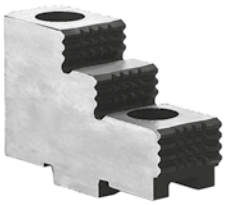


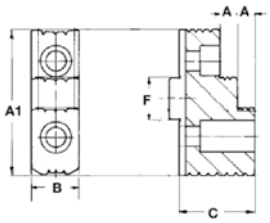

## Weiche Aufsatzbacke, ungestuft, Stück
## *Soft top jaw, piece*

- Material C45 - *material C45*

| Für / *for* Ø mm | A mm | B mm | C mm | F h6 mm | L mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 125* | 55 | 20 | 27,5 | 5 | 20 | ○ | ZE-KWAB3-125 |
| 160 | 85 | 20 | 35,5 | 18 | 32 | ○ | ZE-KWAB3-160 |
| 200 | 105 | 25 | 40 | 20 | 40 | ○ | ZE-KWAB3-200 |
| 250 | 125 | 30 | 55 | 20 | 40 | ○ | ZE-KWAB3-250 |
| 315 | 145 | 50 | 54 | 26 | 54 | ○ | ZE-KWAB3-315 |
| 400 | 180 | 50 | 80 | 30 | 60 | ○ | ZE-KWAB3-400 |
| 500 | 220 | 60 | 90 | 40 | 76 | ○ | ZE-KWAB3-500 |
| 630 | 260 | 65 | 110 | 40 | 82 | ○ | ZE-KWAB3-630 |

* abweichende Zeichung / * *differing drawing*

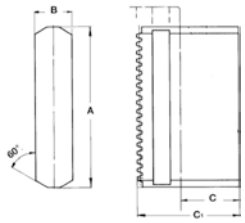





## Harte Aufsatzbacke, umkehrbar, Stück
## *Hard reversible top jaw, piece*

| Für / *for* Ø mm | A mm | A1 mm | B mm | C mm | F h6 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 160 | 7,5 | 63 | 20 | 32,5 | 18 | ○ | ZE-KHAB3-160 |
| 200 | 10 | 72 | 22 | 38 | 20 | ○ | ZE-KHAB3-200 |
| 250 | 14 | 90 | 32 | 50 | 20 | ○ | ZE-KHAB3-250 |
| 315 | 15 | 104 | 36 | 56 | 26 | ○ | ZE-KHAB3-315 |
| 400 | 20 | 130 | 45 | 75 | 30 | ○ | ZE-KHAB3-400 |
| 500 | 20 | 130 | 45 | 75 | 30 | ○ | ZE-KHAB3-500 |
| 630 | 30 | 185 | 65 | 97 | 40 | ○ | ZE-KHAB3-630 |



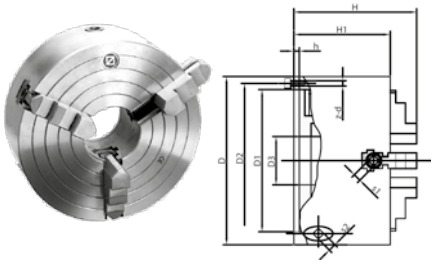



## Weiche Monoblockbacke, Stück
## *Soft solid jaw, piece*

- *Material C45* - *material C45*

| Für / *for* Ø mm | A mm | B mm | C mm | C1 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 160 | 79 | 20 | 24 | 45 | ○ | ZE-KMB3-160 |
| 200 | 94 | 22 | 35 | 60 | ○ | ZE-KMB3-200 |
| 250 | 115 | 26 | 40 | 70 | ○ | ZE-KMB3-250 |
| 315 | 130 | 32 | 46 | 81 | ○ | ZE-KMB3-315 |
| 400 | 176 | 45 | 52 | 93 | ○ | ZE-KMB3-400 |

# Kombinierte Drehfutter Wescott
# *Combined lathe chucks Wescott*



## Dreibacken-Drehfutter Wescott, zylindrische Aufnahme
## *Three-jaw lathe chucks Wescott, centre mount*

Backen zentrisch spannend und einzeln verstellbar. Das Drehfutter ist besonders geeignet zum Spannen von unregelmäßig geformten Werkstücken.

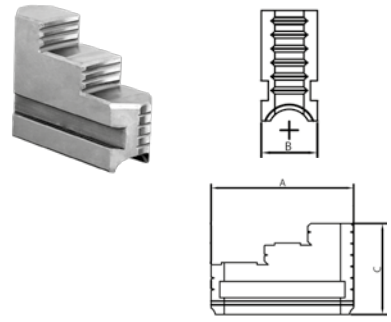
*Self-centering and individually adjustable jaws. This lathe chuck is especially suitable for holding irregularly shaped work pieces.*

**Guss / *Cast iron***

| D (Ø) mm | D1 mm | D2 mm | D3 mm | H1 mm | H mm | h mm | S1 mm | S2 mm | z-d mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 130 | 142 | 42 | 87 | 115 | 5 | 10 | 8 | 6-M8 | ZE-WG310-160 |
| 200 | 165 | 180 | 65 | 97 | 127 | 5 | 12 | 10 | 6-M10 | ZE-WG310-200 |
| 250 | 206 | 226 | 80 | 102 | 142 | 5 | 12 | 10 | 6-M12 | ZE-WG310-250 |
| 325 | 272 | 296 | 100 | 120 | 163 | 6 | 13 | 12 | 6-M16 | ZE-WG310-325 |

Inkl. je 1 Satz harter Umkehrbacken, Kombi-Spannschlüssel, Befestigungsschrauben
*Incl. 1 set of hardened reversible jaws, wrench, fixing screws*

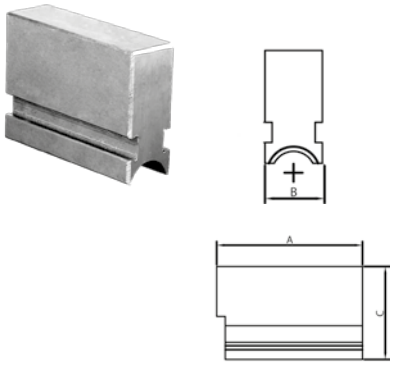
# Backensätze für Dreibacken-Drehfutter Wescott
# *Jaws for three-jaw lathe chucks Wescott*



## Harte, gestufte Umkehrbacken
## *Hard reversible, stepped jaws*

| Für / *for* Ø mm | A mm | B mm | C mm | Art.-Nr./ *Order no.* |
|---|---|---|---|---|
| 160 | 61 | 20 | 52 | ZE-WHUB3-160 |
| 200 | 75 | 25 | 57 | ZE-WHUB3-200 |
| 250 | 90 | 27 | 68 | ZE-WHUB3-250 |
| 325 | 110 | 34 | 79 | ZE-WHUB3-325 |

Preis pro Satz / *Price per set*



## Weiche Monoblockbacken
## *Soft solid jaws*

- Material 20 MnCr5
- *material 20 MnCr5*

| Für / *for* Ø mm | A mm | B mm | C mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 160 | 61 | 20 | 52 | ZE-WMB3-160 |
| 200 | 75 | 25 | 57 | ZE-WMB3-200 |
| 250 | 90 | 27 | 68 | ZE-WMB3-250 |
| 325 | 110 | 34 | 79 | ZE-WMB3-325 |

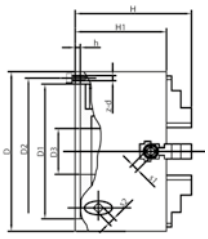
Preis pro Satz / *Price per set*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Kombinierte Vierbacken-Drehfutter Wescott
# *Combined lathe chucks Wescott*





## Vierbacken-Drehfutter Wescott, zylindrische Aufnahme
## *Four-jaw lathe chucks Wescott, centre mount*

Backen zentrisch spannend und einzeln verstellbar. Das Drehfutter ist besonders geeignet zum Spannen von unregelmäßig geformten Werkstücken.

*Self-centering and individually adjustable jaws. This lathe chuck is especially suitable for holding irregularly shaped work pieces.*

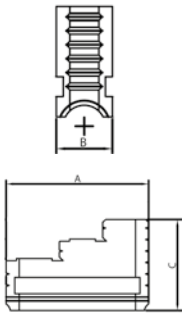
**Guss / *Cast iron***

| D (Ø) mm | D1 mm | D2 mm | D3 mm | H1 mm | H mm | h mm | S1 mm | S2 mm | z-d mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 130 | 142 | 42 | 87 | 115 | 5 | 10 | 8 | 6-M8 | ● | ZE-WG410-160 |
| 200 | 165 | 180 | 65 | 97 | 127 | 5 | 12 | 10 | 6-M10 | ● | ZE-WG410-200 |
| 250 | 206 | 226 | 80 | 102 | 142 | 5 | 12 | 10 | 6-M12 | ● | ZE-WG410-250 |
| 325 | 272 | 296 | 100 | 120 | 163 | 6 | 13 | 12 | 6-M16 | ◗ | ZE-WG410-325 |

Inkl. je 1 Satz harter Umkehrbacken, Kombi-Spannschlüssel, Befestigungsschrauben
*Incl. 1 set of hardened reversible jaws, wrench, fixing screws*

# Backensätze für Vierbacken-Drehfutter Wescott
# *Jaws for four-jaw lathe chucks Wescott*



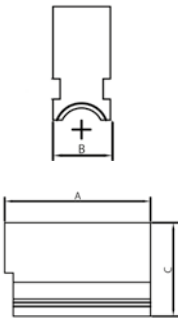


## Harte, gestufte Umkehrbacken
## *Hard reversible, stepped jaws*

| Für / *for* Ø mm | A mm | B mm | C mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 160 | 61 | 20 | 52 | ◗ | ZE-WHUB4-160 |
| 200 | 75 | 25 | 57 | ◗ | ZE-WHUB4-200 |
| 250 | 90 | 27 | 68 | ◗ | ZE-WHUB4-250 |
| 325 | 110 | 34 | 79 | ◗ | ZE-WHUB4-325 |

Preis pro Satz / *Price per set*





## Weiche Monoblockbacken
## *Soft solid jaws*

- *Material 20 MnCr5*
- *material 20 MnCr5*

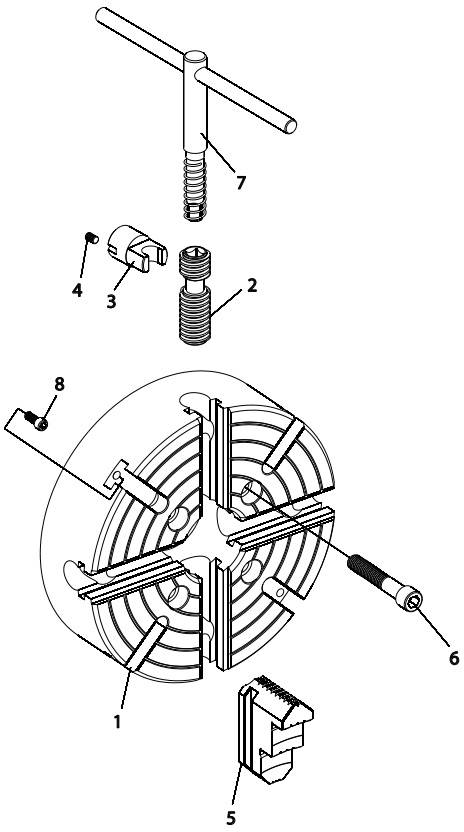
| Für / *for* Ø mm | A mm | B mm | C mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 160 | 61 | 20 | 52 | ◗ | ZE-WMB4-160 |
| 200 | 75 | 25 | 57 | ◗ | ZE-WMB4-200 |
| 250 | 90 | 27 | 68 | ◗ | ZE-WMB4-250 |
| 325 | 110 | 34 | 79 | ◗ | ZE-WMB4-325 |

Preis pro Satz / *Price per set*

# Planscheiben
# *Independent chucks*

## Ab Ø 250 mit T-Nuten, ab Ø 160 Befestigung von vorne
## *From Ø 250 with T-grooves, from Ø 160 front mounting*

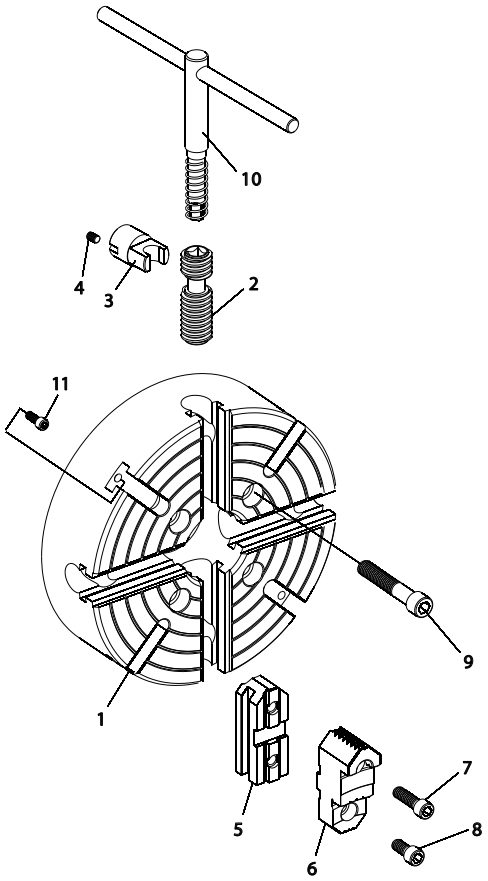
**Planscheiben**
**mit einteiligen *Umkehrbacken* /**
***Independent chucks***
***with one-piece jaws***




1. Futterkörper
2. Verstellspindel
3. Spindellager
4. Fixierschraube
5. Umkehraufsatzbacke
6. Befestigungsschraube
7. Schlüssel
8. T-Nut Schraube

1. *Chuck body*
2. *Operating screw*
3. *Thrust bearing*
4. *Set screw*
5. *Hard solid reversible jaw*
6. *Chuck mounting bolt*
7. *Chuck wrench*
8. *T-Slot screw*

**Planscheiben**
**mit Grund- und *Aufsatzbacken* /**
***Independent chucks***
***with two-piece jaws***

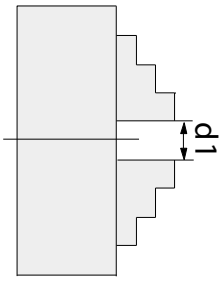


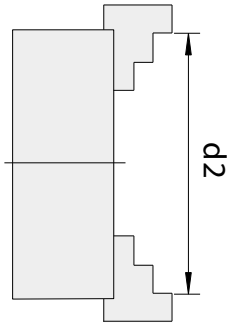

1. Futterkörper
2. Verstellspindel
3. Spindellager
4. Schraube
5. Harte Grundbacke
6. Harte Aufsatzbacke
7 & 8. Backen-Befestigungsschraube
9. Befestigungsschraube
10. Schlüssel
11. T-Nut Schraube

1. *Chuck body*
2. *Operating screw*
3. *Thrust bearing*
4. *Set screw*
5. *Hard master jaw*
6. *Hard top jaw*
7 & 8. *Jaw mounting bolt*
9. *Chuck mounting bolt*
10. *Chuck wrench*
11. *T-Slot screw*

## Spannbereich / *Clamping range*

| Ø mm | d1 min | d2 max | Ø max. |
|---|---|---|---|
| 80 | 3 | 80 | 96 |
| 100 | 3 | 100 | 116 |
| 125 | 3 | 125 | 150 |
| 160 | 3 | 160 | 185 |
| 200 | 10 | 200 | 235 |
| 250 | 10 | 250 | 296 |
| 315 | 15 | 315 | 369 |
| 400 | 20 | 400 | 465 |
| 500 | 45 | 500 | 570 |
| 630 | 50 | 630 | 720 |
| 800 | 50 | 800 | 888 |





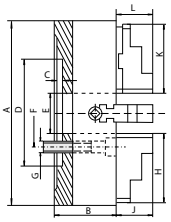

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Planscheiben
# *Independent chucks*

Mit 4 einzeln verstellbaren Backen.
Die Planscheibe ist besonders geeignet zum Spannen von unregelmäßig geformten Werkstücken.

*With 4 individually adjustable jaws.*
*This independent chuck is especially suitable for holding irregularly shaped work pieces.*






## Zylindrische Aufnahme, einteilige Backen
## *Centre mount, one-piece jaws*

### Guss / *Cast iron*

| A (Ø) mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | K mm | L mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 42 | 3,5 | 55 | 22 | 66 | 4xM6 | 33 | 16 | - | - | 3000 | 1,9 | ● | ZE-4100-080 |
| 100 | 54 | 4 | 72 | 25 | 84 | 4xM8 | 42 | 23 | - | - | 3000 | 2,4 | ● | ZE-4100-100 |
| 125 | 56 | 4,5 | 95 | 30 | 108 | 4xM8 | 53 | 22 | - | - | 2500 | 5,0 | ● | ZE-4100-125 |
| 160 | 65 | 5 | 65 | 45 | 95 | 4xM10 | 61,5 | 31,5 | - | - | 2000 | 7,5 | ● | ZE-4100-160 |
| 200 | 75 | 6 | 75 | 56 | 95 | 4xM10 | 85 | 35 | 82 | 46,4 | 1800 | 10 | ● | ZE-4100-200 |
| 250 | 85 | 7 | 150 | 65 | 104,8 | 4xM12 | 92 | 40,3 | 96,5 | 60,4 | 1500 | 25 | ● | ZE-4100-250 |
| 315 | 95 | 7 | 175 | 80 | 133,4 | 4xM16 | 111 | 49,8 | 112,5 | 60,9 | 1200 | 39 | ● | ZE-4100-315 |
| 400 | 105 | 10 | 200 | 100 | 171,4 | 4xM16 | 129 | 49,8 | 129 | 72,3 | 800 | 61 | ● | ZE-4100-400 |
| 500 | 120 | 12 | 270 | 125 | 235 | 4xM20 | 152,5 | 59,8 | 136 | 90,3 | 500 | 105 | ● | ZE-4100-500 |
| 630 | 140 | 12 | 270 | 160 | 235 | 4xM20 | 177 | 59,8 | 136 | 97,8 | 400 | 211 | ● | ZE-4100-630 |
| 800 | 145 | 12 | 250 | 210 | 300 | 8xM20 | 202 | 70,8 | 136 | 93,8 | 300 | 319 | ● | ZE-4100-800 |

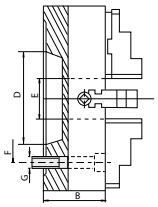
Inkl. 1 Satz einteiliger Umkehrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set hardened reversible jaws, wrench, fixing screws*

Auf Anfrage auch mit geteilten Backen lieferbar / *With two-piece jaws available upon request*

**Planscheiben in größeren Durchmessern und Ersatzbacken auf Anfrage lieferbar**
***Independent chucks in bigger diameters and spare jaws available upon request***

# Planscheiben
# *Independent chucks*





## Kurzkegelaufnahme nach DIN 55026, einteilige Backen
## *According to DIN 55026, one-piece jaws*

### Guss / *Cast iron*

| Ø mm | KK Taper | B mm | D mm | E mm | F mm | G mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 200 | 4 | 75 | 63,5 | 50 | 82,6 | 4xM10 | 1800 | 17 | ○ | ZE-4156-204 |
| 200 | 5 | 75 | 82,6 | 50 | 104,8 | 4xM10 | 1800 | 17 | ○ | ZE-4156-205 |
| 200 | 6 | 75 | 106,4 | 50 | 133,4 | 4xM12 | 1800 | 17 | ○ | ZE-4156-206 |
| 250 | 5 | 85 | 82,6 | 65 | 104,8 | 8xM10 | 1500 | 25,5 | ○ | ZE-4156-255 |
| 250 | 6 | 85 | 106,4 | 65 | 133,4 | 4xM12 | 1500 | 25,5 | ○ | ZE-4156-256 |
| 250 | 8 | 85 | 139,7 | 65 | 171,4 | 4xM16 | 1500 | 25,5 | ○ | ZE-4156-258 |
| 315 | 5 | 95 | 82,6 | 80 | 104,8 | 4xM10 | 1200 | 40 | ○ | ZE-4156-315 |
| 315 | 6 | 95 | 106,4 | 80 | 133,4 | 8xM12 | 1200 | 40 | ○ | ZE-4156-316 |
| 315 | 8 | 95 | 139,8 | 80 | 171,4 | 4xM16 | 1200 | 40 | ○ | ZE-4156-318 |
| 315 | 11 | 95 | 196,9 | 80 | 235 | 4xM20 | 1200 | 40 | ○ | ZE-4156-311 |
| 400 | 6 | 105 | 106,4 | 100 | 133,4 | 8xM12 | 800 | 65 | ○ | ZE-4156-406 |
| 400 | 8 | 105 | 139,8 | 100 | 171,4 | 4xM16 | 800 | 65 | ○ | ZE-4156-408 |
| 400 | 11 | 105 | 196,9 | 100 | 235 | 4xM20 | 800 | 65 | ○ | ZE-4156-411 |
| 500 | 8 | 120 | 139,7 | 125 | 171,4 | 8xM16 | 500 | 114 | ○ | ZE-4156-508 |
| 500 | 11 | 120 | 196,9 | 125 | 235 | 8xM20 | 500 | 114 | ○ | ZE-4156-511 |
| 630 | 8 | 140 | 139,7 | 125 | 171,4 | 8xM16 | 400 | 165 | ○ | ZE-4156-638 |
| 630 | 11 | 140 | 196,9 | 160 | 235 | 8xM20 | 400 | 165 | ○ | ZE-4156-611 |
| 630 | 15 | 140 | 285,8 | 160 | 330,2 | 4xM24 | 400 | 165 | ○ | ZE-4156-615 |
| 800 | 11 | 145 | 196,9 | 180 | 235 | 8xM20 | 300 | 305 | ○ | ZE-4156-811 |
| 800 | 15 | 145 | 285,8 | 180 | 330,2 | 8xM24 | 300 | 305 | ○ | ZE-4156-815 |

Inkl. 1 Satz einteiliger Umkehrbacken, Spannschlüssel, Befestigungsschrauben
*Incl. 1 set hardened reversible jaws, wrench, fixing screws*

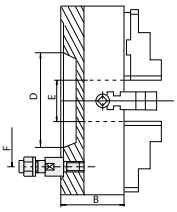
Auf Anfrage auch mit geteilten Backen lieferbar / *With two-piece jaws available upon request*

**Planscheiben in größeren Durchmessern und Ersatzbacken auf Anfrage lieferbar**
***Independent chucks in bigger diameters and spare jaws available upon request***



○ **Lagerstandard / *in stock***
◑ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***






## Kurzkegelaufnahme nach DIN 55027, einteilige Backen
## *According to DIN 55027, one-piece jaws*

### Guss / *Cast iron*

| Ø mm | KK Taper | B mm | D mm | E mm | F mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 200 | 4 | 75 | 63,5 | 56 | 85 | 1800 | 10 | ● | ZE-4157-204 |
| 200 | 5 | 75 | 82,6 | 56 | 104,8 | 1800 | 10 | ● | ZE-4157-205 |
| 200 | 6 | 75 | 106,4 | 56 | 133,4 | 1800 | 10 | ● | ZE-4157-206 |
| 250 | 5 | 85 | 82,6 | 65 | 104,8 | 1500 | 27,5 | ● | ZE-4157-255 |
| 250 | 6 | 85 | 106,4 | 65 | 133,4 | 1500 | 27,5 | ● | ZE-4157-256 |
| 250 | 8 | 85 | 139,7 | 65 | 171,4 | 1500 | 27,5 | ● | ZE-4157-258 |
| 315 | 5 | 95 | 82,6 | 80 | 104,8 | 1200 | 39,5 | ● | ZE-4157-315 |
| 315 | 6 | 95 | 106,4 | 80 | 133,4 | 1200 | 39,5 | ● | ZE-4157-316 |
| 315 | 8 | 95 | 139,8 | 80 | 171,4 | 1200 | 39,5 | ● | ZE-4157-318 |
| 315 | 11 | 95 | 196,9 | 80 | 235 | 1200 | 39,5 | ○ | ZE-4157-311 |
| 400 | 6 | 105 | 106,4 | 100 | 133,4 | 800 | 60 | ● | ZE-4157-406 |
| 400 | 8 | 105 | 139,8 | 100 | 171,4 | 800 | 60 | ● | ZE-4157-408 |
| 400 | 11 | 105 | 196,9 | 100 | 235 | 800 | 60 | ● | ZE-4157-411 |
| 500 | 8 | 120 | 139,7 | 125 | 171,4 | 500 | 95,5 | ● | ZE-4157-508 |
| 500 | 11 | 120 | 196,9 | 125 | 235 | 500 | 95,5 | ● | ZE-4157-511 |
| 630 | 8 | 140 | 139,7 | 125 | 171,4 | 400 | 165 | ● | ZE-4157-638 |
| 630 | 11 | 140 | 196,9 | 160 | 235 | 400 | 165 | ● | ZE-4157-611 |
| 630 | 15 | 140 | 285,8 | 160 | 330,2 | 400 | 165 | ○ | ZE-4157-615 |
| 800 | 11 | 145 | 196,9 | 180 | 235 | 300 | 298 | ● | ZE-4157-811 |
| 800 | 15 | 145 | 285,8 | 180 | 330,2 | 300 | 298 | ● | ZE-4157-815 |

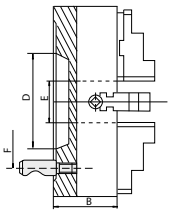
Inkl. 1 Satz einteiliger Umkehrbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set hardened reversible jaws, wrench, fixing bolts*

Auf Anfrage auch mit geteilten Backen lieferbar / *With two-piece jaws available upon request*

**Planscheiben in größeren Durchmessern und Ersatzbacken auf Anfrage lieferbar**
***Independent chucks in bigger diameters and spare jaws available upon request***

# Planscheiben
# *Independent chucks*






## Kurzkegelaufnahme nach DIN 55029, einteilige Backen
## *According to DIN 55029, one-piece jaws*

### Guss / *Cast iron*

| Ø mm | KK Taper | B mm | D mm | E mm | F mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 160 | 3 | 65 | 53,98 | 45 | 70,6 | 2000 | 7,5 | ● | ZE-4159-163 |
| 200 | 4 | 75 | 63,5 | 56 | 82,6 | 1800 | 10 | ● | ZE-4159-204 |
| 200 | 5 | 75 | 82,6 | 56 | 104,8 | 1800 | 10 | ● | ZE-4159-205 |
| 200 | 6 | 75 | 106,4 | 56 | 133,4 | 1800 | 10 | ● | ZE-4159-206 |
| 250 | 5 | 85 | 82,6 | 65 | 104,8 | 1500 | 27,5 | ● | ZE-4159-255 |
| 250 | 6 | 85 | 106,4 | 65 | 133,4 | 1500 | 27,5 | ● | ZE-4159-256 |
| 250 | 8 | 85 | 139,7 | 65 | 171,4 | 1500 | 27,5 | ● | ZE-4159-258 |
| 315 | 5 | 95 | 82,6 | 80 | 104,8 | 1200 | 39,5 | ● | ZE-4159-315 |
| 315 | 6 | 95 | 106,4 | 80 | 133,4 | 1200 | 39,5 | ● | ZE-4159-316 |
| 315 | 8 | 95 | 139,8 | 80 | 171,4 | 1200 | 39,5 | ● | ZE-4159-318 |
| 315 | 11 | 95 | 196,9 | 80 | 235 | 1200 | 39,5 | ○ | ZE-4159-311 |
| 400 | 6 | 105 | 106,4 | 100 | 133,4 | 800 | 60 | ● | ZE-4159-406 |
| 400 | 8 | 105 | 139,8 | 100 | 171,4 | 800 | 60 | ● | ZE-4159-408 |
| 400 | 11 | 105 | 196,9 | 100 | 235 | 800 | 60 | ● | ZE-4159-411 |
| 500 | 8 | 120 | 139,7 | 125 | 171,4 | 500 | 95,5 | ● | ZE-4159-508 |
| 500 | 11 | 120 | 196,9 | 125 | 235 | 500 | 95,5 | ● | ZE-4159-511 |
| 630 | 8 | 140 | 139,7 | 125 | 171,4 | 400 | 165 | ● | ZE-4159-638 |
| 630 | 11 | 140 | 196,9 | 160 | 235 | 400 | 165 | ● | ZE-4159-611 |
| 630 | 15 | 140 | 285,8 | 160 | 330,2 | 400 | 165 | ○ | ZE-4159-615 |
| 800 | 11 | 145 | 196,9 | 180 | 235 | 300 | 298 | ○ | ZE-4159-811 |
| 800 | 15 | 145 | 285,8 | 180 | 330,2 | 300 | 298 | ○ | ZE-4159-815 |

Inkl. 1 Satz einteiliger Umkehrbacken, Spannschlüssel, Befestigungsbolzen
*Incl. 1 set hardened reversible jaws, wrench, fixing bolts*

Auf Anfrage auch mit geteilten Backen lieferbar / *With two-piece jaws available upon request*

**Planscheiben in größeren Durchmessern und Ersatzbacken auf Anfrage lieferbar**
***Independent chucks in bigger diameters and spare jaws available upon request***



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Flansche
## *Adaptor plates*

**Material = Stahl**
***Material = steel***

**Flansche nach DIN 55026 / DIN 55027 / DIN 55029**
**Weitere Flansche auf Anfrage**

***Adaptor plates according to DIN 55026 / DIN 55027 / DIN 55029***
***Further adaptor plates available upon request***



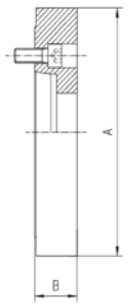





# Flansche für Drehfutter und Planscheiben
## *Adaptor plates for lathe and independent chucks*



**Stahl / *Steel***



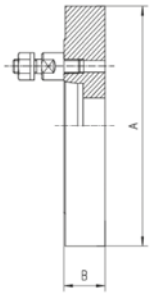

## Kurzkegelaufnahme nach DIN 55026, futterseitig plan
## *According to DIN 55026, semi-machined*

| Für / *for* Ø mm | KK / *Taper* | A mm | B mm | Durchlass / *Thru-bore* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 160 | 5 | 162 | 23 | 79,5 | ● | ZE-FP6-160/5 |
| 200 | 4 | 203 | 23 | 61 | ○ | ZE-FP6-200/4 |
| 200 | 5 | 203 | 23 | 79,5 | ● | ZE-FP6-200/5 |
| 200 | 6 | 203 | 23 | 103 | ● | ZE-FP6-200/6 |
| 250 | 5 | 253 | 28 | 79,5 | ○ | ZE-FP6-250/5 |
| 250 | 6 | 253 | 28 | 103 | ● | ZE-FP6-250/6 |
| 250 | 8 | 253 | 28 | 136,2 | ● | ZE-FP6-250/8 |
| 315 | 6 | 318 | 35 | 103 | ● | ZE-FP6-315/6 |
| 315 | 8 | 318 | 35 | 136,2 | ● | ZE-FP6-315/8 |
| 315 | 11 | 318 | 38 | 192,8 | ○ | ZE-FP6-315/11 |
| 400 | 6 | 405 | 35 | 103 | ○ | ZE-FP6-400/6 |
| 400 | 8 | 405 | 35 | 136,2 | ○ | ZE-FP6-400/8 |
| 400 | 11 | 405 | 35 | 192,8 | ○ | ZE-FP6-400/11 |
| 500 | 8 | 505 | 35 | 136,2 | ○ | ZE-FP6-500/8 |
| 500 | 11 | 505 | 36 | 192,8 | ○ | ZE-FP6-500/11 |
| 500 | 15 | 505 | 42 | 281,5 | ○ | ZE-FP6-500/15 |
| 630 | 8 | 605 | 45 | 136,2 | ○ | ZE-FP6-630/8 |
| 630 | 11 | 605 | 45 | 192,8 | ○ | ZE-FP6-630/11 |
| 630 | 15 | 605 | 45 | 281,5 | ○ | ZE-FP6-630/15 |

Bitte beachten Sie, dass bei der DIN 55026 das Futter von vorne durchbohrt werden muss.
*Please note that for DIN 55026 the chuck needs to be drilled for front mounting*



**Stahl / *Steel***




## Kurzkegelaufnahme nach DIN 55027, futterseitig plan
## *According to DIN 55027, semi-machined*

| Für / *for* Ø mm | KK / *Taper* | A mm | B mm | Durchlass / *Thru-bore* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 125 | 3 | 127 | 28 | 51,4 | ● | ZE-FP7-125/3 |
| 125 | 4 | 127 | 28 | 61 | ● | ZE-FP7-125/4 |
| 160 | 3 | 162 | 29 | 51,4 | ● | ZE-FP7-160/3 |
| 160 | 4 | 162 | 29 | 61 | ● | ZE-FP7-160/4 |
| 160 | 5 | 162 | 32 | 79,5 | ● | ZE-FP7-160/5 |
| 200 | 4 | 203 | 29 | 61 | ● | ZE-FP7-200/4 |
| 200 | 5 | 203 | 32 | 79,5 | ● | ZE-FP7-200/5 |
| 200 | 6 | 203 | 39 | 103 | ● | ZE-FP7-200/6 |
| 250 | 5 | 253 | 32 | 79,5 | ● | ZE-FP7-250/5 |
| 250 | 6 | 253 | 39 | 103 | ● | ZE-FP7-250/6 |
| 250 | 8 | 253 | 42 | 136,2 | ● | ZE-FP7-250/8 |
| 315 | 6 | 318 | 42 | 103 | ● | ZE-FP7-315/6 |
| 315 | 8 | 318 | 45 | 136,2 | ● | ZE-FP7-315/8 |
| 315 | 11 | 318 | 52 | 192,8 | ● | ZE-FP7-315/11 |
| 400 | 6 | 405 | 42 | 103 | ● | ZE-FP7-400/6 |
| 400 | 8 | 405 | 45 | 136,2 | ● | ZE-FP7-400/8 |
| 400 | 11 | 405 | 49 | 192,8 | ● | ZE-FP7-400/11 |
| 500 | 8 | 505 | 42 | 136,2 | ● | ZE-FP7-500/8 |
| 500 | 11 | 505 | 49 | 192,8 | ● | ZE-FP7-500/11 |
| 500 | 15 | 505 | 50 | 281,5 | ○ | ZE-FP7-500/15 |
| 630 | 8 | 605 | 42 | 136,2 | ● | ZE-FP7-630/8 |
| 630 | 11 | 605 | 49 | 192,8 | ● | ZE-FP7-630/11 |
| 630 | 15 | 605 | 52 | 281,5 | ● | ZE-FP7-630/15 |



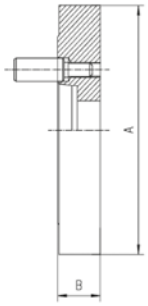
● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Flansche für Drehfutter und Planscheiben
*Adaptor plates for lathe and independent chucks*

## Kurzkegelaufnahme nach DIN 55029, futterseitig plan
## *According to DIN 55029, semi-machined*



**Stahl / *Steel***

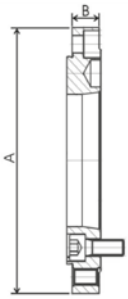



| Für / *for* Ø mm | KK / *Taper* | A mm | B mm | Durchlass / *Thru-bore* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 125 | 3 | 127 | 28 | 51,4 | ● | ZE-FP9-125/3 |
| 125 | 4 | 127 | 28 | 61 | ● | ZE-FP9-125/4 |
| 160 | 3 | 162 | 29 | 51,4 | ● | ZE-FP9-160/3 |
| 160 | 4 | 162 | 29 | 61 | ● | ZE-FP9-160/4 |
| 160 | 5 | 162 | 32 | 79,5 | ● | ZE-FP9-160/5 |
| 200 | 4 | 203 | 29 | 61 | ● | ZE-FP9-200/4 |
| 200 | 5 | 203 | 32 | 79,5 | ● | ZE-FP9-200/5 |
| 200 | 6 | 203 | 39 | 103 | ● | ZE-FP9-200/6 |
| 250 | 5 | 253 | 32 | 79,5 | ● | ZE-FP9-250/5 |
| 250 | 6 | 253 | 39 | 103 | ● | ZE-FP9-250/6 |
| 250 | 8 | 253 | 42 | 136,2 | ● | ZE-FP9-250/8 |
| 315 | 6 | 318 | 42 | 103 | ● | ZE-FP9-315/6 |
| 315 | 8 | 318 | 45 | 136,2 | ● | ZE-FP9-315/8 |
| 315 | 11 | 318 | 52 | 192,8 | ● | ZE-FP9-315/11 |
| 400 | 6 | 405 | 42 | 103 | ○ | ZE-FP9-400/6 |
| 400 | 8 | 405 | 45 | 136,2 | ● | ZE-FP9-400/8 |
| 400 | 11 | 405 | 49 | 192,8 | ● | ZE-FP9-400/11 |
| 500 | 8 | 505 | 42 | 136,2 | ● | ZE-FP9-500/8 |
| 500 | 11 | 505 | 49 | 192,8 | ● | ZE-FP9-500/11 |
| 500 | 15 | 505 | 50 | 281,5 | ○ | ZE-FP9-500/15 |
| 630 | 8 | 605 | 42 | 136,2 | ○ | ZE-FP9-630/8 |
| 630 | 11 | 605 | 49 | 192,8 | ● | ZE-FP9-630/11 |
| 630 | 15 | 605 | 52 | 281,5 | ○ | ZE-FP9-630/15 |

## Kurzkegelaufnahme nach DIN 55026 (A2), fertig bearbeitet für Drehfutter nach DIN 6350
## *According to DIN 55026 (A2), fully machined for chucks acc. to DIN 6350*



**Stahl / *Steel***



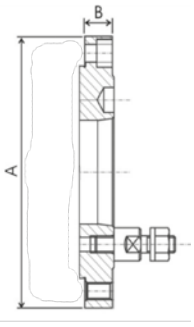

| Für / *for* Ø mm | KK / *Taper* | A mm | B mm | Lochkreis / *PCD* mm | Durchlass / *Thru-bore* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 160 | 5 | 160 | 21 | 104,8 | 79,5 | ● | ZE-FV6-160/5 |
| 200 | 4 | 200 | 21 | 82,6 | 61 | ○ | ZE-FV6-200/4 |
| 200 | 5 | 200 | 21 | 104,8 | 79,5 | ● | ZE-FV6-200/5 |
| 200 | 6 | 200 | 21 | 133,4 | 103 | ● | ZE-FV6-200/6 |
| 250 | 5 | 250 | 26 | 104,8 | 79,5 | ○ | ZE-FV6-250/5 |
| 250 | 6 | 250 | 26 | 133,4 | 103 | ○ | ZE-FV6-250/6 |
| 250 | 8 | 250 | 26 | 171,4 | 136,2 | ○ | ZE-FV6-250/8 |
| 315 | 6 | 315 | 33 | 133,4 | 103 | ○ | ZE-FV6-315/6 |
| 315 | 8 | 315 | 33 | 171,4 | 136,2 | ○ | ZE-FV6-315/8 |
| 315 | 11 | 315 | 35 | 235 | 192,8 | ○ | ZE-FV6-315/11 |
| 400 | 6 | 400 | 33 | 133,4 | 103 | ○ | ZE-FV6-400/6 |
| 400 | 8 | 400 | 33 | 171,4 | 136,2 | ○ | ZE-FV6-400/8 |
| 400 | 11 | 400 | 33 | 235 | 192,8 | ○ | ZE-FV6-400/11 |
| 500 | 8 | 500 | 34 | 171,4 | 136,2 | ○ | ZE-FV6-500/8 |
| 500 | 11 | 500 | 34 | 235 | 192,8 | ○ | ZE-FV6-500/11 |
| 500 | 15 | 500 | 39 | 330,2 | 281,5 | ○ | ZE-FV6-500/15 |
| 630 | 8 | 630 | 42 | 171,4 | 136,2 | ○ | ZE-FV6-630/8 |
| 630 | 11 | 630 | 42 | 235 | 192,8 | ○ | ZE-FV6-630/11 |
| 630 | 15 | 630 | 42 | 330,2 | 281,5 | ○ | ZE-FV6-630/15 |

Bitte beachten Sie, dass bei der DIN 55026 das Futter von vorne durchbohrt werden muss.
*Please note that for DIN 55026 the chuck needs to be drilled for front mounting*

# Flansche für Drehfutter und Planscheiben
## *Adaptor plates for lathe and independent chucks*



**Stahl / *Steel***

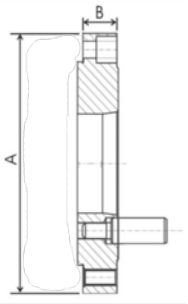



### Kurzkegelaufnahme nach DIN 55027, fertig bearbeitet für Drehfutter nach DIN 6350
### *According to DIN 55027, fully machined for chucks acc. to DIN 6350*

| Für / *for* Ø mm | KK / *Taper* | A mm | B mm | Lochkreis / *PCD* mm | Durchlass / *Thru-bore* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 125 | 3 | 125 | 18,5 | 75 | 51,4 | ● | ZE-FV7-125/3 |
| 125 | 4 | 125 | 21 | 85 | 61 | ● | ZE-FV7-125/4 |
| 160 | 3 | 160 | 21 | 75 | 51,4 | ● | ZE-FV7-160/3 |
| 160 | 4 | 160 | 21 | 85 | 61 | ● | ZE-FV7-160/4 |
| 160 | 5 | 160 | 21 | 104,8 | 79,5 | ● | ZE-FV7-160/5 |
| 200 | 4 | 200 | 21 | 85 | 61 | ● | ZE-FV7-200/4 |
| 200 | 5 | 200 | 21 | 104,8 | 79,5 | ● | ZE-FV7-200/5 |
| 200 | 6 | 200 | 21 | 133,4 | 103 | ● | ZE-FV7-200/6 |
| 250 | 5 | 250 | 26 | 104,8 | 79,5 | ● | ZE-FV7-250/5 |
| 250 | 6 | 250 | 26 | 133,4 | 103 | ● | ZE-FV7-250/6 |
| 250 | 8 | 250 | 26 | 171,4 | 136,2 | ● | ZE-FV7-250/8 |
| 315 | 6 | 315 | 33 | 133,4 | 103 | ● | ZE-FV7-315/6 |
| 315 | 8 | 315 | 33 | 171,4 | 136,2 | ● | ZE-FV7-315/8 |
| 315 | 11 | 315 | 33 | 235 | 192,8 | ● | ZE-FV7-315/11 |
| 400 | 6 | 400 | 33 | 133,4 | 103 | ● | ZE-FV7-400/6 |
| 400 | 8 | 400 | 33 | 171,4 | 136,2 | ● | ZE-FV7-400/8 |
| 400 | 11 | 400 | 33 | 235 | 192,8 | ● | ZE-FV7-400/11 |
| 500 | 8 | 500 | 34 | 171,4 | 136,2 | ● | ZE-FV7-500/8 |
| 500 | 11 | 500 | 34 | 235 | 192,8 | ● | ZE-FV7-500/11 |
| 500 | 15 | 500 | 34 | 330,2 | 281,5 | ○ | ZE-FV7-500/15 |
| 630 | 8 | 630 | 42 | 171,4 | 136,2 | ● | ZE-FV7-630/8 |
| 630 | 11 | 630 | 42 | 235 | 192,8 | ● | ZE-FV7-630/11 |
| 630 | 15 | 630 | 42 | 330,2 | 281,5 | ● | ZE-FV7-630/15 |



**Stahl / *Steel***




### Kurzkegelaufnahme nach DIN 55029, fertig bearbeitet für Drehfutter nach DIN 6350
### *According to DIN 55029, fully machined for chucks acc. to DIN 6350*

| Für / *for* Ø mm | KK / *Taper* | A mm | B mm | Lochkreis / *PCD* mm | Durchlass / *Thru-bore* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 125 | 3 | 125 | 26 | 70,6 | 51,4 | ● | ZE-FV9-125/3 |
| 125 | 4 | 125 | 26 | 82,6 | 61 | ● | ZE-FV9-125/4 |
| 160 | 3 | 160 | 27 | 70,6 | 51,4 | ● | ZE-FV9-160/3 |
| 160 | 4 | 160 | 27 | 82,6 | 61 | ● | ZE-FV9-160/4 |
| 160 | 5 | 160 | 30 | 104,8 | 79,5 | ● | ZE-FV9-160/5 |
| 200 | 4 | 200 | 27 | 82,6 | 61 | ● | ZE-FV9-200/4 |
| 200 | 5 | 200 | 30 | 104,8 | 79,5 | ● | ZE-FV9-200/5 |
| 200 | 6 | 200 | 36,5 | 133,4 | 103 | ● | ZE-FV9-200/6 |
| 250 | 5 | 250 | 30 | 104,8 | 79,5 | ● | ZE-FV9-250/5 |
| 250 | 6 | 250 | 36,5 | 133,4 | 103 | ● | ZE-FV9-250/6 |
| 250 | 8 | 250 | 39 | 171,4 | 136,2 | ● | ZE-FV9-250/8 |
| 315 | 6 | 315 | 39,5 | 133,4 | 103 | ● | ZE-FV9-315/6 |
| 315 | 8 | 315 | 42 | 171,4 | 136,2 | ● | ZE-FV9-315/8 |
| 315 | 11 | 315 | 52 | 235 | 192,8 | ● | ZE-FV9-315/11 |
| 400 | 6 | 400 | 39,5 | 133,4 | 103 | ● | ZE-FV9-400/6 |
| 400 | 8 | 400 | 39 | 171,4 | 136,2 | ● | ZE-FV9-400/8 |
| 400 | 11 | 400 | 47 | 235 | 192,8 | ● | ZE-FV9-400/11 |
| 500 | 8 | 500 | 39 | 171,4 | 136,2 | ● | ZE-FV9-500/8 |
| 500 | 11 | 500 | 47 | 235 | 192,8 | ● | ZE-FV9-500/11 |
| 500 | 15 | 500 | 50 | 330,2 | 281,5 | ○ | ZE-FV9-500/15 |
| 630 | 8 | 630 | 39 | 171,4 | 136,2 | ● | ZE-FV9-630/8 |
| 630 | 11 | 630 | 47 | 235 | 192,8 | ● | ZE-FV9-630/11 |
| 630 | 15 | 630 | 50 | 330,2 | 281,5 | ● | ZE-FV9-630/15 |



● **Lagerstandard / *in stock***
◑ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Drehfutter und Planscheiben

## Sonderanfertigungen bis 5000 mm

**Zum Beispiel:**

- 8-Backen-Planspiralfutter/-Planscheiben
- Schwerlastplanscheiben
- Aufspannscheiben
- Wescott-Futter
- Kraftspannfutter

➤ **lieferbar auf Anfrage**



# Big diameter chucks

## Special designs up to 5000 mm

***For example:***

- *8-jaw lathe chucks/independent chucks*
- *Heavy-duty independent chucks*
- *Face plates*
- *Wescott lathe chucks*
- *Power chucks*

➤ ***available upon request***



# Backen-Ausdrehringe
# *Jaw turning rings*



## Für Innen- und Außenspannung
## *For internal and external clamping*

Das Set besteht aus einzelnen Ringen aus gehärtetem Spezialstahl mit je 3 Kurvensegmenten, die über 3 x 120° sowohl am inneren als auch am äußeren Umfang angeordnet sind. Durch die patentierten Ringe ist es möglich, Spannbacken präzise auszudrehen. Durch die stufenlose Einstellmöglichkeit kann man exakt soviel Material entfernen, wie nötig ist. Dies spart Zeit und Werkzeugkosten.

- Innen- und Außenspannung mit 1 Ring
- stufenloser Spannbereich für alle Futtergrößen
- 1/10 mm genaue Einstellung des Drehdurchessers
- optimale Zugänglichkeit des Werkzeuges
- schnelle und flexible Handhabung
- hohe Kosteneinsparung bei Spannbacken
- geringe Rüstkosten
- lieferbar für alle Futtergrößen von Ø 80 - 1000 mm

*This set comprises individual rings from hardened special-purpose steel each consisting of 3 curved segments (3 x 120°) to be arranged both at the inner and outer circumference.*
*These patented rings allow to turn-out jaws to a maximum precision. Thanks to an infinite adjustability it is possible to remove an exact amount of material thus saving set up time and costs.*

- *internal and external clamping with only 1 ring*
- *infinitely adjustable clamping range for all chucks*
- *exact adjustment of boring diameter (1/10 mm precision)*
- *ease of handling*
- *less clamping jaws required*
- *reduced set up times*
- *available for all chuck sizes Ø 80 - 1000 mm*

## Standard Ausführung
## *Standard version*

| Größe / *Size* | Ringe / *Rings* | Sätze Spannbolzen inkl. * / *incl. clamping pin sets* * | Arbeitsbereich / *Range* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| S | 20 | 2 | Ø = 0-200 mm | 24-19508-S |
| L | 29 | 3 | Ø = 0-315 mm | 24-19508-L |
| XL | 10 | 2 | Ø = 400-630 mm | 24-19508-XL |

## Premium Ausführung
## *Premium version*

NEU *NEW* !

Inkl. flexiblen, verstellbaren Spannbolzen, die bis zu 2 mm der Schraubensenkung ausgleichen

*Incl. flexible, adjustable clamping pins, which can compensate up to 2 mm of the bore*

| Größe / *Size* | Ringe / *Rings* | Sätze Spannbolzen inkl. * / *incl. clamping pin sets* * | Arbeitsbereich / *Range* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| S | 20 | 2 | Ø = 0-200 mm | 24-21508-S |
| L | 29 | 3 | Ø = 0-315 mm | 24-21508-L |
| XL | 10 | 2 | Ø = 400-630 mm | 24-21508-XL |

*** Bitte bei Bestellung gewünschte Spannbolzen angeben**
**** Please indicate clamping pin size when ordering***

| Größe / *Size* | verfügbare Spannbolzen / *available clamping pins* |
|---|---|
| S | M6/M8/M10/M12/M14/M16 |
| L | M6/M8/M10/M12/M14/M16 |
| XL | M12/M14/M16/M20/M24 |

**Auch für 4- und 6-Backen-Drehfutter auf Anfrage lieferbar. Weitere Spannbolzen auf Anfrage lieferbar**
***Also available for 4- or 6-jaw lathe chucks upon request. Other clamping pins available upon request***

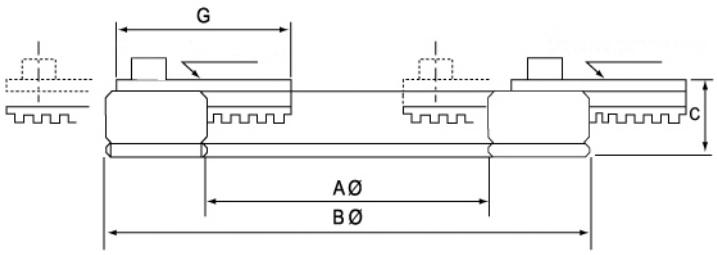


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Backen-Ausdrehvorrichtungen
*Jaw turning fixtures*

## Ausdrehvorrichtungen für Dreibacken-Planspiralfutter
## *Jaw turning fixtures for three-jaw scroll chucks*





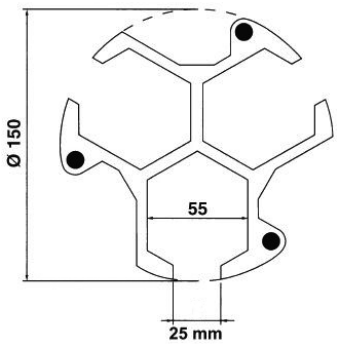

| Für Futter / *For chuck* | A Ø mm | B Ø mm | C mm | G mm | Einhängebereiche / *Adjusting ranges* mm | Max. Spannkraft / *Max. gripping force (kN)* | Max. Drehzahl / *Max. speed* (min-1) | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| Ø 125-200 | 100 | 170 | 26 | 61 | 56-124 / 134-200 | 14,7 | 800 | 3 | ZE-ADP3-200 |
| Ø 160-250 | 125 | 200 | 26 | 61 | 85-150 / 170-230 | 14,7 | 700 | 4 | ZE-ADP3-250 |
| Ø 200-315 | 160 | 248 | 31 | 80 | 100-190 / 220-300 | 17,1 | 600 | 6 | ZE-ADP3-315 |

**Backen-Ausdrehringe für Kraftspannfutter siehe Seite 65**
***Jaw turning rings for power chucks see page 65***

## Drehfutteranschläge
## *Work piece stops*

NEU NEW !






Zum Spannen von kurzen Teilen.

- wird durch 3 Magnete am Futterkörper befestigt
- parallel geschliffen
- Positionsgenauigkeit ±0,01mm
- fur Werkstücke von Ø 15 - Ø 130mm

Material: Aluminium

For clamping of short work pieces.

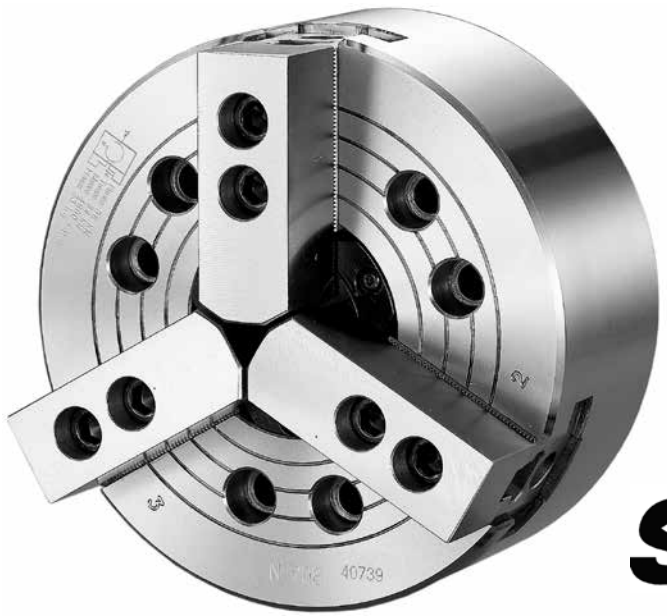
- *is fixed by 3 magnets onto the chuck body*
- *parallel ground*
- *accuracy of ±0,01mm*
- *for work pieces Ø 15 - Ø 130mm*

*Material: Aluminium*

| Höhe / *Height* mm | Art.-Nr. / *Order no.* |
|---|---|
| 15 | ZE-DFA-15 |
| 20 | ZE-DFA-20 |
| 25 | ZE-DFA-25 |
| 30 | ZE-DFA-30 |
| 35 | ZE-DFA-35 |
| Satz / *Set (15, 20, 25, 30, 35)* | ZE-DFA-SATZ |

# Kraftspannfutter
# *Power chucks*

## AUTOStrong Kraftspannfutter
## *AUTOStrong power chucks*



AUTO Strong

**Kraftspannfutter**

Kraftspannfutter mit zylindrischer Aufnahme oder Kurzkegelaufnahme:

- Stahl
- 2-, 3- und 4-Backen
- ohne Durchgangsbohrung
- mit Durchgangsbohrung
- mit großer Durchgangsbohrung

Andere Aufnahmen auf Anfrage.

Alle Verschleißteile gehärtet und geschliffen für hohe Rundlaufgenauigkeit und Langlebigkeit.
Schmiernippel in jeder Grundbacke.

**Dreibacken-Keilstangen-Kraftspannfutter**

**Pneumatische Vorderendfutter**

**Hydraulikzylinder**

**Stationäre Kraftspannfutter**

***Power chucks***

*Power chucks with centre mount or taper mounting*

- *steel*
- *2, 3, and 4 jaws*
- *without bore*
- *with bore*
- *with big bore*

*Other mountings available upon request.*

*All sliding surfaces are hardened and ground for high runout precision and long service life.*
*Lubrication nipple in each base jaw.*

***Three-jaw wedge bar power chuck***

***Pneumatic power chucks***

***Hydraulic cylinders***

***Stationary power chucks***



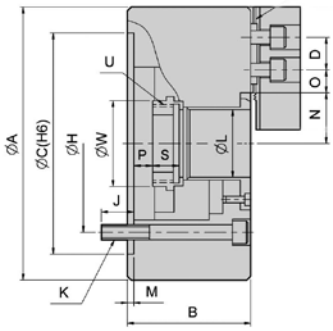
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

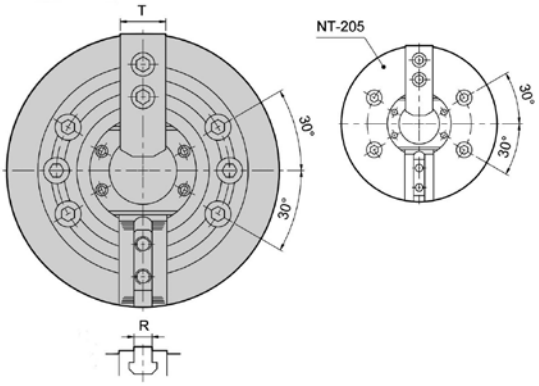
# Zweibacken-Kraftspannfutter mit Durchgangsbohrung - 1,5 x 60°
*Two-jaw power chucks with bore - 1,5 x 60°*

AUTO Strong

## Zylindrische Aufnahme, mit Durchgangsbohrung
## *Centre mount, with bore*






**Stahl / *Steel***

| Typ / *Type* | Ø mm | Durchgangsbohrung / *Through-Hole* mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigungskraft / *Max. draw bar pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / *Matching Cylinder* | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NT-205 | 135 | 33 | 5,4 | 10 | 11,66 | 24 | 19,5 | HJ05 | HC05 | M1036 | 7000 | 6,8 | ● | 29-NT-205 |
| NT-206 | 169 | 45 | 5,5 | 12 | 14,66 | 38 | 18,9 | HJ06 | HC06 | M1246 | 6000 | 12,8 | ● | 29-NT-206 |
| NT-208 | 210 | 52 | 7,4 | 16 | 23,20 | 58,59 | 17,3 | HJ08 | HC08 | M1552 | 4900 | 22 | ● | 29-NT-208 |
| NT-210 | 254 | 75 | 8,8 | 19 | 28,70 | 74 | 18,4 | HJ10 | HC10 | M1875 | 4200 | 34 | ● | 29-NT-210 |
| NT-212 | 304 | 91 | 10,6 | 23 | 38 | 98 | 18,4 | HJ12 | HC12 | M2091 | 3400 | 55 | ● | 29-NT-212 |
| NT-215 | 381 | 117,5 | 10,6 | 23 | 47,29 | 12 | 15,3 | HJ15 | HC15 | M2511 | 2500 | 106 | ○ | 29-NT-215 |
| NT-218 | 450 | 117,5 | 10,6 | 23 | 47,29 | 12 | 15,3 | HJ15 | HC15 | M2511 | 2000 | 122 | ○ | 29-NT-218 |

Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben, Zugrohradapterrohling
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws, blank draw tube adaptor*

| Typ / *Type* | A mm | B mm | C(H6) mm | S mm | H mm | M mm | T mm | R mm | L mm | K | W mm | N max. | O max. | O min. | P max. | P min. | J mm | U max. | D mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NT-205 | 135 | 60 | 110 | 20 | 82,55 | 4 | 23 | 10 | 33 | 3-M10 | 45 | 26,5 | 19,75 | 7,75 | 1 | -9 | 15,5 | M40x1,5 | 14 |
| NT-206 | 169 | 81 | 140 | 19 | 104,78 | 5 | 32 | 12 | 45 | 6-M10 | 60 | 32 | 22,75 | 9,25 | 11 | -1 | 16 | M55x2 | 20 |
| NT-208 | 210 | 91 | 170 | 20,5 | 133,35 | 5 | 37 | 14 | 52 | 6-M12 | 66 | 38,7 | 29,75 | 14,75 | 14,5 | -1,5 | 20 | M60x2 | 25 |
| NT-210 | 254 | 100 | 220 | 25 | 171,45 | 5 | 42 | 16 | 75 | 6-M16 | 94 | 51 | 33,75 | 14,25 | 8,5 | -10,5 | 22 | M85x2 | 30 |
| NT-212 | 304 | 110 | 220 | 28 | 171,45 | 6 | 52 | 21 | 91 | 6-M16 | 108 | 61,3 | 45,75 | 15,75 | 8 | -15 | 23 | M100x2 | 30 |
| NT-215 | 381 | 133 | 300 | 43 | 235 | 6 | 62 | 22 | 117,5 | 6-M20 | 139 | 82 | 46,75 | 13,75 | 7 | -16 | 30 | M130x2 | 43 |
| NT-218 | 450 | 133 | 300 | 43 | 235 | 6 | 62 | 22 | 117,5 | 6-M20 | 139 | 82 | 79,75 | 15,25 | 7 | -16 | 35 | M130x2 | 43 |

## Backen kompatibel zu Kitagawa Typ BT200
## *Jaws compatible with Kitagawa type BT200*

# Zwei- / Dreibacken-Kombinations-Kraftspannfutter mit Durchgangsbohrung - 1,5 x 60°
# *Two-/ Three-jaw combined power chucks with bore - 1,5 x 60°*

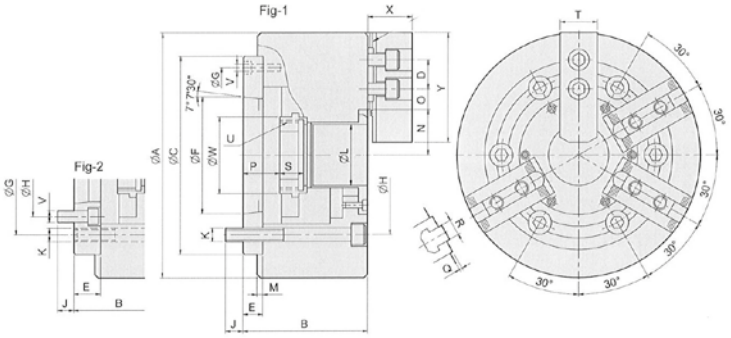
AUTO Strong

## DIN 55026, mit Durchgangsbohrung
## *According to DIN 55026, with bore*

NEU *NEW* !

- Kann als 2- oder 3-Backenfutter verwendet werden
- *can be used as 2- or 3-jaw-chuck*






**Stahl / *Steel***

| Typ / *Type* | Ø mm | Durchgangsbohrung / *Trough hole* mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigunskraft / *Max. pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / *Matching Cylinder* | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NHT-208A5 | 210 | 52 | 7,4 | 16 | (2-Ba.) 14,66<br>(3-Ba.) 21,99 | 38<br>56,99 | 12.1<br>17.2 | HJ06 | HC08-1 | M1552 | 3500 | 26 | ● | 29-NHT-208A5 | |
| NHT-208A6 | 210 | 52 | 7,4 | 16 | (2-Ba.) 14,66<br>(3-Ba.) 21,99 | 38<br>56,99 | 12.1<br>17.2 | HJ06 | HC08-1 | M1552 | 3500 | 25 | ● | 29-NHT-208A6 | |

| Typ / *Type* | A mm | B mm | C(H6) mm | M mm | H mm | L mm | K mm | J mm | D mm | N max. mm | O max. mm | O min. mm | P max. mm | P min. mm | T mm | R mm | S mm | U max | W mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NHT-208A5 | 210 | 113 | 170 | 5 | 104,78 | 52 | 6xM12 | 13 | 20 | 41,8 | 34 | 7,5 | 37,5 | 21,5 | 32 | 12 | 20,5 | M60x2,0 | 66 |
| NHT-208A6 | 210 | 107 | 170 | 5 | 133,35 | 52 | 6xM12 | 17 | 20 | 41,8 | 34 | 7,5 | 31,5 | 15,5 | 32 | 12 | 20,5 | M60x2,5 | 66 |



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

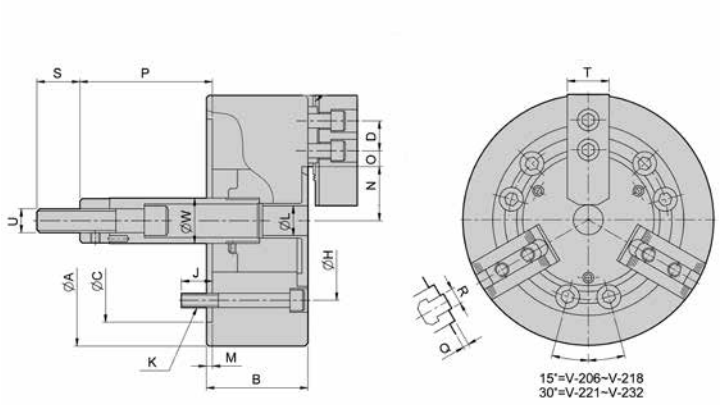
# Dreibacken-Kraftspannfutter ohne Durchgangsbohrung - 1,5 x 60°
*Three-jaw power chucks without bore - 1,5 x 60°*



AUTO Strong

## Zylindrische Aufnahme, ohne Durchgangsbohrung
## *Centre mount, without bore*






**Stahl / *Steel***

| Typ / *Type* | Ø mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Spannbereich max. / *Gripping max.* mm | Spannbereich min. / *Gripping min.* mm | Max. Betätigungskraft / *Max. pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Trägheitsmoment / *Moment of inertia* (kgf-m2) | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / *Matching Cylinder* | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-206 | 165 | 9,2 | 20 | 165 | 18 | 18 | 51,5 | 26,5 | 0,045 | HJ06 | HC06 | MS105C | 5200 | 12 | ○ | 29-V-206 |
| V-208 | 210 | 9,7 | 21 | 210 | 12 | 25 | 75 | 25,5 | 0,137 | HJ08 | HC08 | MS125C | 4500 | 23 | ● | 29-V-208 |
| V-210 | 254 | 8,8 | 25 | 254 | 16 | 29 | 108 | 28,6 | 0,3 | HJ10 | HC10 | MS125C | 4000 | 34,5 | ● | 29-V-210 |
| V-212 | 304 | 10,5 | 30 | 304 | 18 | 41 | 156 | 27,5 | 0,72 | HJ12-1 | HC12-1 | MS150C | 3300 | 59,5 | ● | 29-V-212 |
| V-215 | 381 | 16 | 35 | 381 | 68 | 82 | 249 | 32,6 | 1,8 | HJ15-1 | HC15-1 | MS200C | 3000 | 101 | ○ | 29-V-215 |
| V-218 | 450 | 16 | 35 | 450 | 130 | 82 | 249 | 32,6 | 2,9 | HJ15-1 | HC15-1 | MS200C | 2700 | 134 | ○ | 29-V-218 |
| V-224* | 610 | 16 | 35 | 573 | 138 | 82 | 273 | 32,6 | 7 | HJ24-1 | HC24-1 | MS200C | 1760 | 220 | ○ | 29-V-224 |

* Verzahnung / *serration* 3 x 60°
Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws*

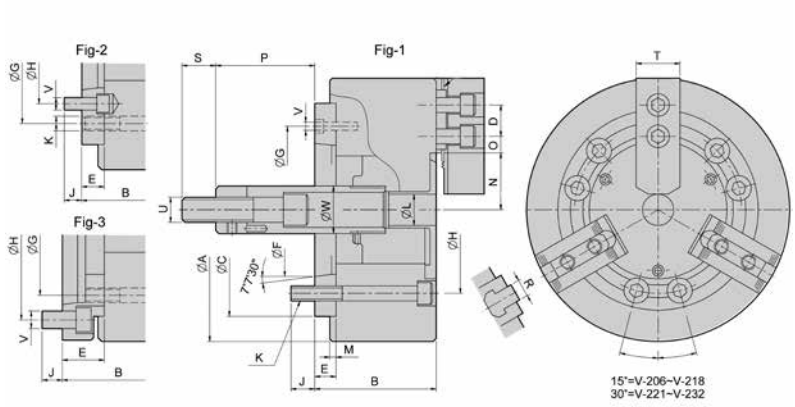
| Typ / *Type* | A mm | B mm | C(H6) mm | M mm | H mm | L mm | K mm | J mm | D mm | N max. mm | Q max. mm | Q min. mm | P max. mm | P min. mm | T mm | R mm | S mm | U max | W mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-206 | 165 | 74 | 140 | 5 | 104,78 | 21 | 6-M10 | 14 | 20 | 38,7 | 15,25 | 9,25 | 104,6 | 84,6 | 31 | 12 | 36 | M16x2,0 | 34 |
| V-208 | 210 | 85 | 170 | 5 | 133,35 | 25 | 6-M12 | 20 | 25 | 46,75 | 22,25 | 11,75 | 132 | 111 | 35 | 14 | 36 | M20x2,5 | 38 |
| V-210 | 254 | 89 | 220 | 5 | 171,45 | 34 | 6-M16 | 18 | 30 | 51,1 | 30,75 | 11,25 | 158 | 133 | 40 | 16 | 36 | M20x2,5 | 45 |
| V-212 | 304 | 106 | 220 | 6 | 171,45 | 34 | 6-M16 | 22 | 30 | 61 | 48,75 | 12,75 | 163 | 133 | 50 | 18 | 36 | M20x2,5 | 50 |
| V-215 | 381 | 114 | 300 | 6 | 235 | - | 6-M20 | 29 | 43 | 77,5 | 50,25 | 23,25 | 104 | 69 | 50 | 25,5 | 55 | M30x3,5 | 60 |
| V-218 | 450 | 114 | 300 | 6 | 235 | - | 6-M20 | 29 | 43 | 108 | 50,25 | 23,23 | 92 | 57 | 50 | 25,5 | 55 | M30x3,5 | 60 |
| V-224 | 610 | 125 | 380 | 6 | 330,2 | - | 6-M24 | 31 | 60 | 125 | 93,5 | 24,5 | 97 | 62 | 65 | 25 | 55 | M30x3,5 | 60 |

# Dreibacken-Kraftspannfutter ohne Durchgangsbohrung - 1,5 x 60°
## *Three-jaw power chucks without bore - 1,5 x 60°*

AUTO Strong

## DIN 55026, ohne Durchgangsbohrung
## *According to DIN 55026, without bore*






**Stahl / *Steel***

| Typ / *Type* | Fig | Ø mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigunskraft / *Max. pull force* (kN) | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungs-druck / *Max. operating pressure (kN)* | Trägheitsmoment / *Moment of inertia* (kN x m2) | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / *Matching Cylinde* | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-206A5 | 1 | 165 | 9,2 | 20 | 18 | 52,49 | 26,5 | 0,05 | HJ06 | HC06 | MS105C | 5000 | 13,2 | ● | 29-V-206A5 |
| V-206A6 | 3 | 165 | 9,2 | 20 | 18 | 52,49 | 26,5 | 0,059 | HJ06 | HC06 | MS105C | 5000 | 15,8 | ○ | 29-V-206A6 |
| V-208A5 | 2 | 210 | 9,7 | 21 | 25 | 75 | 25,5 | 0,154 | HJ08 | HC08 | MS125C | 4500 | 25,8 | ○ | 29-V-208A5 |
| V-208A6 | 1 | 210 | 9,7 | 21 | 25 | 75 | 25,5 | 0,149 | HJ08 | HC08 | MS125C | 4500 | 25 | ● | 29-V-208A6 |
| V-210A6 | 2 | 254 | 8,8 | 25 | 29 | 108 | 28,6 | 0,35 | HJ10 | HC10 | MS125C | 4000 | 40,5 | ● | 29-V-210A6 |
| V-210A8 | 1 | 254 | 8,8 | 25 | 29 | 108 | 28,6 | 0,33 | HJ10 | HC10 | MS125C | 4000 | 37,5 | ● | 29-V-210A8 |
| V-212A8 | 1 | 304 | 10,5 | 30 | 41 | 156 | 27,5 | 0,75 | HJ12-1 | HC12-1 | MS150C | 3300 | 62,5 | ● | 29-V-212A8 |
| V-212A11 | 3 | 304 | 10,5 | 30 | 41 | 156 | 27,5 | 0,888 | HJ12-1 | HC12-1 | MS150C | 3300 | 72,9 | ○ | 29-V-212A11 |
| V-215A8 | 2 | 381 | 16 | 35 | 82 | 249 | 32,6 | 2,05 | HJ15-1 | HC15-1 | MS200C | 3000 | 115 | ○ | 29-V-215A8 |
| V-215A11 | 1 | 381 | 16 | 35 | 82 | 249 | 32,6 | 1,92 | HJ15-1 | HC15-1 | MS200C | 3000 | 108 | ○ | 29-V-215A11 |
| V-218A8 | 2 | 450 | 16 | 35 | 82 | 249 | 32,6 | 3,35 | HJ15-1 | HC15-1 | MS200C | 2700 | 134 | ○ | 29-V-218A8 |
| V-218A11 | 1 | 450 | 16 | 35 | 82 | 249 | 32,6 | 3,05 | HJ15-1 | HC15-1 | MS200C | 2700 | 141 | ○ | 29-V-218A11 |
| V-224A11* | 2 | 610 | 16 | 35 | 82 | 249 | 32,6 | 7,6 | HJ24-1 | HC24-1 | MS200C | 1760 | 239 | ○ | 29-V-224A11 |
| V-224A15* | 1 | 610 | 16 | 35 | 82 | 273 | 32,6 | 7,38 | HJ24-1 | HC24-1 | MS200C | 1760 | 232 | ○ | 29-V-224A15 |

* Verzahnung / *serration* 3 x 60°
Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws*

| Typ / *Type* | A mm | B mm | H mm | D mm | C mm | K | M mm | J mm | L mm | E mm | F mm | G mm | O max. | O min. | P max. | P min. | S mm | U max | W mm | N max. | T mm | R mm | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-206A5 | 165 | 84 | 104,78 | 20 | 140 | 6-M10 | 5 | 14 | 21 | 15 | 82,563 | 116 | 14,75 | 7,25 | 89,6 | 69,6 | 36 | M16x2,0 | 34 | 38,7 | 31 | 12 | 3-M6 |
| V-206A6 | 165 | 104 | 133,35 | 20 | 140 | 6-M10 | 5 | 16 | 21 | 35 | 106,375 | 104,78 | 14,75 | 7,25 | 69,6 | 49,6 | 36 | M16x2,0 | 34 | 38,7 | 31 | 12 | 6-M12 |
| V-208A5 | 210 | 103 | 104,78 | 25 | 170 | 6-M12 | 5 | 13 | 25 | 23 | 82,563 | 133,35 | 22,25 | 10,25 | 109 | 88 | 36 | M20x2,5 | 38 | 46,8 | 35 | 14 | 6-M10 |
| V-208A6 | 210 | 97 | 133,35 | 25 | 170 | 6-M12 | 5 | 18 | 25 | 17 | 106,375 | 150 | 22,25 | 11,75 | 115 | 94 | 36 | M20x2,5 | 38 | 46,3 | 35 | 14 | 3-M6 |
| V-210A6 | 254 | 109 | 133,35 | 30 | 220 | 6-M16 | 5 | 18 | 34 | 25 | 106,375 | 171,45 | 30,75 | 11,25 | 133 | 108 | 36 | M20x2,5 | 45 | 51,1 | 40 | 16 | 6-M12 |
| V-210A8 | 254 | 102 | 171,45 | 30 | 220 | 6-M16 | 5 | 25 | 34 | 18 | 139,719 | 190 | 30,75 | 11,25 | 140 | 115 | 36 | M20x2,5 | 45 | 51,1 | 40 | 16 | 6-M8 |
| V-212A8 | 304 | 118 | 171,45 | 30 | 220 | 6-M16 | 6 | 25 | 34 | 18 | 139,719 | 190 | 48,75 | 12,75 | 145 | 115 | 36 | M20x2,5 | 50 | 61 | 50 | 18 | 6-M8 |
| V-212A11 | 304 | 150 | 235 | 30 | 220 | 6-M16 | 6 | 28 | 34 | 50 | 196,869 | 171,45 | 48,75 | 12,75 | 113 | 83 | 36 | M20x2,5 | 50 | 61 | 50 | 18 | 6-M20 |
| V-215A8 | 381 | 141 | 171,45 | 43 | 300 | 6-M20 | 6 | 24 | - | 33 | 139,719 | 235 | 50,25 | 23,25 | 71 | 36 | 55 | M30x3,5 | 60 | 77,5 | 50 | 25,5 | 6-M16 |
| V-215A11 | 381 | 130 | 235 | 43 | 300 | 6-M20 | 6 | 32 | - | 22 | 196,869 | 260 | 50,25 | 23,25 | 82 | 47 | 55 | M30x3,5 | 60 | 77,5 | 50 | 25,5 | 3-M10 |
| V-218A8 | 450 | 141 | 171,45 | 43 | 300 | 6-M20 | 6 | 24 | - | 33 | 139,719 | 235 | 50,25 | 23,25 | 59 | 24 | 50 | M30x3,5 | 60 | 108 | 62 | 25,5 | 6-M16 |
| V-218A11 | 450 | 130 | 235 | 43 | 300 | 6-M20 | 6 | 32 | - | 22 | 196,869 | 260 | 50,25 | 23,25 | 70 | 35 | 55 | M30x3,5 | 60 | 108 | 50 | 25,5 | 3-M10 |
| V-224A11 | 610 | 146 | 235 | 60 | 380 | 6-M24 | 6 | 28 | - | 27 | 196,869 | 330,2 | 93,5 | 24,5 | 70 | 35 | 55 | M30x3,5 | 60 | 125 | 65 | 25 | 6-M20 |
| V-224A15 | 610 | 146 | 330,2 | 60 | 380 | 6-M24 | 6 | 34 | - | 27 | 285,775 | 330,2 | 93,5 | 24,5 | 70 | 35 | 55 | M30x3,5 | 60 | 125 | 65 | 25 | 3-M12 |



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

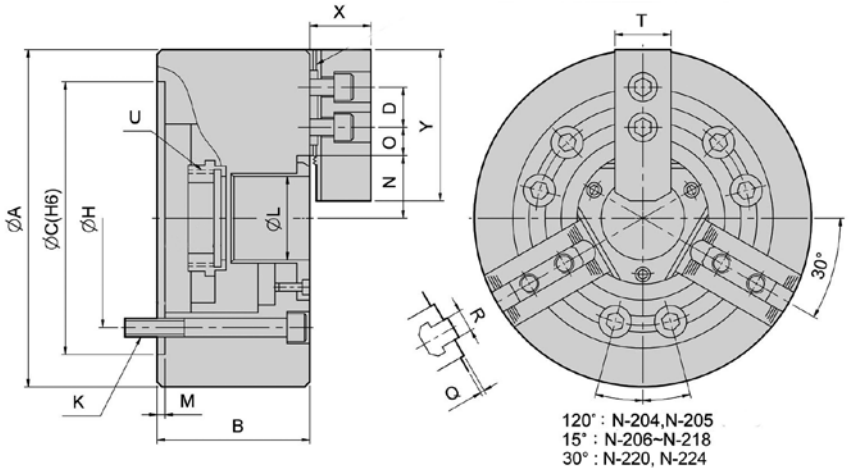
# Dreibacken-Kraftspannfutter mit Durchgangsbohrung - 1,5 x 60°
*Three-jaw power chucks with bore - 1,5 x 60°*

AUTO Strong

## Zylindrische Aufnahme, mit Durchgangsbohrung
## *Centre mount, with bore*



**Stahl / *Steel***




| Typ / *Type* | Ø mm | Durchgangsbohrung / *Through hole* mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigungskraft / *Max. Draw bar pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Trägheitsmoment / *Moment of inertia* (kgf-m2) | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / *Matching Cylinder* | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N-204 | 110 | 26 | 5,4 | 10 | 14 | 28,50 | 31,6 | 0,007 | HJ05 | HC04 | M0928 | 8000 | 4 | ● | 29-N-204 |
| N-205 | 135 | 33 | 5,4 | 10 | 17,50 | 36 | 28,5 | 0,018 | HJ05 | HC05 | M1036 | 7000 | 7 | ● | 29-N-205 |
| N-206 | 169 | 45 | 5,5 | 12 | 22 | 57 | 28,5 | 0,057 | HJ06 | HC06 | M1246 | 6000 | 13,5 | ● | 29-N-206 |
| N-208 | 210 | 52 | 7,4 | 16 | 34,89 | 89 | 26,5 | 0,17 | HJ08 | HC08 | M1552 | 4900 | 23 | ● | 29-N-208 |
| N-210 | 254 | 75 | 8,8 | 19 | 43 | 111 | 27,5 | 0,315 | HJ10 | HC10 | M1875 | 4200 | 35 | ● | 29-N-210 |
| N-212 | 304 | 91 | 10,6 | 23 | 57 | 147 | 27,5 | 0,737 | HJ12 | HC12 | M2091 | 3300 | 56,5 | ● | 29-N-212 |
| N-215 | 381 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | 2,27 | HJ15 | HC15 | M2511 | 2500 | 111 | ● | 29-N-215 |
| N-218 | 450 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | 3,55 | HJ15 | HC15 | M2511 | 2000 | 164 | ○ | 29-N-218 |
| N-220* | 510 | 180 | 10,6 | 23 | 90 | 234 | 30,6 | 6,5 | HJ24-1 | HC24-1 | ML2816 | 1800 | 190 | ○ | 29-N-220 |
| N-224* | 610 | 205 | 12 | 26 | 90 | 234 | 26,5 | 14,8 | HJ24-1 | HC24-1 | ML3320 | 1400 | 270 | ○ | 29-N-224 |

* Verzahnung / *serration* 3 x 60°
Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben, Zugrohradapterrohling
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws, blank draw tube adaptor*

| Typ / *Type* | A mm | B mm | C(H6) mm | H mm | M mm | L mm | U max. | T mm | Y mm | X mm | D mm | N max. mm | O max. mm | O min. mm | R mm | K mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N-204 | 110 | 59 | 85 | 70,6 | 4 | 26 | M32x1,5 | 23 | 49,5 | 24 | 14 | 23,2 | 13,75 | 6,75 | 10 | 3-M10x60 |
| N-205 | 135 | 60 | 110 | 82,55 | 4 | 33 | M40x1,5 | 23 | 54 | 26 | 14 | 26,5 | 19,75 | 7,75 | 10 | 3-M10x60 |
| N-206 | 169 | 81 | 140 | 104,78 | 5 | 45 | M55x2 | 32 | 73 | 37 | 20 | 32 | 22,75 | 9,25 | 12 | 6-M10x80 |
| N-208 | 210 | 91 | 170 | 133,35 | 5 | 52 | M60x2 | 37 | 95 | 38 | 25 | 38,7 | 29,75 | 14,75 | 14 | 6-M12x90 |
| N-210 | 254 | 100 | 220 | 171,45 | 5 | 75 | M85x2 | 42 | 110 | 43 | 30 | 51 | 33,75 | 14,25 | 16 | 6-M16x100 |
| N-212 | 304 | 110 | 220 | 171,45 | 6 | 91 | M100x2 | 52 | 130 | 51 | 30 | 61,3 | 45,75 | 15,75 | 21 | 6-M16x110 |
| N-215 | 381 | 133 | 300 | 235 | 6 | 117,5 | M130x2 | 62 | 165 | 66 | 43 | 82 | 46,75 | 13,75 | 24 | 6-M20x135 |
| N-218 | 450 | 133 | 300 | 235 | 6 | 117,5 | M130x2 | 62 | 165 | 66 | 43 | 82 | 79,25 | 13,75 | 24 | 6-M20x135 |
| N-220 | 510 | 134 | 380 | 330,2 | 6 | 180 | M190x3 | 65 | 180 | 73 | 60 | 112,5 | 60,5 | 24,5 | 25 | 6-M24x135 |
| N-224 | 610 | 147 | 520 | 463,6 | 6 | 205 | M215x3 | 65 | 180 | 73 | 60 | 139,9 | 87,5 | 24,5 | 25 | 6-M20x150 |

## Backen kompatibel zu Kitagawa Typ B200
## *Jaws compatible with Kitagawa type B200*

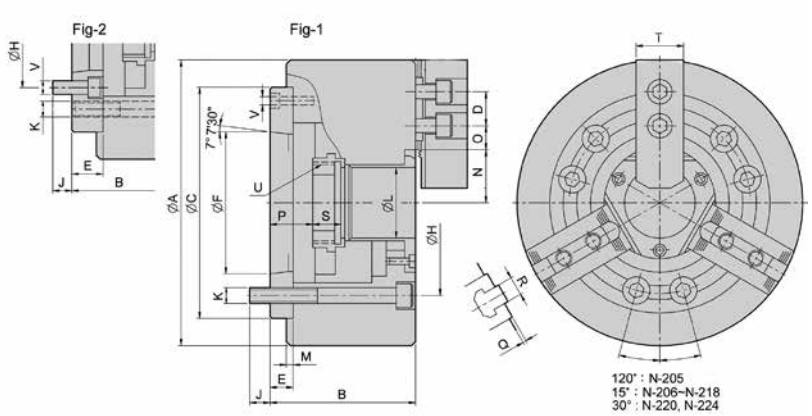
# Dreibacken-Kraftspannfutter mit Durchgangsbohrung - 1,5 x 60°
## *Three-jaw power chucks with bore - 1,5 x 60°*

AUTO Strong

### DIN 55026, mit Durchgangsbohrung
### *According to DIN 55026, with bore*



**Stahl / *Steel***




| Typ / *Type* | Fig | Ø mm | Durchgangsbohrung / *Through hole* mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigungskraft / *Max. Draw bar pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / *Matching Cylinder* | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N-205A4 | 1 | 135 | 33 | 5,4 | 10 | 17,50 | 36 | 28,5 | HJ05 | HC05 | M1036 | 7000 | 7,8 | ● | 29-N-205A4 | |
| N-205A5 | 3 | 135 | 33 | 5,4 | 10 | 17,50 | 36 | 28,5 | HJ05 | HC05 | M1036 | 7000 | 9,0 | ○ | 29-N-205A5 | |
| N-206A4 | 2 | 169 | 45 | 5,5 | 12 | 22 | 57 | 28,5 | HJ06 | HC06 | M1246 | 6000 | 15,5 | ○ | 29-N-206A4 | |
| N-206A5 | 1 | 169 | 45 | 5,5 | 12 | 22 | 57 | 27,5 | HJ06 | HC06 | M1246 | 6000 | 14,7 | ● | 29-N-206A5 | |
| N-208A5 | 2 | 210 | 52 | 7,4 | 16 | 34,89 | 89 | 26,5 | HJ08 | HC08 | M1552 | 4900 | 25,8 | ● | 29-N-208A5 | |
| N-208A6 | 1 | 210 | 52 | 7,4 | 16 | 34,89 | 89 | 26,5 | HJ08 | HC08 | M1552 | 4900 | 25 | ● | 29-N-208A6 | |
| N-210A6 | 2 | 254 | 75 | 8,8 | 19 | 43 | 111 | 27,5 | HJ10 | HC10 | M1875 | 4200 | 41 | ● | 29-N-210A6 | |
| N-210A8 | 1 | 254 | 75 | 8,8 | 19 | 43 | 111 | 27,5 | HJ10 | HC10 | M1875 | 4200 | 38 | ● | 29-N-210A8 | |
| N-212A6 | 2 | 304 | 91 | 10,6 | 23 | 57 | 147 | 27,5 | HJ12 | HC12 | M2091 | 3300 | 62,5 | ● | 29-N-212A6 | |
| N-212A8 | 1 | 304 | 91 | 10,6 | 23 | 57 | 147 | 27,5 | HJ12 | HC12 | M2091 | 3300 | 59,5 | ● | 29-N-212A8 | |
| N-215A8 | 2 | 381 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | HJ15 | HC15 | M2511 | 2500 | 125 | ● | 29-N-215A8 | |
| N-215A11 | 1 | 381 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | HJ15 | HC15 | M2511 | 2500 | 118 | ○ | 29-N-215A11 | |
| N-218A8 | 2 | 450 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | HJ15 | HC15 | M2511 | 2000 | 178 | ○ | 29-N-218A8 | |
| N-218A11 | 1 | 450 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | HJ15 | HC15 | M2511 | 2000 | 171 | ○ | 29-N-218A11 | |
| N-220A11* | 2 | 510 | 180 | 10,6 | 23 | 90 | 234 | 30,6 | HJ24-1 | HC24-1 | ML2816 | 1800 | 215 | ○ | 29-N-220A11 | |
| N-224A11* | 2 | 610 | 205 | 12 | 26 | 90 | 234 | 26,5 | HJ24-1 | HC24-1 | ML3320 | 1400 | 332 | ○ | 29-N-224A11 | |

* Verzahnung / *serration* 3 x 60°
Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben, Zugrohradapterrohling
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws, blank draw tube adaptor*

| Typ / *Type* | A mm | B mm | G mm | D mm | E mm | F mm | C mm | H mm | J mm | K | L mm | M mm | N max. | O max. | O min. | P max. | P min. | Q mm | R mm | S mm | T mm | U max. | V |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N-205A4 | 135 | 71 | 96 | 14 | 15 | 63,513 | 110 | 82,55 | 15,5 | 3xM10 | 33 | 4 | 26,5 | 19,75 | 7,75 | 16 | 6 | 2 | 10 | 20 | 23 | M40x1,5 | 3xM6 |
| N-205A5 | 135 | 88 | 82,55 | 14 | 32 | 82,563 | 110 | 104,78 | 14 | 3xM10 | 33 | 4 | 26,5 | 19,75 | 7,75 | 33 | 23 | 2 | 12 | 20 | 25 | M40x1,5 | 6xM10 |
| N-206A4 | 169 | 96 | 104,78 | 20 | 20 | 63,513 | 140 | 82,55 | 16 | 6xM10 | 45 | 5 | 32 | 22,75 | 9,25 | 26 | 14 | 2 | 12 | 19 | 31 | M55x2,0 | 6xM10 |
| N-206A5 | 169 | 91 | 116 | 20 | 15 | 82,563 | 140 | 104,78 | 16 | 6xM10 | 45 | 5 | 32 | 22,75 | 9,25 | 26 | 14 | 2 | 12 | 19 | 32 | M55x2,0 | 6xM10 |
| N-208A5 | 210 | 109 | 135,35 | 25 | 23 | 82,563 | 170 | 104,78 | 13 | 6xM12 | 52 | 5 | 38,7 | 29,75 | 14,75 | 37,5 | 21,5 | 2 | 14 | 20,5 | 37 | M60x2,0 | 6xM12 |
| N-208A6 | 210 | 103 | 150 | 25 | 17 | 106,375 | 170 | 133,35 | 18 | 6xM12 | 52 | 5 | 38,7 | 29,75 | 14,75 | 31,5 | 15,5 | 2 | 14 | 20,5 | 37 | M85x2,0 | 6xM12 |
| N-210A6 | 254 | 120 | 171,45 | 30 | 25 | 106,375 | 220 | 133,35 | 18 | 6xM16 | 75 | 5 | 51 | 33,75 | 14,25 | 33,5 | 14,5 | 2 | 16 | 25 | 42 | M85x2,0 | 6xM16 |
| N-210A8 | 254 | 113 | 190 | 30 | 18 | 139,719 | 220 | 171,45 | 24 | 6xM16 | 75 | 5 | 51 | 33,75 | 14,25 | 26,5 | 7,5 | 2 | 16 | 25 | 42 | M100x2,0 | 6xM16 |
| N-212A6 | 304 | 129 | 171,45 | 30 | 25 | 106,375 | 220 | 133,35 | 18 | 6xM16 | 91 | 6 | 61,3 | 45,75 | 15,75 | 33 | 10 | 2 | 21 | 28 | 50 | M100x2,0 | 6xM12 |
| N-212A8 | 304 | 122 | 190 | 30 | 18 | 139,719 | 220 | 171,45 | 25 | 6xM16 | 91 | 6 | 61,3 | 45,75 | 15,75 | 26 | 3 | 2 | 21 | 28 | 50 | M100x2,0 | 3xM8 |
| N-215A8 | 381 | 160 | 235 | 43 | 33 | 139,719 | 300 | 171,45 | 24 | 6xM20 | 117,5 | 6 | 82 | 46,75 | 13,75 | 40 | 17 | 5 | 24 | 43 | 62 | M130x2,0 | 6xM20 |
| N-215A11 | 381 | 149 | 260 | 43 | 22 | 196,869 | 300 | 235 | 28 | 6xM20 | 117,5 | 6 | 82 | 46,75 | 13,75 | 29 | 6 | 5 | 24 | 43 | 62 | M130x2,0 | 6xM20 |
| N-218A8 | 450 | 160 | 235 | 43 | 33 | 139,719 | 300 | 171,45 | 24 | 6xM20 | 117,5 | 6 | 82 | 79,25 | 13,75 | 40 | 17 | 5 | 22 | 43 | 62 | M130x2,0 | 6xM20 |
| N-218A11 | 450 | 149 | 260 | 43 | 22 | 196,869 | 300 | 235 | 28 | 6xM20 | 117,5 | 6 | 82 | 79,25 | 13,75 | 29 | 6 | 5 | 22 | 43 | 62 | M130x2,0 | 6xM20 |
| N-220A11 | 510 | 169 | 330,2 | 60 | 41 | 196,869 | 380 | 235 | 30 | 6xM24 | 180 | 6 | 112,5 | 60,5 | 24,5 | 52 | 29 | 5 | 25 | 38 | 65 | M190x3,0 | 6xM20 |
| N-224A11 | 610 | 186 | 463,5 | 60 | 45 | 196,869 | 520 | 235 | 28 | 6xM24 | 205 | 6 | 139,9 | 87,5 | 24,5 | 61 | 35 | 5 | 25 | 38 | 65 | M215x3,0 | 6xM20 |



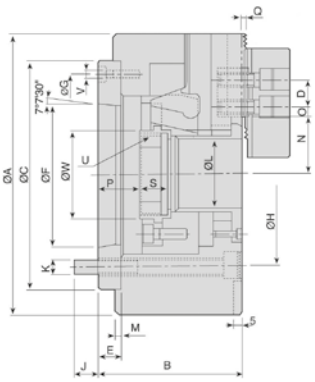
● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

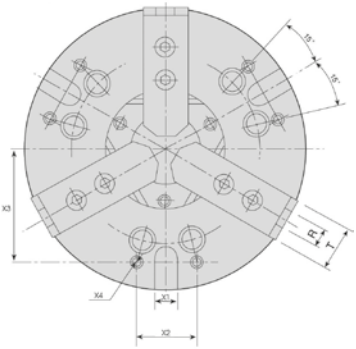
# Dreibacken-Kraftspannfutter mit großer Durchgangsbohrung - 1,5 x 60°
*Three-jaw power chucks with big bore - 1,5 x 60°*

AUTO Strong

## DIN 55026, mit großer Durchgangsbohrung
## *According to DIN 55026, with big bore*







### Stahl / *Steel*

| Typ / *Type* | Ø mm | Durchgangsbohrung / *Through hole* mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigungskraft / *Max. Draw bar pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / *Matching Cylinder* | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NB-206A5 | 170 | 52 | 6 | 13 | 22 | 57 | 18,4 | HJ06 | HC06 | M1552 | 6000 | 14,5 | ● | 29-NB-206A5 |
| NB-208A6 | 210 | 66 | 7,4 | 16 | 34,89 | 89 | 20,5 | HJ08 | HC08 | M1868 | 4600 | 24 | ● | 29-NB-208A6 |
| NB-210A8 | 254 | 78 | 8,8 | 19 | 43 | 111 | 27,5 | HJ10 | HC10 | M1878 | 4200 | 37,4 | ● | 29-NB-210A8 |
| NB-212A11 | 315 | 122 | 10,6 | 23 | 57 | 147 | 20,5 | HJ12 | HC12 | M2511 | 3200 | 65 | ○ | 29-NB-212A11 |
| NB-215A15 | 405 | 142 | 10,6 | 23 | 71 | 180 | 25,5 | HJ15 | HC15 | M2816 | 2500 | 130 | ○ | 29-NB-215A15 |
| NB-218A15 | 457 | 166,5 | 10,6 | 23 | 71 | 180 | 25,5 | HJ15 | HC15 | M2816 | 2000 | 160 | ○ | 29-NB-218A15 |

Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben, Zugrohradapterrohling
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws, blank draw tube adaptor*

| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | K | L mm | M mm | O max. | O min. | P max. | P min. | Q mm | R mm | S max. | T min. | U max | V | W mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NB-206A5 | 170 | 97 | 140 | 20 | 22 | 82,563 | 116 | 104,78 | 16 | 6xM10 | 52 | 5 | 18,25 | 9,25 | 30 | 17 | 2 | 12 | 16 | 32 | M60x2,0 | 3xM6 | 60 |
| NB-208A6 | 210 | 103 | 170 | 25 | 17 | 106,375 | 150 | 133,35 | 19,5 | 6xM12 | 66 | 5 | 23,75 | 11,75 | 31,5 | 15,5 | 2 | 14 | 20 | 37 | M74x2,0 | 3xM6 | 80 |
| NB-210A8 | 254 | 113 | 220 | 30 | 24 | 139,719 | 190 | 171,45 | 24 | 6xM16 | 78 | 5 | 33,75 | 14,25 | 26,5 | 7,5 | 2 | 16 | 25 | 42 | M87x2,0 | 6xM8 | 94 |
| NB-212A11 | 315 | 134 | 300 | 30 | 22 | 196,869 | 260 | 235 | 28 | 6xM20 | 122 | 6 | 36,25 | 12,75 | 42 | 19 | 2 | 21 | 28 | 52 | M135x2 | 3xM10 | 143 |
| NB-215A15 | 405 | 154 | 380 | 43 | 27 | 285,775 | 330 | 330,2 | 33 | 6xM24 | 142 | 6 | 45,25 | 15,25 | 34 | 11 | 5 | 22 | 43 | 62 | M155x2 | 3xM12 | 164 |
| NB-218A15 | 457 | 154 | 380 | 43 | 27 | 285,775 | 330 | 330,2 | 33 | 6xM24 | 166 | 6 | 63,25 | 18,25 | 34 | 11 | 5 | 22 | 43 | 62 | M180x3 | 3xM12 | 189 |

## Backen kompatibel zu Kitagawa Typ BB200
## *Jaws compatible with Kitagawa type BB200*

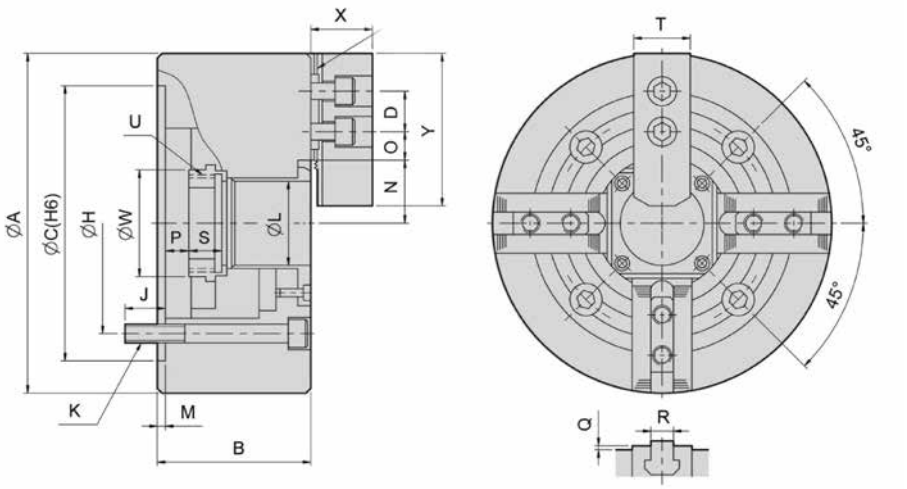
# Vierbacken-Kraftspannfutter mit Durchgangsbohrung - 1,5 x 60°
## *Four-jaw power chucks with bore - 1,5 x 60°*

AUTO Strong

### Zylindrische Aufnahme, mit Durchgangsbohrung
### *Centre mount, with bore*



**Stahl / *Steel***




| Typ / *Type* | Ø mm | Durchgangsbohrung / *Through hole* mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigungskraft / *Max. Draw bar pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Trägheitsmoment / *Moment of inertia* (kgf-m2) | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder / Matching Cylinder | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NIT-206 | 169 | 45 | 5,5 | 12 | 22 | 57 | 28,5 | 0,058 | HJ06 | HC06 | M1546 | 4500 | 14 | ● | 29-NIT-206 | |
| NIT-208 | 210 | 52 | 7,4 | 16 | 34,89 | 89 | 26,5 | 0,177 | HJ08 | HC08 | M1552 | 3600 | 24 | ● | 29-NIT-208 | |
| NIT-210 | 254 | 75 | 8,8 | 19 | 43 | 111 | 27,5 | 0,324 | HJ10 | HC10 | M1875 | 3200 | 36 | ● | 29-NIT-210 | |
| NIT-212 | 304 | 91 | 10,6 | 23 | 57 | 147 | 27,5 | 0,763 | HJ12 | HC12 | M2091 | 2700 | 58,5 | ○ | 29-NIT-212 | |
| NIT-215 | 381 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | 2,331 | HJ15 | HC15 | M2511 | 1900 | 114 | ○ | 29-NIT-215 | |
| NIT-218 | 450 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | 3,798 | HJ15 | HC15 | M2511 | 1500 | 140 | ○ | 29-NIT-218 | |
| NIT-224* | 610 | 205 | 12 | 26 | 90 | 234 | 26,5 | 15,2 | HJ24-1 | HC24-1 | ML3320 | 1000 | 284 | ○ | 29-NIT-224 | |

* Verzahnung / *serration* 3 x 60°
Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben, Zugrohradapterrohling
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws, blank draw tube adaptor*

| Typ / *Type* | A mm | B mm | C(H6) mm | H mm | M mm | L mm | U max. | T mm | Y mm | X mm | D mm | N max. mm | O max. mm | O min. mm | R mm | K mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 206 | 169 | 81 | 140 | 104,78 | 5 | 45 | M55x2 | 31 | 73 | 37 | 20 | 32 | 22,75 | 9,25 | 12 | 4-M10x80 |
| 208 | 210 | 91 | 170 | 133,35 | 5 | 52 | M60x2 | 35 | 95 | 38 | 25 | 38,7 | 29,75 | 14,75 | 14 | 4-M12x90 |
| 210 | 254 | 100 | 220 | 171,45 | 5 | 75 | M85x2 | 40 | 110 | 43 | 30 | 51 | 33,75 | 14,25 | 16 | 4-M16x100 |
| 212 | 304 | 110 | 220 | 171,45 | 6 | 91 | M100x2 | 50 | 130 | 51 | 30 | 61,3 | 45,75 | 15,75 | 21 | 4-M16x110 |
| 215 | 381 | 133 | 300 | 235 | 6 | 117,5 | M130x2 | 62 | 165 | 66 | 43 | 82 | 42,25 | 16,75 | 22 | 4-M20x135 |
| 218 | 450 | 133 | 300 | 235 | 6 | 117,5 | M130x2 | 62 | 165 | 66 | 43 | 82 | 79,75 | 15,25 | 22 | 4-M20x135 |
| 224 | 610 | 147 | 520 | 463,6 | 6 | 205 | M215x3 | 65 | 180 | 73 | 60 | 139,9 | 87,5 | 24,5 | 25 | 8-M24x150 |



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

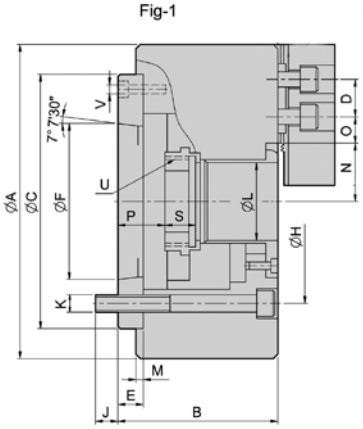
# Vierbacken-Kraftspannfutter mit Durchgangsbohrung - 1,5 x 60°
## *Four-jaw power chucks with bore - 1,5 x 60°*

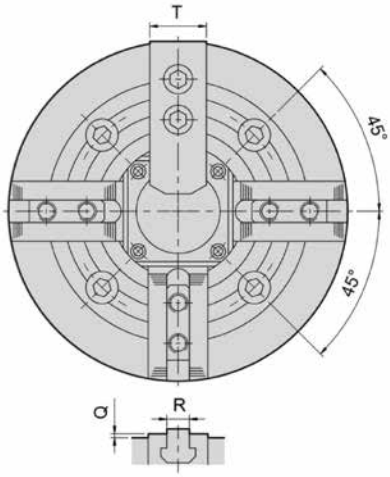
AUTO Strong

## DIN 55026, mit Durchgangsbohrung
## *According to DIN 55026, with bore*



Fig-1




**Stahl / *Steel***

| Typ / *Type* | Ø mm | Durchgangsbohrung / *Through hole* mm | Backenhub / *Jaw stroke* mm | Zugrohrhub / *Plunger stroke* mm | Max. Betätigungskraft / *Max. Draw bar pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Trägheitsmoment / *Moment of inertia* (kgf-m2) | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder Matching Cylinder | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NIT-206A5 | 169 | 45 | 5,5 | 12 | 22 | 57 | 28,5 | 0,058 | HJ06 | HC06 | M1246 | 4500 | 13,7 | ● | 29-NIT-206A5 |
| NIT-208A5 | 210 | 52 | 7,4 | 16 | 34,40 | 88 | 26,5 | 0,177 | HJ08 | HC08 | M1552 | 3600 | 24 | ● | 29-NIT-208A5 |
| NIT-208A6 | 210 | 52 | 7,4 | 16 | 34,40 | 88 | 26,5 | 0,177 | HJ08 | HC08 | M1552 | 3600 | 24 | ● | 29-NIT-208A6 |
| NIT-210A6 | 254 | 75 | 8,8 | 19 | 43 | 111 | 27,5 | 0,324 | HJ10 | HC10 | M1875 | 3200 | 36 | ● | 29-NIT-210A6 |
| NIT-210A8 | 254 | 75 | 8,8 | 19 | 43 | 111 | 27,5 | 0,324 | HJ10 | HC10 | M1875 | 3200 | 36 | ● | 29-NIT-210A8 |
| NIT-212A8 | 304 | 91 | 10,6 | 23 | 57 | 147 | 27,5 | 0,763 | HJ12 | HC12 | M2091 | 2700 | 58,5 | ○ | 29-NIT-212A8 |
| NIT-215A8 | 381 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | 2,331 | HJ15 | HC15 | M2511 | 1900 | 114 | ○ | 29-NIT-215A8 |
| NIT-215A11 | 381 | 117,5 | 10,6 | 23 | 71 | 180 | 23,5 | 2,331 | HJ15 | HC15 | M2511 | 1900 | 114 | ○ | 29-NIT-215A11 |

Inkl. je 1 Satz Grund- und weiche Aufsatzbacken, Befestigungsschrauben, Zugrohradapterrohling
*Incl. 1 set each of hardened base jaws and soft top jaws, fixation screws, blank draw tube adaptor*

| Typ / *Type* | A mm | B mm | D mm | E mm | F mm | C mm | H mm | J mm | K | L mm | M mm | N max. | O max. | O min. | P max. | P min. | Q mm | R mm | S mm | T mm | U max. | V | W mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 206A5 | 169 | 91 | 15 | 15 | 82,563 | 140 | 104,78 | 16 | 6xM10 | 45 | 5 | 32 | 22,75 | 9,25 | 26 | 14 | 2 | 12 | 19 | 32 | M55x2,0 | 6xM10 | 60 |
| 208A5 | 210 | 109 | 25 | 23 | 82,563 | 170 | 104,78 | 13 | 6xM12 | 52 | 5 | 38,7 | 29,75 | 14,75 | 37,5 | 21,5 | 2 | 14 | 20,5 | 37 | M60x2,0 | 6xM12 | 66 |
| 208A6 | 210 | 103 | 25 | 17 | 106,375 | 170 | 133,35 | 18 | 6xM12 | 52 | 5 | 38,7 | 29,75 | 14,75 | 31,5 | 15,5 | 2 | 14 | 20,5 | 37 | M60x2,0 | 6xM12 | 66 |
| 210A6 | 254 | 120 | 30 | 25 | 106,375 | 220 | 133,35 | 18 | 6xM16 | 75 | 5 | 51 | 33,75 | 14,25 | 33,5 | 14,5 | 2 | 16 | 25 | 42 | M85x2,0 | 6xM16 | 94 |
| 210A8 | 254 | 113 | 30 | 18 | 139,719 | 220 | 171,45 | 24 | 6xM16 | 75 | 5 | 51 | 33,75 | 14,25 | 26,5 | 7,5 | 2 | 16 | 25 | 42 | M85x2,0 | 6xM16 | 94 |
| 212A8 | 304 | 122 | 30 | 18 | 139,719 | 220 | 171,45 | 25 | 6xM16 | 91 | 6 | 61,3 | 45,75 | 15,75 | 26 | 3 | 2 | 21 | 28 | 52 | M100x2,0 | 6xM16 | 108 |
| 215A8 | 381 | 160 | 43 | 33 | 139,719 | 300 | 171,45 | 24 | 6xM20 | 117,5 | 6 | 82 | 46,75 | 13,75 | 40 | 17 | 5 | 24 | 43 | 62 | M130x2,0 | 6xM20 | 139 |
| 215A11 | 381 | 149 | 43 | 22 | 196,869 | 300 | 235 | 28 | 6xM20 | 117,5 | 6 | 82 | 46,75 | 13,75 | 29 | 6 | 5 | 24 | 43 | 62 | M130x2,0 | 6xM20 | 139 |

# Großes Dreibacken-Keilstangen-Kraftspannfutter ohne Durchgangsbohrung - Kreuzversatz
## *Large three-jaw wedge type power chuck, without bore - cross tenon*

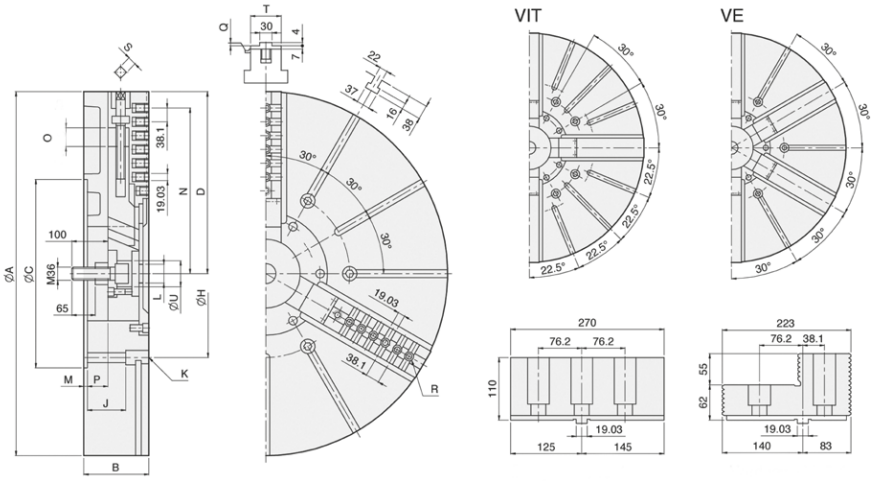
AUTO Strong

### Zylindrische Aufnahme, ohne Durchgangsbohrung
### *Centre mount, without bore*

NEU *NEW* !

- Grundbacken mit manuell einstellbarem Radialspiel
- für den vertikalen Einsatz geeignet
- *master jaw with manual radial setting function*
- *suitable for vertical lathes*






**Stahl / *Steel***

| Typ / *Type* | Backen / *Jaw* | Zugrohrhub / *Plunger stroke* mm | Backenhub / *Jaw stroke* mm | Max. Betätigungskraft / *Max. Draw bar pull force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Betätigungsdruck / *Max. operating pressure (kN)* | Trägheitsmoment / *Moment of inertia* (kgf-m2) | Passende harte Aufsatzbacken / *Matching hard jaws* | Passende weiche Aufsatzbacken / *Matching soft jaws* | Passender Zylinder Matching Cylinder | Max. Drehzahl / *Max. speed* (rpm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-240 | 3 | 57 | 23+30 | 180 | 320 | 42,8 | 0,082 | HJ40-1 | HC40-1 | MS250C | 630 | 645 | ○ | 29-V-240 |
| V-250 | 3 | 57 | 23+30 | 180 | 320 | 42,8 | 0,168 | HJ40-1 | HC40-1 | MS250C | 500 | 890 | ○ | 29-V-250 |
| V-263 | 3 | 60 | 24+40 | 200 | 360 | 46,9 | 0,548 | HJ40-1 | HC40-1 | MS250C | 400 | 1800 | ○ | 29-V-263 |

Inkl. 1 Satz Grundbacken, Befestigungsschrauben
*Incl. 1 set of hardened base jaws, fixation screws*

| Typ / *Type* | A mm | B mm | C mm | D max | H mm | J mm | K | L mm | M mm | N max. | O mm | P max. | P min. | Q mm | R mm | S mm | T mm | U mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V-240 | 1005 | 180 | 520 | 502 | 463.6 | 108 | M24 | M52x1.5 | 8 | 457 | 30 | 59 | 2 | 4 | 7-M24 | 19 | 85 | 72 |
| V-250 | 1250 | 180 | 520 | 623 | 463.6 | 108 | M24 | M52x1.5 | 8 | 563 | 30 | 59 | 2 | 4 | 10-M24 | 19 | 85 | 72 |
| V-263 | 1600 | 220 | 720 | 796 | 647.6 | 144 | M30 | M52x1.5 | 8 | 738 | 40 | 82 | 22 | 6 | 13-M24 | 22 | 110 | 72 |

**Auch als 4- und 6-Backen Ausführung auf Anfrage lieferbar**
***Also available as 4- or 6-jaw type upon request***



○ **Lagerstandard / *in stock***
◐ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

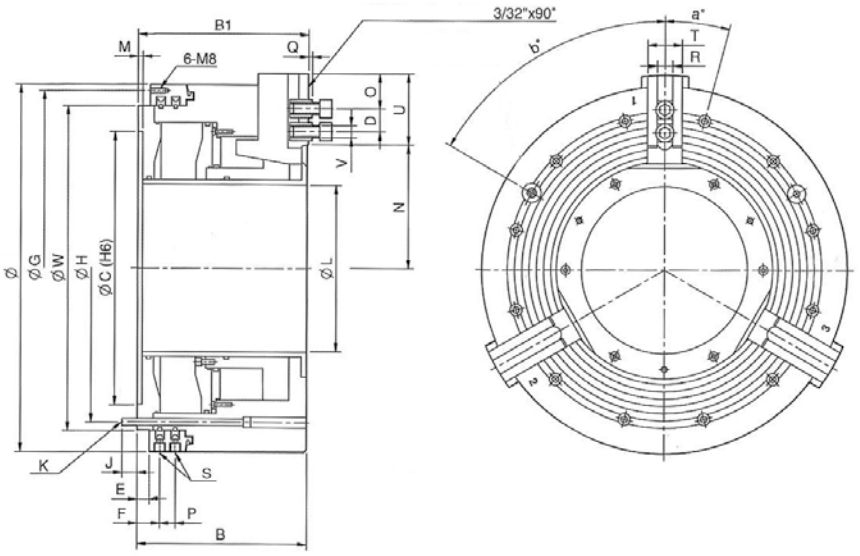
AUTO Strong

## Pneumatische Vorderendfutter mit zylindrischer Aufnahme
## *Pneumatic power chucks with centre mount*

- mit integriertem Pneumatikzylinder
- mit Eil- und Spannhub
- Spanndruck- und Spannhubkontrolle

- *with built-in pneumatic cylinder*
- *fast and clamping jaw stroke*
- *clamping pressure and stroke control*






**Stahl / *Steel***

| Typ / *Type* | Ø mm | Durchgangsbohrung / *Through-Hole* mm | Gesamtbackenhub / *Total stroke jaw* mm | Spannhub / *Clamping stroke* mm | Zylinderfläche / *Piston Area* ($cm^2$) | Betriebsdruck min.-max. / *Operating Pressure min.-max.* (bar) | Max. Spannkraft / *Max. gripping force (kN)* | Max. Drehzahl / *Max. speed* (rpm) | Trägheitsmoment / *Moment if intertia* ($kgf\text{-}m^2$) | Luftverbrauch / *Air consumption* | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PBES-605* | 605 | 275 | 25,4 | 8,5 | 954 | 2-10 | 180 | 1100 | 20,6 | 39,5 | 360 | ❍ | 29-PBES-605 |
| PBES-850* | 850 | 375 | 25,4 | 12 | 1342 | 2-10 | 250 | 750 | 110 | 68 | 980 | ❍ | 29-PBES-850 |

* Verzahnung / *serration* 3/32“ x 90°
Inkl. je 1 Satz Grund- und weiche Aufsatzbacken
*Incl. 1 set each of hardened base jaws and soft top jaws*

| Typ / *Type* | B mm | B1 mm | C mm | D max. / *min.* | E mm | F mm | G mm | H mm | J mm | K | L mm | M mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PBES-605 | 280 | 282 | 450 | 79/38 | 20 | 37 | 585 | 508 | 25 | 12-M12 | 275 | 8 |
| PBES-850 | 352 | 354 | 700 | 140/47 | 25 | 44,5 | 830 | 745 | 30 | 12-M16 | 375 | 8 |

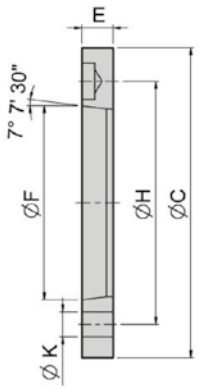
| Typ / *Type* | N max. / *min.* | O min. | P max. | Q min. | R mm | S mm | T mm | U mm | V mm | W mm | a° mm | b° mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PBES-605 | 204,6/*179,2* | 14 | 26 | 3 | 25,5 | G1/2 | 57 | 116,5 | M20 | 535 | 15 | 60 |
| PBES-850 | 268/*242,6* | 16 | 33 | 4 | 30 | G1/2 | 75 | 182 | M24 | 775 | 15 | 60 |

**Ersatzbacken auf Anfrage lieferbar**
***Spare jaws available upon request***

# Flansche nach DIN 55026 für Kraftspannfutter
## *Adaptor plates according to DIN 55026 for power chucks*

AUTO Strong






**Stahl / *Steel***

| Spindel / *Spindle* | C mm | E mm | F mm | H mm | K mm | Passende Futter / *Matching chucks* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| A4 | 110 | 15 | 63,513 | 82,55 | 3-11 | N-205 | ○ | 29-FN-205/4 |
| A4 | 110 | 15 | 63,513 | 82,55 | 4-11 | NT-205 | ○ | 29-FNT-205/4 |
| A5 | 140 | 15 | 82,563 | 104,78 | 6-11 | N-206, NB-306, V-206 | ○ | 29-FN-206/5 |
| A5 | 140 | 15 | 82,563 | 104,78 | 6-11 | NT-206, VT-206 | ○ | 29-FNT-206/5 |
| A5 | 140 | 15 | 82,563 | 104,78 | 4-11 | NIT-206 | ○ | 29-FNIT-206/5 |
| A6 | 170 | 17 | 106,375 | 133,35 | 6-13 | N-208, NB-208, V-208 | ● | 29-FN-208/6 |
| A6 | 170 | 17 | 106,375 | 133,35 | 6-13 | NT-208, VT-208 | ○ | 29-FNT-208/6 |
| A6 | 170 | 17 | 106,375 | 133,35 | 4-13 | NIT-208 | ○ | 29-FNIT-208/6 |
| A6 | 170 | 17 | 106,375 | 133,35 | 6-13 | NHT-208 | ○ | 29-FNHT-208/6 |
| A8 | 220 | 18 | 139,719 | 171,45 | 6-17 | N-210, N-212, NB-210, V-210, V-212 | ● | 29-FN-210/8 |
| A8 | 220 | 18 | 139,719 | 171,45 | 6-17 | NT-210, NT-212, VT-210, VT-212 | ○ | 29-FNT-210/8 |
| A8 | 220 | 18 | 139,719 | 171,45 | 4-17 | NIT-210, NIT-212, VIT-212 | ○ | 29-FNIT-210/8 |
| A11 | 300 | 22 | 196,869 | 235 | 6-21 | N-215, N-218, NB-212, V-215, V-218 | ○ | 29-FN-215/11 |
| A11 | 300 | 22 | 196,869 | 235 | 6-21 | NT-215, VT-215 | ○ | 29-FNT-215/11 |
| A11 | 300 | 22 | 196,869 | 235 | 4-21 | NIT-215, VIT-218 | ○ | 29-FNIT-215/11 |
| A15 | 380 | 27 | 285,775 | 330,2 | 6-25 | N-220, V-221, V-224, V-232, NB-215, NB-218 | ○ | 29-FN-220/15 |
| A15 | 380 | 27 | 285,775 | 330,2 | 8-25 | VIT-224, VIT-232 | ○ | 29-FVIT-224/15 |
| A20 | 520 | 25 | 412,775 | 463,6 | 6-25 | N-224, N-232, V-240, V-250 | ○ | 29-FN-224/20 |

AUTO Strong



## Fertiger Zugrohradapter inkl. Gewinde nach Kundenwunsch
## *Ready machined draw tube adapter incl. thread according to customer's requirement*

NEU *NEW* !

| | | Art.-Nr. / *Order no.* |
|---|---|---|
| Beispiel / *Ordering example* = 29-ZRA-M74X2,0 | ○ | 29-ZRA- |



○ Lagerstandard / *in stock*
◐ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

# Hydraulikzylinder mit Durchgang für hohe Drehzahlen
## *Hydraulic high speed cylinders with trough-hole*

AUTO Strong



### Typ M
### *Type M*

- kompakte und leichte Bauweise
- große Bohrung
- geeignet für hohe Drehzahlen

- *small sized and light-weight design*
- *large bore*
- *suitable for high speeds*

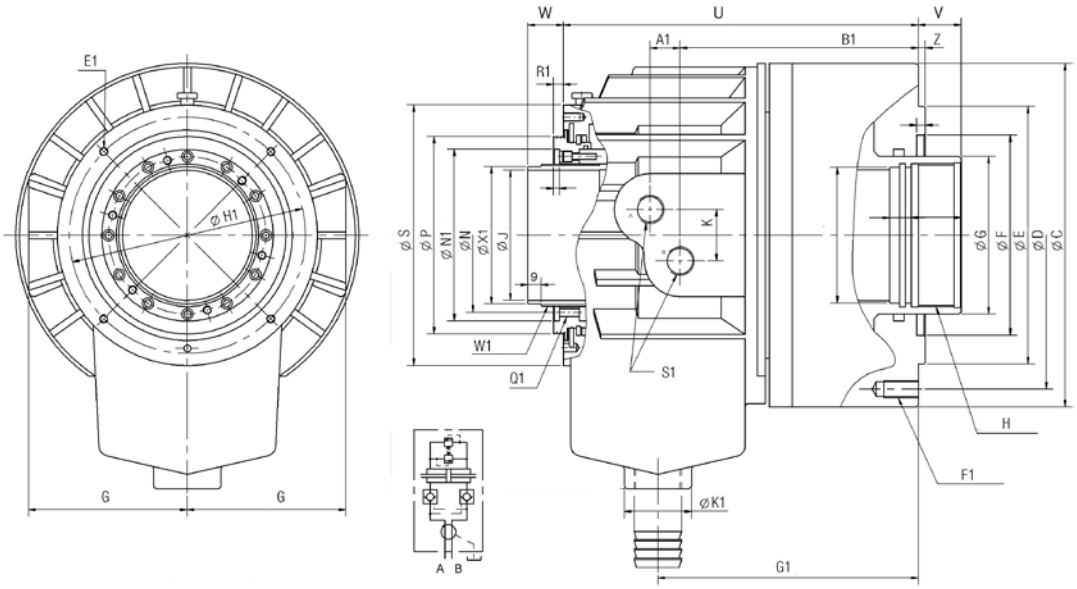
| Typ / *Type* | Kolbendurchmesser / *Piston dia* mm | Kolbenfläche Druckseite / *Piston area Pressure side* cm2 | Kolbenfläche Zugseite / *Piston area Pull side* cm2 | Kolbenhub / *Piston stroke* mm | Max. Zugrohrkraft (öffnen) / *Max. draw bar pull-push side* kgf | Max. Zugrohrkraft (schließen) / *Max. draw bar pull-pull side* kgf | Max. Betriebsdruck / *Max. operating pressure* kgf / *cm2* | Max. Drehzahl / *Max. speed* | Trägheitsmoment / *Moment of inertia* kg / *m²* | kg | Gesamtundichtheit / *Total leakage* L / *min* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M0928 | 90 | 53,2 | 48,3 | 10 | 19,9 (2029) | 18 (1835) | 40,8 | 8000 | 0,006 | 5,5 | 3,0 | ○ | 29-M0928 |
| M1036 | 105 | 71 | 68,5 | 15 | 24,8 (2529) | 24 (2447) | 40,8 | 8000 | 0,011 | 8,6 | 3,0 | ○ | 29-M1036 |
| M1236 | 125 | 100 | 89 | 15 | 38 (3875) | 33 (3365) | 40,8 | 7000 | 0,019 | 13 | 3,0 | ○ | 29-M1236 |
| M1246 | 125 | 100 | 89 | 15 | 38 (3875) | 33 (3365) | 40,8 | 7000 | 0,019 | 12 | 3,0 | ● | 29-M1246 |
| M1546 | 155 | 161 | 155 | 22 | 60 (6118) | 56 (5710) | 40,8 | 6200 | 0,052 | 18 | 3,9 | ○ | 29-M1546 |
| M1552 | 155 | 161 | 150 | 22 | 60 (6118) | 56 (5710) | 40,8 | 6200 | 0,052 | 16,8 | 3,9 | ● | 29-M1552 |
| M1868 | 180 | 198 | 197 | 25 | 74 (7546) | 73,5 (7495) | 40,8 | 4700 | 0,098 | 28 | 4,2 | ○ | 29-M1868 |
| M1870 | 180 | 198 | 183 | 25 | 74 (7546) | 69 (7036) | 40,8 | 4700 | 0,095 | 26,5 | 4,2 | ○ | 29-M1870 |
| M1875 | 180 | 198 | 183 | 25 | 74 (7546) | 69 (7036) | 40,8 | 4700 | 0,095 | 26 | 4,2 | ○ | 29-M1875 |
| M1878 | 180 | 198 | 183 | 25 | 74 (7546) | 69 (7036) | 40,8 | 4700 | 0,095 | 25,5 | 4,2 | ○ | 29-M1878 |
| M2085 | 205 | 252 | 234 | 30 | 94 (9584) | 88 (8973) | 40,8 | 3800 | 0,15 | 37,5 | 4,5 | ○ | 29-M2085 |
| M2091 | 205 | 252 | 234 | 30 | 94 (9584) | 88 (8973) | 40,8 | 3800 | 0,15 | 37 | 4,5 | ○ | 29-M2091 |
| M2511 | 250 | 348 | 336 | 23 | 124 (12644) | 120 (12236) | 40,8 | 2800 | 0,45 | 57 | 7,0 | ○ | 29-M2511 |

Inkl. Kühlmittelsammler
*Incl. coolant collector*

**Abmessungen siehe nächste Seite**
***Dimensions see next page***

# Hydraulikzylinder mit Durchgang für hohe Drehzahlen
*Hydraulic high speed cylinders with trough-hole*

## Typ M, Abmessungen
## *Type M, Dimensions*




| Typ / *Type* | C1 mm | E1 mm | F1 mm | G1 mm | H1 mm | J1 mm | K1 mm | L1 mm | M1 mm | N1 mm | O1 mm | P1 mm | Q1 mm | R1 mm | S1 mm | T1 mm | U1 mm | W1 mm | X1 mm | B mm | C mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M0928 | 25 | M6x1,0 | M8x1,25 | 110 | 76 | 58 | 44 | 15 | 34 | 53 | 14 | 4 | M4x0,7 | 5 | PT1/4″ | 5 | 116 | M34x1,5 | 32 | 85 | 120 |
| M1036 | 25 | M5x0,8 | M10x1,5 | 126 | 88 | 68 | 53 | 15 | 38 | 64 | 14 | 4 | M5x0,8 | 4 | PT3/8″ | 6 | 136 | M44x1,5 | 42 | 101 | 136 |
| M1236 | 25 | M6x1,0 | M10x1,5 | 135 | 98 | 76 | 47 | 15 | 38 | 76 | 14 | 4 | M5x0,8 | 6 | PT1/2″ | 6 | 169 | M52x1,5 | 50 | 99 | 154,5 |
| M1246 | 30 | M6x1,0 | M10x1,5 | 135 | 98 | 76 | 47 | 15 | 50 | 76 | 14 | 4 | M5x0,8 | 6 | PT1/2″ | 6 | 169 | M52x1,5 | 50 | 99 | 154,5 |
| M1546 | 30 | M6x1,0 | M10x1,5 | 145 | 110 | 86 | 47 | 15 | 50 | 85 | 14 | 4 | M6x1,0 | 7 | PT1/2″ | 6 | 187,5 | M58x1,5 | 56 | 103 | 190 |
| M1552 | 30 | M6x1,0 | M10x1,5 | 145 | 110 | 86 | 47 | 15 | 55 | 85 | 14 | 4 | M6x1,0 | 7 | PT1/2″ | 6 | 187,5 | M58x1,5 | 56 | 103 | 190 |
| M1868 | 35 | M6x1,0 | M10x1,5 | 166 | 155 | 101 | 47 | 15 | 70 | 108 | 16 | 4 | M6x1,0 | 7,5 | PT1/2″ | 6 | 220 | M84x2 | 81 | 126 | 215 |
| M1870 | 35 | M6x1,0 | M10x1,5 | 166 | 155 | 101 | 47 | 15 | 75 | 108 | 16 | 4 | M6x1,0 | 7,5 | PT1/2″ | 6 | 220 | M84x2 | 81 | 126 | 215 |
| M1875 | 35 | M6x1,0 | M10x1,5 | 166 | 155 | 101 | 47 | 15 | 80 | 108 | 16 | 4 | M6x1,0 | 7,5 | PT1/2″ | 6 | 220 | M84x2 | 81 | 126 | 215 |
| M1878 | 35 | M6x1,0 | M10x1,5 | 166 | 155 | 101 | 47 | 20 | 82 | 108 | 16 | 4 | M6x1,0 | 7,5 | PT1/2″ | 6 | 220 | M84x2 | 81 | 126 | 215 |
| M2085 | 35 | M6x1,0 | M12x1,75 | 182 | 165 | 110 | 47 | 20 | 89 | 120 | 16 | 4 | M6x1,0 | 7 | PT1/2″ | 6 | 267 | M99x2 | 96 | 141 | 240 |
| M2091 | 35 | M6x1,0 | M12x1,75 | 182 | 165 | 110 | 47 | 15 | 95 | 120 | 16 | 4 | M6x1,0 | 7 | PT1/2″ | 6 | 267 | M99x2 | 96 | 141 | 240 |
| M2511 | 45 | M6x1,0 | M16x2,0 | 197 | 206 | 129 | 55 | 20 | 123 | 160 | 18 | 5 | M6x1,0 | 7 | PT1/2″ | 6 | 294 | - | 134,6 | 186 | 310 |

| Typ / *Type* | D mm | E mm | F mm | G mm | H mm | J mm | K mm | L mm | N mm | P mm | Q mm | S mm | T mm | U max mm | V min mm | V max mm | W min mm | W mm | x mm | z mm | A1 mm | B1 mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M0928 | 100 | 80 | 65 | 44 | M38x1,5 | 28 | 25 | 54 | 44 | 59 | 65 | 90 | 105 | 156 | 9 | -1 | 35 | 25 | 3 | 5 | 9 | 108 |
| M1036 | 115 | 100 | 65 | 48 | M42x1,5 | 36 | 32 | 62 | 54 | 73 | 80 | 104 | 115 | 179,5 | 10 | -5 | 39 | 24 | 2,5 | 5 | 11 | 120,5 |
| M1236 | 130 | 100 | 80 | 65 | M42x1,5 | 36 | 36 | 67 | 64 | 85 | 90 | 118 | 114 | 184 | 10 | -5 | 40 | 25 | 4 | 5 | 11 | 126,5 |
| M1246 | 130 | 100 | 80 | 65 | M55x2 | 46 | 36 | 67 | 64 | 85 | 90 | 118 | 114 | 184 | 10 | -5 | 40 | 25 | 4 | 5 | 11 | 126,5 |
| M1546 | 170 | 130 | 85 | 65 | M55x2 | 46 | 36 | 75 | 73 | 96 | 102 | 137 | 130 | 196 | 17 | -5 | 47 | 25 | 4 | 5 | 11 | 136 |
| M1552 | 170 | 130 | 85 | 70 | M60x2 | 52 | 36 | 75 | 73 | 96 | 102 | 137 | 130 | 196 | 17 | -5 | 47 | 25 | 4 | 5 | 11 | 136 |
| M1868 | 190 | 160 | 120 | 85 | M75x2 | 68 | 36 | 84 | 98 | 121 | 131 | 166 | 160 | 230 | 20 | -5 | 50 | 25 | 4 | 5 | 17,5 | 152,5 |
| M1870 | 190 | 160 | 120 | 95 | M78x2 | 70 | 36 | 84 | 98 | 121 | 131 | 166 | 160 | 230 | 20 | -5 | 50 | 25 | 4 | 5 | 17,5 | 152,5 |
| M1875 | 190 | 160 | 120 | 95 | M85x2 | 75 | 36 | 84 | 98 | 121 | 131 | 166 | 160 | 230 | 20 | -5 | 50 | 25 | 4 | 5 | 17,5 | 152,5 |
| M1878 | 190 | 160 | 120 | 95 | M87x2 | 78 | 36 | 84 | 98 | 121 | 131 | 166 | 160 | 230 | 20 | -5 | 50 | 25 | 4 | 5 | 17,5 | 152,5 |
| M2085 | 215 | 180 | 140 | 110 | M93x2 | 85 | 36 | 93 | 108 | 138 | 148 | 182 | 185 | 253 | 25 | -5 | 55 | 25 | 3 | 5 | 21 | 166,5 |
| M2091 | 215 | 180 | 140 | 110 | M100x2 | 91 | 36 | 93 | 108 | 138 | 148 | 182 | 185 | 253 | 25 | -5 | 55 | 25 | 3 | 5 | 21 | 166,5 |
| M2511 | 275 | 230 | 166 | 140 | M130x2 | 117,5 | 36 | 89 | 148 | 178 | - | 232 | 215 | 296 | 18 | -5 | 38 | 15 | 3 | 6 | 27 | 184,5 |



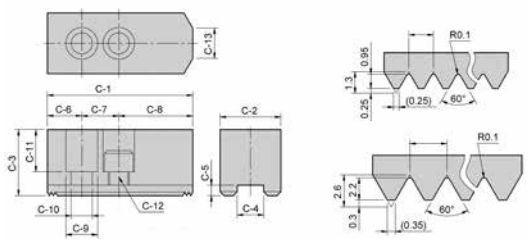
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Einzelne Backen für Kraftspannfutter
*Single jaws for hydraulic power chucks*

AUTO Strong

## Weiche Aufsatzbacken, Stück
## *Soft top jaws, piece*





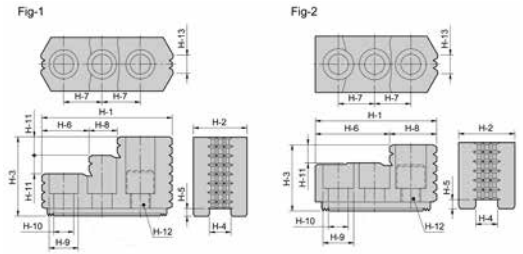

| Typ / *Type* | C-1 mm | C-2 mm | C-3 mm | C-4 mm | C-5 mm | C-6 mm | C-7 mm | C-8 mm | C-9 mm | C-10 mm | C-11 mm | C-12 | C-13 mm | Verzahnung / *Serration* | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC04 | 53 | 23 | 23 | 10 | 5 | 9 | 14 | 30 | 13,5 | 9 | 14 | M8 | 3 | 1,5x60° | 0,2 | ● | 29-HC-04 |
| HC05 | 62 | 25 | 30 | 10 | 5 | 9 | 14 | 39 | 13,5 | 9 | 21 | M8 | 5 | 1,5x60° | 0,3 | ● | 29-HC-05 |
| HC06 | 73 | 31 | 36 | 12 | 5 | 15 | 20 | 38 | 17 | 11 | 23 | M10 | 14 | 1,5x60° | 0,5 | ● | 29-HC-06 |
| HC08 | 95 | 35 | 37 | 14 | 5 | 24 | 25 | 46 | 19 | 13 | 22 | M12 | 16 | 1,5x60° | 0,8 | ● | 29-HC-08 |
| HC10 | 110 | 40 | 42 | 16 | 5 | 30 | 30 | 50 | 19 | 13 | 27 | M12 | 18 | 1,5x60° | 1,3 | ● | 29-HC-10 |
| HC12 | 130 | 50 | 50 | 21 | 5 | 39 | 30 | 61 | 25 | 17 | 30 | M16 | 23 | 1,5x60° | 2,2 | ● | 29-HC-12 |
| HC12-1 | 130 | 50 | 50 | 18 | 5 | 39 | 30 | 61 | 23 | 15 | 30 | M14 | 23 | 1,5x60° | 2,2 | ● | 29-HC-12-1 |
| HC15 | 165 | 62 | 62 | 22 | 8 | 37 | 43 | 85 | 32 | 21 | 38 | M20 | - | 1,5x60° | 4,2 | ● | 29-HC-15 |
| HC15-1 | 165 | 62 | 62 | 25,5 | 5 | 37 | 43 | 85 | 32 | 21 | 38 | M20 | - | 1,5x60° | 4,2 | ● | 29-HC-15-1 |
| HC24-1 | 180 | 65 | 70 | 25 | 9 | 40 | 60 | 80 | 32 | 21 | 45 | M20 | - | 3,0x60° | 5,3 | ● | 29-HC-24-1 |
| HC32-1 | 210 | 74 | 90 | 25 | 9 | 40 | 80 | 90 | 32 | 21 | 65 | M20 | - | 3,0x60° | 9,8 | ○ | 29-HC-32-1 |

Preis pro Stück / *Price per piece*

AUTO Strong

## Harte Aufsatzbacken, Stück
## *Hard top jaws, piece*






| Typ / *Type* | H-1 mm | H-2 mm | H-3 mm | H-4 mm | H-5 mm | H-6 mm | H-7 mm | H-8 mm | H-9 mm | H-10 mm | H-11 mm | H-12 | H-13 mm | Abb. / *Fig* | Verz. / *Serration* | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HJ05 | 53 | 23 | 27,5 | 10 | 4 | 30,5 | 14 | 22,5 | 13,5 | 8,5 | 10 | M8 | 6 | 2 | 1,5x60° | 0,2 | ● | 29-HJ-05 |
| HJ06 | 67 | 31 | 36 | 12 | 5 | 39,5 | 20 | 27,5 | 17 | 11 | 10 | M10 | 11 | 2 | 1,5x60° | 0,3 | ● | 29-HJ-06 |
| HJ08 | 86 | 35 | 51 | 14 | 5 | 31 | 25 | 18 | 19 | 13 | 12 | M12 | 12 | 1 | 1,5x60° | 0,6 | ● | 29-HJ-08 |
| HJ10 | 99,5 | 40 | 54 | 16 | 5 | 43 | 30 | 17 | 19 | 13 | 13 | M12 | 15 | 1 | 1,5x60° | 1,0 | ● | 29-HJ-10 |
| HJ12 | 103 | 50 | 52 | 21 | 4 | 62,5 | 30 | 40,5 | 25 | 17 | 17 | M16 | 30 | 2 | 1,5x60° | 1,2 | ● | 29-HJ-12 |
| HJ12-1 | 103 | 50 | 52 | 18 | 5 | 62,5 | 30 | 40,5 | 22 | 15 | 17 | M14 | 30 | 2 | 1,5x60° | 1,2 | ● | 29-HJ-12-1 |
| HJ15 | 149 | 62 | 86 | 22 | 8 | 63 | 43 | 34 | 32 | 21 | 20 | M20 | 40 | 1 | 1,5x60° | 3,2 | ● | 29-HJ-15 |
| HJ15-1 | 149 | 62 | 86 | 25,5 | 5 | 63 | 43 | 34 | 32 | 21 | 20 | M20 | 40 | 1 | 1,5x60° | 3,2 | ● | 29-HJ-15-1 |
| HJ24-1 | 159,5 | 80 | 90 | 25 | 9 | 104,5 | 50 | 55 | 32 | 21 | 40 | M20 | 55 | 2 | 3,0x60° | 4,7 | ● | 29-HJ-24-1 |

Preis pro Stück / *Price per piece*

**ACHTUNG:** **Es handelt sich nicht um Backensätze, sondern um einzelne Backen**
**Für Zwei-Backen-Futter bitte 2 Stück bzw. für Drei-Backen-Futter 3 Stück usw. bestellen**

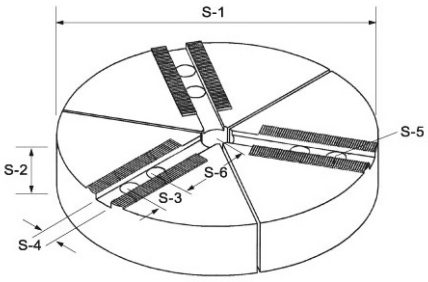
***ATTENTION:*** ***No sets are delivered, but single jaws***
***For two-jaw chucks please order 2 pieces, for three-jaw chucks 3 pieces etc.***

## Backen kompatibel zu Kitagawa Kraftspannfuttern
## *Jaws compatible with Kitagawa power chucks*

# Segmentbacken für Kraftspannfutter - Verzahnung 1,5 x 60°
*Pie jaws for power chucks - serration 1,5 x 60°*



**Stahl / *Steel***




## Weiche Segmentbacken für Kraftspannfutter, Satz
## *Soft pie jaws for power chucks, set*

- besonders für verformungsempfindliche Werkstücke geeignet
- Spannkraftübertragung auf große Spannfläche, da das Werkstück fast vollständig umschlossen wird
- können als Backenrohling für Sonderbacken genutzt werden

- *suitable for thin-walled work pieces*
- *large clamping nearly the entire circumference of the work piece*
- *can be used as blanks for special jaws*

| Für Futter-Typ / *For chuck type* | S-1 mm | S-2 mm | S-3 mm | S-4 mm | S-5 mm | S-6 mm | Durchg. / *Thru hole* mm | Verzahnung / *Serration* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 205 | 135 | 32 | 14 | 10 | M8 | 43,5 | 25 | 1,5x60° | ○ | 29-SAB-05 |
| 206 | 169 | 40 | 20 | 12 | M10 | 49,5 | 25 | 1,5x60° | ● | 29-SAB-06 |
| 208 | 200 | 40 | 25 | 14 | M12 | 51 | 25 | 1,5x60° | ● | 29-SAB-08 |
| 208 | 200 | 50 | 25 | 14 | M12 | 51 | 25 | 1,5x60° | ○ | 29-SAB-08-1 |
| 210 | 250 | 50 | 30 | 16 | M12 | 65 | 25 | 1,5x60° | ○ | 29-SAB-10 |
| 212 | 300 | 50 | 30 | 21 | M16 | 81 | 25 | 1,5x60° | ○ | 29-SAB-12 |

Preis pro Satz / *Price per set*

# Nutensteine
# *T-Nuts*

AUTO Strong



## Nutenstein für Kraftspannfutter, Stück
## *T-nut for power chucks, piece*

**Fig. 1**

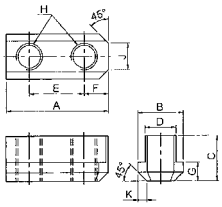



**Fig. 2**

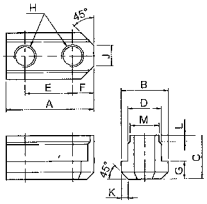
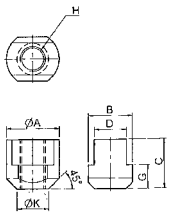



**Fig. 3**




| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H | J mm | K mm | L mm | M mm | Abb. / *Fig.* | Passend zu Futter / *Matching chuck* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N0205-0H | 26 | 14,5 | 15 | 10 | 14 | 6 | 5,5 | M8 | 5 | 2 | - | - | 1 | N-204, N-205 | ● | 29-N0205-0H |
| N0206-0H | 36 | 17,5 | 18,5 | 12 | 20 | 8,2 | 7,5 | M10 | 8 | 2,5 | - | - | 1 | N-206, NB-306 | ● | 29-N0206-0H |
| N0208-0H | 46,5 | 20,5 | 20,5 | 14 | 25 | 10,5 | 8,5 | M12 | 12 | 4 | - | - | 1 | N-208, NB-208 | ● | 29-N0208-0H |
| N0210-0H | 51 | 22,5 | 21,5 | 16 | 30 | 11 | 8,5 | M12 | 11 | 3 | - | - | 1 | N-210, NB-210 | ● | 29-N0210-0H |
| N0212-0H | 55,5 | 29,5 | 27,8 | 21 | 30 | 12 | 11,5 | M16 | 13 | 4,5 | - | - | 1 | N-212, NB-212 | ● | 29-N0212-0H |
| N0215-0H | 80 | 33,5 | 45,5 | 24 | 43 | 17 | 16,5 | M20 | 11 | 5 | 8 | 22 | 2 | N-215, N-218 | ● | 29-N0215-0H |
| V0206-0H | 36,5 | 17,5 | 22,5 | 12 | 20 | 7,5 | 7,5 | M10 | 6 | 3 | - | - | 1 | V-206, NHT-208 | ● | 29-V0206-0H |
| V0208-0H | 48 | 20,5 | 25,5 | 14 | 25 | 11 | 9,5 | M12 | 8 | 4 | - | - | 1 | V-208 | ● | 29-V0208-0H |
| V0210-0H | 55 | 22,5 | 25,5 | 16 | 30 | 11 | 9,5 | M12 | 8 | 4 | - | - | 1 | V-210 | ● | 29-V0210-0H |
| V0212-0H | 55,5 | 26,5 | 33,5 | 18 | 30 | 11,5 | 13,5 | M14 | 12 | 5 | - | - | 1 | V-212 | ● | 29-V0212-0H |
| V0215-0H | 42 | 35 | 39,2 | 25,5 | - | - | 19 | M20 | - | 25 | - | - | 3 | V-215, V-218 | ● | 29-V0215-0H |
| V0215-0H1 | 42 | 35 | 41,2 | 26 | - | - | 19 | M20 | - | 25 | - | - | 3 | V-215P3,0 | ● | 29-V0215-1-0H |
| V0224-0H | 46 | 37,5 | 45 | 25 | - | - | 19 | M20 | - | 26,5 | - | - | 3 | N-220, N-224, V-221, V-224, V-232 | ● | 29-V0224-0H |

Lieferung erfolgt ohne Schrauben / *Screws not included*
Preis pro Stück / *Price per piece*



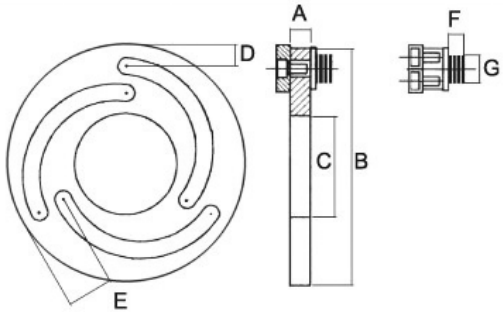
● **Lagerstandard / *in stock***
◑ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

## Ausdrehvorrichtungen für Kraftspannfutter
## *Jaw turning fixtures for power chucks*

- schnelle und flexible Handhabung
- *ease of handling*








| Für Futter-Typ / *For chuck type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 205 | 12 | 140 | 60 | 12 | 28 | 9 | 13 | 2 | ● | 29-ADKF-05 |
| 206 | 12 | 168 | 80 | 12 | 32 | 9 | 16,5 | 2 | ● | 29-ADKF-06 |
| 208 | 12 | 218 | 115 | 15 | 36 | 9 | 18,5 | 3 | ● | 29-ADKF-08 |
| 210 | 12 | 258 | 150 | 17 | 40 | 9 | 18,5 | 4 | ● | 29-ADKF-10 |
| 212 | 15 | 316 | 188 | 21 | 50 | 9 | 22,5 | 6 | ● | 29-ADKF-12 |
| 215 | 20 | 380 | 230 | 23 | 52 | 16 | 31 | 11 | ● | 29-ADKF-15 |

# Spannzangenfutter
# *Collet chucks*

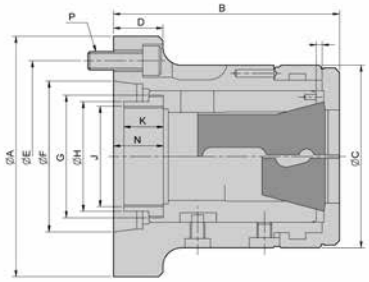
AUTO Strong

## Kraftspannzangenfutter CR
## *Collet chucks CR power operated*



- kompakte Bauweise
- hohe Rundlaufgenauigkeit

- *compact design*
- *high concentricity*




| Futter / *Chuck* | Spannzange / *Collet* | ○ max. | ⬡ max. | □ max. |
|---|---|---|---|---|
| CR26 | 161E | 26 | 22 | 18 |
| CR30 | 163E | 30 | 26 | 21 |
| CR42 | 173E | 42 | 36 | 30 |
| CR60 | 185E | 60 | 52 | 42 |
| CR80 | 193E | 80 | 69 | 56 |

| | Typ / *Type* | A mm | Aufnahme / *Mounting* | Max. Stangendurchmesser / *Bar capacity* mm | Spannhub / *Sleeve stroke* mm | Max. Betätigungskraft / *Max. operating force (kN)* | Max. Spannkraft / *Max. gripping force (kN)* | Max. Drehzahl / *Max. speed* (Upm) | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N | CR26A4 | 112 | A2-4 | 26 | 5 | 20 | 44 | 7000 | 4,5 | ● | 29-CR-26A4 |
| | CR30A4 | 112 | A2-4 | 30 | 5 | 20 | 44 | 7000 | 4,1 | ● | 29-CR-30A4 |
| | CR42 | 155 | Zyl Ø140 | 42 | 7 | 25 | 55 | 6000 | 6,2 | ● | 29-CR-42 |
| | CR42A5 | 135 | A2-5 | 42 | 7 | 25 | 55 | 6000 | 6,2 | ● | 29-CR-42A5 |
| | CR42A6 | 170 | A2-6 | 42 | 7 | 25 | 55 | 6000 | 11,5 | ● | 29-CR-42A6 |
| | CR60 | 185 | Zyl Ø170 | 60 | 7 | 30 | 65 | 5000 | 13 | ● | 29-CR-60 |
| | CR60A6 | 170 | A2-6 | 60 | 7 | 30 | 65 | 5000 | 13 | ● | 29-CR-60A6 |
| | CR80A8 | 220 | A2-8 | 80 | 7 | 35 | 73 | 4000 | 21 | ● | 29-CR-80A8 |

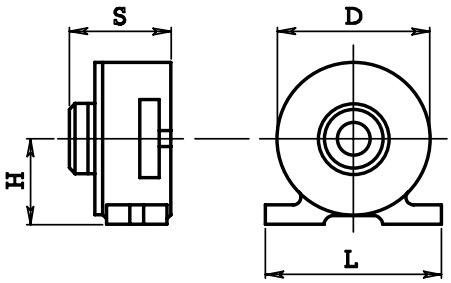
| Typ / *Type* | B mm | C mm | D mm | E mm | F mm | G | H mm | J max. | K mm | N mm | P | T mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CR26A4 | 103,5 | 85 | 30 | 82,55 | 63,513 | M50x1,5 | 45 | M40x1,5 | 15 | 21,7 | 3-M10 | 2,3 |
| CR30A4 | 103,5 | 85 | 30 | 82,55 | 63,513 | M50x1,5 | 45 | M40x1,5 | 15 | 21,7 | 3-M10 | 2,3 |
| CR42 | 114 | 100 | 23 | 104,78 | 140 | M66x1,5 | 66 | M55x2,0 | 25 | - | 3-M10 | 3,1 |
| CR42A5 | 124 | 100 | 27 | 104,78 | 82,563 | M66x1,5 | 60 | M55x2,0 | 25 | 27,4 | 4-M10 | 3,1 |
| CR42A6 | 124 | 100 | 32 | 133,35 | 106,375 | M66x1,5 | 66 | M60x2,0 | 22 | 27,4 | 4-M12 | 3,1 |
| CR60 | 139 | 130 | 30 | 133,35 | 170 | M90x1,5 | 80 | M74x2,0 | 30 | - | 6-M12 | 3,1 |
| CR60A6 | 145 | 130 | 27 | 133,35 | 106,375 | M90x1,5 | 80 | M74x2,0 | 30 | 29,9 | 4-M12 | 3,1 |
| CR80A8 | 170 | 156 | 35 | 171,45 | 139,719 | M114x2,0 | 99 | M90x2,0 | 27,5 | 34,9 | 6-M16 | 6,1 |

## Pneumatische Spannzangenfutter für Druckspannzangen
## *Pneumatic collet chucks for dead length collets*



- pneumatische Spannung
- hochpräzise Werkstückzentrierung
- horizontal und vertikal einsetzbar

- *pneumatic clamping*
- *precise centering of work piece*
- *for horizontal and vertical application*



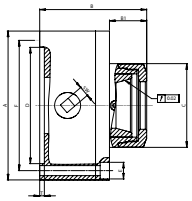

| | Für SZ / *For collet* | D mm | H mm | L mm | S mm | Spannkraft / *Clamping force* bei / *per 6 bar* | Spannkraft / *Clamping force* bei / *per 8 bar* | Spannkraft / *Clamping force* bei / *per 10 bar* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| | 161E (2-26) | 152 | 77 | 170 | 97 | 5 kN | 7 kN | 9 kN | ◗ | 14-PSF-161E |
| | 173E (3-42) | 165 | 85 | 180 | 117 | 6 kN | 8 kN | 10 kN | ◗ | 14-PSF-173E |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Spannzangenfutter für Druckspannzangen
## *Collet chucks for dead-length collets*





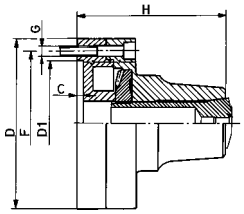
**Technische Merkmale:**
- Handbetätigung mit Schlüssel am Futterkörper
- Standardaufnahme DIN 6350
- Spannzangenart: Druckspannzangen DIN 6343, Typ 161E / 163E / 164E / 173E / 185E
- einsetzbar auf Dreh-, Fräs- und Bohrmaschinen

***Technical features:***
- *manually operated by wrench*
- *standard mounting DIN 6350*
- *for dead length collets DIN 6343, type 161E / 163E / 164E / 173E / 185E*
- *suitable for milling, driling and grinding operations*

| Ø mm | Spann-zange / *Collet* | Bereich / *Range* mm | A mm | B mm | B1 mm | C mm | D (H6) mm | F mm | E Ø | T mm | SW mm | $RPM_{MAX}$ min-1 | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 161E | 1-26 | 160 | 115 | 40 | 90 | 125 | 140 | 3x10,5 | 5 | 11 | 4500 | ○ | 79-SZF-161E |
| 35 | 163E | 2-30 | 160 | 115 | 40 | 90 | 125 | 140 | 3x10,5 | 5 | 11 | 4500 | ○ | 79-SZF-163E |
| 38 | 164E | 2-32 | 160 | 115 | 40 | 90 | 125 | 140 | 3x10,5 | 5 | 11 | 4500 | ○ | 79-SZF-164E |
| 48 | 173E | 3-42 | 160 | 115 | 40 | 90 | 125 | 140 | 3x10,5 | 5 | 11 | 4500 | ○ | 79-SZF-173E |
| 66 | 185E | 4-60 | 200 | 125 | 78 | 152 | 160 | 176 | 3x10,5 | 5 | 11 | 4000 | ○ | 79-SZF-185E |

Inkl. Betätigungsschlüssel, Hakenschlüssel und Befestigungsschrauben
*Incl. wrench, hook spanner and fixing screws*



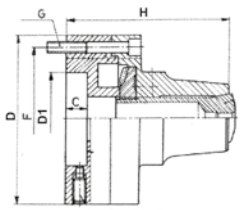



## 5C-Spannzangenfutter, mit zylindrischer Aufnahme
## *5C-collet chuck, centre mount*

| C mm | D (Ø) mm | D1 mm | F mm | G mm | H mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 126 | 95 | 108 | 3 x M8 x 45 | 107,4 | 6000 | 4,5 | ● | ZE-SF5C-125 |

Inkl. Spannschlüssel und Befestigungsschrauben
*Incl. wrench and fixing screws*






## 5C-Spannzangenfutter, mit zylindrischer Aufnahme mit radialer Feineinstellung
## *5C-collet chuck, centre mount with radial fine adjustment*

| C mm | D (Ø) mm | D1 mm | F mm | G mm | H mm | $RPM_{MAX}$ min-1 | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 15 | 126 | 55 | 108 | 3 x M8 x 55 | 117 | 6000 | 5,4 | ● | ZE-SF5C-125FE |

Inkl. Spannschlüssel und Befestigungsschrauben
*Incl. wrench and fixing screws*

**Mit allen gängigen Spindelaufnahmen lieferbar. Passende Spannzangen auf Seite 188**
***Available for all spindle tapers. Suitable collets see page 188***

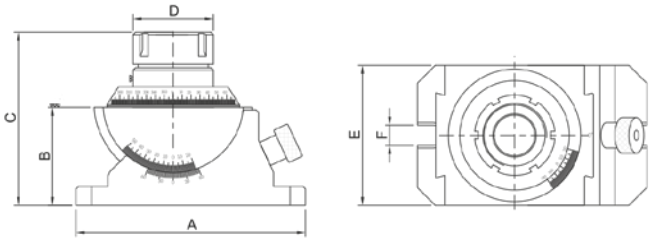
# Spannzangenfutter
# *Collet chucks*

## Dreh- und schwenkbares Spannzangenfutter
## *Universal angle collet chuck*

- für Spannzangen ER40 (2-30)
- mit Skalenring 360°
- Toleranz ± 0,01 mm / 100 mm
- 45° schwenkbar
- Nonius

- *for collets ER40 (2-30)*
- *360° scale ring*
- *tolerance ± 0.01 mm / 100 mm*
- *45° vertical tilting*
- *Vernier*



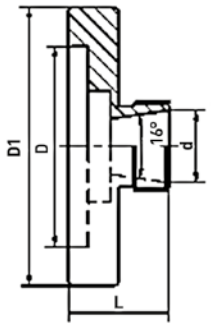



| A mm | B mm | C mm | D mm | E mm | F mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 180 | 77 | 136 | 63 | 110 | 16 | ZE-SZS-ER40 |

**Passende Spannzangen auf Seite 181**
***Suitable collets see page 181***

# Spannzangenvorrichtungen
# *Collet fixtures*






## Spannzangenvorrichtungen
## *Collet fixtures*

- mit zylindrischer Aufnahme
- geeignet als stationäre Spannvorrichtung oder zur Aufnahme im Drehfutter

- *cylindrical mounting*
- *suitable as stationary clamping device or for use in lathe chucks*

| Für SZ / *For collet* | D1 mm | D mm | d mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| ER 16 | 45 | 22 | 16 | 25 | ZE-SPV-ER16-045 |
| ER 25 | 100 | 72 | 25 | 36 | ZE-SPV-ER25-100 |
| ER 32 | 80 | 55 | 32 | 42 | ZE-SPV-ER32-080 |
| ER 32 | 125 | 95 | 32 | 42 | ZE-SPV-ER32-125 |

**Passende Spannzangen auf Seite 181**
***Suitable collets see page 181***

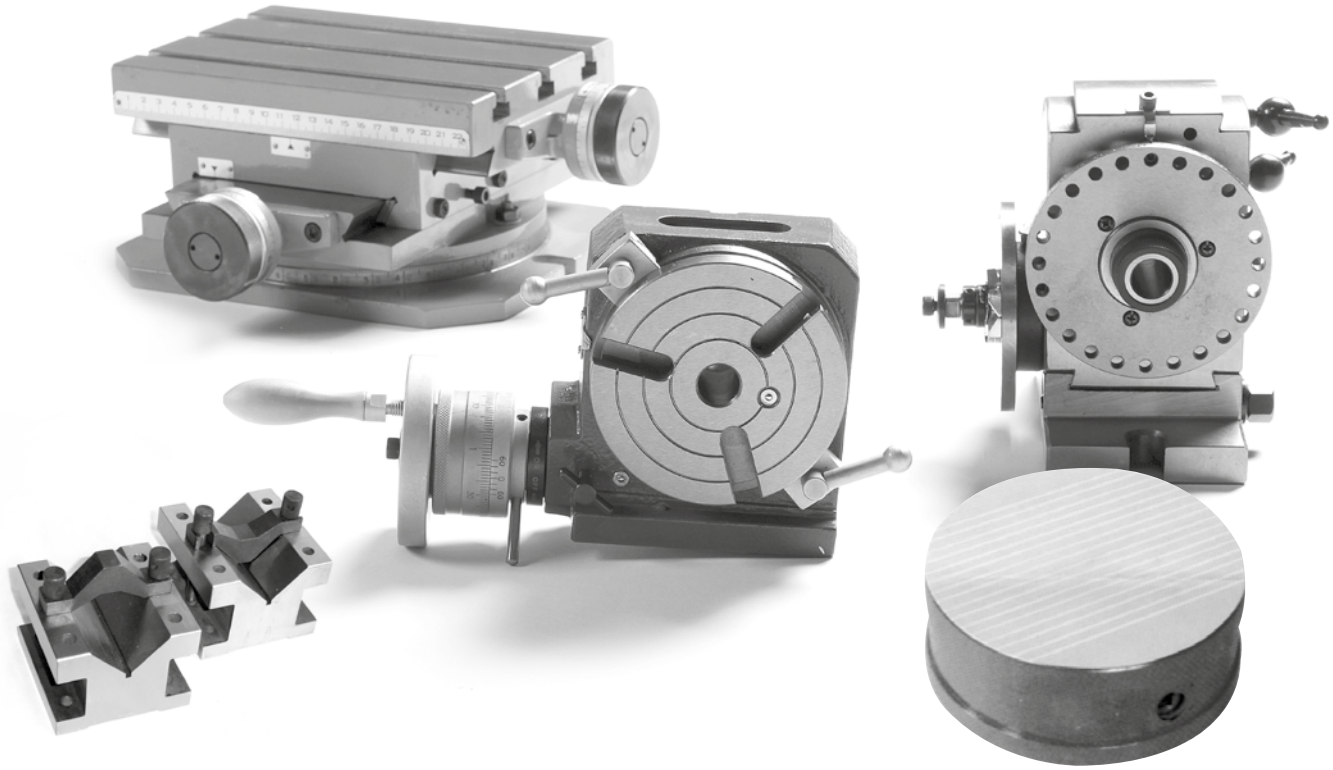


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Aufspannvorrichtungen, Prismenblöcke und Winkelprismen, Magnetspannplatten, Klauenkästen, Keilspanner, Kreuz- und Schiebetische, Aufspannwinkel und Aufspannwürfel

## *Clamping fixtures, V-blocks and angle prisms, magnetic plates, box jaws, wedge clamps, cross and slide tables, angle plates and clamping cubes*





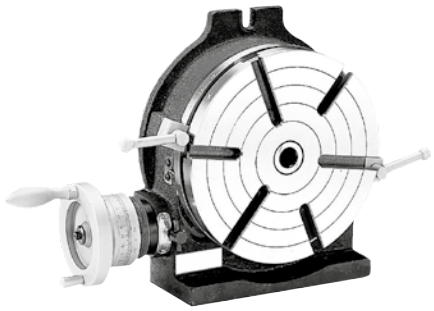
## Inhalt:

**2.1 | Aufspannvorrichtungen**
| Rundtische
| Teilapparate
| Reitstöcke
| Zubehör für Teilapparate und Rundtische
| Rundtische und Teilapparate inkl. Drehfutter
| Schwenkbare Rundtische, Spanntische
| Stationäre Drehfutter
| Drehfutter auf Drehplatte
**2.2 | Prismenblöcke - Winkelprismen**
**2.3 | Magnetspannplatten**
**2.4 | Klauenkästen**
**2.5 | Keilspanner**
**2.6 | Kreuz- und Schiebetische**
**2.7 | Aufspannwinkel und Aufspannwürfel**

## *Content:*

***2.1 | Clamping fixtures***
| *Rotary tables*
| *Indexing fixtures*
| *Tailstocks*
| *Accessories for indexing fixtures and rotary tables*
| *Rotary tables and indexing fixtures incl. lathe chucks*
| *Rotary table, tiltable and swivel angle plates*
| *Stationary lathe chucks*
| *Lathe chucks on swivel plate*
***2.2 | V-Blocks - Angle prisms***
***2.3 | Magnetic plates***
***2.4 | Box jaws***
***2.5 | Wedge clamps***
***2.6 | Cross and slide tables***
***2.7 | Angle plates and angle cubes***

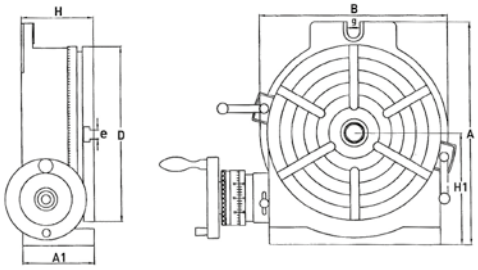
# Rundtische und Teilapparate
# *Rotary tables and indexing fixtures*



## Präzisions-Rundtisch
## *Precision rotary table*

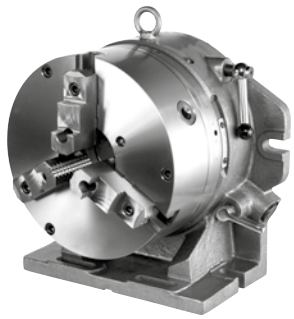
- horizontal und vertikal einsetzbar
- Übersetzung 90:1
- 360° Skalierung, Skaleneinteilung 1', mit Nonius 10'', Vorschub 4° je Umdrehung
- Parallelität 0,02 mm, Rechtwinkligkeit 0,02 mm, Rundlaufgenauigkeit 0,015 mm

- *for horizontal and vertical applications*
- *ratio 90:1*
- *360° graduation, 1' graduation, with vernier 10'', feed 4° per rotation*
- *parallelism 0,02 mm, squareness 0,02 mm, runout 0,015 mm*




| Typ / *Type* | MK / *MT* | A mm | A1 mm | B mm | D mm | e mm | H mm | H1 mm | Nuten / *Slots* | Nut / *Slot* | Max. Belastung / *Max. load cap.* Hor. kg | Vert. kg | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110 | 2 | 138 | 58 | 118 | 110 | 11 | 72 | 80 | 3 | - | 35 | 18 | 8 | ● | ZE-RT-110 |
| 150 | 2 | 205 | 78 | 163 | 150 | 11 | 80 | 102 | 3 | 17 | 40 | 20 | 13 | ● | ZE-RT-150 |
| 200 | 3 | 265 | 100 | 219 | 205 | 14 | 102 | 135 | 3 | 17 | 80 | 40 | 27 | ● | ZE-RT-200 |
| 250 | 3 | 321 | 106 | 276 | 254 | 14 | 109 | 163 | 6 | 17 | 90 | 50 | 38 | ● | ZE-RT-250 |
| 300 | 4 | 388 | 123 | 330 | 305 | 16 | 125 | 194 | 6 | 17 | 120 | 60 | 61 | ● | ZE-RT-300 |
| 350 | 4 | 445 | 123 | 389 | 353 | 16 | 125 | 225 | 6 | 17 | 130 | 70 | 80 | ● | ZE-RT-350 |
| 406 | 4 | 503 | 128 | 435 | 406 | 16 | 130 | 258 | 6 | 17 | 140 | 70 | 119 | ● | ZE-RT-406 |

**Passende Flansche und Zubehör siehe Seite 73 und 74**
***Suitable adaptor plates and accessories see page 73 and 74***

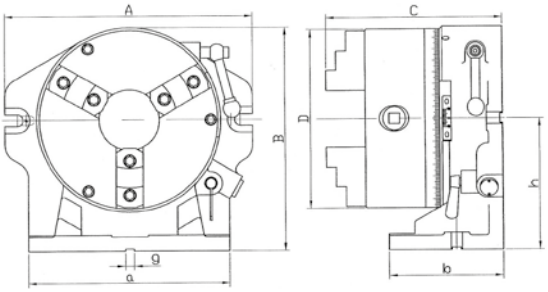




## Direkt-Teilapparat
## *Simple indexing spacer*

- horizontal und vertikal einsetzbar
- schnell verstellbar, einfache Handhabung
- inkl. Drehfutter und Rastplatten 2, 3, 4, 6, 8, 12, 24-fach einstellbar

- *for horizontal and vertical applications*
- *ease of handling*
- *incl. lathe chuck and masking plates in 2, 3 ,4, 6, 8, 12, 24 sections adjustable*




| Typ / *Type* | Teilung / *division* | A mm | B mm | C mm | D mm | a mm | b mm | h mm | Nut (g) / *Slot (g) mm* | Spannbereich / *clamp. range* | Bohrung / *bore* | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 165 | 2-24 | 260 | 218 | 156 | 167 | 220 | 130 | 123 | 16 | 4-156 | 44 | 30 | ● | ZE-TA-165 |
| 200 | 2-24 | 312 | 257 | 173 | 200 | 258 | 148 | 155 | 16 | 4-180 | 58 | 52 | ● | ZE-TA-200 |
| 310 | 2-48 | 433 | 391 | 233 | 310 | 354 | 198 | 228 | 16 | 5-265 | 105 | 91 | ● | ZE-TA-310 |

Inkl. Dreibacken-Drehfutter, Rastplatten
*Incl. 3-jaw lathe chuck and masking plates*



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***



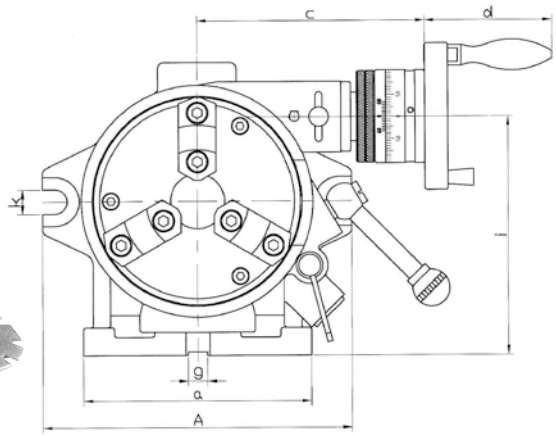
## Teilapparat mit Handrad
## *Super indexing spacer with hand wheel*

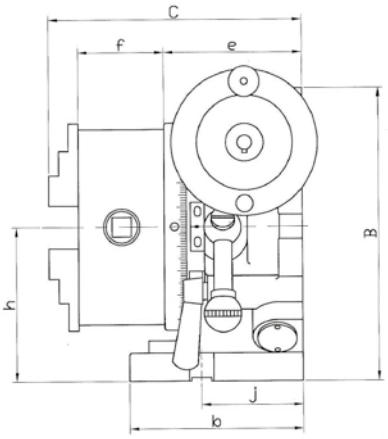
- horizontal und vertikal einsetzbar
- Übersetzung 90:1, Skaleneinteilung 1‘ mit Nonius 10“
- Teilung durch Indexrastung in 2, 3, 4, 6, 8, 12 und 24 Teile
- inkl. Drehfutter, Aufspannscheibe, Rastplatten

- *for horizontal and vertical applications*
- *ratio 90:1, 1‘ graduation, with vernier 10“*
- *indexing graduation in 2, 3, 4, 6, 8, 12 and 24 sections*
- *incl. lathe chuck, face plate and masking plates*







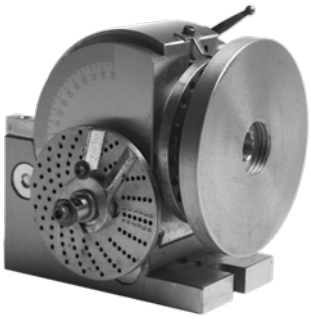




| | | Futter / *chuck* | | | Aufspannscheibe / *face plate* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Typ / *type* | Teilung / *division* | Ø | Spannbereich / *clamp. range* | Bohrung-Ø / *hole-Ø* | Ø | Dicke / *thickness* | A mm | a mm | B mm | C mm |
| 165 | 2, 3, 4, 6, 8, 12, 24 | 167 | 4-156 | 44 | 203 | 50 | 250 | 220 | 235 | 221 |
| 200 | 2, 3, 4, 6, 8, 12, 24 | 210 | 4-180 | 63 | 254 | 58 | 310 | 225 | 285 | 243 |

| Typ / *Type* | b mm | c mm | d mm | e mm | f mm | h mm | i mm | j mm | k mm | Nut (g) / *Slot (g)* mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 165 | 150 | 184 | 82 | 112 | 66 | 123 | 186 | 80 | 18 | 16 | 45 | ZE-TAK-165 |
| 200 | 160 | 201 | 82 | 125 | 75 | 155 | 232 | 90 | 18 | 16 | 72 | ZE-TAK-200 |

*Inkl. Dreibacken-Drehfutter, Aufspannscheibe, Rastplatten*
*Incl. 3-jaw lathe chuck, face plate and masking plates*

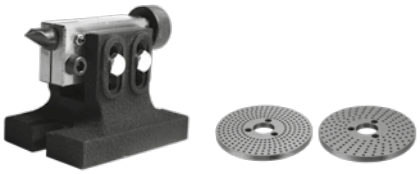
**Inkl. Vierbacken-Drehfutter auf Anfrage lieferbar**
***Incl. four-jaw lathe chuck available upon request***

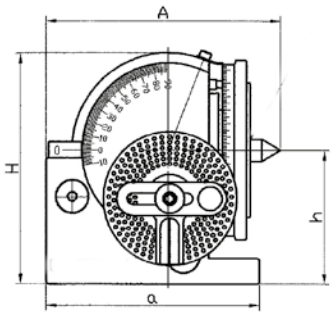


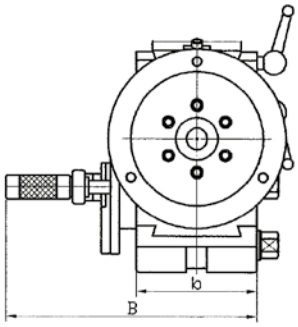
## Halb-Universal Teilapparat
## *Semi-universal dividing head*

- Teilung durch Indexrastung in 2, 3, 4, 6, 8, 12 und 24 Teile
- horizontal/vertikal schwenkbar von -10° bis +90°
- durch indirekte Teilung jede Teilung 2 bis 50 und viele Teilungen bis 380 möglich (Übersetzungsverhältnis 1:40)

- *direct indexing in 2, 3, 4, 6, 8, 12 and 24 sections*
- *horizontally/vertically tiltable from -10° to +90°*
- *indirect indexing of all numbers from 2 to 50 and many numbers up to 380 (ratio 1:40)*

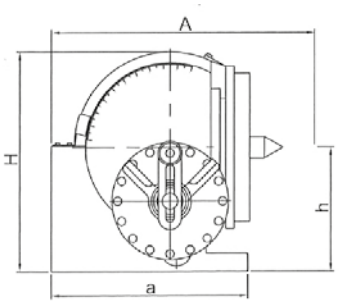


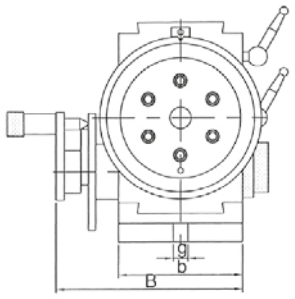



| h mm | MK / *MT* | A mm | B mm | H mm | a mm | b mm | Nut / *Slot* mm | Spindel / *Spindle* Ø | inkl. Reitstock / *incl. tailstock* | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 2 | 177 | 188 | 173 | 160 | 91 | 16 | 18 | RSV-108 | 19 | ● | ZE-HUT-1 |
| 128 | 3 | 245 | 230 | 220 | 205 | 114 | 16 | 20 | RSV-145 | 34 | ● | ZE-HUT-2 |

Inkl. Reitstock und 2 Teilscheiben / *Incl. tailstock and 2 dividing plates*




## Universal Teilapparat
## *Universal dividing head*

- beliebige Winkel einstellbar durch direkte oder indirekte Teilung
- Teilung durch Indexrastung in 2, 3, 4, 6, 8, 12 und 24 Teile
- durch indirekte Teilung jede Teilung 2 bis 50 und viele Teilungen bis 380 möglich (Übersetzungverhältinis 1:40)
- schnelle Umstellung auf Direktteilung
- Horizontal / vertikal schwenkbar von - 10° bis + 90°

- *any angle possible by direct or indirect indexing*
- *direct indexing in 2, 3, 4, 6, 8, 12 and 24 sections*
- *indirect indexing of all numbers from 2 to 50 and many numbers up to 380 possible (ratio 1:40)*
- *easy conversion to direct indexing*
- *horizontally / vertically tiltable from - 10° to + 90°*

| h mm | MK / *MT* | A mm | B mm | H mm | a mm | b mm | Nut (g) / *Slot (g)* mm | Spindel / *Spindle* Ø | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 134 | 4 | 285 | 202 | 237 | 213 | 134 | 16 | 25,4 | 36 | ● | ZE-VUT-2A |

Inkl. Reitstock und 2 Teilscheiben / *Incl. tailstock and 2 dividing plates*



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Zubehör für Teilapparate und Rundtische
*Accessories for indexing fixtures and rotary tables*

## Teilscheiben für Rundtische
## *Dividing plates for rotary tables*



A B C



D E





| Typ / *Type* | Mögliche Teilungen / *possible divisions* |
|---|---|
| A | 15, 16, 17, 18, 19, 20 |
| B | 21, 23, 27, 29, 31, 33 |
| C | 37, 39, 41, 43, 47, 49 |

| Typ / *Type* | Mögliche Teilungen / *possible divisions* |
|---|---|
| D | 26, 28, 30, 32, 34, 37, 38<br>39, 41, 43, 44, 46, 47, 49<br>51, 53, 57, 59 |
| E | 61, 63, 67, 69, 71, 73, 77<br>79, 81, 83, 87, 89, 91, 93<br>97, 99 |

| Satz / *Set* | Passend zu / *Suitable for* | Typ / *Type* | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|
| 1 | ZE-RT-110 / *-150* | A, B, C | ● | ZE-TS-1 | |
| 2 | ZE-RT-200 | D, E | ● | ZE-TS-2 | |
| 3 | ZE-RT-250 / *-300* / *-350* / *-406* | D, E | ● | ZE-TS-3 | |



## Reitstöcke für Rundtische und Teilapparate
## *Tailstocks for rotary tables and dividing heads*

- höhenverstellbar
- *height adjustable*

| Passend zu / *Suitable for* | Verstellbar / *Adjustable* | | Nut (g) / *Slot (g)* mm | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|
| | max. | min. | | | | | |
| ZE-HUT-1, ZE-RT-110 / -150 | 108 | 80 | 16 | 4 | ● | ZE-RSV-108 | |
| ZE-HUT-2, ZE-TA-165, ZE-TAK-165, ZE-RT-200 | 145 | 115 | 16 | 6 | ● | ZE-RSV-145 | |
| ZE-TA-200, ZE-TAK-200, ZE-RT-250 / -300 | 200 | 130 | 16 | 8 | ● | ZE-RSV-200 | |
| ZE-RT-350 / -406, ZE-TA-310 | 260 | 190 | 16 | 12 | ● | ZE-RSV-260 | |

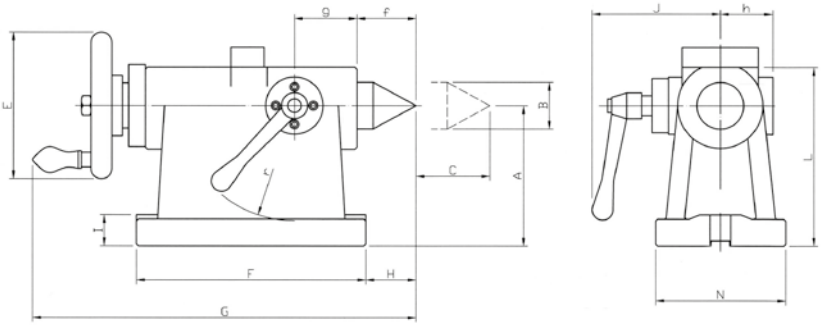
# Zubehör für Teilapparate und Rundtische
# *Accessories for indexing fixtures and rotary tables*



## Reitstöcke
## *Tailstocks*

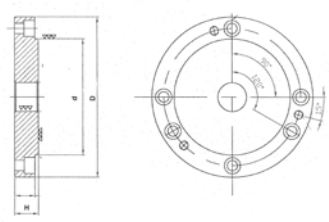
- hochpräzise Ausführung
- mit Pinole MK 3
- ohne Höhenverstellung

- *high precision type*
- *with quill MT 3*
- *without height adjustment*




| A mm | MK / *MT* | C mm | D mm | E mm | FxN mm | G mm | H mm | I mm | J mm | L mm | u mm | f mm | g mm | h mm | j mm | r mm | Nut / *Slot* | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 135 | 3 | 55 | Ø14 | 125 | 215x120 | 332 | 25 | 25 | 109 | 164 | 19 | 40 | 69 | 44 | 70 | 80 | 18 | 21 | ● | ZE-RSF-135 |
| 160 | 3 | 55 | Ø18 | 140 | 230x130 | 356 | 30 | 30 | 129 | 193 | 19 | 45 | 70 | 52 | 80 | 95 | 18 | 23 | ● | ZE-RSF-160 |
| 210 | 3 | 55 | Ø18 | 140 | 230x146 | 356 | 30 | 30 | 129 | 243 | 19 | 45 | 70 | 52 | 80 | 95 | 18 | 29,4 | ● | ZE-RSF-210 |





## Flansche für Rundtische
## *Adaptor plates for rotary tables*

| Passend zu / *Suitable for* | D mm | d mm | H mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| ZE-RT-150 / -200 | 138 | 100 | 20 | 2 | ● | ZE-FLRT-0 |
| ZE-RT-200 / -250 | 170 | 130 | 21 | 4 | ● | ZE-FLRT-1 |
| ZE-RT-250 / -300 / -350 | 195 | 155 | 24 | 6 | ● | ZE-FLRT-2 |
| ZE-RT-300 / -350 / -406 | 210 | 160 | 24 | 5 | ● | ZE-FLRT-3 |

## Zentrierdorne mit Morsekegel für Rundtisch-Flansche
## *Centering arbors with morse taper for rotary table adaptor plates*



| Passend zu / *Suitable for* | MK / *MT* | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| ZE-RT-150 / -200 | 2 | ● | ZE-ZD-MK2 |
| ZE-RT-200 / -250 | 3 | ● | ZE-ZD-MK3 |
| ZE-RT-300 / -350 / -406 | 4 | ● | ZE-ZD-MK4 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Teilapparate und Rundtische inkl. Drehfutter
*Indexing fixtures and rotary tables incl. lathe chuck*



Beispiel / *example*

## Rundtisch inkl. Dreibacken-Drehfutter
## *Rotary table incl. three-jaw lathe chuck*

| Typ / *Type* | Drehfutter-Ø / *Chuck-Ø* | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|
| RT150 | 130 | ◗ | ZE-RT-150DF | |
| RT200 | 160 | ◗ | ZE-RT-200DF | |
| RT250 | 190 | ◗ | ZE-RT-250DF | |
| RT300 | 200 | ◗ | ZE-RT-300DF | |



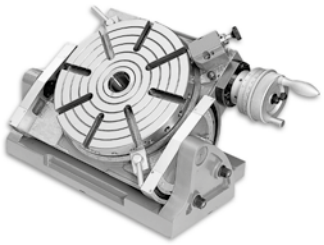
Beispiel / *example*

## Teilapparat inkl. Dreibacken-Drehfutter
## *Indexing fixture incl. three-jaw lathe chuck*

| Typ / *Type* | Drehfutter-Ø / *Chuck-Ø* | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|
| VUT2A | 200 | ◗ | ZE-VUT-200KPL | |

Inkl. Reitstock, Teilscheibe und Körnerspitze / *incl. tailstock, dividing plate and centre*

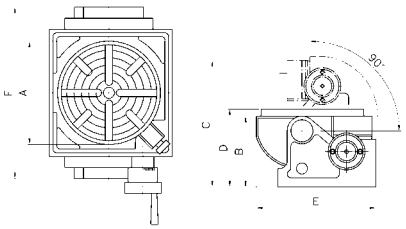
# Schwenkbarer Präzisions-Rundtisch
# *Precision rotary table, tiltable*



## Typ UT
## *Type UT*

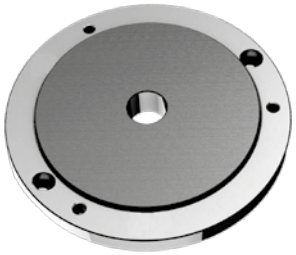
- stabile Bauweise
- Spitzenhöhe verstellbar von min. 113 mm bis max. 230 mm
- Winkel verstellbar 90°
- mit 10“ Nonius
- Skalenteilung 1‘

- *rugged construction*
- *center height min. 113 mm up to max. 230 mm*
- *tilting range 90°*
- *with 10“ vernier*
- *graduation 1‘*



| A mm | B mm | C mm | D mm | E mm | F mm | Übers. / *Ratio* | MK / *MT* | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 305 | 172 | 366 | 192 | 340 | 460 | 90:1 | 5 | 97 | ● | 13-UT300 | |
| Teilscheiben / *Dividing plates*<br>A: 24, 25, 26, 28, 32, 37, 38, 41, 42, 43<br>B: 46, 47, 49, 51, 53, 54, 57, 58, 59, 62, 66 | | | | | | | | | ● | 13-UT300-TS | |

**Passende Reitstöcke siehe Seiten 73 und 74**
***Suitable tailstocks see pages 73 and 74***



## Flansch passend zu Typ UT
## *Adaptor plate suitable for type UT*

| passend zu Typ / *suitable for type* | für Drehfutter Ø / *for chuck Ø* | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|
| UT 300 | 250 | ● | 13-UT-300FL | |

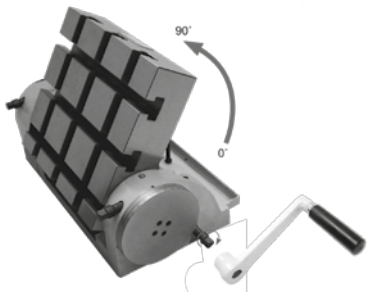
**Passendes Drehfutter siehe Seite 13, Typ ZE-6353-250 (muss von vorne durchbohrt werden)**
***Suitable chuck see page 13, type ZE-6353-250 (needs to be drilled from front)***

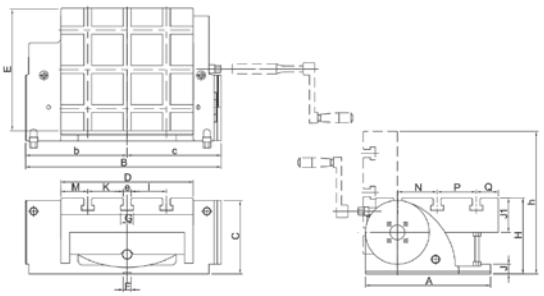
## Schwenkbare Spanntische, 90°
## *Heavy-duty tilting plates, 90°*

NEU *NEW* !

- zum Aufspannen von verschiedenen Vorrichtungen, wie z.B. Schraubstöcken, Drehfuttern, etc.

- *used for mounting of different devices, such as vices, lathe chucks, etc.*





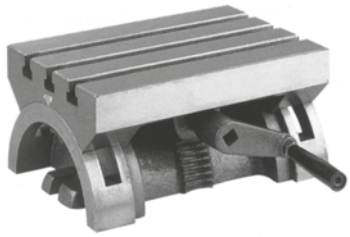
| Belastbarkeit / *loading capacity* | Horizontal / *horizontal* kg | Vertikal / *vertical* kg |
|---|---|---|
| 14-SSP-150 | 30 | 12 |
| 14-SSP-270 | 45 | 20 |
| 14-SSP-320 | 50 | 35 |

| A mm | B mm | C mm | D mm | E mm | Positioniernut F / *positioning slot F* | G mm | H mm | I mm | J mm | J1 mm | K mm | M mm | N mm | P mm | Q mm | b mm | c mm | Nut (e) / *Slot (e)* mm | h mm | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 180 | 285 | 113 | 156 | 150 | 16 | 20 | 115 | 44 | 16 | 50 | 44 | 28 | 50 | 50 | 30 | 145 | 140 | 10 | 251 | 18 | ● | 14-SSP-150 | |
| 255 | 399 | 150 | 270 | 258 | 16 | 22 | 155 | 72 | 20 | 70 | 72 | 55 | 80 | 80 | 45 | 207 | 192 | 12 | 291 | 60 | ● | 14-SSP-270 | |
| 300 | 449 | 169 | 320 | 298 | 16 | 26 | 169 | 92 | 25 | 75 | 92 | 60 | 98 | 100 | 48 | 232 | 217 | 16 | 305 | 83 | ● | 14-SSP-320 | |



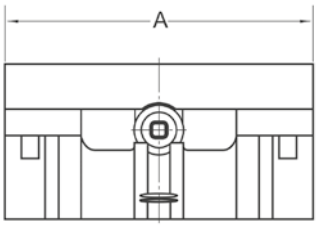
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

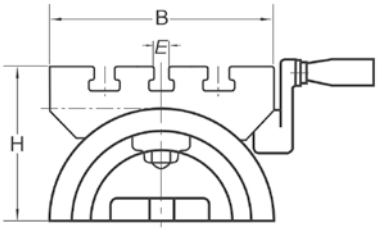
# Spanntische
# *Swivel angle plates*



## Schwenkbarer Spanntisch, Typ HWCK2
## *Swivel angle plate, type HWCK2*

- in beide Richtungen schwenkbar
- ± 45° verstellbar
- *swivel-type*
- *adjustable ± 45°*



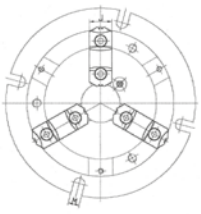

| | Größe / *Size* | A mm | B mm | E mm | H mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| | 180x130 | 180 | 130 | 10 | 91 | 8 | ● | 14-HWCK2-180 |
| | 250x178 | 255 | 178 | 12 | 130 | 16 | ● | 14-HWCK2-250 |
| N | 300x240 | 300 | 240 | 12 | 164 | 37 | ● | 14-HWCK2-300 |
| | 380x260 | 380 | 260 | 16 | 185 | 69 | ● | 14-HWCK2-380 |
| | 600x300 | 600 | 300 | 16 | 205 | 100 | ● | 14-HWCK2-600 |

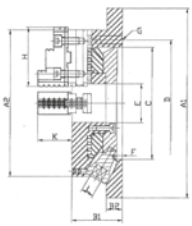
# Stationäre Drehfutter
# *Stationary lathe chucks*



## Stationäre Dreibacken-Drehfutter, extraflach
## *Stationary three-jaw lathe chucks, extra thin*

- Winkel zwischen Handgriff und Drehplatte beträgt 30°, dadurch bequeme Bedienung
- geringe Bauhöhe des Futters für mehr Arbeitsraum
- harte und weiche Backen können eingesetzt werden
- *30° angle between wrench and base for ease of handling*
- *„extra thin“ chuck design increases machining space*
- *may be used with hard or soft jaws*

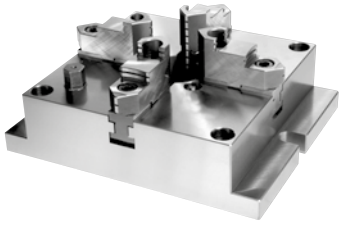


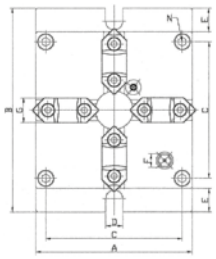


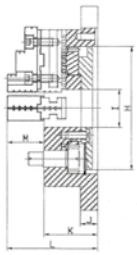
| Typ / *Type* | A1 mm | A2 mm | B1 mm | B2 mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | K mm | L mm | M mm | Spannbereich / *Clamp. range* mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 170 | 220 | 170 | 58 | 18 | 130 | 147 | 45 | 6 | 3-M10 | 68 | 26 | 40 | 10 | 13 | 8-160 | 12 | ● | ZE-SDF3-170 |
| 210 | 270 | 210 | 65 | 20 | 155 | 172 | 60 | 6 | 3-M10 | 85 | 28 | 45 | 11 | 13 | 11-200 | 20 | ● | ZE-SDF3-210 |
| 255 | 315 | 255 | 73 | 20 | 190 | 210 | 80 | 6 | 3-M12 | 93 | 32 | 52 | 12 | 16 | 12-250 | 30 | ● | ZE-SDF3-255 |
| 305 | 370 | 305 | 80 | 22 | 250 | 285 | 105 | 6 | 3-M12 | 117 | 40 | 59 | 14 | 18 | 15-300 | 47 | ● | ZE-SDF3-305 |

Inkl. Bedienschlüssel / *Incl. wrench*

# Stationäre Drehfutter
# *Stationary lathe chucks*







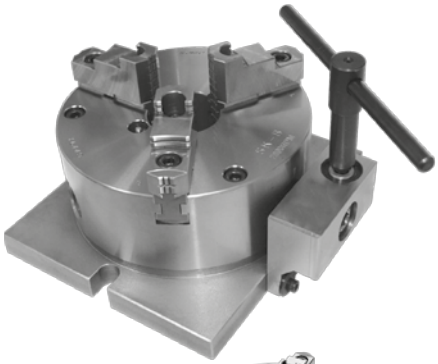
## Stationäre Vierbacken-Drehfutter
## *Stationary four-jaw lathe chuck*

- sichere Spannung des Werkstücks (Genauigkeit: 0,03 mm)
- hohe Werkstücke können aufgrund der niedrigen Bauweise ebenfalls gespannt werden
- rechtwinklige Werkstücke können paarweise mit zwei Backen gespannt werden
- mit Schmutzabdeckung
- mit Durchgangsbohrung für das Spannen langer Werkstücke
- der Bedienschlüssel wird vertikal angesetzt
- mehrere Futter können kombiniert werden

- *safe gripping of work piece (precision: within 0,03 mm )*
- *large work pieces can be held thanks to low profile body*
- *able to grip square work pieces by using this chuck as a two-way jaw unit*
- *with dirt cover*
- *with thru bore*
- *handle is set on the face and does not interfere with the table*
- *several chucks may be combined*

| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | G mm | H mm | I mm | J mm | K mm | L mm | M mm | N mm | Spannbereich / *Clamp. range* mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 165 | 165 | 215 | 144 | 18 | 50 | 26 | 130 | 40 | 18 | 57 | 96 | 39 | 4-M10 | 4-128 | 14 | ● | ZE-SDF4-165 |
| 200 | 200 | 250 | 174 | 18 | 50 | 28 | 160 | 55 | 20 | 65 | 108 | 43 | 4-M12 | 5-162 | 22 | ● | ZE-SDF4-200 |
| 250 | 250 | 310 | 218 | 18 | 60 | 32 | 200 | 70 | 22 | 72 | 122 | 50 | 4-M14 | 6-200 | 36 | ● | ZE-SDF4-250 |
| 310 | 310 | 380 | 274 | 22 | 70 | 40 | 260 | 100 | 25 | 85 | 141 | 56 | 4-M16 | 10-265 | 62 | ● | ZE-SDF4-310 |

**Passende Aufsatzbacken siehe Seiten 24 und 25**
***Suitable jaws see pages 24 and 25***

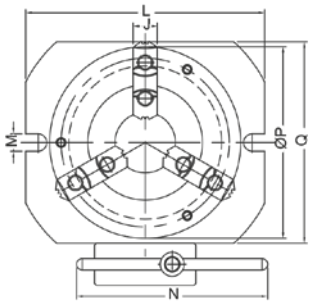


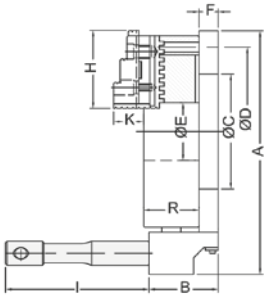


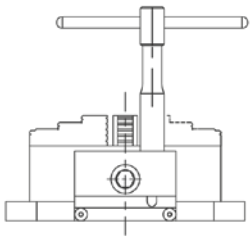
## Dreibacken-Drehfutter mit Winkeltrieb
## *Three-jaw lathe chuck with angle drive*

- Winkeltrieb mit zweifacher Verstellmöglichkeit
- geringe Bauhöhe des Futters für mehr Arbeitsraum
- harte und weiche Backen können eingesetzt werden

- *angle drive with dual adjustment*
- *extra thin chuck design increases machining space*
- *may be used with hard or soft jaws*



| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | M mm | N mm | P mm | Q mm | R mm | Spannbereich / *Clamp. range* mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 219 | 83 | 90 | 147 | 45 | 20 | 3-M10 | 72 | 150 | 26 | 39 | 215 | 18 | 200 | 165 | 175 | 67 | 8-160 | 12 | ● | ZE-SDF3WT-150 |
| 200 | 254 | 83 | 120 | 176 | 58 | 20 | 3-M10 | 82 | 150 | 28 | 43 | 250 | 18 | 200 | 200 | 200 | 76,5 | 8-180 | 20 | ● | ZE-SDF3WT-200 |
| 250 | 327 | 83 | 190 | 250 | 87 | 24 | 3-M12 | 100 | 150 | 35 | 50 | 324 | 18 | 200 | 273 | 283 | 87 | 12-260 | 30 | ● | ZE-SDF3WT-250 |
| 300 | 364 | 83 | 220 | 285 | 105 | 24 | 3-M12 | 114 | 150 | 40 | 56 | 360 | 18 | 200 | 310 | 320 | 96 | 15-300 | 47 | ● | ZE-SDF3WT-300 |

**Inkl. Vierbacken-Drehfutter auf Anfrage lieferbar**
***Incl. four-jaw lathe chuck available upon request***



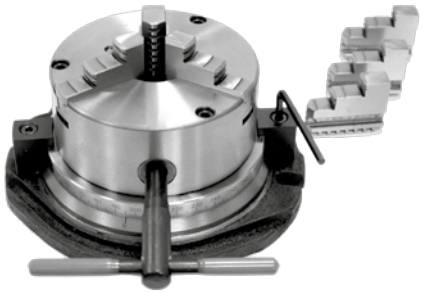
● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

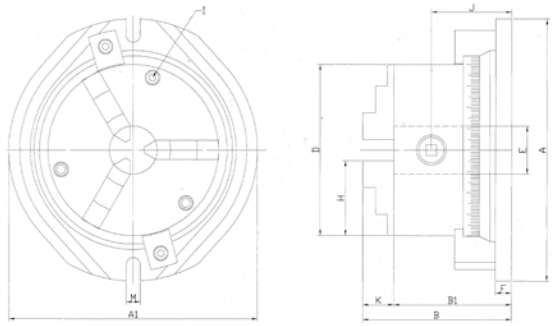
# Drehfutter auf Drehplatte
*Lathe chucks on swivel plate*

## Dreibacken-Drehfutter auf Drehplatte
## *Three-jaw chuck with swivel base*

- 360° Skala
- einfache Handhabung

- *360° degree scale*
- *smooth swivel motion and easy handling*





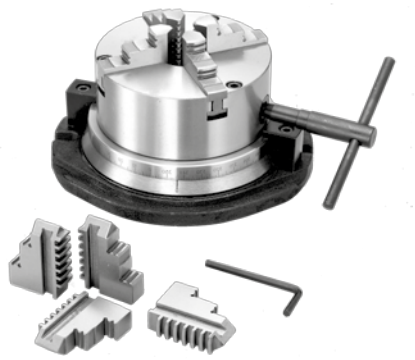
| Typ / *Type* | A mm | A1 mm | B mm | B1 mm | C mm | D mm | E mm | F mm | H mm | I mm | J mm | K mm | M mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 245 | 233 | 139 | 110 | 100 | 160 | 45 | 15 | 70 | 3-M8 | 69 | 29 | 14 | 18 | ● | ZE-1300-160 |
| 200 | 340 | 269 | 159 | 125 | 115 | 200 | 65 | 20 | 86 | 3-M10 | 75 | 34 | 18 | 31 | ● | ZE-1300-200 |

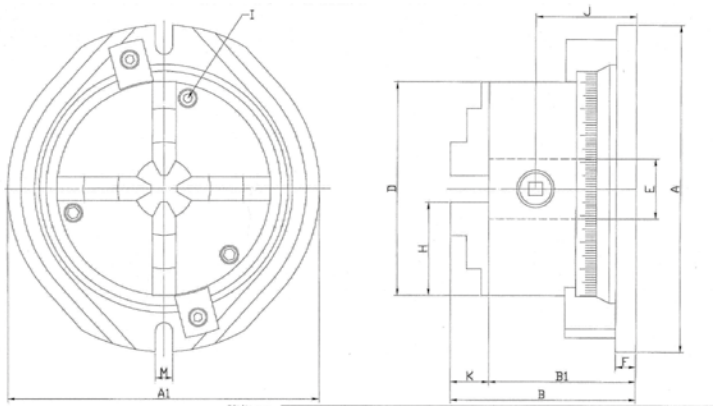
Inkl. je 1 Satz Dreh- und Bohrbacken, Bedienschlüssel / *Incl. 1 set each of solid jaws internally / externally stepped, wrench*

## Vierbacken-Drehfutter auf Drehplatte
## *Four-jaw chuck with swivel base*

- 360° Skala
- einfache Handhabung

- *360° degree scale*
- *smooth swivel motion and easy handling*



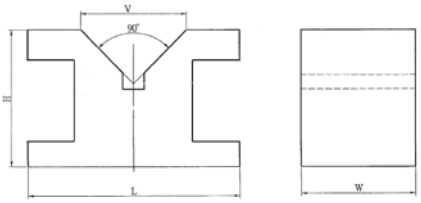


| Typ / *Type* | A mm | A1 mm | B mm | B1 mm | C mm | D mm | E mm | F mm | H mm | I mm | J mm | K mm | M mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 245 | 233 | 139 | 110 | 100 | 160 | 45 | 15 | 70 | 3-M8 | 69 | 29 | 14 | 18 | ● | ZE-1300-160 |
| 200 | 340 | 269 | 159 | 125 | 115 | 200 | 65 | 20 | 86 | 3-M10 | 75 | 34 | 18 | 31 | ● | ZE-1300-200 |

Inkl. je 1 Satz Dreh- und Bohrbacken, Bedienschlüssel / *Incl. 1 set each of solid jaws internally / externally stepped, wrench*

## Prismenblöcke mit Spannbügel
## *V-blocks with clamping bracket*





- geeignet zum Spannen von Rundmaterial
- 1 Prisma, 90°
- Spezialstahl gehärtet 55 - 62 HRC
- Parallelität: 0,005 / 100 mm
- Rechtwinkligkeit: 0,005 / 100 mm
- Lieferung paarweise

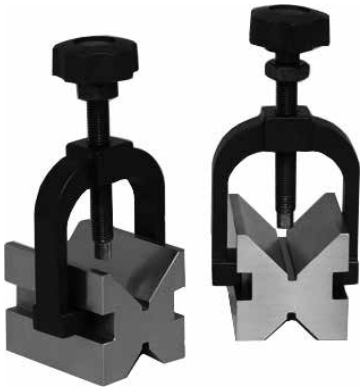
- *suitable for clamping round material*
- *one V-groove 90°*
- *hardened special steel 55 - 62 HRC*
- *parallelism: 0,005 / 100 mm*
- *squareness: 0,005 / 100 mm*
- *delivered in pairs*

| L mm | W mm | H mm | V mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 35 | 35 | 30 | 11,5 | 14-PPSB-35 |
| 60 | 60 | 50 | 30 | 14-PPSB-60 |
| 75 | 100 | 75 | 60 | 14-PPSB-75 |
| 105 | 105 | 78 | 60 | 14-PPSB-105 |

Preis pro Paar / *Price per pair*

## Prismenblöcke mit Spannbügel, rostfrei
## *V-blocks with clamping bracket, non corrosive*

NEU *NEW* !



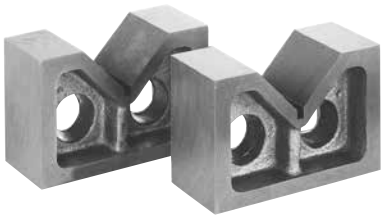
- 2 unterschiedlich tiefe Prismen, 90°
- Rechtwinkligkeit: 0,004 / 100 mm
- Lieferung paarweise

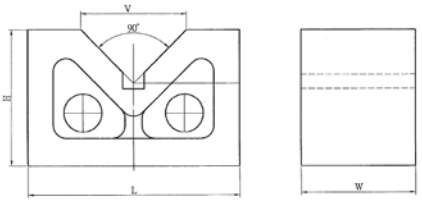
- *two V-grooves with different depth, 90°*
- *squareness: 0,004 / 100 mm*
- *delivered in pairs*

| L mm | W mm | H mm | Für / *for* Ø mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 40 | 50 | 40 | 5-30 | 14-PPSB-50RF |
| 55 | 75 | 55 | 5-50 | 14-PPSB-75RF |
| 75 | 100 | 75 | 7-70 | 14-PPSB-100RF |

Preis pro Paar / *Price per pair*

## Prismenblöcke
## *V-blocks*





- aus Spezialguss
- prismatischer Einschnitt 90°
- Lieferung paarweise

- *special cast iron*
- *V-groove 90°*
- *delivered in pairs*

| L mm | W mm | H mm | V mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 50 | 27 | 32 | 25 | 14-PP-50 |
| 76 | 35 | 61 | 44 | 14-PP-76 |
| 100 | 45 | 67 | 53 | 14-PP-100 |
| 130 | 51,5 | 79,5 | 64 | 14-PP-130 |
| 156 | 66 | 90,5 | 81 | 14-PP-156 |
| 181 | 77 | 110 | 85,4 | 14-PP-181 |
| 206 | 103 | 143 | 116 | 14-PP-206 |

Preis pro Paar / *Price per pair*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## X-Prismenblöcke, 4-fach
## *X-prism-blocks*

NEU NEW !



- Paarweise geschliffen
- 4 Prismen, 90°
- Lieferung paarweise
- Genauigkeit: ± 0,016 mm

- *machined in pairs*
- *4 V-grooves, 90°*
- *set of 2 pieces*
- *accuracy: ± 0,016 mm*

| Größe / *Size* mm | Für / *for* Ø mm | Güte / *Grade* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 75 x 150 x 130 | 8-120 | 1 | ● | 14-XPP-75/1 |
| 90 x 200 x 170 | 12-180 | 1 | ● | 14-XPP-90/1 |

Preis pro Paar / *Price per set*

## Prismenblöcke magnetisch, mit Schalter
## *Magnetic V-blocks, switchable*

NEU NEW !



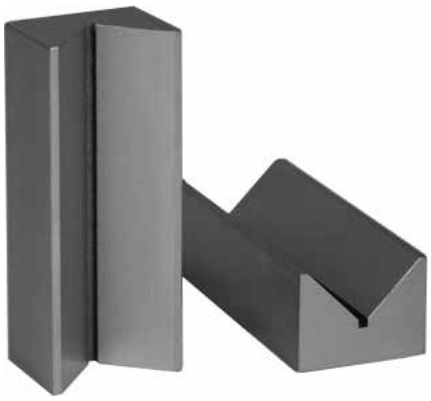
- Paarweise bearbeitet
- mit Schalter
- gehärteter Stahl
- 90° Prisma
- Rechtwinkligkeit: 0,02 / 100 mm
- Lieferung paarweise

- *machined in pairs*
- *with switch*
- *hardened steel*
- *90° V-groove*
- *squareness: 0,02 / 100 mm*
- *set of 2 pieces*

| Größe / *Size* mm | Für / *for* Ø mm | Magnetkraft / *Magnetic force* kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 70 x 40 x 50 | 6-38 | 15 | ● | 14-PPMS-70 |
| 100 x 50 x 80 | 6-44 | 20 | ● | 14-PPMS-100 |
| 150 x 50 x 100 | 6-40 | 23 | ● | 14-PPMS-150 |

Preis pro Paar / *Price per set*

# Prismenblöcke
# *V-blocks*



## Prismenpaare
## *V-block pairs*

NEU *NEW* !

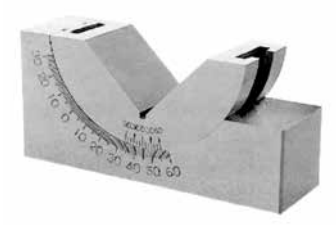
- paarweise geschliffen
- Spezialguss
- prismatischer Einschnitt 90°
- Lieferung paarweise

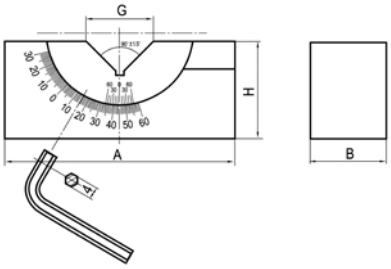
- *machined in pairs*
- *special cast iron*
- *V-groove 90°*
- *set of 2 pieces*

| L x B x H / *L x W x H* mm | Güte / *Grade* | Für / *for* Ø mm | Genauigkeit / *Accuracy* mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 75 x 35 x 30 | 0 | 5-40 | ± 0,008 | 14-PBL-75/0 |
| 100 x 47 x 40 | 0 | 5-55 | ± 0,008 | 14-PBL-100/0 |
| 150 x 55 x 45 | 0 | 5-60 | ± 0,008 | 14-PBL-150/0 |
| 200 x 65 x 55 | 0 | 5-75 | ± 0,008 | 14-PBL-200/0 |
| 75 x 40 x 30 | 1 | 6-40 | ± 0,016 | 14-PBL-75/1 |
| 100 x 40 x 30 | 1 | 6-50 | ± 0,016 | 14-PBL-100/1 |
| 150 x 50 x 40 | 1 | 8-60 | ± 0,016 | 14-PBL-150/1 |
| 200 x 70 x 50 | 1 | 8-70 | ± 0,016 | 14-PBL-200/1 |
| 75 x 40 x 30 | 3 | 6-40 | ± 0,064 | 14-PBL-75/3 |
| 100 x 40 x 30 | 3 | 6-50 | ± 0,064 | 14-PBL-100/3 |
| 150 x 50 x 40 | 3 | 8-60 | ± 0,064 | 14-PBL-150/3 |
| 200 x 70 x 50 | 3 | 8-70 | ± 0,064 | 14-PBL-200/3 |

Preis pro Paar / *Price per set*

# Winkelprismen
# *Angle prisms*





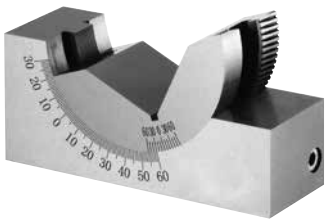

## Winkelprismen, einstellbar
## *Angle prisms, adjustable*

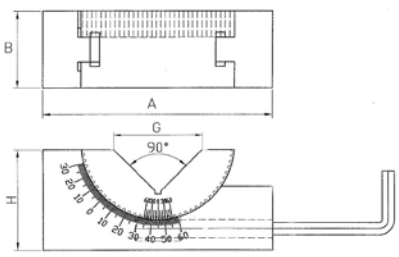
- prismatischer Einschnitt 90°
- Stahl, 58 - 64 HRC
- Rechtwinkligkeit: ± 0,01 mm
- Winkel einstellbar von -30° bis +60°

- *V-groove 90°*
- *high carbon steel, 58 - 64 HRC*
- *squareness: ± 0,01 mm*
- *angle adjustable from -30° to +60°*

| B mm | A mm | H mm | G mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 25 | 75 | 32 | 22 | 0,5 | 14-WPE-25 |
| 30 | 102 | 48 | 48 | 1 | 14-WPE-30 |
| 46 | 102 | 48 | 48 | 1,5 | 14-WPE-46 |

Preis pro Stück / *Price per piece*






## Winkelprismen, einstellbar mit Schneckengetriebe
## *Angle prisms, adjustable by worm gear*

- prismatischer Einschnitt 90°
- Stahl, 50 - 54 HRC
- Rechtwinkligkeit: ± 0,01 mm
- Winkel einstellbar von -30° bis +60° mit Schneckengetriebe

- *V-groove 90°*
- *steel, 50 - 54 HRC*
- *squareness: ± 0,01 mm*
- *angle adjustable from -30° to +60° by worm gear*

| B mm | A mm | H mm | G mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 25 | 75 | 32 | 29,5 | 0,5 | 14-WPESG-25 |
| 30 | 102 | 47 | 51,9 | 1 | 14-WPESG-30 |
| 46 | 102 | 47 | 53,4 | 1,4 | 14-WPESG-46 |

Preis pro Stück / *Price per piece*



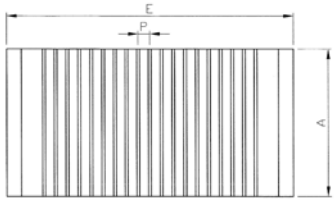
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

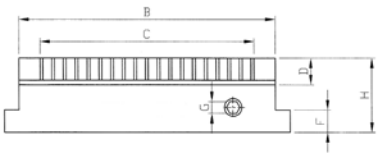
## Permanentmagnet-Spannplatten
## *Permanent magnetic plates*

- für Fräs- und Schleifarbeiten
- Erzeugung der Magnetkraft durch Permanentmagnete
- mit enger Querpolteilung
- Ein- / Ausschalten über 6-Kant-Schlüssel
- Haftkraft bis zu 100 N/cm²

- *for milling and grinding operations*
- *generation of magnetic force by permanent magnets*
- *narrow pole pitch*
- *on/off-operation by hexagonal wrench*
- *holding force up to 100 N/cm²*



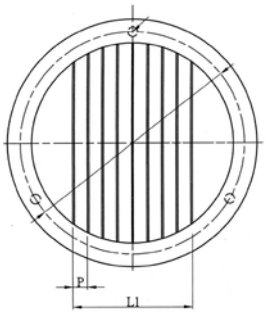



| | Größe / *Size* mm | A mm | B mm | C mm | D mm | P mm | G mm | E mm | F mm | H mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 100x175 | 100 | 175 | 146 | 20 | 8 (2+6) | 8 | 187 | 15 | 50 | 8 | ● | 14-PMP18-100/175 |
| | 125x250 | 125 | 250 | 206 | 20 | 8 (2+6) | 8 | 262 | 15 | 50 | 15 | ● | 14-PMP18-125/250 |
| | 150x300 | 150 | 300 | 256 | 20 | 8 (2+6) | 8 | 318 | 15 | 50 | 19 | ● | 14-PMP18-150/300 |
| N | 150x450 | 150 | 450 | 406 | 20 | 8 (2+6) | 8 | 468 | 15 | 50 | 28 | ● | 14-PMP18-150/450 |
| | 200x400 | 200 | 400 | 365 | 20 | 8 (2+6) | 8 | 418 | 15 | 50 | 32 | ● | 14-PMP18-200/400 |
| | 250x500 | 200 | 500 | 456 | 20 | 8 (2+6) | 8 | 518 | 15 | 50 | 50 | ● | 14-PMP18-250/500 |
| | 300x600 | 300 | 600 | 550 | 18 | 8 (2+6) | 8 | 620 | 15 | 48 | 74 | ● | 14-PMP18-300/600 |

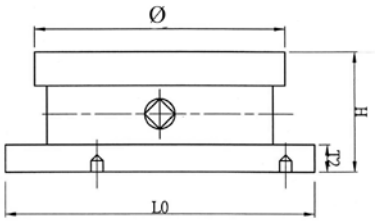
## Permanentmagnet-Rundfutter
## *Round permanent magnetic chucks*






- für Dreh- und Schleifmaschinen, Teilapparate und Rundtische
- Erzeugung der Magnetkraft durch Permanentmagnete
- Ein- / Ausschalten über Schlüssel
- Haftkraft bis zu 100 N/cm²

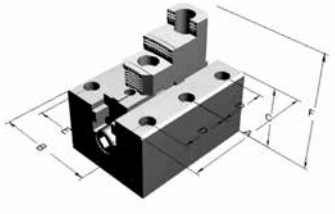
- *for turning and grinding machines, dividing heads and rotary tables*
- *generation of magnetic force by permanent magnets*
- *on/off-operation by wrench*
- *holding force up to 100 N/cm²*




| Ø mm | L1 mm | t2 mm | L0 mm | P mm | H mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 150 | 101 | 18 | 200 | 9 (2+7) | 78 | 9 | ● | 14-PMPRD18-150 |
| 200 | 137 | 18 | 200 | 9 (2+7) | 78 | 13 | ● | 14-PMPRD18-200 |
| 250 | 191 | 18 | 250 | 9 (2+7) | 78 | 20 | ● | 14-PMPRD18-250 |
| 300 | 227 | 18 | 305 | 9 (2+7) | 78 | 31 | ● | 14-PMPRD18-300 |

# Klauenkästen
*Box jaws*





## Satz à 4 Stück / *Set of 4 pcs.*

- Material: Stahl - *material: steel*

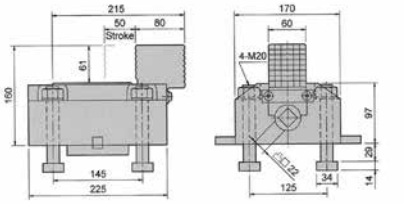
| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | H mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 220 | 160 | 114 | 80 | 120 | 207 | 60 | ❍ | 14-KLK-220 |
| 2 | 280 | 200 | 124 | 110 | 150 | 218,5 | 70 | ❍ | 14-KLK-280 |
| 3 * | 345 | 265 | 135 | 142,5 | 190 | 247,5 | 80 | ❍ | 14-KLK-345 |
| 4 * | 400 | 320 | 160 | 150 | 240 | 255 | 90 | ❍ | 14-KLK-400 |

* mit 1 Stufe / *with 1 step*

**Sonderanfertigungen auf Anfrage**
***Special sizes available on request***

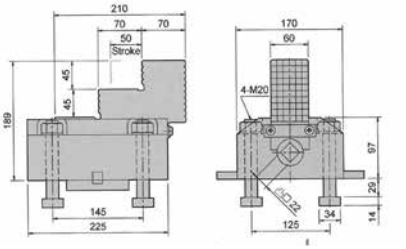


AUTO Strong



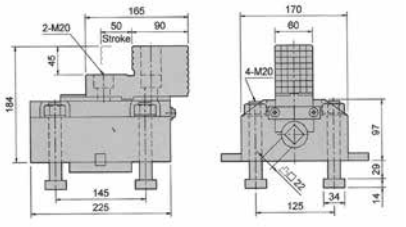

## HB4-160, Satz à 4 Stück / *set of 4 pcs.*

| Höhe / *Height* mm | Backenhub / *Jaw stroke* mm | Max. Spannkraft / *Max. gripping force* kN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 160 | 50 | 39,2 | 29 | ❍ | 29-HB4-160 |




## HB4-189, Satz à 4 Stück / *set of 4 pcs.*

| Höhe / *Height* mm | Backenhub / *Jaw stroke* mm | Max. Spannkraft / *Max. gripping force* kN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 189 | 50 | 39,2 | 31 | ❍ | 29-HB4-189 |




## HB4-2P, Satz à 4 Stück / *set of 4 pcs.*

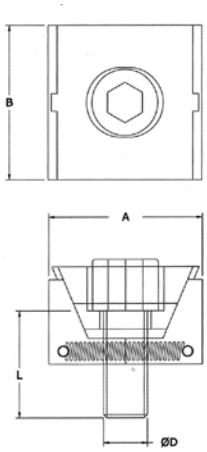
- mit geteilten Backen - *with two-piece jaws*

| Höhe / *Height* mm | Backenhub / *Jaw stroke* mm | Max. Spannkraft / *Max. gripping force* kN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 184 | 50 | 39,2 | 31 | ❍ | 29-HB4-2P |

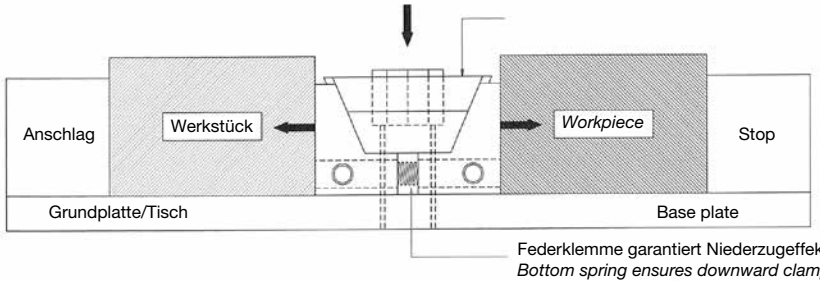


● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
❍ **auf Anfrage** / ***on request***

# Keilspanner
# *Wedge clamps*




Durch Anziehen der Schraube werden die beiden Backen nach außen bewegt, wodurch die Werkstücke gespannt werden.
*By tightening the screws, the jaws are pushed aside to clamp the work pieces.*

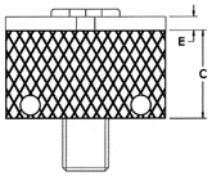



Federklemme garantiert Niederzugeffekt.
*Bottom spring ensures downward clamping force.*

## Keilspanner, geriffelt
## *Wedge clamps, serrated*

NEU NEW !



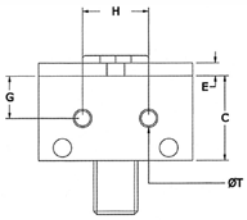



| Typ / *Type* | A min. | A opt. | A max. | B mm | C mm | Ø D mm | E mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 8 | 27 | 29-30 | 33 | 31 | 16 | M8 x 20 | 2 | ● | 14-KSG-33 |
| 12 | 42 | 45-46 | 50 | 42 | 23 | M12 x 30 | 3,5 | ● | 14-KSG-50 |
| 16 | 57 | 61-63 | 67 | 58 | 30 | M16 x35 | 4 | ● | 14-KSG-67 |

## Keilspanner, glatt
## *Wedge clamps, plain*

NEU NEW !



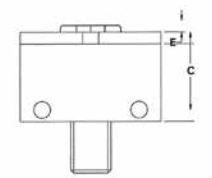



| Typ / *Type* | A min. | A opt. | A max. | B mm | C mm | Ø D mm | E mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 8 | 27 | 29-30 | 33 | 31 | 16 | M8 x 20 | 2 | ● | 14-KSS-33 |
| 12 | 42 | 45-46 | 50 | 42 | 23 | M12 x 30 | 3,5 | ● | 14-KSS-50 |
| 16 | 57 | 61-63 | 67 | 58 | 30 | M16 x35 | 4 | ● | 14-KSS-67 |

NEU NEW !

## Keilspanner, weich
## *Wedge clamps, soft*

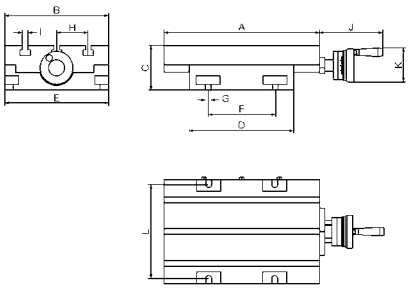





| Typ / *Type* | A min. | A opt. | A max. | B mm | C mm | Ø D mm | E mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 8 | 33 | 35-36 | 39 | 31 | 16 | M8 x 20 | 2 | ● | 14-KSW-39 |
| 12 | 52 | 55-56 | 60 | 42 | 23 | M12 x 30 | 3,5 | ● | 14-KSW-60 |
| 16 | 67 | 71-73 | 77 | 58 | 30 | M16 x35 | 4 | ● | 14-KSW-77 |

# Kreuz- und Schiebetische
## *Cross and slide tables*





## Typ CP
## *Type CP*

BAZLS

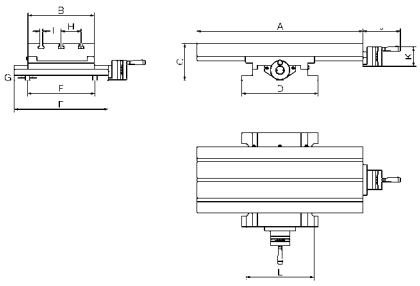
Stationäre Schiebetische mit einer Achse.

*Stationary slide tables with 1 axis.*

| Typ CP / *Type CP* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | T-Nuten / *T-nuts* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CP-0 | 230 | 164 | 66 | 164 | 164 | - | - | 50 | 10 | 56 | 56 | - | 3 |
| CP-1 | 330 | 220 | 94 | 220 | 220 | 140 | 12 | 67 | 12 | 137 | 70 | 198 | 3 |
| CP-2 | 430 | 240 | 100 | 260 | 240 | 150 | 16 | 72 | 12 | 135 | 70 | 216 | 3 |
| CP-3 | 600 | 240 | 98 | 310 | 240 | 200 | 16 | 72 | 12 | 135 | 70 | 216 | 3 |
| CP-4 | 800 | 240 | 110 | 415 | 240 | 300 | 16 | 72 | 12 | 140 | 100 | 216 | 3 |
| CP-5 | 800 | 320 | 104 | 415 | 320 | 300 | 16 | 72 | 12 | 140 | 100 | 300 | 4 |

| Typ CP / *Type CP* | X-Verfahrweg / *X-Travel* mm | Auflösung / *Resolution* mm | Gewinde-steigung / *Thread lead* | Max. Werkstückgewicht / *Max. weight of work p.* kg | Max. Arbeitsdruck / *Max. pressure* kg | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|
| CP-0 | 70 | 0,05 | 2 | 55 | 500 | 10 | ● | 18-CP-0 | |
| CP-1 | 110 | 0,05 | 4 | 105 | 700 | 25 | ● | 18-CP-1 | |
| CP-2 | 170 | 0,05 | 4 | 270 | 900 | 35 | ● | 18-CP-2 | |
| CP-3 | 290 | 0,05 | 4 | 270 | 980 | 45 | ◗ | 18-CP-3 | |
| CP-4 | 385 | 0,05 | 4 | 290 | 1200 | 62 | ◗ | 18-CP-4 | |
| CP-5 | 385 | 0,05 | 4 | 290 | 1200 | 85 | ◗ | 18-CP-5 | |





## Typ MF
## *Type MF*

BAZLS

Stationäre Koordinatentische mit zwei Achsen.

*Stationary cross tables with 2 axes.*

| Typ MF / *Type MF* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | T-Nuten / *T-nuts* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MF-0 | 230 | 164 | 101 | 225 | 225 | 160 | 12 | 50 | 10 | 56 | 56 | 191 | 3 |
| MF-1 | 330 | 220 | 125 | 256 | 280 | 210 | 16 | 67 | 12 | 137 | 70 | 210 | 3 |
| MF-2 | 430 | 240 | 132 | 276 | 340 | 244 | 16 | 72 | 12 | 135 | 70 | 246 | 3 |
| MF-3 | 600 | 240 | 133 | 276 | 340 | 244 | 16 | 72 | 12 | 135 | 70 | 246 | 3 |

| Typ MF / *Type MF* | X-Verfahrweg / *X-Travel* mm | Y-Verfahrweg / *Y-Travel* mm | Auflösung / *Resolution* mm | Gewinde-steigung / *Thread lead* | Max. Werkst.gewicht / *Max. weight of work p.* kg | Max. Arbeitsdruck / *Max. pressure* kg | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|
| MF-0 | 120 | 110 | 0,05 | 2 | 55 | 500 | 16 | ● | 18-MF-0 | |
| MF-1 | 190 | 130 | 0,05 | 4 | 105 | 700 | 33 | ● | 18-MF-1 | |
| MF-2 | 240 | 160 | 0,05 | 4 | 270 | 900 | 46 | ● | 18-MF-2 | |
| MF-3 | 350 | 160 | 0,05 | 4 | 270 | 980 | 56 | ● | 18-MF-3 | |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

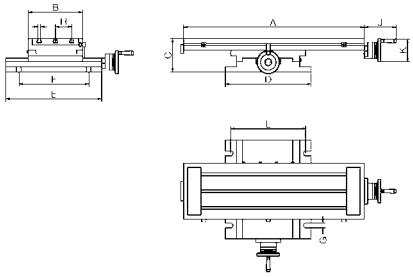


## Typ MF DRILL
## *Type MF DRILL*

BAZIS

Stationäre Kreuztische mit zwei Achsen und zwei zusätzlichen Anschlägen für den X-Verfahrweg.

*Stationary cross tables with 2 axes and additionally with 2 stops for X-travel.*



| Typ MF DRILL / *Type MF DRILL* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | T-Nuten / *T-nuts* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MF-2 Drill | 430 | 240 | 133 | 276 | 340 | 244 | 16 | 72 | 12 | 140 | 100 | 246 | 3 |
| MF-3 Drill | 600 | 240 | 133 | 276 | 340 | 244 | 16 | 72 | 12 | 140 | 100 | 246 | 3 |
| MF-4 Drill | 800 | 240 | 144 | 380 | 425 | 310 | 20 | 72 | 12 | 140 | 100 | 332 | 3 |
| MF-5 Drill | 800 | 320 | 150 | 370 | 600 | 460 | 20 | 72 | 12 | 140 | 100 | 322 | 4 |
| MF-6 Drill | 800 | 320 | 229 | 480 | 800 | 610 | 20 | 72 | 12 | - | 100 | 430 | 4 |

| Typ MF DRILL / *Type MF DRILL* | X-Verfahrweg / *X-Travel* mm | Y-Verfahrweg / *Y-Travel* mm | Auflösung / *Resolution* mm | Gewinde-steigung / *Thread lead* | Max. Werkstückgewicht / *Max. weight of work p.* kg | Max. Arbeits-druck / *Max. pressure* kg | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| MF-2 Drill | 240 | 160 | 0,05 | 4 | 270 | 900 | 46 | ● | 18-MF-2DRILL |
| MF-3 Drill | 350 | 160 | 0,05 | 4 | 270 | 980 | 56 | ● | 18-MF-3DRILL |
| MF-4 Drill | 470 | 240 | 0,05 | 4 | 290 | 1200 | 86 | ○ | 18-MF-4DRILL |
| MF-5 Drill | 470 | 300 | 0,05 | 4 | 290 | 1200 | 122 | ○ | 18-MF-5DRILL |
| MF-6 Drill | 700 | 400 | 0,05 | 4 | 900 | 1350 | 290 | ○ | 18-MF-6DRILL |

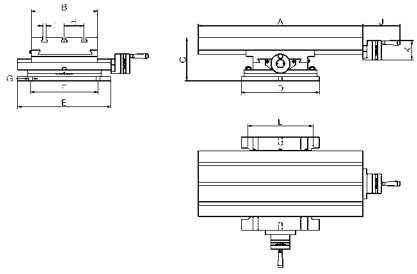


## Typ MG - drehbar
## *Type MG - rotatable*

BAZIS

Drehbare Koordinatentische mit zwei Achsen. Für mechanische Anwendungen bei denen außer der Kontrolle des X-Y Verfahrweges noch eine Rotation des Tisches von ± 90° benötigt wird.

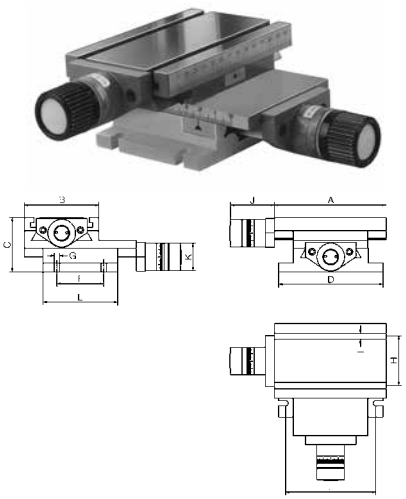
*Rotating cross tables with 2 axes to enable performance of any mechanical application in which ± 90° rotation of the table is required apart from X-Y control.*



| Typ MG / *Type MG* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | T-Nuten / *T-nuts* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MG-0 | 230 | 164 | 120 | 213 | 250 | | 12 | 50 | 10 | 56 | 56 | | 3 |
| MG-1 | 330 | 220 | 142 | 255 | 285 | 216 | 14 | 67 | 12 | 137 | 70 | 217 | 3 |
| MG-2 | 430 | 240 | 150 | 284 | 340 | 245 | 16 | 72 | 12 | 135 | 70 | 238 | 3 |
| MG-3 | 600 | 240 | 154 | 284 | 340 | 245 | 16 | 72 | 12 | 135 | 70 | 238 | 3 |
| MG-4 | 800 | 240 | 180 | 368 | 425 | 305 | 20 | 72 | 12 | 140 | 100 | 338 | 3 |
| MG-5 | 800 | 320 | 180 | 368 | 425 | 305 | 20 | 72 | 12 | 140 | 100 | 338 | 4 |

| Typ MG / *Type MG* | X-Verfahrweg / *X-Travel* mm | Y-Verfahrweg / *Y-Travel* mm | Auflösung / *Resolution* mm | Gewinde-steigung / *Thread lead* | Max. Werkstückgewicht / *Max. weight of work p.* kg | Max. Arbeits-druck / *Max. pressure* kg | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| MG-0 | 120 | 110 | 0,05 | 2 | 55 | 500 | 22 | ● | 18-MG-0 |
| MG-1 | 190 | 130 | 0,05 | 4 | 105 | 700 | 38 | ● | 18-MG-1 |
| MG-2 | 240 | 160 | 0,05 | 4 | 270 | 900 | 55 | ● | 18-MG-2 |
| MG-3 | 350 | 160 | 0,05 | 4 | 270 | 980 | 65 | ● | 18-MG-3 |
| MG-4 | 470 | 240 | 0,05 | 4 | 290 | 1200 | 113 | ○ | 18-MG-4 |
| MG-5 | 470 | 300 | 0,05 | 4 | 290 | 1200 | 126 | ○ | 18-MG-5 |

# Kreuztische MINI
## *Cross tables MINI*



## Typ MF MINI
## *Type MF MINI*

BAZUS

Stationäre Koordinatentische mit zwei Achsen, entwickelt für Anwendungen in der Feinmechanik sowie für Versuchs- und Messlabore.

*Stationary cross tables with 2 axes, designed for fine mechanics or laboratory applications.*

| Typ MF MINI / Type MF MINII | A mm | B mm | C mm | D mm | E mm | F mm | H mm | I mm | J mm | K mm | L mm | T-Nuten / *T-nuts* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MF-100 | 150 | 100 | 73 | 140 | 100 | 63 | 66 | 8 | 60 | 37 | 121 | 2 |
| MF-200 | 200 | 100 | 85 | 140 | 100 | 63 | 66 | 8 | 60 | 37 | 121 | 2 |

| Typ MF MINI / Type MF MINII | X-Verfahrweg / *X-Travel* mm | Y-Verfahrweg / *Y-Travel* mm | Auflösung / *Resolution* mm | Gewinde-steigung / *Thread lead* | Max. Werkstückgewicht / *Max. weight of work p.* kg | Max. Arbeits-druck / *Max. pressure* kg | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| MF-100 | 50 | 50 | 0,025 | P-1,75 | 40 | 250 | 6 | ● | 18-MF-100 |
| MF-200 | 100 | 100 | 0,025 | P-1,75 | 40 | 250 | 6,5 | ● | 18-MF-200 |



## Typ MG MINI - drehbar
## *Type MG MINI - rotatable*

BAZUS

Drehbare Koordinatentische mit zwei Achsen, wie Ausführung MF MINI, jedoch mit zusätzlicher Rotationsmöglichkeit von ± 30°.

*Rotating cross tables with 2 axes, identical to MF MINI, but with the possibility of performing ± 30° rotation.*

| Typ MG MINI / *Type MG MINI* | A mm | B mm | C mm | D mm | E mm | F mm | H mm | I mm | J mm | K mm | L mm | T-Nuten / *T-nuts* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MG-100 | 150 | 100 | 85 | 160 | 120 | 100 | 66 | 8 | 60 | 37 | 140 | 2 |
| MG-200 | 200 | 100 | 87 | 160 | 120 | 100 | 66 | 8 | 60 | 37 | 140 | 2 |

| Typ MG MINI / *Type MG MINI* | X-Verfahrweg / *X-Travel* mm | Y-Verfahrweg / *Y-Travel* mm | Auflösung / *Resolution* mm | Gewinde-steigung / *Thread lead* | Max. Werkstückgewicht / *Max. weight of work p.* kg | Max. Arbeits-druck / *Max. pressure* kg | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| MG-100 | 50 | 50 | 0,025 | P-1,75 | 45 | 255 | 7 | ● | 18-MG-100 |
| MG-200 | 100 | 100 | 0,025 | P-1,75 | 45 | 255 | 9,5 | ● | 18-MG-200 |



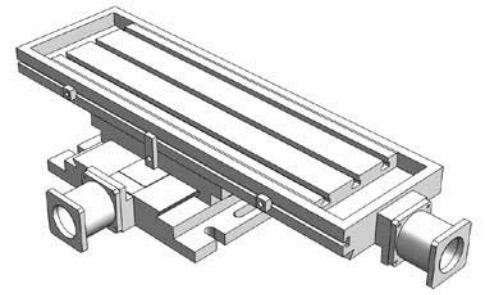
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Typ KN
## *Type KN*

- Koordinatentische mit automatischem Positionierungssystem
- Präzisions-Kugelrollspindeln und Turcite-Schwalbenschwanzführungen
- mit verschiedensten Motorvarianten

- *Cross tables with automatic positioning system*
- *precision ball-bearing spindles and Turcite-dovetail grooves*
- *many different types of motors available*



| Typ / *Type* | X-Verfahrweg / *X-Travel* mm | Y-Verfahrweg / *Y-Travel* mm | Toleranz / *Tolerance* mm | Max. Werkstückgewicht / *Max. weight of work p.* kg | Max. Arbeitsdruck / *Max. pressure* kg | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| KN1 | 190 | 130 | ± 0,01 | 105 | 700 | 39 | 18-KN-1 |
| KN2 | 240 | 160 | ± 0,01 | 270 | 900 | 46 | 18-KN-2 |
| KN3 | 350 | 160 | ± 0,01 | 270 | 980 | 56 | 18-KN-3 |
| KN4 | 470 | 240 | ± 0,01 | 290 | 1200 | 86 | 18-KN-4 |
| KN5 | 470 | 300 | ± 0,01 | 320 | 1200 | 122 | 18-KN-5 |
| KN6 | 700 | 400 | ± 0,01 | 900 | 1350 | 290 | 18-KN-6 |

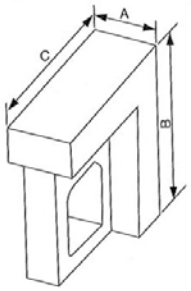



- Steuerung mit Kinematik Touchscreen oder jeder anderen CNC-Steuerung (Fanuc, Heidenhain, etc.) lieferbar auf Anfrage

- *control by Kinematik touchpad or any other CNC-control system (Fanuc, Heidenhain, etc.) available upon request*

**Touchscreen Steuerung optional (nicht enthalten) /**
***Touchscreen control unit optional (not included)***





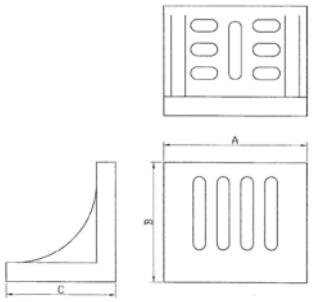

## Aufspannwinkel, Typ AW
## *Angle plates, type AW*

- Spezialguss
- Rechtwinkligkeit und Parallelität: 0,01 mm / 100 mm

- *special cast iron*
- *squareness and parallelism: 0,01 mm / 100 mm*

| Typ / *Type* | A mm | B mm | C mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 100 | 102 | 126 | 150 | 7 | 38-AW-100 |
| 125 | 126 | 202 | 300 | 17 | 38-AW-125 |
| 150 | 150 | 150 | 202 | 15 | 38-AW-150 |
| 200 | 202 | 250 | 300 | 33 | 38-AW-200 |



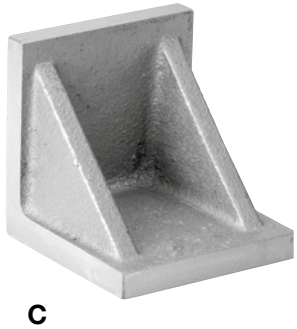


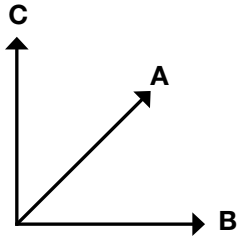

## Aufspannwinkel mit Spannschlitzen, Typ AWSS
## *Angles plates with clamping slots, type AWSS*

- Spezialguss
- 2-seitig bearbeitet
- Spannfläche und Standfläche mit Spannschlitzen
- mit Versteifungsrippen
- Rechtwinkligkeit und Parallelität: 0,01 mm / 100 mm

- *special cast iron*
- *machined on 2 sides*
- *clamping surface and base with clamping slots*
- *reinforced by ribs*
- *squareness and parallelism: 0,01 mm / 100 mm*

| Typ / *Type* | A mm | B mm | C mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 150 | 150 | 126 | 115 | 4 | 38-AWSS-150 |
| 200 | 202 | 150 | 126 | 8 | 38-AWSS-200 |
| 250 | 250 | 202 | 126 | 12 | 38-AWSS-250 |
| 300 | 300 | 228 | 202 | 24 | 38-AWSS-300 |






## Aufspannwinkel ohne Aussparungen, Typ AWG
## *Plain angles plates, type AWG*

- Spezialguss
- 2-seitig bearbeitet
- mit Versteifungsrippen
- Rechtwinkligkeit und Parallelität: 0,01 mm / 100 mm

- *special cast iron*
- *machined on 2 sides*
- *reinforced by ribs*
- *squareness and parallelism: 0,01 mm / 100 mm*

| Typ / *Type* | A mm | B mm | C mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 50 | 51 | 51 | 51 | 0,4 | 38-AWG-50 |
| 100 | 102 | 102 | 102 | 2,5 | 38-AWG-100 |
| 150 | 152 | 152 | 152 | 7 | 38-AWG-150 |
| 250 | 254 | 254 | 254 | 28 | 38-AWG-250 |
| 300 | 305 | 305 | 305 | 43 | 38-AWG-300 |

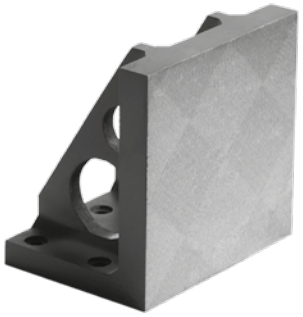


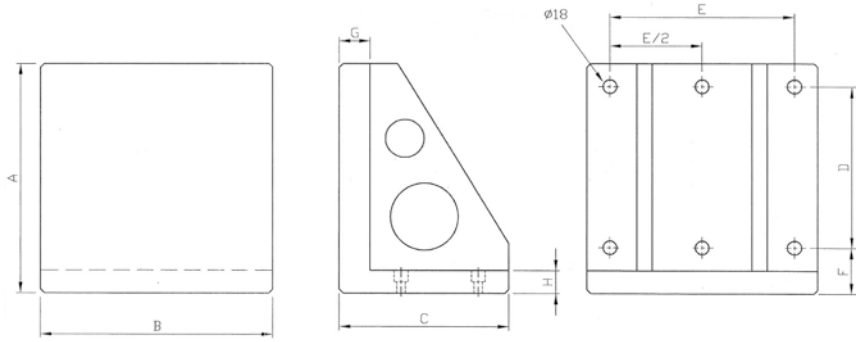
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Aufspannwinkel, Typ CD23
## *Angle plates, type CD23*

NEU NEW !

- GG 30 spannungsfrei geglüht
- *GG 30 stress-annealed*





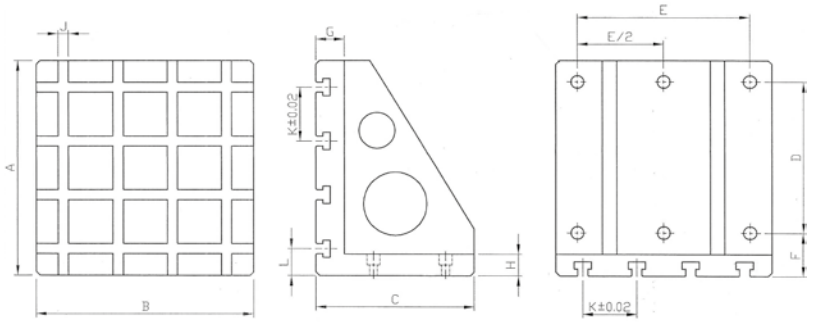

| A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 300 | 300 | 220 | 100 | 250 | 90 | 40 | 30 | 52 | 38-CD23-300 |
| 400 | 400 | 280 | 160 | 320 | 90 | 40 | 30 | 90 | 38-CD23-400 |
| 500 | 500 | 350 | 200 | 400 | 90 | 50 | 35 | 175 | 38-CD23-500 |
| 630 | 630 | 435 | 250 | 500 | 100 | 50 | 40 | 305 | 38-CD23-630 |
| 800 | 800 | 525 | 320 | 640 | 115 | 50 | 45 | 480 | 38-CD23-800 |

## Aufspannwinkel mit T-Nuten, Typ RS28
## *Angle plates with t-slots, type RS28*

NEU NEW !

- GG 30 spannungsfrei geglüht
- *GG 30 stress-annealed*





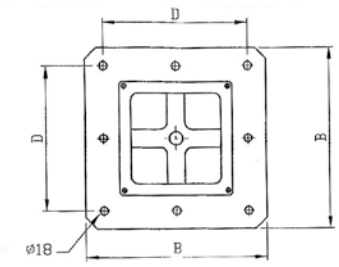

| A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm (± 0,02) | L mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 300 | 300 | 220 | 100 | 250 | 90 | 60 | 30 | Ø18 | 14 | 100 | 50 | 63 | 38-RS28-300/14 |
| 400 | 400 | 280 | 160 | 320 | 90 | 60 | 30 | Ø18 | 14 | 100 | 50 | 114 | 38-RS28-400/14 |
| 500 | 500 | 350 | 200 | 400 | 90 | 60 | 35 | Ø18 | 14 | 100 | 50 | 184 | 38-RS28-500/14 |
| 630 | 630 | 450 | 250 | 500 | 100 | 60 | 40 | Ø18 | 14 | 125 | 65 | 316 | 38-RS28-630/14 |
| 800 | 800 | 550 | 320 | 640 | 115 | 75 | 45 | Ø18 | 14 | 150 | 100 | 577 | 38-RS28-800/14 |
| 300 | 300 | 220 | 100 | 250 | 90 | 60 | 30 | Ø18 | 18 | 100 | 50 | 59 | 38-RS28-300/18 |
| 400 | 400 | 280 | 160 | 320 | 90 | 60 | 30 | Ø18 | 18 | 100 | 50 | 111 | 38-RS28-400/18 |
| 500 | 500 | 350 | 200 | 400 | 90 | 60 | 35 | Ø18 | 18 | 100 | 50 | 175 | 38-RS28-500/18 |
| 630 | 630 | 450 | 250 | 500 | 100 | 65 | 40 | Ø18 | 18 | 125 | 65 | 304 | 38-RS28-630/18 |

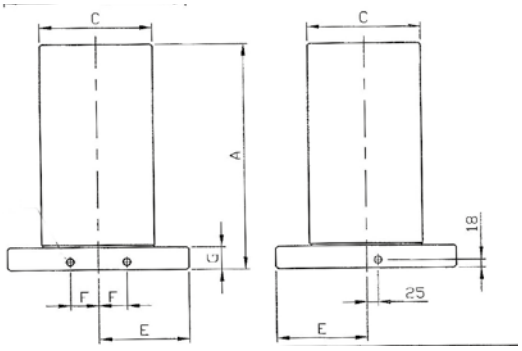
## Aufspannwürfel, Typ FE50
## *Clamping cubes, type FE50*

NEU NEW !

- GG 30 spannungsfrei geglüht
- *GG 30 stress-annealed*






| A mm | B mm | C mm | D mm | E mm | F mm | G mm | Befest.-Löcher / *Fixing holes* | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 500 | 400 | 250 | 320 | 200 | 55 | 50 | 4 | 175 | ● | 38-FE50-500 |
| 600 | 500 | 300 | 400 | 250 | 75 | 50 | 8 | 240 | ● | 38-FE50-600 |
| 700 | 630 | 350 | 500 | 315 | 100 | 50 | 8 | 390 | ● | 38-FE50-700 |
| 800 | 800 | 500 | 640 | 400 | 135 | 50 | 8 | 745 | ● | 38-FE50-800 |

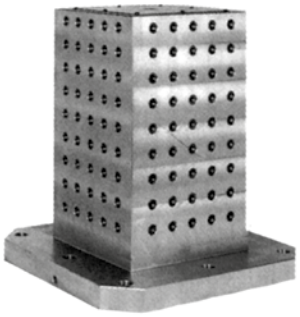
## Rasterwürfel, Typ MS17
## *Locator-grid cubes, type MS17*

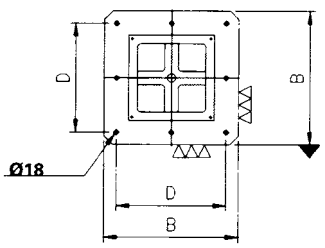
NEU NEW !

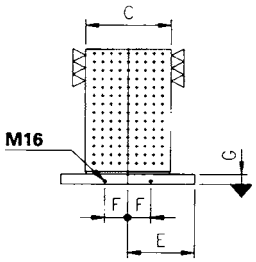
- *GG 30 spannungsfrei geglüht*
- *GG 30 stress-annealed*

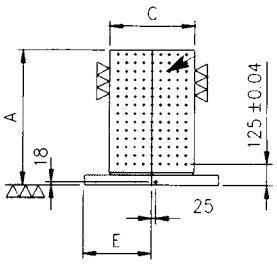
**Lochraster: ± 0,01 mm: 40 mm, M12/ 50 mm, M16**

***Grid spacing: ± 0,01 mm: 40 mm, M12/ 50 mm, M16***






| A mm | B mm | C mm | D mm | E mm | F mm | G mm | Rasterbohrung / *Grid holes* (F7) Ø | Raster/ *Spacing* | Anz. Bohrung./ *No. of holes* | Befest.-Löcher/ *Fixing holes* | kg | | Art.-Nr./ *Order no* | EUR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 500 | 400 | 250 | 320 | 200 | 55 | 50 | 12/M12 | 40 | 180 | 4 | 145 | ● | 38-MS17-500/12 | 2.639,10 |
| 600 | 500 | 300 | 400 | 250 | 75 | 50 | 12/M12 | 40 | 264 | 8 | 230 | ● | 38-MS17-600/12 | 3.988,90 |
| 700 | 630 | 350 | 500 | 315 | 100 | 50 | 12/M12 | 40 | 392 | 8 | 380 | ● | 38-MS17-700/12 | 5.761,20 |
| 800 | 800 | 500 | 640 | 400 | 135 | 50 | 12/M12 | 40 | 704 | 8 | 720 | ● | 38-MS17-800/12 | 9.010,00 |
| 500 | 400 | 250 | 320 | 200 | 55 | 50 | 16/M16 | 50 | 112 | 4 | 143 | ● | 38-MS17-500/16 | 2.357,50 |
| 600 | 500 | 300 | 400 | 250 | 75 | 50 | 16/M16 | 50 | 180 | 8 | 228 | ● | 38-MS17-600/16 | 3.510,70 |
| 700 | 630 | 350 | 500 | 315 | 100 | 50 | 16/M16 | 50 | 288 | 8 | 376 | ● | 38-MS17-700/16 | 5.209,60 |
| 800 | 800 | 500 | 640 | 400 | 135 | 50 | 16/M16 | 50 | 504 | 8 | 710 | ● | 38-MS17-800/16 | 7.667,20 |



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Hülsen und Dorne

## *Sleeves and arbors*



## Inhalt:

- Reduzierhülsen
- Verlängerungshülsen
- Bohrer- und Reibahlenverlängerungen
- Reduzierhülsen für Hydrodehnspannfutter
- Klemmhülsen
- Spindelhülsen
- Gewindebohrer-Spannhülsen
- Gewindebohrerhalter mit Schnellwechselsystem
- Kegeldorne

## *Content:*

- *Reducing sleeves*
- *Extension sleeves*
- *Drill and reamer extensions*
- *Reducing sleeves for hydraulic expansion mandrels*
- *Clamping sleeves*
- *Spindle sleeves*
- *Tap holders*
- *Tap holders with quick change mechanism*
- *Taper arbors*

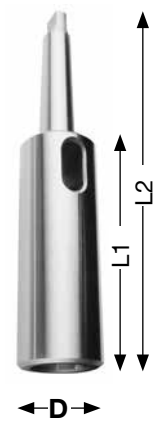
# Reduzierhülsen
# *Reducing sleeves*




## DIN 2185, ganz gehärtet und geschliffen
## *DIN 2185, completely hardened and ground*

| Außenkegel / *External taper* | Innenkegel / *Internal taper* | L mm | ca. g | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 1 | 0 | 80 | 30 | ● | 01-52-1/0 |
| 2 | 1 | 92 | 95 | ● | 01-52-2/1 |
| 3 | 1 | 99 | 190 | ● | 01-52-3/1 |
| 3 | 2 | 112 | 250 | ● | 01-52-3/2 |
| 4 | 1 | 124 | 550 | ● | 01-52-4/1 |
| 4 | 2 | 124 | 480 | ● | 01-52-4/2 |
| 4 | 3 | 140 | 360 | ● | 01-52-4/3 |
| 5 | 1 | 156 | 1700 | ● | 01-52-5/1 |
| 5 | 2 | 156 | 1520 | ● | 01-52-5/2 |
| 5 | 3 | 156 | 1360 | ● | 01-52-5/3 |
| 5 | 4 | 171 | 950 | ● | 01-52-5/4 |
| 6 | 1 | 218 | 4400 | ● | 01-52-6/1 |
| 6 | 2 | 218 | 4300 | ● | 01-52-6/2 |
| 6 | 3 | 218 | 4100 | ● | 01-52-6/3 |
| 6 | 4 | 218 | 3600 | ● | 01-52-6/4 |
| 6 | 5 | 218 | 2550 | ● | 01-52-6/5 |

# Verlängerungshülsen
# *Extension sleeves*




## DIN 2187, ganz gehärtet und geschliffen
## *DIN 2187, completely hardened and ground*

| Außenkegel / *External taper* | Innenkegel / *Internal taper* | D mm | L2 mm | L1 mm | ca. g | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 20 | 145 | 83 | 190 | ● | 01-65-1/1 |
| 1 | 2 | 30 | 160 | 98 | 340 | ● | 01-65-1/2 |
| 2 | 1 | 20 | 160 | 85 | 250 | ● | 01-65-2/1 |
| 2 | 2 | 30 | 175 | 100 | 400 | ● | 01-65-2/2 |
| 2 | 3 | 36 | 196 | 121 | 840 | ● | 01-65-2/3 |
| 2 | 4 | 48 | 169 | 94 | 1300 | ● | 01-65-2/4 |
| 3 | 1 | 20 | 175 | 81 | 400 | ● | 01-65-3/1 |
| 3 | 2 | 30 | 194 | 100 | 550 | ● | 01-65-3/2 |
| 3 | 3 | 36 | 215 | 121 | 1000 | ● | 01-65-3/3 |
| 3 | 4 | 48 | 240 | 146 | 1500 | ● | 01-65-3/4 |
| 4 | 1 | 20 | 200 | 82,5 | 800 | ● | 01-65-4/1 |
| 4 | 2 | 30 | 215 | 97,5 | 850 | ● | 01-65-4/2 |
| 4 | 3 | 36 | 240 | 122,5 | 1300 | ● | 01-65-4/3 |
| 4 | 4 | 48 | 265 | 147,5 | 1900 | ● | 01-65-4/4 |
| 4 | 5 | 63 | 300 | 182,5 | 3310 | ● | 01-65-4/5 |
| 5 | 1 | 20 | 232 | 82,5 | 1800 | ● | 01-65-5/1 |
| 5 | 2 | 30 | 247 | 97,5 | 1900 | ● | 01-65-5/2 |
| 5 | 3 | 36 | 268 | 118,5 | 2150 | ● | 01-65-5/3 |
| 5 | 4 | 48 | 300 | 150,5 | 2750 | ● | 01-65-5/4 |
| 5 | 5 | 63 | 335 | 182,5 | 4200 | ● | 01-65-5/5 |
| 5 | 6 | 82 | 396 | 247 | 640 | ● | 01-65-5/6 |
| 6 | 3 | 36 | 330 | 120 | 4580 | ● | 01-65-6/3 |
| 6 | 4 | 48 | 355 | 180 | 5420 | ● | 01-65-6/4 |
| 6 | 5 | 63 | 390 | 180 | 6750 | ● | 01-65-6/5 |
| 6 | 6 | 82 | 451 | 241 | 11890 | ● | 01-65-6/6 |

**Sonderhülsen auf Anfrage**
***Special sleves available upon request***

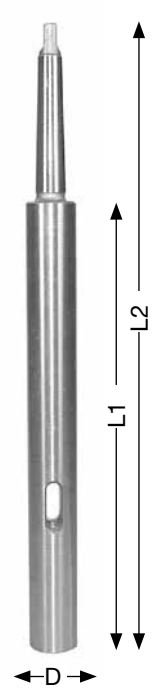


● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Bohrer- und Reibahlen-Verlängerungen
*Drill and reamer extensions*



## Ganz geschliffen, Kegel gehärtet
## *Completely ground, taper hardened*




| Außenkegel / *External taper* | Innenkegel / *Internal taper* | D mm | L1 mm | L2 mm | ca. g | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 1 | 1 | 20 | 138 | 200 | 250 | 01-75-1/1-200 |
| 1 | 1 | 20 | 188 | 250 | 375 | 01-75-1/1-250 |
| 1 | 1 | 20 | 238 | 300 | 500 | 01-75-1/1-300 |
| 1 | 1 | 20 | 288 | 350 | 625 | 01-75-1/1-350 |
| 1 | 1 | 20 | 338 | 400 | 750 | 01-75-1/1-400 |
| 1 | 1 | 20 | 388 | 450 | 900 | 01-75-1/1-450 |
| 1 | 1 | 20 | 438 | 500 | 1000 | 01-75-1/1-500 |
| 2 | 2 | 25 | 125 | 200 | 430 | 01-75-2/2-200 |
| 2 | 2 | 25 | 175 | 250 | 625 | 01-75-2/2-250 |
| 2 | 2 | 25 | 225 | 300 | 820 | 01-75-2/2-300 |
| 2 | 2 | 25 | 275 | 350 | 1015 | 01-75-2/2-350 |
| 2 | 2 | 25 | 325 | 400 | 1200 | 01-75-2/2-400 |
| 2 | 2 | 25 | 375 | 450 | 1400 | 01-75-2/2-450 |
| 2 | 2 | 25 | 425 | 500 | 1600 | 01-75-2/2-500 |
| 2 | 2 | 25 | 525 | 600 | 1800 | 01-75-2/2-600 |
| 3 | 3 | 32 | 156 | 250 | 1000 | 01-75-3/3-250 |
| 3 | 3 | 32 | 206 | 300 | 1300 | 01-75-3/3-300 |
| 3 | 3 | 32 | 256 | 350 | 1550 | 01-75-3/3-350 |
| 3 | 3 | 32 | 306 | 400 | 1850 | 01-75-3/3-400 |
| 3 | 3 | 32 | 356 | 450 | 2100 | 01-75-3/3-450 |
| 3 | 3 | 32 | 405 | 500 | 2400 | 01-75-3/3-500 |
| 3 | 3 | 32 | 506 | 600 | 2700 | 01-75-3/3-600 |
| 4 | 4 | 40 | 182,5 | 300 | 1650 | 01-75-4/4-300 |
| 4 | 4 | 40 | 232,5 | 350 | 2150 | 01-75-4/4-350 |
| 4 | 4 | 40 | 282,5 | 400 | 2650 | 01-75-4/4-400 |
| 4 | 4 | 40 | 332,5 | 450 | 3100 | 01-75-4/4-450 |
| 4 | 4 | 40 | 382,5 | 500 | 3600 | 01-75-4/4-500 |
| 4 | 4 | 40 | 482,5 | 600 | 4200 | 01-75-4/4-600 |

**Sonderhülsen auf Anfrage**
***Special sleves available upon request***

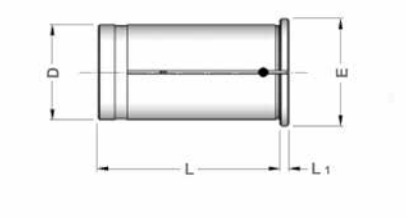
# Reduzierhülsen für Hydrodehnspannfutter
# *Reducing sleeves for hydraulic expansion mandrels*



Für die Reduzierung des Spanndurchmessers bei Hydrodehnspannfuttern.

*For diameter reduction of hydraulic expansion mandrels.*

## Kühlmitteldicht bis 60 bar
## *Mechanically sealed up to 60 bar*



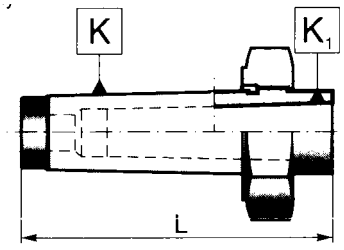

| D mm | Bohrungen / *Bores* Ø mm | E mm | L mm | L1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 20 | 3, 4, 5, 6, 8, 10, 12, 14, 16 | 24 | 50,5 | 2 | 94-52-20/Ø |
| 32 | 10, 12, 16, 18, 20, 25 | 36 | 60,5 | 3 | 94-52-32/Ø |

**Weitere Abmessungen auf Anfrage**
***Further sizes available upon request***

# Spindelhülsen für Werkzeuge mit Morsekegel
*Spindle sleeves for tools with morse taper*

## Mit Abdrückgewinde und Mutter
## *With draw-off thread and nut*



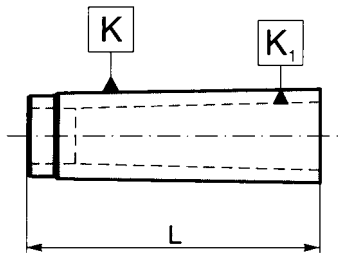



| Außenkegel-MK / *External taper-MT* | Innenkegel-MK / *Internal taper-MT* | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 2* | 1 | 84 | 01-84-2/1 |
| 3* | 1 | 102 | 01-84-3/1 |
| 4* | 1 | 122 | 01-84-4/1 |
| 3 | 2 | 102 | 01-84-3/2 |
| 4 | 2 | 122 | 01-84-4/2 |
| 4 | 3 | 122 | 01-84-4/3 |
| 5 | 2 | 153 | 01-84-5/2 |
| 5 | 3 | 153 | 01-84-5/3 |
| 5 | 4 | 153 | 01-84-5/4 |
| 6 | 3 | 212 | 01-84-6/3 |
| 6 | 4 | 212 | 01-84-6/4 |
| 6 | 5 | 212 | 01-84-6/5 |

* mit Austreibschlitz
* *with drift slot*

# Spindelhülsen für Werkzeuge mit Morsekegel
*Spindle sleeves for tools with morse taper*






| Außenkegel-MK / *External taper-MT* | Innenkegel-MK / *Internal taper-MT* | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 2 | 1 | 60 | 01-83-2/1 |
| 3 | 1 | 70 | 01-83-3/1 |
| 3 | 2 | 70 | 01-83-3/2 |
| 4 | 2 | 70 | 01-83-4/2 |
| 4 | 3 | 70 | 01-83-4/3 |
| 5 | 2 | 77 | 01-83-5/2 |
| 5 | 3 | 77 | 01-83-5/3 |
| 5 | 4 | 77 | 01-83-5/4 |
| 6 | 3 | 110 | 01-83-6/3 |
| 6 | 4 | 110 | 01-83-6/4 |
| 6 | 5 | 110 | 01-83-6/5 |
| metrisch / *metric 80* | 5 | 110 | 01-83-80/5 |
| metrisch / *metric 80* | 6 | 110 | 01-83-80/6 |
| metrisch / *metric 100* | 6 | 132 | 01-83-100/6 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Klemmhülsen
*Clamping sleeves*



Ganz gehärtet und geschliffen
*Completely hardened and ground*

## Nach DIN 6328 für Gewindebohrer
## *According to DIN 6328 for taps*

| MK / *MT* | Außen-Ø / *External-Ø* mm | L mm | Bohrung / *Bore* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 1 | 12,2 | 65,5 | 2,5/2,8/ 3,5/4,0/4,5/5,0/ 5,5/6,0/7,0/8,0 | ● | 06-501E-Ø |
| 2 | 18,0 | 78,5 | 4,5/5,5/6,0/7,0/ 8,0/9,0/10,0/ 11,0/12,0/12,5 | ● | 06-504E-Ø |
| 3 | 24,0 | 98,0 | 8,0/9,0/10,0/ 11,0/12,0/ 12,5/14,0/16,0 | ● | 06-535E-Ø |
| 4 | 31,5 | 123,0 | 12,0/14,0/ 16,0/18,0/20,0/ 22,0/25,0 | ● | 06-538E-Ø |
| 5 | 44,7 | 156,0 | 22,0/25,0/28,0/ 30,0/32,0/36,0 | ● | 06-589E-Ø |

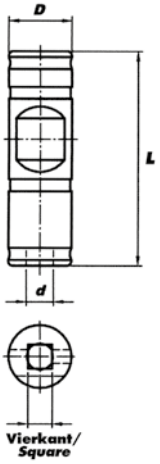
## Nach DIN 6329 für Spiralbohrer
## *According to DIN 6329 for spiral drills*

| MK / *MT* | Außen-Ø / *External-Ø* mm | L mm | Abmessungen / *Dimensions* | Bohrung / *Bore* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 1 | 12,2 | 65,5 | 3,0 - 8,0 | 0,5 | ● | 06-511E-Ø |
| 2 | 18,0 | 78,5 | 5,0 - 13,0 | 0,5 | ● | 06-514E-Ø |
| 3 | 24,0 | 98,0 | 8,0 - 18,0 | 0,5 | ● | 06-545E-Ø |
| 4 | 31,5 | 123,0 | 12,0 - 20,0 | 1,0 | ● | 06-548E-Ø |
| 5 | 44,7 | 156,0 | 20,0 - 36,0 | 1,0 | ○ | 06-599E-Ø |

**Weitere Abmessungen lieferbar auf Anfrage**
***Further dimensions available upon request***

# Gewindebohrer-Spannhülsen
*Tap holders*






## Für Maschinen mit steigungssynchronem Vorschub
## *For machines with rigid tapping*

- einsetzbar in herkömmlichen Weldon Spannfuttern nach DIN 1835 B
- kein Schlupf zwischen Hülse und Bohrer
- bei innerer Kühlmittelzufuhr 100% Kühlung an der Schneide

- *suitable for standard Weldon chucks according to DIN 1835 B*
- *no slip between tap holder and drill*
- *100% blade cooling if internal coolant supply is selected*

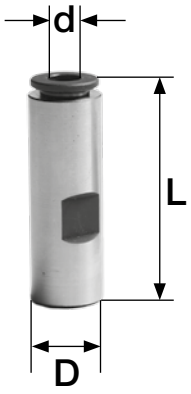
| Außen-Ø / *External-Ø* mm | Innen-Ø / *Internal-Ø* mm | Vierkant / *Square* mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 8 | 2,5 | 2,1 | 27 | 81-GEW-8X2,5 |
| 8 | 2,8 | 2,1 | 27 | 81-GEW-8X2,8 |
| 10 | 3,5 | 2,7 | 35 | 81-GEW-10X3,5 |
| 10 | 4,0 | 3,0 | 35 | 81-GEW-10X4,0 |
| 10 | 4,5 | 3,4 | 35 | 81-GEW-10X4,5 |
| 12 | 6,0 | 4,9 | 45 | 81-GEW-12X6,0 |
| 14 | 7,0 | 5,5 | 45 | 81-GEW-14X7,0 |
| 14 | 8,0 | 6,2 | 45 | 81-GEW-14X8,0 |
| 16 | 9,0 | 7,0 | 48 | 81-GEW-16X9,0 |
| 16 | 10,0 | 8,0 | 48 | 81-GEW-16X10,0 |
| 18 | 11,0 | 9,0 | 48 | 81-GEW-18X11,0 |
| 20 | 12,0 | 9,0 | 50 | 81-GEW-20X12,0 |
| 25 | 14,0 | 11,0 | 56 | 81-GEW-25X14,0 |
| 25 | 16,0 | 12,0 | 56 | 81-GEW-25X16,0 |
| 32 | 18,0 | 14,5 | 60 | 81-GEW-32X18,0 |
| 32 | 20,0 | 16,0 | 60 | 81-GEW-32X20,0 |
| 32 | 22,0 | 18,0 | 60 | 81-GEW-32X22,0 |
| 40 | 25,0 | 20,0 | 70 | 81-GEW-40X25,0 |
| 40 | 28,0 | 22,0 | 70 | 81-GEW-40X28,0 |
| 50 | 32,0 | 24,0 | 80 | 81-GEW-50X32,0 |
| 50 | 36,0 | 29,0 | 80 | 81-GEW-50X36,0 |
| 50 | 40,0 | 32,0 | 80 | 81-GEW-50X40,0 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

NEU / NEW !






## Gewindebohrerhalter mit Weldon-Spannfläche
## *Tap holders for Weldon chucks*

- für den Einsatz von Gewindebohrern mit 4-Kant in Weldonfuttern
- mit Schnellwechselsystem

- *to use tapping collets with internal square in weldon chucks*
- *with quick change mechanism*

| D mm | d mm | Vierkant / *Square* mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 3,5 | 2,7 | 56 | 09-GBE-16/3,5 |
| 16 | 4,0 | 3,0 | 56 | 09-GBE-16/4,0 |
| 16 | 4,5 | 3,4 | 56 | 09-GBE-16/4,5 |
| 16 | 6,0 | 4,9 | 56 | 09-GBE-16/6,0 |
| 20 | 4,5 | 3,4 | 58 | 09-GBE-20/4,5 |
| 20 | 6,0 | 4,9 | 58 | 09-GBE-20/6,0 |
| 20 | 7,0 | 5,5 | 58 | 09-GBE-20/7,0 |
| 20 | 8,0 | 6,2 | 58 | 09-GBE-20/8,0 |
| 20 | 9,0 | 7,0 | 58 | 09-GBE-20/9,0 |
| 20 | 10,0 | 8,0 | 58 | 09-GBE-20/10 |
| 25 | 4,5 | 3,4 | 66 | 09-GBE-25/4,5 |
| 25 | 6,0 | 4,9 | 66 | 09-GBE-25/6,0 |
| 25 | 7,0 | 5,5 | 66 | 09-GBE-25/7,0 |
| 25 | 8,0 | 6,2 | 66 | 09-GBE-25/8,0 |
| 25 | 9,0 | 7,0 | 66 | 09-GBE-25/9,0 |
| 25 | 10,0 | 8,0 | 66 | 09-GBE-25/10,0 |
| 25 | 11,0 | 9,0 | 66 | 09-GBE-25/11,0 |
| 25 | 12,0 | 9,0 | 66 | 09-GBE-25/12,0 |
| 32 | 6,0 | 4,9 | 70 | 09-GBE-32/6,0 |
| 32 | 7,0 | 5,5 | 70 | 09-GBE-32/7,0 |
| 32 | 8,0 | 6,2 | 70 | 09-GBE-32/8,0 |
| 32 | 9,0 | 7,0 | 70 | 09-GBE-32/9,0 |
| 32 | 10,0 | 8,0 | 70 | 09-GBE-32/10,0 |
| 32 | 11,0 | 9,0 | 70 | 09-GBE-32/11,0 |
| 32 | 12,0 | 9,0 | 70 | 09-GBE-32/12,0 |
| 32 | 14,0 | 11,0 | 70 | 09-GBE-32/14,0 |
| 32 | 16,0 | 12,0 | 70 | 09-GBE-32/16,0 |
| 32 | 18,0 | 14,5 | 70 | 09-GBE-32/18,0 |

# DIN 238, Kegeldorne mit Morsekegelschaft
## *DIN 238, taper arbors with morse taper shanks*



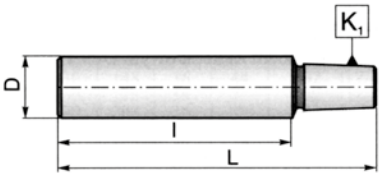
Ganz gehärtet und geschliffen
*Completely hardened and ground*

| MK / *MT* | Kegel / *Taper* | L mm | ca. g | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 1 | B 10 | 86 | 55 | 41-1/B10 |
| 1 | B 12 | 90 | 60 | 41-1/B12 |
| 1 | B 16 | 97 | 90 | 41-1/B16 |
| 1 | B 18 | 105 | 110 | 41-1/B18 |
| 1 | B 18 VK | 97 | 95 | 41-1/B18VK |
| 2 | B 10 | 101 | 130 | 41-2/B10 |
| 2 | B 12 | 105 | 135 | 41-2/B12 |
| 2 | B 16 | 112 | 160 | 41-2/B16 |
| 2 | B 18 | 120 | 180 | 41-2/B18 |
| 2 | B 18 VK | 108,5 | 165 | 41-2/B18VK |
| 2 | B 22 | 128 | 245 | 41-2/B22 |
| 3 | B 12 | 124 | 280 | 41-3/B12 |
| 3 | B 16 | 131 | 310 | 41-3/B16 |
| 3 | B 18 | 139 | 320 | 41-3/B18 |
| 3 | B 18 VK | 132 | 320 | 41-3/B18VK |
| 3 | B 22 | 147 | 390 | 41-3/B22 |
| 3 | B 24 | 157 | 440 | 41-3/B24 |
| 4 | B 16 | 156 | 625 | 41-4/B16 |
| 4 | B 18 | 164 | 660 | 41-4/B18 |
| 4 | B 18 VK | 159 | 640 | 41-4/B18VK |
| 4 | B 22 | 172 | 715 | 41-4/B22 |
| 4 | B 24 | 182 | 770 | 41-4/B24 |
| 5 | B 16 | 188 | 1600 | 41-5/B16 |
| 5 | B 18 | 196 | 1600 | 41-5/B18 |
| 5 | B 22 | 204 | 1650 | 41-5/B22 |
| 5 | B 24 | 214 | 1700 | 41-5/B24 |

VK = verkürzter Bohrfutterkegel
*VK = shortened drill chuck taper*

# Kegeldorne mit Zylinderschaft
## *Taper arbors with cylinder shanks*





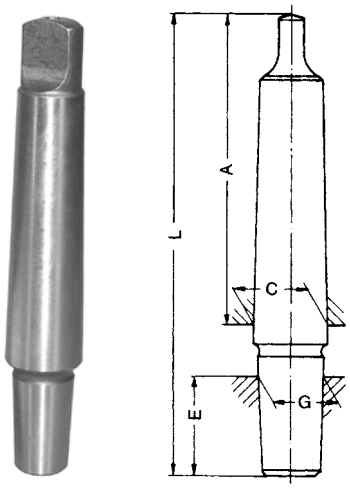

Ganz gehärtet und geschliffen
*Completely hardened and ground*

| D mm | l mm | Kegel / *Taper* | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 8 | 35 | B 10 | 55 | 13-5348-8-35-B10 |
| 10 | 50 | B 10 | 70 | 13-5348-10-50-B10 |
| 10 | 50 | B 12 | 75 | 13-5348-10-50-B12 |
| 10 | 50 | B 16 | 82 | 13-5348-10-50-B16 |
| 12 | 50 | B 16 | 82 | 13-5348-12-50-B16 |
| 12 | 60 | B 16 | 92 | 13-5348-12-60-B16 |
| 16 | 50 | B 16 | 81 | 13-5348-16-50-B16 |
| 16 | 70 | B 16 | 101 | 13-5348-16-70-B16 |
| 16 | 70 | B 18 | 110 | 13-5348-16-70-B18 |
| 20 | 60 | B 12 | 87 | 13-5348-20-60-B12 |
| 20 | 60 | B16 | 93 | 13-5348-20-60-B16 |
| 20 | 60 | B 18 | 100 | 13-5348-20-60-B18 |
| 25 | 75 | B 16 | 107 | 13-5348-25-75-B16 |
| 30 | 70 | B 16 | 106 | 13-5348-30-70-B16 |
| 30 | 70 | B 18 | 112 | 13-5348-30-70-B18 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Kegeldorne mit Jacobs-Kegel
## *Taper arbors with Jacobs taper*

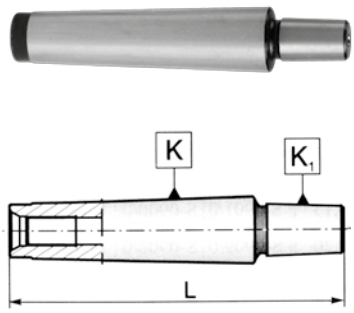



### Typ 236
### *Type 236*

| MK / *MT* | Kegel / *Taper* | L mm | A mm | C mm | E mm | G mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 1 | J1 | 85 | 62 | 12,065 | 16,7 | 9,754 | 41-1/J1 |
| 1 | J2 | 90 | 62 | 12,065 | 22,2 | 14,199 | 41-1/J2 |
| 1 | J3 | 99 | 62 | 12,065 | 31 | 20,599 | 41-1/J3 |
| 1 | J6 | 94 | 62 | 12,065 | 25,4 | 17,170 | 41-1/J6 |
| 2 | J1 | 100 | 75 | 17,788 | 16,7 | 9,754 | 41-2/J1 |
| 2 | J2 | 105 | 75 | 17,788 | 22,2 | 14,199 | 41-2/J2 |
| 2 | J3 | 114 | 75 | 17,788 | 31 | 20,599 | 41-2/J3 |
| 2 | J6 | 108 | 75 | 17,788 | 25,4 | 17,170 | 41-2/J6 |
| 3 | J2 | 124 | 94 | 23,825 | 22,2 | 14,199 | 41-3/J2 |
| 3 | J3 | 133 | 94 | 23,825 | 31 | 20,599 | 41-3/J3 |
| 3 | J33 | 127 | 94 | 23,825 | 25,4 | 17,170 | 41-3/J33 |
| 3 | J4 | 144 | 94 | 23,825 | 42 | - | 41-3/J4 |
| 3 | J6 | 127 | 94 | 23,825 | 25,4 | 15,850 | 41-3/J6 |
| 4 | J3 | 158 | 117,5 | 31,267 | 31 | 20,599 | 41-4/J3 |
| 4 | J6 | 152 | 117,5 | 31,267 | 25,4 | 17,170 | 41-4/J6 |

Ganz gehärtet und geschliffen
*Completely hardened and ground*

# Kegeldorne mit Morsekegel und Anzugsgewinde
## *Taper arbors with morse taper and internal thread*




### DIN 228 A
### *DIN 228 A*

| | MK / *MT* | L mm | Gewinde / *Thread* | Kegel / *Taper* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| N | 2 | 90 | M 10 | B 10 | 41-2/B10-M10 |
| | 2 | 95 | M 10 | B 12 | 41-2/B12-M10 |
| | 2 | 101 | M 10 | B 16 | 41-2/B16-M10 |
| | 3 | 121 | M 12 | B 16 | 41-3/B16-M12 |
| | 4 | 143 | M 16 | B 16 | 41-4/B16-M16 |

# Kegeldorne mit Gewinde
## *Taper arbors with thread*



| MK / *MT* | Gewinde / *Thread* | Länge / *Length* mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 2 | 3/8-24 | 101 | 0,2 | 41-2-3/8-24 |
| 2 | 1/2-20 | 104 | 0,2 | 41-2-1/2-20 |
| 2 | 5/8-16 | 106 | 0,2 | 41-2-5/8-16 |
| 3 | M20 | 122 | 0,4 | 41-3-3/M20 |

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Bohrfutter
## *Drill chucks*





## Inhalt:

- Bohrfutter
- Kurzbohrfutter für Rechts- und Linkslauf

## *Content:*

- *Drill chucks*
- *Universal drill chucks for right- and left-hand rotation*

# Schnellspann-Bohrfutter
## *Keyless drill chucks*



- Schnellspann-Bohrfutter, für stationäre und Handbohrmaschinen, schlüssellos
- automatische Nachspannung

- *keyless drill chucks for stationary machines and power tools*
- *self-tightening*

| Spannweite / *Capacity* mm | Aufnahme / *Mount* | Durchmesser / *Diameter mm* | Länge / *Length* mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 0,5-6 | B 10 | 34 | 72 | 44-85-6B10 |
| 0,5-8 | B 12 | 42 | 82 | 44-85-8B12 |
| 1-10 | B 12 | 42 | 82 | 44-85-10B12 |
| 1-10 | 1/2" x 20 | 42 | 86 | 44-85-10G12 |
| 1-10 | 3/8" x 24 | 42 | 86 | 44-85-10G38 |
| 1,5-13 | 1/2" x 20 | 44 | 97 | 44-85-13G12 |
| 1-13 | B 16 | 44 | 97 | 44-85-13B16 |
| 3-16 | B 16 | 54 | 110 | 44-85-16B16 |
| 3-16 | B 18 | 54 | 110 | 44-85-16B18 |

# Präzisions-Schnellspann-Bohrfutter
## *High-precision keyless drill chucks*



- Präzisions-Schnellspann-Bohrfutter, selbstspannend
- zum Einsatz auf Werkzeugmaschinen
- Rundlauf 0,05 mm

- *high-precision keyless drill chuck, self-tightening*
- *for high-precision machine tools*
- *run-out 0,05 mm*

| Spannweite / *Capacity* mm | Aufnahme / *Mount* | Durchmesser / *Diameter mm* | L geöffnet / *L opened* mm | L geschlossen / *L closed* mm | g | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 0,5-8 | B 10 | 34 | 61 | 69 | 320 | 44-95-8B10 |
| 0,5-8 | B 12 | 34 | 61 | 69 | 320 | 44-95-8B12 |
| 0,5-10 | B 12 | 43 | 81 | 92 | 705 | 44-95-10B12 |
| 0,5-10 | B 16 | 43 | 81 | 92 | 705 | 44-95-10B16 |
| 0,5-13 | B 16 | 51,5 | 92 | 103 | 1030 | 44-95-13B16 |
| 3-16 | B 16 | 56 | 95 | 108 | 1370 | 44-95-16B16 |
| 3-16 | B 18 | 56 | 95 | 108 | 1365 | 44-95-16B18 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Kurzbohrfutter
## *Universal drill chucks*

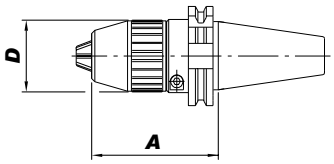
- höchste Präzision und Rundlaufgenauigkeit: max. 0,03 mm Abweichung
- für Rechts- und Linkslauf
- hohe Spannkraft bei geringem Kraftaufwand
- sehr kurze und kompakte Bauweise, da Werkzeugschaft und Bohrfutter eine Einheit bilden
- einfache Bedienung: schneller und unkomplizierter Werkzeugwechsel innerhalb oder außerhalb der Maschine, kein Öffnen bei schnellem Spindelstopp oder plötzlichem Richtungswechsel
- besonders geeignet zum Einsatz auf CNC-Maschinen
- Lieferumfang: Spannfutter inkl. Spannschlüssel

- *high precision and concentricity: runout 0,03 mm max.*
- *right and left rotation*
- *high gripping force high gripping force with minimal effort*
- *short and sturdy design: tool shank and chuck are forming one unit*
- *simple operation: quick tool change inside or outside of machine, no unintentional opening in case of sudden spindle stop or direction reversal*
- *suitable for CNC and high precision machine applications*
- *scope of delivery: drill chuck incl. wrench*

Rundlaufprüfung der Babel-Bohrfutter erfolgt mit Anzugsmoment ca. 12 Nm unter Verwendung folgender Prüfdorne:
13 mm: Ø 6 mm, 8 mm, 12 mm
16 mm: Ø 6 mm, 8 mm, 12 mm und 16 mm

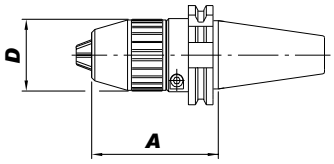
*Runout test of Babel drill chucks is done with a torque of approx 12 Nm using the following test mandrels:*
*13 mm: Ø 6 mm, 8 mm, 12 mm*
*16 mm: Ø 6 mm, 8 mm, 12 mm und 16 mm*





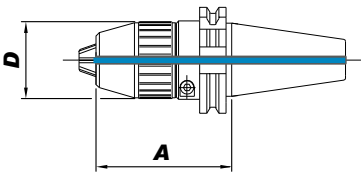

### DIN 69871 - Standard / *DIN 69871 - Standard*

| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 30 | 1-13 | 71 | 45 | ● | 82-691330 |
| SK 40 | 1-13 | 81 | 45 | ● | 82-691340 |
| SK 40 | 1-16 | 87 | 50 | ● | 82-691640 |
| SK 50 | 1-13 | 91 | 45 | ● | 82-691350 |
| SK 50 | 1-16 | 97 | 50 | ● | 82-691650 |



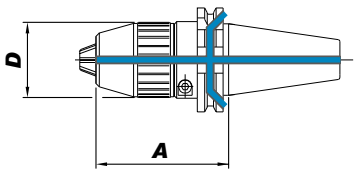

### DIN 69871 - Kurze Version / *DIN 69871 - Short version*

| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 40 | 1-13 | 67,5 | 45 | ● | 82-691340K |




### DIN 69871 - AD / *DIN 69871 - AD*

| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 40 | 1-13 | 81 | 45 | ● | 82-691341 |
| SK 40 | 1-16 | 87 | 50 | ● | 82-691641 |
| SK 50 | 1-13 | 91 | 45 | ● | 82-691351 |
| SK 50 | 1-16 | 97 | 50 | ● | 82-691651 |

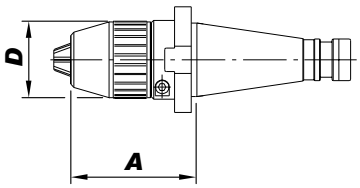



### DIN 69871 - ADB / *DIN 69871 - ADB*

| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 40 | 1-13 | 81 | 45 | ● | 82-691342 |
| SK 40 | 1-16 | 87 | 50 | ● | 82-691642 |
| SK 50 | 1-13 | 91 | 45 | ● | 82-691352 |
| SK 50 | 1-16 | 97 | 50 | ● | 82-691652 |

**Standard:** ohne Kühlung / *without coolant*
**AD:** mit innerer Kühlmittelzufuhr / *with internal coolant supply*
**ADB:** mit innerer Kühlmittelzufuhr und über den Bund / *with internal coolant supply and via collar*

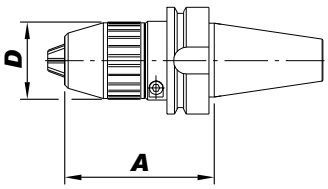





## DIN 2080 - Standard
## *DIN 2080 - Standard*

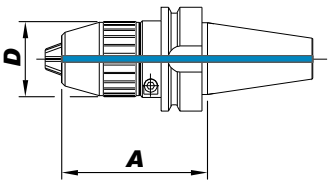
| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 30 | 1-13 | 71 | 45 | 82-801330 |
| SK 30 | 1-16 | 76 | 50 | 82-801630 |
| SK 40 | 1-13 | 73,5 | 45 | 82-801340 |
| SK 40 | 1-16 | 79,5 | 50 | 82-801640 |
| SK 50 | 1-16 | 93,5 | 50 | 82-801650 |






## MAS-BT - Standard
## *MAS-BT - Standard*

| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| BT 30 | 1-13 | 82 | 45 | 82-701330 |
| BT 40 | 1-13 | 89 | 45 | 82-701340 |
| BT 40 | 1-16 | 95 | 50 | 82-701640 |
| BT 50 | 1-16 | 116 | 50 | 82-701650 |




## MAS-BT - AD
## *MAS-BT - AD*

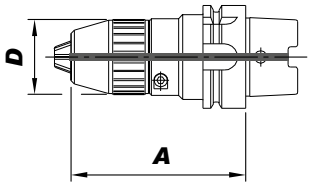
| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| BT 40 | 1-13 | 89 | 45 | 82-701341 |
| BT 40 | 1-16 | 95 | 50 | 82-701641 |
| BT 50 | 1-16 | 116 | 50 | 82-701651 |

**Standard:** ohne Kühlung / *without coolant*
**AD:** mit innerer Kühlmittelzufuhr / *with internal coolant supply*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

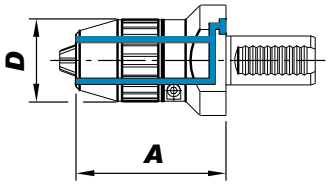





## DIN 69893 - AD (HSK)
## *DIN 69893 - AD (HSK)*

| Kegel / *Shank* | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 63 A | 1-13 | 107 | 45 | 82-631330 |
| 63 A | 1-16 | 112 | 50 | 82-631630 |
| 100 A | 1-16 | 127 | 50 | 82-1001630 |






## DIN 69880 (VDI) - mit Kühlmitteldüsen
## *DIN 69880 (VDI) - with coolant nozzles*

| VDI | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 * | 0,3-10 | 48,7 | 40 | 82-341016 |
| 20 * | 0,3-10 | 43,7 | 50 | 82-341020 |
| 25 | 1-13 | 87 | 50 | 82-341325 |
| 30 | 1-13 | 87 | 50 | 82-341330 |
| 30 | 1-16 | 92 | 55 | 82-341630 |
| 40 | 1-13 | 88 | 50 | 82-341340 |
| 40 | 1-16 | 93 | 55 | 82-341640 |
| 50 | 1-16 | 101,5 | 55 | 82-341650 |

**Mit Innenkühlung lieferbar auf Anfrage / *With internal coolant supply available upon request***

** Spannung durch den Schaft / Clamping trough shank*

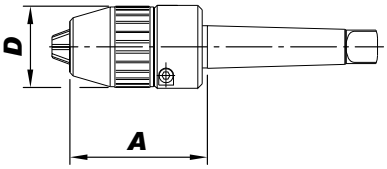


## Nach ISO 26623-1 - Standard
## *According to ISO 26623-1 - Standard*

| Größe / *Size* | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 6 | 1-13 | 105,4 | 45 | 82-261306 |
| 6 | 1-16 | 110,8 | 50 | 82-261606 |

**Standard:** ohne Kühlung / *without coolant*
**AD:** mit innerer Kühlmittelzufuhr / *with internal coolant supply*

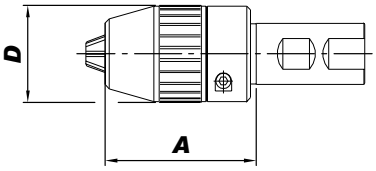





## Mit Morsekegel und Austreiblappen - Standard
## *With morse taper and tang - Standard*

| MK / *MT* | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MK 2 | 1-13 | 80 | 45 | 82-221302 |
| MK 2 | 1-16 | 86 | 50 | 82-221602 |
| MK 3 | 1-13 | 80 | 45 | 82-221303 |
| MK 3 | 1-16 | 86 | 50 | 82-221603 |
| MK 4 | 1-16 | 86 | 50 | 82-221604 |
| MK 5 | 1-16 | 86 | 50 | 82-221605 |






## Mit Zylinderschaft Weldon - Standard
## *With cylindrical shank Weldon - Standard*

| Ø mm | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 25 | 1-13 | 75,5 | 45 | 82-351325 |
| 25 | 1-16 | 81 | 45 | 82-351625 |
| 32 | 1-13 | 70 | 45 | 82-351332 |
| 32 | 1-16 | 75,5 | 50 | 82-351632 |

**Standard:** ohne Kühlung / *without coolant*





Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Körnerspitzen

## *Tailstock centres*



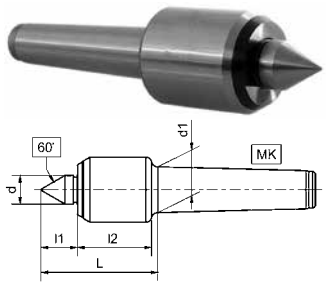
## Inhalt:

- Mitlaufende Drehbankspitzen
- Mitlaufende Zentrierkegel
- Mitlauf. Drehbankspitzen für auswechselbare Einsätze
- ROTOR Rotierende Spitzen
- Feste Zentrierspitzen
- Feste Zentrierkegel
- Strinmitnehmer

## *Content:*

- *Revolving tailstock centres*
- *Revolving tube centres*
- *Revolving tailstock centres for interchangeable inserts*
- ROTOR *Live-Centres*
- *Fixed centres*
- *Fixed tube centres*
- *Face drivers*

# Serie 80
# *Series 80*



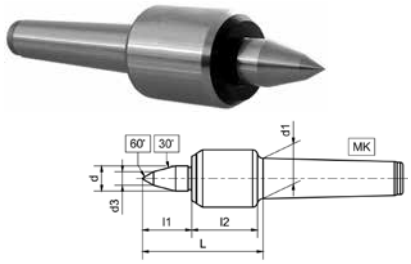

## Mitlaufende Präzisions-Drehbankspitze
## *Precision revolving tailstock centre*

- stabile Konstruktion
- schaftgelagerter Körner
- kleiner Gehäusedurchmesser
- Dauerschmierung
- Gehäuse gehärtet und geschliffen

- *solid design*
- *centre tip with needle bearings*
- *slim design with small casing diameter*
- *maintenance-free lubrication*
- *housing hardened and ground*

| Typ / *Type* | MK / *MT* | Ø mm | d mm | d1 mm | L mm | l1 mm | l2 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | 2 | 32 | 15 | 17,78 | 62 | 20 | 37 | 6000 | 200 | 0,005 | ● | 03-80-02 |
| 83 | 3 | 34 | 15 | 23,82 | 63 | 20 | 38 | 6000 | 400 | 0,005 | ● | 03-80-03 |
| 84 | 4 | 43 | 20 | 31,26 | 76 | 26 | 42 | 6000 | 800 | 0,005 | ● | 03-80-04 |
| 85 | 5 | 58 | 30 | 44,39 | 105 | 62 | 35 | 4000 | 1200 | 0,008 | ● | 03-80-05 |

# Serie 80 KOP
# *Series 80 KOP*



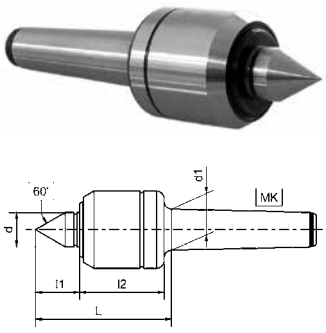

## Mitlaufende Präzisions-Drehbankspitze KOP
## *Precision revolving tailstock centre, extended*

- wie Serie 80, aber mit verlängerter Spitze 30° / 60°

- *as series 80, but with extended tip 30° / 60°*

| Typ / *Type* | MK / *MT* | Ø mm | d mm | d1 mm | L mm | l1 mm | l2 mm | d3 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 KOP | 2 | 32 | 15 | 17,78 | 71 | 29 | 37 | 8 | 6000 | 150 | 0,005 | ● | 03-80-02KOP |
| 83 KOP | 3 | 34 | 15 | 23,82 | 73 | 30 | 38 | 8 | 6000 | 300 | 0,005 | ● | 03-80-03KOP |
| 84 KOP | 4 | 43 | 20 | 31,26 | 86 | 36 | 42 | 10 | 6000 | 700 | 0,005 | ● | 03-80-04KOP |
| 85 KOP | 5 | 58 | 30 | 44,39 | 116 | 46 | 62 | 12 | 4000 | 1000 | 0,01 | ● | 03-80-05KOP |

# Serie 100
# *Series 100*




## Mitlaufende Präzisions-Drehbankspitze
## *Precision revolving tailstock centre*

- Universal-Ausführung mit 3 Rillenkugellagern
- Gehäuse gehärtet und geschliffen
- Körner aus chromlegiertem Werkzeugstahl
- hohe Rundlaufgenauigkeit
- besonders leichter Lauf
- wartungsfreie Dauerschmierung

- *universal centre with 3 groove ball bearings*
- *housing hardened and ground*
- *centre tip from chromium-alloyed tool steel*
- *high concentricity*
- *easy and smooth running*
- *maintenance-free permanent lubrication*

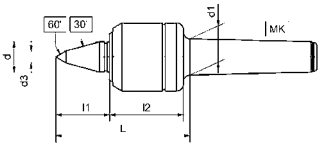
| Typ / *Type* | MK / *MT* | Ø mm | d mm | d1 mm | L mm | l1 mm | l2 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 1 | 28 | 12 | 12,06 | 57,5 | 17 | 34 | 6500 | 25 | 0,005 | ● | 03-111 |
| 113 | 1 | 35 | 13 | 12,06 | 63,5 | 18 | 39 | 5500 | 50 | 0,005 | ● | 03-113 |
| 121 | 2 | 35 | 13 | 17,78 | 65 | 18 | 39 | 5500 | 80 | 0,005 | ● | 03-121 |
| 123 | 2 | 45 | 20 | 17,78 | 83 | 26 | 49 | 5000 | 100 | 0,005 | ● | 03-123 |
| 131 | 3 | 45 | 20 | 23,82 | 83 | 26 | 49 | 5000 | 150 | 0,005 | ● | 03-131 |
| 133 | 3 | 60 | 24 | 23,82 | 102,5 | 34 | 60 | 4000 | 300 | 0,005 | ● | 03-133 |
| 141 | 4 | 60 | 24 | 31,26 | 104,5 | 34 | 60 | 4000 | 400 | 0,005 | ● | 03-141 |
| 143 | 4 | 76 | 32 | 31,26 | 126 | 42 | 73 | 3200 | 650 | 0,008 | ● | 03-143 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Serie 100 KOP
## *Series 100 KOP*





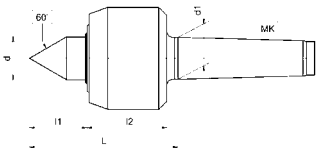

### Mitlaufende Präzisions-Drehbankspitze KOP
### *Precision revolving tailstock centre, extended*

- wie Serie 100, aber mit verlängerter Spitze 30° / 60°
- *as series 100, but with extended tip 30° / 60°*

| Typ / *Type* | MK / *MT* | Ø mm | d mm | d1 mm | L mm | l1 mm | l2 mm | d3 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123 KOP | 2 | 45 | 20 | 17,78 | 93 | 36 | 49 | 8 | 5000 | 100 | 0,005 | ● | 03-123KOP |
| 131 KOP | 3 | 45 | 20 | 23,82 | 93 | 36 | 49 | 8 | 5000 | 150 | 0,005 | ● | 03-131KOP |
| 133 KOP | 3 | 60 | 24 | 23,82 | 114 | 46 | 60 | 10 | 4000 | 300 | 0,005 | ● | 03-133KOP |
| 141 KOP | 4 | 60 | 24 | 31,26 | 116 | 46 | 60 | 10 | 4000 | 400 | 0,005 | ● | 03-141KOP |
| 143 KOP | 4 | 76 | 32 | 31,26 | 138 | 55 | 73 | 12 | 3200 | 650 | 0,008 | ● | 03-143KOP |

# Serie 800
## *Series 800*





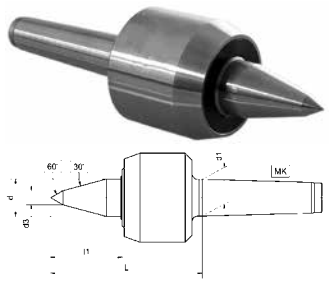

### Mitlaufende Präzisions-Drehbankspitze
### *Precision revolving tailstock centre*

- schaftgelagerter Körner aus chromlegiertem Werkzeugstahl von hoher Verschleißfestigkeit
- ganzes Gehäuse gehärtet und geschliffen
- mit starkem Längslager und doppelreihigem Schrägkugellager
- hohe Rundlaufgenauigkeit, wartungsfreie Dauerschmierung
- optimale Abdichtung gegen Eindringen von Kühlmittel und Schmutz

- *centre tip from chromium-alloyed tool steel with high wear resistance*
- *housing completely hardened and ground*
- *with strong axial bearing and double-row angular ball bearings*
- *high concentricity, maintenance-free permanent lubrication*
- *optimum sealing to avoid penetration of coolant and dirt*

| Typ / *Type* | MK / *MT* | Ø mm | d mm | d1 mm | L mm | l1 mm | l2 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 823 | 2 | 45 | 20 | 17,78 | 74 | 25 | 43 | 5000 | 150 | 0,005 | ● | 03-823 |
| 831 | 3 | 45 | 20 | 23,82 | 77 | 25 | 43 | 5000 | 200 | 0,005 | ● | 03-831 |
| 833 | 3 | 60 | 24 | 23,82 | 92 | 32 | 50 | 4300 | 400 | 0,005 | ● | 03-833 |
| 841 | 4 | 60 | 24 | 31,26 | 94 | 32 | 50 | 4300 | 600 | 0,005 | ● | 03-841 |
| 843 | 4 | 76 | 32 | 31,26 | 108 | 42 | 58 | 3200 | 750 | 0,005 | ● | 03-843 |
| 851 | 5 | 78 | 32 | 44,39 | 115 | 46 | 58 | 3200 | 1800 | 0,005 | ● | 03-851 |
| 853 | 5 | 96 | 42 | 44,39 | 130 | 48 | 72 | 2600 | 2000 | 0,007 | ● | 03-853 |
| 863 | 6 | 110 | 52 | 63,34 | 152 | 62 | 79 | 2000 | 4500 | 0,01 | ● | 03-863 |

# Serie 800 KOP
# *Series 800 KOP*

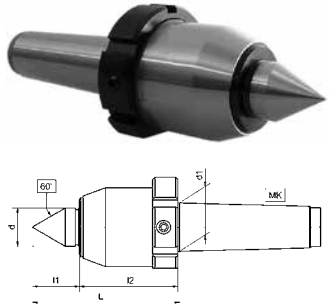



## Mitlaufende Präzisions-Drehbankspitze KOP
## *Precision revolving tailstock centre, extended*

- wie Serie 800, aber mit verlängerter Spitze 30° / 60°
- *as series 800, but with extended tip 30° / 60°*

| Typ / *Type* | MK / *MT* | Ø mm | d mm | d1 mm | L mm | l1 mm | l2 mm | d3 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 823 KOP | 2 | 45 | 20 | 17,78 | 85 | 36 | 43 | 8 | 5000 | 100 | 0,005 | ● | 03-823KOP |
| 831 KOP | 3 | 45 | 20 | 23,82 | 88 | 36 | 43 | 8 | 5000 | 150 | 0,005 | ● | 03-831KOP |
| 833 KOP | 3 | 60 | 24 | 23,82 | 103 | 46 | 50 | 10 | 4300 | 300 | 0,005 | ● | 03-833KOP |
| 841 KOP | 4 | 60 | 24 | 31,26 | 105 | 46 | 50 | 10 | 4300 | 400 | 0,005 | ● | 03-841KOP |
| 843 KOP | 4 | 76 | 32 | 31,26 | 126 | 60 | 58 | 12 | 3200 | 600 | 0,005 | ● | 03-843KOP |
| 851 KOP | 5 | 78 | 32 | 44,39 | 128 | 60 | 58 | 12 | 3200 | 1200 | 0,005 | ● | 03-851KOP |
| 853 KOP | 5 | 96 | 42 | 44,39 | 153 | 71 | 72 | 16 | 2600 | 1400 | 0,007 | ● | 03-853KOP |
| 863 KOP | 6 | 110 | 52 | 63,34 | 174 | 84 | 79 | 20 | 2000 | 2500 | 0,01 | ● | 03-863KOP |

# Serie 805
# *Series 805*

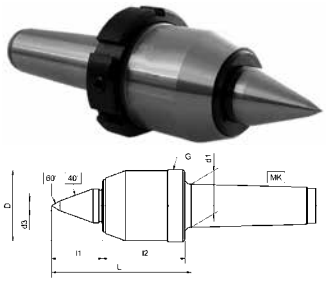



## Mitlaufende Hochleistungs-Drehbankspitze
## *High performance revolving tailstock centre*

- speziell für NC-Drehmaschinen mit Abdrückmutter
- ganz gehärtet und geschliffen
- Körner schaftgelagert in Präzisions-Nadellager
- für hohe Drehzahlen bei optimalem Rundlauf
- Dauerschmierung
- mit Zusatzdichtung auch für Schleifmaschinen geeignet

- *especially developed for use on NC machines with draw-off nut*
- *completely hardened and ground*
- *centre tip supported by needle bearings for high speeds with optimum concentricity*
- *permanent lubrication*
- *with additional sealing also suitable for grinding machines*

| Typ / *Type* | MK / *MT* | Ø mm | d mm | L mm | l1 mm | l2 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | G | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 835 | 3 | 52 | 25 | 92 | 30 | 56 | 12000 | 300 | 0,003 | M 54 x 1,5 | ◗ | 03-835 |
| 845 | 4 | 60 | 28 | 105 | 35 | 63 | 10000 | 600 | 0,003 | M 62 x 1,5 | ● | 03-845 |
| 855 | 5 | 72 | 35 | 135 | 43 | 82 | 8000 | 1200 | 0,003 | M 74 x 1,5 | ● | 03-855 |
| 865 | 6 | 83 | 44 | 148 | 50 | 88 | 5000 | 2500 | 0,007 | M 85 x 1,5 | ● | 03-865 |




## Mitlaufende Hochleistungs-Drehbankspitze KOP
## *High performance revolving tailstock centre, extended*

- wie Serie 805, aber mit verlängerter Spitze 30° / 60°
- *as series 805, but with extended tip 30° / 60°*

| Typ / *Type* | MK / *MT* | Ø mm | d mm | L mm | l1 mm | l2 mm | d3 mm | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | G | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 835 KOP | 3 | 52 | 25 | 102 | 40 | 56 | 8 | 12000 | 200 | 0,003 | M 54 x 1,5 | ● | 03-835KOP |
| 845 KOP | 4 | 60 | 28 | 115 | 45 | 63 | 8 | 10000 | 400 | 0,003 | M 62 x 1,5 | ● | 03-845KOP |
| 855 KOP | 5 | 72 | 35 | 145 | 53 | 82 | 10 | 8000 | 800 | 0,003 | M 74 x 1,5 | ● | 03-855KOP |
| 865 KOP | 6 | 83 | 44 | 165 | 67 | 88 | 14 | 5000 | 1700 | 0,007 | M 85 x 1,5 | ● | 03-865KOP |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

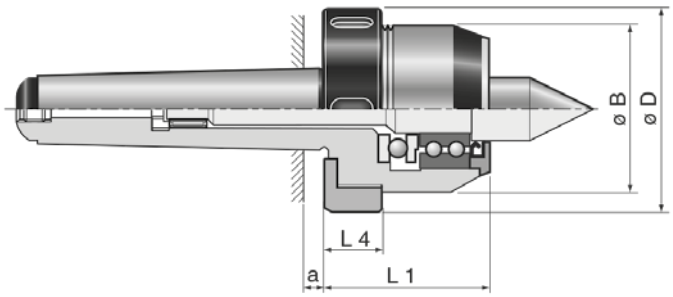


## Mitlaufende Hochleistungs-Drehbankspitze
## *Heavy-duty NC revolving tailstock centre*

NEU NEW !

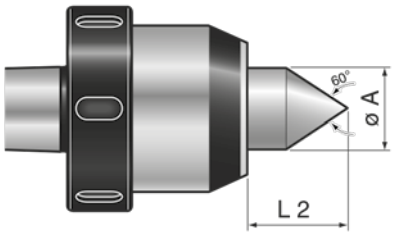
- mit Abdrückmutter
- Erhältlich in 2 Varianten: Standard oder mit Hartmetalleinsatz

- *with draw-off nut*
- *available in 2 versions: standard or with carbide tip*



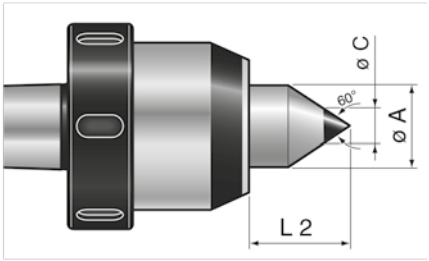

| MK / *MT* | D mm | B mm | L1 mm | L4 mm | a mm | Drehzahl / *Speed* max. | Rundlauf-genauigkeit / *Run-out* max. mm | kg |
|---|---|---|---|---|---|---|---|---|
| 3 | 69 | 55 | 49 | 22 | 5 | 7000 | 0,005 | 1,1 |
| 4 | 74 | 61 | 57 | 24 | 6,5 | 5500 | 0,005 | 1,9 |
| 5 | 92 | 80 | 65 | 24 | 6,5 | 4500 | 0,005 | 3,9 |
| 6 | 104 | 93 | 75 | 27 | 8 | 3200 | 0,008 | 8,8 |

## Standard
## *Standard*

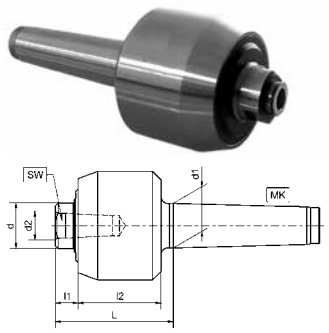



| MK / *MT* | A mm | L2 mm | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|
| 3 | 22 | 28 | 03-1603 | ● |
| 4 | 29 | 40 | 03-1604 | ● |
| 5 | 38 | 48 | 03-1605 | ● |
| 6 | 42 | 55 | 03-1606 | ● |

## Mit Hartmetallspitze
## *Full carbide tip*




| MK / *MT* | A mm | C mm | L2 mm | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|
| 3 | 22 | 10 | 28 | 03-1603HM | ● |
| 4 | 29 | 12 | 40 | 03-1604HM | ● |
| 5 | 38 | 18 | 48 | 03-1605HM | ● |
| 6 | 42 | 20 | 55 | 03-1606HM | ● |




## Mitlaufende Präzisions-Drehbankspitze für Wechseleinsätze
## *Precision revolving tailstock centre for interchangeable inserts*

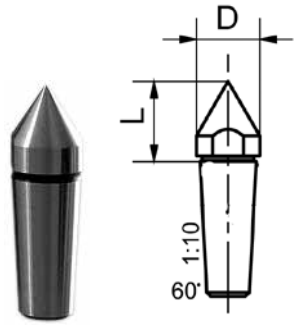
- gleiche Konstruktion wie Reihe 800, jedoch für auswechselbare Einsätze (siehe Seiten 114 - 116)
- Lieferung ohne Einsätze
- komplette Sätze siehe Seite 116

- *same construction as series 800, but for interchangeable inserts (see pages 114 - 116)*
- *delivered without inserts*
- *complete boxed sets see page 116*

| MK / *MT* | Typ / *Type* | Ø mm | d mm | d1 mm | d2 mm | L mm | l1 mm | l2 mm | SW | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 923 | 45 | 20 | 17,98 | 12 | 59 | 10 | 43 | 17 | 5000 | 50 | 0,005 | 03-923 |
| 3 | 933 | 60 | 24 | 23,82 | 14 | 68 | 11 | 50 | 19 | 4300 | 200 | 0,005 | 03-933 |
| 4 | 943 | 76 | 32 | 31,26 | 18 | 79 | 13 | 58 | 27 | 3200 | 300 | 0,007 | 03-943 |
| 5 | 953 | 96 | 42 | 44,39 | 24 | 98 | 14 | 72 | 36 | 2600 | 800 | 0,01 | 03-953 |



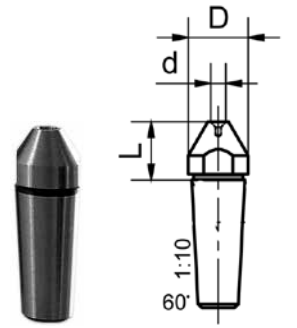
# Auswechselbare Einsätze für Serie 900 + 905
# *Interchangeable inserts for series 900 + 905*




*Kegelgöße / Taper ratio 1:10*

## Spitzkörner
## *Pointed centre*

| Zu Typ / *For type* | D mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 923 / 935 | 14 | 20 | 03-923/1 |
| 933 / 945 | 16 | 21 | 03-933/1 |
| 943 / 955 | 22 | 27 | 03-943/1 |
| 953 / 965 | 28 | 34 | 03-953/1 |




*Kegelgöße / Taper ratio 1:10*

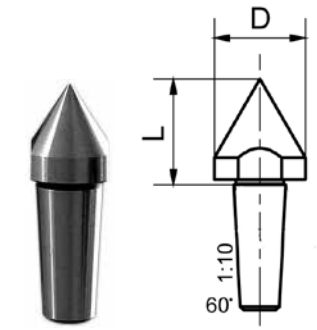
## Hohlkörner
## *Hollow centre*

| Zu Typ / *For type* | D mm | d mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 923 / 935 | 14 | 4 | 15 | 03-923/2 |
| 933 / 945 | 16 | 4 | 17 | 03-933/2 |
| 943 / 955 | 22 | 5 | 21 | 03-943/2 |
| 953 / 965 | 28 | 6 | 27 | 03-953/2 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

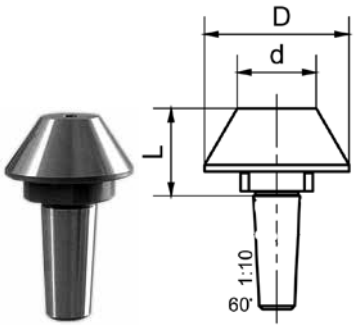
# Auswechselbare Einsätze für Serie 900 + 905
*Interchangeable inserts for series 900 + 905*




Kegelgöße / *Taper ratio 1:10*

## Großer Spitzkörner
## *Large pointed centre*

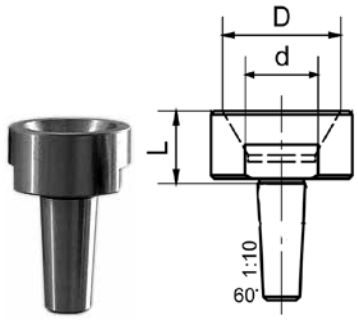
| Zu Typ / *For type* | D mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 923 / 935 | 17 | 23 | 03-923/3 |
| 933 / 945 | 25 | 31 | 03-933/3 |
| 943 / 955 | 32 | 40 | 03-943/3 |
| 953 / 965 | 38 | 45 | 03-953/3 |




Kegelgöße / *Taper ratio 1:10*

## Kegel
## *Taper*

| Zu Typ / *For type* | D mm | d mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 923 / 935 | 28 | 13 | 33 | 03-923/4 |
| 933 / 945 | 44 | 24 | 28 | 03-933/4 |
| 943 / 955 | 55 | 30 | 34 | 03-943/4 |
| 953 / 965 | 68 | 36 | 41 | 03-953/4 |

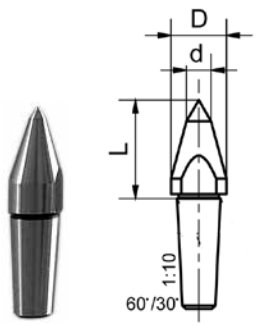



Kegelgöße / *Taper ratio 1:10*

## Hohlkegel
## *Female taper*

| Zu Typ / *For type* | D mm | d mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 923 / 935 | 20 | 10 | 17 | 03-923/5 |
| 933 / 945 | 35 | 20 | 23 | 03-933/5 |
| 943 / 955 | 42 | 25 | 28 | 03-943/5 |
| 953 / 965 | 60 | 37 | 35 | 03-953/5 |

# Auswechselbare Einsätze für Serie 900 + 905
*Interchangeable inserts for series 900 + 905*




Kegelgöße / *Taper ratio 1:10*

## Kopierkörner
## *Copying centre*

| Zu Typ / *For type* | D mm | d mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 923 / 935 | 14 | 4 | 32 | 03-923/6 |
| 933 / 945 | 18 | 6 | 35 | 03-933/6 |
| 943 / 955 | 22 | 8 | 43 | 03-943/6 |
| 953 / 965 | 28 | 10 | 52 | 03-953/6 |

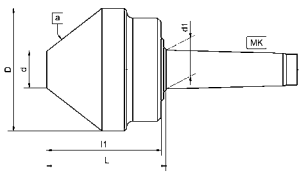


## Satz im Kasten
## *Set in a box*

| Typ / *Type* | MK / *MT* | Art.-Nr. / *Order no.* |
|---|---|---|
| 923 | 2 | 03-923K |
| 933 | 3 | 03-933K |
| 943 | 4 | 03-943K |
| 953 | 5 | 03-953K |

# Serie 400
*Series 400*






## Mitlaufende Präzisions-Zentrierkegel
## *Precision revolving tube centre*

- zur Bearbeitung von Rohren und anderen Hohlkörpern
- ganzes Werkzeug gehärtet und fein geschliffen
- stabile Konstruktion
- wartungsfreie Dauerschmierung
- abgedichtet
- auch für Schleifarbeiten geeignet

- *for machining of tubes and other hollow objects*
- *completely hardened and fine-ground*
- *time-tested and sturdy design*
- *maintenance-free permanent lubrication*
- *sealed*
- *also suitable for grinding operations*

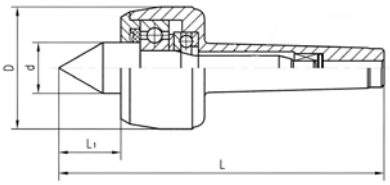
| Typ / *Type* | MK / *MT* | D mm | d mm | d1 mm | L mm | l1 mm | α | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | Rundlauf-genauigkeit / *Run-out* max. mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 421 | 2 | 60 | 20 | 17,78 | 73 | 66 | 60° | 4000 | 200 | 0,005 | 1 | 03-421 |
| 431 | 3 | 80 | 30 | 23,82 | 86 | 78 | 60° | 3500 | 450 | 0,005 | 2 | 03-431 |
| 432 | 3 | 100 | 30 | 23,82 | 100 | 92 | 75° | 3000 | 400 | 0,005 | 4 | 03-432 |
| 441 | 4 | 100 | 30 | 31,26 | 101 | 92 | 75° | 3000 | 650 | 0,005 | 4 | 03-441 |
| 442 | 4 | 125 | 50 | 31,26 | 91 | 82 | 75° | 3000 | 650 | 0,007 | 5 | 03-442 |
| 451 | 5 | 125 | 50 | 44,39 | 92 | 82 | 75° | 3000 | 1800 | 0,007 | 6 | 03-451 |
| 452 | 5 | 150 | 50 | 44,39 | 112 | 102 | 75° | 2800 | 1900 | 0,007 | 9 | 03-452 |
| 461 | 6 | 150 | 50 | 63,34 | 112 | 102 | 75° | 2800 | 2800 | 0,01 | 12 | 03-461 |
| 453 | 5 | 200 | 50 | 44,39 | 136 | 126 | 75° | 1800 | 2000 | 0,01 | 15 | 03-453 |
| 462 | 6 | 200 | 50 | 63,34 | 136 | 126 | 75° | 1800 | 2800 | 0,01 | 18 | 03-462 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Mitlaufende Drehbankspitzen
*Revolving tailstock centres*

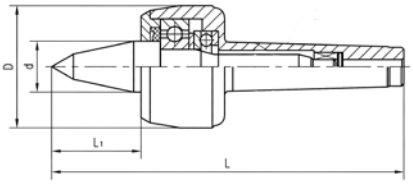





## Mitlaufende Drehbankspitzen
## *Revolving tailstock centre*

| MK / *MT* | D mm | L mm | L1 mm | d mm | Winkel / *Angle* | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | 114 | 17 | 15 | 60° | 7000 | 100 | ● | 13-MLK-01 |
| 2 | 45 | 129 | 24 | 20 | 60° | 7000 | 200 | ● | 13-MLK-02 |
| 3 | 60 | 160,5 | 31 | 25 | 60° | 5000 | 500 | ● | 13-MLK-03 |
| 4 | 70 | 205 | 41 | 32 | 60° | 3800 | 800 | ● | 13-MLK-04 |
| 5 | 90 | 258,5 | 50,5 | 40 | 60° | 3000 | 2000 | ● | 13-MLK-05 |
| 6 | 105 | 334 | 57,5 | 50 | 60° | 2600 | 3500 | ● | 13-MLK-06 |





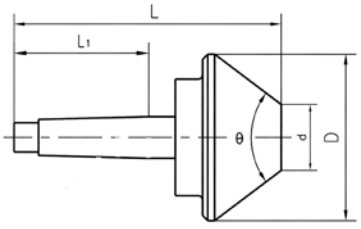

## Mitlaufende Drehbankspitzen
## *Revolving tailstock centre*

- mit verlängerter Spitze 30° / 60°
- *with extended tip 30° / 60°*

| MK / *MT* | D mm | L mm | L1 mm | d mm | Winkel / *Angle* | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 45 | 139 | 34 | 20 | 30°/60° | 7000 | 140 | ● | 13-MLK-02KOP |
| 3 | 60 | 176,5 | 47 | 25 | 30°/60° | 5000 | 400 | ● | 13-MLK-03KOP |
| 4 | 70 | 217 | 53 | 32 | 30°/60° | 3800 | 500 | ● | 13-MLK-04KOP |
| 5 | 90 | 273 | 65 | 40 | 30°/60° | 3000 | 1200 | ● | 13-MLK-05KOP |
| 6 | 105 | 354,5 | 78 | 50 | 30°/60° | 2600 | 2500 | ● | 13-MLK-06KOP |

# Mitlaufender Zentrierkegel
*Revolving tube centres*






## Mitlaufender Zentrierkegel
## *Revolving tube centre*

- gehärtet und geschliffen
- *hardened and ground*

| MK / *MT* | D mm | d mm | L mm | L1 mm | Winkel / *Angle* | Drehzahl / *Speed* max. | Werkst. / *Work piece* max. kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 60 | 20 | 132 | 64 | 60° | 4000 | 200 | ● | 13-MLZK-2/60 |
| 3 | 100 | 30 | 170 | 81 | 60° | 3000 | 600 | ● | 13-MLZK-3/100 |
| 4 | 160 | 40 | 232 | 102,5 | 60° | 1900 | 800 | ● | 13-MLZK-4/160 |
| 5 | 200 | 40 | 252 | 129,5 | 75° | 1500 | 1600 | ● | 13-MLZK-5/200 |
| 5 | 250 | 57 | 281 | 129,5 | 75° | 1300 | 1800 | ● | 13-MLZK-5/250 |
| 6 | 250 | 57 | 355 | 182 | 75° | 1200 | 2000 | ● | 13-MLZK-6/250 |

## Typ DA, mit Druckanzeige und großem Federweg
## *Type DA, with pressure indication and long travel stroke*

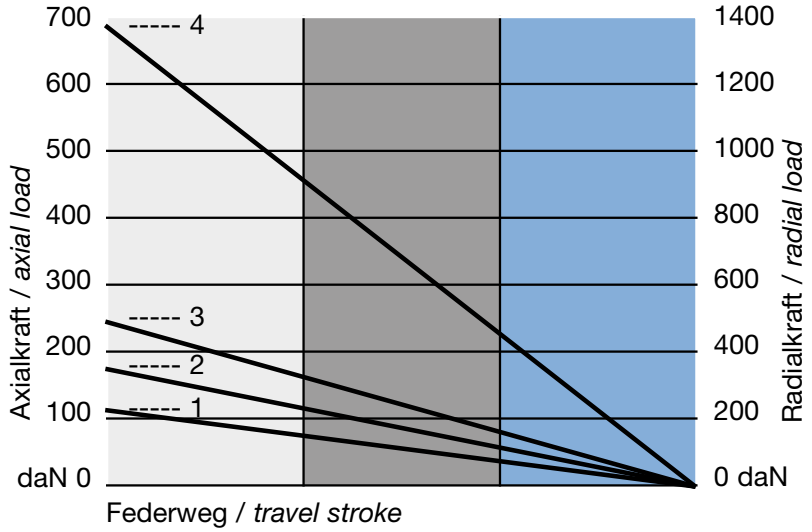


**Anwendungsbereich:**
Die Druckanzeige durch Farbringe ermöglicht eine schnelle Einstellung und Überwachung des optimalen Anstelldruckes. Bei fester Positionierung werden Längentoleranzen und unterschiedliche Zentrierbohrungen durch den Federweg kompensiert. Leichte Werkstücke können entsprechend fein gespannt werden.

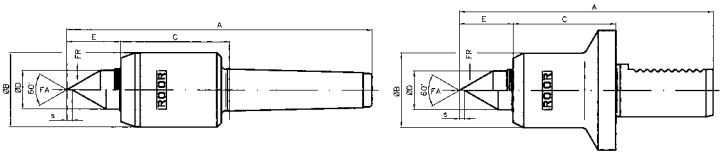
***Application:***
*A pressure indicator with different color bands permits rapid settings and monitoring of the optimum pressure.*
*Length tolerances and different centre bores are compensated through a travel stroke at fixed positions.*
*Thus light work pieces can be clamped very carefully.*

Federkraft für allgemeines Drehen
*Spring load for regular lathe*

| Ausführung / *Model* | Diagramm / *Diagram* |
|---|---|
| MK / *MT 2* | 1 |
| MK / *MT 3* | 2 |
| MK / *MT 4* | 3 |
| MK / *MT 5* | 4 |
| Zyl. / *cyl. Ø20 x 40* | 1 |
| Zyl. / *cyl. Ø25 x 50* | 2 |
| Zyl. / *cyl. Ø1" x 2"* | 2 |
| Zyl. / *cyl. Ø32 x 63* | 3 |
| VDI 20 | 1 |
| VDI 30 | 2 |
| VDI 40 | 3 |
| VDI 50 | 4 |




## Typ DA-N, normale Spitze, allgemeines Drehen
## *Type DA-N, regular tip, regular turning*

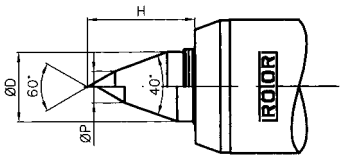


| Ausführung / *Model* | FA daN | FR daN | A mm | B mm | C mm | D mm | E mm | s mm | Werkstück / *Work piece* max. kg | Drehzahl / *Speed* max. | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MK / *MT 2* | 11-110 | 24-240 | 136 | 34 | 53 | 14 | 19 | 2,7 | 190 | 7000 | ○ | 03-0241 |
| MK / *MT 3* | 20-200 | 40-420 | 173 | 42 | 62 | 22 | 31 | 3 | 440 | 5800 | ○ | 03-0341 |
| MK / *MT 4* | 23-230 | 50-500 | 209 | 53 | 72 | 28 | 33 | 4,3 | 900 | 4800 | ○ | 03-0441 |
| MK / *MT 5* | 80-800 | 150-1500 | 259 | 64 | 88 | 38 | 42 | 5,2 | 1850 | 4000 | ○ | 03-0541 |
| Zyl. / *cyl. Ø25 x 50* | 20-200 | 40-420 | 139 | 42 | 58 | 22 | 31 | 3 | 190 | 5800 | ○ | 03-2551 |
| Zyl. / *cyl. Ø1" x 2"* | 20-190 | 40-420 | 139 | 42 | 58 | 22 | 31 | 3 | 440 | 5800 | ○ | 03-0151 |
| Zyl. / *cyl. Ø32 x 63* | 23-230 | 50-500 | 165 | 53 | 68 | 28 | 33 | 4,3 | 900 | 4800 | ○ | 03-3251 |
| VDI 20 | 11-110 | 24-240 | 108 | 34 | 48 | 14 | 19 | 2,7 | 190 | 7000 | ○ | 03-2061 |
| VDI 30 | 20-200 | 40-420 | 144 | 42 | 58 | 22 | 31 | 3 | 440 | 5800 | ○ | 03-3061 |
| VDI 40 | 23-230 | 50-500 | 165 | 53 | 68 | 28 | 33 | 4,3 | 900 | 4800 | ○ | 03-4061 |
| VDI 50 | 80-800 | 150-1500 | 201 | 64 | 81 | 38 | 42 | 5,2 | 1850 | 4000 | ○ | 03-5061 |



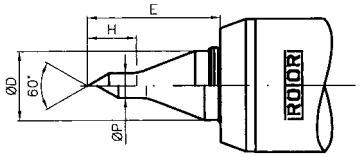
○ **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

## Typ DA-V, verlängerte Spitze, allgemeines Drehen
## *Type DA-V, extended tip, regular turning*



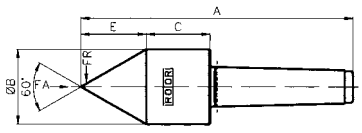

| Ausführung / *Model* | D mm | H mm | P mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MK / *MT 2* | 15 | 22 | 8 | 03-0242 |
| MK / *MT 3* | 22 | 35 | 10 | 03-0342 |
| MK / *MT 4* | 28 | 41 | 14 | 03-0442 |
| MK / *MT 5* | 38 | 51 | 15 | 03-0542 |
| Zyl. / *cyl. Ø25 x 50* | 22 | 35 | 10 | 03-2552 |
| Zyl. / *cyl. Ø1" x 2"* | 22 | 35 | 10 | 03-0152 |
| Zyl. / *cyl. Ø32 x 63* | 28 | 41 | 14 | 03-3252 |
| VDI 20 | 14 | 22 | 8 | 03-2062 |
| VDI 30 | 22 | 35 | 10 | 03-3062 |
| VDI 40 | 28 | 41 | 14 | 03-4062 |
| VDI 50 | 38 | 51 | 15 | 03-5062 |

## Typ DA-L, schlanke Spitze, allgemeines Drehen
## *Type DA-L, slim tip, regular turning*



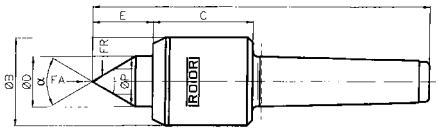

| Ausführung / *Model* | D mm | E mm | H mm | P mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| MK / *MT 2* | 14 | 28 | 12 | 5,8 | 03-0248 |
| MK / *MT 3* | 22 | 43 | 16 | 7,8 | 03-0348 |
| MK / *MT 4* | 28 | 51 | 19 | 9,8 | 03-0448 |
| MK / *MT 5* | 38 | 62 | 22 | 11,8 | 03-0548 |
| Zyl. / *cyl. Ø25 x 50* | 22 | 43 | 16 | 7,8 | 03-2558 |
| Zyl. / *cyl. Ø1" x 2"* | 22 | 43 | 16 | 7,8 | 03-0158 |
| Zyl. / *cyl. Ø32 x 63* | 28 | 51 | 19 | 9,8 | 03-3258 |
| VDI 20 | 14 | 28 | 12 | 5,8 | 03-2068 |
| VDI 30 | 22 | 43 | 16 | 7,8 | 03-3068 |
| VDI 40 | 28 | 51 | 19 | 9,8 | 03-4068 |
| VDI 50 | 38 | 62 | 22 | 11,8 | 03-5068 |

## Typ E-B, Vollkegel 60°
## *Type E-B, pipe nose 60°*




| Ausf. / *Model* | MK / *MT* | A mm | B mm | C mm | E mm | Werkst. / *Work pc.* max. kg | FR max. daN | FA max. daN | Rund-laufabw. / *Max. runout* | Dreh-zahl / *Speed* max. | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ST | 2 | 132 | 38 | 30 | 33 | 180 | 90 | 90 | 0,002 | 13500 | 03-2110 |
| SU | 2 | 143 | 45 | 35 | 39 | 260 | 130 | 115 | 0,002 | 11000 | 03-2210 |
| ST | 3 | 160 | 45 | 35 | 39 | 260 | 130 | 115 | 0,002 | 11000 | 03-3110 |
| SU | 3 | 184 | 55 | 50 | 48 | 440 | 220 | 260 | 0,002 | 8500 | 03-3210 |
| ST | 4 | 206 | 55 | 50 | 48 | 440 | 220 | 260 | 0,002 | 8500 | 03-4110 |
| SU | 4 | 255 | 70 | 57 | 61 | 670 | 335 | 440 | 0,002 | 6700 | 03-4210 |
| ST | 5 | 253 | 70 | 57 | 61 | 670 | 335 | 440 | 0,002 | 6700 | 03-5110 |
| SU | 5 | 275 | 80 | 70 | 69 | 950 | 475 | 925 | 0,004 | 5300 | 03-5210 |
| ST | 6 | 329 | 80 | 70 | 69 | 950 | 475 | 925 | 0,004 | 5300 | 03-6110 |

## Typ N, normale Spitze für Schwerbearbeitung
## *Type N, regular tip for heavy-duty operations*




Anwendungsbereich:
Bewährtes Spitzenprogramm für CNC-gesteuerte und konventionelle Dreh- und Schleifmaschinen. Mit Überdrucksicherung durch Tellerfeder.

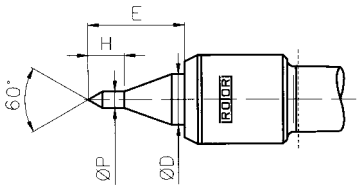
*Application:*
*Reliable top quality product for CNC and conventional lathes and grinding machines. With over-pressure security through disc spring.*

Ausführung:
- ST (Standard) für den Normaleinsatz
- SU (Super) für höchste Belastung und niedrige Drehzahlen

*Models:*
- *ST (standard) for normal loads*
- *SU (super) for heavy-duty loads and low turning rates*

| MK / *MT* | Ausführung / *Model* | A mm | B mm | C mm | D mm | E mm | Winkel / *Angle* | Werkstück / *Work piece* max. kg | FR max. daN | FA max. daN | Drehzahl / *Speed* max. | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | ST | 163 | 42 | 48 | 24 | 29 | 60° | 510 | 255 | 700 | 5800 | ○ | 03-0311 |
| 3 | SU | 171 | 53 | 53 | 30 | 33 | 60° | 700 | 350 | 1100 | 4800 | ○ | 03-0321 |
| 4 | ST | 194 | 53 | 53 | 30 | 33 | 60° | 1100 | 550 | 1100 | 4800 | ○ | 03-0411 |
| 4 | SU | 211 | 64 | 57 | 40 | 45 | 60° | 1800 | 900 | 1800 | 4000 | ○ | 03-0421 |
| 5 | ST | 239 | 64 | 57 | 40 | 45 | 60° | 2100 | 1050 | 1800 | 4000 | ○ | 03-0511 |
| 5 | SU | 265 | 86 | 73 | 50 | 56 | 60° | 3000 | 1500 | 3000 | 2800 | ○ | 03-0521 |
| 6 | ST | 318 | 86 | 73 | 50 | 56 | 60° | 4000 | 2000 | 3000 | 2800 | ○ | 03-0611 |
| 6 | SU | 378 | 126 | 125 | 60 | 65 | 60° | 6000 | 3000 | 7000 | 1500 | ○ | 03-0621 |
| 7 | SU | 483 | 144 | 140 | 80 | 79 | 60° | 14000 | 7000 | 10000 | 1200 | ○ | 03-0721 |
| metr.80 | ST | 395 | 126 | 125 | 60 | 65 | 60° | 6000 | 3000 | 7000 | 1500 | ○ | 03-8011 |
| metr.80 | SU | 432 | 144 | 148 | 80 | 79 | 60° | 14000 | 7000 | 10000 | 1200 | ○ | 03-8021 |
| metr.100 | ST | 445 | 144 | 124 | 80 | 79 | 60° | 14000 | 7000 | 10000 | 1200 | ○ | 03-1011 |

## Typ L, schlanke Spitze
## *Type L, slim tip*




Anwendungsbereich:
Bewährtes Spitzenprogramm für CNC-gesteuerte und konventionelle Dreh- und Schleifmaschinen. Mit Überdrucksicherung durch Tellerfeder.

*Application:*
*Reliable top quality product for CNC and conventional lathes and grinding machines. With over-pressure security through disc spring.*

Ausführung:
- SM (small) kleines Gehäuse, für leichte Arbeiten und hohe Drehzahlen
- ST (Standard) für den Normaleinsatz

*Models:*
- *SM (small) small body, for light pieces and higher turning rates*
- *ST (standard) for normal loads*

| MK / *MT* | Ausführung / *Model* | D mm | E mm | H mm | P mm | Werkstück / *Work piece* max. kg | Drehzahl / *Speed* max. | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 2 | ST | 16 | 29 | 12 | 2,8 | 100 | 7000 | ○ | 03-0218 |
| 3 | SM | 16 | 29 | 12 | 5,8 | 100 | 7000 | ○ | 03-0308 |
| 3 | ST | 24 | 42 | 16 | 7,8 | 200 | 5800 | ○ | 03-0318 |
| 4 | SM | 24 | 42 | 16 | 7,8 | 200 | 5800 | ○ | 03-0408 |
| 4 | ST | 30 | 51 | 19 | 9,8 | 350 | 4800 | ○ | 03-0418 |
| 5 | SM | 30 | 51 | 19 | 9,8 | 350 | 4800 | ○ | 03-0508 |
| 5 | ST | 40 | 65 | 22 | 11,8 | 540 | 4000 | ○ | 03-0518 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Feststehende Präzisions-Zentrierspitzen nach DIN 806+807
## *Fixed centres according to DIN 806+807*

- ganz gehärtet und geschliffen
- *completely hardened and ground*

### Typ 501 DIN 806 WS
### *Type 501 DIN 806 WS*




Standard
*Standard*

| Typ / *Type* | MK / *MT* | D mm | L mm | Winkel / *Angle* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 511 | 1 | 12,2 | 80 | 60° | ● | 03-511 |
| 521 | 2 | 18 | 100 | 60° | ● | 03-521 |
| 531 | 3 | 24,1 | 125 | 60° | ● | 03-531 |
| 541 | 4 | 31,6 | 160 | 60° | ● | 03-541 |
| 551 | 5 | 44,7 | 200 | 60° | ● | 03-551 |
| 561 | 6 | 63,8 | 270 | 60° | ● | 03-561 |
| 571 | 7 | 83,5 | 360 | 60° | ○ | 03-571 |

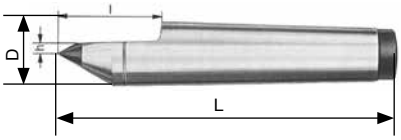
### Typ 503 DIN 806 E
### *Type 503 DIN 806 E*




Hartmetalleinsatz
*Full carbide tip*

| Typ / *Type* | MK / *MT* | D mm | L mm | Winkel / *Angle* | d mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 513 | 1 | 12,2 | 80 | 60° | 7 | ● | 03-513 |
| 523 | 2 | 18 | 100 | 60° | 7 | ● | 03-523 |
| 533 | 3 | 24,1 | 125 | 60° | 11 | ● | 03-533 |
| 543 | 4 | 31,6 | 160 | 60° | 14 | ● | 03-543 |
| 553 | 5 | 44,7 | 200 | 60° | 18 | ● | 03-553 |
| 563 | 6 | 63,8 | 270 | 60° | 18 | ● | 03-563 |

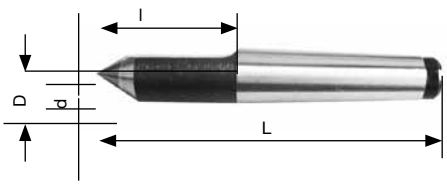
### Typ 504 DIN 806 HE
### *Type 504 DIN 806 HE*




Hartmetalleinsatz mit halber Spitze
*Half carbide tip*

| Typ / *Type* | MK / *MT* | D mm | L mm | Winkel / *Angle* | d mm | h mm | l mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 514 | 1 | 12,2 | 80 | 60° | 7 | 1,5 | 22 | ● | 03-514 |
| 524 | 2 | 18 | 100 | 60° | 7 | 2 | 30 | ● | 03-524 |
| 534 | 3 | 24,1 | 125 | 60° | 11 | 3 | 38 | ● | 03-534 |
| 544 | 4 | 31,6 | 160 | 60° | 14 | 5 | 50 | ● | 03-544 |
| 554 | 5 | 44,7 | 200 | 60° | 18 | 7 | 63 | ● | 03-554 |
| 564 | 6 | 63,8 | 270 | 60° | 18 | 10 | 79 | ● | 03-564 |

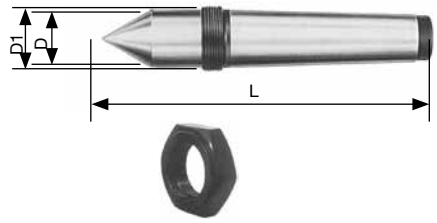
### Typ 504 DIN 806 HE - verlängert
### *Type 504 DIN 806 HE - extended*




Hartmetalleinsatz mit verlängerter halber Spitze
*Extended half carbide tip*

| Typ / *Type* | MK/ *MT* | D mm | L mm | Winkel / *Angle* | d mm | l mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 524VL | 2 | 18 | 135 | 60° | 11 | 65 | ● | 03-524VL |
| 534VL | 3 | 24,1 | 150 | 60° | 14 | 63 | ● | 03-534VL |
| 544VL | 4 | 31,6 | 180 | 60° | 18 | 70 | ● | 03-544VL |

## Typ 505 DIN 807 WS
## *Type 505 DIN 807 WS*




Mit Abdrückmutter
*With draw-off nut*

| Typ / *Type* | MK / *MT* | D mm | L mm | Winkel / *Angle* | D1 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 515 | 1 | 12,2 | 80 | 60° | M16x1,5 | ● | 03-515 |
| 525 | 2 | 18 | 100 | 60° | M22x1,5 | ● | 03-525 |
| 535 | 3 | 24,1 | 125 | 60° | M27x1,5 | ● | 03-535 |
| 545 | 4 | 31,6 | 160 | 60° | M36x1,5 | ● | 03-545 |
| 555 | 5 | 44,7 | 200 | 60° | M48x1,5 | ● | 03-555 |
| 565 | 6 | 63,8 | 270 | 60° | M68x1,5 | ● | 03-565 |

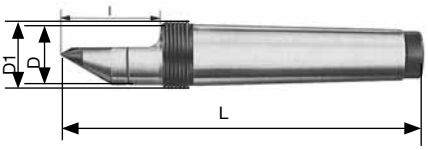
## Typ 506 DIN 807 E
## *Type 506 DIN 807 E*




Hartmetalleinsatz mit Abdrückgewinde
*Full carbide tip with thread*

| Typ / *Type* | MK / *MT* | D mm | L mm | Winkel / *Angle* | d mm | D1 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 516 | 1 | 12,2 | 90 | 60° | 7 | M16x1,5 | ● | 03-516 |
| 526 | 2 | 18 | 112 | 60° | 7 | M22x1,5 | ● | 03-526 |
| 536 | 3 | 24,1 | 137 | 60° | 11 | M27x1,5 | ● | 03-536 |
| 546 | 4 | 31,6 | 175 | 60° | 14 | M36x1,5 | ● | 03-546 |
| 556 | 5 | 44,7 | 217 | 60° | 18 | M48x1,5 | ● | 03-556 |
| 566 | 6 | 63,8 | 290 | 60° | 18 | M68x1,5 | ● | 03-566 |

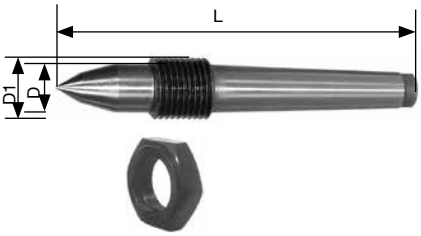
## Typ 507 DIN 807 HE
## *Type 507 DIN 807 HE*




Hartmetalleinsatz, mit halber Spitze
mit Abdrückgewinde
*Half carbide tip with thread*

| Typ / *Type* | MK / *MT* | D mm | L mm | Winkel / *Angle* | d mm | l mm | D1 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 517 | 1 | 12,2 | 90 | 60° | 7 | 22 | M16x1,5 | ● | 03-517 |
| 527 | 2 | 18 | 112 | 60° | 7 | 30 | M22x1,5 | ● | 03-527 |
| 537 | 3 | 24,1 | 137 | 60° | 11 | 38 | M27x1,5 | ● | 03-537 |
| 547 | 4 | 31,6 | 175 | 60° | 14 | 50 | M36x1,5 | ● | 03-547 |
| 557 | 5 | 44,7 | 217 | 60° | 18 | 63 | M48x1,5 | ● | 03-557 |
| 567 | 6 | 63,8 | 290 | 60° | 18 | 79 | M68x1,5 | ● | 03-567 |

## Typ 508 DIN 807 WS
## *Type 508 DIN 807 WS*




Verlängerte Spitze mit Abdrückmutter
*Extended tip with draw-off nut*

| Typ / *Type* | MK / *MT* | D mm | L mm | Winkel / *Angle* | D1 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 518 | 1 | 12,2 | 80 | 30°/60° | M16x1,5 | ● | 03-518 |
| 528 | 2 | 18 | 118 | 30°/60° | M22x1,5 | ● | 03-528 |
| 538 | 3 | 24,1 | 148 | 30°/60° | M27x1,5 | ● | 03-538 |
| 548 | 4 | 31,6 | 186,5 | 30°/60° | M36x1,5 | ● | 03-548 |
| 558 | 5 | 44,7 | 242 | 30°/60° | M48x1,5 | ● | 03-558 |
| 568 | 6 | 63,8 | 330 | 30°/60° | M68x1,5 | ● | 03-568 |

**Passende Abdrückmuttern siehe Seite 123**
***Suitable draw-off nuts see page 123***

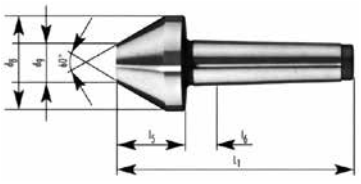




● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Zentrierkegel, fest
## *Fixed tube centre*

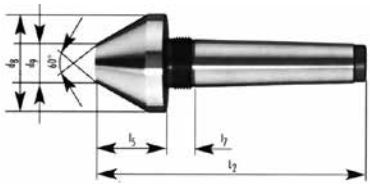
- gehärtet und geschliffen
- Rundlaufgenauigkeit: 0,003 mm
- *hardened and ground*
- *max. runout: 0,003 mm*



| MK / *MT* | d8 mm | d9 mm | l5 mm | l6 mm | l7 mm | L1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 2 | 50 | 10 | 40 | 6 | 18 | 110 | 03-ZK-2-50 |
| 3 | 50 | 20 | 35 | 7 | 20 | 123 | 03-ZK-3-50 |
| 3 | 90 | 40 | 55 | 7 | 20 | 143 | 03-ZK-3-90 |
| 4 | 50 | 20 | 35 | 8,5 | 24,5 | 146 | 03-ZK-4-50 |
| 4 | 90 | 40 | 55 | 8,5 | 24,5 | 166 | 03-ZK-4-90 |
| 5 | 90 | 40 | 55 | 10,5 | 26,5 | 195 | 03-ZK-5-90 |
| 5 | 130 | 50 | 80 | 10,5 | 26,5 | 220 | 03-ZK-5-130 |

## Zentrierkegel mit Abdrückgewinde, fest
## *Fixed tube centre with draw-off-thread*

- Lieferung ohne Abdrückmutter
- gehärtet und geschliffen
- Rundlaufgenauigkeit: 0,003 mm
- *supplied without draw-off nut*
- *hardened and ground*
- *max. runout: 0,003 mm*



| MK / *MT* | Gewinde / *Thread* mm | d8 mm | d9 mm | l5 mm | l6 mm | l7 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 2 | M22 x 1,5 | 50 | 10 | 40 | 6 | 18 | 122 | 03-ZKA-2-50 |
| 3 | M27 x 1,5 | 50 | 20 | 35 | 7 | 20 | 136 | 03-ZKA-3-50 |
| 3 | M27 x 1,5 | 90 | 40 | 55 | 7 | 20 | 156 | 03-ZKA-3-90 |
| 4 | M36 x 1,5 | 50 | 20 | 35 | 8,5 | 24,5 | 162 | 03-ZKA-4-50 |
| 4 | M36 x 1,5 | 90 | 40 | 55 | 8,5 | 24,5 | 182 | 03-ZKA-4-90 |
| 5 | M48 x 1,5 | 90 | 40 | 55 | 10,5 | 26,5 | 211 | 03-ZKA-5-90 |
| 5 | M48 x 1,5 | 130 | 50 | 80 | 10,5 | 26,5 | 236 | 03-ZKA-5-130 |

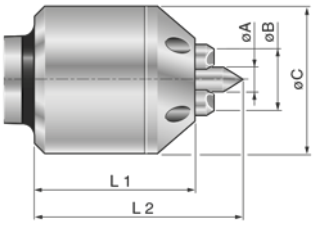
## Abdrückmutter
## *Draw-off nut*



| MK / *MT* | Gewinde / *Thread* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 1 | M16 x 1,5 | 03-ADM-1 |
| 2 | M22 x 1,5 | 03-ADM-2 |
| 3 | M27 x 1,5 | 03-ADM-3 |
| 4 | M36 x 1,5 | 03-ADM-4 |
| 5 | M48 x 1,5 | 03-ADM-5 |
| 6 | M68 x 1,5 | 03-ADM-6 |

# Stirnmitnehmer, hydraulisch
## *Hydraulic face drivers*

NEU *NEW* !






Lieferumfang:
Stirnmitnehmer, 1 Satz Mitnehmerbolzen S1, 1 Stück Zentrierspitze S4

*Scope of supply:*
*Hydraulic face driver, 1 set inserts S1, 1 piece centre S4*

## Typ A (17-25 mm)
## *Type A (17-25 mm)*

| MK / *MT* | Ø Min. mm | Ø Max. mm | Ø A mm | Ø B mm | Ø C mm | L1 mm | L2 mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 12 | 25 | 8 | 20 | 48 | 52 | 67 | 0,9 | 03-SMN-3/25 |
| 4 | 12 | 25 | 8 | 20 | 48 | 52 | 67 | 1,2 | 03-SMN-4/25 |

Art.-Nr. / *Order no.*

| | |
|---|---|
| ○ | 03-EA-S? |

Beispiel / *Ordering example*
= 03-EA-S1




## Typ B (30-47 mm)
## *Type B (30-47 mm)*

| MK / *MT* | Ø Min. mm | Ø Max. mm | Ø A mm | Ø B mm | Ø C mm | L1 mm | L2 mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 30 | 47 | 12 | 30 | 62 | 64 | 86 | 1,5 | 03-SMN-3/47 |
| 4 | 30 | 47 | 12 | 30 | 62 | 64 | 86 | 2,7 | 03-SMN-4/47 |
| 5 | 30 | 47 | 12 | 30 | 62 | 64 | 86 | 3,9 | 03-SMN-5/47 |

Art.-Nr. / *Order no.*

| | |
|---|---|
| ○ | 03-EB-S? |

Beispiel / *Ordering example*
= 03-EB-S1



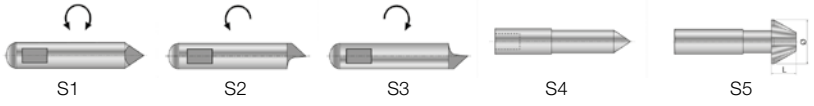

## Typ C (40-70 mm)
## *Type C (40-70 mm)*

| MK / *MT* | Ø Min. mm | Ø Max. mm | Ø A mm | Ø B mm | Ø C mm | L1 mm | L2 mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 40 | 70 | 18 | 41 | 87 | 95 | 125 | 4,3 | 03-SMN-4/70 |
| 5 | 40 | 70 | 18 | 41 | 87 | 95 | 125 | 5,3 | 03-SMN-5/70 |
| 6 | 40 | 70 | 18 | 41 | 87 | 95 | 125 | 7,8 | 03-SMN-6/70 |

Art.-Nr. / *Order no.*

| | |
|---|---|
| ○ | 03-EC-S? |

Beispiel / *Ordering example*
= 03-EC-S1




| L mm | Ø mm |
|---|---|
| 15 | 30 |

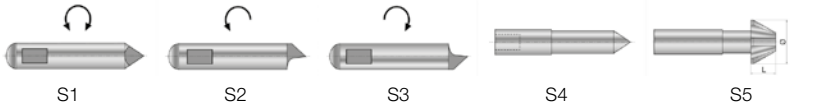
## Typ D (57-90 mm)
## *Type D (57-90 mm)*

| MK / *MT* | Ø Min. mm | Ø Max. mm | Ø A mm | Ø B mm | Ø C mm | L1 mm | L2 mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 57 | 90 | 23 | 57 | 109 | 100 | 140 | 7,0 | 03-SMN-4/90 |
| 5 | 57 | 90 | 23 | 57 | 109 | 100 | 140 | 8,2 | 03-SMN-5/90 |
| 6 | 57 | 90 | 23 | 57 | 109 | 100 | 140 | 9,5 | 03-SMN-6/90 |

Art.-Nr. / *Order no.*

| | |
|---|---|
| ○ | 03-ED-S? |

Beispiel / *Ordering example*
= 03-ED-S1

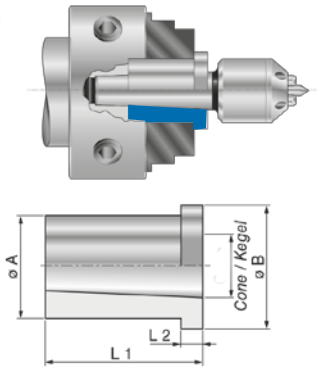



| L mm | Ø mm |
|---|---|
| 15 | 30 |



○ **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

NEU
NEW !



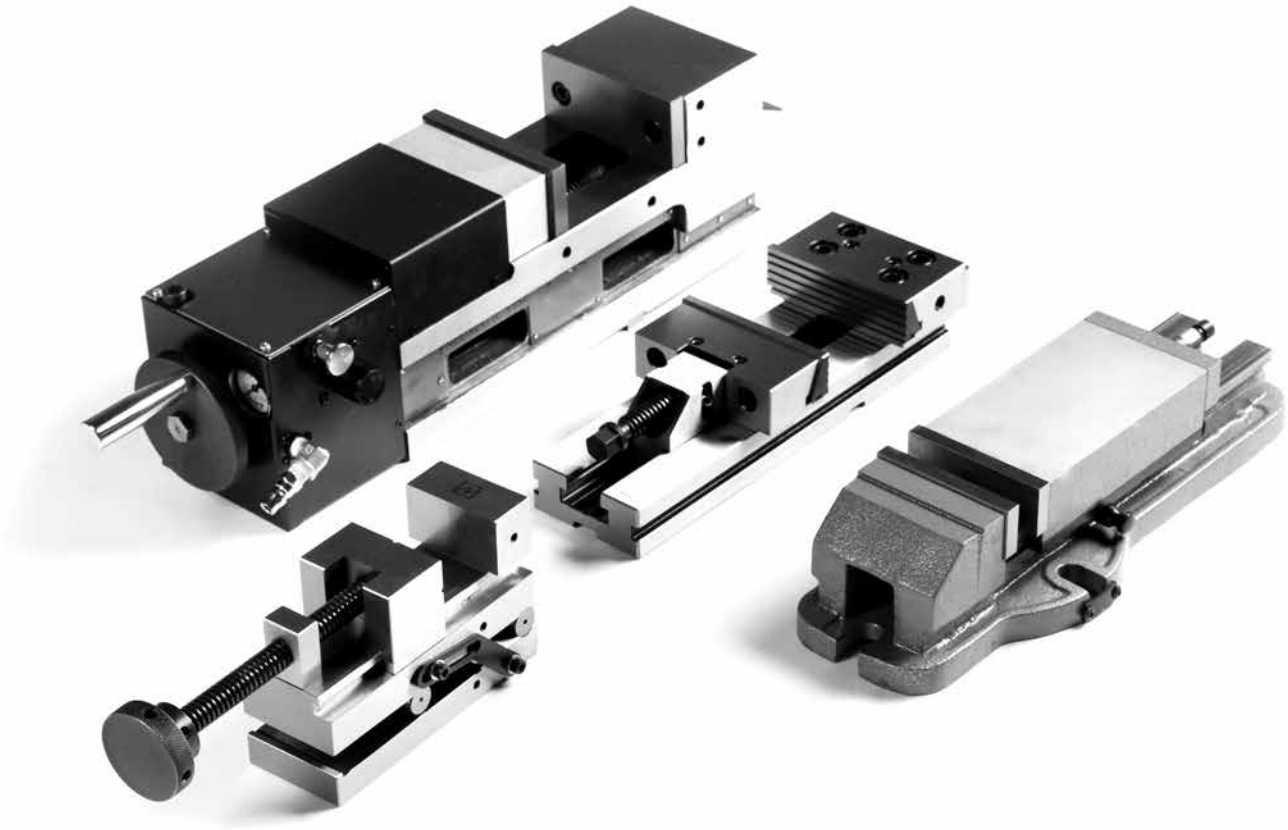

## Kegelhülsen, zylindrisch mit Innenkegel (MK)
## *Conic bushes, cylindrical with internal taper (MT)*

| MK / *MT* | L1 mm | L2 mm | Ø A mm | Ø B mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 3 | 65 | 8 | 35 | 44 | 0,3 | 03-KH-3 |
| 4 | 70 | 8 | 42 | 49 | 0,45 | 03-KH-4 |
| 5 | 80 | 10 | 54 | 59 | 0,6 | 03-KH-5 |
| 6 | 85 | 10 | 75 | 84 | 0,75 | 03-KH-6 |

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Schraubstöcke

## *Vices*





## Inhalt:


- Maschinenschraubstöcke Typ CMC
- Doppelspanner
- Pneumatikspanner
- Mehrfach-Spanneinrichtung
- NC-Spanner
- Mechanische und hydraulische Maschinenschraubstöcke
- Fräsmaschinenschraubstöcke
- 3-Achsen-Schraubstock
- Bohrmaschinenschraubstöcke
- Werkbankschraubstöcke
- Zentrischspanner
- 5-Achsen-Zentrischspanner
- Schleifschraubstöcke
- Sinus-Schraubstöcke
- Erodierschraubstöcke, rostfrei
- Präzisions-Schraubstöcke CARMINATI MORSE
- Universal-Werkstückanschläge
- Universal Aufsatzprismenbacken


## *Content:*

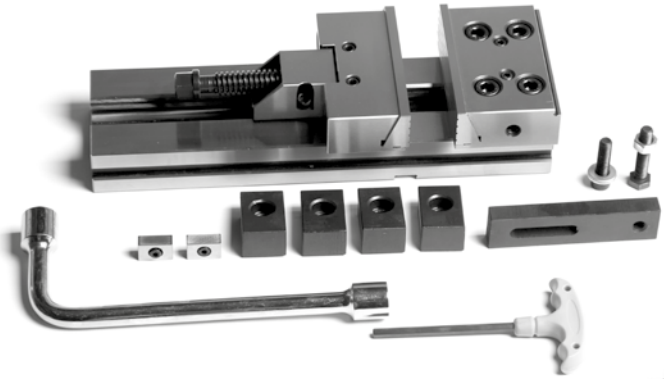

- *Precision machine vices type CMC*
- *Double vices*
- *Pneumatic vices*
- *Multiflex vices*
- *NC-vices*
- *Mechanical and hydraulical machine vices*
- *Milling machine vices*
- *3-axes machine vices*
- *Drilling machine vices*
- *Bench vices*
- *Self-centering vices*
- *5-axes self-centering vices*
- *Tool maker vices*
- *Since vices*
- *Erosion vices, non-corrosive*
- *Precision vices* CARMINATI MORSE
- *Stop-dogs*
- *Universal prism jaws*

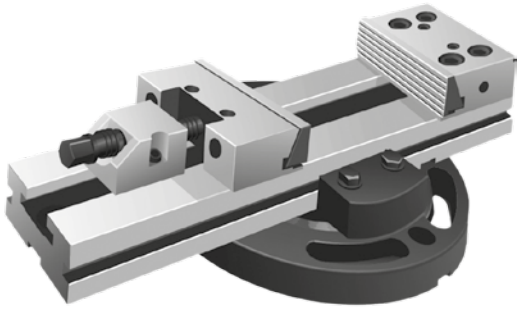
# Maschinenschraubstöcke Typ CMC
*Precision machine vices type CMC*

## Präzisions-Maschinenschraubstock Typ CMC
## *Precision machine vice type CMC*

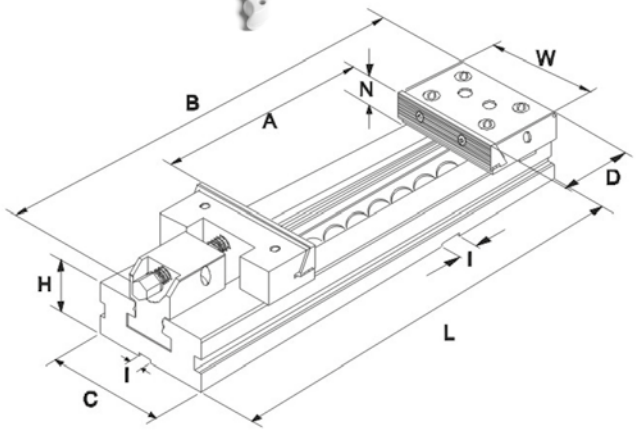
- Führungsflächen gehärtet
- mit Niederzugeffekt
- modulares System
- Parallelität < 0,005 / 100 mm
- Rechtwinkligkeit < 0,02 / 50 mm
- Wiederholgenauigkeit < 0,02 mm
- feste Backe um 180° drehbar, Rückseite mit Spannstufe

- *hardened slideways*
- *with pull-down mechanism*
- *modular system*
- *parallelism < 0,005 / 100 mm*
- *perpendicularity < 0,02 / 50 mm*
- *repeatability < 0,02 mm*
- *fixed jaw rotatable by 180°, reverse with step*





Drehplatte optional /
*Swivel plate optional*




| W mm | A mm | L mm | B mm | C mm | D mm | H mm | I mm | N mm | Max. Anz. moment / *Max. torque* Nm | Max. Spann-kraft / *Clamping force* daN | kg | | Art.-*Nr.* / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 100 | 270 | 320 | 75 | 77,9 | 35 | 16 | 30 | 30 | 3000 | 7 | ● | ZE-CMC-100/100 |
| 125 | 150 | 345 | 410 | 95 | 77,9 | 40 | 16 | 40 | 40 | 3000 | 13 | ● | ZE-CMC-125/150 |
| 150 | 200 | 420 | 500 | 125 | 89,4 | 50 | 16 | 50 | 60 | 5000 | 26 | ● | ZE-CMC-150/200 |
| 150 | 300 | 520 | 600 | 125 | 89,4 | 50 | 16 | 50 | 60 | 5000 | 29 | ● | ZE-CMC-150/300 |
| 175 | 200 | 455 | 530 | 145 | 96,8 | 58 | 16 | 60 | 60 | 6000 | 37 | ● | ZE-CMC-175/200 |
| 175 | 300 | 555 | 630 | 145 | 96,8 | 58 | 16 | 60 | 60 | 6000 | 42 | ● | ZE-CMC-175/300 |
| 175 | 400 | 655 | 730 | 145 | 96,8 | 58 | 16 | 60 | 60 | 6000 | 47 | ● | ZE-CMC-175/400 |
| 200 | 200 | 495 | 580 | 170 | 113 | 70 | 16 | 65 | 80 | 10000 | 64 | ● | ZE-CMC-200/200 |
| 200 | 300 | 595 | 680 | 170 | 113 | 70 | 16 | 65 | 80 | 10000 | 69 | ● | ZE-CMC-200/300 |
| 200 | 400 | 695 | 780 | 170 | 113 | 70 | 16 | 65 | 80 | 10000 | 74 | ● | ZE-CMC-200/400 |
| 200 | 500 | 795 | 880 | 170 | 113 | 70 | 16 | 65 | 80 | 10000 | 84 | ● | ZE-CMC-200/500 |
| 300 | 300 | 635 | 730 | 195 | 120 | 78 | 16 | 80 | 80 | 10000 | 105 | ● | ZE-CMC-300/300 |
| 300 | 400 | 735 | 830 | 195 | 120 | 78 | 16 | 80 | 80 | 10000 | 115 | ● | ZE-CMC-300/400 |

Inkl. Spannpratzen, Passsteine, Schlüssel, Handkurbel und Werkstückanschlag
*Incl. brackets, T-nuts, wrench, crank and work piece stop*

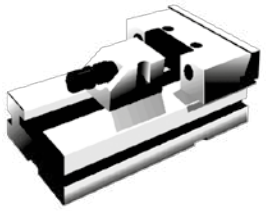


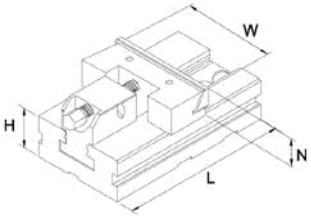
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Geteilte Schraubstöcke Typ CMC
*Modular vices type CMC*



## Bewegliches Element Typ CMC
### *Movable jaw section type CMC*



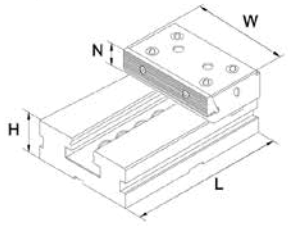



- speziell zum Spannen übergroßer Werkstücke
- vielseitige Spannmöglichkeiten
- *for clamping oversized work pieces*
- *various clamping possibilities*

| W mm | N mm | L mm | H mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 100 | 30 | 140 | 35 | 4 | ● | ZE-GS-B100 |
| 125 | 40 | 160 | 40 | 6 | ● | ZE-GS-B125 |
| 150 | 50 | 230 | 50 | 14 | ● | ZE-GS-B150 |
| 175 | 60 | 240 | 58 | 21 | ● | ZE-GS-B175 |
| 200 | 65 | 300 | 70 | 35 | ● | ZE-GS-B200 |
| 300 | 80 | 350 | 78 | 60 | ○ | ZE-GS-B300 |

## Festes Element Typ CMC
### *Fixed jaw section type CMC*

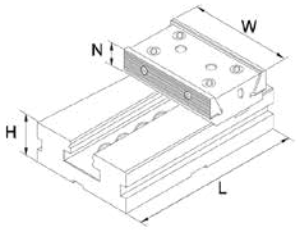





| W mm | N mm | L mm | H mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 100 | 30 | 140 | 35 | 4 | ● | ZE-GS-F100 |
| 125 | 40 | 160 | 40 | 6 | ● | ZE-GS-F125 |
| 150 | 50 | 230 | 50 | 13 | ● | ZE-GS-F150 |
| 175 | 60 | 240 | 58 | 18 | ● | ZE-GS-F175 |
| 200 | 65 | 300 | 70 | 30 | ● | ZE-GS-F200 |
| 300 | 80 | 350 | 78 | 51 | ○ | ZE-GS-F300 |

## Festes Element doppelt Typ CMC
### *Double fixed jaw section type CMC*






- mit beidseitiger Spannmöglichkeit
- *with double-sided clamping possibility*

| W mm | N mm | L mm | H mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 100 | 30 | 140 | 35 | 4 | ○ | ZE-GS-D100 |
| 125 | 40 | 160 | 40 | 6 | ○ | ZE-GS-D125 |
| 150 | 50 | 230 | 50 | 13 | ○ | ZE-GS-D150 |
| 175 | 60 | 240 | 58 | 19 | ○ | ZE-GS-D175 |
| 200 | 65 | 300 | 70 | 30 | ○ | ZE-GS-D200 |
| 300 | 80 | 350 | 78 | 53 | ○ | ZE-GS-D300 |

# Zubehör für Typ CMC
*Accessories for type CMC*

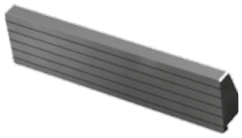
## Drehplatte
### *Swivel plate*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | ZE-CMC-100D |
| 125 | ● | ZE-CMC-125D |
| 150 | ● | ZE-CMC-150D |
| 175 | ● | ZE-CMC-175D |
| 200 | ● | ZE-CMC-200D |
| 300 | ❍ | ZE-CMC-300D |

Preis pro Stück / *Price per piece*

## Rillenbacke
### *Grooved jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | ZE-CMC-100RB |
| 125 | ● | ZE-CMC-125RB |
| 150 | ● | ZE-CMC-150RB |
| 175 | ● | ZE-CMC-175RB |
| 200 | ● | ZE-CMC-200RB |
| 300 | ❍ | ZE-CMC-300RB |

Preis pro Stück / *Price per piece*

## Glatte Backe
### *Plain jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | ZE-CMC-100GB |
| 125 | ● | ZE-CMC-125GB |
| 150 | ● | ZE-CMC-150GB |
| 175 | ● | ZE-CMC-175GB |
| 200 | ● | ZE-CMC-200GB |
| 300 | ❍ | ZE-CMC-300GB |

Preis pro Stück / *Price per piece*

## Weiche Backe
### *Soft machinable jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | ZE-CMC-100WB |
| 125 | ● | ZE-CMC-125WB |
| 150 | ● | ZE-CMC-150WB |
| 175 | ● | ZE-CMC-175WB |
| 200 | ● | ZE-CMC-200WB |
| 300 | ❍ | ZE-CMC-300WB |

Preis pro Stück / *Price per piece*

## Spannbacke überhoch
### *Extra-high jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ❍ | ZE-CMC-100GH |
| 125 | ● | ZE-CMC-125GH |
| 150 | ● | ZE-CMC-150GH |
| 175 | ● | ZE-CMC-175GH |
| 200 | ● | ZE-CMC-200GH |
| 300 | ❍ | ZE-CMC-300GH |

Preis pro Stück / *Price per piece*

## Prismenbacke
### *Prism jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | ZE-CMC-100PB |
| 125 | ● | ZE-CMC-125PB |
| 150 | ● | ZE-CMC-150PB |
| 175 | ● | ZE-CMC-175PB |
| 200 | ● | ZE-CMC-200PB |
| 300 | ❍ | ZE-CMC-300PB |

Preis pro Stück / *Price per piece*

## Koordinaten-Prismenbacke
### *Prismatic stack type jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ❍ | ZE-CMC-100KB |
| 125 | ● | ZE-CMC-125KB |
| 150 | ● | ZE-CMC-150KB |
| 175 | ● | ZE-CMC-175KB |
| 200 | ● | ZE-CMC-200KB |
| 300 | ❍ | ZE-CMC-300KB |

Preis pro Stück / *Price per piece*

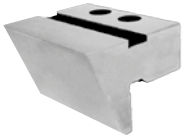
## Niederzugbacke
### *Pull-down jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ❍ | ZE-CMC-100NB |
| 125 | ● | ZE-CMC-125NB |
| 150 | ● | ZE-CMC-150NB |
| 175 | ● | ZE-CMC-175NB |
| 200 | ● | ZE-CMC-200NB |
| 300 | ❍ | ZE-CMC-300NB |

Preis pro Stück / *Price per piece*

## Niederzugbacke überhoch
### *Extra-high pull down jaw*



| passend zu / *suitable for* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ❍ | ZE-CMC-100NH |
| 125 | ● | ZE-CMC-125NH |
| 150 | ● | ZE-CMC-150NH |
| 175 | ● | ZE-CMC-175NH |
| 200 | ● | ZE-CMC-200NH |
| 300 | ❍ | ZE-CMC-300NH |

Preis pro Stück / *Price per piece*

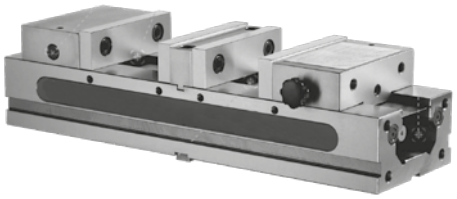


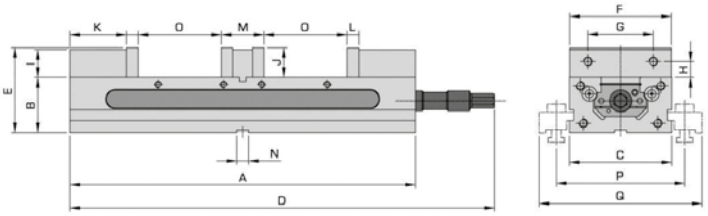
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
❍ **auf Anfrage** / ***on request***

## Doppelspanner Typ TLD
## *Double vices type TLD*

- zentrisches Spannen von 2 Werkstücken gleicher oder unterschiedlicher Größe
- Führungsflächen gehärtet
- mit Niederzugeffekt
- 6 verschiedene Spannmöglichkeiten
- einfahrbare Spindel (nur Typ TLD-150), komplett abgedeckt

- *self centering for 2 work pieces of same or different size hardened slideways*
- *with pull-down mechanism*
- *6 clamping options*
- *retractable spindle (only type TLD-150), completely covered*



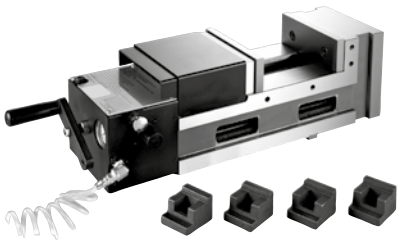



| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | M mm | N mm | O mm | P mm | Q mm | Max. Spannkraft / *Clamping force* daN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 405 | 63,5 | 104 | 459 | 101,5 | 102 | 63,5 | 17,5 | 33 | 38 | 69 | 15 | 55 | 18 | 90 | 143 | 195 | 4000 | 20 | ● | ZE-TLD-100 |
| 150 | 520 | 82,5 | 154 | 536 | 127 | 152 | 98,4 | 23,8 | 41,5 | 44,5 | 86,5 | 18 | 66 | 18 | 125 | 193 | 245 | 3000 | 52 | ● | ZE-TLD-150 |

**Passende Nutensteine lieferbar auf Anfrage**
***Suitable t-nuts available upon request***

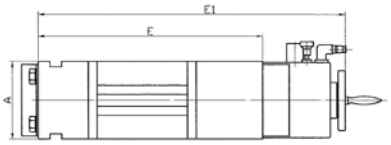
# Pneumatikspanner
# *Pneumatic vices*

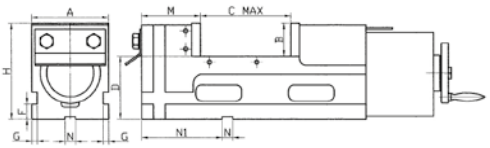
## Typ PSP
## *Type PSP*



- Betätigung durch Pressluft
- besonders geeignet für Serienfertigung auf Maschinenzentren, Fräs- und Bohrmaschinen und Sondermaschinen
- mit Niederzugeffekt
- Taktzeit nur 1,5 s
- Hub bis 8 mm
- einstellbar von 0-4000 kg/cm²

- *actuaction by compressed air*
- *suitable for mass production and for machine centers, milling, drilling and special-purpose machines*
- *with pull-down mechanism*
- *cycle speed 1,5 s*
- *clamping stroke up to 8 mm*
- *capacity from 0-4000 kg/cm²*

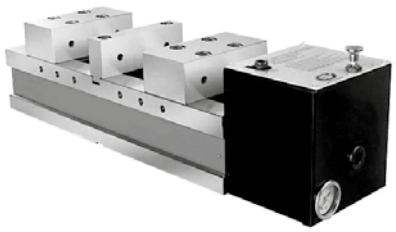



| Typ / *Type* | A mm | B mm | Cmax mm | D mm | E mm | E1 mm | F mm | G mm | H mm | M mm | N mm | N1 mm | Max. Spann-kraft / *Clamping force* daN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 130/150 | 130 | 55 | 150 | 105 | 380 | 520 | 25 | 9 | 160 | 100 | 18 | 136 | 6000 | 41 | ● | ZE-PSP-130/150 |
| 160/160 | 160 | 58 | 160 | 105 | 400 | 540 | 25 | 9 | 163 | 100 | 18 | 136 | 6000 | 50 | ● | ZE-PSP-160/160 |
| 160/250 | 160 | 58 | 250 | 105 | 490 | 630 | 25 | 9 | 163 | 100 | 18 | 136 | 6000 | 57 | ● | ZE-PSP-160/250 |
| 180/200 | 180 | 63 | 200 | 110 | 460 | 600 | 25 | 12 | 173 | 108 | 18 | 171 | 9000 | 67 | ○ | ZE-PSP-180/200 |
| 200/200 | 200 | 63 | 200 | 110 | 470 | 610 | 25 | 12 | 173 | 108 | 18 | 171 | 9000 | 77 | ● | ZE-PSP-200/200 |
| 200/300 | 200 | 63 | 300 | 110 | 570 | 710 | 25 | 12 | 173 | 108 | 18 | 171 | 9000 | 86 | ● | ZE-PSP-200/300 |

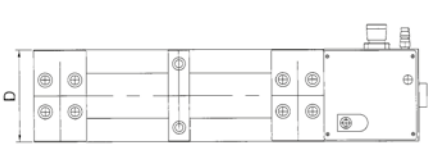
## Pneumatischer Doppelspanner, Typ DPSP
## *Pneumatic double vice, type DPSP*

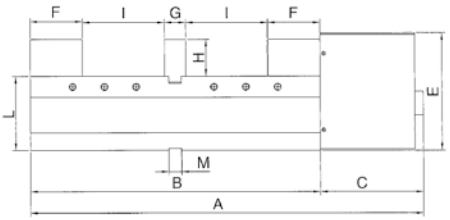
NEU *NEW* !



- Betätigung durch Pressluft
- mit Niederzugeffekt
- mit 2 Spannstellen
- Taktzeit nur 1,5 s
- Hub bis 8 mm
- Werkstücke unterschiedlicher Größe (bis 5 mm) spannbar
- einstellbar von 0-4000 kg/cm²

- *actuaction by compressed air*
- *with pull-down mechanism*
- *for 2 work pieces*
- *cycle speed 1,5 s*
- *clamping stroke up to 8 mm*
- *work pieces of different sizes (up to 5 mm) can be clamped*
- *capacity from 0-4000 kg/cm²*




| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | L mm | M mm | Max. Spann-kraft / *Clamping force* daN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 115 | 556 | 410 | 146 | 130 | 166 | 74 | 30 | 52 | 0-115 | 105 | 18 | 3200 | 42 | ● | ZE-DPSP-130 |
| 150 | 656 | 510 | 146 | 160 | 168 | 82 | 30 | 55 | 0-155 | 105 | 18 | 4000 | 67 | ● | ZE-DPSP-160 |



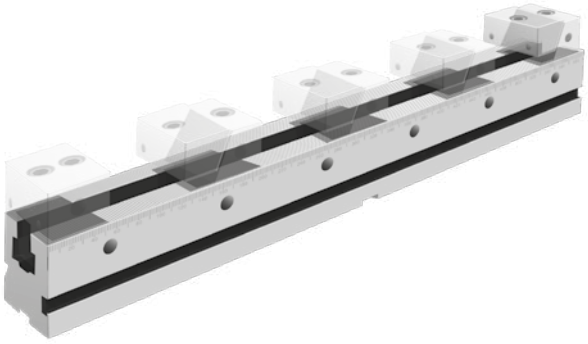
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

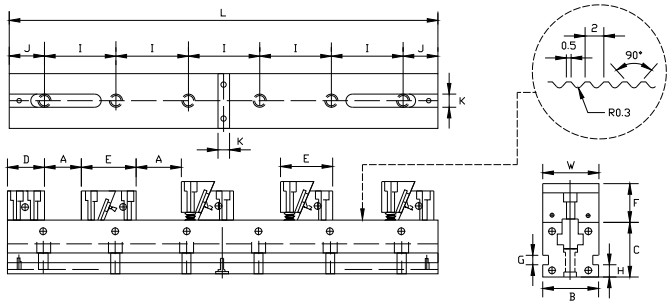
# Mehrfach-Spanneinrichtungen
# *Multiflex vices*

## Typ MFS
## *Type MFS*

- zum Spannen von mehreren Werkstücken
- variable Anpassung der Spannelemente an die Werkstückabmessungen
- optimale Nutzung des Arbeitsbereichs einer Maschine
- mit Skalierung auf Spannleiste
- Lieferumfang: 1 Spannleiste, 1 feste Backe (glatt), 3 (bis L = 500 mm) oder 4 (ab L = 500 mm) Spannbacken (glatt)

- *for clamping of multiple work pieces*
- *each clamping element individually adjustable*
- *optimum exploitation of machine's work-space*
- *with scale for ease of handling*
- *scope of delivery: 1 clamping bar, 1 fixed jaw (plain), 3 (up to L = 500 mm) or 4 (from L = 500 mm) clamping jaws (plain)*

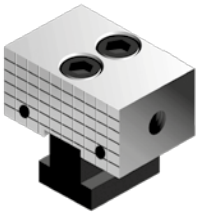





| B mm | L mm | W mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | 1xA | 2xA | 3xA | 4xA Standard | 5xA | Max. Spann-kraft / *Clamping force* daN | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 300 | 48 | 50 | 38 | 55 - 58 | 32 - 25 | 12 | 15 | 100 | 50 | 16 | 208 | 75 | 30 | 8 | - | 1000 | ● | ZE-MFS-50/300 |
| 50 | 400 | 48 | 50 | 38 | 55 - 58 | 32 - 25 | 12 | 15 | 100 | 50 | 16 | 308 | 125 | 64 | 33 | 15 | 1000 | ● | ZE-MFS-50/400 |
| 50 | 500 | 48 | 50 | 38 | 55 - 58 | 32 - 25 | 12 | 15 | 100 | 50 | 16 | 408 | 175 | 96 | 58 | 35 | 1000 | ● | ZE-MFS-50/500 |
| 50 | 600 | 48 | 50 | 38 | 55 - 58 | 32 - 25 | 12 | 15 | 100 | 50 | 16 | 508 | 225 | 129 | 83 | 55 | 1000 | ● | ZE-MFS-50/600 |
| 50 | 700 | 48 | 50 | 38 | 55 - 58 | 32 - 25 | 12 | 15 | 100 | 50 | 16 | 608 | 275 | 161 | 108 | 75 | 1000 | ● | ZE-MFS-50/700 |
| 75 | 400 | 73 | 75 | 50 | 70 - 75 | 46 - 40 | 16 | 20 | 100 | 50 | 16 | 275 | 100 | 41 | 12 | - | 1500 | ● | ZE-MFS-75/400 |
| 75 | 500 | 73 | 75 | 50 | 70 - 75 | 46 - 40 | 16 | 20 | 100 | 50 | 16 | 375 | 150 | 75 | 37 | 15 | 1500 | ● | ZE-MFS-75/500 |
| 75 | 600 | 73 | 75 | 50 | 70 - 75 | 46 - 40 | 16 | 20 | 100 | 50 | 16 | 475 | 200 | 108 | 62 | 35 | 1500 | ● | ZE-MFS-75/600 |
| 75 | 700 | 73 | 75 | 50 | 70 - 75 | 46 - 40 | 16 | 20 | 100 | 50 | 16 | 575 | 250 | 141 | 87 | 55 | 1500 | ● | ZE-MFS-75/700 |
| 75 | 800 | 73 | 75 | 50 | 70 - 75 | 46 - 40 | 16 | 20 | 100 | 50 | 16 | 675 | 300 | 174 | 112 | 75 | 1500 | ● | ZE-MFS-75/800 |

Inkl. 4 Spannpratzen mit Nutensteinen und Schrauben, 2 Passsteine, 4 Werkstückanschläge, Spannschlüssel
*Incl. 4 brackets, t-nuts, screws, 2 key-nuts, 4 piece stops and wrench*

# Ersatzbacken für Typ MFS
*Spare jaws for type MFS*



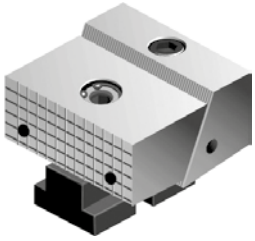
## Feste Backe, Stück
*Fixed jaw, piece*

| Für Typ / *For type* | Breite / *Width* mm | Länge / *Length* mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MFS50 | 48 | 38 | 0,4 | ZE-MFS-50FB |
| MFS75 | 73 | 50 | 1,3 | ZE-MFS-75FB |



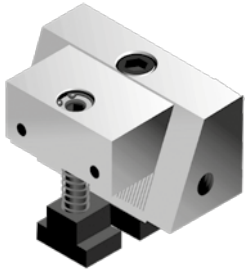
## Bewegliche Backe, glatt, Stück
*Movable jaw, plain, piece*

| Für Typ / *For type* | Breite / *Width* mm | Länge / *Length* mm | kg | Art.-Nr. / *Order order no.* |
|---|---|---|---|---|
| MFS50 | 48 | 54/58 | 0,6 | ZE-MFS-50GB |
| MFS75 | 73 | 70/75 | 1,8 | ZE-MFS-75GB |



## Bewegliche Backe, geriffelt, Stück
*Movable jaw, serrated, piece*

| Für Typ / *For type* | Breite / *Width* mm | Länge / *Length* mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MFS50 | 48 | 54/58 | 0,6 | ZE-MFS-50RB |
| MFS75 | 73 | 70/75 | 1,8 | ZE-MFS-75RB |



## Bewegliche Backe, extrabreit, glatt, Stück
*Movable jaw, enlarged, plain, piece*

| Für Typ / *For type* | Breite / *Width* mm | Länge / *Length* mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MFS50 | 63 | 56 | 1,1 | ZE-MFS-50XLB |
| MFS75 | 109 | 60 | 3 | ZE-MFS-75XLB |

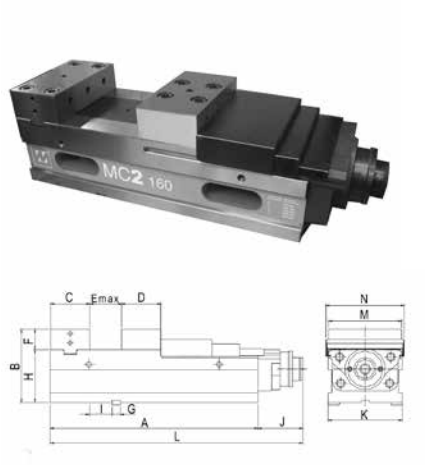


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# NC Schraubstöcke Typ MC2
## *NC precision power vices type MC2*

### Präzisions-Hochdruckspanner *mit mechanischer Kraftverstärkung*
### *High-power vice with mechanical force itensifier*

| Vorwahlstufe / *Pre-selection* | Spannkraft / *Clamping force* Typ / *Type 125* | Spannkraft / *Clamping force* Typ / *Type 160* | Spannkraft / *Clamping force* Typ / *Type 200* |
|---|---|---|---|
| 0 | 500 daN | 500 daN | 500 daN |
| 1 | 1600 daN | 1300 daN | 1500 daN |
| 2 | 2800 daN | 2700 daN | 3200 daN |
| 3 | 3600 daN | 4000 daN | 5100 daN |
| 4 | 4500 daN | 5400 daN | 6800 daN |



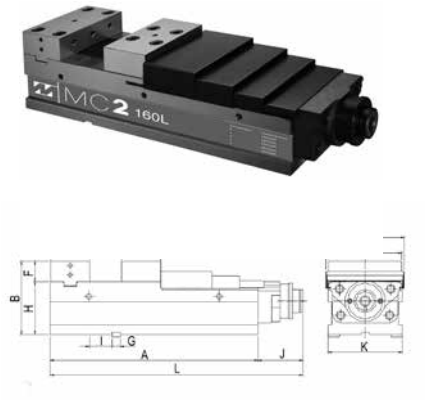

### *Typ MC2*
### *type MC2*

- Sphäroguss FCD60
- unten und seitlich geschliffen
- Anti-Lift-Mechanismus
- eingebauter Niederzug
- mechanische Kraftverstärkung, dichtungslos
- kurze Bauart
- Spannkraft voreinstellbar

- *ductile iron FCD60*
- *steel body, ground below and sideways*
- *“Anti-lifting” mechanism*
- *integrated pull down*
- *mechanical force increase, no seals required*
- *short body*
- *pre-selection of clamping force*

| | Typ MC2 / *Type MC2* | A mm | B mm | C mm | D mm | Emax mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | M mm | N mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 125 | 365 | 145 | 78 | 74 | 208 | 45 | 18 | 100 | 57 | 98,5 | 126 | 463,5 | 125 | 135 | 35 | ● | 14-MC2-125 |
| | 160 | 455 | 160 | 86 | 86 | 275 | 45 | 18 | 115 | 49 | 98,5 | 162 | 553,5 | 160 | 171 | 57 | ● | 14-MC2-160 |
| N | 160M | 480 | 160 | 86 | 86 | 300 | 45 | 18 | 115 | 49 | 98,5 | 162 | 578,5 | 160 | 174 | 63 | ● | 14-MC2-160M |
| | 200 | 505 | 180 | 100 | 97 | 300 | 55 | 18 | 125 | 66 | 100 | 202 | 603,5 | 200 | 211 | 90 | ● | 14-MC2-200 |

Inkl. 4 Spannpratzen, Hebeösen, Schlüssel und Nutensteine
*Incl. clamping brackets, eye bolts, keys and t-nuts*




### *Typ MC2 lang*
### *type MC2 long*

- lange Version des Typs MC2
- extra große Spannweite

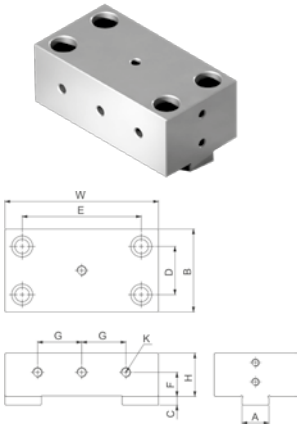
- *long version of ype MC2*
- *with large opening range*

| Typ MC2 / *Type MC2* | A mm | B mm | C mm | D mm | Emax mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | M mm | N mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 160L | 535 | 160 | 86 | 86 | 355 | 45 | 18 | 115 | 49 | 98,5 | 162 | 633,5 | 160 | 174 | 64 | ● | 14-MC2-160L |
| 200L | 610 | 180 | 100 | 97 | 405 | 55 | 18 | 125 | 66 | 100 | 202 | 708,5 | 200 | 214 | 103 | ● | 14-MC2-200L |

Inkl. 4 Spannpratzen, Hebeösen, Schlüssel und Nutensteine
*Incl. clamping brackets, eye bolts, keys and t-nuts*

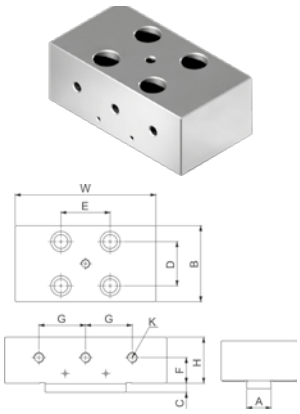
**Ersatzbacken siehe Seiten 136 / 137**
***Jaws see pages 136 / 137***

# Ersatzbacken für Schraubstöcke Typ MC2
*Spare jaws for vices type MC2*



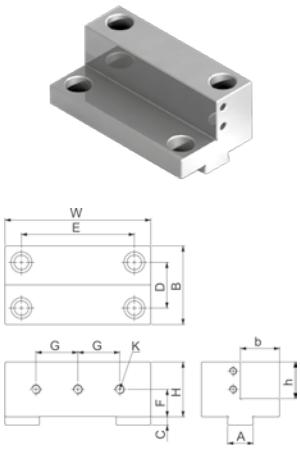

## Feste Blockbacke, Stück
*Fixed jaw, piece*

| Größe / *Size* | A mm | B mm | C mm | D mm | E mm | H mm | W mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 125 | 24 | 78 | 8 | 45 | 88 | 45 | 125 | 14-HJ-125 |
| 160 | 28 | 86 | 9 | 50 | 124 | 45 | 160 | 14-HJ-160 |
| 200 | 28 | 100 | 9 | 62 | 140 | 55 | 200 | 14-HJ-200 |



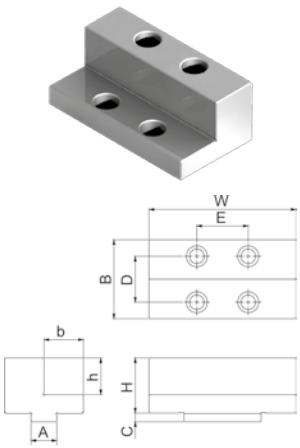

## Bewegliche Blockbacke, Stück
*Movable jaw, piece*

| Größe / *Size* | A mm | B mm | C mm | D mm | E mm | H mm | W mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 125 | 24 | 76 | 8 | 42 | 35 | 45 | 125 | 14-BHJ-125 |
| 160 | 28 | 86 | 9 | 50 | 56 | 45 | 160 | 14-BHJ-160 |
| 200 | 28 | 98 | 9 | 59 | 62 | 55 | 200 | 14-BHJ-200 |




## Feste Stufenbacke, Stück
*Stepped jaw, fixed, piece*

| Größe / *Size* | A mm | B mm | b mm | C mm | D mm | E mm | H mm | h mm | W mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 24 | 78 | 38 | 8 | 45 | 88 | 50 | 32 | 126 | 14-LJ-125 |
| 160 | 28 | 86 | 43 | 8 | 50 | 124 | 60 | 40 | 160 | 14-LJ-160 |
| 200 | 28 | 98 | 49 | 9 | 62 | 140 | 70 | 45 | 200 | 14-LJ-200 |




## Bewegliche Stufenbacke, Stück
*Stepped jaw, movable, piece*

| Größe / *Size* | A mm | B mm | b mm | C mm | D mm | E mm | H mm | h mm | W mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 24 | 76 | 38 | 8 | 42 | 35 | 50 | 32 | 125 | 14-BLJ-125 |
| 160 | 28 | 86 | 43 | 8 | 50 | 56 | 60 | 40 | 160 | 14-BLJ-160 |
| 200 | 28 | 98 | 49 | 9 | 59 | 62 | 70 | 45 | 200 | 14-BLJ-200 |

**Weitere Ersatzbacken auf Anfrage**
***Further jaws available upon request***



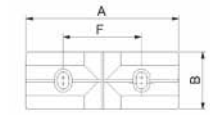
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

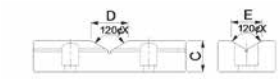
# Ersatzbacken für Schraubstöcke Typ MC2
*Spare jaws for vices type MC2*



## Prismenbacke, Stück
## *Prism jaw, piece*



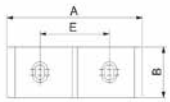


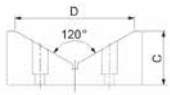




| Größe / *Size* | A mm | B mm | C mm | D mm | E mm | F mm | G | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 125 | 125 | 47 | 25 | 30 | 25 | 64 | M8 | ● | 14-PB-125 |
| 160 | 160 | 62 | 30 | 30 | 30 | 92 | M10 | ● | 14-PB-160 |
| 200 | 200 | 72 | 30 | 30 | 30 | 100 | M10 | ○ | 14-PB-200 |

## Koordinaten-Prismenbacke, Stück
## *V-jaw, piece*





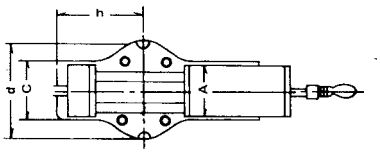



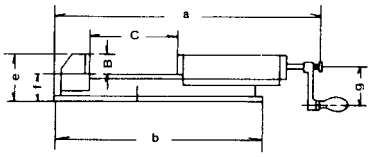

| Größe / *Size* | A mm | B mm | C mm | D mm | E mm | F | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 125 | 125 | 47 | 50 | 110 | 64 | M8 | ● | 14-KB-125 |
| 160 | 160 | 62 | 55 | 130 | 92 | M10 | ● | 14-KB-160 |
| 200 | 200 | 72 | 55 | 130 | 100 | M10 | ● | 14-KB-200 |

**Weitere Ersatzbacken auf Anfrage**
***Further jaws available upon request***

# Schraubstöcke Typ FHS
*Vices type FHS*






## Hydraulischer Maschinenschraubstock Typ FHS
## *Hydraulic machine vice type FHS*

- robuste Bauart mit mechanisch-hydraulischer Hochdruckspindel und großer Spannweite
- hohe Spanngenauigkeit
- Schnellverstellung durch Steckbolzen
- alle Verschleißteile sind gehärtet, deshalb sowohl für schwere als auch leichte Zerspanung verwendbar

- *sturdy design with hydraulic high-pressure spindle, mechanical drive and large clamping capacity*
- *high accuracy*
- *rapid clamping range adjustment with socket pins*
- *all wearing parts are hardened, therefore suitable for heavy- and light-duty machining operations*

| Typ / *Type* | A mm | B mm | C mm | a mm | b mm | c mm | d mm | e mm | f mm | g mm | h mm | Spannkraft / *Clamping force* daN | Nutenbreite / *Slot width* mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FHS 100 | 100 | 35 | 170 | 525 | 435 | 110 | 160 | 94 | 58 | 60 | 155 | 2500 | 20 | 18 | ● | 14-FHS100 |
| FHS 125 | 125 | 45 | 220 | 670 | 540 | 165 | 185 | 116 | 72 | 97 | 117 | 4000 | 20 | 32 | ● | 14-FHS125 |
| FHS 150 | 150 | 51 | 300 | 800 | 610 | 165 | 240 | 133 | 82 | 125 | 150 | 5000 | 20 | 51 | ● | 14-FHS150 |
| FHS 200 | 200 | 62 | 300 | 900 | 700 | 225 | 280 | 160 | 100 | 200 | 265 | 7000 | 20 | 90 | ● | 14-FHS200 |

Inkl. Kurbel, Verlängerung und glatten Backen
*Incl. hand crank, extension and plain jaws*

# Zubehör für Typ FHS
*Accessories for type FHS*



## Drehplatte
## *Swivel plate*

| Für Größe / *For size* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | 14-100S |
| 125 | ● | 14-125S |
| 150 | ● | 14-150S |
| 200 | ● | 14-200S |



## Glatte Backen, Satz
## *Plain jaws, set*

| Für Größe / *For size* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | 14-FHS100GB |
| 125 | ● | 14-FHS125GB |
| 150 | ● | 14-FHS150GB |
| 200 | ● | 14-FHS200GB |



## Niederzugbacken, Stück
## *Pull-down jaws, piece*

| Für Größe / *For size* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 100 | ● | 14-FHS100/1 |
| 125 | ● | 14-FHS125/1 |
| 150 | ● | 14-FHS150/1 |
| 200 | ● | 14-FHS200/1 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Zubehör für Typ FHS
*Accessories for type FHS*

## Prismenbacken, Satz; 1 St. mit Prisma, 1 St. glatt
*Prism jaws, set; 1 pc. with prism, 1 pc. plain*



| Für Größe / *For size* | Art.-Nr. / *Order no.* |
|---|---|
| 100 | 14-FHS100/2 |
| 125 | 14-FHS125/2 |
| 150 | 14-FHS150/2 |
| 200 | 14-FHS200/2 |

## Rillenbacken, Satz
*Grooved jaws, set*



| Für Größe / *For size* | Art.-Nr. / *Order no.* |
|---|---|
| 100 | 14-FHS100/3 |
| 125 | 14-FHS125/3 |
| 150 | 14-FHS150/3 |
| 200 | 14-FHS200/3 |

## Dichtungssatz
*Set of seals*



| Für Größe / *For size* | Art.-Nr. / *Order no.* |
|---|---|
| 100 | 14-FHS100D |
| 125 | 14-FHS125D |
| 150 | 14-FHS150D |
| 200 | 14-FHS200D |

**Alle Ersatzteile ab Lager lieferbar. Technischer Service in unserem Hause**
***All spare parts available in stock. Company-own technical service***

# Schraubstöcke Typ NCK2
# *Vices type NCK2*

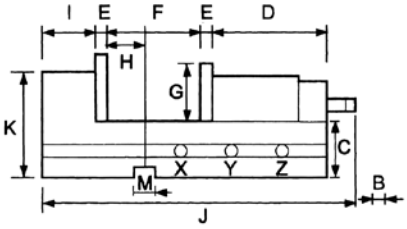
## Typ NCK2
## *Type NCK2*

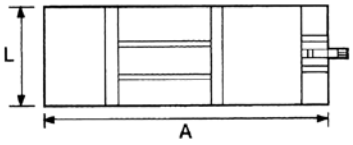
NEU *NEW* !

- mechanisch - hydraulisch
- eingebauter Niederzugeffekt
- mit Schnellverstellung
- Toleranz der Bauhöhe 0,02 mm, somit für den Einsatz mehrerer Schraubstöcke nebeneinander geeignet
- auch seitlich einsetzbar
- Bett gehärtet HRC 45°, Körper aus Guss FCD 60

- *mechanic - hydraulic*
- *with pull down mechanism*
- *with quick adjustment*
- *height tolerance = 0,02 mm, suitable for side by side application*
- *can also be laterally mounted*
- *hardened bed HRC 45°, body made from cast iron FCD 60*






| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | Spannbereich / *Clamping range* F mm X | Y | Z | G mm | H mm | I mm | J mm | K mm | L mm | M mm | f mm | daN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 404 | 14 | 62 | 208 | 12,5 | 0-85 | 85-170 | - | 42 | 45 | 64,5 | 450<br>540 | 102 | 105 | 16 | 50 | 2500 | 22 | ● | 14-NCK2-100 |
| 150 | 507 | 19 | 85 | 243 | 15,5 | 0-90 | 90-180 | 180-270 | 57 | 65 | 84,5 | 620<br>710 | 140 | 152 | 18 | 90 | 5000 | 50 | ● | 14-NCK2-150 |
| 200 | 606 | 19 | 95 | 257 | 18,5 | 0-100 | 100-200 | 200-300 | 62 | 82 | 89,5 | 655<br>755 | 162 | 200 | 18 | 150 | 7000 | 80 | ● | 14-NCK2-200 |

| | |
|---|---|
| Parallelität der festen Backe zur Stirnseite / *Parallelism of body face and fixed jaw clamp face* | 0,01 mm |
| Rechtwinkligkeit feste Backe zu Führungsbahn / *Squareness of fixed jaw and jaw slideway* | 0,015 mm |
| Rechtwinkligkeit der festen Backe zur Auflagefläche bei seitlicher Aufspannung / *Squareness of fixed jaw to table in side-lock position* | 0,02 mm |
| Parallelität Auflagefläche zu Führungsbahn / *Parallelism of body bottom face and jaw slideway* | 0,01 mm |
| Max. Hub eines Referenzwerkstücks / *Max. lift of test block* | 0,02 mm |
| Parallelität Referenzwerkstück zu Auflagefläche / *Parallelism of clamped test block and bottom face* | 0,015 mm |



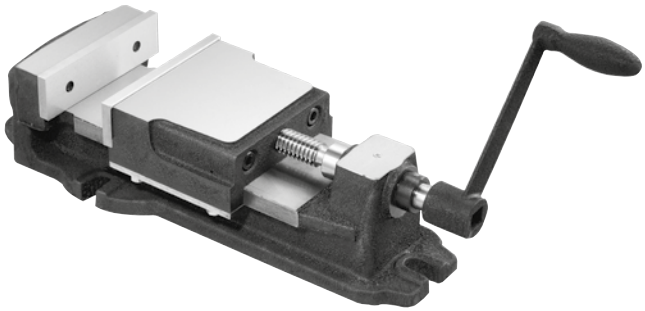
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

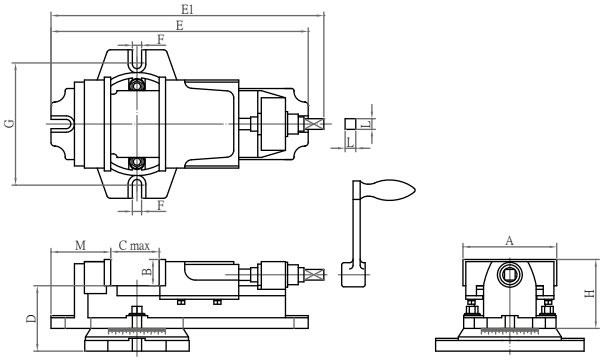
# Fräsmaschinenschraubstöcke
*Milling machine vices*

## Typ MSK ohne Drehplatte, mechanisch
## *Type MSK without swivel plate, mechanical*

- für Fräs-, Schleif- und Bohrarbeiten
- Backen gehärtet und geschliffen

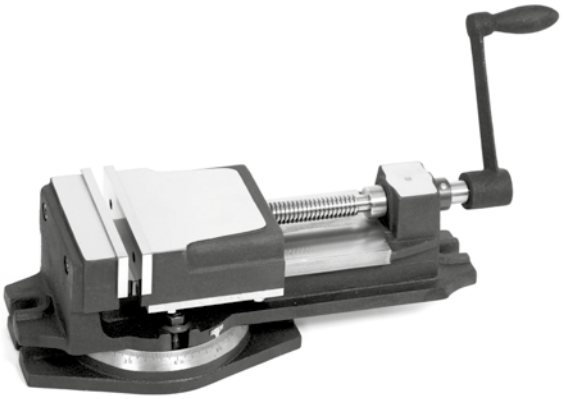
- *for milling, grinding and drilling operations*
- *jaws hardened and ground*

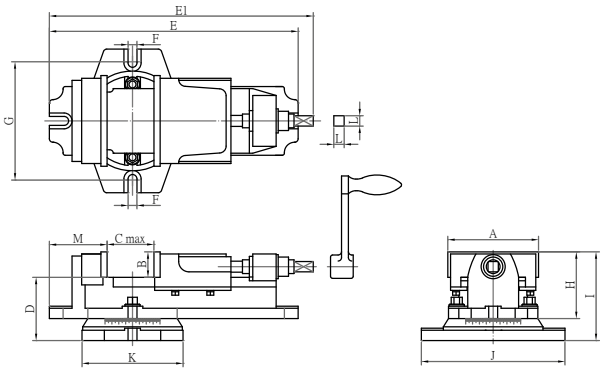





| Typ / *Type* | A mm | B mm | Cmax mm | E mm | E1 mm | F mm | G mm | H mm | L mm | M mm | Max. Spann-kraft / *Clamping force* daN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 104 | 36 | 62 | 293 | 310 | 13 | 145 | 83 | 15 | 65 | 900 | 9 | ● | ZE-MSK100 |
| 125 | 130 | 37 | 82 | 362 | 384 | 13 | 172 | 97 | 15 | 84 | 900 | 15 | ● | ZE-MSK125 |
| 150 | 152 | 43 | 112 | 442 | 473 | 15 | 209 | 108 | 16,5 | 90 | 1000 | 26 | ● | ZE-MSK150 |
| 200 | 204 | 63 | 149 | 579 | 609 | 18 | 312 | 148 | 21 | 122 | 1400 | 53 | ● | ZE-MSK200 |

## Typ MSK mit Drehplatte
## *Type MSK with swivel plate*






| Typ / *Type* | A mm | B mm | Cmax mm | D mm | E mm | E1 mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | M mm | Max. Spann-kraft / *Clamping force* daN | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 104 | 36 | 62 | 76 | 293 | 310 | 13 | 145 | 83 | 113 | 176 | 122 | 15 | 65 | 900 | 10 | ● | ZE-MSK100D |
| 125 | 130 | 37 | 82 | 92 | 362 | 384 | 13 | 172 | 97 | 129 | 209 | 147 | 15 | 84 | 900 | 17 | ● | ZE-MSK125D |
| 150 | 152 | 43 | 112 | 105 | 442 | 473 | 15 | 209 | 108 | 148 | 260 | 181 | 16,5 | 90 | 1000 | 28 | ● | ZE-MSK150D |
| 200 | 204 | 63 | 149 | 127 | 579 | 609 | 18 | 312 | 148 | 190 | 350 | 234 | 21 | 122 | 1400 | 56 | ● | ZE-MSK200D |

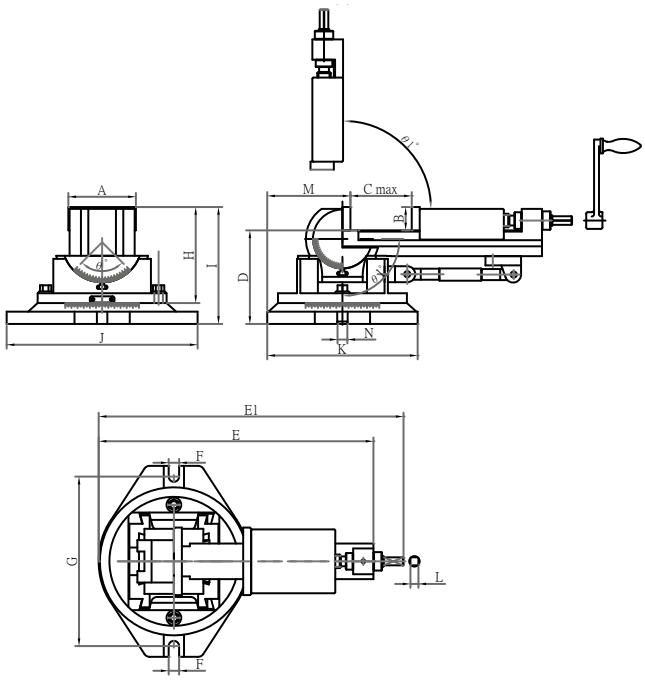
# 3-Achsen-Schraubstöcke
# *3-axes machine vices*

## Typ MSK3
## *Type MSK3*

- 3-fach verstellbar
- 360° drehbar
- 0-90° vertikal verstellbar
- ± 45° schwenkbar
- Backen gehärtet und geschliffen

- *adjustable in 3 ways*
- *360° rotatable*
- *0-90° vertically adjustable*
- *± 45° tiltable*
- *jaws hardened and ground*





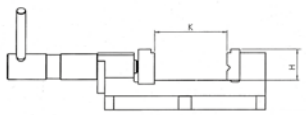


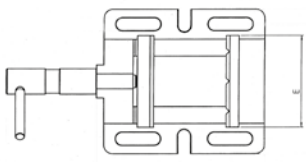


| Typ / *Type* | A mm | B mm | Cmax mm | D mm | E mm | E1 mm | F mm | G mm | H mm | I mm | J mm | K mm | L mm | M mm | N mm | Max. Spann-kraft / *Clamping force* daN | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 80 | 31 | 85 | 126 | 335 | 370 | 15 | 210 | 127 | 157 | 240 | 185 | 10 | 95 | 16 | 800 | 17 | ● | ZE-MSK3-080 | |
| 110 | 110 | 38 | 115 | 152 | 448 | 497 | 17 | 276 | 157 | 190 | 311 | 245 | 13 | 135 | 16 | 1000 | 33 | ● | ZE-MSK3-110 | |
| 135 | 135 | 40 | 150 | 170 | 530 | 580 | 17 | 310 | 173 | 210 | 358 | 271 | 13 | 140 | 16 | 1600 | 50 | ● | ZE-MSK3-135 | |

# Bohrmaschinenschraubstöcke
# *Drilling machine vices*







## Bohrmaschinen-Schraubstock Typ MSP
## *Drilling machine vice type MSP*

- Körper aus Guss
- Stahlbacken mit vertikalem und horizontalem Prisma

- *cast iron body*
- *steel jaws with vertical and horizontal prism*

| Typ / *Type* | Backenbreite / *Jaw width* mm | Spannweite / *Max. opening* mm | Backenhöhe / *Jaw height* mm | kg | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|
| MSP 80 | 85 | 65 | 29 | 4 | ● | 0T-206085 | |
| MSP 100 | 100 | 85 | 33 | 5 | ● | 0T-206100 | |
| MSP 120 | 120 | 110 | 33 | 8 | ● | 0T-206120 | |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Werkbankschraubstöcke Typ WBS
## *Table vices type WBS*



- sehr stabile Konstruktion
- Backen aus Hochqualitätsstahl, gehärtet auf 54 HRC ± 5
- große Ambossfläche
- integrierte Drehplatte ± 35° mit Positionsschrauben
- Typ T: mit Backen für Rundmaterial

- *sturdy design*
- *jaws made from high-quality steel, hardened to 54 HRC ± 5*
- *large anvil*
- *integrated swivel base ± 35° with position screws*
- *type T: with pipe jaws*



Typ T
*Type T*

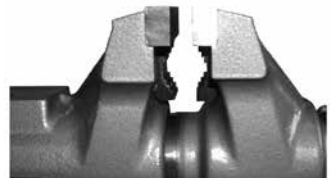
| Typ / *Type* | Backenbreite / *Width of jaws* mm | Spannweite / *Clamping range* mm | Spannkraft / *Clamping force* daN | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 63 | 63 | 55 | 3500 | 4 | 14-WBS-063 |
| 80 | 80 | 70 | 3500 | 6 | 14-WBS-080 |
| 100 | 100 | 105 | 3500 | 12,5 | 14-WBS-100 |
| 125 | 125 | 115 | 3500 | 20 | 14-WBS-125 |
| 125T * | 125 | 115 | 3500 | 20 | 14-WBS-125T |
| 150 | 150 | 125 | 3500 | 30 | 14-WBS-150 |
| 150T * | 150 | 125 | 3500 | 30 | 14-WBS-150T |

* mit Backen für Rundmaterial
* *with pipe jaws*



- Schraubstock für große Belastungen
- auf Drehplatte, 360° drehbar
- Ambossfläche 70 x 150 mm
- Backen aus Hochqualitätsstahl, gehärtet auf 52 - 54 HRC
- Typ T: mit Backen für Rundmaterial

- *heavy-duty vice*
- *swivel base, 360° rotatable*
- *large anvil 70x150 mm*
- *jaws made from high-quality steel, hardened to 52 - 54 HRC*
- *type T: with pipe jaws*



Typ T
*Type T*

| Typ / *Type* | Backenbreite / *Width of jaws* mm | Spannweite / *Clamping range* mm | Spannkraft / *Clamping force* daN | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 200 | 200 | 200 | 5500 | 40 | 14-WBS-200 |
| 200T | 200 | 200 | 5500 | 40 | 14-WBS-200T |
| 250 * | 250 | 200 | 5500 | 45 | 14-WBS-250 |
| 250T * | 250 | 200 | 5500 | 45 | 14-WBS-250T |

* mit Backen für Rundmaterial
* *with pipe jaws*

## Teleskophalter für Werkbank-Schraubstöcke
## *Telescopic holder for table vices*

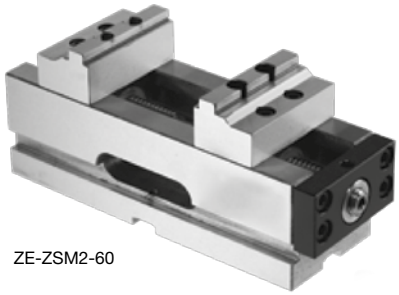


- Teleskophalter passend zu Typ WBS 100, 125, 150
- ermöglicht eine Höhenverstellung des Schraubstockes
- Einstellungsbereich: 0 - 200 mm

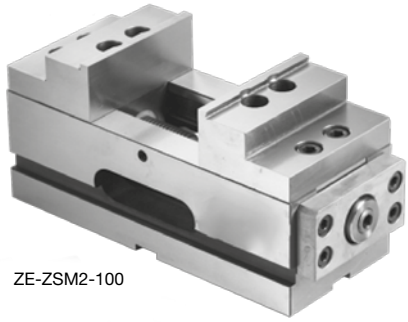
- *telescopic holder suitable for types WBS 100, 125, 150*
- *for height adjustment of vices*
- *range of adjustment: 0 - 200 mm*

| Typ / *Type* | Höhenverstellung / *Range of adjustment* mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|
| TP200 | 0-200 | 8,6 | 14-TP200 |

# Zentrischspanner Typ ZSM2
# *Self-centering vices type ZSM2*



ZE-ZSM2-60

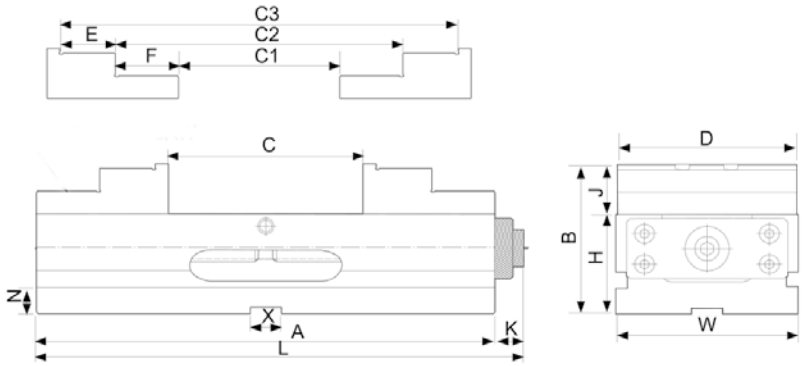


ZE-ZSM2-100

## Zentrischspanner Typ ZSM2
## *Self-centering vice type ZSM2*

- Für 4/5-Achs-Bearbeitung
- Wiederholgenauigkeit: 0,01 mm
- mit Niederzugeffekt

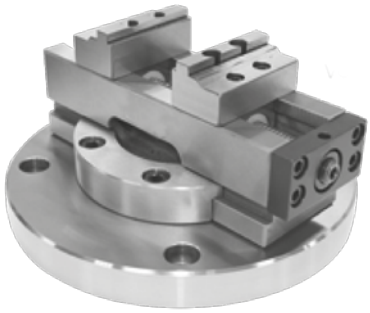
- *for 4/5-axes machining*
- *repeatability: 0,01 mm*
- *with pull-down mechanism*




| | D mm | A mm | B mm | C offen / *open* mm | C1 | C2 | C3 | F mm | H mm | J mm | K mm | N mm | X mm | L mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Spannweite / *Clamping range* | | | | | | | | | | | | |
| | 60 | 170 | 80 | 100 | 112 | 45-140 | - | 20 | 55 | 25 | 15 | 14 | 14 | 185 | ● | ZE-ZSM2-60 |
| | 100 | 240 | 120 | 90 | 90 | 70-160 | 134-222 | 35 | 80 | 40 | 20 | 22 | 18 | 260 | ● | ZE-ZSM2-100 |
| N | 100 | 240 | 120 | 130 | 140 | 62-190 | - | 30 | 80 | 40 | 16 | 21 | 16 | 256 | ● | ZE-ZSM2-100XL |

Inkl. 4 Spannpratzen und Schlüssel
*Incl. 4 clamping brackets and key*

# Zubehör für Typ ZSM2
# *Accessories for type ZSM2*



## Drehplatte
## *Swivel plate*

| Passend zu Typ / *Suitable for type* | Größe / *Size* | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 60 | Ø 200 x 22 mm | ○ | ZE-ZSM2-60D |
| 100 / 100XL | Ø 250 x 22 mm | ○ | ZE-ZSM2-100D |

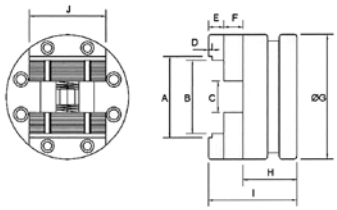
Drehplatte optional (ohne Schraubstock) /
*Swivel plate optional (without vice)*



● **Lagerstandard** / ***in stock***
◑ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# 5-Achsen-Zentrischspanner, Typ SR5
*5-axes self-centering vices, type SR5*






## Zentrischspanner, Typ SR5
## *Self-centering vices, type SR5*

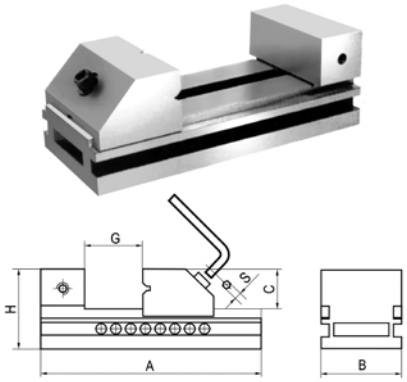
NEU NEW !

- für 5-Achs-Bearbeitung
- runder Körper, für weniger Störkonturen und geringeren Platzbedarf
- ideal zum Einsatz auf Rundtischen, Teilapparaten etc.

- *suitable for 5-axis machining*
- *round body for less interference and less requirement space*
- *ideally suited to indexing spacers, rotary tables etc.*

| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 105 | 95 | 40 | 5 | 20 | 25 | 160 | 70 | 115 | 100 | ● | 14-SR5-100 |
| 130 | 135 | 125 | 50 | 5 | 20 | 25 | 210 | 80 | 125 | 130 | ● | 14-SR5-130 |
| 160 | 165 | 155 | 60 | 5 | 25 | 25 | 250 | 90 | 140 | 160 | ● | 14-SR5-160 |

# Schleifschraubstöcke
*Tool maker vices*

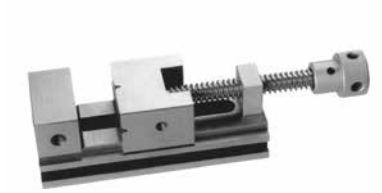


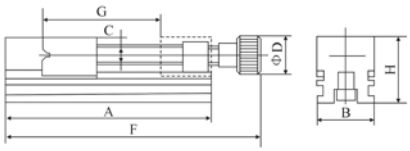

## TMV-A, mit Schnellverstellung
## *TMV-A, with quick adjustment*

- aus Legierungsstahl, wärmebehandelt, gehärtet 58 HRC und feingeschliffen
- geeignet zum Einsatz auf Fräs- und Schleifmaschinen
- auch als Kontrollschraubstock verwendbar
- Parallelität: 0,005 mm / 100 mm
- Rechtwinkligkeit: 0,005 mm / 100 mm

- *made from heat treated alloy steel, subzero treatment for stress relief against distortion, hardened 58 HRC and finished by grinding*
- *suitable for milling and grinding machines*
- *also suitable as reference for inspection*
- *parallelism: 0,005 mm / 100 mm*
- *squareness: 0,005 mm / 100 mm*

| Typ / *Type* | A mm | B mm | C mm | G mm | H mm | S mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| A50 | 135 | 50 | 25 | 65 | 50 | 5 | 2 | ● | 14-TMV-A50 |
| A63 | 170 | 63 | 32 | 85 | 63 | 6 | 3 | ● | 14-TMV-A63 |
| A73 | 185 | 73 | 35 | 100 | 70 | 6 | 4 | ● | 14-TMV-A73 |
| A100 | 240 | 100 | 45 | 125 | 90 | 8 | 10 | ● | 14-TMV-A100 |
| A125 | 280 | 125 | 50 | 160 | 100 | 10 | 16 | ● | 14-TMV-A125 |
| A150 | 300 | 150 | 50 | 175 | 100 | 10 | 18 | ● | 14-TMV-A150 |



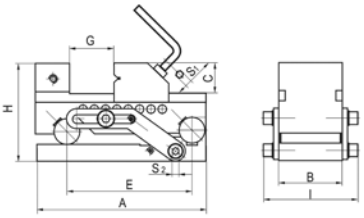



## TMV-B, mit Gewindespindel
## *TMV-B, screw type*

| Typ / *Type* | A mm | B mm | C mm | Ø D mm | G mm | H mm | F mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| B50 | 150 | 50 | 25 | 32 | 65 | 50 | 177,5 | 2 | ● | 14-TMV-B50 |
| B73 | 205 | 73 | 35 | 43 | 100 | 70 | 227,5 | 5 | ● | 14-TMV-B73 |
| B100 | 255 | 100 | 45 | 43 | 125 | 90 | 305,5 | 11 | ● | 14-TMV-B100 |

# Sinus-Schraubstöcke
*Sine vices*





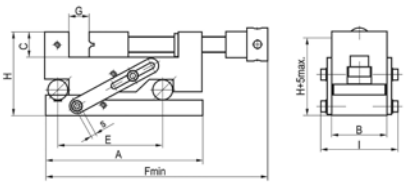

## TMV-SA, mit Schnellverstellung
## *TMV-SA, with quick adjustment*

- genaue Winkeleinstellung durch Endmaße
- sichere Fixierung des Schraubstocks in jeder Winkeleinstellung
- Parallelität: 0,005 mm / 100 mm
- Rechtwinkligkeit: 0,005 mm / 100 mm

- *accurate angle setting by gauge blocks*
- *safe fixation in any angular position*
- *parallelism: 0,005 mm / 100 mm*
- *squareness: 0,005 mm / 100 mm*

| Typ / *Type* | A mm | B mm | C mm | E mm | G mm | H mm | I mm | S1 mm | S2 mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SA63 | 170 | 63 | 32 | 100±0,005 | 85 | 94 | 88 | 6 | 5 | 5 | ● | 14-TMV-SA63 |
| SA73 | 185 | 73 | 35 | 100±0,005 | 100 | 101 | 98 | 6 | 5 | 9 | ● | 14-TMV-SA73 |
| SA88 | 230 | 88 | 40 | 150±0,0075 | 125 | 108 | 117 | 8 | 6 | 11 | ● | 14-TMV-SA88 |

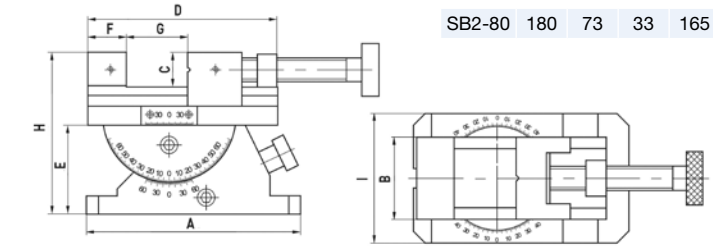





## TMV-SB, mit Gewindespindel
## *TMV-SB, screw type*

| Typ / *Type* | A mm | B mm | C mm | E mm | F mm | G mm | H mm | I mm | S mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB63 | 185 | 63 | 32 | 100±0,005 | 227 | 85 | 92,5 | 88 | 5 | 7 | ● | 14-TMV-SB63 |
| SB73 | 205 | 73 | 35 | 150±0,0075 | 253 | 100 | 107,5 | 98 | 6 | 9 | ● | 14-TMV-SB73 |
| SB100 | 255 | 100 | 45 | 200±0,01 | 293 | 125 | 117,5 | 129 | 6 | 17 | ● | 14-TMV-SB100 |






## TMV-SB2, mit Gradeinteilungen
## *TMV-SB2, with scales*

- in 2 Ebenen verstellbar
- 360° drehbar, 60° schwenkbar
- Nonius
- Parallelität: 0,005 mm / 100 mm
- Rechtwinkligkeit: 0,005 mm / 100 mm

- *adjustable in 2 axes*
- *360° rotatable, 60° tiltable*
- *vernier*
- *parallelism: 0,005 mm / 100 mm*
- *squareness: 0,005 mm/ 100 mm*

| Typ/ *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | kg | | Art.-Nr./ *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB2-80 | 180 | 73 | 33 | 165 | 73 | 34 | 0-85 | 139 | 130 | 14 | ● | 14-TMV-SB2-80 |



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

# Schleif- und Erodier-Schraubstöcke
*Grinding and erosion vices*



Abbildung 1 / *figure 1*

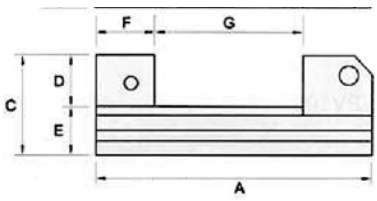
## Typ SES, rostfrei
## *Type SES, noncorrosive*

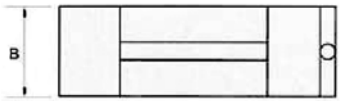
- geeignet für den Einsatz auf Erodier- und Schleifmaschinen für die präzise Bearbeitung von Werkstücken
- Material: nichtrostender Chromstahl 50 - 55 HRC
- Parallelität: 0,003 mm / 100 mm
- Rechtwinkligkeit: 0,003 mm / 100 mm

- *suitable for milling, grinding and high precision operations*
- *material: stainless steel 50 - 55 HRC*
- *parallelism: 0,003 mm / 100 mm*
- *squareness: 0,003 mm / 100 mm*



Abbildung 2 / *figure 2*




| Typ / *Type* | Abbildung / *figure* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SES-25 Mini* | 1 | 65 | 25 | 30 | 10 | - | 20 | 0-19 | 0,3 | ● | 14-SES-25 |
| SES-50 | 2 | 140 | 50 | 53 | 25 | 28 | 25 | 0-75 | 1,8 | ● | 14-SES-50 |
| SES-72 | 2 | 180 | 72 | 62 | 30 | 32 | 35 | 0-100 | 3,8 | ● | 14-SES-72 |

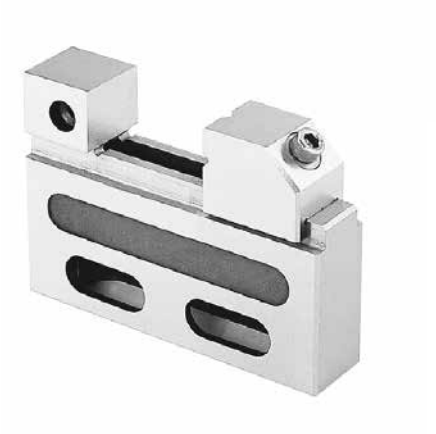
* mit Stufenbacke / *with stepped jaw*

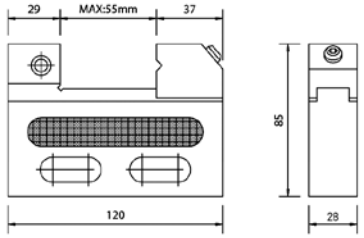
# Erodier-Schraubstöcke
## *Erosion vices*

### Typ SESP, rostfrei
### *Type SESP, noncorrosive*

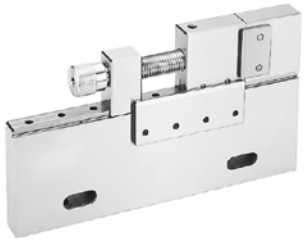
- hochgenauer Schraubstock, geeignet zum Einsatz auf Erodiermaschinen
- hohe Spannkräfte garantieren stabile Positionierung der Werkstücke auch bei hohem Kühlwasserdruck
- Material: nichtrostender Chromstahl 54 HRC ± 2
- Parallelität: 0,002 mm / 100 mm
- Rechwinkligkeit: 0,002 mm / 100 mm

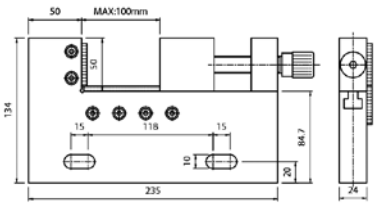
- *high precision vise, suitable for use on eroding machines*
- *high clamping forces guarantee stable positioning of work piece even at high coolant pressure*
- *material: stainless steel, hardened treatment up to 54 HRC ± 2*
- *parallelism: 0,002 mm / 100 mm*
- *squareness: 0,002 mm / 100 mm*



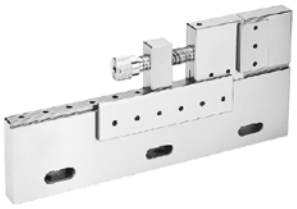


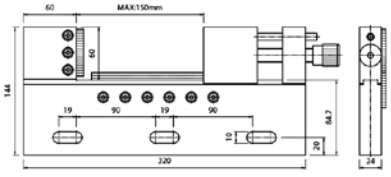

| Spannweite / Opening mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 55 | 1 | ○ | 14-SESP-28/50 |






| Spannweite / Opening mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 100 | 5 | ● | 14-SESP-24/100 |



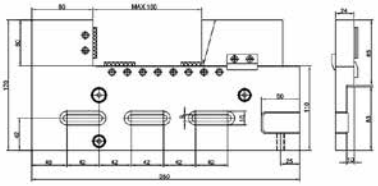



| Spannweite / Opening mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 150 | 7 | ● | 14-SESP-24/150 |

- in aufgespanntem Zustand justierbar in 3 Achsen
- nichtrostender Chromstahl, 45 - 55 HRC
- Parallelitat: 0,003 mm / 100 mm
- Rechwinkligkeit: 0,005 mm /100 mm

- *adjustable in 3 axes*
- *material: stainless steel, 45 - 55 HRC*
- *parallelism: 0,003 mm / 100 mm*
- *squareness: 0,005 mm / 100 mm*



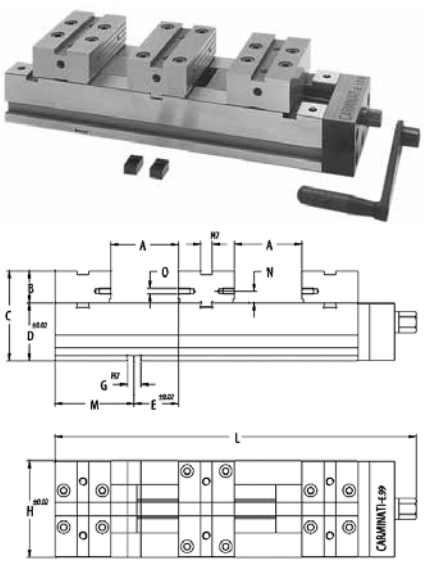



| Spannweite / Opening mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 160 | 8 | ○ | 14-SESP-24/160 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Zentrisch spannende Doppelschraubstöcke
## *Self-centering double vices*



### Typ EDMA.99, mechanisch
### *Type EDMA.99, mechanical*

Einsatz horizontal oder seitlich.
Hochbelastbare Trapezspindel.

*Used on level ground or on side.*
*Heavy-duty trapezoidal spindle.*

**Material:** Legierter Stahl, gehärtet und geschliffen

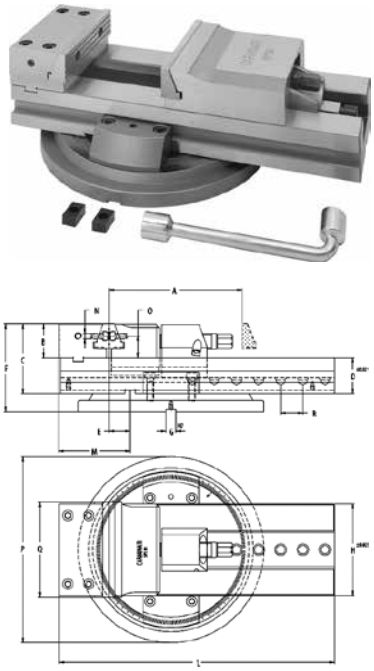
***Material:*** *Hardened alloy steel, precision ground*

**Spannkraft:** Typ 100: 1,8 t
Typ 125: 2,5 t
Typ 150: 3,5 t

***Clamping force:*** *Type 100: 1,8 t*
*Type 125: 2,5 t*
*Type 150: 3,5 t*

| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | L mm | M mm | N mm | O mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 80 | 33 | 93 | 60 | 46 | 12 | 14 | 100 | 374 | 82 | 12 | M6 | 20 | 14-EDMA99-100 |
| 125 | 96 | 42 | 112 | 70 | 61 | 16 | 16 | 125 | 474 | 107 | 22 | M6 | 38 | 14-EDMA99-125 |
| 150 | 145 | 52 | 132 | 80 | 61 | 16 | 16 | 150 | 584 | 162 | 22 | M8 | 61 | 14-EDMA99-150 |

# Präzisionsschraubstöcke mit Niederzugbacken
## *Precision vices with pull-down jaws*



### Typ SP.81, mechanisch - modulares System
### *Type SP.81, mechanical - modular system*

**Eigenschaften:**
- Niederzugbacken drücken das Werkstück sicher nach unten
- beim Lösen gehen die Backen in die Ausgangsstellung zurück
- große Spannweite, schnelle Vor-einstellung über Kugelrastbolzen
- alle Teile sind gehärtet und geschlif-fen und ergeben höchste Präzision

**Lieferung erfolgt ohne Drehplatte**

***Main features:***
- *pull-down jaws which clamp the work piece on the plate under any conditions*
- *jaw return control*
- *wide opening and quick positioning for special machining*
- *all parts are hardened and ground*

***Supplied without swivel plate***

**Material:** Legierter Stahl, gehärtet und geschliffen

***Material:*** *Hardened alloy steel, precision ground*

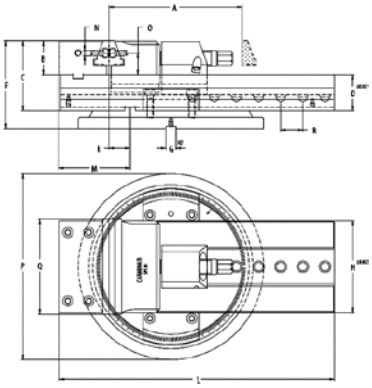
**Spannkraft:** Typ 100: 2,5 t
Typ 125: 3,5 t
Typ 150: 4 t
Typ 200: 5 t

***Clamping force:*** *Type 100: 2,5 t*
*Type 125: 3,5 t*
*Type 150: 4 t*
*Type 200: 5 t*

| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | L mm | M mm | N mm | O mm | P mm | Q mm | R mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 120 | 39,5 | 79,5 | 40 | 1,5 | 102,5 | 14 | 95 | 301 | 61 | M6 | 25,5 | 205 | 100 | 20 | 18 | 14-SP81-100 |
| 125 | 159 | 46 | 89 | 43 | 11,5 | 116 | 14 | 120 | 352 | 81 | M6 | 30 | 238 | 125 | 27 | 28 | 14-SP81-125 |
| 150 | 210 | 53 | 110 | 57 | 33,5 | 138 | 16 | 145 | 435 | 112 | M8 | 34 | 293 | 150 | 35 | 49 | 14-SP81-150 |
| 200 | 320 | 67 | 134 | 67 | 44 | 168 | 16 | 195 | 596 | 142 | M8 | 43,5 | 343 | 200 | 40 | 97 | 14-SP81-200 |

# Präzisionsschraubstöcke mit Niederzugbacken
*Precision vices with pull-down jaws*





## Typ ISP.81, mechanisch-hydraulisch - modulares System
## *Type ISP.81, mechanical-hydraulical - modular system*

Präzisions-Schraubstock. Ausführung wie Grundmodell SP.81, jedoch **mit eingebauter Hydraulikspindel** und mechanischem Antrieb. **Lieferung erfolgt ohne Drehplatte.**

*Precision vice. Design identical to basic model SP.81, however with **integrated hydraulic/mechanic spindle. Supplied without swivel plate.***

**Material:** Legierter Stahl, gehärtet und geschliffen

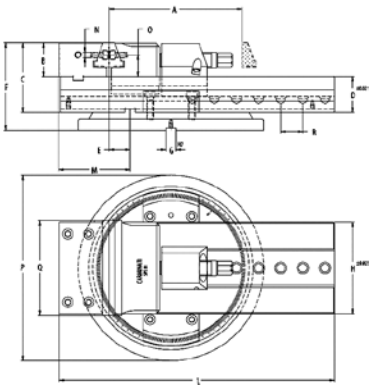
***Material:*** *Hardened alloy steel, precision ground*

***Spannkraft:*** Typ 100: 2 t
Typ 125: 3 t
Typ 150: 4 t
Typ 200: 5 t

***Clamping force:*** *Type 100: 2 t*
*Type 125: 3 t*
*Type 150: 4 t*
*Type 200: 5 t*

| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | L mm | M mm | N mm | O mm | P mm | Q mm | R mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 120 | 39,5 | 79,5 | 40 | 1,5 | 102,5 | 14 | 95 | 301 | 61 | M6 | 25,5 | 205 | 100 | 20 | 19 | 14-ISP81-100 |
| 125 | 159 | 46 | 89 | 43 | 11,5 | 116 | 14 | 120 | 352 | 81 | M6 | 30 | 238 | 125 | 27 | 29 | 14-ISP81-125 |
| 150 | 210 | 53 | 110 | 57 | 33,5 | 138 | 16 | 145 | 435 | 112 | M8 | 34 | 293 | 150 | 35 | 51 | 14-ISP81-150 |
| 200 | 320 | 67 | 134 | 67 | 44 | 168 | 16 | 195 | 596 | 142 | M8 | 43,5 | 343 | 200 | 40 | 99 | 14-ISP81-200 |





## Typ OSP.81, pneumatisch-hydraulisch - modulares System
## *Type OSP.81, pneumatical-hydraulical - modular system*

Präzisions-Schraubstock. Ausführung wie Grundmodell SP.81, jedoch mit eingebautem Hydraulikzylinder in Verbindung mit einem pneumatisch-hydraulischen Druckübersetzer; dadurch besonders geeignet für Serienfertigung. Die bewegliche Backe lässt sich leicht voreinstellen. **Lieferung erfolgt inklusive Druckübersetzer, ohne Drehplatte.**

*Precision vice. Design identical to basic model SP.81, however with integrated hydraulic cylinder incl. pneumatic-hydraulic pressure multiplier. Especially suitable for series manufacture.The moveable jaw can easily be preadjusted. **Supplied with pressure multiplier, without swivel plate.***

**Material:** Legierter Stahl, gehärtet und geschliffen

***Material:*** *Hardened alloy steel, precision ground*

**Hub:** 6 mm

***Stroke:*** *6 mm*

**Spannkraft:** (bei 8 bar) Typ 125: 2,5 t
Typ 150: 4,5 t
Typ 200: 5,5 t

***Clamping force:*** *(at 8 bar) Type 125: 2,5 t*
*Type 150: 4,5 t*
*Type 200: 5,5 t*

| Typ / *Type* | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | L mm | M mm | N mm | O mm | P mm | Q mm | R mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 159 | 46 | 89 | 43 | 11,5 | 116 | 14 | 120 | 352 | 81 | M6 | 30 | 238 | 125 | 27 | 29 | 14-*OSP81-125* |
| 150 | 210 | 53 | 110 | 57 | 33,5 | 138 | 16 | 145 | 435 | 112 | M8 | 34 | 293 | 150 | 35 | 51 | 14-*OSP81-150* |
| 200 | 320 | 67 | 134 | 67 | 44 | 168 | 16 | 195 | 596 | 142 | M8 | 43,5 | 343 | 200 | 40 | 99 | 14-*OSP81-200* |

**Lieferbar auch mit verlängertem Bett auf Anfrage**
***Longer version available upon request***



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Universal-Werkstückanschlag
*Universal stop-dog*



## Universal-Werkstückanschlag
## *Universal stop-dog*



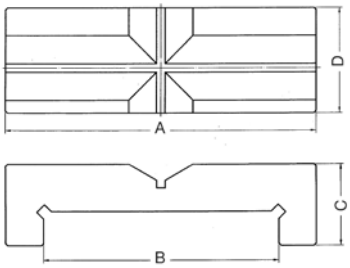
- Universal-Werkstückanschlag aus zweifarbig eloxiertem Aluminium für Bohr- und Fräsmaschinen
- durch die zwei Gelenkpfannen und den 360° drehbaren Kopf ist jede Einstell-Lage möglich
- inkl. Nutenstein (für 16, 18 und 20 mm T-Nuten), Anschlagstange und Inbusschlüssel

- *universal two-coloured work piece stop, made from anodized aluminium for boring and milling machines*
- *two cranks and a knob (360° pivotable) allow any setting angle*
- *incl. t-nut (for 16, 18 and 20 mm), stop rod and hexagon wrench*

| Höhe Anschlagst. / *Height of stop rod* mm | Gesamthöhe / *Total height* mm | Anschlagst.-Ø / *Stop rod dia.* mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 155 | 215 | 8 | 09-AMS-160BH |

# Universal Aufsatz-Prismenbacken für Schraubstöcke
*Universal prism jaws for vices*






## Universal Aufsatz-Prismenbacken mit Werkstückanschlag
## *Universal prism jaws with work stop*

- geeignet für alle gängigen Schraubstöcke
- leicht und schnell montierbar

- *suitable for all kinds of vices*
- *easy mounting and handling*

| Für Backenbreite / *For jaw width* mm | A mm | B mm | C mm | D mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 100-110 | 145 | 110 | 38 | 49 | 1,6 | 14-APB-100/110 |
| 125-140 | 175 | 140 | 39 | 49 | 1,7 | 14-APB-125/140 |
| 150-160 | 190 | 160 | 40 | 53 | 2 | 14-APB-150/160 |
| 200-210 | 245 | 210 | 42 | 76 | 4,2 | 14-APB-200/210 |

Preis pro Stück / *Price per piece*

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# VDI-Werkzeughalter
# *VDI-Tool holders*



## Inhalt:

- Werkzeughalter DIN 69880
- Stangengreifer
- Mitlaufende Zentrierspitzen
- Räumwerkzeughalter
- Pendelhalter
- Werkstückanschläge
- Prüfdorne
- Einrichtehalter
- Reduzierbuchsen, Kugelspritzdüsen, O-Ringe
- Schutzstopfen

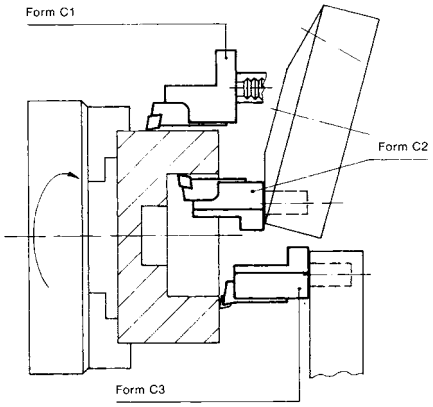
## *Content:*

- *Tool holders DIN 69880*
- *Bar pullers*
- *Revolving tailstock centres*
- *Broach tool holders*
- *Floating chucks*
- *Work piece stops*
- *Test arbors*
- *Setting holders*
- *Reduction sleeves, ball spray nozzles, O-rings*
- *Protective plugs*

# VDI-Halter
## *VDI-Tool holders*

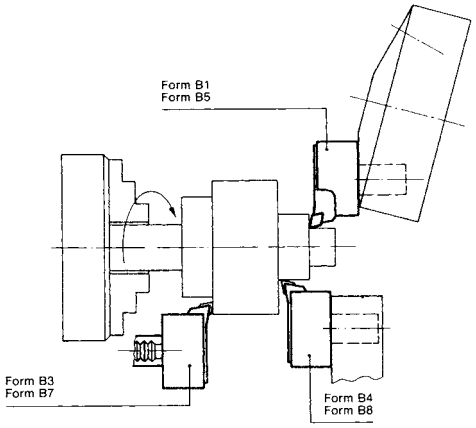
Einsatz von Axial-Werkzeughaltern bei linker Spindeldrehrichtung

Application of axial tool holders with left-hand spindle rotation



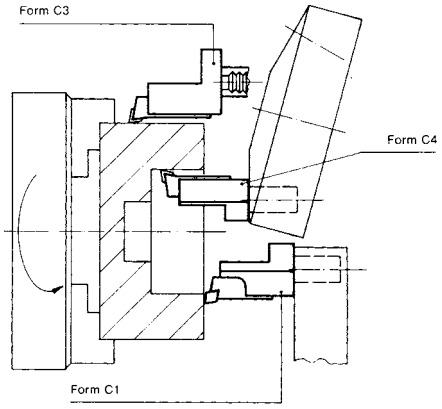

*Einsatz von Radial-Werkzeughaltern bei linker Spindeldrehrichtung*

*Application of radial tool holders with left-hand spindle rotation*



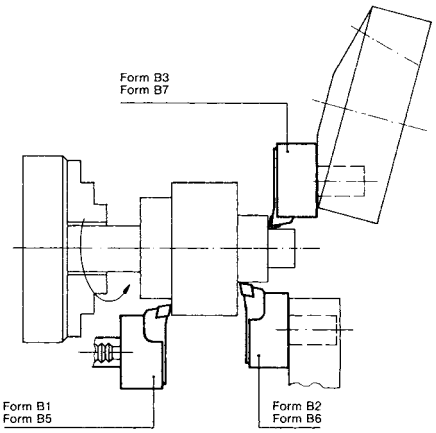

Einsatz von Axial-Werkzeughaltern bei rechter Spindeldrehrichtung

Application of axial tool holders with right-hand spindle rotation



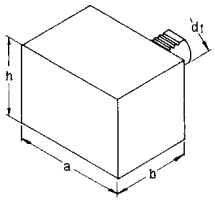

*Einsatz von Radial-Werkzeughaltern bei rechter Spindeldrehrichtung*

*Application of radial tool holders with right-hand spindle rotation*




## Typ A1, Werkzeughalter-Rohling, rechteckig*
## *Type A1, rectangular soft blank**






| | d1 mm | a mm | h mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 16 | 78 | 44 | 44 | 47-A1-16-44 |
| | 20 | 100 | 60 | 65 | 47-A1-20-65 |
| | 25 | 100 | 60 | 75 | 47-A1-25-75 |
| | 30 | 130 | 76 | 85 | 47-A1-30-85 |
| | 40 | 151 | 96 | 100 | 47-A1-40-100 |
| NEU/*NEW* | 40 | 60 | 96 | 220 | 47-A1-40-220 |
| | 50 | 160 | 120 | 125 | 47-A1-50-125 |
| | 60 | 165 | 125 | 160 | 47-A1-60-160 |

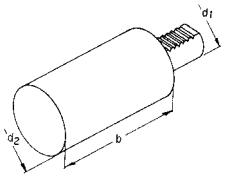
* Material 42 CRMo 4



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Typ A2, Werkzeughalter-Rohling, rund*
## *Type A2, round soft blank**



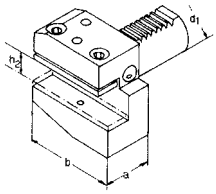



| d1 mm | d2 mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 16 | 40 | 60 | 47-A2-16-60 |
| 20 | 50 | 70 | 47-A2-20-70 |
| 25 | 58 | 80 | 47-A2-25-80 |
| 25 | 58 | 200 | 47-A2-25-200 |
| 30 | 68 | 100 | 47-A2-30-100 |
| 30 | 68 | 240 | 47-A2-30-240 |
| 40 | 83 | 120 | 47-A2-40-120 |
| 40 | 83 | 320 | 47-A2-40-320 |
| 50 | 98 | 135 | 47-A2-50-135 |
| 50 | 98 | 400 | 47-A2-50-400 |
| 60 | 123 | 150 | 47-A2-60-150 |
| 60 | 123 | 480 | 47-A2-60-480 |

* Material: 42 CrMo 4

## Typ B1, Radial-Werkzeughalter, rechts, kurz
## *Type B1, radial tool holder, right-hand, short*

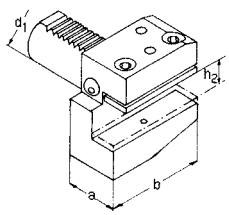





| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 42 | 47-B1-16-12 |
| 20 | 12/16 | 30 | 55 | 47-B1-20-16 |
| 25 | 12/16 | 30 | 55 | 47-B1-25-16 |
| 30 | 16/20 | 40 | 70 | 47-B1-30-20 |
| 40 | 20/25 | 44 | 85 | 47-B1-40-25 |
| 50 | 25/32 | 55 | 100 | 47-B1-50-32 |
| 60 | 25/32 | 60 | 125 | 47-B1-60-32 |

## Typ B2, Radial-Werkzeughalter, links, kurz
## *Type B2, radial tool holder, left-hand, short*

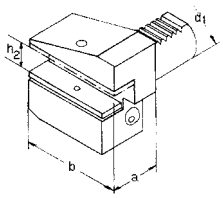





| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 42 | 47-B2-16-12 |
| 20 | 12/16 | 30 | 55 | 47-B2-20-16 |
| 25 | 12/16 | 30 | 55 | 47-B2-25-16 |
| 30 | 16/20 | 40 | 70 | 47-B2-30-20 |
| 40 | 20/25 | 44 | 85 | 47-B2-40-25 |
| 50 | 25/32 | 55 | 100 | 47-B2-50-32 |
| 60 | 25/32 | 60 | 125 | 47-B2-60-32 |

## Typ B3, Radial-Werkzeughalter, überkopf, rechts, kurz
## *Type B3, radial tool holder, inverted, right-hand, short*

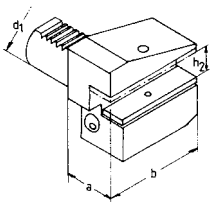





| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 42 | 47-B3-16-12 |
| 20 | 12/16 | 30 | 55 | 47-B3-20-16 |
| 25 | 12/16 | 30 | 55 | 47-B3-25-16 |
| 30 | 16/20 | 40 | 70 | 47-B3-30-20 |
| 40 | 20/25 | 44 | 85 | 47-B3-40-25 |
| 50 | 25/32 | 55 | 100 | 47-B3-50-32 |
| 60 | 25/32 | 60 | 125 | 47-B3-60-32 |

# VDI-Halter
# *VDI-Tool holders*

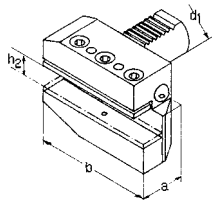





## Typ B4, Radial-Werkzeughalter, überkopf, links, kurz
## *Type B4, radial tool holder, inverted, left-hand, short*

| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 42 | ● 47-B4-16-12 |
| 20 | 12/16 | 30 | 55 | ● 47-B4-20-16 |
| 25 | 12/16 | 30 | 55 | ● 47-B4-25-16 |
| 30 | 16/20 | 40 | 70 | ● 47-B4-30-20 |
| 40 | 20/25 | 44 | 85 | ● 47-B4-40-25 |
| 50 | 25/32 | 55 | 100 | ● 47-B4-50-32 |
| 60 | 25/32 | 60 | 125 | ● 47-B4-60-32 |

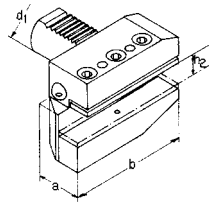





## Typ B5, Radial-Werkzeughalter, rechts, lang
## *Type B5, radial tool holder, right-hand, long*

| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 58 | ● 47-B5-16-12 |
| 20 | 12/16 | 30 | 75 | ● 47-B5-20-16 |
| 25 | 12/16 | 30 | 75 | ● 47-B5-25-16 |
| 30 | 16/20 | 40 | 100 | ● 47-B5-30-20 |
| 40 | 20/25 | 44 | 118 | ● 47-B5-40-25 |
| 50 | 25/32 | 55 | 130 | ● 47-B5-50-32 |
| 60 | 25/32 | 60 | 145 | ● 47-B5-60-32 |

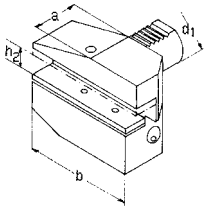





## Typ B6, Radial-Werkzeughalter, links, lang
## *Type B6, radial tool holder, left-hand, long*

| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 58 | ● 47-B6-16-12 |
| 20 | 12/16 | 30 | 75 | ● 47-B6-20-16 |
| 25 | 12/16 | 30 | 75 | ● 47-B6-25-16 |
| 30 | 16/20 | 40 | 100 | ● 47-B6-30-20 |
| 40 | 20/25 | 44 | 118 | ● 47-B6-40-25 |
| 50 | 25/32 | 55 | 130 | ● 47-B6-50-32 |
| 60 | 25/32 | 60 | 145 | ● 47-B6-60-32 |





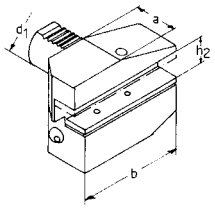

## Typ B7, Radial-Werkzeughalter, überkopf, rechts, lang
## *Type B7, radial tool holder, inverted, right-hand, long*

| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 58 | ● 47-B7-16-12 |
| 20 | 12/16 | 30 | 75 | ● 47-B7-20-16 |
| 25 | 12/16 | 30 | 75 | ● 47-B7-25-16 |
| 30 | 16/20 | 40 | 100 | ● 47-B7-30-20 |
| 40 | 20/25 | 44 | 118 | ● 47-B7-40-25 |
| 50 | 25/32 | 55 | 130 | ● 47-B7-50-32 |
| 60 | 25/32 | 60 | 145 | ● 47-B7-60-32 |



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

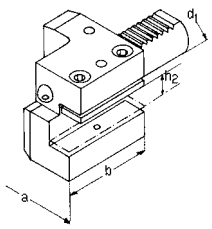





## Typ B8, Radial-Werkzeughalter, überkopf, links, lang
## *Type B8, radial tool holder, inverted, left-hand, long*

| d1 mm | h2 mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 24 | 58 | 47-B8-16-12 |
| 20 | 12/16 | 30 | 75 | 47-B8-20-16 |
| 25 | 12/16 | 30 | 75 | 47-B8-25-16 |
| 30 | 16/20 | 40 | 100 | 47-B8-30-20 |
| 40 | 20/25 | 44 | 118 | 47-B8-40-25 |
| 50 | 25/32 | 55 | 130 | 47-B8-50-32 |
| 60 | 25/32 | 60 | 145 | 47-B8-60-32 |

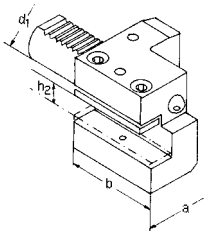





## Typ C1, Axial-Werkzeughalter, rechts
## *Type C1, axial tool holder, right-hand*

| d1 mm | h2 mm | b mm | a mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 44 | 43 | 47-C1-16-12 |
| 20 | 12/16 | 50 | 52 | 47-C1-20-16 |
| 25 | 12/16 | 55 | 58 | 47-C1-25-16 |
| 30 | 16/20 | 70 | 76 | 47-C1-30-20 |
| 40 | 20/25 | 85 | 85 | 47-C1-40-25 |
| 50 | 25/32 | 100 | 100 | 47-C1-50-32 |
| 60 | 25/32 | 125 | 125 | 47-C1-60-32 |

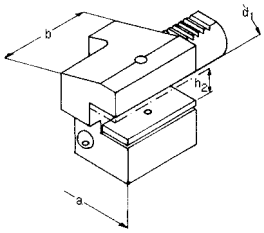





## Typ C2, Axial-Werkzeughalter, links
## *Type C2, axial tool holder, left-hand*

| d1 mm | h2 mm | b mm | a mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 44 | 43 | 47-C2-16-12 |
| 20 | 12/16 | 50 | 52 | 47-C2-20-16 |
| 25 | 12/16 | 55 | 58 | 47-C2-25-16 |
| 30 | 16/20 | 70 | 76 | 47-C2-30-20 |
| 40 | 20/25 | 85 | 85 | 47-C2-40-25 |
| 50 | 25/32 | 100 | 100 | 47-C2-50-32 |
| 60 | 25/32 | 125 | 125 | 47-C2-60-32 |



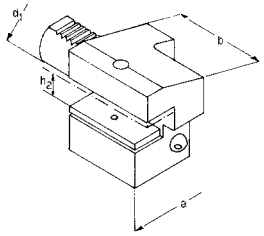



## Typ C3, Axial-Werkzeughalter, überkopf, rechts
## *Type C3, axial tool holder, inverted, right-hand*

| d1 mm | h2 mm | b mm | a mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 | 10/12 | 44 | 43 | 47-C3-16-12 |
| 20 | 12/16 | 50 | 52 | 47-C3-20-16 |
| 25 | 12/16 | 55 | 58 | 47-C3-25-16 |
| 30 | 16/20 | 70 | 76 | 47-C3-30-20 |
| 40 | 20/25 | 85 | 85 | 47-C3-40-25 |
| 50 | 25/32 | 100 | 100 | 47-C3-50-32 |
| 60 | 25/32 | 125 | 125 | 47-C3-60-32 |

# VDI-Halter
# *VDI-Tool holders*





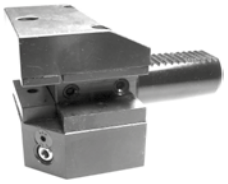
## Typ C4, Axial-Werkzeughalter, überkopf, links
## *Type C4, axial tool holder, inverted, left-hand*

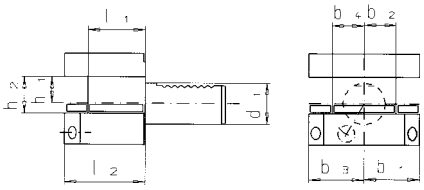
| d1<br>mm | h2<br>mm | b<br>mm | a<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|
| 16 | 10/12 | 44 | 43 | ● | 47-C4-16-12 |
| 20 | 12/16 | 50 | 52 | ● | 47-C4-20-16 |
| 25 | 12/16 | 55 | 58 | ● | 47-C4-25-16 |
| 30 | 16/20 | 70 | 76 | ● | 47-C4-30-20 |
| 40 | 20/25 | 85 | 85 | ● | 47-C4-40-25 |
| 50 | 25/32 | 100 | 100 | ● | 47-C4-50-32 |
| 60 | 25/32 | 125 | 125 | ● | 47-C4-60-32 |



## Typ D1, Vierkant-Mehrfach-Aufnahme
## *Type D1, multiple square tool holder*

| d1<br>mm | h2<br>mm | b<br>mm | a<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|
| 25 | 12/16 | 48 | 66 | ● | 47-D1-25-16 |
| 30 | 16/20 | 60 | 76 | ● | 47-D1-30-20 |
| 40 | 20/25 | 72 | 90 | ● | 47-D1-40-25 |
| 50 | 25/32 | 85 | 105 | ● | 47-D1-50-32 |

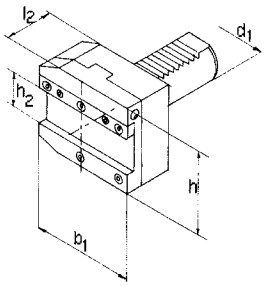




## Typ D2, Vierkant-Mehrfach-Aufnahme, überkopf
## *Type D2, multiple square tool holder, inverted*

| d1<br>mm | h1 / *h2*<br>mm | b<br>mm | a<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|
| 25 | 12/16 | 48 | 66 | ● | 47-D2-25-16 |
| 30 | 16/20 | 60 | 76 | ● | 47-D2-30-20 |
| 40 | 20/25 | 72 | 90 | ● | 47-D2-40-25 |
| 50 | 25/32 | 85 | 105 | ● | 47-D2-50-32 |





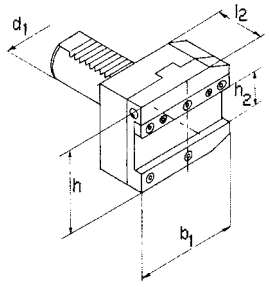
## Abstechhalter, rechts
## *Parting off tool holder, right-hand*

| d1<br>mm | b1<br>mm | h<br>mm | l2<br>mm | h2<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|---|
| 25 | 60 | 64 | 50 | 26 | ○ | 47-AR-25-26 |
| 30 | 70 | 71 | 50 | 26 | ● | 47-AR-30-26 |
| 40 | 85 | 84,5 | 50 | 26 | ● | 47-AR-40-26 |
| 40 | 85 | 84,5 | 50 | 32 | ● | 47-AR-40-32 |
| 50 | 100 | 88 | 50 | 26 | ◗ | 47-AR-50-26 |
| 50 | 100 | 88 | 50 | 32 | ● | 47-AR-50-32 |
| 60 | 125 | 103 | 50 | 32 | ○ | 47-AR-60-32 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

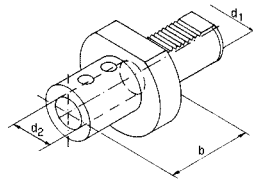





## Abstechhalter, links
## *Parting off tool holder, left-hand*

| d1 mm | b1 mm | h mm | l2 mm | h2 mm | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|
| 25 | 60 | 64 | 50 | 26 | 47-AL-25-26 | ○ |
| 30 | 70 | 71 | 50 | 26 | 47-AL-30-26 | ● |
| 40 | 85 | 84,5 | 50 | 26 | 47-AL-40-26 | ● |
| 40 | 85 | 84,5 | 50 | 32 | 47-AL-40-32 | ● |
| 50 | 100 | 88 | 50 | 26 | 47-AL-50-26 | ● |
| 50 | 100 | 88 | 50 | 32 | 47-AL-50-32 | ● |
| 60 | 125 | 103 | 50 | 32 | 47-AL-60-32 | ○ |





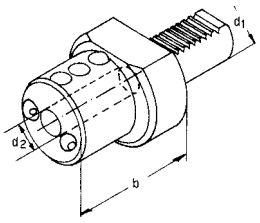

## Typ E1, Wendeplatten-Bohrerhalter, IK
## *Type E1, U-drill holder, IC*

| d1 mm | d2 mm | b mm | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|
| 20 | 16 | 66 | 47-E1-20-16 | ● |
| 20 | 20 | 67 | 47-E1-20-20 | ● |
| 20 | 25 | 71 | 47-E1-20-25 | ● |
| 25 | 20 | 67 | 47-E1-25-20 | ● |
| 25 | 25 | 71 | 47-E1-25-25 | ● |
| 30 | 10 | 66 | 47-E1-30-10 | ● |
| 30 | 12 | 66 | 47-E1-30-12 | ● |
| 30 | 16 | 66 | 47-E1-30-16 | ● |
| 30 | 20 | 67 | 47-E1-30-20 | ● |
| 30 | 25 | 71 | 47-E1-30-25 | ● |
| 30 | 32 | 75 | 47-E1-30-32 | ● |
| 30 | 40 | 90 | 47-E1-30-40 | ● |
| 40 | 10 | 66 | 47-E1-40-10 | ● |
| 40 | 12 | 66 | 47-E1-40-12 | ● |
| 40 | 14 | 66 | 47-E1-40-14 | ● |
| 40 | 16 | 66 | 47-E1-40-16 | ● |
| 40 | 20 | 67 | 47-E1-40-20 | ● |
| 40 | 25 | 75 | 47-E1-40-25 | ● |
| 40 | 32 | 75 | 47-E1-40-32 | ● |
| 40 | 40 | 90 | 47-E1-40-40 | ● |
| 40 | 50 | 100 | 47-E1-40-50 | ● |
| 50 | 20 | 67 | 47-E1-50-20 | ● |
| 50 | 25 | 80 | 47-E1-50-25 | ● |
| 50 | 32 | 80 | 47-E1-50-32 | ● |
| 50 | 40 | 90 | 47-E1-50-40 | ● |
| 50 | 50 | 100 | 47-E1-50-50 | ● |
| 60 | 25 | 80 | 47-E1-60-25 | ● |
| 60 | 32 | 80 | 47-E1-60-32 | ● |
| 60 | 40 | 90 | 47-E1-60-40 | ● |
| 60 | 50 | 100 | 47-E1-60-50 | ● |

**Beliebige Innendurchmesser, Zwischengrößen, Zollmaße etc. lieferbar auf Anfrage**
***Other internal diameters, intermediary bores, inch bores etc. available upon request***

## Typ E2, Bohrstangenhalter, IK/EK
## *Type E2, boring bar holder, IC/EC*






| d1 mm | d2 mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 16 | 6 | 44 | 47-E2-16-06 |
| 16 | 8 | 44 | 47-E2-16-08 |
| 16 | 10 | 44 | 47-E2-16-10 |
| 16 | 12 | 44 | 47-E2-16-12 |
| 16 | 16 | 44 | 47-E2-16-16 |
| 20 | 8 | 50 | 47-E2-20-08 |
| 20 | 10 | 50 | 47-E2-20-10 |
| 20 | 12 | 50 | 47-E2-20-12 |
| 20 | 16 | 50 | 47-E2-20-16 |
| 20 | 20 | 50 | 47-E2-20-20 |
| 20 | 25 | 60 | 47-E2-20-25 |
| 25 | 8 | 50 | 47-E2-25-08 |
| 25 | 10 | 50 | 47-E2-25-10 |
| 25 | 12 | 50 | 47-E2-25-12 |
| 25 | 16 | 50 | 47-E2-25-16 |
| 25 | 20 | 50 | 47-E2-25-20 |
| 25 | 25 | 60 | 47-E2-25-25 |
| 30 | 6 | 60 | 47-E2-30-06 |
| 30 | 8 | 60 | 47-E2-30-08 |
| 30 | 10 | 60 | 47-E2-30-10 |
| 30 | 12 | 60 | 47-E2-30-12 |
| 30 | 16 | 60 | 47-E2-30-16 |
| 30 | 20 | 60 | 47-E2-30-20 |
| 30 | 25 | 60 | 47-E2-30-25 |
| 30 | 32 | 75 | 47-E2-30-32 |
| 40 | 6 | 75 | 47-E2-40-06 |
| 40 | 8 | 75 | 47-E2-40-08 |
| 40 | 10 | 75 | 47-E2-40-10 |
| 40 | 12 | 75 | 47-E2-40-12 |
| 40 | 16 | 75 | 47-E2-40-16 |
| 40 | 20 | 75 | 47-E2-40-20 |
| 40 | 25 | 75 | 47-E2-40-25 |
| 40 | 32 | 75 | 47-E2-40-32 |
| 40 | 40 | 90 | 47-E2-40-40 |
| 40 | 50 | 90 | 47-E2-40-50 |
| 50 | 10 | 75 | 47-E2-50-10 |
| 50 | 12 | 90 | 47-E2-50-12 |
| 50 | 16 | 90 | 47-E2-50-16 |
| 50 | 20 | 90 | 47-E2-50-20 |
| 50 | 25 | 90 | 47-E2-50-25 |
| 50 | 32 | 90 | 47-E2-50-32 |
| 50 | 40 | 90 | 47-E2-50-40 |
| 50 | 50 | 100 | 47-E2-50-50 |
| 60 | 12 | 90 | 47-E2-60-12 |
| 60 | 16 | 90 | 47-E2-60-16 |
| 60 | 20 | 90 | 47-E2-60-20 |
| 60 | 25 | 90 | 47-E2-60-25 |
| 60 | 32 | 90 | 47-E2-60-32 |
| 60 | 40 | 90 | 47-E2-60-40 |
| 60 | 50 | 100 | 47-E2-60-50 |

**Beliebige Innendurchmesser, Zwischengrößen, Zollmaße etc. lieferbar auf Anfrage**
***Other internal diameters, intermediary bores, inch bores etc. available upon request***



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

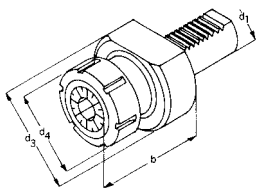
## Typ E3, Spannzangenfutter OZ, für Spannzangen DIN 6388
## *Type E3, collet chucks OZ, for collets DIN 6388*



| d1 mm | OZ | d3 mm | Spannbereich / *Clamping range* | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 16 | 415 E | 40 | 2-16 | 65 | 47-E3-16-16 |
| 20 | 415 E | 50 | 2-16 | 57 | 47-E3-20-16 |
| 20 | 4541 E | 50 | 4-20 | 62 | 47-E3-20-20 |
| 25 | 415 E | 58 | 2-16 | 57 | 47-E3-25-16 |
| 30 | 462 E | 68 | 2-25 | 75 | 47-E3-30-25 |
| 40 | 462 E | 83 | 2-25 | 75 | 47-E3-40-25 |
| 40 | 467 E | 83 | 4-32 | 90 | 47-E3-40-32 |
| 50 | 462 E | 98 | 2-25 | 75 | 47-E3-50-25 |
| 50 | 467 E | 98 | 4-32 | 90 | 47-E3-50-32 |
| 60 | 467 E | 123 | 4-32 | 90 | 47-E3-60-32 |

## Typ E4, Spannzangenfutter ER, für Spannzangen DIN 6499
## *Type E4, collet chucks ER, for collets DIN 6499*

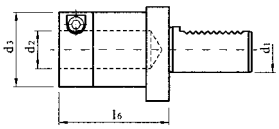





| d1 mm | ER | d3 mm | Spannbereich / *Clamping range* | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 16 | ER 16 | 40 | 1-10 | 40 | 47-E4-16-16 |
| 16 | ER 20 | 40 | 1-13 | 44 | 47-E4-16-20 |
| 20 | ER 16 | 50 | 1-10 | 40 | 47-E4-20-16 |
| 20 | ER 20 | 50 | 1-13 | 44 | 47-E4-20-20 |
| 20 | ER 25 | 50 | 1-16 | 54 | 47-E4-20-25 |
| 20 | ER 32 | 50 | 2-20 | 40 | 47-E4-20-32 |
| 25 | ER 25 | 58 | 1-16 | 57 | 47-E4-25-25 |
| 25 | ER 32 | 58 | 2-20 | 62 | 47-E4-25-32 |
| 30 | ER 25 | 68 | 1-16 | 70 | 47-E4-30-25 |
| 30 | ER 32 | 68 | 2-20 | 62 | 47-E4-30-32 |
| 30 | ER 40 | 68 | 2-25 | 70 | 47-E4-30-40 |
| 40 | ER 25 | 83 | 1-16 | 70 | 47-E4-40-25 |
| 40 | ER 32 | 83 | 2-20 | 84 | 47-E4-40-32 |
| 40 | ER 40 | 83 | 2-25 | 75 | 47-E4-40-40 |
| 50 | ER 32 | 98 | 2-20 | 84 | 47-E4-50-32 |
| 50 | ER 40 | 98 | 2-25 | 90 | 47-E4-50-40 |
| 60 | ER 40 | 123 | 2-25 | 75 | 47-E4-60-40 |

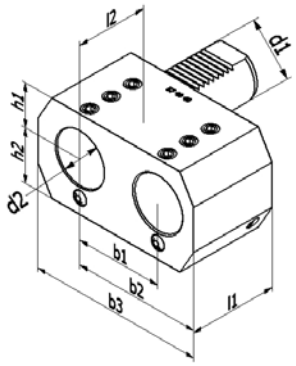
## Typ E2S, Werkzeughalter geschlitzt, schwingungsarm
## *Type E2S, toolholder slotted, reduced vibration*






| Typ / *Type* | d1 mm | d2 mm | d3 mm | l6 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 30 x 6 | 30 | 6 | 30 | 57 | 47-E2S-30-06 |
| 30 x 8 | 30 | 8 | 30 | 57 | 47-E2S-30-08 |
| 30 x 10 | 30 | 10 | 36 | 57 | 47-E2S-30-10 |
| 30 x 12 | 30 | 12 | 36 | 57 | 47-E2S-30-12 |
| 30 x 16 | 30 | 16 | 40 | 57 | 47-E2S-30-16 |
| 30 x 20 | 30 | 20 | 44 | 57 | 47-E2S-30-20 |
| 30 x 25 | 30 | 25 | 49 | 72 | 47-E2S-30-25 |
| 30 x 32 | 30 | 32 | 56 | 72 | 47-E2S-30-32 |
| 40 x 10 | 40 | 10 | 36 | 62 | 47-E2S-40-10 |
| 40 x 12 | 40 | 12 | 36 | 62 | 47-E2S-40-12 |
| 40 x 16 | 40 | 16 | 40 | 62 | 47-E2S-40-16 |
| 40 x 20 | 40 | 20 | 44 | 62 | 47-E2S-40-20 |
| 40 x 25 | 40 | 25 | 49 | 77 | 47-E2S-40-25 |
| 40 x 32 | 40 | 32 | 56 | 77 | 47-E2S-40-32 |
| 40 x 40 | 40 | 40 | 64 | 77 | 47-E2S-40-40 |

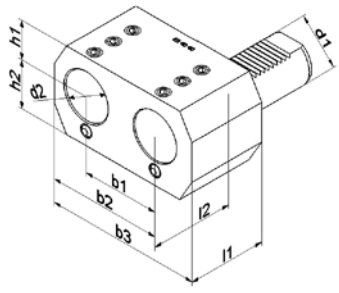





## Typ E7, Doppel-Bohrstangenhalter
## *Typ E7, Boring bar holders with 2 bores*

| d1 mm | d2 mm | h1 mm | h2 mm | l1 mm | l2 mm | b1 mm | b2 mm | b3 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 16 | 25 | 25 | 45 | 42 | 32 | 51 | 76 | ● | 47-E7-20-16 |
| 20 | 20 | 25 | 25 | 45 | 42 | 32 | 51 | 76 | ● | 47-E7-20-20 |
| 30 | 25 | 28 | 32 | 56 | 52 | 45 | 65 | 95 | ● | 47-E7-30-25 |
| 40 | 32 | 32,5 | 40 | 66 | 60 | 50 | 75 | 115 | ● | 47-E7-40-32 |
| 50 | 32 | 32,5 | 47,5 | 60 | 60 | 50 | 75 | 115 | ● | 47-E7-50-32 |
| 50 | 40 | 42 | 46 | 66 | 60 | 68 | 103 | 145 | ● | 47-E7-50-40 |
| 50 | 50 | 35 | 49 | 90 | 80 | 68 | 103 | 152 | ● | 47-E7-50-50 |






## Typ E8, Doppel-Bohrstangenhalter
## *Typ E8, Boring bar holders with 2 bores*

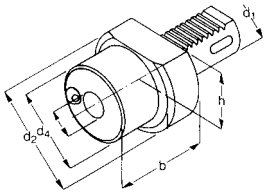
| d1 mm | d2 mm | h1 mm | h2 mm | l1 mm | l2 mm | b1 mm | b2 mm | b3 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 16 | 25 | 25 | 45 | 42 | 32 | 51 | 76 | ● | 47-E8-20-16 |
| 20 | 20 | 25 | 25 | 45 | 42 | 32 | 51 | 76 | ● | 47-E8-20-20 |
| 30 | 25 | 28 | 32 | 56 | 52 | 45 | 65 | 95 | ● | 47-E8-30-25 |
| 40 | 32 | 32,5 | 40 | 66 | 60 | 50 | 75 | 115 | ● | 47-E8-40-32 |
| 50 | 32 | 32,5 | 47,5 | 60 | 60 | 50 | 75 | 115 | ● | 47-E8-50-32 |
| 50 | 50 | 35 | 49 | 90 | 80 | 68 | 103 | 152 | ○ | 47-E8-50-50 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Typ F, Morsekegelaufnahme
## *Type F, Morse taper holder*





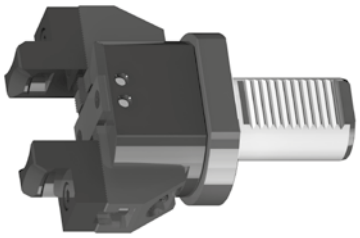

| d1<br>mm | MK /<br>*MT* | h<br>mm | d2<br>mm | b<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|
| 20 | 1 | 23 | 50 | 22 | 47-F20-1 |
| 20 | 2 | 23 | 50 | 90 | 47-F20-2 |
| 25 | 1 | 25 | 58 | 22 | 47-F25-1 |
| 25 | 2 | 25 | 58 | 46 | 47-F25-2 |
| 30 | 1 | 28 | 68 | 27 | 47-F30-1 |
| 30 | 2 | 28 | 68 | 36 | 47-F30-2 |
| 30 | 3 | 28 | 68 | 66 | 47-F30-3 |
| 40 | 1 | 32,5 | 83 | 36 | 47-F40-1 |
| 40 | 2 | 32,5 | 83 | 36 | 47-F40-2 |
| 40 | 3 | 32,5 | 83 | 50 | 47-F40-3 |
| 40 | 4 | 32,5 | 83 | 80 | 47-F40-4 |
| 50 | 2 | 35 | 98 | 36 | 47-F50-2 |
| 50 | 3 | 35 | 98 | 45 | 47-F50-3 |
| 50 | 4 | 35 | 98 | 55 | 47-F50-4 |
| 50 | 5 | 35 | 98 | 68 | 47-F50-5 |
| 60 | 3 | 42,5 | 123 | 36 | 47-F60-3 |
| 60 | 4 | 42,5 | 123 | 50 | 47-F60-4 |
| 60 | 5 | 42,5 | 123 | 81 | 47-F60-5 |

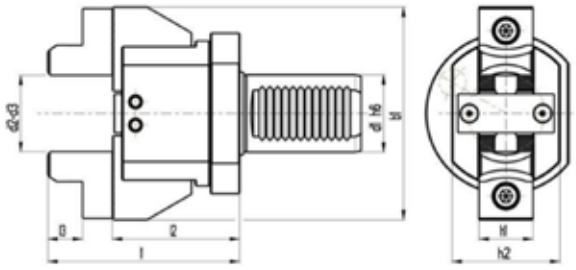
# Stangengreifer
# *Bar puller*

## Stangengreifer, Typ SGF
## *Bar puller, type SGF*

- für zwei Spannbereiche
- mit Wendebacken

- *for two clamping ranges*
- *with reversible clamping jaws*

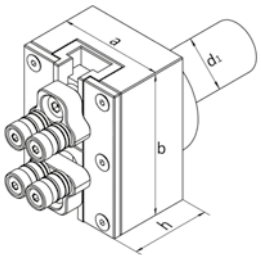




| d1<br>mm | Spannber. 1 /<br>*Clamp.range 1* | Spannber. 2 /<br>*Clamp.range 2* | h1<br>mm | h2<br>mm | L1<br>mm | L2<br>mm | L3<br>mm | b1<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| Zyl. / *cyl.* 32 | 6-56 | 56-110 | 28 | 56 | 100 | 66 | 18 | 110 | ● | 47-SGF32Z |
| 20 | 6-56 | 56-110 | 28 | 56 | 100 | 66 | 18 | 110 | ● | 47-SGF20 |
| 30 | 6-56 | 56-110 | 28 | 56 | 100 | 66 | 18 | 110 | ● | 47-SGF30 |
| 40 | 6-56 | 56-110 | 28 | 56 | 100 | 66 | 18 | 110 | ● | 47-SGF40 |
| 50 | 6-56 | 56-110 | 28 | 56 | 100 | 66 | 18 | 110 | ● | 47-SGF50 |

## Stangengreifer, Typ SG25
## *Bar puller, type SG25*






- zylindrische Aufnahme D25 mit Spannfläche
- mit diamantbeschichteten Rollen für sicheren Halt, minimiert das Risiko einer Beschädigung des Rohmaterials
- stufenlose Einstellung auf jeden Durchmesser mit Hilfe der angebrachten Skala
- großer Spannbereich, verstellbar 1-70 mm, schnelle Verstellung des neuen Spannbereichs
- kompaktes Aluminium-Leichtgehäuse, blau eloxiert
- Lieferumfang: Stangengreifer inkl. 1 Paar Spannbacken mit diamantbeschichteten Rollen, 1 Paar feste Standardbacken, Bedienschlüssel

- *cylindrical mounting D25 with clamping flat*
- *with diamond-coated rollers for an excellent grip, minimizing the damage risk for the clamped material*
- *any diameter is infinitely adjustable by means of a scale*
- *large clamping range from 1-70 mm, fast resetting of clamping range*
- *light-weight aluminium body, blue anodized*
- *scope of delivery: bar puller including 1 pair of jaws with diamond-coated rollers, 1 pair of fixed standard jaws, setting tools*

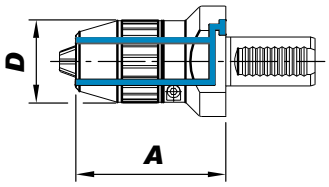
| d1 | Spannbereich /<br>*Clamping range* | a<br>mm | b<br>mm | h<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|---|
| 25 | 1-70 | 55 | 75 | 42 | ● | 47-SG25-70 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Kurzbohrfutter VDI
## *Universal drill chucks VDI*





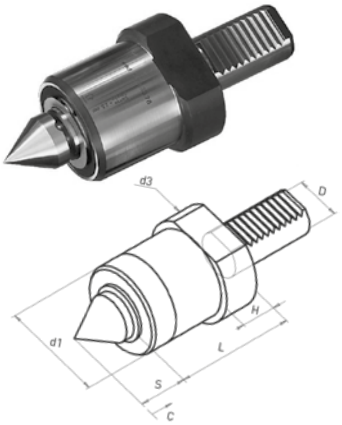

### DIN 69880 (VDI) - mit Kühlmitteldüsen
### *DIN 69880 (VDI) - with coolant nozzles*

| VDI | Spannweite / *Capacity* mm | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 16 * | 0,3-10 | 46 | 40 | 82-341016 |
| 20 * | 0,3-10 | 41 | 50 | 82-341020 |
| 25 | 1-13 | 87 | 50 | 82-341325 |
| 30 | 1-13 | 87 | 50 | 82-341330 |
| 30 | 1-16 | 92 | 55 | 82-341630 |
| 40 | 1-13 | 88 | 50 | 82-341340 |
| 40 | 1-16 | 93 | 55 | 82-341640 |
| 50 | 1-16 | 101,5 | 55 | 82-341650 |

**Mit Innenkühlung lieferbar auf Anfrage / *With internal coolant supply available upon request***

** Spannung durch den Schaft / Clamping trough shank*

# Mitlaufende Zentrierspitze mit VDI-Schaft
## *Revolving tailstock centre with VDI shank*




### Gefedert
### *Spring-loaded*

- speziell für den Einsatz auf CNC-Drehmaschinen
- für auswechselbare Einsätze
- Lieferung mit 1 Standardeinsatz (Fig. 1)

- *especially for the use on CNC lathes*
- *for interchangeable inserts*
- *delivered with 1 standard insert (Fig. 1)*

| D | d1 mm | d3 mm | L mm | H mm | S mm | Federweg / *Travelstroke* max. | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 30 | 58 | 68 | 78 | 20 | 34 | 2,5 | 47-MZ2-30 |
| 40 | 58 | 83 | 80 | 22 | 34 | 2,5 | 47-MZ2-40 |

### Einsätze
### *Inserts*

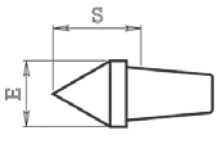


*Fig. 1*

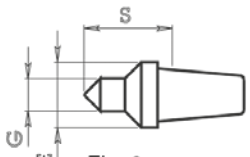


*Fig. 2*

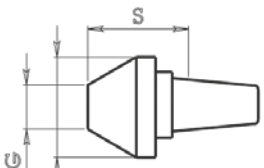


*Fig. 3*

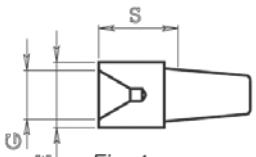


*Fig. 4*

| Abb. / Fig. | E mm | S mm | G mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 1 | 28 | 34 | - | 47-MZ2-E1 |
| 2 | 28 | 40 | 7 | 47-MZ2-E2 |
| 2 | 28 | 40 | 12 | 47-MZ2-E3 |
| 3 | 58 | 36 | 25 | 47-MZ2-E4 |
| 4 | 28 | 32 | 24 | 47-MZ2-E5 |

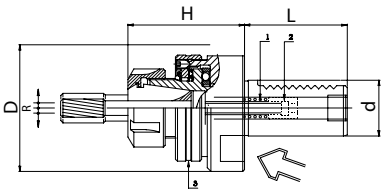
# Pendelhalter mit VDI-Schaft
## *Floating chucks with VDI shank*




### Pendelhalter mit Innenkühlung
### *Floating chucks with internal cooling*

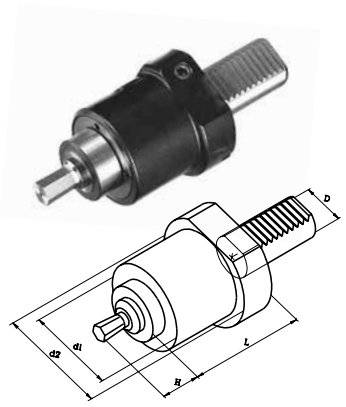
- mit einstellbarem Radialspiel
- Einstellbereiche: Freipendeln und Parallelpendeln
- Federkraft, Zentrierkraft und Freipendeln einstellbar

- *radial clearance adjustable*
- *application: free and parallel floating*
- *spring force, centering force and floating adjustable*




| d | Spannzange / *Collet* | D mm | H mm | L mm | R max mm | G max mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 30 | ER 25 | 68 | 64 | 55 | 1 | 1,5 | 47-PH-30-25 |
| 30 | ER 32 | 68 | 72 | 55 | 1,5 | 1,5 | 47-PH-30-32 |
| 40 | ER 32 | 83 | 74 | 63 | 1,5 | 1,5 | 47-PH-40-32 |
| 40 | ER 40 | 83 | 74 | 63 | 1,5 | 1,5 | 47-PH-40-40 |

# Räumwerkzeughalter mit VDI-Schaft
## *Broach tool holders with VDI shank*

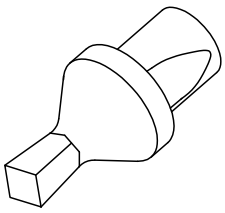



### Räumwerkzeughalter
### *Broach tool holder*

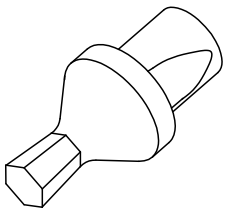
| D | d1 mm | d2 mm | L mm | H mm | Aufnahme / *Mounting* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 30 | 58 | 68 | 83 | 25 | Ø 12 | 47-RHV-30-12 |
| 30 | 58 | 68 | 83 | 40 | Ø 16 | 47-RHV-30-16 |
| 40 | 58 | 83 | 83 | 25 | Ø 12 | 47-RHV-40-12 |
| 40 | 58 | 83 | 83 | 40 | Ø 16 | 47-RHV-40-16 |

# Räumstempel
## *Broaching cutters*

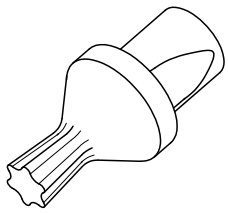




Vierkant / *Square*



Sechskant / *Hexagonal*



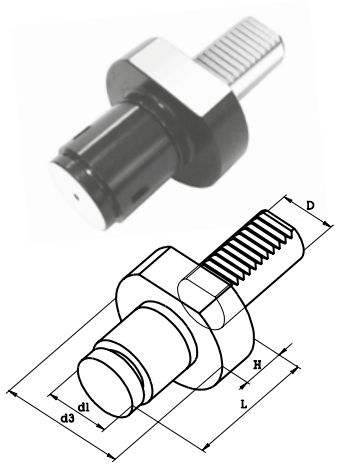
Torx / *Torx*

| Schaft-Ø / *Shank-Ø* | Form / *Form* | Bereich / *Range* | H mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 12 | Vierkant / *Square* | 2-13 | 25 | 47-RST12/4-Ø |
| 12 | Sechskant / *Hexagonal* | 1-14 | 25 | 47-RST12/6-Ø |
| 16 | Vierkant / *Square* | 3-25 | 40 | 47-RST16/4-Ø |
| 16 | Sechskant / *Hexagonal* | 3-25 | 40 | 47-RST16/6-Ø |
| 12 | Torx / *Torx* | 6-50 | 25 | 47-RST12/T-Ø |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Werkstückanschlag mit VDI-Schaft
*Work piece stops with VDI shank*

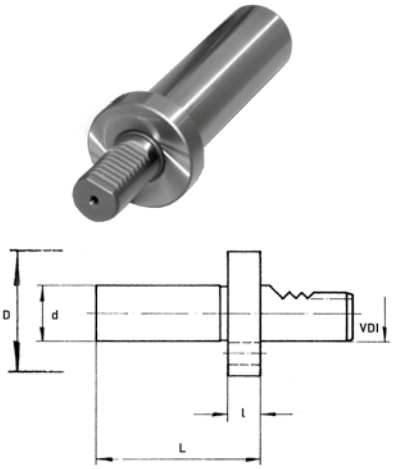



## Mitlaufende Werkstückanschläge
## *Revolving work piece stops*

- gefedert - *spring-loaded*

| D | d1 mm | d3 mm | L mm | H mm | Federweg / *Stroke* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 20 | 35 | 50 | 58 | 16 | 3 | ◗ | 47-MW-2035 |
| 20 | 56 | 50 | 58 | 16 | 3 | ◗ | 47-MW-2056 |
| 30 | 35 | 68 | 70 | 20 | 3 | ◗ | 47-MW-3035 |
| 30 | 56 | 68 | 70 | 20 | 3 | ◗ | 47-MW-3056 |
| 40 | 44 | 83 | 78 | 22 | 3 | ◗ | 47-MW-4044 |
| 40 | 60 | 83 | 78 | 22 | 3 | ◗ | 47-MW-4060 |

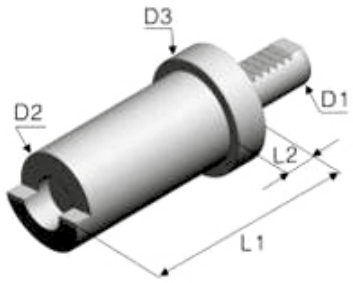
# Prüfdorne
*Test arbors*




## Prüfdorne - DIN 69880 (VDI)
## *Test arbors - DIN 69880 (VDI)*

| VDI mm | d mm | D mm | L mm | l mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 16 | 30 | 40 | 120 | 15 | ● | 83-PD-16-30 |
| 20 | 40 | 50 | 150 | 15 | ● | 83-PD-20-40 |
| 25 | 40 | 58 | 150 | 15 | ● | 83-PD-25-40 |
| 30 | 40 | 68 | 200 | 15 | ● | 83-PD-30-40 |
| 40 | 40 | 83 | 200 | 15 | ● | 83-PD-40-40 |
| 50 | 40 | 98 | 200 | 15 | ● | 83-PD-50-40 |

# Einrichtehalter
*Setting holders*

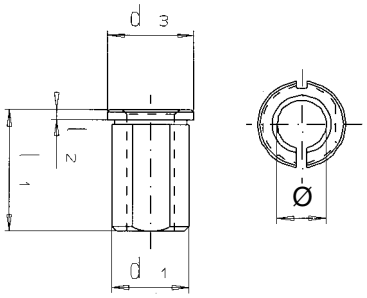



## Einrichtehalter
## *Setting holders*

| D1 mm | D2 mm | D3 mm | L1 mm | L2 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 16 | 30 | 40 | 100 | 15 | ● | 47-EH-16 |
| 20 | 40 | 50 | 100 | 15 | ◗ | 47-EH-20 |
| 25 | 40 | 58 | 100 | 15 | ◗ | 47-EH-25 |
| 30 | 40 | 68 | 100 | 15 | ● | 47-EH-30 |
| 40 | 40 | 83 | 100 | 15 | ● | 47-EH-40 |
| 50 | 40 | 98 | 100 | 15 | ● | 47-EH-50 |
| 60 | 40 | 123 | 100 | 15 | ● | 47-EH-60 |

# Zubehör für VDI-Halter
# *Accessories for VDI-tool holders*



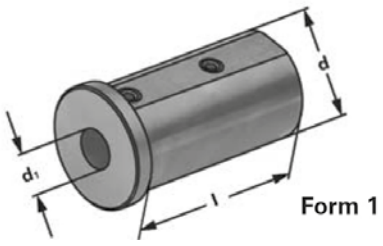



## Reduzierbuchsen RZ, geschlitzt
## *Reduction sleeves RZ, slotted*

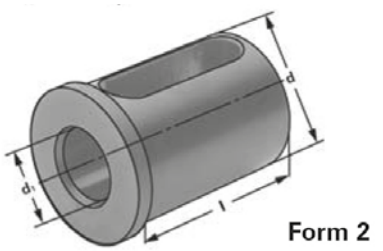
| d1 mm | Ø mm | d3 mm | l1 mm | l2 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 20 | 8, 10, 12, 14, 16 | 24 | 50 | 4 | ● | 47-RZ-20-Ø |
| 25 | 8, 10, 12, 14, 16, 18, 20 | 29 | 50 | 4 | ● | 47-RZ-25-Ø |
| 32 | 8, 10, 12, 14, 16, 18, 20, 25 | 36 | 60 | 4 | ● | 47-RZ-32-Ø |
| 40 | 10, 12, 14, 16, 18, 20, 25, 32 | 44 | 75 | 4 | ● | 47-RZ-40-Ø |
| 50 | 20, 25, 32, 40 | 54 | 75 | 4 | ● | 47-RZ-50-Ø |
| 60 | 25, 32, 40, 50 | 64 | 75 | 4 | ● | 47-RZ-60-Ø |

## Reduzierbuchsen für Bohrstangenhalter Typ E2
## *Reduction sleeves for boring bar holders type E2*

- Reduzierung zum Spannen von Werkzeugen mit Zylinderschaft
- *reduction sleeve for clamping of tool holders with cylindrical shank*

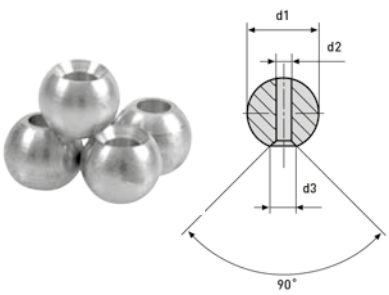


Form 1



Form 2

| d mm | d1 mm | l mm | Form / *Form* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 25 | 6 | 46 | 1 | ● | 47-KRH-25-06 |
| 25 | 8 | 46 | 1 | ● | 47-KRH-25-08 |
| 25 | 10 | 46 | 1 | ● | 47-KRH-25-10 |
| 25 | 12 | 46 | 1 | ● | 47-KRH-25-12 |
| 25 | 16 | 46 | 2 | ● | 47-KRH-25-16 |
| 25 | 20 | 46 | 2 | ● | 47-KRH-25-20 |
| 32 | 6 | 56 | 1 | ● | 47-KRH-32-06 |
| 32 | 8 | 56 | 1 | ● | 47-KRH-32-08 |
| 32 | 10 | 56 | 1 | ● | 47-KRH-32-10 |
| 32 | 12 | 56 | 1 | ● | 47-KRH-32-12 |
| 32 | 16 | 56 | 2 | ● | 47-KRH-32-16 |
| 32 | 20 | 56 | 2 | ● | 47-KRH-32-20 |
| 32 | 25 | 56 | 2 | ● | 47-KRH-32-25 |
| 40 | 6 | 71 | 1 | ● | 47-KRH-40-06 |
| 40 | 8 | 71 | 1 | ● | 47-KRH-40-08 |
| 40 | 10 | 71 | 1 | ● | 47-KRH-40-10 |
| 40 | 12 | 71 | 1 | ● | 47-KRH-40-12 |
| 40 | 16 | 71 | 2 | ● | 47-KRH-40-16 |
| 40 | 20 | 71 | 2 | ● | 47-KRH-40-20 |
| 40 | 25 | 71 | 2 | ● | 47-KRH-40-25 |
| 40 | 32 | 71 | 2 | ● | 47-KRH-40-32 |




## Kugelspritzdüsen
## *Ball spray nozzles*

- Material: Messing
- *material: brass*

| d1 mm | d2 mm | d3 mm | VE / *Set* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 8 | 3,5 | 5,5 | 10 Stk. / *10 pcs.* | ● | 47-KD-8 |
| 10 | 5 | 7 | 10 Stk. / *10 pcs.* | ● | 47-KD-10 |
| 14 | 6 | 9 | 10 Stk. / *10 pcs.* | ● | 47-KD-14 |

Abgabe nur in VE à 10 Stück, Preis versteht sich für 10 Stück
*Only available in sets of 10 pieces, price refers to 10 pieces*



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

# Zubehör für VDI-Halter
*Accessories for VDI-tool holders*





## O-Ringe
## *O-rings*

| Für / *For* | VE / *Set* | Art.-Nr. / *Order no.* |
|---|---|---|
| VDI 16 | 10 Stk. / *10 pcs.* | 47-OR-VDI16 |
| VDI 20 | 10 Stk. / *10 pcs.* | 47-OR-VDI20 |
| VDI 25 | 10 Stk. / *10 pcs.* | 47-OR-VDI25 |
| VDI 30 | 10 Stk. / *10 pcs.* | 47-OR-VDI30 |
| VDI 40 | 10 Stk. / *10 pcs.* | 47-OR-VDI40 |
| VDI 50 | 10 Stk. / *10 pcs.* | 47-OR-VDI50 |
| VDI 60 | 10 Stk. / *10 pcs.* | 47-OR-VDI60 |

Abgabe nur in VE à 10 Stück, Preis versteht sich für 10 Stück
*Only available in sets of 10 pieces, price refers to 10 pieces*

# Schutzstopfen
# *Protective plugs*



## Schutzstopfen Z2, Stahl
## *Protective plug Z2, steel*

| d mm | D mm | l mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 16 | 40 | 13 | 47-Z2-16S |
| 20 | 50 | 16 | 47-Z2-20S |
| 25 | 58 | 16 | 47-Z2-25S |
| 30 | 68 | 16 | 47-Z2-30S |
| 40 | 83 | 20 | 47-Z2-40S |
| 50 | 98 | 20 | 47-Z2-50S |
| 60 | 123 | 20 | 47-Z2-60S |



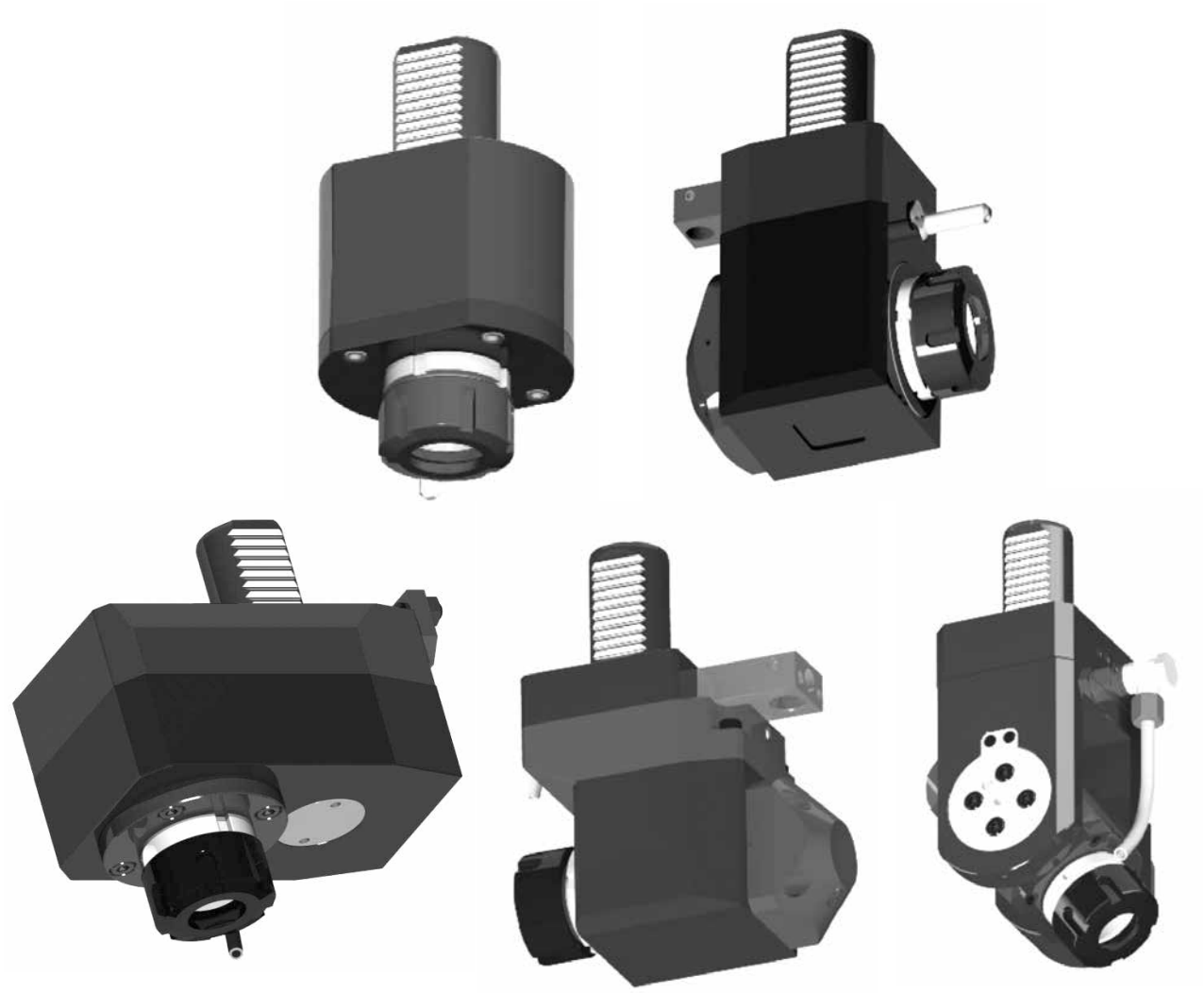
## Schutzstopfen Z2, Kunststoff
## *Protective plug Z2, plastic*

| d mm | D mm | l mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 16 | 40 | 13 | 47-Z2-16K |
| 20 | 50 | 16 | 47-Z2-20K |
| 25 | 58 | 16 | 47-Z2-25K |
| 30 | 68 | 16 | 47-Z2-30K |
| 40 | 83 | 20 | 47-Z2-40K |
| 50 | 98 | 20 | 47-Z2-50K |
| 60 | 123 | 20 | 47-Z2-60K |

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Angetriebene Werkzeuge

## *Driven tools*



## Inhalt:

- | DIN 5480 - für SAUTER Revolver
- | DIN 5482 - für SAUTER Revolver
- | TOEM - für BARRUFALDI Revolver
- | Befestigung mit Schrauben
  **für MORI SEIKI Revolver**
- | Befestigung mit Schrauben
  **für NAKAMURA Revolver**

## *Content:*

- | *DIN 5480 - for SAUTER turrets*
- | *DIN 5482 - for SAUTER turrets*
- | *TOEM - for BARRUFALDI turrets*
- | *Mounted by bolts*
  ***for MORI SEIKI turrets***
- | *Mounted by bolts*
  ***for NAKAMURA turrets***

# Angetriebene Werkzeuge - DIN 5480 - für SAUTER Revolver
# *Driven tools - DIN 5480 - for SAUTER turrets*



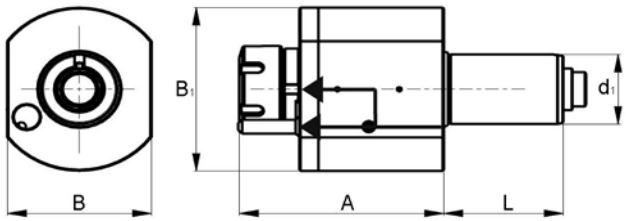
## Angetriebene Werkzeuge - DIN 5480
## *Driven tools - DIN 5480*

- Kühlmitteldruck bis 20 bar
- gekapselte Präzisionslager
- geeignet für hohe Drehzahlen
- geeignet für Rechts- und Linkslauf

- *coolant pressure up to 20 bar*
- *high-precision capsulated bearings*
- *suitable for high spindle speeds*
- *suitable for right and left-hand rotation*



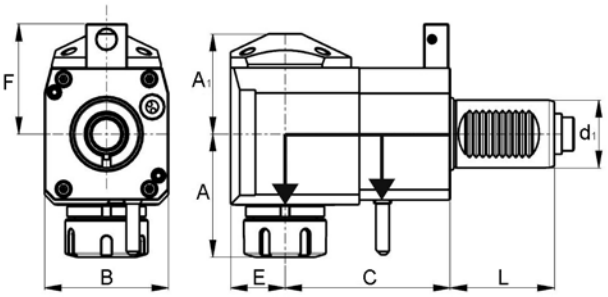
## DIN 5480, gerade
## *DIN 5480, straight*




| d1 | SZ / *Collet* | IK / *IC* | A mm | L mm | B mm | B1 mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | 87 | 55 | 62 | 69 | 1 : 1 | 28 | 6000 | ◗ | 47-80-G-30-25 |
| VDI 30 | ER 25 | ✔ | 87 | 55 | 62 | 69 | 1 : 1 | 28 | 6000 | ◗ | 47-80-G-30-25IK |
| VDI 40 | ER 25 | - | 120 | 63 | 76 | 94 | 1 : 1 | 50 | 6000 | ◗ | 47-80-G-40-25 |
| VDI 40 | ER 25 | ✔ | 120 | 63 | 76 | 94 | 1 : 1 | 50 | 6000 | ◗ | 47-80-G-40-25IK |
| VDI 40 | ER 32 | - | 120 | 63 | 76 | 94 | 1 : 1 | 50 | 6000 | ◗ | 47-80-G-40-32 |
| VDI 40 | ER 32 | ✔ | 120 | 63 | 76 | 94 | 1 : 1 | 50 | 6000 | ◗ | 47-80-G-40-32IK |



## DIN 5480, abgewinkelt 90°
## *DIN 5480, angular 90°*




| d1 | SZ / *Collet* | IK / *IC* | Richtung / *Direction* | C mm | A1 mm | A mm | L mm | F mm | E mm | B mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | rechts/*right* | 55 | 48 | 63 | 55 | 56 | 26 | 64 | 1 : 1 | 28 | 6000 | ◗ | 47-80-WKR-30-25 |
| VDI 30 | ER 25 | ✔ | rechts/*right* | 55 | 51 | 63 | 55 | 56 | 26 | 64 | 1 : 1 | 28 | 6000 | ◗ | 47-80-WKR-30-25IK |
| VDI 30 | ER 25 | - | rechts/*right* | 85 | 48 | 63 | 55 | 56 | 26 | 64 | 1 : 1 | 28 | 6000 | ◗ | 47-80-WR-30-25 |
| VDI 30 | ER 25 | ✔ | rechts/*right* | 85 | 51 | 63 | 55 | 56 | 26 | 64 | 1 : 1 | 28 | 6000 | ◗ | 47-80-WR-30-25IK |
| VDI 40 | ER 32 | - | rechts/*right* | 80 | 59 | 74 | 63 | 65 | 33 | 75 | 1 : 1 | 50 | 6000 | ◗ | 47-80-WKR-40-32 |
| VDI 40 | ER 32 | ✔ | rechts/*right* | 80 | 62 | 74 | 63 | 65 | 33 | 75 | 1 : 1 | 50 | 6000 | ◗ | 47-80-WKR-40-32IK |
| VDI 40 | ER 32 | - | rechts/*right* | 100 | 59 | 74 | 63 | 65 | 33 | 75 | 1 : 1 | 50 | 6000 | ◗ | 47-80-WR-40-32 |
| VDI 40 | ER 32 | ✔ | rechts/*right* | 100 | 62 | 74 | 63 | 65 | 33 | 75 | 1 : 1 | 50 | 6000 | ◗ | 47-80-WR-40-32IK |

**Passende Sicherheitsschlüssel ER siehe Seite 246 / *Suitable safety-spanners ER see page 246***

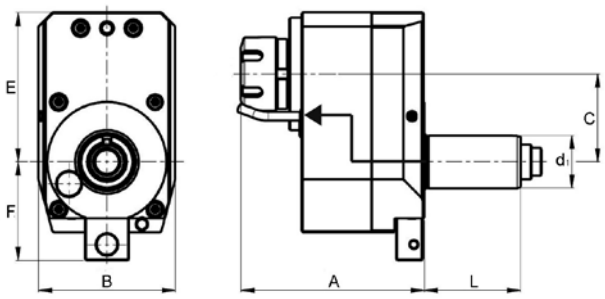


◗ **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

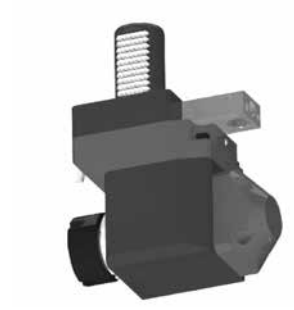
# Angetriebene Werkzeuge - DIN 5480 - für SAUTER Revolver
*Driven tools - DIN 5480 - for SAUTER turrets*



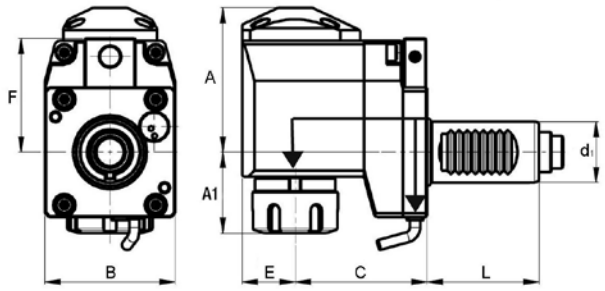
## DIN 5480
***gerade, versetzt***
## *DIN 5480*
***straight, offset***




| d1 | SZ / *Collet* | IK / *IC* | Richtung / *Direction* | C mm | A mm | L mm | F mm | E mm | B mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | rechts/*right* | 50 | 105 | 55 | 56 | 85 | 78 | 1 : 2 | 14 | 12000 | 47-80-GV-30-25 |



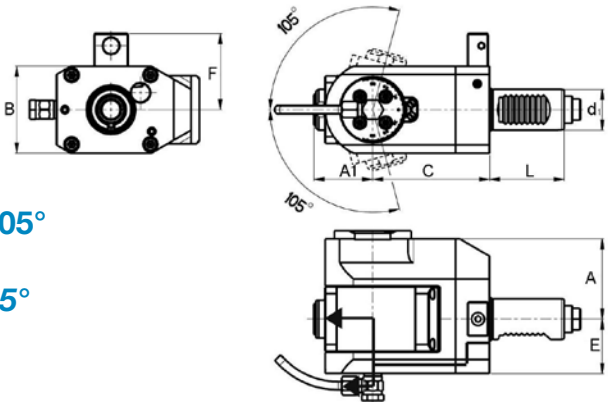
## DIN 5480
***abgewinkelt 90°,***
***zurückgesetzt***
## *DIN 5480*
***angular 90°,***
***offset***




| d1 | SZ / *Collet* | IK / *IC* | Richtung / *Direction* | C mm | A mm | A1 mm | L mm | F mm | E mm | B mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | rechts/*right* | 75 | 71 | 40 | 55 | 56 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-80-WVR-30-25 |
| VDI 30 | ER 25 | ✔ | rechts/*right* | 75 | 74 | 40 | 55 | 56 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-80-WVR-30-25IK |



## DIN 5480,
## verstellbar 0° bis ±105°
## *DIN 5480,*
## *adjustable 0° to ±105°*




| d1 | SZ / *Collet* | IK / *IC* | C mm | A mm | A1 mm | L mm | F mm | E mm | B mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 16 | ✔ | 86 | 65 | 43 | 55 | 56 | 40 | 64 | 1 : 1 | 16 | 6000 | 47-80-E-30-16IK |

**Passende Sicherheitsschlüssel ER siehe Seite 246 / *Suitable safety-spanners ER see page 246***

# Angetriebene Werkzeuge - DIN 5482 - für SAUTER Revolver
*Driven tools - DIN 5482- for SAUTER turrets*



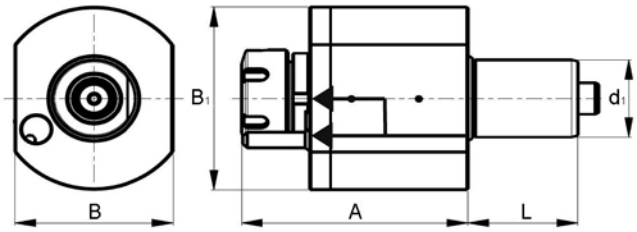
## Angetriebene Werkzeuge - DIN 5482
## *Driven tools - DIN 5482*

- Kühlmitteldruck bis 20 bar
- gekapselte Präzisionslager
- geeignet für hohe Drehzahlen
- geeignet für Rechts- und Linkslauf

- *coolant pressure up to 20 bar*
- *high-precision capsulated bearings*
- *suitable for high spindle speeds*
- *suitable for right and left-hand rotation*



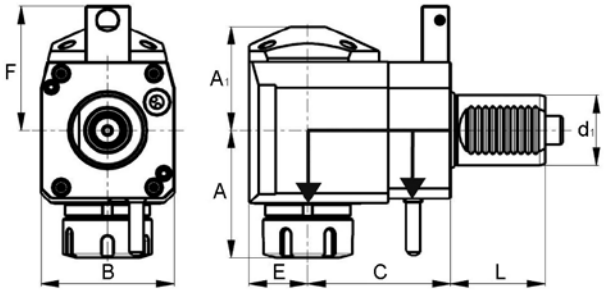
## DIN 5482, gerade
## *DIN 5482, straight*




| d1 | SZ / *Collet* | IK / *IC* | A mm | L mm | B mm | B1 mm | Überset-zung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | 87 | 45 | 62 | 69 | 1 : 1 | 28 | 6000 | 47-82-G-30-25 |
| VDI 30 | ER 25 | ✔ | 87 | 45 | 62 | 69 | 1 : 1 | 28 | 6000 | 47-82-G-30-25IK |
| VDI 40 | ER 25 | - | 105 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-82-G-40-25 |
| VDI 40 | ER 25 | ✔ | 105 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-82-G-40-25IK |
| VDI 40 | ER 32 | - | 108 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-82-G-40-32 |
| VDI 40 | ER 32 | ✔ | 108 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-82-G-40-32IK |



## DIN 5482, abgewinkelt 90°
## *DIN 5482, angular 90°*




| d1 | SZ / *Collet* | IK / *IC* | Richtung / *Direction* | C mm | A1 mm | A mm | L mm | F mm | E mm | B mm | Überset-zung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | rechts/*right* | 55 | 48 | 63 | 45 | 48 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-82-WR-30-25 |
| VDI 30 | ER 25 | ✔ | rechts/*right* | 55 | 51 | 63 | 45 | 48 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-82-WR-30-25IK |
| VDI 40 | ER 25 | - | rechts/*right* | 80 | 59 | 70 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WR-40-25 |
| VDI 40 | ER 25 | ✔ | rechts/*right* | 80 | 62 | 70 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WR-40-25IK |
| VDI 40 | ER 32 | - | rechts/*right* | 80 | 59 | 74 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WR-40-32 |
| VDI 40 | ER 32 | ✔ | rechts/*right* | 80 | 62 | 74 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WR-40-32IK |
| VDI 40 | ER 25 | - | links/*left* | 80 | 59 | 70 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WL-40-25 |
| VDI 40 | ER 25 | ✔ | links/*left* | 80 | 62 | 70 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WL-40-25IK |
| VDI 40 | ER 32 | - | links/*left* | 80 | 59 | 74 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WL-40-32 |
| VDI 40 | ER 32 | ✔ | links/*left* | 80 | 62 | 74 | 53 | 71 | 33 | 75 | 1 : 1 | 50 | 6000 | 47-82-WL-40-32IK |

**Passende Sicherheitsschlüssel ER siehe Seite 246 / *Suitable safety-spanners ER see page 246***

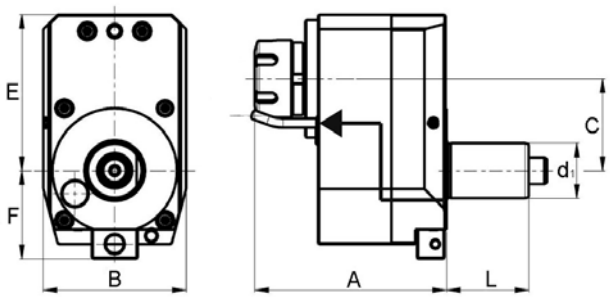


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Angetriebene Werkzeuge - DIN 5482 - für SAUTER Revolver
*Driven tools - DIN 5482- for SAUTER turrets*



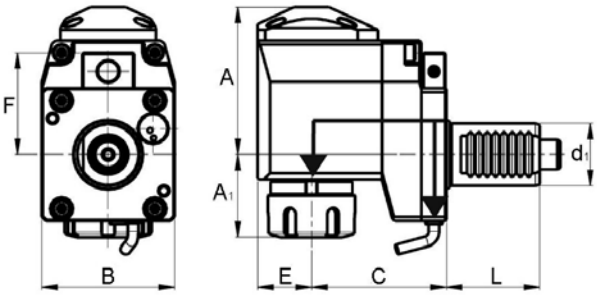
## DIN 5482
## gerade, versetzt
## *DIN 5482*
## *straight, offset*




| d1 | SZ / *Collet* | IK / *IC* | Richtung / *Direction* | C mm | A mm | L mm | F mm | E mm | B mm | Überset-zung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | rechts/*right* | 50 | 105 | 45 | 48 | 85 | 78 | 1 : 2 | 14 | 12000 | 47-82-GV-30-25 |



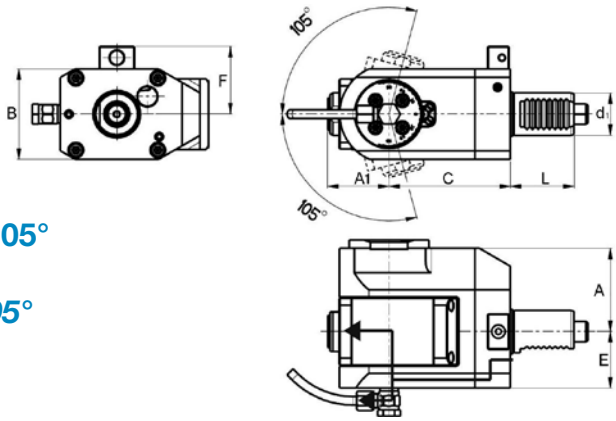
## DIN 5482
## abgewinkelt 90°, zurückgesetzt
## *DIN 5482*
## *angular 90°, offset*




| d1 | SZ / *Collet* | IK / *IC* | Richtung / *Direction* | C mm | A mm | A1 mm | L mm | F mm | E mm | B mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | rechts/*right* | 75 | 71 | 40 | 45 | 48 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-82-WVR-30-25 |
| VDI 30 | ER 25 | ✔ | rechts/*right* | 75 | 74 | 40 | 45 | 48 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-82-WVR-30-25IK |



## DIN 5482,
## verstellbar 0° bis ±105°
## *DIN 5482,*
## *adjustable 0° to ±105°*




| d1 | SZ / *Collet* | IK / *IC* | C mm | A mm | A1 mm | L mm | F mm | E mm | B mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 16 | ✔ | 86 | 65 | 43 | 45 | 48 | 40 | 64 | 1 : 1 | 16 | 6000 | 47-82-E-30-16IK |

**Passende Sicherheitsschlüssel ER siehe Seite 246 / *Suitable safety-spanners ER see page 246***

# Angetriebene Werkzeuge - TOEM - für BARRUFALDI Revolver
# *Driven tools - TOEM - for BARRUFALDI turrets*



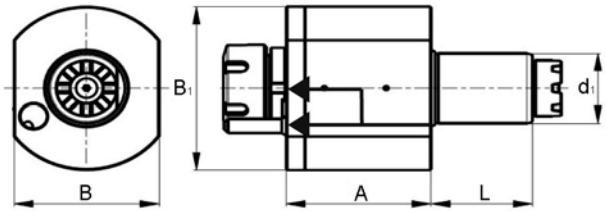
## Angetriebene Werkzeuge - TOEM
## *Driven tools - TOEM*

- Kühlmitteldruck bis 20 bar
- gekapselte Präzisionslager
- geeignet für hohe Drehzahlen
- geeignet für Rechts- und Linkslauf

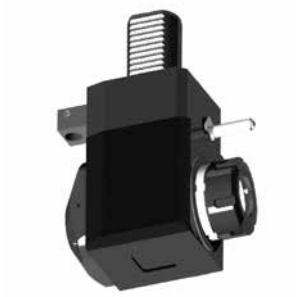
- *coolant pressure up to 20 bar*
- *high-precision capsulated bearings*
- *suitable for high spindle speeds*
- *suitable for right and left-hand rotation*



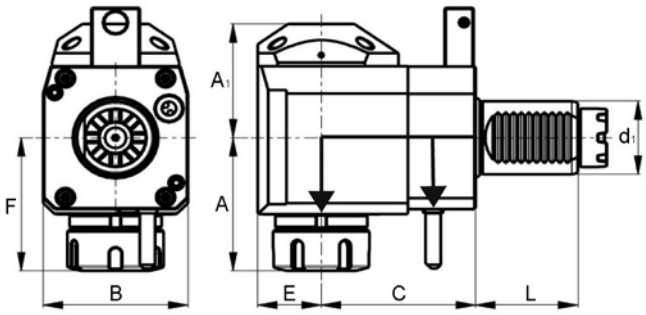
## TOEM, gerade
## *TOEM, straight*




| d1 | SZ / *Collet* | IK / *IC* | A mm | L mm | B mm | B1 mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | 87 | 45 | 62 | 69 | 1 : 1 | 28 | 6000 | 47-TO-G-30-25 |
| VDI 30 | ER 25 | ✔ | 87 | 45 | 62 | 69 | 1 : 1 | 28 | 6000 | 47-TO-G-30-25IK |
| VDI 40 | ER 25 | - | 105 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-TO-G-40-25 |
| VDI 40 | ER 25 | ✔ | 105 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-TO-G-40-25IK |
| VDI 40 | ER 32 | - | 108 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-TO-G-40-32 |
| VDI 40 | ER 32 | ✔ | 108 | 53 | 76 | 94 | 1 : 1 | 50 | 6000 | 47-TO-G-40-32IK |



## TOEM, abgewinkelt 90°
## *TOEM, angular 90°*




| d1 | SZ / *Collet* | IK / *IC* | Richtung/ *Direction* | C mm | A1 mm | A mm | L mm | F mm | E mm | B mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VDI 30 | ER 25 | - | rechts/*right* | 55 | 48 | 63 | 45 | 48 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-TO-WR-30-25 |
| VDI 30 | ER 25 | ✔ | rechts/*right* | 55 | 51 | 63 | 45 | 48 | 26 | 64 | 1 : 1 | 28 | 6000 | 47-TO-WR-30-25IK |

**Passende Sicherheitsschlüssel ER siehe Seite 246 / *Suitable safety-spanners ER see page 246***



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Angetriebene Werkzeuge - Befestigung mit Schrauben - für MORI SEIKI Revolver
*Driven tools - Mounted by bolts - for MORI SEIKI turrets*

NEU NEW !

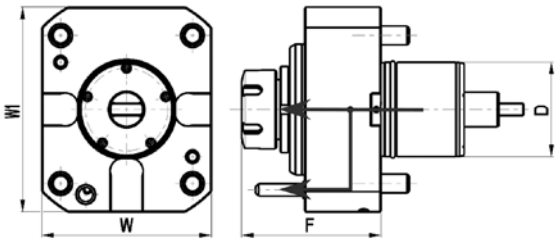
## Angetriebene Werkzeuge - Befestigung mit Schrauben
## *Driven tools - Mounted by bolts*

- Kühlmitteldruck bis 20 bar
- gekapselte Präzisionslager
- geeignet für hohe Drehzahlen
- geeignet für Rechts- und Linkslauf

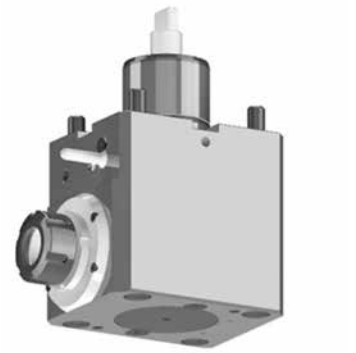
- *coolant pressure up to 20 bar*
- *high-precision capsulated bearings*
- *suitable for high spindle speeds*
- *suitable for right and left-hand rotation*



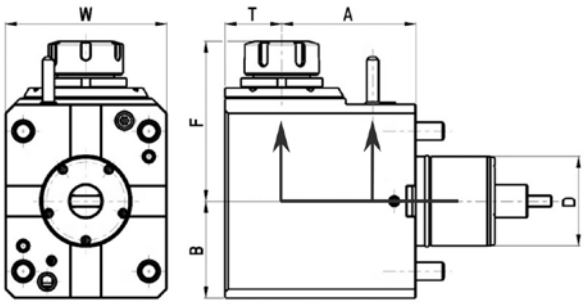
### Gerade
### *Straight*




| D | SZ / *Collet* | IK / *IC* | F mm | W mm | W1 mm | Überset-zung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 45 | ER 25 | - | 86 | 75 | 75 | 1 : 1 | 28 | 6000 | 47-MO-G-45-25 |
| 45 | ER 25 | ✔ | 86 | 75 | 75 | 1 : 1 | 28 | 6000 | 47-MO-G-45-25IK |
| 60 | ER 32 | - | 89 | 108 | 130 | 1 : 1 | 70 | 6000 | 47-MO-G-60-32 |
| 60 | ER 32 | ✔ | 89 | 108 | 130 | 1 : 1 | 70 | 6000 | 47-MO-G-60-32IK |



### Abgewinkelt 90°
### *Angular 90°*




| D | SZ / *Collet* | IK / *IC* | A mm | B mm | F mm | T mm | W mm | Überset-zung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | ER 32 | - | 90 | 65 | 107 | 38 | 108 | 1 : 1 | 70 | 6000 | 47-MO-WR-60-32 |
| 60 | ER 32 | ✔ | 90 | 65 | 107 | 38 | 108 | 1 : 1 | 70 | 6000 | 47-MO-WR-60-32IK |

**Passende Sicherheitsschlüssel ER siehe Seite 246 / *Suitable safety-spanners ER see page 246***

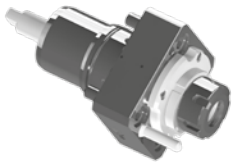
# Angetriebene Werkzeuge - Befestigung mit Schrauben - für NAKAMURA Revolver
*Driven tools - Mounted by bolts - for NAKAMURA turrets*

NEU *NEW* !

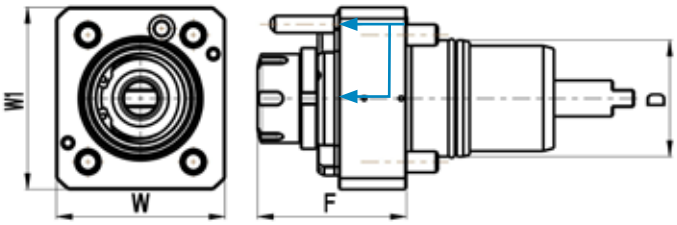
## Angetriebene Werkzeuge - Befestigung mit Schrauben
## *Driven tools - Mounted by bolts*

- Kühlmitteldruck bis 20 bar
- gekapselte Präzisionslager
- geeignet für hohe Drehzahlen
- geeignet für Rechts- und Linkslauf

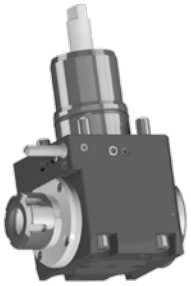
- *coolant pressure up to 20 bar*
- *high-precision capsulated bearings*
- *suitable for high spindle speeds*
- *suitable for right and left-hand rotation*



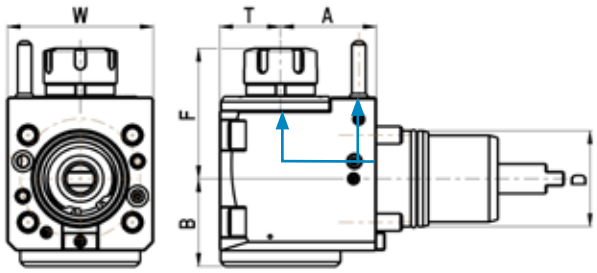
### Gerade
### *Straight*




| D | SZ / *Collet* | IK / *IC* | F mm | W mm | W1 mm | Übersetzung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 55 | ER 25 | - | 71 | 80 | 86 | 1 : 1 | 28 | 6000 | 47-NA-G-55-25 |
| 55 | ER 25 | ✔ | 71 | 80 | 86 | 1 : 1 | 28 | 6000 | 47-NA-G-55-25IK |
| 65 | ER 32 | - | 75 | 96 | 96 | 1 : 1 | 50 | 6000 | 47-NA-G-65-32 |
| 65 | ER 32 | ✔ | 75 | 96 | 96 | 1 : 1 | 50 | 6000 | 47-NA-G-65-32IK |



### Abgewinkelt 90°
### *Angular 90°*




| d1 | SZ / *Collet* | IK / *IC* | A mm | B mm | F mm | T mm | W mm | Überset-zung / *Ratio* | Max. Drehmoment / *Max. torque* Nm | Drehzahl / *Speed* min-1 | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ER 25 | - | 55 | 50,3 | 74,8 | 35 | 84 | 1 : 1 | 28 | 6000 | 47-NA-WR-55-25 |
| 55 | ER 25 | ✔ | 55 | 50,3 | 74,8 | 35 | 84 | 1 : 1 | 28 | 6000 | 47-NA-WR-55-25IK |
| 65 | ER 32 | - | 65 | 59 | 110 | 38 | 96 | 1 : 1 | 50 | 6000 | 47-NA-WR-65-32 |
| 65 | ER 32 | ✔ | 65 | 59 | 110 | 38 | 96 | 1 : 1 | 50 | 6000 | 47-NA-WR-65-32IK |

**Passende Sicherheitsschlüssel ER siehe Seite 246 / *Suitable safety-spanners ER see page 246***



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Spannzangen
## *Collets*



## Inhalt:

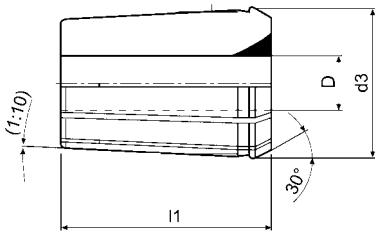
- DIN 6388B / OZ (doppelt geschlitzt)
- DIN 6388A / OZ (einfach geschlitzt)
- DIN 6499 / ER / ESX (ER 8 - ER 50)
- DIN 6499 / ER / ESX, Präzisionsausführung (ER 8 - ER 40)
- DIN 6499 / ER / ESX, abgedichtet (ER 11 - ER 40)
- Gewindebohrzangen mit Innenvierkant (ER 16 - ER 50)
- Typ 385 E (5C), Typ 386 E, Typ 369 E (R8)
- Direktspannzangen
- DIN 6343 (161 E, 163 E, 173 E, 185 E, 193 E)
- Spannzangensätze
- Anschlagschrauben
- Aluminiumkoffer
- Gewindebohrzangen mit Längenausgleich

## *Content:*

- *DIN 6388B / OZ (double slotted)*
- *DIN 6388A / OZ (single slotted)*
- *DIN 6499 / ER / ESX (ER 8 - ER 50)*
- *DIN 6499 / ER / ESX, precision design (ER 8 - ER 40)*
- *DIN 6499 / ER/ ESX, sealed (ER 11 - ER 40)*
- *Tapping collets with internal square (ER 16 - ER 50)*
- *Type 385 E (5C), type 386 E, type 369 E (R8)*
- *Taper collets*
- *DIN 6343 (161 E, 163 E, 173 E, 185 E, 193 E)*
- *Collet sets*
- *Stop screws*
- *Aluminium cases*
- *Tapping collets with length compensation*

# Spannzangen OZ, DIN 6388B, doppelt geschlitzt
## *Collets OZ, DIN 6388B, double slotted*






### Typ 415 E (OZ 16), 0,5 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 2-16 | OZ 16 | 25,5 | 40 | ● 06-415E-Ø |

### Typ 4541 E (OZ 20), 1 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 4-20 | OZ 20 | 29,8 | 45 | ● 06-4541E-Ø |

### Typ 462 E (OZ 25), 0,5 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 2-25 | OZ 25 | 35,5 | 52 | ● 06-462E-Ø |

### Typ 467 E (OZ 32), 1 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 3-32 | OZ 32 | 43,7 | 60 | ● 06-467E-Ø |

### Typ 468 E (OZ 40), 1 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| NEU/*NEW* | 12-40 | OZ 40 | 52,2 | 68 | ● 06-468E-Ø |

# Spannzangen OZ, DIN 6388A, einfach geschlitzt
## *Collets OZ, DIN 6388A, single slotted*



### Typ 401 E (OZ 8), 0,5 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 1,0-2,5 | OZ 8 | 14,5 | 26 | ◗ 06-401E-Ø |
| | 3,0-8,0 | OZ 8 | 14,5 | 26 | ◗ 06-401E-Ø |

### Typ 410 E (OZ 16), 1 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 2-16 | OZ 16 | 25,5 | 40 | ● 06-410E-Ø |

### Typ 444 E (OZ 25), 1 mm steigend / *stepped*

| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 2-25 | OZ 25 | 35,5 | 52 | ● 06-444E-Ø |

### Typ 450 E (OZ 32), 1 mm steigend / *stepped*

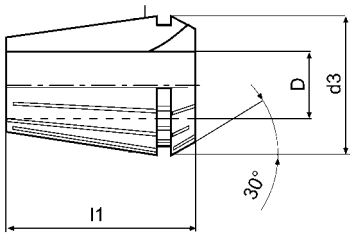
| | D mm | OZ | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| | 4-32 | OZ 32 | 44 | 60 | ● 06-450E-Ø |



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

# Spannzangen ER/ESX, DIN 6499
## *Collets ER/ESX, DIN 6499*






### ER 8 (4004 E), 0,5 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 1-5 | 8,5 | 13,5 | ● 09-9008-Ø |

### ER 11 (4008 E), 0,5 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 1-7 | 11,5 | 18 | ● 09-9011-Ø |

### ER 16 (426 E), 0,5 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 1-10 | 17 | 27,5 | ● 09-9016-Ø |

### ER 20 (428 E), 0,5 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 1-2,5 | 21 | 31,5 | ● 09-9020-Ø |
| 3-13 | 21 | 31,5 | ● 09-9020-Ø |

### ER 25 (430 E), 0,5 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 1-2,5 | 26 | 34 | ● 09-9025-Ø |
| 3-16 | 26 | 34 | ● 09-9025-Ø |

### ER 32 (470 E), 0,5 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 2-2,5 | 33 | 40 | ● 09-9032-Ø |
| 3-20 | 33 | 40 | ● 09-9032-Ø |

### ER 40 (472 E), 1 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 3-26 | 41 | 46 | ● 09-9040-Ø |
| 27-30 | 41 | 46 | ● 09-9040-Ø |

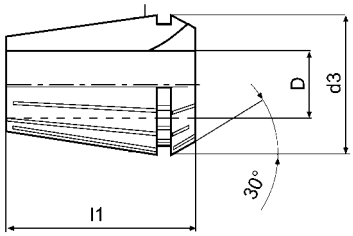
### ER 50 (477 E), 1 mm steigend / *stepped*

| D mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 6-34 | 52 | 60 | ● 09-9050-Ø |

# Präzisionsausführung, Spannzangen ER/ESX, DIN 6499
## *Precision design, collets ER/ESX, DIN 6499*

| D min.<br>mm | D max.<br>mm | l<br>mm | Rundlauf /<br>*Runout* |
|---|---|---|---|
| 1 | 1,6 | 6 | 0,005 |
| 1,6 | 3 | 10 | 0,008 |
| 3 | 7 | 16 | 0,008 |
| 7 | 10 | 25 | 0,008 |
| 10 | 18 | 40 | 0,010 |
| 18 | 26 | 50 | 0,010 |






PRÄZISION / PRECISION

### ER 8 (4004 E) - Präzision / Precision, 0,5 mm steigend / *stepped*

| D<br>mm | d3<br>mm | l1<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 1-5 | 8,5 | 13,5 | ○ 09-9008-ØUP |

### ER 11 (4008 E) - Präzision / Precision, 0,5 mm steigend / *stepped*

| D<br>mm | d3<br>mm | l1<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 1-7 | 11,5 | 18 | ● 09-9011-ØUP |

### ER 16 (426 E) - Präzision / Precision, 0,5 mm steigend / *stepped*

| D<br>mm | d3<br>mm | l1<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 1-2,5 | 17 | 27,5 | ● 09-9016-ØUP |
| 3-10 | 17 | 27,5 | ● 09-9016-ØUP |

### ER 20 (428 E) - Präzision / Precision, 1 mm steigend / *stepped*

| D<br>mm | d3<br>mm | l1<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 1-2 | 21 | 31,5 | ● 09-9020-ØUP |
| 3-13 | 21 | 31,5 | ● 09-9020-ØUP |

### ER 25 (430 E) - Präzision / Precision, 1 mm steigend / *stepped*

| D<br>mm | d3<br>mm | l1<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 1-2 | 26 | 34 | ● 09-9025-ØUP |
| 3-16 | 26 | 34 | ● 09-9025-ØUP |

### ER 32 (470 E) - Präzision / Precision, 1 mm steigend / *stepped*

| D<br>mm | d3<br>mm | l1<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 2 | 33 | 40 | ● 09-9032-2,0UP |
| 3-20 | 33 | 40 | ● 09-9032-ØUP |

### ER 40 (472 E) - Präzision / Precision, 1 mm steigend / *stepped*

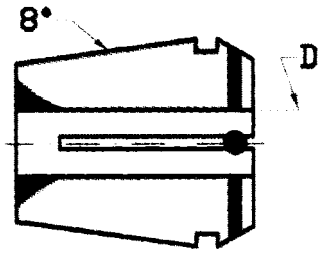
| D<br>mm | d3<br>mm | l1<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 3-26 | 41 | 46 | ● 09-9040-ØUP |



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

# Spannzangen abgedichtet ER/ESX, DIN 6499, 1 mm steigend
*Sealed collets ER/ESX, DIN 6499, 1 mm stepped*






ABGEDICHTET / SEALED

## ER 11 (4012 E) - Abgedichtet / Sealed

| D mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 3 - 7 mm | ● 09-9011-ØS | |

## ER 16 (425 E) - Abgedichtet / Sealed

| D mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 3 - 10 mm | ● 09-9016-ØS | |

## ER 20 (427 E) - Abgedichtet / Sealed

| D mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 3 - 13 mm | ● 09-9020-ØS | |

## ER 25 (429 E) - Abgedichtet / Sealed

| D mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 3 - 16 mm | ● 09-9025-ØS | |

## ER 32 (469 E) - Abgedichtet / Sealed

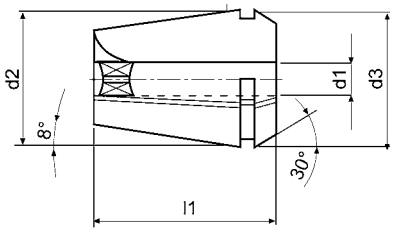
| D mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 3 - 20 mm | ● 09-9032-ØS | |

## ER 40 (471 E) - Abgedichtet / Sealed

| D mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 4 - 26 mm | ● 09-9040-ØS | |

# Gewindebohrzangen mit Innenvierkant
*Tapping collets with internal square*






## ER 16-GB mit Innenvierkant
## *ER 16-GB with internal square*

| d1 x ❑ mm | d2 mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 3,5 x 2,7 | 16 | 16,8 | 27,5 | 09-8016-3,5 |
| 4 x 3 | 16 | 16,8 | 27,5 | 09-8016-4,0 |
| 4,5 x 3,4 | 16 | 16,8 | 27,5 | 09-8016-4,5 |
| 5 x 5 | 16 | 16,8 | 27,5 | 09-8016-5,0 |
| 5,5 x 4,3 | 16 | 16,8 | 27,5 | 09-8016-5,5 |
| 6 x 4,9 | 16 | 16,8 | 27,5 | 09-8016-6,0 |
| 7 x 5,5 | 16 | 16,8 | 27,5 | 09-8016-7,0 |
| 8 x 6,2 | 16 | 16,8 | 27,5 | 09-8016-8,0 |
| 9 x 7 | 16 | 16,8 | 27,5 | 09-8016-9,0 |
| 10 x 8 | 16 | 16,8 | 27,5 | 09-8016-10,0 |

## ER 20-GB mit Innenvierkant
## *ER 20-GB with internal square*

| d1 x ❑ mm | d2 mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 3,5 x 2,7 | 20 | 20,8 | 31,5 | 09-8020-3,5 |
| 4 x 3 | 20 | 20,8 | 31,5 | 09-8020-4,0 |
| 4,5 x 3,4 | 20 | 20,8 | 31,5 | 09-8020-4,5 |
| 5 x 5 | 20 | 20,8 | 31,5 | 09-8020-5,0 |
| 5,5 x 4,3 | 20 | 20,8 | 31,5 | 09-8020-5,5 |
| 6 x 4,9 | 20 | 20,8 | 31,5 | 09-8020-6,0 |
| 7 x 5,5 | 20 | 20,8 | 31,5 | 09-8020-7,0 |
| 8 x 6,2 | 20 | 20,8 | 31,5 | 09-8020-8,0 |
| 9 x 7 | 20 | 20,8 | 31,5 | 09-8020-9,0 |
| 10 x 8 | 20 | 20,8 | 31,5 | 09-8020-10,0 |
| 11 x 9 | 20 | 20,8 | 31,5 | 09-8020-11,0 |
| 12 x 9 | 20 | 20,8 | 31,5 | 09-8020-12,0 |

## ER 25-GB mit Innenvierkant
## *ER 25-GB with internal square*

| d1 x ❑ mm | d2 mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 3,5 x 2,7 | 25 | 25,8 | 34 | 09-8025-3,5 |
| 4 x 3 | 25 | 25,8 | 34 | 09-8025-4,0 |
| 4,5 x 3,4 | 25 | 25,8 | 34 | 09-8025-4,5 |
| 5 x 5 | 25 | 25,8 | 34 | 09-8025-5,0 |
| 5,5 x 4,3 | 25 | 25,8 | 34 | 09-8025-5,5 |
| 6 x 4,9 | 25 | 25,8 | 34 | 09-8025-6,0 |
| 7 x 5,5 | 25 | 25,8 | 34 | 09-8025-7,0 |
| 8 x 6,2 | 25 | 25,8 | 34 | 09-8025-8,0 |
| 9 x 7 | 25 | 25,8 | 34 | 09-8025-9,0 |
| 10 x 8 | 25 | 25,8 | 34 | 09-8025-10,0 |
| 11 x 9 | 25 | 25,8 | 34 | 09-8025-11,0 |
| 12 x 9 | 25 | 25,8 | 34 | 09-8025-12,0 |
| 14 x 11 | 25 | 25,8 | 34 | 09-8025-14,0 |
| 16 x 12 | 25 | 25,8 | 34 | 09-8025-16,0 |

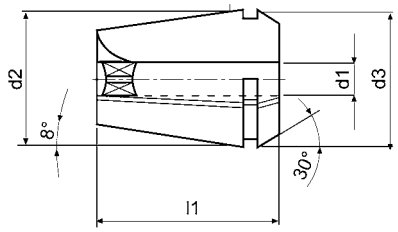
**Abgedichtete Gewindebohrzangen auf Anfrage lieferbar**
***Sealed tapping collets availabe upon request***



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Gewindebohrzangen mit Innenvierkant
*Tapping collets with internal square*






## ER 32-GB mit Innenvierkant
## *ER 32-GB with internal square*

| d1 x ❑ mm | d2 mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 3,5 x 2,7 | 32 | 32,8 | 40 | 09-8032-3,5 |
| 4 x 3 | 32 | 32,8 | 40 | 09-8032-4,0 |
| 4,5 x 3,4 | 32 | 32,8 | 40 | 09-8032-4,5 |
| 5 x 5 | 32 | 32,8 | 40 | 09-8032-5,0 |
| 5,5 x 4,3 | 32 | 32,8 | 40 | 09-8032-5,5 |
| 6 x 4,9 | 32 | 32,8 | 40 | 09-8032-6,0 |
| 7 x 5,5 | 32 | 32,8 | 40 | 09-8032-7,0 |
| 8 x 6,2 | 32 | 32,8 | 40 | 09-8032-8,0 |
| 9 x 7 | 32 | 32,8 | 40 | 09-8032-9,0 |
| 10 x 8 | 32 | 32,8 | 40 | 09-8032-10,0 |
| 11 x 9 | 32 | 32,8 | 40 | 09-8032-11,0 |
| 12 x 9 | 32 | 32,8 | 40 | 09-8032-12,0 |
| 14 x 11 | 32 | 32,8 | 40 | 09-8032-14,0 |
| 16 x 12 | 32 | 32,8 | 40 | 09-8032-16,0 |
| 18 x 14,5 | 32 | 32,8 | 40 | 09-8032-18,0 |
| 20 x 16 | 32 | 32,8 | 40 | 09-8032-20,0 |

## ER 40-GB mit Innenvierkant
## *ER 40-GB with internal square*

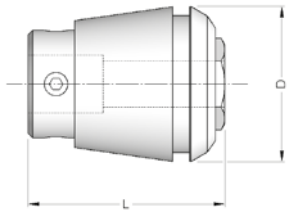
| d1 x ❑ mm | d2 mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 6 x 4,9 | 40 | 40,8 | 46 | 09-8040-6,0 |
| 7 x 5,5 | 40 | 40,8 | 46 | 09-8040-7,0 |
| 8 x 6,2 | 40 | 40,8 | 46 | 09-8040-8,0 |
| 9 x 7 | 40 | 40,8 | 46 | 09-8040-9,0 |
| 10 x 8 | 40 | 40,8 | 46 | 09-8040-10,0 |
| 11 x 9 | 40 | 40,8 | 46 | 09-8040-11,0 |
| 12 x 9 | 40 | 40,8 | 46 | 09-8040-12,0 |
| 14 x 11 | 40 | 40,8 | 46 | 09-8040-14,0 |
| 16 x 12 | 40 | 40,8 | 46 | 09-8040-16,0 |
| 18 x 14,5 | 40 | 40,8 | 46 | 09-8040-18,0 |
| 20 x 16 | 40 | 40,8 | 46 | 09-8040-20,0 |
| 22 x 18 | 40 | 40,8 | 46 | 09-8040-22,0 |

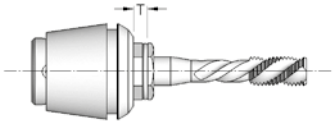
## ER 50-GB mit Innenvierkant
## *ER 50-GB with internal square*

| d1 x ❑ mm | d2 mm | d3 mm | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 8 x 6,2 | 50 | 51,4 | 60 | 09-8050-8,0 |
| 9 x 7 | 50 | 51,4 | 60 | 09-8050-9,0 |
| 10 x 8 | 50 | 51,4 | 60 | 09-8050-10,0 |
| 11 x 9 | 50 | 51,4 | 60 | 09-8050-11,0 |
| 12 x 9 | 50 | 51,4 | 60 | 09-8050-12,0 |
| 14 x 11 | 50 | 51,4 | 60 | 09-8050-14,0 |
| 16 x 12 | 50 | 51,4 | 60 | 09-8050-16,0 |
| 18 x 14,5 | 50 | 51,4 | 60 | 09-8050-18,0 |
| 20 x 16 | 50 | 51,4 | 60 | 09-8050-20,0 |
| 22 x 18 | 50 | 51,4 | 60 | 09-8050-22,0 |
| 25 x 20 | 50 | 51,4 | 60 | 09-8050-25,0 |
| 28 x 22 | 50 | 51,4 | 60 | 09-8050-28,0 |
| 32 x 24 | 50 | 51,4 | 60 | 09-8050-32,0 |

**Abgedichtete Gewindebohrzangen auf Anfrage lieferbar**
***Sealed tapping collets availabe upon request***

# Gewindebohrzangen mit Längenausgleich
*Tapping collets with length compensation*



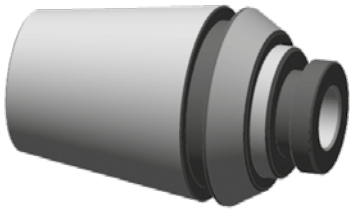



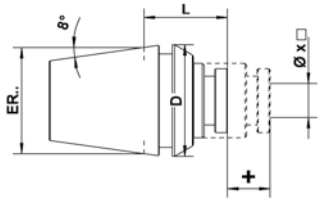

## Gewindebohrzangen ER mit Längenausgleich
## *Tapping collets ER with length compensation*

| SZ / *Collet* | Spann-Ø / *Clamping-Ø* mm | D mm | L mm | T mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| ER 16 | Ø 2,5 - Ø 6,0 | 17 | 27 | 7 | ● | 09-6016-Ø |
| ER 20 | Ø 2,8 - Ø 7,0 | 21 | 31 | 7 | ● | 09-6020-Ø |
| ER 25 | Ø 2,5 - Ø 10,0 | 26 | 34 | 8 | ● | 09-6025-Ø |
| ER 32 | Ø 4,5 - Ø 12,0 | 33 | 43 | 10 | ● | 09-6032-Ø |
| ER 40 | Ø 6,0 - Ø 16,0 | 41 | 54 | 13 | ● | 09-6040-Ø |

| SZ / *Collet* | Standard-Ø / *Standard-Ø* mm |
|---|---|
| ER 16 | 2,5 / 2,8 / 3,5 / 4,5 / 6,0 |
| ER 20 | 2,8 / 3,5 / 4,5 / 6,0 / 7,0 |
| ER 25 | 2,5 / 2,8 / 3,5 / 4,5 / 6,0 / 7,0 / 8,0 / 9,0 / 10,0 |
| ER 32 | 4,5 / 6,0 / 7,0 / 8,0 / 9,0 / 10,0 / 11,0 / 12,0 |
| ER 40 | 6,0 / 7,0 / 8,0 / 9,0 / 10,0 / 11,0 / 12,0 / 14,0 / 16,0 |

Andere Abmessungen lieferbar auf Anfrage
*Further dimensions available upon request*






## Gewindebohrzangen ER
## mit Längenausgleich und Schnellwechselsystem
## *Tapping collets ER*
## *with length compensation and quick-change system*

NEU *NEW* !

| SZ / *Collet* | Spann-Ø / *Clamping-Ø* mm | D mm | L mm | + mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| ER 16 | Ø 2,5 - Ø 5,0 | 17 | 11 | 6 | ◗ | 09-4016-Ø |
| ER 20 | Ø 2,8 - Ø 7,0 | 21 | 17 | 7 | ◗ | 09-4020-Ø |
| ER 25 | Ø 2,8 - Ø 9,0 | 26 | 18,5 | 8 | ◗ | 09-4025-Ø |
| ER 32 | Ø 2,8 - Ø 12,0 | 33 | 18,5 | 10 | ◗ | 09-4032-Ø |
| ER 40 | Ø 2,8 - Ø 16,0 | 41 | 19 | 12 | ◗ | 09-4040-Ø |

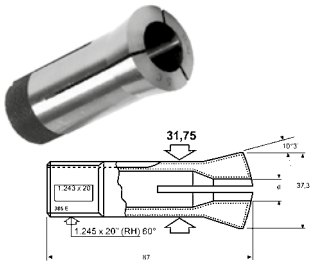
| SZ / *Collet* | Standard-Ø / *Standard-Ø* mm |
|---|---|
| ER 16 | 2,5 / 2,8 / 3,5 / 4,5 |
| ER 20 | 2,8 / 3,5 / 4,5 / 6,0 / 7,0 |
| ER 25 | 2,8 / 4,5 / 6,0 / 7,0 / 8,0 / 9,0 |
| ER 32 | 2,8 / 3,5 / 4,5 / 6,0 / 7,0<br>8,0 / 9,0 / 10,0 / 11,0 / 12,0 |
| ER 40 | 2,8 / 3,5 / 4,5 / 6,0 / 7,0 / 8,0<br>9,0 / 10,0 / 11,0 / 12,0 / 14,0 / 16,0 |

Andere Abmessungen lieferbar auf Anfrage
*Further dimensions available upon request*



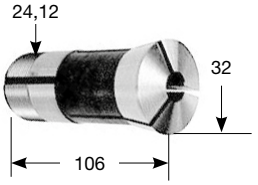
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Sonstige Spannzangen, rund
## *Collets, round*



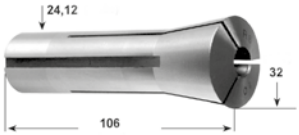

### Typ 385 E (5C), 0,5 mm steigend / *0,5 mm stepped*

| D mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 1 - 2,5 mm | ● | 06-385E-Ø |
| 3 - 27 mm | ● | 06-385E-Ø |
| 27,5 - 30 mm | ● | 06-385E-Ø |




### Typ 386 E, 0,5 mm steigend / *0,5 mm stepped*

| D mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 1 - 2,5 mm | ● | 06-386E-Ø |
| 3 - 29 mm | ● | 06-386E-Ø |




### Typ 369 E (R8), 1 mm steigend / *1 mm stepped*

| D mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 2 mm | ● | 06-369E-Ø |
| 3 - 22 mm | ● | 06-369E-Ø |

# Direktspannzangen
## *Taper collets*



### Mit Morsekegel
### *With Morse taper*

| MK / *MT* | Ø mm | Innengewinde / *Internal thread* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 2 | 2, 3, 4, 5, 6, 8, 10, 12 | M10 | ● | 06-228-2-Ø |
| 3 | 3, 4, 5, 6, 8, 10, 12, 14, 16, 18 | M12 | ● | 06-228-3-Ø |
| 4 | 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 25 | M16 | ● | 06-228-4-Ø |



### Typ 574 E mit Steilkegel
### *Type 574 E with steep taper*

NEU NEW !

| SK | Ø mm | Gewinde / *Thread* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 40 | 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 25 | S20 x 2 | ◗ | 06-DSSK-S20-Ø |



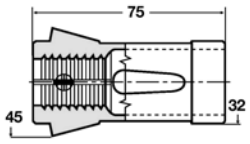
### Typ 575 E mit Steilkegel
### *Type 575 E with steep taper*

NEU NEW !

| SK | Ø mm | Gewinde / *Thread* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 40 | 4, 5, 6, 8, 10, 12, 14, 16, 18, 20 , 22, 24, 25 | M16 | ◗ | 06-DSSK-M16-Ø |

# Spannzangen DIN 6343
*Collets DIN 6343*

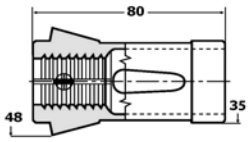
## Typ 161 E, 0,5 mm steigend / *Type 161 E, 0,5 mm stepped*




| D<br>mm | Form /<br>*form* | Art.-Nr. /<br>*Order no.* |
|---|---|---|
| 3-26 mm | rund / *round* | 06-161E-Ø |

Bis Ø 7 mm - glatte Bohrung, ab Ø 8 mit Querrillen
*Up to Ø 7 mm - smooth bore, from Ø 8 mm - radial grooved*

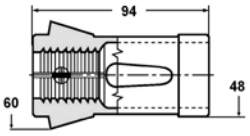
## Typ 163 E, 0,5 mm steigend / *Type 163 E, 0,5 mm stepped*




| D<br>mm | Form /<br>*form* | Art.-Nr. /<br>*Order no.* |
|---|---|---|
| 2-30 mm | rund / *round* | 06-163E-Ø |
| Nofallspannzange / *Emergency collet 163 E* | | 06-163E-NOT |

Bis Ø 7 mm - glatte Bohrung, ab Ø 8 mit Querrillen
*Up to Ø 7 mm - smooth bore, from Ø 8 mm - radial grooved*

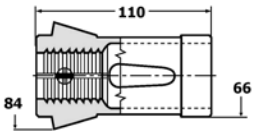
## Typ 173 E, 0,5 mm steigend / *Type 173 E, 0,5 mm stepped*




| Größe /<br>*Size* | Form /<br>*form* | Art.-Nr. /<br>*Order no.* |
|---|---|---|
| Ø 3 - 42 mm | rund / *round* | 06-173E-Ø |
| □ 4 - 30 mm | vierkant / *square* | 06-173E-Ø-4Kant |
| ⬡ 4 - 36 mm | sechskant / *hexagonal* | 06-173E-Ø-6Kant |
| Nofallspannzange / *Emergency collet 173 E* | | 06-173E-NOT |

Bis Ø 7 mm - glatte Bohrung, ab Ø 8 mit Querrillen
*Up to Ø 7 mm - smooth bore, from Ø 8 mm - radial grooved*

## Typ 185 E, 1 mm steigend / *Type 185 E, 1 mm stepped*

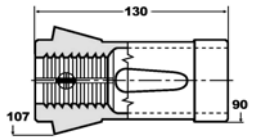



| Größe /<br>*Size* | Form /<br>*form* | Art.-Nr. /<br>*Order no.* |
|---|---|---|
| Ø 4 - 60 mm | rund / *round* | 06-185E-Ø |
| □ 10 - 42 mm | vierkant / *square* | 06-185E-Ø-4Kant |
| ⬡ 6 - 52 mm | sechskant / *hexagonal* | 06-185E-Ø-6Kant |
| Nofallspannzange / *Emergency collet 185 E* | | 06-185E-NOT |

Bis Ø 7 mm - glatte Bohrung, ab Ø 8 mit Querrillen
*Up to Ø 7 mm - smooth bore, from Ø 8 mm - radial grooved*

## Typ 193 E, 5 mm steigend / *Type 193 E, 5 mm stepped*

NEU *NEW* !




| D<br>mm | Form /<br>*form* | Art.-Nr. /<br>*Order no.* |
|---|---|---|
| 20, 25, 30, 35, 40, 45,<br>50, 55, 60, 65, 70, 75, 80 | rund / *round* | 06-193E-Ø |

Weitere Größen auf Anfrage
*Further sizes available upon request*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Spannzangen-Sätze, 1 mm steigend
*Collet sets, 1 mm stepped*



## Spannzangen-Sätze ER in Holzleiste DIN 6499
## *Collet sets ER in wooden tray DIN 6499*

| Typ / *Type* | D mm | Anzahl d. Spannzangen / *Number of collets* | Art.-Nr. / *Order no.* |
|---|---|---|---|
| ER 11 (4008E)* | 1-7 | 13 | 09-SATZ-ER11HL |
| ER 16 (426E) | 1-10 | 10 | 09-SATZ-ER16HL |
| ER 20 (428E) | 2-13 | 12 | 09-SATZ-ER20HL |
| ER 25 (430E) | 2-16 | 15 | 09-SATZ-ER25HL |
| ER 32 (470E) | 3-20 | 18 | 09-SATZ-ER32HL |
| ER 40 (472E) | 4-26 | 23 | 09-SATZ-ER40HL |

* 0,5 mm steigend
* *0,5 mm stepped*



## Spannzangen-Sätze ER im Aluminiumkoffer DIN 6499
## *Collet sets ER in aluminium case DIN 6499*

| Typ / *Type* | D mm | Anzahl d. Spannzangen / *Number of collets* | Art.-Nr. / *Order no.* |
|---|---|---|---|
| ER 16 (426E) | 1-10 | 10 | 09-SATZ-ER16AK |
| ER 20 (428E) | 2-13 | 12 | 09-SATZ-ER20AK |
| ER 25 (430E) | 2-16 | 15 | 09-SATZ-ER25AK |
| ER 32 (470E) | 3-20 | 18 | 09-SATZ-ER32AK |
| ER 40 (472E) | 4-26 | 23 | 09-SATZ-ER40AK |



## Präzisions-Spannzangen-Sätze ER in Holzleiste
## *Precision collet sets ER in wooden tray*

- Präzisionsausführung - *precision type*

| | Typ / *Type* | D mm | Anzahl d. Spannzangen / *Number of collets* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| NEU/*NEW* | ER 11 (4008E) | 1-7 | 7 | 09-SATZ-ER11-UP |
| | ER 16 (426E) | 1-10 | 10 | 09-SATZ-ER16-UP |
| | ER 20 (428E) | 2-13 | 12 | 09-SATZ-ER20-UP |
| | ER 25 (430E) | 2-16 | 15 | 09-SATZ-ER25-UP |
| | ER 32 (470E) | 3-20 | 18 | 09-SATZ-ER32-UP |
| | ER 40 (472E) | 4-26 | 23 | 09-SATZ-ER40-UP |



## Spannzangen-Sätze OZ in Holzleiste DIN 6388
## *Collet sets OZ in wooden tray DIN 6388*

| | Typ / *Type* | D mm | Anzahl d. Spannzangen / *Number of collets* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| | 415 E | 2-16 | 15 | 06-SATZ-415EHL |
| | 462 E | 2-25 | 24 | 06-SATZ-462EHL |
| | 467 E | 4-32 | 29 | 06-SATZ-467EHL |
| NEU/*NEW* | 410 E | 2-16 | 15 | 06-SATZ-410EHL |
| NEU/*NEW* | 444 E | 2-25 | 24 | 06-SATZ-444EHL |



## Spannzangen-Sätze OZ im Aluminiumkoffer DIN 6388
## *Collet sets OZ in aluminium case DIN 6388*

| | Typ / *Type* | D mm | Anzahl d. Spannzangen / *Number of collets* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| | 415 E | 2-16 | 15 | 06-SATZ-415EAK |
| | 462 E | 2-25 | 24 | 06-SATZ-462EAK |
| | 467 E | 4-32 | 29 | 06-SATZ-467EAK |
| NEU/*NEW* | 410 E | 2-16 | 15 | 06-SATZ-410EAK |
| NEU/*NEW* | 444 E | 2-25 | 24 | 06-SATZ-444EAK |

# Spannzangen-Sätze
*Collet sets*



## Sonstige Spannzangen Sätze
## *Optional collet sets*

| | Typ / *Type* | D mm | Steigung / *Stepping* | Holzleiste / *wooden tray* | Anzahl d. Spannzangen / *Number of collets* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| | 385 E | 3-26 | 1 | Ja / *Yes* | 24 | ● | 06-SATZ-385EHL |
| | 385 E | 1-29 | 0,5 | Nein / *No* | 57 | ● | 06-SATZ-385/0,5 |
| NEU/*NEW* | 386 E | 3-29 | 1 | Nein / *No* | 24 | ● | 06-SATZ-386E |
| NEU/*NEW* | 173 E | 3-42 | 1 | Nein / *No* | 40 | ● | 06-SATZ-173E |
| NEU/*NEW* | 173 E | 3-42 | 0,5 | Nein / *No* | 79 | ● | 06-SATZ-173E/0,5 |

# Anschlagschrauben
*Stop screws*



## Für 5C-Spannzangen
## *For 5C-collets*

- Gewinde auf ganzer Länge gehärtet
- für einstellbare Werkstücktiefen bis 75 mm (von Spannzangenoberfläche)

- *thread hardened over entire length*
- *for adjustable work piece depths up to 75 mm (from collet surface)*

| | D mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| für 5C-Spannzangen / *for 5C-collets* | | ● | 06-106220 |



## Für Spannzangen DIN 6343
## *For collets DIN 6343*

- für Spannzangen 163E, 173E, 185E

- *for collets 163E, 173E, 185E*

| | D mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| für 163E / *for 163E* | | ◗ | 06-163E-AN |
| für 173E / *for 173E* | | ● | 06-173E-AN |
| für 185E / *for 185E* | | ● | 06-185E-AN |





● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Aluminiumkoffer
*Aluminium cases*



## Für Spannzangen
## *For collets*

| Passend für / *Suitable for* | Anzahl der Plätze / *Number of seats* | Art.-Nr. / *Order no.* |
|---|---|---|
| ER 16 | 10 | 09-ER16-AK |
| ER 20 | 13 | 09-ER20-AK |
| ER 25 / 415E / 410E | 16 | 09-ER25/415E-AK |
| ER 32 | 20 | 09-ER32-AK |
| 462E / 444E | 25 | 09-462E-AK |
| ER 40 / 467E / 450E | 30 | 09-ER40/467E-AK |



## Für Spannzangen und Futter
## *For collets and collet chucks*

- geeignet für Spannzangensatz und Spannzangenfutter SK30 und SK40
- *suitable for collet set and collet chucks SK30 and SK40*

| Passend für / *Suitable for* | Anzahl der Plätze / *Number of seats* | Art.-Nr. / *Order no.* |
|---|---|---|
| ER 25 | 16 | 09-ALK-ER25 |
| ER 32 | 20 | 09-ALK-ER32 |
| ER 40 | 24 | 09-ALK-ER40 |



## Für Kantentaster
## *For edge finders*

NEU NEW !

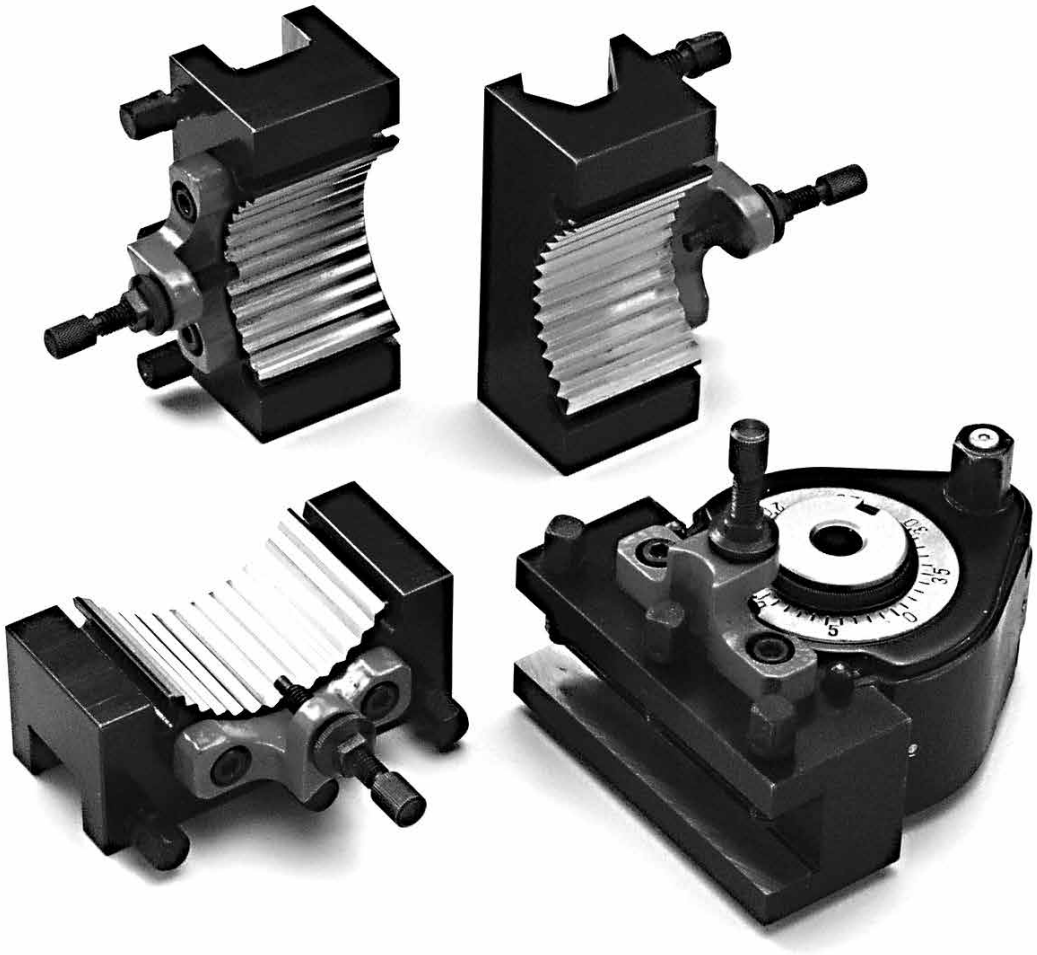
| Passend für / *Suitable for* | Abmessungen / *Dimensions* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 0I-129055-N | 140 x 56 x 42 | 42-1010-AK |

**Kantentaster siehe Seite 256**
***Edge finders see page 256***

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Schnellwechselstahlhalter

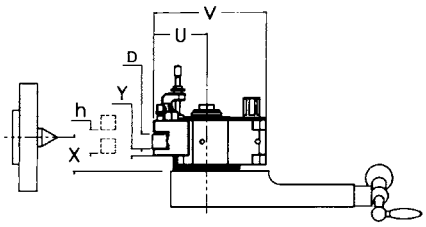
## *Quick-change tool holders*



ORIGINALMULTISUISSE®

BASIC

# Technische Daten
## *Technical Data*



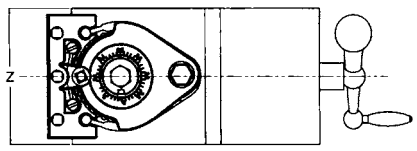

Bei der Wahl der Größe ist zu beachten:

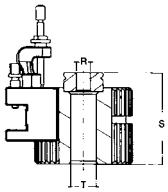
1. Antriebsleistung der Drehbank
2. Spitzenhöhe ab Querschlitten „X“
3. Die Länge des Wechselhalters „lg“ soll möglichst der Breite „Z“ des Querschlittens entsprechen
4. Die zu verwendende Stahlhöhe „D“ ergibt zusammen mit der Stahlauflage „Y“ und dem darunter verbleibenden Zwischenraum das erforderliche Maß „X“ (siehe Tabelle)

*Pay attention to the following details to find the correct size:*

1. *Driving motor power*
2. *Centers height from carriage „X“*
3. *Length of toolholder „lg“ should possibly correspond to width „Z“ of top slide*
4. *Height of tool „D“, which together with height „Y“ and the space that remains underneath makes up the necessary size „X“ (see table)*

| Typ / *Type* | | Aa | A | A | E | E | E | B | B | C | C | C | D1 | D1 | D1 | D2 | D2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stahlhalter D / *Toolholder D* | ➜ | 12 | 16 | 20 | 16 | 20 | 25 | 25 | 32 | 32 | 40 | 45 | 40 | 50 | 63 | 50 | 63 |
| Stahlhöhe D / *Tool height D* | ↓ | X min. | | | | | | | | | | | | | | | |
| 6 | | 12 | | | | | | | | | | | | | | | |
| 8 | | 14 | 17 | | | | | | | | | | | | | | |
| 10 | | 16 | 19 | 19 | 19 | 19 | 22 | | | | | | | | | | |
| 12 | | 18 | 21 | 21 | 21 | 21 | 24 | 25 | 26 | | | | | | | | |
| (14) | | | 23 | 23 | 23 | 23 | 26 | 27 | 28 | 29 | | | | | | | |
| 16 | | | 25 | 25 | 25 | 25 | 28 | 29 | 30 | 31 | 31 | | | | | | |
| 20 | | | | | | 29 | 32 | 33 | 34 | 35 | 35 | 38 | | | | | |
| 25 | | | | | | | 37 | 38 | 39 | 40 | 40 | 43 | 45 | | | | |
| (30) | | | | | | | | | 44 | 45 | 45 | 48 | 50 | 51 | 52 | 50 | 55 |
| 32 | | | | | | | | | | 47 | 47 | 50 | 52 | 53 | 54 | 52 | 57 |
| 40 | | | | | | | | | | | 55 | 58 | 60 | 61 | 62 | 60 | 65 |
| 50 | | | | | | | | | | | | | | 71 | 72 | 70 | 75 |
| 63 | | | | | | | | | | | | | | | 85 | | 88 |




Die Bohrung „R“ in der Zentrierscheibe muss auf das Maß der Spannschraube vergrößert werden.

*Hole „R“ in the centring disc must be enlarged up to the size of the clamping screw.*

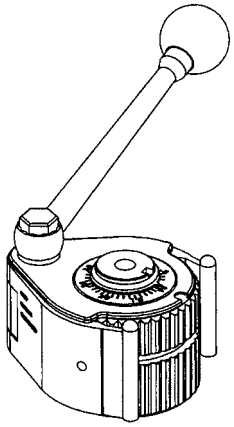
| Typ / *Type* | | Aa | A | A | E | E | E | B | B | C | C | C | D1 | D1 | D1 | D2 | D2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antriebsleistung / *Driving power* | KW | 1 | 2 | | 4,5 | | | 7 | | 13 | | | 20 | | | 28 | |
| Wechselhalter-Größe / *Change toolholder size* | D | 12 | 16 | 20 | 16 | 20 | 25 | 25 | 32 | 32 | 40 | 45 | 40 | 50 | 63 | 50 | 63 |
| Schlittenbreite max / *Max. carriage width* | Z mm | 80 | 100 | | 120 | | | 150 | | 180 | | | 200 | | | 250 | |
| Spitzenhöhe ab Querschlitten min. / *Min. centers height from carriage* | X min | 18 | 24,5 | 28,5 | 24,5 | 28,5 | 37 | 37 | 45,5 | 47 | 55 | 63 | 60 | 70 | 83 | 70 | 88 |
| Spitzenhöhe ab Querschlitten max. / *Max. centers height from carriage* | X max | 26 | 35,5 | 39,5 | 40,5 | 39,5 | 43 | 57 | 56,5 | 87 | 90 | 93 | 95 | 100 | 103 | 90 | 118 |
| Höhenverstellbarkeit / *Hight adjustability* | h mm | 8 | 11 | | 16 | 11 | 6 | 20 | 11 | 40 | 35 | 30 | 35 | 30 | 20 | 20 | 30 |
| Stahlauflage / *Tool repose* | Y mm | 6 | 8,5 | 8,5 | 8,5 | 8,5 | 12 | 12 | 13,5 | 15 | 15 | 18 | 20 | 20 | 25 | 20 | 25 |
| Höhe des Arbeitsstahls max. / *Max. tool height* | D mm | 12 | 16 | 20 | 16 | 20 | 25 | 25 | 32 | 32 | 40 | 45 | 40 | 50 | 63 | 50 | 65 |
| Gesamtbreite max. / *Total width* | V mm | 70 | 100 | | 125 | | | 150 | | 200 | | | 230 | 234 | 242 | 275 | 282 |
| Gesamthöhe / *Total height* | S mm | 37 | 56 | | 68 | | | 79 | | 110 | | | 122 | | | 135 | |
| Ausladung max. / *Max. distance* | U mm | 30 | 48 | | 60 | | | 71 | | 90 | | | 112 | 116 | 124 | 140 | 147 |
| Bohrung Ø max. / *Boring Ø max.* | T mm | 13 | 20 | | 20 | | | 32 | | 40 | | | 40 | | | 80 | |





Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Schnellwechselstahlhalter, ORIGINAL MULTISUISSE ®
## *Quick-change tool holders, ORIGINAL MULTISUISSE ®*



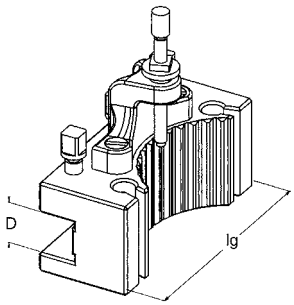
ORIGINALMULTISUISSE®

### Stahlhalterkopf
### *Turret*

| Größe / *Size* | Typ / *Type* | Art.-Nr. / *Order no.* |
|---|---|---|
| Aa | Kopf / *Head Aa* | 50-100-100 |
| A | Kopf / *Head A* | 50-100-106 |
| E | Kopf / *Head E* | 50-100-123 |
| B | Kopf / *Head B* | 50-100-141 |
| C | Kopf / *Head C* | 50-100-156 |
| D1 | Kopf / *Head D1* | 50-100-177 |
| D2 | Kopf / *Head D2* | 50-100-186 |

ORIGINALMULTISUISSE®

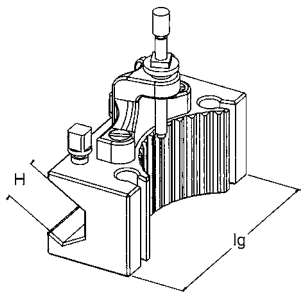
### Drehstahlhalter D
### *Tool holder D*




| Typ / *Type* | D mm | lg mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| AaD | 12 | 50 | 50-100-101 |
| AD | 16 | 75 | 50-100-107 |
| AD | 16 | 90 | 50-100-108 |
| AD | 20 | 75 | 50-100-109 |
| AD | 20 | 90 | 50-100-110 |
| ED | 16 | 100 | 50-100-124 |
| ED | 20 | 100 | 50-100-125 |
| ED | 25 | 100 | 50-100-126 |
| BD | 25 | 120 | 50-100-142 |
| BD | 25 | 140 | 50-100-143 |
| BD | 32 | 120 | 50-100-144 |
| BD | 32 | 140 | 50-100-145 |
| CD | 32 | 150 | 50-100-157 |
| CD | 32 | 170 | 50-100-158 |
| CD | 40 | 150 | 50-100-159 |
| CD | 40 | 170 | 50-100-160 |
| CD | 45 | 170 | 50-100-161 |
| D1D | 40 | 180 | 50-100-178 |
| D1D | 50 | 180 | 50-100-179 |
| D1D | 63 | 180 | 50-100-180 |
| D2D | 50 | 220 | 50-100-187 |
| D2D | 63 | 220 | 50-100-188 |

ORIGINALMULTISUISSE®

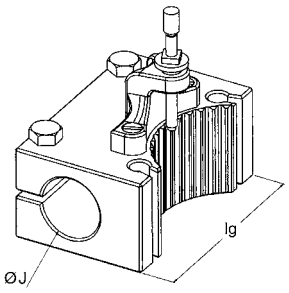
### Bohrstahlhalter H
### *Bar holder H*




| Typ / *Type* | H mm | lg mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| AaH | 12 | 50 | 50-100-102 |
| AH | 20 | 85 | 50-100-111 |
| EH | 16 | 100 | 50-100-127 |
| EH | 25 | 100 | 50-100-128 |
| BH | 32 | 130 | 50-100-146 |
| CH | 40 | 160 | 50-100-162 |
| CH | 50 | 160 | 50-100-163 |
| D1H | 63 | 180 | 50-100-181 |
| D2H | 70 | 220 | 50-100-189 |

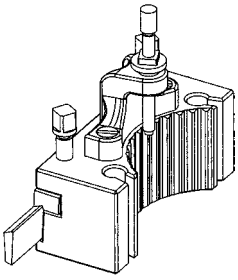
# Schnellwechselstahlhalter, ORIGINAL MULTISUISSE ®
*Quick-change tool holders, ORIGINAL MULTISUISSE ®*

## Bohrstangenhalter J
*Bush holder J*



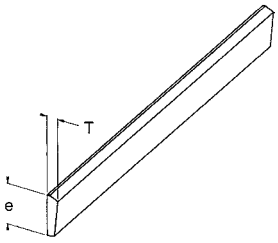

| Typ / *Type* | J mm | lg mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| AaJ | 15 | 50 | 50-100-103 |
| AJ | 30 | 80 | 50-100-112 |
| EJ | 30 | 100 | 50-100-129 |
| EJ | 40 | 100 | 50-100-130 |
| BJ | 40 | 120 | 50-100-147 |
| CJ | 40 | 160 | 50-100-164 |
| CJ | 50 | 160 | 50-100-165 |
| D1J | 63 | 180 | 50-100-182 |
| D2J | 63 | 220 | 50-100-190 |

## Abstechhalter T
*Cutting-off holder T*



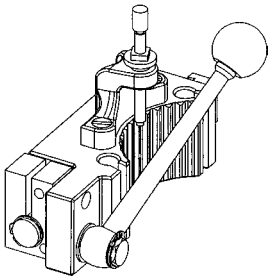
| Typ / *Type* | Stahlgröße / *Cutting tool size* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| AaT | 2,5 x 10 | 50-100-104 |
| AT-K | 2,7 x 10 | 50-100-113 |
| ET-K | 4 x 16 | 50-105-131 |
| BT-K | 4 x 16 | 50-100-148 |
| CT-K | 5,1 x 18,5 | 50-100-166 |

## Abstechstahl TS
*Cutting-off blade TS*




| Typ / *Type* | T mm | e mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| AaTs | 2,5 | 10 | 50-100-105 |
| AO-F | 2,7 | 10 | 50-100-114 |
| ETS | 2,4 | 15,9 | 50-100-132 |
| A1/2a-F | 4,0 | 22 | 50-100-149 |
| A3A-H | 4,8 | 18 | 50-100-167 |

## Rückzugsstahlhalter FE für Außengewinde
*Thread-cutting device FE for external thread*



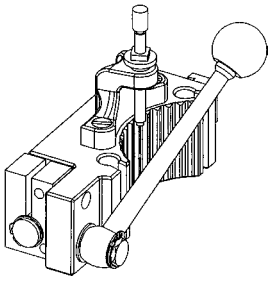
Vorgang: Mit dem Rückzugshebel kann ohne Verstellung des Kreuzsupports aus dem Gewinde ausgefahren werden. Es muß lediglich die neue Spantiefe nachgestellt werden.

*Operation: The cutting blade can be retracted from the thread through the handle without moving the cross slide. The next cutting depth can be prepared during the tool's way back.*

| Typ / *Type* | Zu Kopf / *For turret* | Hub / *Stroke* mm | Messertyp / *Cutting blade size* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| AFE | A | 11 | AF 60 / *AF 55* | 50-100-115 |
| EFE | E | 12 | AF 60 / *AF 55* | 50-100-133 |
| BFE | B | 10 | BF 60 / *BF 55* | 50-100-150 |
| CFE | C | 14 | CF 60 / *CF 55* | 50-100-168 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*



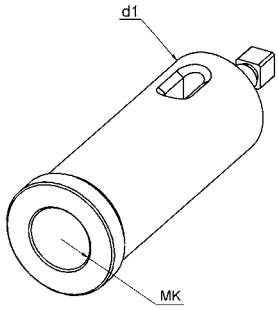
## Rückzugsstahlhalter FI für Innengewinde
## *Thread-cutting device FI for internal thread*

Vorgang: Mit dem Rückzugshebel kann ohne Verstellung des Kreuzsupports aus dem Gewinde ausgefahren werden. Es muß lediglich die neue Spantiefe nachgestellt werden.

*Operation: The cutting blade can be retracted from the thread through the handle without moving the cross slide. The next cutting depth can be prepared during the tool's way back.*

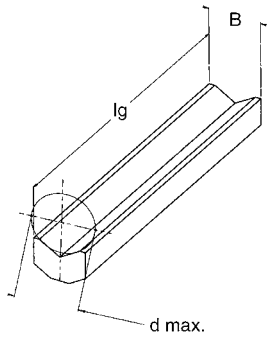
| Typ / *Type* | Zu Kopf / *For turret* | Hub / *Stroke* mm | Ø mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| AFI | A | 11 | 12 | ◗ | 50-100-116 |
| EFI | E | 12 | 12 | ◗ | 50-100-134 |
| BFI | B | 10 | 20 | ◗ | 50-100-151 |
| CFI | C | 14 | 20 | ◗ | 50-100-169 |

## Hülse mit Morsekegel L
## *Bush with morse taper L*



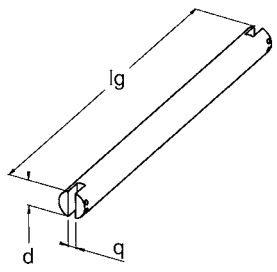

| Typ / *Type* | MK / *MT* | d1 mm | Passend zu Bohrstangenhalter Typ J / *Matching to bush holder type J* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| AL | 1 | 30 | AJ 3080 / EJ 30100 | ● | 50-100-119 |
| AL | 2 | 30 | AJ 3080 / EJ 30100 | ● | 50-100-120 |
| BL | 1 | 40 | EJ 40100 / BJ 40120 / CJ 40160 | ● | 50-100-153 |
| BL | 2 | 40 | EJ 40100 / BJ 40120 / CJ 40160 | ● | 50-100-135 |
| BL | 3 | 40 | EJ 40100 / BJ 40120 / CJ 40160 | ● | 50-100-136 |
| BL | 4 | 40 | EJ 40100 / BJ 40120 / CJ 40160 | ● | 50-100-137 |
| CL | 3 | 50 | CJ 50160 | ● | 50-100-171 |
| CL | 4 | 50 | CJ 50160 | ● | 50-100-172 |
| CL | 5 | 50 | CJ 50160 | ● | 50-100-173 |
| DL | 5 | 63 | D1J 63180 / D2J 63180 | ● | 50-100-183 |

## Einlegeprisma P für Bohrstahlhalter H
## *Prism P for bar holder H*




| Typ / *Type* | d max. mm | lg mm | B mm | Zu Typ / *To type* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| AP 1485 | 14 | 85 | 16 | AH 2085 | ● | 50-100-121 |
| EP 16100 | 16 | 100 | 20 | EH 16100 | ● | 50-100-138 |
| BP 20130 | 20 | 130 | 22 | BH 32130 | ● | 50-100-155 |
| CP 25160 | 25 | 160 | 30 | CH 40160 | ● | 50-100-174 |
| CP 32160 | 32 | 160 | 33 | CH 50160 | ● | 50-100-175 |
| D1P 40180 | 40 | 180 | 50 | D1H 63180 | ● | 50-100-184 |
| D2P 45220 | 45 | 220 | 60 | D2H 70220 | ◗ | 50-100-191 |

## Bohrstange M passend zu Halter J, ohne Drehling
## *Boring bar M for bush holder J, without tool*




| Typ / *Type* | d mm | lg mm | q mm | Passend zu Bohrstangenhalter Typ J / *Matching to bush holder type J* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| AM | 30 | 250 | 12 | AJ 3080 / EJ 30100 | ◗ | 50-100-122 |
| BM | 40 | 500 | 12 | EJ 40100 / BJ 40120 / CJ 40160 | ◗ | 50-100-140 |
| CM | 50 | 500 | 12 | CJ 50160 | ◗ | 50-100-176 |
| D1M | 63 | 600 | 12 | D1J 63180 / D2J 63220 | ◗ | 50-100-185 |

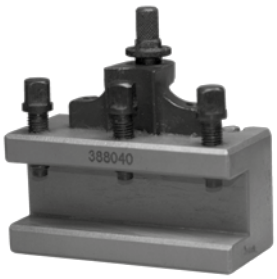
# Schnellwechselstahlhalter, BASIC
# *Quick-change tool holders, BASIC*

## Kopf
## *Turret*



| Größe / *Size* | Typ / *Type* | Art.-Nr. / *Order no.* |
|---|---|---|
| Aa | Kopf / *Head* Aa | BAS-100-100 |
| A | Kopf / *Head* A | BAS-100-106 |
| E | Kopf / *Head* E | BAS-100-123 |
| B | Kopf / *Head* B | BAS-100-141 |
| C | Kopf / *Head* C | BAS-100-156 |
| D | Kopf / *Head* D | BAS-100-177 |

## Drehstahlhalter
## *Tool holder*




| Größe / *Size* | h mm | l mm | Typ / *Type* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| Aa | 12 | 50 | DAa 12 50 | BAS-100-101 |
| A | 20 | 75 | DA 20 75 | BAS-100-110 |
| E | 20 | 100 | DE 20 100 | BAS-100-125 |
| E | 25 | 100 | DE 25 100 | BAS-100-126 |
| B | 25 | 120 | DB 25 120 | BAS-100-142 |
| B | 25 | 140 | DB 25 140 | BAS-100-143 |
| B | 32 | 120 | DB 32 120 | BAS-100-144 |
| B | 32 | 140 | DB 32 140 | BAS-100-145 |
| C | 32 | 150 | DC 32 150 | BAS-100-157 |
| C | 32 | 170 | DC 32 170 | BAS-100-158 |
| C | 40 | 150 | DC 40 150 | BAS-100-159 |
| C | 40 | 170 | DC 40 170 | BAS-100-160 |
| C | 45 | 170 | DC 45 170 | BAS-100-161 |
| D | 40 | 180 | DD 40 180 | BAS-100-178 |
| D | 50 | 180 | DD 50 180 | BAS-100-179 |
| D | 63 | 180 | DD 63 180 | BAS-100-180 |

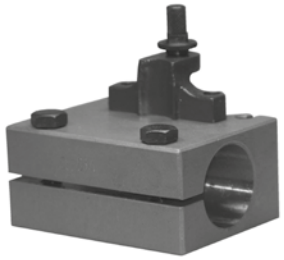
## Bohrstahlhalter
## *Bar holder*




| Größe / *Size* | h mm | l mm | Typ / *Type* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| Aa | 12 | 50 | HAa 12 50 | BAS-100-102 |
| A | 20 | 90 | HA 20 90 | BAS-100-111 |
| E | 30 | 100 | HE 30 100 | BAS-100-127 |
| B | 32 | 130 | HB 32 130 | BAS-100-146 |
| C | 32 | 160 | HC 32 160 | BAS-100-162 |
| C | 40 | 160 | HC 40 160 | BAS-100-163 |
| D | 50 | 180 | HD 50 180 | BAS-100-181 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*



## Bohrstangenhalter
## *Boring bar holder*

| Größe / *Size* | Ø mm | l mm | Typ / *Type* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| Aa | 15 | 50 | JAa 15 50 | ● | BAS-100-103 |
| A | 30 | 80 | JA 30 80 | ● | BAS-100-112 |
| E | 30 | 100 | JE 30 100 | ● | BAS-100-129 |
| E | 40 | 100 | JE 40 100 | ● | BAS-100-130 |
| B | 40 | 120 | JB 40 120 | ● | BAS-100-147 |
| C | 40 | 150 | JC 40 150 | ● | BAS-100-164 |
| C | 50 | 150 | JC 50 150 | ● | BAS-100-165 |
| D | 63 | 180 | JD 63 180 | ● | BAS-100-182 |



## Abstechhalter
## *Cutting-off holder*

| Größe / *Size* | für Abstechmesser / *for cutting-off blade* | Typ / *Type* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| Aa | 2,5 x 10 mm | AAa | ● | BAS-100-104 |
| A | 2,7 x 10 mm | AA | ● | BAS-100-113 |
| E | 2,4 x 15,9 mm | AE | ● | BAS-100-131 |
| B | 4 x 16 mm | AB | ● | BAS-100-148 |
| C | 4,8 x 25 mm | ACM | ● | BAS-100-166 |

**MK-Hülsen, Abstechstähle, Einlegeprismen und Bohrstangen siehe Seite 196/197. Ersatzteile auf Anfrage**
***For MT-sleeves, cutting-off blades, prism inserts and boring bars refer to pages 196/197. Spare parts available upon request***

## Schnellwechselstahlhalter-Sätze
## *Quick-change tool holder sets*



| Satz bestehend aus / *Set consisting of* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 1 x Kopf Aa, 3 x Drehstahlhalter 12 x 50, 1 x Bohrstahlhalter 12 x 50 / *1 x head Aa, 3 x tool holders 12 x 50, 1 x bar holder 12 x 50* | ● | BAS-SATZ-AA |
| 1 x Kopf A, 3 x Drehstahlhalter 20 x 80, 1 x Bohrstahlhalter 18 x 80 / *1 x head A, 3 x tool holders 20 x 80, 1 x bar holder 18 x 80* | ● | BAS-SATZ-A |
| 1 x Kopf B, 3 x Drehstahlhalter 25 x 120, 1 x Bohrstahlhalter 32 x 130 / *1 x head B, 3 x tool holders 25 x 120, 1 x bar holder 32 x 130* | ● | BAS-SATZ-B |
| 1 x Kopf C, 3 x Drehstahlhalter 40 x 150, 1 x Bohrstahlhalter 40 x 160 / *1 x head C, 3 x tool holders 40 x 150, 1 x bar holder 40 x 160* | ● | BAS-SATZ-C |
| 1 x Kopf E, 3 x Drehstahlhalter 25 x 100, 1 x Bohrstahlhalter 30 x 100 / *1 x head E, 3 x tool holders 25 x 100, 1 x bar holder 30 x 100* | ● | BAS-SATZ-E |

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Werkzeugaufnahmen für Fräsmaschinen MK-SK-HSK

# *Tool holders for milling machines MT-SK-HSK*





## Inhalt:

11.1 | Werkzeugsätze im Aluminiumkoffer
11.2 | Morsekegelaufnahmen
11.3 | DIN 2080
11.4 | DIN 69871
11.5 | MAS BT
11.6 | Aufnahmen mit Zylinderschaft
11.7 | HSK
11.8 | Anzugsbolzen

## *Content:*

*11.1 | Tool holder sets in aluminium case*
*11.2 | Morse taper tooling*
*11.3 | DIN 2080*
*11.4 | DIN 69871*
*11.5 | MAS BT*
*11.6 | Straight shank tooling*
*11.7 | HSK*
*11.8 | Pull studs*

# Werkzeugaufnahmen-Sätze
*Tool holder sets*



## Spannzangen-Sätze ER mit Futter im Aluminium-Koffer
## *Collet sets ER with chucks in aluminium case*

- Lieferumfang: Spannzangenfutter, Spannzangensatz, Aluminiumkoffer und Schlüssel
- 1 mm steigend

- *scope of delivery: collet chuck, collet set, aluminium case and spanner*
- *1 mm stepped*

| | DIN | Schaft / *Shank* | SZ-Satz / *Collet set* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| NEU/*NEW* | DIN 228 | MK / MT 2 | ER 25 (Ø 2-16) | SZ-MK2-ER25 |
| NEU/*NEW* | DIN 228 | MK / MT 2 | ER 32 (Ø 3-20) | SZ-MK2-ER32 |
| NEU/*NEW* | DIN 228 | MK / MT 3 | ER 32 (Ø 3-20) | SZ-MK3-ER32 |
| NEU/*NEW* | DIN 228 | MK / MT 4 | ER 32 (Ø 3-20) | SZ-MK4-ER32 |
| NEU/*NEW* | DIN 228 | MK / MT 4 | ER 40 (Ø 4-26) | SZ-MK4-ER40 |
| | DIN 69871 | SK 40 | ER 25 (Ø 2-16) | SZ-SK40-ER25 |
| | DIN 69871 | SK 40 | ER 32 (Ø 3-20) | SZ-SK40-ER32 |
| | DIN 69871 | SK 40 | ER 40 (Ø 4-26) | SZ-SK40-ER40 |
| | DIN 2080 | SK 40 | ER 25 (Ø 2-16) | SZ-ISO40-ER25 |
| | DIN 2080 | SK 40 | ER 32 (Ø 3-20) | SZ-ISO40-ER32 |
| | DIN 2080 | SK 40 | ER 40 (Ø 4-26) | SZ-ISO40-ER40 |
| | MAS BT | SK 40 | ER 25 (Ø 2-16) | SZ-BT40-ER25 |
| | MAS BT | SK 40 | ER 32 (Ø 3-20) | SZ-BT40-ER32 |
| | MAS BT | SK 40 | ER 40 (Ø 4-26) | SZ-BT40-ER40 |

## Spannzangen-Sätze OZ mit Futter im Aluminium-Koffer
## *Collet sets OZ with chucks in aluminium case*

| | DIN | Schaft / *Shank* | SZ-Satz / *Collet set* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| NEU/*NEW* | DIN 228 | MK / MT 3 | 462E (Ø 3-13,16,18,20,25) | SZ-SATZ-462E-MK3 |
| NEU/*NEW* | DIN 2080 | SK 40 | 462E (Ø 3-13,16,18,20,25) | SZ-SATZ-462E-SK40 |

**Weitere Spannzangen-Sätze mit Futter bis Größe SK 45 auf Anfrage**
***Further collet sets with collet chuck up to size SK 45 available upon request***



## Aluminiumkoffer
## *Aluminium case*

- für Spannzangen-Sätze und Spannzangenfutter SK30 und SK40

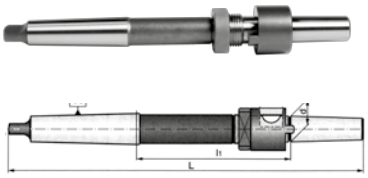
- *for collet sets and collet chucks SK30 and SK40*

| Passend für / *Suitable for* | Anzahl d. Bohrungen / *Number of seats* | Art.-Nr. / *Order no.* |
|---|---|---|
| ER 25 | 16 | 09-ALK-ER25 |
| ER 32 | 20 | 09-ALK-ER32 |
| ER 40 | 24 | 09-ALK-ER40 |



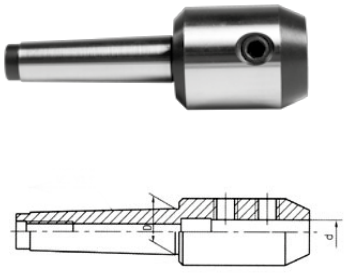
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Aufsteckhalter mit Morsekegel für Reibahlen DIN 219
## *Arbors with morse taper for reamers DIN 219*



| MK / *MT* | d mm | L mm | l1 mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 2 | 10 | 220 | 105,8 | 1 | ● | 13-5310-2-10 |
| 3 | 13 | 250 | 111,9 | 1 | ● | 13-5310-3-13 |
| 3 | 16 | 261 | 117,9 | 1 | ● | 13-5310-3-16 |
| 3 | 19 | 270 | 121,1 | 1 | ● | 13-5310-3-19 |
| 3 | 22 | 278 | 122,1 | 1 | ● | 13-5310-3-22 |
| 4 | 19 | 298 | 125,6 | 2 | ● | 13-5310-4-19 |
| 4 | 22 | 312 | 132,6 | 2 | ● | 13-5310-4-22 |
| 4 | 27 | 325 | 137,6 | 2 | ● | 13-5310-4-27 |
| 4 | 32 | 345 | 148,9 | 3 | ● | 13-5310-4-32 |
| 5 | 27 | 359 | 139,6 | 4 | ● | 13-5310-5-27 |
| 5 | 32 | 376 | 147,9 | 5 | ● | 13-5310-5-32 |
| 5 | 40 | 396 | 157,9 | 7 | ● | 13-5310-5-40 |
| 5 | 50 | 416 | 167,9 | 8 | ● | 13-5310-5-50 |

## Flächenspannfutter WELDON mit Morsekegel
## *End mill adaptors WELDON with morse taper*

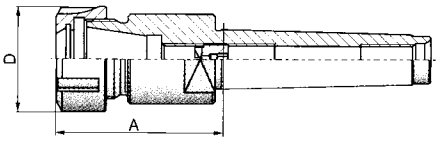


| MK / *MT* | d mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 2 | 4 | ● | 13-7721-2-4 |
| 2 | 6 | ● | 13-7721-2-6 |
| 2 | 8 | ● | 13-7721-2-8 |
| 2 | 10 | ● | 13-7721-2-10 |
| 2 | 12 | ● | 13-7721-2-12 |
| 2 | 14 | ● | 13-7721-2-14 |
| 2 | 16 | ● | 13-7721-2-16 |
| 2 | 18 | ● | 13-7721-2-18 |
| 2 | 20 | ● | 13-7721-2-20 |
| 3 | 4 | ● | 13-7721-3-4 |
| 3 | 6 | ● | 13-7721-3-6 |
| 3 | 8 | ● | 13-7721-3-8 |
| 3 | 10 | ● | 13-7721-3-10 |
| 3 | 12 | ● | 13-7721-3-12 |
| 3 | 14 | ● | 13-7721-3-14 |
| 3 | 16 | ● | 13-7721-3-16 |
| 3 | 18 | ● | 13-7721-3-18 |
| 3 | 20 | ● | 13-7721-3-20 |
| 3 | 25 | ● | 13-7721-3-25 |
| 4 | 6 | ● | 13-7721-4-6 |
| 4 | 8 | ● | 13-7721-4-8 |
| 4 | 10 | ● | 13-7721-4-10 |
| 4 | 12 | ● | 13-7721-4-12 |
| 4 | 14 | ● | 13-7721-4-14 |
| 4 | 16 | ● | 13-7721-4-16 |
| 4 | 18 | ● | 13-7721-4-18 |
| 4 | 20 | ● | 13-7721-4-20 |
| 4 | 25 | ● | 13-7721-4-25 |
| 4 | 32 | ● | 13-7721-4-32 |
| 4 | 40 | ● | 13-7721-4-40 |

# Morsekegelaufnahmen
*Morse taper tooling*

## Spannzangenfutter ER mit Morsekegel
## *Collet chucks ER with morse taper*






| Größe / *Size* | A mm | D mm | Spannbereich / *Clamping range* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MK 2-ER 16 | 43,5 | 32 | 2-10 | 13-7711-2-16 |
| MK 2-ER 20 | 47,5 | 35 | 2-13 | 13-7711-2-20 |
| MK 2-ER 25 | 47 | 42 | 2-16 | 13-7711-2-25 |
| MK 2-ER 32 | 65,5 | 50 | 2-20 | 13-7711-2-32 |
| MK 2-ER 40 | 93 | 63 | 2-26 | 13-7711-2-40 |
| MK 3-ER 16 | 57 | 32 | 2-10 | 13-7711-3-16 |
| MK 3-ER 20 | 45,5 | 35 | 2-13 | 13-7711-3-20 |
| MK 3-ER 25 | 68 | 42 | 2-16 | 13-7711-3-25 |
| MK 3-ER 32 | 73,5 | 50 | 2-20 | 13-7711-3-32 |
| MK 3-ER 40 | 70 | 63 | 2-26 | 13-7711-3-40 |
| MK 4-ER 25 | 54,5 | 42 | 2-16 | 13-7711-4-25 |
| MK 4-ER 32 | 84 | 50 | 2-20 | 13-7711-4-32 |
| MK 4-ER 40 | 71 | 63 | 2-26 | 13-7711-4-40 |
| MK 5-ER 32 | 65,5 | 50 | 2-20 | 13-7711-5-32 |
| MK 5-ER 40 | 67,5 | 63 | 2-26 | 13-7711-5-40 |

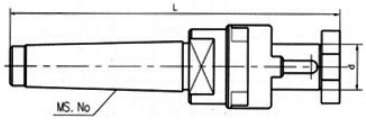
## Spannzangenfutter OZ mit Morsekegel
## *Collet chucks OZ with morse taper*



| Größe / *Size* | Spannzange / *Collet* | A mm | Spannbereich / *Clamping range* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MK2 | OZ16 (415E) | 62 | 2-16 | 09-6310216057 |
| MK2 | OZ25 (462E) | 85 | 2-25 | 09-6310225076 |
| MK3 | OZ25 (462E) | 70 | 2-25 | 09-6310325090 |
| MK4 | OZ25 (462E) | 70 | 2-25 | 09-6310425090 |
| MK5 | OZ25 (462E) | 70 | 2-25 | 09-6310525090 |

## Kombi-Fräseraufsteckdorne mit Morsekegel
## *Combination shell mill adaptors with morse taper*






| MK / *MT* | d mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 2 | 13 | 120 | 13-7430-2-13 |
| 2 | 16 | 125 | 13-7430-2-16 |
| 2 | 22 | 132 | 13-7430-2-22 |
| 2 | 27 | 134 | 13-7430-2-27 |
| 3 | 16 | 149 | 13-7430-3-16 |
| 3 | 22 | 157 | 13-7430-3-22 |
| 3 | 27 | 160 | 13-7430-3-27 |
| 3 | 32 | 169 | 13-7430-3-32 |
| 4 | 16 | 181 | 13-7430-4-16 |
| 4 | 22 | 184 | 13-7430-4-22 |
| 4 | 27 | 187 | 13-7430-4-27 |
| 4 | 32 | 199 | 13-7430-4-32 |
| 4 | 40 | 203 | 13-7430-4-40 |
| 5 | 22 | 219 | 13-7430-5-22 |
| 5 | 27 | 221 | 13-7430-5-27 |
| 5 | 32 | 224 | 13-7430-5-32 |
| 5 | 40 | 227 | 13-7430-5-40 |

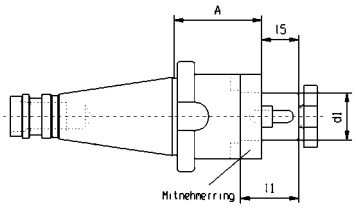
**Einschraubbare Austreiblappen siehe Seite 247**
***Removable tangs see page 247***



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Kombi-Fräseraufsteckdorne DIN 2080
## *Combination shell mill adaptors DIN 2080*

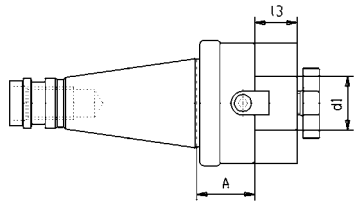





| SK | d1 mm | A mm | l1 mm | l5 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 30 | 13 | 35 | 22 | 12 | 13-7332-30-13 |
| SK 30 | 16 | 35 | 27 | 17 | 13-7332-30-16 |
| SK 30 | 22 | 35 | 31 | 19 | 13-7332-30-22 |
| SK 30 | 27 | 35 | 33 | 21 | 13-7332-30-27 |
| SK 40 | 13 | 52 | 22 | 12 | 13-7332-40-13 |
| SK 40 | 16 | 52 | 27 | 17 | 13-7332-40-16 |
| SK 40 | 22 | 52 | 32 | 19 | 13-7332-40-22 |
| SK 40 | 27 | 52 | 33 | 21 | 13-7332-40-27 |
| SK 40 | 32 | 52 | 38 | 24 | 13-7332-40-32 |
| SK 40 | 40 | 52 | 41 | 27 | 13-7332-40-40 |
| SK 50 | 16 | 55 | 27 | 17 | 13-7332-50-16 |
| SK 50 | 22 | 55 | 31 | 19 | 13-7332-50-22 |
| SK 50 | 27 | 55 | 33 | 21 | 13-7332-50-27 |
| SK 50 | 32 | 55 | 38 | 24 | 13-7332-50-32 |
| SK 50 | 40 | 55 | 41 | 27 | 13-7332-50-40 |
| SK 50 | 50 | 55 | 46 | 30 | 13-7332-50-50 |

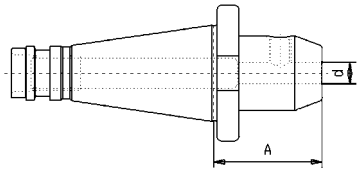
## Messerkopf-Aufnahmen DIN 2080
## *Face mill holders DIN 2080*






| SK | d1 mm | A mm | l3 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | 16 | 30 | 19 | 13-7311-40-16 |
| SK 40 | 22 | 30 | 19 | 13-7311-40-22 |
| SK 40 | 27 | 30 | 21 | 13-7311-40-27 |
| SK 40 | 32 | 30 | 24 | 13-7311-40-32 |
| SK 40 | 40 | 30 | 27 | 13-7311-40-40 |
| SK 50 | 22 | 40 | 19 | 13-7311-50-22 |
| SK 50 | 27 | 40 | 21 | 13-7311-50-27 |
| SK 50 | 32 | 40 | 24 | 13-7311-50-32 |
| SK 50 | 40 | 40 | 27 | 13-7311-50-40 |
| SK 50 | 50 | 40 | 30 | 13-7311-50-50 |

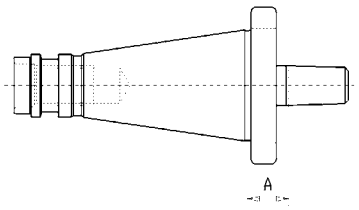





## Flächenspannfutter WELDON DIN 2080
## *End mill adaptors WELDON DIN 2080*

| SK | d mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 6 | 50 | 13-7620-40-6-50 |
| SK 40 | 8 | 50 | 13-7620-40-8-50 |
| SK 40 | 10 | 50 | 13-7620-40-10-50 |
| SK 40 | 12 | 50 | 13-7620-40-12-50 |
| SK 40 | 14 | 50 | 13-7620-40-14-50 |
| SK 40 | 16 | 63 | 13-7620-40-16-63 |
| SK 40 | 20 | 63 | 13-7620-40-20-63 |
| SK 40 | 25 | 80 | 13-7620-40-25-80 |
| SK 40 | 32 | 80 | 13-7620-40-32-80 |
| SK 50 | 6 | 63 | 13-7620-50-6-63 |
| SK 50 | 8 | 63 | 13-7620-50-8-63 |
| SK 50 | 10 | 63 | 13-7620-50-10-63 |
| SK 50 | 12 | 63 | 13-7620-50-12-63 |
| SK 50 | 14 | 63 | 13-7620-50-14-63 |
| SK 50 | 16 | 63 | 13-7620-50-16-63 |
| SK 50 | 18 | 63 | 13-7620-50-18-63 |
| SK 50 | 20 | 63 | 13-7620-50-20-63 |
| SK 50 | 25 | 80 | 13-7620-50-25-80 |
| SK 50 | 32 | 80 | 13-7620-50-32-80 |
| SK 50 | 40 | 90 | 13-7620-50-40-90 |

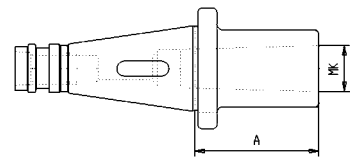





## Bohrfutteraufnahmen DIN 2080
## *Drill chuck adaptors DIN 2080*

| SK | Kegel / *Taper* | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 30 | B10 | 17 | 13-5370-30-B10 |
| SK 30 | B16 | 17 | 13-5370-30-B16 |
| SK 40 | B12 | 17 | 13-5370-40-B12 |
| SK 40 | B16 | 17 | 13-5370-40-B16 |
| SK 40 | B18 | 17 | 13-5370-40-B18 |
| SK 50 | B16 | 20 | 13-5370-50-B16 |
| SK 50 | B18 | 20 | 13-5370-50-B18 |





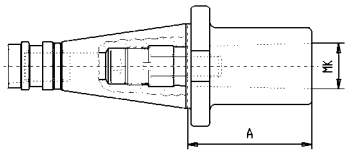

## Zwischenhülsen DIN 2080 für MK-Werkzeuge mit Austreiblappen
## *Reducing adaptors DIN 2080 for MT tools with tang*

| SK | MK / *MT* | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 1 | 50 | 13-1679-40/1 |
| SK 40 | 2 | 50 | 13-1679-40/2 |
| SK 40 | 3 | 70 | 13-1679-40/3 |
| SK 40 | 4 | 95 | 13-1679-40/4 |
| SK 50 | 1 | 45 | 13-1679-50/1 |
| SK 50 | 2 | 50 | 13-1679-50/2 |
| SK 50 | 3 | 65 | 13-1679-50/3 |
| SK 50 | 4 | 70 | 13-1679-50/4 |
| SK 50 | 5 | 105 | 13-1679-50/5 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*





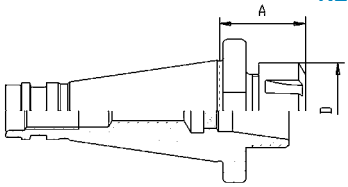

## Zwischenhülsen DIN 2080 für MK-Werkzeuge mit Anzugsgewinde,
## *Reducing adaptors DIN 2080 for MT tools with thread,*

- mit Anzugsgewinde DIN 6364 - *with thread DIN 6364*

| SK | MK / *MT* | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 1 | 50 | 13-1676-40/1 |
| SK 40 | 2 | 50 | 13-1676-40/2 |
| SK 40 | 3 | 70 | 13-1676-40/3 |
| SK 40 | 4 | 95 | 13-1676-40/4 |
| SK 50 | 1 | 45 | 13-1676-50/1 |
| SK 50 | 2 | 60 | 13-1676-50/2 |
| SK 50 | 3 | 65 | 13-1676-50/3 |
| SK 50 | 4 | 70 | 13-1676-50/4 |
| SK 50 | 5 | 120 | 13-1676-50/5 |



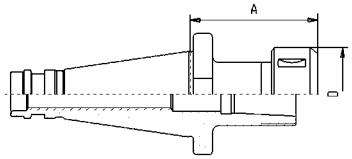
## Spannzangenfutter ER DIN 2080
## *Collet chucks ER DIN 2080*




| | SK | Spannzange / *Collet* | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| NEU/*NEW* | SK 30 | ER 16 | 50 | 28 | 13-7616-30-16 |
| NEU/*NEW* | SK 30 | ER 32 | 60 | 42 | 13-7616-30-32 |
| | SK 40 | ER 32 | 50 | 28 | 13-7616-40-16 |
| | SK 40 | ER 25 | 50 | 42 | 13-7616-40-25 |
| | SK 40 | ER 32 | 45 | 50 | 13-7616-40-32 |
| | SK 40 | ER 40 | 80 | 63 | 13-7616-40-40 |
| | SK 50 | ER 32 | 70 | 50 | 13-7616-50-32 |
| | SK 50 | ER 40 | 80 | 63 | 13-7616-50-40 |



## Spannzangenfutter OZ DIN 2080
## *Collet chucks OZ DIN 2080*

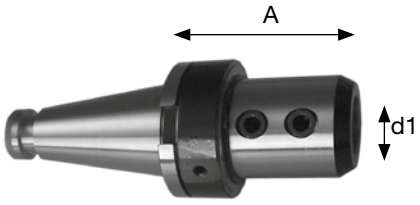



| SK | Spannzange / *Collet* | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | OZ16 (415E) | 70 | 43 | 13-7605-40-16 |
| SK 40 | OZ25 (462E) | 70 | 60 | 13-7605-40-25 |
| SK 40 | OZ32 (467E) | 80 | 72 | 13-7605-40-32 |
| SK 50 | OZ32 (467E) | 80 | 72 | 13-7605-50-32 |

## Fräseraufnahme DIN 2080 mit Kühlmittelring für IKZ
## *Weldon chuck DIN 2080 with cooling agent ring*

- mit Kühlmittelring für innere Kühlmittelzufuhr
- Aufnahmebohrung nach DIN 1835B (Weldon)

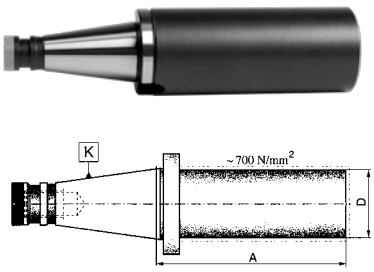
- *with cooling agent ring for internal-coolant supply*
- *according to DIN 1835B (Weldon)*




| SK | d1 mm | A mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | 20 | 70 | ○ | 09-FSKR-ISO-40-20 |
| SK 40 | 25 | 100 | ○ | 09-FSKR-ISO-40-25 |
| SK 40 | 32 | 110 | ○ | 09-FSKR-ISO-40-32 |
| SK 40 | 40 | 120 | ○ | 09-FSKR-ISO-40-40 |
| SK 50 | 20 | 70 | ○ | 09-FSKR-ISO-50-20 |
| SK 50 | 25 | 100 | ○ | 09-FSKR-ISO-50-25 |
| SK 50 | 32 | 110 | ○ | 09-FSKR-ISO-50-32 |
| SK 50 | 40 | 120 | ○ | 09-FSKR-ISO-50-40 |

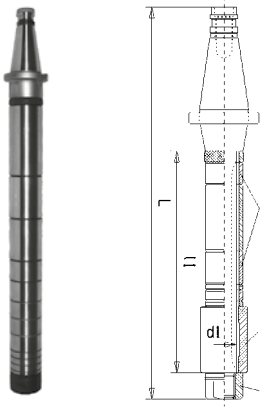
**Passende Reduzierhülsen siehe Seite 224**
***Suitable reduction sleeves see page 224***

## Rohlinge DIN 2080
## *Blanks DIN 2080*




| SK | D mm | A mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 40 | 40 | 280 | 4 | ● | 13-2190-40-40-280 |
| SK 40 | 63 | 280 | 8 | ● | 13-2190-40-63-280 |
| SK 50 | 50 | 330 | 8 | ● | 13-2190-50-50-330 |
| SK 50 | 80 | 330 | 7 | ● | 13-2190-50-80-330 |

# Lange Fräserdorne nach DIN 6355
# *Long milling arbors DIN 6355*



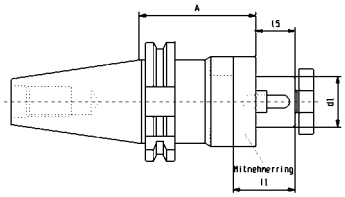

| | | Art.-Nr. / *Order no.* |
|---|---|---|
| Fräserdorn mit Mutter, Endring und Passfeder / *Arbor with nut, end ring and fitted key* Form A: 40x13x315 - 50x60x800 auf Anfrage / *on request* | ◗ | 13-7175-? |
| Fräserdorn mit Mutter, Ringsatz und Passfeder/ *Arbor with nut, spacing collars, end ring and fitted key* Form B: 40x13x315 - 50x60x800 auf Anfrage / *on request* | ◗ | 13-7178-? |
| Fräserdorn mit Mutter, 1 Laufbuchse, Ringsatz und Passfeder/ *Arbor with nut, spacing collars, 1 sleeve, end ring and fitted key* Form C: 40x13x315 - 50x60x800 auf Anfrage / *on request* | ◗ | 13-7181-? |
| Fräserdorn mit Mutter, 2 Laufbuchsen, Ringsatz und Passfeder/ *Arbor with nut, spacing collars, 2 sleeves, end ring and fitted key* Form D: 40x13x315 - 50x60x800 auf Anfrage / *on request* | ◗ | 13-7184-? |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Kombi-Fräseraufsteckdorne DIN 69871
## *Combination shell mill adaptors DIN 69871*

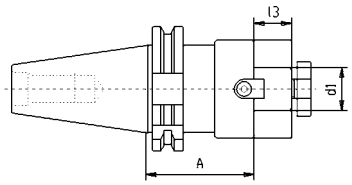





| SK | d1 mm | A mm | l1 mm | l5 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 40 | 13 | 55 | 22 | 12 | 13-7301-40-13 |
| SK 40 | 16 | 55 | 27 | 17 | 13-7301-40-16 |
| SK 40 | 22 | 55 | 32 | 19 | 13-7301-40-22 |
| SK 40 | 27 | 55 | 33 | 21 | 13-7301-40-27 |
| SK 40 | 32 | 60 | 38 | 24 | 13-7301-40-32 |
| SK 40 | 40 | 60 | 41 | 27 | 13-7301-40-40 |
| SK 50 | 16 | 55 | 27 | 17 | 13-7301-50-16 |
| SK 50 | 22 | 55 | 31 | 19 | 13-7301-50-22 |
| SK 50 | 27 | 55 | 33 | 21 | 13-7301-50-27 |
| SK 50 | 32 | 55 | 38 | 24 | 13-7301-50-32 |
| SK 50 | 40 | 55 | 41 | 27 | 13-7301-50-40 |
| SK 50 | 50 | 70 | 46 | 30 | 13-7301-50-50 |

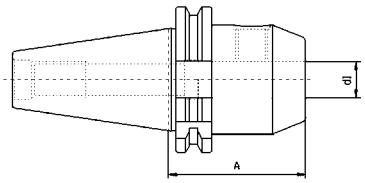
## Messerkopf-Aufnahmen DIN 69871
## *Face mill holders DIN 69871*






| SK | d1 mm | A mm | l3 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | 16 | 35 | 17 | 13-7369-40-16 |
| SK 40 | 16 | 100 | 17 | 13-7369-40-16-100 |
| SK 40 | 22 | 35 | 19 | 13-7369-40-22 |
| SK 40 | 22 | 100 | 19 | 13-7369-40-22-100 |
| SK 40 | 22 | 160 | 19 | 13-7369-40-22-160 |
| SK 40 | 27 | 40 | 21 | 13-7369-40-27 |
| SK 40 | 27 | 100 | 21 | 13-7369-40-27-100 |
| SK 40 | 27 | 160 | 21 | 13-7369-40-27-160 |
| SK 40 | 32 | 50 | 24 | 13-7369-40-32 |
| SK 40 | 32 | 100 | 24 | 13-7369-40-32-100 |
| SK 40 | 32 | 160 | 24 | 13-7369-40-32-160 |
| SK 40 | 40 | 50 | 27 | 13-7369-40-40 |
| SK 40 | 40 | 100 | 27 | 13-7369-40-40-100 |
| SK 40 | 40 | 160 | 27 | 13-7369-40-40-160 |
| SK 50 | 22 | 35 | 19 | 13-7369-50-22 |
| SK 50 | 22 | 100 | 19 | 13-7369-50-22-100 |
| SK 50 | 22 | 160 | 19 | 13-7369-50-22-160 |
| SK 50 | 27 | 40 | 21 | 13-7369-50-27 |
| SK 50 | 27 | 100 | 21 | 13-7369-50-27-100 |
| SK 50 | 27 | 160 | 21 | 13-7369-50-27-160 |
| SK 50 | 32 | 35 | 24 | 13-7369-50-32 |
| SK 50 | 32 | 100 | 24 | 13-7369-50-32-100 |
| SK 50 | 32 | 160 | 24 | 13-7369-50-32-160 |
| SK 50 | 40 | 55 | 27 | 13-7369-50-40 |
| SK 50 | 40 | 100 | 27 | 13-7369-50-40-100 |
| SK 50 | 40 | 160 | 27 | 13-7369-50-40-160 |
| SK 50 | 50 | 60 | 30 | 13-7369-50-50 |






## Flächenspannfutter WELDON DIN 69871
## *End mill adaptors WELDON DIN 69871*

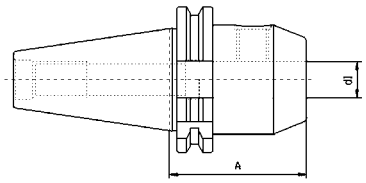
| SK | d mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 30 | 6 | 50 | 13-7625-30-6-50 |
| SK 30 | 8 | 50 | 13-7625-30-8-50 |
| SK 30 | 10 | 50 | 13-7625-30-10-50 |
| SK 30 | 12 | 50 | 13-7625-30-12-50 |
| SK 30 | 14 | 63 | 13-7625-30-14-63 |
| SK 30 | 16 | 63 | 13-7625-30-16-63 |
| SK 30 | 20 | 63 | 13-7625-30-20-63 |
| SK 40 | 6 | 50 | 13-7625-40-6-50 |
| SK 40 | 6 | 100 | 13-7625-40-6-100 |
| SK 40 | 6 | 160 | 13-7625-40-6-160 |
| SK 40 | 8 | 50 | 13-7625-40-8-50 |
| SK 40 | 8 | 100 | 13-7625-40-8-100 |
| SK 40 | 8 | 160 | 13-7625-40-8-160 |
| SK 40 | 10 | 50 | 13-7625-40-10-50 |
| SK 40 | 10 | 100 | 13-7625-40-10-100 |
| SK 40 | 10 | 160 | 13-7625-40-10-160 |
| SK 40 | 12 | 50 | 13-7625-40-12-50 |
| SK 40 | 12 | 100 | 13-7625-40-12-100 |
| SK 40 | 12 | 160 | 13-7625-40-12-160 |
| SK 40 | 14 | 50 | 13-7625-40-14-50 |
| SK 40 | 14 | 100 | 13-7625-40-14-100 |
| SK 40 | 14 | 160 | 13-7625-40-14-160 |
| SK 40 | 16 | 63 | 13-7625-40-16-63 |
| SK 40 | 16 | 100 | 13-7625-40-16-100 |
| SK 40 | 16 | 160 | 13-7625-40-16-160 |
| SK 40 | 18 | 63 | 13-7625-40-18-63 |
| SK 40 | 18 | 100 | 13-7625-40-18-100 |
| SK 40 | 18 | 160 | 13-7625-40-18-160 |
| SK 40 | 20 | 63 | 13-7625-40-20-63 |
| SK 40 | 20 | 100 | 13-7625-40-20-100 |
| SK 40 | 20 | 160 | 13-7625-40-20-160 |
| SK 40 | 22 | 63 | 13-7625-40-22-63 |
| SK 40 | 25 | 100 | 13-7625-40-25-100 |
| SK 40 | 25 | 160 | 13-7625-40-25-160 |
| SK 40 | 32 | 100 | 13-7625-40-32-100 |
| SK 40 | 32 | 160 | 13-7625-40-32-160 |
| SK 40 | 40 | 115 | 13-7625-40-40-115 |
| SK 50 | 6 | 63 | 13-7625-50-6-63 |
| SK 50 | 6 | 100 | 13-7625-50-6-100 |
| SK 50 | 6 | 160 | 13-7625-50-6-160 |
| SK 50 | 8 | 63 | 13-7625-50-8-63 |
| SK 50 | 8 | 100 | 13-7625-50-8-100 |
| SK 50 | 8 | 160 | 13-7625-50-8-160 |
| SK 50 | 10 | 63 | 13-7625-50-10-63 |
| SK 50 | 10 | 100 | 13-7625-50-10-100 |
| SK 50 | 10 | 160 | 13-7625-50-10-160 |
| SK 50 | 12 | 63 | 13-7625-50-12-63 |
| SK 50 | 12 | 100 | 13-7625-50-12-100 |
| SK 50 | 12 | 160 | 13-7625-50-12-160 |
| SK 50 | 14 | 63 | 13-7625-50-14-63 |
| SK 50 | 14 | 100 | 13-7625-50-14-100 |
| SK 50 | 14 | 160 | 13-7625-50-14-160 |
| SK 50 | 16 | 63 | 13-7625-50-16-63 |
| SK 50 | 16 | 100 | 13-7625-50-16-100 |
| SK 50 | 16 | 160 | 13-7625-50-16-160 |
| SK 50 | 18 | 63 | 13-7625-50-18-63 |
| SK 50 | 18 | 100 | 13-7625-50-18-100 |
| SK 50 | 18 | 160 | 13-7625-50-18-160 |
| SK 50 | 20 | 63 | 13-7625-50-20-63 |
| SK 50 | 20 | 100 | 13-7625-50-20-100 |
| SK 50 | 20 | 160 | 13-7625-50-20-160 |

Weitere *Größen siehe nächste Seite* /
*Further sizes see next page*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

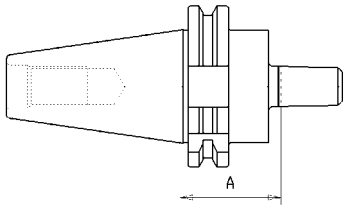





| SK | d<br>mm | A<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| SK 50 | 25 | 80 | 13-7625-50-25-80 |
| SK 50 | 25 | 100 | 13-7625-50-25-100 |
| SK 50 | 25 | 160 | 13-7625-50-25-160 |
| SK 50 | 32 | 100 | 13-7625-50-32-100 |
| SK 50 | 32 | 160 | 13-7625-50-32-160 |
| SK 50 | 40 | 120 | 13-7625-50-40-120 |

## Bohrfutteraufnahmen DIN 69871
## *Drill chuck adaptors DIN 69871*

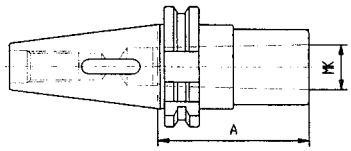





| SK | Kegel /<br>*Taper* | A<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| SK 40 | B12 | 40 | 13-5374-40-B12 |
| SK 40 | B16 | 40 | 13-5374-40-B16 |
| SK 40 | B18 | 40 | 13-5374-40-B18 |
| SK 50 | B16 | 40 | 13-5374-50-B16 |
| SK 50 | B18 | 40 | 13-5374-50-B18 |

## Zwischenhülsen DIN 69871 für MK-Werkzeuge mit Austreiblappen
## *Reducing adaptors DIN 69871 for MT tools with tang*



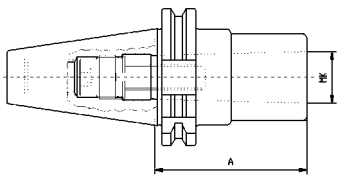



| SK | MK /<br>*MT* | A<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| SK 40 | 1 | 50 | 13-1681-40/1 |
| SK 40 | 2 | 50 | 13-1681-40/2 |
| SK 40 | 3 | 70 | 13-1681-40/3 |
| SK 40 | 4 | 95 | 13-1681-40/4 |
| SK 50 | 1 | 45 | 13-1681-50/1 |
| SK 50 | 2 | 50 | 13-1681-50/2 |
| SK 50 | 3 | 65 | 13-1681-50/3 |
| SK 50 | 4 | 95 | 13-1681-50/4 |
| SK 50 | 5 | 100 | 13-1681-50/5 |

## Zwischenhülsen DIN 69871 für MK-Werkzeuge mit Anzugsgewinde
## *Reducing adaptors DIN 69871 for MT tools with thread*

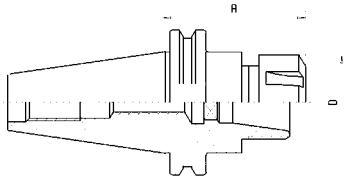
- mit Anzugsgewinde DIN 6364
- *with thread DIN 6364*






| SK | MK /<br>*MT* | A<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| SK 40 | 1 | 50 | 13-1695-40/1 |
| SK 40 | 2 | 50 | 13-1695-40/2 |
| SK 40 | 3 | 70 | 13-1695-40/3 |
| SK 40 | 4 | 95 | 13-1695-40/4 |
| SK 50 | 1 | 45 | 13-1695-50/1 |
| SK 50 | 2 | 60 | 13-1695-50/2 |
| SK 50 | 3 | 65 | 13-1695-50/3 |
| SK 50 | 4 | 95 | 13-1695-50/4 |
| SK 50 | 5 | 105 | 13-1695-50/5 |

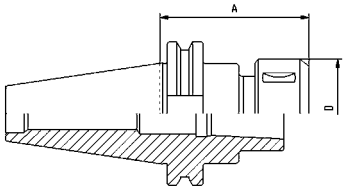




## Spannzangenfutter DIN 69871 ER
## *Collet chucks DIN 69871 ER*

| SK | Spannzange / *Collet* | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | ER 16 | 63 | 28 | 13-7617-40-16 |
| SK 40 | ER 16 | 100 | 28 | 13-7617-40-16-100 |
| SK 40 | ER 16 | 160 | 28 | 13-7617-40-16-160 |
| SK 40 | ER 25 | 60 | 42 | 13-7617-40-25 |
| SK 40 | ER 25 | 100 | 42 | 13-7617-40-25-100 |
| SK 40 | ER 25 | 160 | 42 | 13-7617-40-25-160 |
| SK 40 | ER 32 | 70 | 50 | 13-7617-40-32 |
| SK 40 | ER 32 | 100 | 50 | 13-7617-40-32-100 |
| SK 40 | ER 32 | 160 | 50 | 13-7617-40-32-160 |
| SK 40 | ER 40 | 80 | 63 | 13-7617-40-40 |
| SK 40 | ER 40 | 100 | 63 | 13-7617-40-40-100 |
| SK 40 | ER 40 | 160 | 63 | 13-7617-40-40-160 |
| SK 50 | ER 32 | 70 | 50 | 13-7617-50-32 |
| SK 50 | ER 32 | 100 | 50 | 13-7617-50-32-100 |
| SK 50 | ER 32 | 160 | 50 | 13-7617-50-32-160 |
| SK 50 | ER 40 | 80 | 63 | 13-7617-50-40 |
| SK 50 | ER 40 | 100 | 63 | 13-7617-50-40-100 |
| SK 50 | ER 40 | 160 | 63 | 13-7617-50-40-160 |





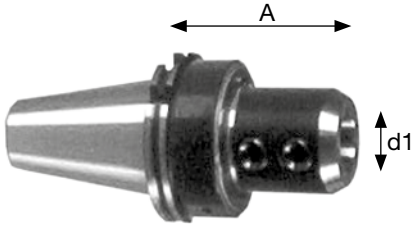
## Spannzangenfutter DIN 69871 OZ
## *Collet chucks DIN 69871 OZ*

| SK | Spannzange / *Collet* | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | OZ16 (415E) | 70 | 43 | 13-7645-40-16 |
| SK 40 | OZ25 (462E) | 70 | 60 | 13-7645-40-25 |
| SK 40 | OZ32 (467E) | 90 | 72 | 13-7645-40-32 |
| SK 50 | OZ25 (462E) | 70 | 60 | 13-7645-50-25 |
| SK 50 | OZ32 (467E) | 80 | 72 | 13-7645-50-32 |

## Fräseraufnahme DIN 69871 mit Kühlmittelring für IKZ
## *Weldon chuck DIN 69871 with cooling agent ring*

- mit Kühlmittelring für innere Kühlmittelzufuhr
- Aufnahmebohrung nach DIN 1835B (Weldon)

- *with cooling agent ring for internal-coolant supply*
- *according to DIN 1835B (Weldon)*

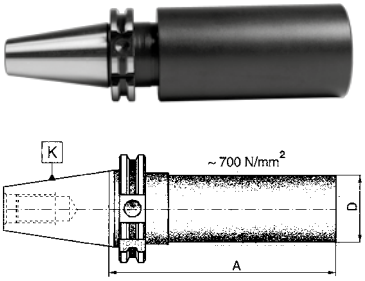



| SK | d1 mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 20 | 70 | 09-FSKR-DIN-40-20 |
| SK 40 | 25 | 100 | 09-FSKR-DIN-40-25 |
| SK 40 | 32 | 110 | 09-FSKR-DIN-40-32 |
| SK 40 | 40 | 120 | 09-FSKR-DIN-40-40 |
| SK 50 | 20 | 70 | 09-FSKR-DIN-50-20 |
| SK 50 | 25 | 100 | 09-FSKR-DIN-50-25 |
| SK 50 | 32 | 110 | 09-FSKR-DIN-50-32 |
| SK 50 | 40 | 120 | 09-FSKR-DIN-50-40 |

**Passende Reduzierhülsen siehe Seite 224**
***Suitable reduction sleeves see page 224***



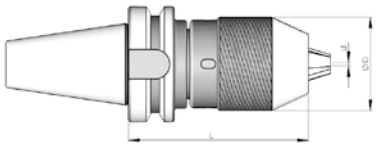
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*




## Rohlinge DIN 69871
## *Blanks DIN 69871*

| SK | D mm | A mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 40 | 40 | 280 | 8 | ● | 13-2191-40-40-280 |
| 40 | 63 | 160 | 8 | ● | 13-2191-40-63-160 |
| 40 | 63 | 280 | 8 | ● | 13-2191-40-63-280 |
| 50 | 50 | 330 | 7 | ● | 13-2191-50-50-330 |
| 50 | 80 | 330 | 16 | ● | 13-2191-50-80-330 |

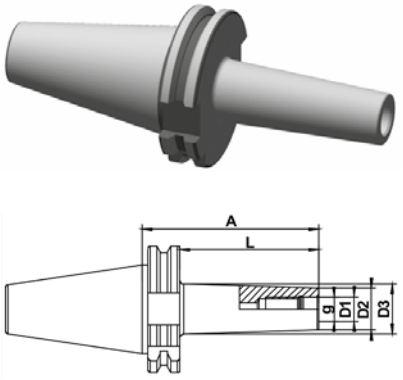
## NC-Bohrfutter DIN 69871
## *NC-drill chucks DIN 69871*



- inkl. Hakenschlüssel
- *incl. hook wrench*

| SK | Spannweite (d) / *Capacity (d)* mm | D mm | l mm | Rundlaufgenauigkeit / *Runout* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 40 | 1-13 | 50 | 95 | 0,05 | ● | 13-7655-40-13 |
| 40 | 3-16 | 57 | 100 | 0,05 | ● | 13-7655-40-16 |
| 50 | 3-16 | 55 | 115 | 0,05 | ● | 13-7655-50-16 |

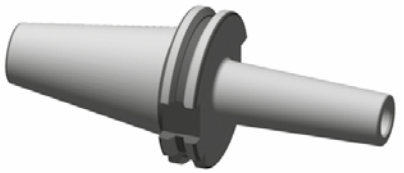
## Fräsdorne DIN 69871 AD/B für Aufschraubfräser
## *DIN 69871 AD/B Screw-on type milling arbors*

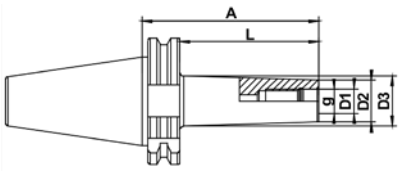



Gewuchtet G = 2,5 20.000 U/min.
*Balanced G = 2,5 20.000 U/min.*

| SK | g | D1 mm | D2 mm | D3 mm | A mm | L mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 40 | M6 | 6,5 | 10 | 13 | 44 | 25 | ◗ | 13-FASK40-M6-25 |
| 40 | M6 | 6,5 | 10 | 20 | 69 | 50 | ◗ | 13-FASK40-M6-50 |
| 40 | M6 | 6,5 | 10 | 23 | 94 | 75 | ◗ | 13-FASK40-M6-75 |
| 40 | M8 | 8,5 | 13 | 15 | 44 | 25 | ◗ | 13-FASK40-M8-25 |
| 40 | M8 | 8,5 | 13 | 23 | 69 | 50 | ◗ | 13-FASK40-M8-50 |
| 40 | M8 | 8,5 | 13 | 23 | 94 | 75 | ◗ | 13-FASK40-M8-75 |
| 40 | M8 | 8,5 | 13 | 25 | 119 | 100 | ◗ | 13-FASK40-M8-100 |
| 40 | M10 | 10,5 | 18 | 20 | 44 | 25 | ◗ | 13-FASK40-M10-25 |
| 40 | M10 | 10,5 | 18 | 23 | 69 | 50 | ◗ | 13-FASK40-M10-50 |
| 40 | M10 | 10,5 | 18 | 28 | 94 | 75 | ◗ | 13-FASK40-M10-75 |
| 40 | M10 | 10,5 | 18 | 32 | 119 | 100 | ◗ | 13-FASK40-M10-100 |
| 40 | M12 | 12,5 | 21 | 24 | 44 | 25 | ◗ | 13-FASK40-M12-25 |
| 40 | M12 | 12,5 | 21 | 23 | 69 | 50 | ◗ | 13-FASK40-M12-50 |
| 40 | M12 | 12,5 | 21 | 31 | 94 | 75 | ◗ | 13-FASK40-M12-75 |
| 40 | M12 | 12,5 | 21 | 32 | 119 | 100 | ◗ | 13-FASK40-M12-100 |
| 40 | M12 | 12,5 | 21 | 36 | 144 | 125 | ◗ | 13-FASK40-M12-125 |
| 40 | M16 | 17 | 29 | 29 | 44 | 25 | ◗ | 13-FASK40-M16-25 |
| 40 | M16 | 17 | 29 | 29 | 69 | 50 | ◗ | 13-FASK40-M16-50 |
| 40 | M16 | 17 | 29 | 31 | 94 | 75 | ◗ | 13-FASK40-M16-75 |
| 40 | M16 | 17 | 29 | 32 | 119 | 100 | ◗ | 13-FASK40-M16-100 |
| 40 | M16 | 17 | 29 | 40 | 144 | 125 | ◗ | 13-FASK40-M16-125 |

Weitere *Größen siehe nächste Seite* /
*Further sizes see next page*



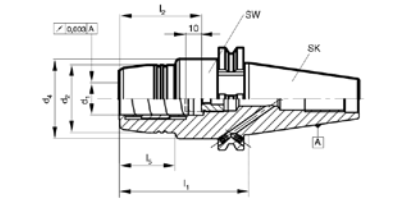



Gewuchtet G = 2,5 20.000 U/min.
*Balanced G = 2,5 20.000 U/min.*

| SK | g | D1 mm | D2 mm | D3 mm | A mm | L mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 50 | M8 | 8,5 | 13 | 23 | 69 | 50 | ◗ | 13-FASK50-M8-50 |
| 50 | M8 | 8,5 | 13 | 25 | 119 | 100 | ◗ | 13-FASK50-M8-100 |
| 50 | M8 | 8,5 | 13 | 30 | 169 | 150 | ◗ | 13-FASK50-M8-150 |
| 50 | M10 | 10,5 | 18 | 23 | 69 | 50 | ◗ | 13-FASK50-M10-50 |
| 50 | M10 | 10,5 | 18 | 32 | 119 | 100 | ◗ | 13-FASK50-M10-100 |
| 50 | M10 | 10,5 | 18 | 37 | 169 | 150 | ◗ | 13-FASK50-M10-150 |
| 50 | M12 | 12,5 | 21 | 24 | 69 | 50 | ◗ | 13-FASK50-M12-50 |
| 50 | M12 | 12,5 | 21 | 33 | 119 | 100 | ◗ | 13-FASK50-M12-100 |
| 50 | M12 | 12,5 | 21 | 40 | 169 | 150 | ◗ | 13-FASK50-M12-150 |
| 50 | M16 | 17 | 29 | 34 | 69 | 50 | ◗ | 13-FASK50-M16-50 |
| 50 | M16 | 17 | 29 | 36 | 119 | 100 | ◗ | 13-FASK50-M16-100 |
| 50 | M16 | 17 | 29 | 43 | 169 | 150 | ◗ | 13-FASK50-M16-150 |

## Hydrodehnspannfutter DIN 69871 AD/B
## *Hydraulic expansion chuck DIN 69871 AD/B*





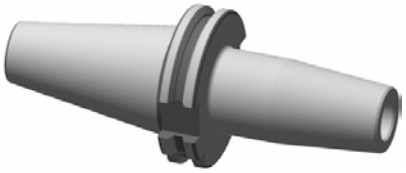

Gewuchtet G = 2,5 25.000 U/min.
*Balanced G = 2,5 25.000 U/min.*

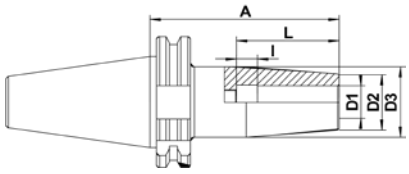
| SK | d1 mm | d2 mm | d4 mm | l1 mm | l2 mm | l5 mm | SW | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 40 | 6 | 26 | 49,5 | 80,5 | 37 | 29,5 | 5 | ○ | 13-HDSK40-6-80 |
| 40 | 8 | 28 | 49,5 | 80,5 | 37 | 30 | 5 | ○ | 13-HDSK40-8-80 |
| 40 | 10 | 30 | 49,5 | 80,5 | 41 | 31 | 5 | ○ | 13-HDSK40-10-80 |
| 40 | 12 | 32 | 49,5 | 80,5 | 46 | 31,5 | 5 | ○ | 13-HDSK40-12-80 |
| 40 | 14 | 34 | 49,5 | 80,5 | 46 | 31,5 | 5 | ○ | 13-HDSK40-14-80 |
| 40 | 16 | 38 | 49,5 | 80,5 | 49 | 33 | 5 | ○ | 13-HDSK40-16-80 |
| 40 | 18 | 40 | 49,5 | 80,5 | 49 | 33 | 5 | ○ | 13-HDSK40-18-80 |
| 40 | 20 | 49,5 | 49,5 | 64,5 | 51 | - | 6 | ○ | 13-HDSK40-20-65 |
| 40 | 20 | 42 | 49,5 | 80,5 | 51 | 34 | 6 | ○ | 13-HDSK40-20-80 |
| 50 | 12 | 32 | 49,5 | 80,5 | 46 | 31,5 | 5 | ○ | 13-HDSK50-12-80 |
| 50 | 20 | 42 | 49,5 | 80,5 | 80,5 | 33,7 | 5 | ○ | 13-HDSK50-20-80 |
| 50 | 32 | 72 | 72 | 81,0 | 81 | - | 6 | ○ | 13-HDSK50-32-80 |



○ **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Schrumpffutter DIN 69871 AD/B
## *Shrink chuck DIN 69871 AD/B*



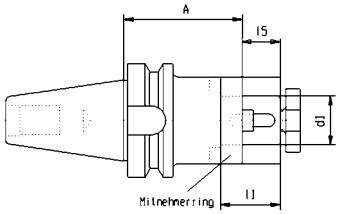



Gewuchtet G = 2,5 25.000 U/min.
*Balanced G = 2,5 25.000 U/min.*

| SK | D1 mm | D2 mm | D3 mm | L mm | l mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 40 | 3 | 10 | 20 | 15 | - | 80 | 13-SHFSK40-3-80 |
| 40 | 3 | 10 | 20 | 15 | - | 120 | 13-SHFSK40-3-120 |
| 40 | 3 | 10 | 20 | 15 | - | 160 | 13-SHFSK40-3-160 |
| 40 | 4 | 15 | 22 | 15 | - | 80 | 13-SHFSK40-4-80 |
| 40 | 4 | 15 | 22 | 15 | - | 120 | 13-SHFSK40-4-120 |
| 40 | 4 | 15 | 22 | 15 | - | 160 | 13-SHFSK40-4-160 |
| 40 | 5 | 15 | 22 | 20 | - | 80 | 13-SHFSK40-5-80 |
| 40 | 5 | 15 | 22 | 20 | - | 120 | 13-SHFSK40-5-120 |
| 40 | 5 | 15 | 22 | 20 | - | 160 | 13-SHFSK40-5-160 |
| 40 | 6 | 20 | 27 | 36 | 10 | 80 | 13-SHFSK40-6-80 |
| 40 | 6 | 20 | 27 | 36 | 10 | 120 | 13-SHFSK40-6-120 |
| 40 | 6 | 20 | 27 | 36 | 10 | 160 | 13-SHFSK40-6-160 |
| 40 | 8 | 20 | 27 | 36 | 10 | 80 | 13-SHFSK40-8-80 |
| 40 | 8 | 20 | 27 | 36 | 10 | 120 | 13-SHFSK40-8-120 |
| 40 | 8 | 20 | 27 | 36 | 10 | 160 | 13-SHFSK40-8-160 |
| 40 | 10 | 24 | 31 | 41 | 10 | 80 | 13-SHFSK40-10-80 |
| 40 | 10 | 24 | 31 | 41 | 10 | 120 | 13-SHFSK40-10-120 |
| 40 | 10 | 24 | 31 | 41 | 10 | 160 | 13-SHFSK40-10-160 |
| 40 | 12 | 24 | 31 | 47 | 10 | 80 | 13-SHFSK40-12-80 |
| 40 | 12 | 24 | 31 | 47 | 10 | 120 | 13-SHFSK40-12-120 |
| 40 | 12 | 24 | 31 | 47 | 10 | 160 | 13-SHFSK40-12-160 |
| 40 | 14 | 27 | 34 | 47 | 10 | 80 | 13-SHFSK40-14-80 |
| 40 | 14 | 27 | 34 | 47 | 10 | 120 | 13-SHFSK40-14-120 |
| 40 | 14 | 27 | 34 | 47 | 10 | 160 | 13-SHFSK40-14-160 |
| 40 | 16 | 27 | 34 | 50 | 10 | 80 | 13-SHFSK40-16-80 |
| 40 | 16 | 27 | 34 | 50 | 10 | 120 | 13-SHFSK40-16-120 |
| 40 | 16 | 27 | 34 | 50 | 10 | 160 | 13-SHFSK40-16-160 |
| 40 | 18 | 33 | 40 | 50 | 10 | 80 | 13-SHFSK40-18-80 |
| 40 | 18 | 33 | 40 | 50 | 10 | 120 | 13-SHFSK40-18-120 |
| 40 | 18 | 33 | 40 | 50 | 10 | 160 | 13-SHFSK40-18-160 |
| 40 | 20 | 33 | 40 | 52 | 10 | 80 | 13-SHFSK40-20-80 |
| 40 | 20 | 33 | 40 | 52 | 10 | 120 | 13-SHFSK40-20-120 |
| 40 | 20 | 33 | 40 | 52 | 10 | 160 | 13-SHFSK40-20-160 |
| 40 | 25 | 44 | 53 | 58 | 10 | 100 | 13-SHFSK40-25-100 |
| 40 | 25 | 44 | 53 | 58 | 10 | 120 | 13-SHFSK40-25-120 |
| 40 | 25 | 44 | 53 | 58 | 10 | 160 | 13-SHFSK40-25-160 |
| 40 | 32 | 44 | 53 | 62 | 10 | 100 | 13-SHFSK40-32-100 |
| 40 | 32 | 44 | 53 | 62 | 10 | 120 | 13-SHFSK40-32-120 |
| 40 | 32 | 44 | 53 | 62 | 10 | 160 | 13-SHFSK40-32-160 |

## Kombi-Fräseraufsteckdorne MAS BT
## *Combination shell mill adaptors MAS BT*

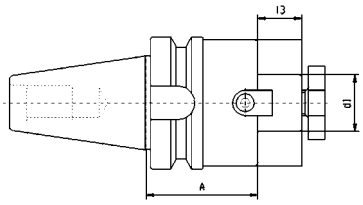





| SK | d1 mm | A mm | l1 mm | l5 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| SK 40 | 16 | 55 | 27 | 17 | ● | 13-7361-40-16 |
| SK 40 | 22 | 55 | 32 | 19 | ● | 13-7361-40-22 |
| SK 40 | 27 | 55 | 33 | 21 | ● | 13-7361-40-27 |
| SK 40 | 32 | 60 | 38 | 24 | ● | 13-7361-40-32 |
| SK 40 | 40 | 60 | 41 | 27 | ● | 13-7361-40-40 |
| SK 50 | 16 | 70 | 27 | 17 | ● | 13-7361-50-16 |
| SK 50 | 22 | 70 | 31 | 19 | ● | 13-7361-50-22 |
| SK 50 | 27 | 70 | 33 | 21 | ● | 13-7361-50-27 |
| SK 50 | 32 | 70 | 38 | 24 | ● | 13-7361-50-32 |
| SK 50 | 40 | 70 | 41 | 27 | ● | 13-7361-50-40 |
| SK 50 | 50 | 70 | 45 | 30 | ● | 13-7361-50-50 |

## Messerkopf-Aufnahmen MAS BT
## *Face mill holders MAS BT*



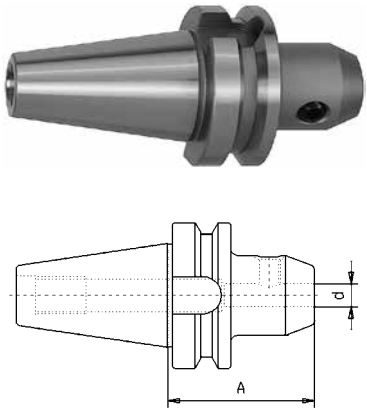



| SK | d1 mm | A mm | l3 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 40 | 16 | 40 | 17 | ● | 13-7388-40-16 |
| SK 40 | 16 | 100 | 17 | ◗ | 13-7388-40-16-100 |
| SK 40 | 22 | 45 | 19 | ● | 13-7388-40-22 |
| SK 40 | 22 | 100 | 19 | ◗ | 13-7388-40-22-100 |
| SK 40 | 27 | 40 | 21 | ● | 13-7388-40-27 |
| SK 40 | 27 | 100 | 21 | ◗ | 13-7388-40-27-100 |
| SK 40 | 32 | 50 | 24 | ● | 13-7388-40-32 |
| SK 40 | 32 | 100 | 24 | ◗ | 13-7388-40-32-100 |
| SK 40 | 40 | 50 | 27 | ● | 13-7388-40-40 |
| SK 40 | 40 | 100 | 27 | ◗ | 13-7388-40-40-100 |
| SK 50 | 22 | 60 | 19 | ● | 13-7388-50-22 |
| SK 50 | 22 | 100 | 19 | ◗ | 13-7388-50-22-100 |
| SK 50 | 27 | 60 | 21 | ● | 13-7388-50-27 |
| SK 50 | 27 | 100 | 21 | ◗ | 13-7388-50-27-100 |
| SK 50 | 32 | 55 | 24 | ● | 13-7388-50-32 |
| SK 50 | 32 | 100 | 24 | ◗ | 13-7388-50-32-100 |
| SK 50 | 40 | 55 | 27 | ● | 13-7388-50-40 |
| SK 50 | 40 | 100 | 27 | ◗ | 13-7388-50-40-100 |
| SK 50 | 50 | 78 | 30 | ● | 13-7388-50-50 |



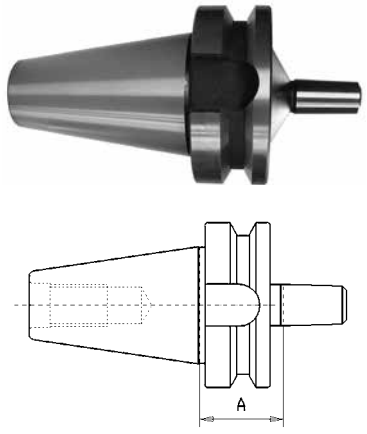
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Flächenspannfutter WELDON MAS BT
## *End mill adaptors WELDON MAS BT*



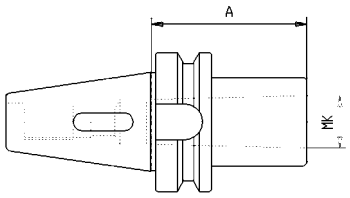

| SK | d mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 6 | 50 | 13-7624-40-6-50 |
| SK 40 | 6 | 100 | 13-7624-40-6-100 |
| SK 40 | 8 | 50 | 13-7624-40-8-50 |
| SK 40 | 8 | 100 | 13-7624-40-8-100 |
| SK 40 | 10 | 63 | 13-7624-40-10-63 |
| SK 40 | 10 | 100 | 13-7624-40-10-100 |
| SK 40 | 12 | 63 | 13-7624-40-12-63 |
| SK 40 | 12 | 100 | 13-7624-40-12-100 |
| SK 40 | 14 | 63 | 13-7624-40-14-63 |
| SK 40 | 16 | 63 | 13-7624-40-16-63 |
| SK 40 | 16 | 100 | 13-7624-40-16-100 |
| SK 40 | 18 | 63 | 13-7624-40-18-63 |
| SK 40 | 20 | 63 | 13-7624-40-20-63 |
| SK 40 | 20 | 100 | 13-7624-40-20-100 |
| SK 40 | 25 | 90 | 13-7624-40-25-90 |
| SK 40 | 32 | 100 | 13-7624-40-32-100 |
| SK 40 | 40 | 105 | 13-7624-40-40-105 |
| SK 50 | 6 | 63 | 13-7624-50-6-63 |
| SK 50 | 8 | 63 | 13-7624-50-8-63 |
| SK 50 | 10 | 63 | 13-7624-50-10-63 |
| SK 50 | 12 | 80 | 13-7624-50-12-80 |
| SK 50 | 14 | 80 | 13-7624-50-14-80 |
| SK 50 | 16 | 80 | 13-7624-50-16-80 |
| SK 50 | 20 | 80 | 13-7624-50-20-80 |
| SK 50 | 25 | 100 | 13-7624-50-25-100 |
| SK 50 | 32 | 105 | 13-7624-50-32-105 |
| SK 50 | 40 | 115 | 13-7624-50-40-115 |

## Bohrfutteraufnahmen MAS BT
## *Drill chuck adaptors MAS BT*




| SK | Kegel / *Taper* | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | B12 | 40 | 13-5373-40-B12 |
| SK 40 | B16 | 42 | 13-5373-40-B16 |
| SK 40 | B18 | 42 | 13-5373-40-B18 |
| SK 50 | B16 | 45 | 13-5373-50-B16 |
| SK 50 | B18 | 45 | 13-5373-50-B18 |

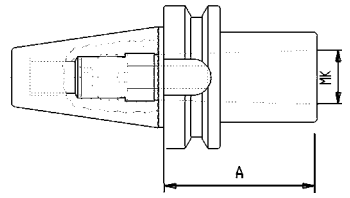





## Zwischenhülsen MAS BT für MK-Werkzeuge mit Austreiblappen
## *Reducing adaptors MAS BT for MT tools with tang*

| SK | MK / *MT* | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 1 | 50 | 13-1661-40/1 |
| SK 40 | 2 | 50 | 13-1661-40/2 |
| SK 40 | 3 | 70 | 13-1661-40/3 |
| SK 40 | 4 | 95 | 13-1661-40/4 |
| SK 50 | 1 | 45 | 13-1661-50/1 |
| SK 50 | 2 | 60 | 13-1661-50/2 |
| SK 50 | 3 | 65 | 13-1661-50/3 |
| SK 50 | 4 | 95 | 13-1661-50/4 |
| SK 50 | 5 | 105 | 13-1661-50/5 |



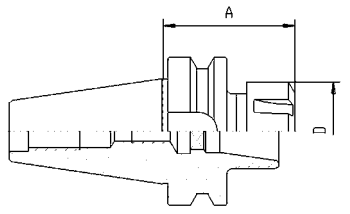



## Zwischenhülsen MAS BT für MK-Werkzeuge mit Anzugsgewinde
## *Reducing adaptors MAS BT for MT tools with thread*

- mit Anzugsgewinde DIN 6364 - *with thread DIN 6364*

| SK | MK / *MT* | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 1 | 50 | 13-1694-40/1 |
| SK 40 | 2 | 50 | 13-1694-40/2 |
| SK 40 | 3 | 70 | 13-1694-40/3 |
| SK 40 | 4 | 95 | 13-1694-40/4 |
| SK 50 | 1 | 45 | 13-1694-50/1 |
| SK 50 | 2 | 55 | 13-1694-50/2 |
| SK 50 | 3 | 65 | 13-1694-50/3 |
| SK 50 | 4 | 80 | 13-1694-50/4 |
| SK 50 | 5 | 120 | 13-1694-50/5 |

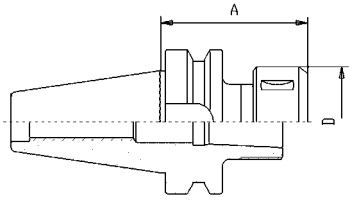





## Spannzangenfutter MAS BT ER
## *Collet chucks MAS BT ER*

| SK | Spannzange / *Collet* | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | ER 16 | 63 | 32 | 13-7626-40-16 |
| SK 40 | ER 25 | 60 | 42 | 13-7626-40-25 |
| SK 40 | ER 32 | 70 | 50 | 13-7626-40-32 |
| SK 40 | ER 40 | 80 | 63 | 13-7626-40-40 |
| SK 50 | ER 32 | 70 | 50 | 13-7626-50-32 |
| SK 50 | ER 40 | 80 | 63 | 13-7626-50-40 |





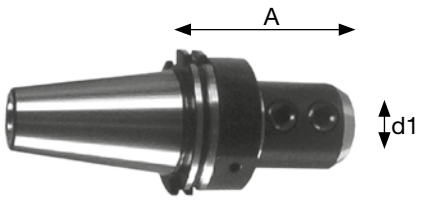

## Spannzangenfutter MAS BT OZ
## *Collet chucks MAS BT OZ*

| SK | Spannzange / *Collet* | A mm | D mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | OZ16 (415E) | 70 | 43 | 13-7606-40-16 |
| SK 40 | OZ25 (462E) | 70 | 60 | 13-7606-40-25 |
| SK 40 | OZ32 (467E) | 90 | 72 | 13-7606-40-32 |
| SK 50 | OZ25 (462E) | 70 | 60 | 13-7606-50-25 |
| SK 50 | OZ32 (467E) | 90 | 72 | 13-7606-50-32 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Fräseraufnahme MAS BT mit Kühlmittelring für IKZ
## *Weldon chuck MAS BT with cooling agent ring*



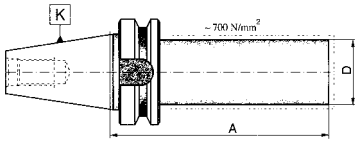

- mit Kühlmittelring für innere Kühlmittelzufuhr
- Aufnahmebohrung nach Weldon DIN 1835B

- *with cooling agent ring for internal-coolant supply*
- *according to DIN 1835B*

| SK | d1 mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 40 | 20 | 70 | 09-FSKR-BT-40-20 |
| SK 40 | 25 | 100 | 09-FSKR-BT-40-25 |
| SK 40 | 32 | 110 | 09-FSKR-BT-40-32 |
| SK 40 | 40 | 120 | 09-FSKR-BT-40-40 |
| SK 50 | 20 | 70 | 09-FSKR-BT-50-20 |
| SK 50 | 25 | 100 | 09-FSKR-BT-50-25 |
| SK 50 | 32 | 110 | 09-FSKR-BT-50-32 |
| SK 50 | 40 | 120 | 09-FSKR-BT-50-40 |

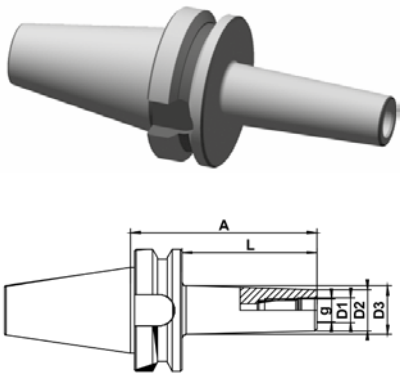
**Passende Reduzierhülsen siehe Seite 224**
***Suitable reduction sleeves see page 224***

## Rohlinge MAS BT
## *Blanks MAS BT*




| SK | D mm | A mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 40 | 40 | 280 | 8 | 13-2192-40-40-280 |
| SK 40 | 63 | 280 | 8 | 13-2192-40-63-280 |
| SK 50 | 50 | 330 | 16 | 13-2192-50-50-330 |
| SK 50 | 80 | 330 | 16 | 13-2192-50-80-330 |

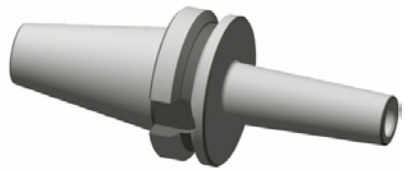
## Fräsdorne MAS BT AD/B für Aufschraubfräser
## *MAS BT AD/B Screw-on type milling arbors*

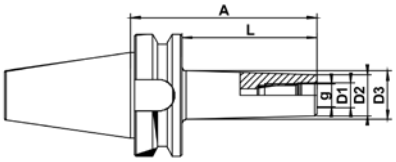



Gewuchtet G = 2,5 20.000 U/min.
*Balanced G = 2,5 20.000 U/min.*

| SK | g | D1 mm | D2 mm | D3 mm | A mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 40 | M6 | 6,5 | 10 | 13 | 55 | 25 | 13-FABT40-M6-25 |
| 40 | M6 | 6,5 | 10 | 20 | 77 | 50 | 13-FABT40-M6-50 |
| 40 | M6 | 6,5 | 10 | 23 | 102 | 75 | 13-FABT40-M6-75 |
| 40 | M8 | 8,5 | 13 | 15 | 52 | 25 | 13-FABT40-M8-25 |
| 40 | M8 | 8,5 | 13 | 23 | 77 | 50 | 13-FABT40-M8-50 |
| 40 | M8 | 8,5 | 13 | 23 | 102 | 75 | 13-FABT40-M8-75 |
| 40 | M8 | 8,5 | 13 | 25 | 120 | 100 | 13-FABT40-M8-100 |
| 40 | M10 | 10,5 | 18 | 20 | 52 | 25 | 13-FABT40-M10-25 |
| 40 | M10 | 10,5 | 18 | 23 | 77 | 50 | 13-FABT40-M10-50 |
| 40 | M10 | 10,5 | 18 | 28 | 102 | 75 | 13-FABT40-M10-75 |
| 40 | M10 | 10,5 | 18 | 32 | 127 | 100 | 13-FABT40-M10-100 |
| 40 | M12 | 12,5 | 21 | 24 | 52 | 25 | 13-FABT40-M12-25 |
| 40 | M12 | 12,5 | 21 | 28 | 77 | 50 | 13-FABT40-M12-50 |
| 40 | M12 | 12,5 | 21 | 31 | 102 | 75 | 13-FABT40-M12-75 |
| 40 | M12 | 12,5 | 21 | 31 | 138 | 100 | 13-FABT40-M12-100 |
| 40 | M16 | 17 | 29 | 29 | 52 | 25 | 13-FABT40-M16-25 |
| 40 | M16 | 17 | 29 | 34 | 77 | 50 | 13-FABT40-M16-50 |
| 40 | M16 | 17 | 29 | 34 | 102 | 75 | 13-FABT40-M16-75 |
| 40 | M16 | 17 | 29 | 41 | 138 | 100 | 13-FABT40-M16-100 |
| 40 | M16 | 17 | 29 | 44 | 152 | 125 | 13-FABT40-M16-125 |
| 40 | M16 | 17 | 29 | 50 | 188 | 150 | 13-FABT40-M16-150 |

Weitere *Größen siehe nächste Seite /*
*Further sizes see next page*



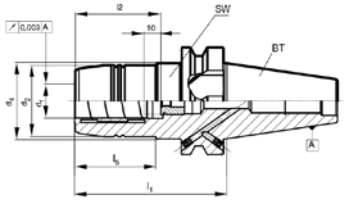



Gewuchtet G = 2,5 20.000 U/min.
*Balanced G = 2,5 20.000 U/min.*

| SK | g | D1 mm | D2 mm | D3 mm | A mm | L mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 50 | M8 | 8,5 | 13 | 23 | 88 | 50 | ◗ | 13-FABT50-M8-50 |
| 50 | M8 | 8,5 | 13 | 25 | 138 | 100 | ◗ | 13-FABT50-M8-100 |
| 50 | M8 | 8,5 | 13 | 30 | 188 | 150 | ◗ | 13-FABT50-M8-150 |
| 50 | M10 | 10,5 | 18 | 23 | 88 | 50 | ◗ | 13-FABT50-M10-50 |
| 50 | M10 | 10,5 | 18 | 32 | 138 | 100 | ◗ | 13-FABT50-M10-100 |
| 50 | M10 | 10,5 | 18 | 37 | 188 | 150 | ◗ | 13-FABT50-M10-150 |
| 50 | M12 | 12,5 | 21 | 24 | 88 | 50 | ◗ | 13-FABT50-M12-50 |
| 50 | M12 | 12,5 | 21 | 33 | 138 | 100 | ◗ | 13-FABT50-M12-100 |
| 50 | M12 | 12,5 | 21 | 40 | 188 | 150 | ◗ | 13-FABT50-M12-150 |
| 50 | M16 | 17 | 29 | 34 | 88 | 50 | ◗ | 13-FABT50-M16-50 |
| 50 | M16 | 17 | 29 | 36 | 138 | 100 | ◗ | 13-FABT50-M16-100 |
| 50 | M16 | 17 | 29 | 43 | 188 | 150 | ◗ | 13-FABT50-M16-150 |

## Hydrodehnspannfutter MAS BT
## *Hydraulic expansion chuck MAS BT*





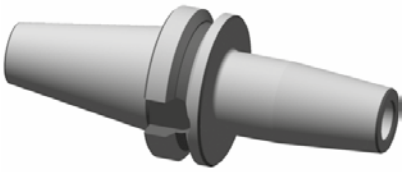

Gewuchtet G = 2,5 25.000 U/min.
*Balanced G = 2,5 25.000 U/min.*

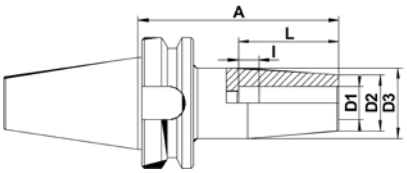
| SK | d1 mm | d2 mm | d4 mm | l1 mm | l2 mm | l5 mm | SW | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 40 | 6 | 26 | 44,5 | 90 | 37 | 43 | 5 | ○ | 13-HDBT40-6-90 |
| 40 | 8 | 28 | 44,5 | 90 | 37 | 44,5 | 5 | ○ | 13-HDBT40-8-90 |
| 40 | 10 | 30 | 44,5 | 90 | 41 | 44,5 | 5 | ○ | 13-HDBT40-10-90 |
| 40 | 12 | 32 | 44,5 | 90 | 46 | 44,5 | 5 | ○ | 13-HDBT40-12-90 |
| 40 | 14 | 34 | 44,5 | 90 | 46 | 44,5 | 5 | ○ | 13-HDBT40-14-90 |
| 40 | 16 | 38 | 44,5 | 90 | 49 | 47,5 | 5 | ○ | 13-HDBT40-16-90 |
| 40 | 18 | 40 | 44,5 | 90 | 49 | 47,5 | 5 | ○ | 13-HDBT40-18-90 |
| 40 | 20 | 49,5 | 49,5 | 72,5 | 51 | - | 5 | ○ | 13-HDBT40-20-70 |
| 40 | 20 | 42 | 44,5 | 90 | 51 | 47,5 | 6 | ○ | 13-HDBT40-20-90 |
| 50 | 12 | 32 | 44,5 | 90 | 46 | 34 | 5 | ○ | 13-HDBT50-12-90 |
| 50 | 20 | 42 | 44,5 | 90 | 51 | 34 | 5 | ○ | 13-HDBT50-20-90 |
| 50 | 32 | 72 | 72 | 90 | 61 | - | 6 | ○ | 13-HDBT50-32-90 |



○ **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Schrumpffutter MAS BT
## *Shrink chuck MAS BT*





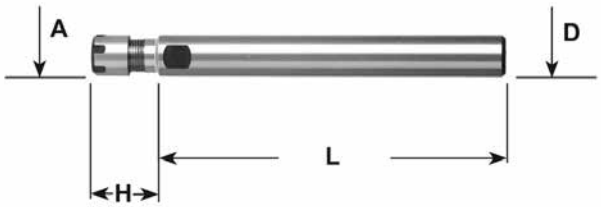

Gewuchtet G = 2,5 25.000 U/min.
*Balanced G = 2,5 25.000 U/min.*

| SK | D1 mm | D2 mm | D3 mm | L mm | l mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 40 | 3 | 10 | 20 | 15 | - | 90 | 13-SHFBT40-3-90 |
| 40 | 3 | 10 | 20 | 15 | - | 120 | 13-SHFBT40-3-120 |
| 40 | 3 | 10 | 20 | 15 | - | 160 | 13-SHFBT40-3-160 |
| 40 | 4 | 15 | 22 | 15 | - | 90 | 13-SHFBT40-4-90 |
| 40 | 4 | 15 | 22 | 15 | - | 120 | 13-SHFBT40-4-120 |
| 40 | 4 | 15 | 22 | 15 | - | 160 | 13-SHFBT40-4-160 |
| 40 | 5 | 15 | 22 | 20 | - | 90 | 13-SHFBT40-5-90 |
| 40 | 5 | 15 | 22 | 20 | - | 120 | 13-SHFBT40-5-120 |
| 40 | 5 | 15 | 22 | 20 | - | 160 | 13-SHFBT40-5-160 |
| 40 | 6 | 20 | 27 | 36 | 10 | 90 | 13-SHFBT40-6-90 |
| 40 | 6 | 20 | 27 | 36 | 10 | 120 | 13-SHFBT40-6-120 |
| 40 | 6 | 20 | 27 | 36 | 10 | 160 | 13-SHFBT40-6-160 |
| 40 | 8 | 20 | 27 | 36 | 10 | 90 | 13-SHFBT40-8-90 |
| 40 | 8 | 20 | 27 | 36 | 10 | 120 | 13-SHFBT40-8-120 |
| 40 | 8 | 20 | 27 | 36 | 10 | 160 | 13-SHFBT40-8-160 |
| 40 | 10 | 24 | 31 | 41 | 10 | 90 | 13-SHFBT40-10-90 |
| 40 | 10 | 24 | 31 | 41 | 10 | 120 | 13-SHFBT40-10-120 |
| 40 | 10 | 24 | 31 | 41 | 10 | 160 | 13-SHFBT40-10-160 |
| 40 | 12 | 24 | 31 | 47 | 10 | 90 | 13-SHFBT40-12-90 |
| 40 | 12 | 24 | 31 | 47 | 10 | 120 | 13-SHFBT40-12-120 |
| 40 | 12 | 24 | 31 | 47 | 10 | 160 | 13-SHFBT40-12-160 |
| 40 | 14 | 27 | 34 | 47 | 10 | 90 | 13-SHFBT40-14-90 |
| 40 | 14 | 27 | 34 | 47 | 10 | 120 | 13-SHFBT40-14-120 |
| 40 | 14 | 27 | 34 | 47 | 10 | 160 | 13-SHFBT40-14-160 |
| 40 | 16 | 27 | 34 | 50 | 10 | 90 | 13-SHFBT40-16-90 |
| 40 | 16 | 27 | 34 | 50 | 10 | 120 | 13-SHFBT40-16-120 |
| 40 | 16 | 27 | 34 | 50 | 10 | 160 | 13-SHFBT40-16-160 |
| 40 | 18 | 33 | 40 | 50 | 10 | 90 | 13-SHFBT40-18-90 |
| 40 | 18 | 33 | 40 | 50 | 10 | 120 | 13-SHFBT40-18-120 |
| 40 | 18 | 33 | 40 | 50 | 10 | 160 | 13-SHFBT40-18-160 |
| 40 | 20 | 33 | 40 | 52 | 10 | 90 | 13-SHFBT40-20-90 |
| 40 | 20 | 33 | 40 | 52 | 10 | 120 | 13-SHFBT40-20-120 |
| 40 | 20 | 33 | 40 | 52 | 10 | 160 | 13-SHFBT40-20-160 |
| 40 | 25 | 44 | 53 | 58 | 10 | 100 | 13-SHFBT40-25-100 |
| 40 | 25 | 44 | 53 | 58 | 10 | 120 | 13-SHFBT40-25-120 |
| 40 | 25 | 44 | 53 | 58 | 10 | 160 | 13-SHFBT40-25-160 |
| 40 | 32 | 44 | 53 | 62 | 10 | 100 | 13-SHFBT40-32-100 |
| 40 | 32 | 44 | 53 | 62 | 10 | 120 | 13-SHFBT40-32-120 |
| 40 | 32 | 44 | 53 | 62 | 10 | 160 | 13-SHFBT40-32-160 |

# Aufnahmen mit Zylinderschaft
*Straight shank tooling*

## Spannzangenfutter ER mit Zylinderschaft und Minimutter
## *Collet chucks ER with cylindrical shank and mini nut*





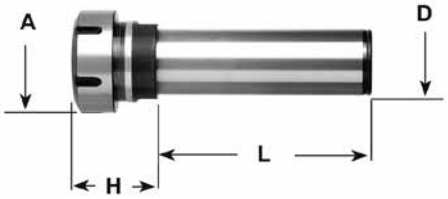

| | D mm | Spannzange / *Collet* | L mm | A mm | H mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| NEU/*NEW* | 12 | ER 8 | 100 | 12 | 23 | ● | 13-7812-12-8M-100 |
| | 12 | ER 11 | 100 | 16 | 26 | ● | 13-7812-12-11M-100 |
| NEU/*NEW* | 12 | ER 11 | 140 | 16 | 28 | ● | 13-7812-12-11M-140 |
| | 12 | ER 16 | 80 | 22 | 35 | ● | 13-7812-12-16M-80 |
| | 16 | ER 11 | 100 | 16 | 19 | ● | 13-7812-16-11M-100 |
| | 16 | ER 11 | 130 | 16 | 19 | ● | 13-7812-16-11M-130 |
| | 16 | ER 11 | 160 | 16 | 18 | ● | 13-7812-16-11M-160 |
| | 16 | ER 16 | 100 | 22 | 35 | ● | 13-7812-16-16M-100 |
| | 16 | ER 16 | 130 | 22 | 35 | ● | 13-7812-16-16M-130 |
| | 16 | ER 16 | 160 | 22 | 33 | ● | 13-7812-16-16M-160 |
| | 20 | ER 11 | 100 | 16 | 19 | ● | 13-7812-20-11M-100 |
| | 20 | ER 11 | 130 | 16 | 19 | ● | 13-7812-20-11M-130 |
| | 20 | ER 16 | 100 | 22 | 31 | ● | 13-7812-20-16M-100 |
| | 20 | ER 16 | 130 | 22 | 31 | ● | 13-7812-20-16M-130 |
| | 20 | ER 16 | 165 | 22 | 22 | ● | 13-7812-20-16M-160 |
| NEU/*NEW* | 20 | ER 20 | 130 | 28 | 45 | ● | 13-7812-20-20M-130 |
| NEU/*NEW* | 20 | ER 20 | 160 | 28 | 45 | ● | 13-7812-20-20M-160 |
| NEU/*NEW* | 20 | ER 20 | 200 | 28 | 45 | ● | 13-7812-20-20M-200 |
| NEU/*NEW* | 25 | ER 11 | 160 | 16 | 28 | ● | 13-7812-25-11M-160 |
| | 25 | ER 16 | 100 | 22 | 25 | ● | 13-7812-25-16M-100 |
| | 25 | ER 16 | 130 | 22 | 25 | ● | 13-7812-25-16M-130 |
| | 25 | ER 16 | 163 | 22 | 22 | ● | 13-7812-25-16M-160 |
| NEU/*NEW* | 25 | ER 20 | 130 | 28 | 40 | ● | 13-7812-25-20M-130 |



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

## Spannzangenfutter ER mit Zylinderschaft u. Standardmutter
## *Collet chucks ER with cylindrical shank and standard nut*






| | D mm | Spannzange / *Collet* | L mm | A mm | H mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| NEU/*NEW* | 20 | ER 25 | 50 | 42 | 42 | ● | 13-7812-20-25-50 |
| | 20 | ER 25 | 100 | 42 | 42 | ● | 13-7812-20-25-100 |
| | 20 | ER 25 | 130 | 42 | 40 | ● | 13-7812-20-25-130 |
| | 20 | ER 25 | 160 | 42 | 46 | ● | 13-7812-20-25-160 |
| | 20 | ER 32 | 100 | 50 | 47 | ● | 13-7812-20-32-100 |
| | 20 | ER 32 | 130 | 50 | 53 | ● | 13-7812-20-32-130 |
| | 20 | ER 32 | 160 | 50 | 53 | ● | 13-7812-20-32-160 |
| NEU/*NEW* | 25 | ER 20 | 160 | 28 | 45 | ● | 13-7812-25-20-160 |
| NEU/*NEW* | 25 | ER 25 | 50 | 42 | 48 | ● | 13-7812-25-25-50 |
| | 25 | ER 25 | 100 | 42 | 45 | ● | 13-7812-25-25-100 |
| | 25 | ER 25 | 160 | 42 | 45 | ● | 13-7812-25-25-160 |
| | 25 | ER 32 | 50 | 50 | 50 | ● | 13-7812-25-32-50 |
| | 25 | ER 32 | 100 | 50 | 50 | ● | 13-7812-25-32-100 |
| | 25 | ER 32 | 130 | 50 | 53 | ● | 13-7812-25-32-130 |
| | 25 | ER 32 | 160 | 50 | 48 | ● | 13-7812-25-32-160 |
| | 25 | ER 40 | 60 | 63 | 55 | ● | 13-7812-25-40-60 |
| | 32 | ER 25 | 100 | 42 | 27 | ● | 13-7812-32-25-100 |
| NEU/*NEW* | 32 | ER 25 | 160 | 42 | 48 | ● | 13-7812-32-25-160 |
| NEU/*NEW* | 32 | ER 32 | 50 | 50 | 50 | ● | 13-7812-32-32-50 |
| | 32 | ER 32 | 100 | 50 | 50 | ● | 13-7812-32-32-100 |
| | 32 | ER 32 | 130 | 50 | 42 | ● | 13-7812-32-32-130 |
| | 32 | ER 32 | 160 | 50 | 48 | ● | 13-7812-32-32-160 |
| | 32 | ER 40 | 70 | 63 | 35 | ● | 13-7812-32-40-70 |
| NEU/*NEW* | 32 | ER 40 | 130 | 63 | 60 | ● | 13-7812-32-40-130 |
| NEU/*NEW* | 40 | ER 32 | 80 | 50 | 45 | ● | 13-7812-40-32-80 |
| | 40 | ER 32 | 135 | 50 | 17 | ● | 13-7812-40-32-130 |
| | 40 | ER 32 | 160 | 50 | 33 | ● | 13-7812-40-32-160 |
| | 40 | ER 40 | 130 | 63 | 50 | ● | 13-7812-40-40-130 |
| | 40 | ER 40 | 160 | 63 | 50 | ● | 13-7812-40-40-160 |
| | 50 | ER 40 | 120 | 63 | 35 | ● | 13-7812-50-40-120 |
| NEU/*NEW* | 50 | ER 40 | 160 | 63 | 35 | ● | 13-7812-50-40-160 |

# Aufnahmen mit Zylinderschaft
*Straight shank tooling*

## Reduzierhülsen für Fräseraufnahmen mit IKZ
## *Reduction sleeves f. Weldon chucks with coolant agent ring*



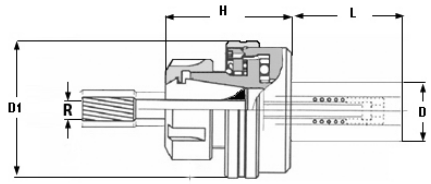
| Ø mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 25 x 16 | ○ | 09-RZ-25-16 |
| 25 x 20 | ○ | 09-RZ-25-20 |
| 32 x 20 | ○ | 09-RZ-32-20 |
| 32 x 25 | ○ | 09-RZ-32-25 |
| 40 x 20 | ○ | 09-RZ-40-20 |
| 40 x 25 | ○ | 09-RZ-40-25 |
| 40 x 32 | ○ | 09-RZ-40-32 |

## Pendelhalter mit Zylinderschaft
## *Floating chucks with cylindrical shank*



- mit einstellbarem Radialspiel
- Einstellbereiche: Freipendeln und Parallelpendeln
- Federkraft, Zentrierkraft und Freipendeln einstellbar

- *with adjustable radial floating movement*
- *application: Free and parallel floating*
- *spring force, centering force and floating movement adjustable*




| Spannzange / *Collet* | D mm | H mm | D1 mm | L mm | R mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| ER 11 | 16 | 40 | 42 | 46 | 1 | ◗ | 09-PHZ-11-16 |
| ER 11 | 20 | 40 | 42 | 46 | 1 | ◗ | 09-PHZ-11-20 |
| ER 16 | 16 | 44 | 42 | 46 | 1 | ◗ | 09-PHZ-16-16 |
| ER 16 | 25 | 44 | 42 | 46 | 1 | ◗ | 09-PHZ-16-25 |
| ER 20 | 16 | 50 | 50 | 46 | 1 | ◗ | 09-PHZ-20-16 |
| ER 20 | 20 | 50 | 50 | 46 | 1 | ◗ | 09-PHZ-20-20 |
| ER 20 | 25 | 50 | 50 | 46 | 1 | ◗ | 09-PHZ-20-25 |
| ER 25 | 20 | 53 | 57 | 46 | 1 | ◗ | 09-PHZ-25-20 |
| ER 25 | 25 | 53 | 57 | 46 | 1 | ◗ | 09-PHZ-25-25 |
| ER 32 | 25 | 58 | 69 | 50 | 1,5 | ◗ | 09-PHZ-32-25 |
| ER 32 | 32 | 58 | 69 | 50 | 1,5 | ◗ | 09-PHZ-32-32 |
| ER 40 | 25 | 64 | 79 | 50 | 1,5 | ◗ | 09-PHZ-40-25 |
| ER 40 | 32 | 64 | 79 | 50 | 1,5 | ◗ | 09-PHZ-40-32 |

## Sägeblattaufnahmen
## *Saw-blade holders*



- zur präzisen Aufnahme von Sägeblättern in Flächenspannfuttern
- Lieferumfang: Aufnahme, Zwischenscheibe und Spannschraube

- *for precision use of saw blades in Weldon chucks*
- *scope of supply: saw blade holder, intermediate disc, clamping screw*

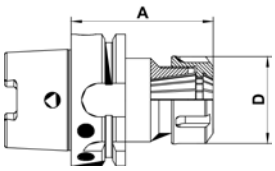
| Sägeblatt-Ø / *Saw-blade-Ø* mm | Gesamtlänge / *Total length* mm | Schaft-Ø / *Shank-Ø* mm | Aufnahme-Ø / *Mounting-Ø* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 20 | 94 | 20 | 5 | ● | 15-00S2020 |
| 25 | 104 | 20 | 8 | ● | 15-00S2025 |
| 32 | 110 | 20 | 8 | ● | 15-00S2032 |
| 40 | 114 | 20 | 10 | ● | 15-00S2040 |
| 50 | 141 | 25 | 13 | ● | 15-00S2550 |
| 63 | 141 | 25 | 16 | ● | 15-00S2563 |
| 80 | 160 | 25 | 22 | ● | 15-00S2580 |
| 100 | 160 | 25 | 22 | ● | 15-00S25100 |



● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

## Spannzangenfutter ER - Form A
## *Collet chucks ER - form A*



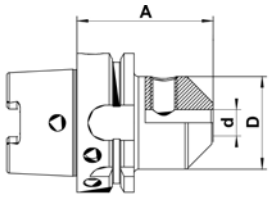



Gewuchtet G = 6,3 20.000 U/min.
*Balanced G = 6,3 20.000 U/min.*

| HSK | Für Spannzange / *For collet* | Spannbereich / *Clamping range* mm | D mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 63A | ER16 | 1-10 | 28 | 100 | 17-SF63A-ER16-100 |
| 63A | ER16 | 1-10 | 28 | 160 | 17-SF63A-ER16-160 |
| 63A | ER25 | 2-16 | 42 | 100 | 17-SF63A-ER25-100 |
| 63A | ER25 | 2-16 | 42 | 160 | 17-SF63A-ER25-160 |
| 63A | ER32 | 2-20 | 50 | 100 | 17-SF63A-ER32-100 |
| 63A | ER32 | 2-20 | 50 | 160 | 17-SF63A-ER32-160 |
| 63A | ER40 | 3-26 | 63 | 120 | 17-SF63A-ER40-120 |
| 63A | ER40 | 3-26 | 63 | 160 | 17-SF63A-ER40-160 |

## Flächenspannfutter WELDON - Form A
## *End mill adaptors WELDON - form A*





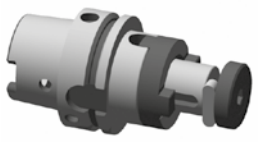

Gewuchtet G = 6,3 20.000 U/min.
*Balanced G = 6,3 20.000 U/min.*

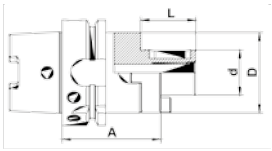
| HSK | d mm | D mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 63A | 6 | 25 | 65 | 17-WE63A-6-65 |
| 63A | 6 | 25 | 100 | 17-WE63A-6-100 |
| 63A | 8 | 28 | 65 | 17-WE63A-8-65 |
| 63A | 8 | 28 | 100 | 17-WE63A-8-100 |
| 63A | 10 | 35 | 65 | 17-WE63A-10-65 |
| 63A | 10 | 35 | 100 | 17-WE63A-10-100 |
| 63A | 12 | 42 | 80 | 17-WE63A-12-80 |
| 63A | 12 | 42 | 100 | 17-WE63A-12-100 |
| 63A | 14 | 44 | 80 | 17-WE63A-14-80 |
| 63A | 14 | 44 | 100 | 17-WE63A-14-100 |
| 63A | 16 | 48 | 80 | 17-WE63A-16-80 |
| 63A | 16 | 48 | 100 | 17-WE63A-16-100 |
| 63A | 16 | 48 | 160 | 17-WE63A-16-160 |
| 63A | 18 | 50 | 80 | 17-WE63A-18-80 |
| 63A | 18 | 50 | 100 | 17-WE63A-18-100 |
| 63A | 20 | 52 | 80 | 17-WE63A-20-80 |
| 63A | 20 | 52 | 100 | 17-WE63A-20-100 |
| 63A | 25 | 65 | 110 | 17-WE63A-25-110 |
| 63A | 32 | 72 | 110 | 17-WE63A-32-110 |
| 63A | 40 | 80 | 125 | 17-WE63A-40-125 |

**Werkzeugaufnahmen mit HSK auch in Form C, E und F lieferbar**
***HSK tool holders are also available in form C, E and F***

# DIN 69893 HSK - A
# *DIN 69893 HSK - A*

## Kombi-Fräseraufsteckdorne DIN 6358 - Form A
## *Combination shell mill adaptors DIN 6358 - form A*



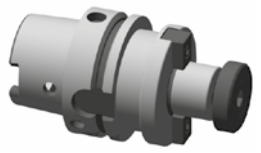


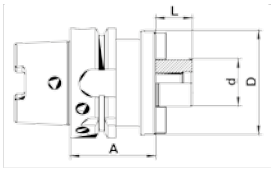

| HSK | d mm | D mm | A mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 63A | 16 | 32 | 60 | 27 | 17-KD63A-16-60 |
| 63A | 16 | 32 | 100 | 27 | 17-KD63A-16-100 |
| 63A | 22 | 40 | 60 | 31 | 17-KD63A-22-60 |
| 63A | 22 | 40 | 100 | 31 | 17-KD63A-22-100 |
| 63A | 27 | 48 | 60 | 33 | 17-KD63A-27-60 |
| 63A | 27 | 48 | 100 | 33 | 17-KD63A-27-100 |
| 63A | 32 | 58 | 65 | 38 | 17-KD63A-32-65 |
| 63A | 32 | 58 | 100 | 38 | 17-KD63A-32-100 |
| 63A | 40 | 70 | 70 | 41 | 17-KD63A-40-70 |

Gewuchtet G = 6,3 20.000 U/min.
*Balanced G = 6,3 20.000 U/min.*

## Messerkopf-Aufnahmen DIN 6357 - Form A
## *Shell mill holders DIN 6357 - form A*

- mit vergrößertem Bunddurchmesser - *with enlarged collar diameter*

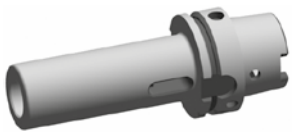


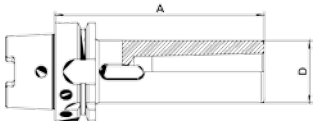



| HSK | d mm | D mm | L mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 63A | 16 | 38 | 17 | 45 | 17-MS63A-16-45 |
| 63A | 16 | 38 | 17 | 100 | 17-MS63A-16-100 |
| 63A | 22 | 48 | 19 | 50 | 17-MS63A-22-50 |
| 63A | 22 | 48 | 19 | 100 | 17-MS63A-22-100 |
| 63A | 27 | 58 | 21 | 55 | 17-MS63A-27-55 |
| 63A | 27 | 58 | 21 | 100 | 17-MS63A-27-100 |
| 63A | 32 | 78 | 24 | 60 | 17-MS63A-32-60 |
| 63A | 32 | 78 | 24 | 100 | 17-MS63A-32-100 |
| 63A | 40 | 88 | 27 | 65 | 17-MS63A-40-65 |
| 63A | 40 | 88 | 27 | 100 | 17-MS63A-40-100 |

Gewuchtet G = 6,3 20.000 U/min.
*Balanced G = 6,3 20.000 U/min.*

## Einsatzhülsen für MK-Werkzeuge mit Austreiblappen - Form A
## *Adaptors for morse taper tools with tang - form A*






| HSK | MK / *MT* | D mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 63A | 1 | 25 | 100 | 17-EH63A-MK1 |
| 63A | 2 | 32 | 115 | 17-EH63A-MK2 |
| 63A | 3 | 40 | 135 | 17-EH63A-MK3 |
| 63A | 4 | 48 | 160 | 17-EH63A-MK4 |

**Werkzeugaufnahmen mit HSK auch in Form C, E und F lieferbar**
***HSK tool holders are also available in form C, E and F***



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Bohrstangenrohling - Form A
## *Blank adaptor - form A*



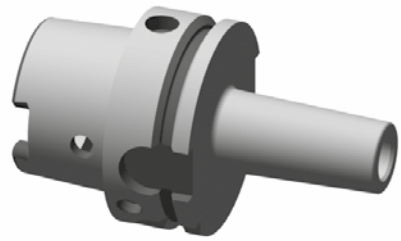
| HSK | D mm | d mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 63A | 63 | 50 | 160 | 17-BR63A-63-160 |

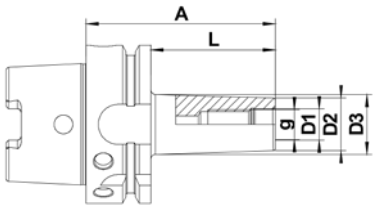
## Prüfdorn - Form A
## *Test arbor - form A*



| HSK | D mm | A mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 63A | 40 | 300 | 17-PD63A-40-300 |

## Fräsdorne für Einschraubfräser - Form A
## *Screw-in type milling arbors - form A*






| HSK | g | D1 mm | D2 mm | D3 mm | A mm | L mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 63A | M6 | 6,5 | 10 | 13 | 51 | 25 | 17-FA63A-M6-25 |
| 63A | M8 | 8,5 | 13 | 15 | 51 | 25 | 17-FA63A-M8-25 |
| 63A | M8 | 8,5 | 13 | 23 | 76 | 50 | 17-FA63A-M8-50 |
| 63A | M8 | 8,5 | 13 | 23 | 101 | 75 | 17-FA63A-M8-75 |
| 63A | M10 | 10,5 | 18 | 20 | 51 | 25 | 17-FA63A-M10-25 |
| 63A | M10 | 10,5 | 18 | 23 | 76 | 50 | 17-FA63A-M10-50 |
| 63A | M10 | 10,5 | 18 | 32 | 126 | 100 | 17-FA63A-M10-100 |
| 63A | M10 | 10,5 | 18 | 36,5 | 176 | 150 | 17-FA63A-M10-150 |
| 63A | M12 | 12,5 | 21 | 24 | 51 | 25 | 17-FA63A-M12-25 |
| 63A | M12 | 12,5 | 21 | 24 | 76 | 50 | 17-FA63A-M12-50 |
| 63A | M12 | 12,5 | 21 | 31 | 101 | 75 | 17-FA63A-M12-75 |
| 63A | M12 | 12,5 | 21 | 33 | 126 | 100 | 17-FA63A-M12-100 |
| 63A | M12 | 12,5 | 21 | 40 | 176 | 150 | 17-FA63A-M12-150 |
| 63A | M16 | 17 | 29 | 29 | 51 | 25 | 17-FA63A-M16-25 |
| 63A | M16 | 17 | 29 | 34 | 76 | 50 | 17-FA63A-M16-50 |
| 63A | M16 | 17 | 29 | 34 | 101 | 75 | 17-FA63A-M16-75 |
| 63A | M16 | 17 | 29 | 36 | 126 | 100 | 17-FA63A-M16-100 |
| 63A | M16 | 17 | 29 | 42,5 | 176 | 150 | 17-FA63A-M16-150 |

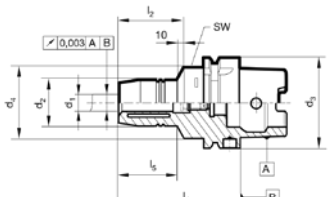
Gewuchtet G = 6,3 15.000 U/min.
*Balanced G = 6,3 15.000 U/min.*

**Werkzeugaufnahmen mit HSK auch in Form C, E und F lieferbar**
***HSK tool holders are also available in form C, E and F***

# DIN 69893 HSK - A
# *DIN 69893 HSK - A*

## Hydrodehnspannfutter - Form A
## *Hydraulic expansion chuck - form A*

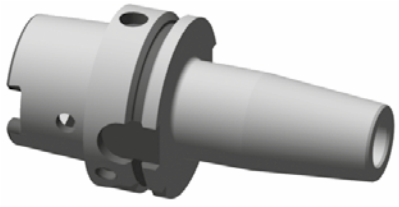


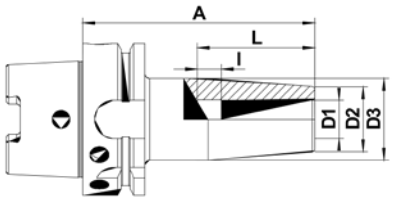



| HSK | d1 mm | d2 mm | d4 mm | l1 mm | l2 mm | l5 mm | SW | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 63A | 6 | 26 | 50 | 70 | 37 | 24 | 5 | ○ | 17-HD63A-6-70 |
| 63A | 8 | 28 | 50 | 70 | 37 | 24 | 5 | ○ | 17-HD63A-8-70 |
| 63A | 10 | 30 | 50 | 80 | 41 | 35 | 5 | ○ | 17-HD63A-10-80 |
| 63A | 12 | 32 | 50 | 85 | 46 | 40 | 5 | ○ | 17-HD63A-12-85 |
| 63A | 14 | 34 | 50 | 85 | 46 | 40 | 5 | ○ | 17-HD63A-14-85 |
| 63A | 16 | 38 | 50 | 95 | 49 | 46 | 5 | ○ | 17-HD63A-16-95 |
| 63A | 18 | 40 | 50 | 95 | 49 | 47 | 5 | ○ | 17-HD63A-18-95 |
| 63A | 20 | 42 | 50 | 95 | 51 | 48 | 5 | ○ | 17-HD63A-20-95 |
| 63A | 25 | 50 | 50 | 110 | 57 | 59 | 6 | ○ | 17-HD63A-25-110 |
| 63A | 32 | 32 | 50 | 125 | 61 | 63 | 6 | ○ | 17-HD63A-32-125 |

Gewuchtet G = 2,5 25.000 U/min.
*Balanced G = 2,5 25.000 U/min.*

## Schrumpffutter - Form A
## *Shrink chuck - form A*






| HSK | D1 mm | D2 mm | D3 mm | L mm | l mm | A mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 63A | 3 | 10 | 20 | 15 | - | 80 | ◗ | 17-SHF63A-3-80 |
| 63A | 3 | 10 | 20 | 15 | - | 120 | ◗ | 17-SHF63A-3-120 |
| 63A | 3 | 10 | 20 | 15 | - | 160 | ◗ | 17-SHF63A-3-160 |
| 63A | 4 | 15 | 22 | 15 | - | 80 | ◗ | 17-SHF63A-4-80 |
| 63A | 4 | 15 | 22 | 15 | - | 120 | ◗ | 17-SHF63A-4-120 |
| 63A | 4 | 15 | 22 | 15 | - | 160 | ◗ | 17-SHF63A-4-160 |
| 63A | 5 | 15 | 22 | 20 | - | 80 | ◗ | 17-SHF63A-5-80 |
| 63A | 5 | 15 | 22 | 20 | - | 120 | ◗ | 17-SHF63A-5-120 |
| 63A | 5 | 15 | 22 | 20 | - | 160 | ◗ | 17-SHF63A-5-160 |
| 63A | 6 | 20 | 27 | 36 | 10 | 80 | ◗ | 17-SHF63A-6-80 |
| 63A | 6 | 20 | 27 | 36 | 10 | 120 | ◗ | 17-SHF63A-6-120 |
| 63A | 6 | 20 | 27 | 36 | 10 | 160 | ◗ | 17-SHF63A-6-160 |
| 63A | 8 | 20 | 27 | 36 | 10 | 80 | ◗ | 17-SHF63A-8-80 |
| 63A | 8 | 20 | 27 | 36 | 10 | 120 | ◗ | 17-SHF63A-8-120 |
| 63A | 8 | 20 | 27 | 36 | 10 | 160 | ◗ | 17-SHF63A-8-160 |
| 63A | 10 | 24 | 31 | 41 | 10 | 85 | ◗ | 17-SHF63A-10-85 |
| 63A | 10 | 24 | 31 | 41 | 10 | 120 | ◗ | 17-SHF63A-10-120 |
| 63A | 10 | 24 | 31 | 41 | 10 | 160 | ◗ | 17-SHF63A-10-160 |
| 63A | 12 | 24 | 31 | 47 | 10 | 90 | ◗ | 17-SHF63A-12-90 |
| 63A | 12 | 24 | 31 | 47 | 10 | 120 | ◗ | 17-SHF63A-12-120 |
| 63A | 12 | 24 | 31 | 47 | 10 | 160 | ◗ | 17-SHF63A-12-160 |
| 63A | 14 | 27 | 34 | 47 | 10 | 90 | ◗ | 17-SHF63A-14-90 |
| 63A | 14 | 27 | 34 | 47 | 10 | 120 | ◗ | 17-SHF63A-14-120 |
| 63A | 14 | 27 | 34 | 47 | 10 | 160 | ◗ | 17-SHF63A-14-160 |

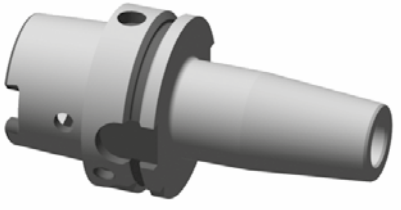
Gewuchtet G = 2,5 25.000 U/min.
*Balanced G = 2,5 25.000 U/min.*

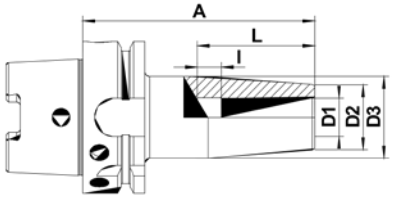
**Werkzeugaufnahmen mit HSK auch in Form C, E und F lieferbar**
***HSK tool holders are also available in form C, E and F***



○ **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
◔ **auf Anfrage** / ***on request***

## Schrumpffutter - Form A
## *Shrink chuck - form A*






| HSK | D1 mm | D2 mm | D3 mm | L mm | l mm | A mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 63A | 16 | 27 | 34 | 50 | 10 | 95 | ◗ | 17-SHF63A-16-95 |
| 63A | 16 | 27 | 34 | 50 | 10 | 120 | ◗ | 17-SHF63A-16-120 |
| 63A | 16 | 27 | 34 | 50 | 10 | 160 | ◗ | 17-SHF63A-16-160 |
| 63A | 18 | 33 | 40 | 50 | 10 | 95 | ◗ | 17-SHF63A-18-95 |
| 63A | 18 | 33 | 40 | 50 | 10 | 120 | ◗ | 17-SHF63A-18-120 |
| 63A | 18 | 33 | 40 | 50 | 10 | 160 | ◗ | 17-SHF63A-18-160 |
| 63A | 20 | 33 | 40 | 52 | 10 | 100 | ◗ | 17-SHF63A-20-100 |
| 63A | 20 | 33 | 40 | 52 | 10 | 120 | ◗ | 17-SHF63A-20-120 |
| 63A | 20 | 33 | 40 | 52 | 10 | 160 | ◗ | 17-SHF63A-20-160 |
| 63A | 25 | 44 | 53 | 58 | 10 | 120 | ◗ | 17-SHF63A-25-120 |
| 63A | 25 | 44 | 53 | 58 | 10 | 160 | ◗ | 17-SHF63A-25-160 |
| 63A | 32 | 44 | 53 | 62 | 10 | 120 | ◗ | 17-SHF63A-32-120 |
| 63A | 32 | 44 | 53 | 62 | 10 | 160 | ◗ | 17-SHF63A-32-160 |

Gewuchtet G = 2,5 25.000 U/min.
*Balanced G = 2,5 25.000 U/min.*

## Kühlmittelröhrchen
## *Coolant tubes*



| Für / *For* HSK | D mm | Gewinde / *Thread* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 32 | 6 | M10x1 | ○ | 17-KMR32 |
| 40 | 8 | M12x1 | ● | 17-KMR40 |
| 50 | 10 | M16x1 | ● | 17-KMR50 |
| 63 | 12 | M18x1 | ● | 17-KMR63 |
| 80 | 14 | M20x1,5 | ● | 17-KMR80 |
| 100 | 16 | M24x1,5 | ● | 17-KMR100 |

## Schlüssel für Kühlmittelrohre
## *Wrench for coolant tubes*

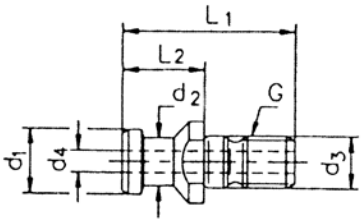


| HSK | | Art.-Nr. / *Order no.* |
|---|---|---|
| 63 | ● | 17-SCH-KMR63 |
| 100 | ● | 17-SCH-KMR100 |

**Werkzeugaufnahmen mit HSK auch in Form B, C, E und F lieferbar**
***HSK tool holders are also available in form B, C, E and F***

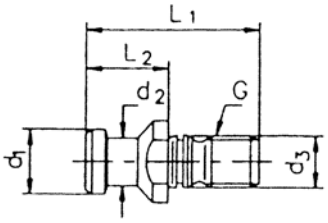
# Anzugsbolzen
# *Pull studs*

## DIN 69872 A, mit Bohrung
## *DIN 69872 A, with bore*



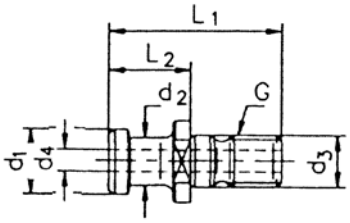

| SK | G | d1 mm | d2 mm | d3 mm | d4 mm | L1 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 30 | M 12 | 13 | 9 | 13 | -- | 44 | 24 | 13-9884A-30-44 |
| 40 | M 16 | 19 | 14 | 17 | 7 | 54 | 26 | 13-9884A-40-54 |
| 50 | M 24 | 28 | 21 | 25 | 11,5 | 74 | 36 | 13-9884A-50-74 |

## DIN 69872 B, ohne Bohrung
## *DIN 69872 B, without bore*



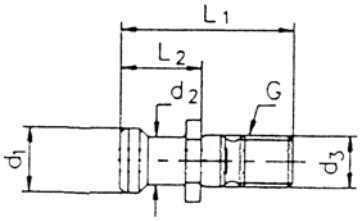

| SK | G | d1 mm | d2 mm | d3 mm | L1 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 30 | M 12 | 13 | 9 | 13 | 44 | 24 | 13-9884B-30-44 |
| 40 | M 16 | 19 | 14 | 17 | 54 | 26 | 13-9884B-40-54 |
| 50 | M 24 | 28 | 21 | 25 | 74 | 36 | 13-9884B-50-74 |

## ISO 7388 II A, mit Bohrung
## *ISO 7388 II A, with bore*



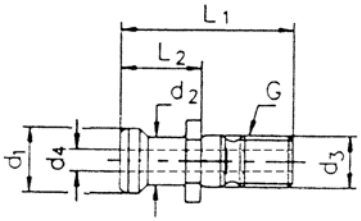

| SK | G | d1 mm | d2 mm | d3 mm | d4 mm | L1 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 40 | M 16 | 19 | 14 | 17 | 7 | 54 | 26 | 13-9885A-40-54 |
| 50 | M 24 | 28 | 21 | 25 | 11,5 | 74 | 36 | 13-9885A-50-74 |

## ISO 7388 II B-OB, ohne Bohrung
## *ISO 7388 II B-OB, without bore*




| SK | G | d1 mm | d2 mm | d3 mm | L1 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 40 | M 16 | 18,95 | 12,95 | 17 | 44,5 | 16,40 | 13-9885BOB-40-45 |
| 50 | M 24 | 29,10 | 19,80 | 25 | 65,5 | 25,56 | 13-9885BOB-50-66 |

## ISO 7388 II B-MB, mit Bohrung
## *ISO 7388 II B-MB, with bore*

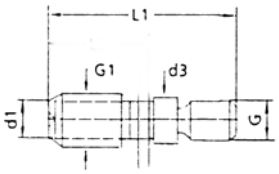



| SK | G | d1 mm | d2 mm | d3 mm | d4 mm | L1 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 40 | M 16 | 18,95 | 12,95 | 17 | 7 | 44,5 | 16,40 | 13-9885BMB-40-45 |
| 50 | M 24 | 29,10 | 19,80 | 25 | 11,5 | 65,5 | 25,56 | 13-9885BMB-50-66 |



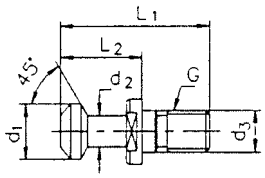
Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## S 20x2, mit Sägegewinde
## *S 20x2 with saw thread*



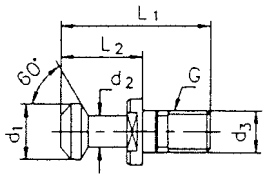

| SK | G | G1 | d1 mm | d3 mm | L1 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 40 | M 16 | S 20x2 | 16,6 | 17 | 58 | ● | 13-9886B-40-58 |

## MAS BT, 45°
## *MAS BT, 45°*



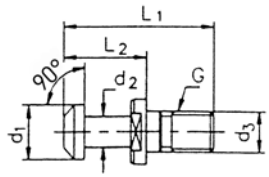

| SK | G | d1 mm | d2 mm | d3 mm | L1 mm | L2 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 30 | M 12 | 11 | 7 | 13 | 43 | 24 | ● | 13-9882B-30-45 |
| 40 | M 16 | 15 | 10 | 17 | 60 | 35 | ● | 13-9882B-40-45 |
| 50 | M 24 | 23 | 17 | 25 | 85 | 45 | ● | 13-9882B-50-45 |

## MAS BT, 60°
## *MAS BT, 60°*



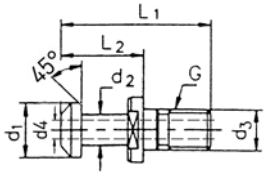

| SK | G | d1 mm | d2 mm | d3 mm | L1 mm | L2 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 30 | M 12 | 11 | 7 | 13 | 43 | 24 | ● | 13-9882B-30-60 |
| 40 | M 16 | 15 | 10 | 17 | 60 | 35 | ● | 13-9882B-40-60 |
| 50 | M 24 | 23 | 17 | 25 | 85 | 45 | ● | 13-9882B-50-60 |

## MAS BT, 90°
## *MAS BT, 90°*




| SK | G | d1 mm | d2 mm | d3 mm | L1 mm | L2 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|
| 40 | M 16 | 15 | 10 | 17 | 60 | 35 | ● | 13-9882B-40-90 |
| 50 | M 24 | 23 | 17 | 25 | 85 | 45 | ● | 13-9882B-50-90 |

## MAS BT, 45°, mit Bohrung
## *MAS BT, 45°, with bore*



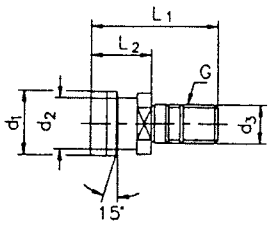

| SK | G | d1 mm | d2 mm | d3 mm | d4 mm | L1 mm | L2 mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 40 | M 16 | 15 | 10 | 17 | 7 | 60 | 35 | ● | 13-9882A-40-45 |
| 50 | M 24 | 23 | 17 | 25 | 11,5 | 85 | 45 | ● | 13-9882A-50-45 |

Einsatzgehärtet 58 HRC ± 2 Eht. 0,5-0,8. Gewinde geschliffen nach DIN. Parallel geschliffen und brüniert.

*Case-hardened 58 HRC ± 2 Eht. 0,5-0,8.Thread ground according to DIN. Parallel ground and browned.*

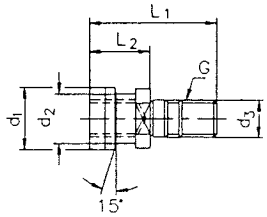
# Anzugsbolzen
*Pull studs*

## OTT, ohne Bohrung
## *OTT, without internal bore*




| SK | G | d1 mm | d2 mm | d3 mm | L1 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 40 | M 16 | 25,0 | 21,1 | 17 | 53 | 25 | 13-9883-40 |
| 50 | M 24 | 39,5 | 32,0 | 25 | 65 | 25 | 13-9883-50 |

## OTT, mit Innengewinde
## *OTT, with internal thread*




| SK | G | d1 mm | d2 mm | d3 mm | L1 mm | L2 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 40 | M 16 | 25,0 | 21,1 | 17 | 53 | 25 | 13-9883I-40 |
| 50 | M 24 | 39,5 | 32,0 | 25 | 65 | 25 | 13-9883I-50 |

Einsatzgehärtet 58 HRC ± 2 Eht.
0,5 - 0,8 mm. Geschliffen und brüniert.

*Case-hardened 58 HRC ± 2* Eht.
*0,5 - 0,8 mm. Ground and browned.*

Spezielle Anzugsbolzen für sämtliche Maschinen lieferbar auf Anfrage

*Special pull studs for all machines available upon request*

# Steckschlüssel für Anzugsbolzen
*Socket wrenches for pull studs*



## Sicherheits-Steckschlüssel SK und MAS BT
## *Security socket wrenches SK and MAS BT*

| Typ / *Type* | DIN | Art.-Nr. / *Order no.* |
|---|---|---|
| SK 40 | DIN 69872 | 13-SCHA-SK40 |
| SK 50 | DIN 69872 | 13-SCHA-SK50 |
| BT 40 | MAS BT | 13-SCHA-BT40 |
| BT 50 | MAS BT | 13-SCHA-BT50 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Ausdreh-, Fräs- und Gewindeschneidfutter

## *Boring, milling and tapping chucks*



## Inhalt:


**12.1** | **Ausdrehkopf-Sätze**

**12.2** | **Gewindeschneidfutter**

| Gewindeschneid-Schnellwechselfutter

| Gewindeschneidapparate mit autom. Rücklauf

| Synchron-Gewindeschneidfutter


## *Content:*


***12.1*** | ***Boring head sets***

***12.2*** | ***Tapping chucks***

| *Quick-change tapping chucks*

| *Reversal tapping heads*

| *Synchro-tapping chucks*

# Ausdrehkopf-Sätze
# *Boring head sets*



## Typ AKS 2G, Ausdrehbereich Ø 10 mm - 240 mm
## *Type AKS 2G, boring capacity Ø 10 mm - 240 mm*

NEU NEW !

- Skala 0,01 mm
- Lieferumfang: Ausdrehkopf, 4 Bohrstangen, 1 Ausdrehwerkzeug, je 1 Sechskantschlüssel 3, 4 und 6 mm

- *scale 0,01 mm*
- *scope of delivery: boring head, 4 boring bars, 1 boring tool, one each hexagon wrenches 3, 4 and 6 mm*

| Schaft / *Shank* | Bohrtiefe max. / *Depth max.* mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| BT 40 | 120 | 6 | ● | BAS-AKS2G-BT40 |
| DIN 69871 / SK 40 | 120 | 6,5 | ● | BAS-AKS2G-SK40 |
| MK / *MT* 3 | 120 | 7,5 | ● | BAS-AKS2G-MK3 |
| MK / *MT* 4 | 120 | 7 | ● | BAS-AKS2G-MK4 |

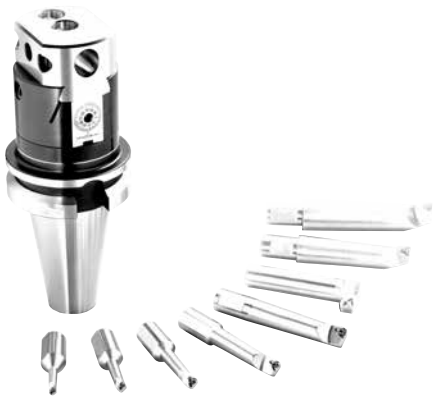


## Typ AKS 1, Ausdrehbereich Ø 8 mm - 46 mm
## *Type AKS 1, boring capacity Ø 8 mm - 46 mm*

- Skala 0,005 mm
- Gesamt-Vorschub: 6 mm
- *Lieferumfang: Ausdrehkopf, 8 Bohrstangen Ø 16 mm, Befestigungsschrauben, Bedienschlüssel*

- *scale 0,005 mm*
- *total stroke: 6 mm*
- *scope of delivery: boring head, 8 boring bars Ø 16 mm, screws, setting tool*

| Schaft / *Shank* | Bohrtiefe max. / *Depth max.* mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| BT 40 | 90 | 7 | ○ | 09-AKS1-BT40 |
| BT 50 | 90 | 8 | ○ | 09-AKS1-BT50 |
| DIN 69871 / *SK 40* | 90 | 7 | ● | 09-AKS1-SK40 |
| DIN 69871 / *SK 50* | 90 | 8 | ○ | 09-AKS1-SK50 |



## Typ AKS 2, Ausdrehbereich Ø 8 mm - 280 mm
## *Type AKS 2, boring capacity Ø 8 mm - 280 mm*

- Skala 0,005 mm
- Gesamt-Vorschub: 27 mm
- Lieferumfang: Ausdrehkopf, 8 Bohrstangen Ø 20 mm, Befestigungsschrauben, Bedienschlüssel

- *scale 0,005 mm*
- *total stroke: 27 mm*
- *scope of delivery: boring head, 8 boring bars Ø 20 mm, screws, setting tool*

| Schaft / *Shank* | Bohrtiefe max. / *Depth max.* mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| BT 40 | 115 | 8 | ● | 09-AKS2-BT40 |
| BT 50 | 115 | 10 | ○ | 09-AKS2-BT50 |
| DIN 69871 / *SK 40* | 115 | 8 | ● | 09-AKS2-SK40 |
| MK / *MT 3* | 115 | 7 | ● | 09-AKS2-MK3 |
| MK / *MT 4* | 115 | 7 | ○ | 09-AKS2-MK4 |
| MK / *MT 5* | 115 | 8 | ○ | 09-AKS2-MK5 |

## Passende Wendeschneidplatten
## *Suitable inserts*

| AKS 2G Ausdrehbereich / *Boring capacity* | AKS 1 Ausdrehbereich / *Boring capacity* | AKS 2 Ausdrehbereich / *Boring capacity* | Wendeschneidplatten / *Inserts* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| Ø 10 - 240 mm | Ø 8 - 13 mm | Ø 8 - 13 mm | TBGT060102L | ● | 1M-TBGT060102L |
| - | Ø 12 - 15 mm | Ø 12 - 21 mm | TPGH090204L | ○ | 1M-TPGH090204L |
| - | Ø 16 - 46 mm | Ø 20 - 280 mm | TPGH110304L | ● | 1M-TPGH110304L |

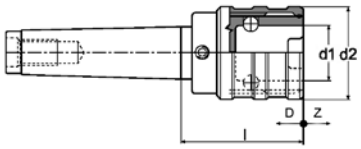
Preis pro Stück. Abgabe nur in VE à 10 Stück
*Price per piece. Only available in sets of 10 pieces*



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***

# Gewindeschneid-Schnellwechselfutter
*Quick-change tapping chucks*

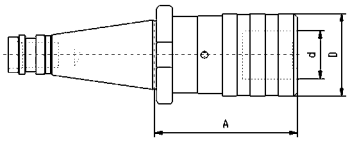





## Gewindeschneid-Schnellwechselfutter mit Morsekegel, mit Längenausgleich auf Zug und Druck
## *Quick-change tapping chucks with morse taper shank, with length compensation*

| MK / *MT* | Größe / *Size* | Spannbereich / *Clamping range* | l mm | d2 mm | d1 mm | Zug / *Ext.* mm | Druck / *Compr.* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| MK / *MT 2* | 1 | M3 - M12 | 46 | 38 | 19 | 9 | 9 | ● | 76-GSSF-MK2/1 |
| MK / *MT 3* | 1 | M3 - M12 | 46 | 38 | 19 | 9 | 9 | ● | 76-GSSF-MK3/1 |
| MK / *MT 3* | 2 | M6 - M20 | 69 | 55 | 31 | 15 | 15 | ● | 76-GSSF-MK3/2 |
| MK / *MT 4* | 2 | M6 - M20 | 70 | 55 | 31 | 15 | 15 | ● | 76-GSSF-MK4/2 |
| MK / *MT 4* | 3 | M14 - M33 | 108 | 79 | 48 | 24 | 24 | ● | 76-GSSF-MK4/3 |
| MK / *MT 5* | 3 | M14 - M36 | 103 | 79 | 48 | 24 | 24 | ● | 76-GSSF-MK5/3 |

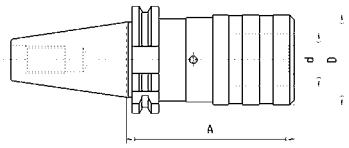





## Gewindeschneid-Schnellwechselfutter DIN 2080, mit Längenausgleich auf Zug und Druck
## *Quick-change tapping chucks DIN 2080, with length compensation*

| SK | Größe / *Size* | Spannbereich / *Clamping range* | A mm | D mm | d mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| SK 40 | 1 | M3 - M14 | 59 | 38 | 19 | ● | 76-GSSF-ISO40/1 |
| SK 40 | 2 | M5 - M22 | 97 | 54 | 31 | ● | 76-GSSF-ISO40/2 |
| SK 40 | 3 | M14 - M36 | 142 | 78 | 48 | ◗ | 76-GSSF-ISO40/3 |
| SK 50 | 1 | M3 - M14 | 50 | 38 | 19 | ◗ | 76-GSSF-ISO50/1 |
| SK 50 | 2 | M5 - M22 | 82 | 54 | 31 | ◗ | 76-GSSF-ISO50/2 |
| SK 50 | 3 | M14 - M36 | 128 | 78 | 48 | ◗ | 76-GSSF-ISO50/3 |

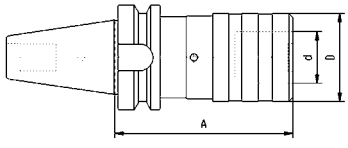





## Gewindeschneid-Schnellwechselfutter DIN 69871, mit Längenausgleich auf Zug und Druck
## *Quick-change tapping chucks DIN 69871, with length compensation*

| SK | Größe / *Size* | Spannbereich / *Clamping range* | A mm | D mm | d mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| SK 40 | 1 | M3 - M14 | 59 | 38 | 19 | ● | 76-GSSF-SK40/1 |
| SK 40 | 2 | M5 - M22 | 97 | 54 | 31 | ● | 76-GSSF-SK40/2 |
| SK 40 | 3 | M14 - M36 | 134 | 78 | 48 | ● | 76-GSSF-SK40/3 |
| SK 50 | 1 | M3 - M14 | 50 | 38 | 19 | ◗ | 76-GSSF-SK50/1 |
| SK 50 | 2 | M5 - M22 | 82 | 54 | 31 | ● | 76-GSSF-SK50/2 |
| SK 50 | 3 | M14 - M36 | 134 | 78 | 48 | ● | 76-GSSF-SK50/3 |





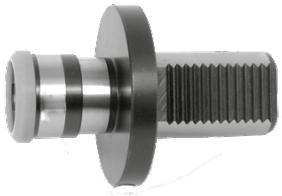

## Gewindeschneid-Schnellwechselfutter MAS BT, mit Längenausgleich auf Zug und Druck
## *Quick-change tapping chucks MAS BT, with length compensation*

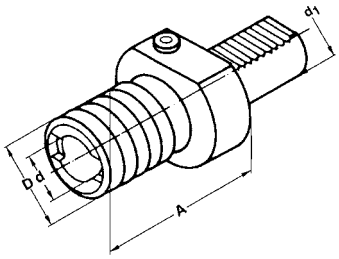
| MAS BT | Größe / *Size* | Spannbereich / *Clamping range* | A mm | D mm | d mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| BT 40 | 1 | M3 - M14 | 65 | 38 | 19 | ● | 76-GSSF-BT40/1 |
| BT 40 | 2 | M5 - M22 | 93 | 54 | 31 | ● | 76-GSSF-BT40/2 |
| BT 40 | 3 | M14 - M36 | 126 | 78 | 48 | ● | 76-GSSF-BT40/3 |
| BT 50 | 1 | M3 - M14 | 80 | 38 | 19 | ◗ | 76-GSSF-BT50/1 |
| BT 50 | 2 | M5 - M22 | 100 | 54 | 31 | ◗ | 76-GSSF-BT50/2 |
| BT 50 | 3 | M14 - M36 | 142 | 78 | 48 | ◗ | 76-GSSF-BT50/3 |

Passende Einsätze siehe Seite 237
*Suitable inserts see page 237*

Lagerstandard / *in stock* ●
innerhalb weniger Tage / *within a few days* ◗
auf Anfrage / *on request* ○

# Gewindeschneid-Schnellwechselfutter
*Quick-change tapping chucks*

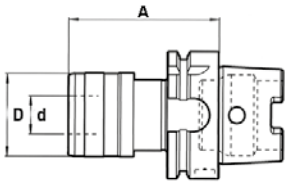





## Gewindeschneid-Schnellwechselfutter *VDI (DIN 69880)*, mit Längenausgleich auf Zug und Druck
## *Quick-change tapping chucks VDI (DIN 69880), with length compensation*

| VDI | Größe / *Size* | Spannbereich / *Clamping range* | A mm | D mm | d mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| VDI 20 | 1 | M3 - M14 | 55 | 38 | 19 | 76-GSSF-VDI20/1 |
| VDI 25 | 1 | M3 - M14 | 55 | 38 | 19 | 76-GSSF-VDI25/1 |
| VDI 30 | 1 | M3 - M14 | 55 | 38 | 19 | 76-GSSF-VDI30/1 |
| VDI 30 | 2 | M5 - M22 | 77 | 54 | 31 | 76-GSSF-VDI30/2 |
| VDI 40 | 1 | M3 - M14 | 55 | 38 | 19 | 76-GSSF-VDI40/1 |
| VDI 40 | 2 | M5 - M22 | 77 | 54 | 31 | 76-GSSF-VDI40/2 |
| VDI 40 | 3 | M14 - M36 | 108 | 78 | 48 | 76-GSSF-VDI40/3 |
| VDI 50 | 2 | M5 - M22 | 77 | 54 | 31 | 76-GSSF-VDI50/2 |
| VDI 50 | 3 | M14 - M36 | 108 | 78 | 48 | 76-GSSF-VDI50/3 |






## Gewindeschneid-Schnellwechselfutter HSK (DIN 69893), Form A, mit Längenausgleich auf Zug und Druck
## *Quick-change tapping chucks HSK (DIN 69893), form A, with length compensation*

| HSK | Größe / *Size* | Spannbereich / *Clamping range* | A mm | D mm | d mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| HSK-50A | 1 | M3 - M14 | 72 | 41 | 19 | 76-GSSF-HSK50A/1 |
| HSK-50A | 2 | M5 - M22 | 110 | 60 | 31 | 76-GSSF-HSK50A/2 |
| HSK-63A | 1 | M3 - M14 | 72 | 41 | 19 | 76-GSSF-HSK63A/1 |
| HSK-63A | 2 | M5 - M22 | 110 | 60 | 31 | 76-GSSF-HSK63A/2 |

**Gewindeschneid-Schnellwechselfutter mit Zylinderschaft lieferbar auf Anfrage**
***Quick-change tapping chucks with cylindrical shank available upon request***

Passende Einsätze siehe Seite 237
*Suitable inserts see page 237*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Gewindeschneid-Schnellwechseleinsätze
*Quick-change tapping inserts*



## Mit Rutschkupplung
*With safety clutch*

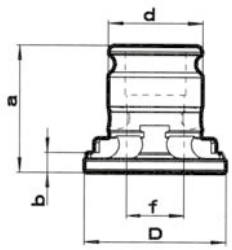
| Größe / *Size* | Bereich / *Thread* | Art.-Nr. / *Order no.* |
|---|---|---|
| 1 | M3 - M14 | 76-GEM1-M... |
| 2 | M5 - M22 | 76-GEM2-M... |
| 3 | M14 - M36 | 76-GEM3-M... |
| 4 | M24 - M48 | 76-GEM4-M... |



## Ohne Rutschkupplung
*Without safety clutch*

| Größe / *Size* | Bereich / *Thread* | Art.-Nr. / *Order no.* |
|---|---|---|
| 1 | M3 - M14 | 76-GEO1-M... |
| 2 | M5 - M22 | 76-GEO2-M... |
| 3 | M14 - M36 | 76-GEO3-M... |

# Reduzierungen für Gewindeschneid-Schnellwechseleinsätze
*Reductions sleeves for quick-change tapping inserts*




| Von Größe auf Größe / *From size to size* | d mm | f mm | D mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 1/0 | 19 | 13 | 30 | 21,5 | 6 | 76-SRE-1/0 |
| 2/1 | 31 | 19 | 46 | 35 | 8,5 | 76-SRE-2/1 |
| 3/1 | 48 | 19 | 68 | 55,5 | 7 | 76-SRE-3/1 |
| 3/2 | 48 | 31 | 68 | 55,5 | 7 | 76-SRE-3/2 |

# Gewindeschneid-Apparate mit automatischem Rücklauf
*Reversal tapping chucks*



## Gewindeschneidapparate BASIC
## *Reversal tapping chucks BASIC*

- mit automatischem Vorschub
- eingebauter Schnellrücklauf 1,75 : 1
- einstellbare Sicherheits-Rutschkupplung
- Längenausgleich auf Druck und Zug

- *automatic feed*
- *rapid reversal 1,75:1*
- *adjustable safety clutch*
- *length compensation*

**Lieferumfang:** 2 Mehrbereichs-Spannzangen und alle notwendigen Schlüssel

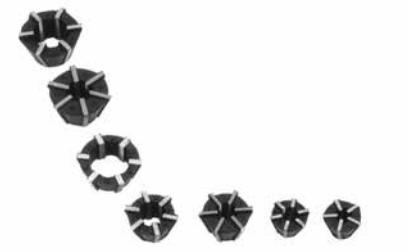
***Scope of delivery:*** *incl. 2 multi-range collets and all required wrenches*

| Typ / *Type* | Aufnahme / *Mounting* | Bereich / *Capacity* | ØD | Max. Drehmoment / *Max. torque* Nm | Max. Drehzahl / *Max. speed* RPM | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 7 | B16 | M2 - M7 | 55 | 14 | 1500 | BAS-GSA-M7 |
| 12 | B16 | M5 - M12 | 75 | 65 | 1000 | BAS-GSA-M12 |
| 20 | B22 | M8 - M20 | 91 | 125 | 600 | BAS-GSA-M20 |

**Passende Kegeldorne siehe Seite 100 / 101**
***Suitable taper arbors see page 100 / 101***

## Mehrbereich-Spannzangen
## *Multi-range collets*

- *für Gewindeschneidapparate*
- *for reversal tapping chucks*



| Zu Typ / *For type* | Bereich / *Capacity* | Spannbereich / *Clamping capacity* | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 7 | M2 - M7 | Ø 2,5-4,5 | 06-RF7-4,5 |
| 7 | M4 - M7 | Ø 4,5-6,5 | 06-RF7-6,5 |
| 12 | M5 - M8 | Ø 4-7 | 06-RF12-7,0 |
| 12 | M8 - M12 | Ø 7-10 | 06-RF12-10,0 |
| 20 | M8 - M14 | Ø 5,5-9 | 06-RF20-9,0 |
| 20 | M14 - M20 | Ø 10,5-14 | 06-RF20-14,0 |
| 20 | M20 | Ø 14-16 | 06-RF20-16,0 |



**Lagerstandard** / ***in stock***
**innerhalb weniger Tage** / ***within a few days***
**auf Anfrage** / ***on request***

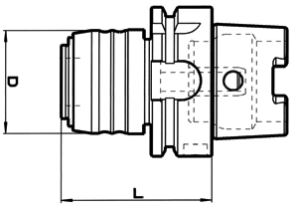
# Synchron-Gewindeschneidfutter
## *Synchro-tapping chucks*

- zum Gewindeschneiden auf Bearbeitungszentren mit Synchronsteuerung
- Micro-Längenausgleich auf Zug (1 mm) und Druck (0,2 mm)
- passende Schnellwechseleinsätze siehe Seite 240

- *for synchronized tapping*
- *micro compensation: in extension (1 mm), in compression (0,2 mm)*
- *suitable inserts see page 240*





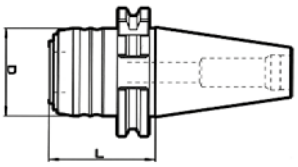



## Grundkörper HSK DIN 69893
## *Base body HSK DIN 69893*

| HSK | d mm | D mm | L mm | Bereich / *Tap capacity* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| HSK-40A | 20 | 43 | 69 | M3-M12 | 76-SYNC-HSKA40/1 |
| HSK-50A | 20 | 43 | 70 | M3-M12 | 76-SYNC-HSKA50/1 |
| HSK-63A | 20 | 43 | 64 | M3-M12 | 76-SYNC-HSKA63/1 |
| HSK-100A | 20 | 43 | 70 | M3-M12 | 76-SYNC-HSKA100/1 |
| HSK-40A | 32 | 60 | 90 | M6-M20 | 76-SYNC-HSKA40/2 |
| HSK-50A | 32 | 60 | 97 | M6-M20 | 76-SYNC-HSKA50/2 |
| HSK-63A | 32 | 60 | 97 | M6-M20 | 76-SYNC-HSKA63/2 |
| HSK-100A | 32 | 60 | 91 | M6-M20 | 76-SYNC-HSKA100/2 |
| HSK-100A | 50 | 87 | 115 | M14-M33* | 76-SYNC-HSKA100/3 |

* Längenausgleich auf Zug (2 mm) und Druck (0,4 mm)
* compensation in extension (2 mm) and in compression (0,4 mm)

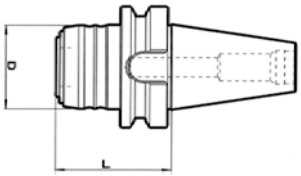





## Grundkörper DIN 69871
## *Base body DIN 69871*

| SK | d mm | D mm | L mm | Bereich / *Tap capacity* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| SK 40 | 20 | 43 | 53 | M3-M12 | 76-SYNC-SK40/1 |
| SK 50 | 20 | 43 | 53 | M3-M12 | 76-SYNC-SK50/1 |
| SK 40 | 32 | 60 | 90 | M6-M20 | 76-SYNC-SK40/2 |
| SK 50 | 32 | 60 | 74 | M6-M20 | 76-SYNC-SK50/2 |

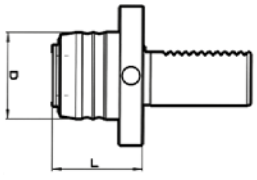





## Grundkörper MAS BT
## *Base body MAS BT*

| MAS BT | d mm | D mm | L mm | Bereich / *Tap capacity* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| BT 40 | 20 | 43 | 61 | M3-M12 | 76-SYNC-BT40/1 |
| BT 50 | 20 | 43 | 72 | M3-M12 | 76-SYNC-BT50/1 |
| BT 40 | 32 | 60 | 82 | M6-M20 | 76-SYNC-BT40/2 |
| BT 50 | 32 | 60 | 93 | M6-M20 | 76-SYNC-BT50/2 |





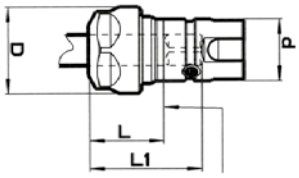

## Grundkörper DIN 69880
## *Base body DIN 69880*

| VDI | d mm | D mm | L mm | Bereich / *Tap capacity* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| VDI 30 | 20 | 43 | 46 | M3-M12 | 76-SYNC-VDI30/1 |
| VDI 40 | 20 | 43 | 46 | M3-M12 | 76-SYNC-VDI40/1 |
| VDI 30 | 32 | 60 | 67 | M6-M20 | 76-SYNC-VDI30/2 |
| VDI 40 | 32 | 60 | 67 | M6-M20 | 76-SYNC-VDI40/2 |

**Weitere Grundkörper auf Anfrage**
***Further base bodies available upon request***

# Schnellwechseleinsätze für Synchron-Gewindeschneidfutter
*Tapping inserts for synchro-tapping chucks*





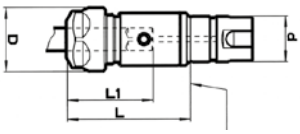

## Schnellwechseleinsatz
## *Tapping inserts*

- Verdrehsicherung durch Schrauben
- keine Gewindebohrzangen notwendig
- *locking by screws*
- *no need to use tapping collets*

| d mm | D mm | L mm | L1 mm | Bereich / *Tap capacity* | Für Spannzangen / *For collets* | Schaft-Ø / *Shank-Ø* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 20* | 28 | 24 | 37 | M3-M12 | ER16 | 2 - 10 | 76-SYNC-SE1 |
| 32 | 42 | 28 | 52 | M6-M20 | ER25 | 2 - 16 | 76-SYNC-SE2 |
| 50 | 63 | 32 | 75 | M14-M33 | ER40 | 6 - 26 | 76-SYNC-SE3 |

* Lieferung mit Sechskantmutter
* *Supplied with hexagonal nut*






## Verlängerter Schnellwechseleinsatz
## *Extended tapping inserts*

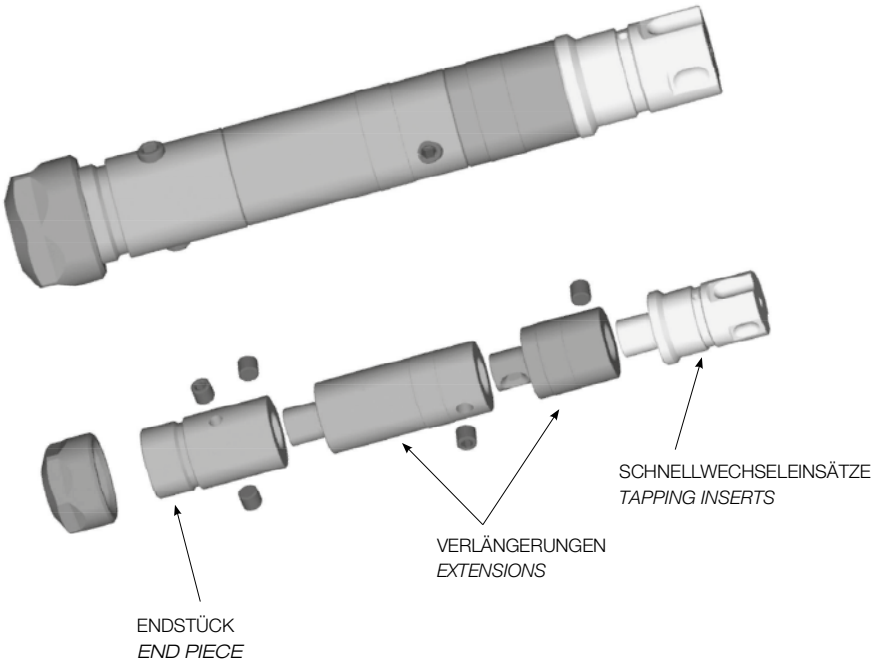
- schlanke Version, für beengte Platzverhältnisse geeignet
- *extra slim, for limited space conditions*

| d mm | D mm | L mm | L1 mm | Bereich / *Tap capacity* | Für Spannzangen / *For collets* | Schaft-Ø / *Shank-Ø* | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|
| 20* | 28 | 55 | 38 | M3-M12 | ER16 | 2 - 10 | 76-SYNC-VSE1 |
| 32 | 42 | 86 | 63 | M6-M20 | ER25 | 2 - 16 | 76-SYNC-VSE2 |
| 50 | 63 | 95 | 73 | M14-M33 | ER40 | 6 - 26 | 76-SYNC-VSE3 |

*Lieferung mit Sechskantmutter
**Supplied with hexagonal nut*

**Weitere Verlängerungen und Endstücke auf Anfrage**
***Further extensions and end pieces upon request***

## Montagebeispiel
## *Example*






Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Zubehör

# *Accessories*



## Inhalt:


**13.1** | **Zubehör für Drehfutter und Planscheiben**
| Dreh- und Schleifmitnehmer
| Hohlspindelanschlage
**13.2** | **Zubehör für Schraubstöcke**
| Nutensteine
| Universal-Werkstückanschlag
| Universal-Werkstückanschlag mit Magnet
**13.3** | **Zubehör für Steilkegelaufnahmen**
| Kegelwischer
| Fräsdornringe
| Schlüssel
| Fräseranzugsschrauben
| Austreiblappen
| Überwurfmuttern
| Mitnehmerringe
| Passfedern
| Spannschrauben für Weldon Futter
| Austreiber
| Schraubquerkeile
| Kühlmittelröhrchen
| Werkzeug-Regale
| Werkzeugwagen
| Montagehilfen


## *Content:*


***13.1*** | ***Accessories for lathe and independent chucks***
| *Safety driving rings*
| *Hollow spindle stops*
***13.2*** | ***Accessories for vices***
| *Tee nuts*
| *Stop dog*
| *Universal work piece stop with magnet*
***13.3*** | ***Accessories for SK-tooling***
| *Taper cleaners*
| *Spacing collars*
| *Spanners*
| *Cross retaining screws*
| *Tangs*
| *Clamping nuts*
| *Clutch drive rings*
| *Feather keys*
| *Clamping screws for Weldon chucks*
| *Ejectors*
| *Driving tenons*
| *Coolant tubes*
| *Tool racks*
| *Tooling trolleys*
| *Assembly supports*

# Sicherheits- Dreh- und Schleifmitnehmer
## *Safety drive rings*



- Nachfolger vom nicht mehr zulässigen “Drehherz”
- Keine Unfallgefahr, da keine hervorstehenden Teile
- Eingestellter Spanndurchmesser wird beibehalten
- Zweiteilig - kann auch bei eingespanntem Werkstück angebracht werden

- *No risk of injuries since free from protruding elements*
- *Adjusted clamping diameter is maintained*
- *Split design to allow mounting while work-piece is clamped*

| Größe / *Size* | Spannbereich / *Clamping range* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 1 | 10-40 | 00-SM-1 |
| 2 | 40-70 | 00-SM-2 |
| 3 | 70-100 | 00-SM-3 |
| 4 | 100-150 | 00-SM-4 |
| 5 | 150-200 | 00-SM-5 |
| 6 | 200-250 | 00-SM-6 |

# Hohlspindelanschläge
## *Hollow spindle stop*



Optimales Hilfswerkzeug passend für nahezu jede Drehbank. Lohnend schon ab Kleinstserien. Teure Rüstzeiten können auf ein Minimum reduziert werden. Problemlos und schnell an jeder Stelle der Hohlspindel zu fixieren. Durch Anziehen mit dem mitgelieferten Schlüssel werden die integrierten Spannbacken an die Innenwand gepresst und gewährleisten so einen sicheren Sitz.

*Useful auxiliary tool suitable for almost every lathe. Worthwile even for small series production. Expensive set-up time can be reduced to a minimum. Quick and easy fixing at any position of the hollow spindle. By tightening with the enclosed key the integrated jaws are pressed against the spindle so that a secure seat is guaranteed.*

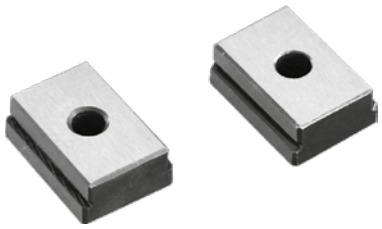
| Spindel-Ø / *Spindle-Ø* | Art.-Nr. / *Order no.* |
|---|---|
| 20-27 | 83-322327 |
| 25-33 | 83-332731 |
| 32-41 | 83-343139 |
| 40-50 | 83-353947 |
| 48-60 | 83-364757 |
| 58-76 | 83-386578 |
| 75-96 | 83-397894 |
| 94-110 | 83-31094110 |

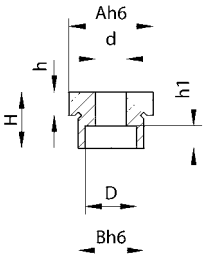
**Ersatz O-Ringe auf Anfrage / *Spare O-Rings available upon request***

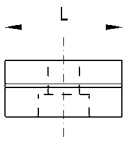


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Passsteine, Paar
## *Tee nuts, set of 2 pieces*






| | A mm | B mm | L mm | H mm | h mm | h1 mm | D mm | d mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 12 | 25 | 10 | 4,8 | 5,7 | 10 | 6 | ● | 14-12-12 |
| | 14 | 14 | 25 | 10 | 0 | 5,7 | 10 | 6 | ● | 14-14-14 |
| | | 18 | | | 4,8 | | | | ● | 14-14-18 |
| | | 20 | | | 4,8 | | | | ● | 14-14-20 |
| | | 22 | | | 4,8 | | | | ○ | 14-14-22 |
| | 16 | 12 | 25 | 10 | 4,8 | 5,7 | 10 | 6 | ● | 14-16-12 |
| | | 14 | | | 4,8 | | | | ● | 14-16-14 |
| | | 16 | | | 0 | | | | ● | 14-16-16 |
| | | 18 | | | 4,8 | | | | ● | 14-16-18 |
| | | 20 | | | 4,8 | | | | ● | 14-16-20 |
| | | 22 | | | 4,8 | | | | ● | 14-16-22 |
| NEU/*NEW* | | 24 | | | 4,8 | | | | ● | 14-16-24 |
| NEU/*NEW* | | 28 | | | 4,8 | | | | ● | 14-16-28 |
| NEU/*NEW* | | 36 | | | 4,8 | | | | ● | 14-16-36 |
| | 18 | 12 | 25 | 10 | 4,8 | 5,7 | 10 | 6 | ● | 14-18-12 |
| | | 14 | | | 4,8 | | | | ● | 14-18-14 |
| | | 16 | | | 4,8 | | | | ● | 14-18-16 |
| | | 18 | | | 0 | | | | ● | 14-18-18 |
| | | 20 | | | 4,8 | | | | ● | 14-18-20 |
| | | 22 | | | 4,8 | | | | ● | 14-18-22 |
| NEU/*NEW* | 20 | 12 | 25 | 10 | 4,8 | 5,7 | 10 | 6 | ● | 14-20-12 |
| | | 14 | | | 4,8 | | | | ● | 14-20-14 |
| | | 16 | | | 4,8 | | | | ● | 14-20-16 |
| | | 18 | | | 4,8 | | | | ● | 14-20-18 |
| | | 20 | | | 0 | | | | ● | 14-20-20 |
| NEU/*NEW* | | 22 | | | 4,8 | | | | ● | 14-20-22 |
| NEU/*NEW* | 22 | 14 | 25 | 10 | 4,8 | 5,7 | 10 | 6 | ● | 14-22-14 |
| NEU/*NEW* | | 16 | | | 4,8 | | | | ● | 14-22-16 |
| NEU/*NEW* | | 18 | | | 4,8 | | | | ● | 14-22-18 |
| NEU/*NEW* | | 20 | | | 4,8 | | | | ● | 14-22-20 |
| NEU/*NEW* | | 22 | | | 4,8 | | | | ● | 14-22-22 |

Preis pro Paar / *Price per set*

## Universal-Werkstückanschlag
## *Universal stop-dog*



- Universal-Werkstückanschlag aus zweifarbig eloxiertem Aluminium für Bohr- und Fräsmaschinen
- durch die zwei Gelenkpfannen und den 360° drehbaren Kopf ist jede Einstell-Lage möglich
- inkl. Nutenstein (für 16, 18 und 20 mm T-Nuten), Anschlagstange und Inbus-schlüssel

- *universal two-coloured work piece stop, made from anodized aluminium for boring and milling machines*
- *two cranks and a knob (360° pivotable) allow any setting angle*
- *incl. t-nut (for 16, 18 and 20 mm), stop rod and hexagon wrench*

| Höhe Anschlagst. / *Height of stop rod* mm | Gesamthöhe / *Total height* mm | Anschlagst.-Ø / *Stop rod dia.* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 155 | 215 | 8 | ● | 09-AMS-160BH |

## Universal-Werkstückanschlag mit Magnet
## *Universal work piece stop with magnet*



- passend für alle Schraubstöcke
- keine Gewindebohrungen nötig

- *suitable for all types of vices*
- *no threads required*

| Gesamthöhe / *Total height* mm | Länge der Anschlagstange / *Length of stop rod* mm | Anschlagst.-Ø / *Stop rod-Ø* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 100 | 125 | 6 | ● | 09-WAM |

# Kegelwischer
# *Taper cleaners*



## SK

- Material: Holz
- *material: wood*

| SK | Art.-Nr. / *Order no.* |
|---|---|
| 30 | 09-76200030 |
| 40 | 09-76200040 |
| 45 | 09-76200045 |
| 50 | 09-76200050 |
| 60 | 09-76200060 |



## MK / *MT*

- Material: Holz
- *material: wood*

| MK / *MT* | Art.-Nr. / *Order no.* |
|---|---|
| 1 | 09-76200001 |
| 2 | 09-76200002 |
| 3 | 09-76200003 |
| 4 | 09-76200004 |
| 5 | 09-76200005 |
| 6 | 09-76200006 |



## HSK

- Material: Kunststoff
- passend für Form A / C / E
- *material: plastic*
- *suitable for form A / C / E*

| HSK | Art.-Nr. / *Order no.* |
|---|---|
| 32 | 09-76205032 |
| 40 | 09-76205040 |
| 50 | 09-76205050 |
| 63 | 09-76205063 |
| 80 | 09-76205080 |
| 100 | 09-762050100 |



## ER

- Material: Holz
- *material: wood*

| ER | Art.-Nr. / *Order no.* |
|---|---|
| 16 | 09-76202016 |
| 20 | 09-76202020 |
| 25 | 09-76202025 |
| 32 | 09-76202032 |
| 40 | 09-76202040 |



## OZ

- Material: Holz
- *material: wood*

| OZ | Art.-Nr. / *Order no.* |
|---|---|
| OZ 6 (400E) | 09-76203006 |
| OZ 8 (401E) | 09-76203008 |
| OZ 16 (415E / 410E) | 09-76203016 |
| OZ 25 (462E / 444E) | 09-76203025 |
| OZ 32 (467E / 450E) | 09-76203032 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Fräsdornringe DIN 2084 A
## *Spacing collars DIN 2084 A*



### Form A

Aus federhartem Spezialstahl gestanzt und entgratet.

*From punched spring steel, deburred edges.*

| | Bohr-Ø / *Bore-Ø* | 16 | 22 | 27 | 32 | 40 | 50 |
|---|---|---|---|---|---|---|---|
| | Außen-Ø / *External-Ø* | 25 | 33 | 39 | 45 | 54 | 67 |
| Stärke / *Thickness* mm | | | | | | | |
| 0,03 | | | | | | | |
| 0,04 | | | | | | | |
| 0,05 | | | | | | | |
| 0,10 | | | | | | | |
| 0,20 | | | | | | | |
| 0,30 | | | | | | | |
| 0,40 | | | | | | | |
| 0,50 | | | | | | | |
| 0,60 | | | | | | | |
| 1,00 | | | | | | | |

**Weitere Größen auf Anfrage**
***Further sizes available upon request***

| | | Art.-Nr. *Order no.* |
|---|---|---|
| Beispiel / *Ordering example*: 27 x 0,03 = 09-2084A27003 | ○ | 09-2084AØ |

Abgabe nur in VE à 10 Stück.
*Only available in sets of 10 pieces.*

# Fräsdornringe DIN 2084 B
## *Spacing collars DIN 2084 B*



### Form B

Aus Stahl gedreht, gehärtet, planparallel geschliffen und geläppt.

*Turned from steel, hardened, ground and lapped.*

| | Bohr-Ø / *Bore-Ø* | 13 | 16 | 22 | 27 | 32 | 40 | 50 | 60 |
|---|---|---|---|---|---|---|---|---|---|
| | Außen-Ø / *External-Ø* | 22 | 27 | 34 | 41 | 47 | 55 | 69 | 83 |
| Stärke / *Thickness* mm | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 10 | | | | | | | | | |
| 20 | | | | | | | | | |
| 30 | | | | | | | | | |

**Weitere Größen und Endringe auf Anfrage**
***Further sizes and end rings available upon request***

| | | Art.-Nr. *Order no.* |
|---|---|---|
| Beispiel / *Ordering example:* 16 x 1 = 09-2084B161 | ● | 09-2084BØ |

Preis versteht sich für 1 Stück
*Price refers to 1 piece*

## Sicherheitsschlüssel ER Mini
## *Safety-spanners ER Mini*



| ER | | Art.-Nr. / *Order no.* |
|---|---|---|
| ER 8 M | ● | 09-SCH-ER8M |
| ER 11 M | ● | 09-SCH-ER11M |
| ER 16 M | ● | 09-SCH-ER16M |
| ER 20 M | ● | 09-SCH-ER20M |
| ER 25 M | ● | 09-SCH-ER25M |

## Sicherheitsschlüssel ER
## *Safety-spanners ER*



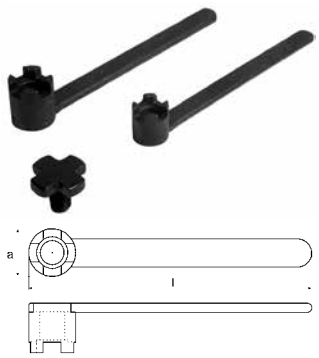
| ER | | Art.-Nr. / *Order no.* |
|---|---|---|
| ER 16 | ● | 09-SCH-ER16 |
| ER 20 | ● | 09-SCH-ER20 |
| ER 25 | ● | 09-SCH-ER25 |
| ER 32 | ● | 09-SCH-ER32 |
| ER 40 | ● | 09-SCH-ER40 |
| ER 50 | ● | 09-SCH-ER50 |

## Hakenschlüssel OZ
## *Hook wrenches OZ*



| Für SZ / *For collet* | Ø mm | OZ | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 415 E | 43 | OZ 16 | ● | 09-SCH-OZ16 |
| 462 E | 60 | OZ 25 | ● | 09-SCH-OZ25 |
| 467 E | 72 | OZ 32 | ● | 09-SCH-OZ32 |
| 468 E | 82 | OZ 40 | ● | 09-SCH-OZ40 |

## Schlüssel für Fräseranzugsschrauben DIN 6368
## *Spanners for cross screws DIN 6368*




| Für Ø / *For Ø* | Schraube / *Screw* | l mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 13 | M6 | 160 | ● | 09-SCH-KD13 |
| 16 | M8 | 180 | ● | 09-SCH-KD16 |
| 22 | M10 | 200 | ● | 09-SCH-KD22 |
| 27 | M12 | 225 | ● | 09-SCH-KD27 |
| 32 | M16 | 250 | ● | 09-SCH-KD32 |
| 40 | M20 | 280 | ● | 09-SCH-KD40 |
| 50 | M24 | 315 | ● | 09-SCH-KD50 |



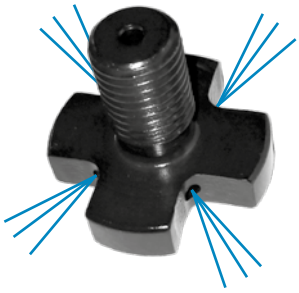
● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Fräseranzugsschrauben
## *Cross retaining screws*



### Für Fräsdorne DIN 6367
### *For shell end mill holders DIN 6367*

| Fräsdorn / *Arbor* | Gewinde / *Thread* | Art.-Nr. / *Order no.* |
|---|---|---|
| 13 | M6 | 09-VTC-M6 |
| 16 | M8 | 09-VTC-M8 |
| 22 | M10 | 09-VTC-M10 |
| 27 | M12 | 09-VTC-M12 |
| 32 | M16 | 09-VTC-M16 |
| 40 | M20 | 09-VTC-M20 |



### Für Fräsdorne DIN 6367 mit innerer Kühlmittelzufuhr
### *For shell end mill holders DIN 6367 with IC*

NEU NEW !

| Fräsdorn / *Arbor* | Gewinde / *Thread* | Art.-Nr. / *Order no.* |
|---|---|---|
| 16 | M8 | 09-VTCIK-M8 |
| 22 | M10 | 09-VTCIK-M10 |
| 27 | M12 | 09-VTCIK-M12 |
| 32 | M16 | 09-VTCIK-M16 |
| 40 | M20 | 09-VTCIK-M20 |

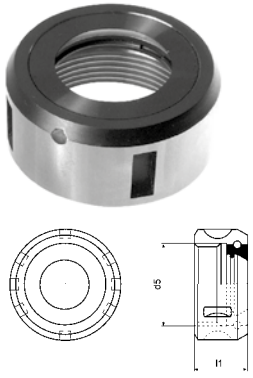
# Austreiblappen
## *Tangs*



### Einschraubbare Austreiblappen für Morsekegel
### *Removable tangs for morse taper shanks*

| MK / *MT* | Gewinde / *Thread* | Art.-Nr. / *Order no.* |
|---|---|---|
| MK 1 | M6 | 09-ATL-MK1 |
| MK 2 | M10 | 09-ATL-MK2 |
| MK 3 | M12 | 09-ATL-MK3 |
| MK 4 | M16 | 09-ATL-MK4 |
| MK 5 | M20 | 09-ATL-MK5 |

# Überwurfmuttern OZ
## *Standard clamping nuts OZ*

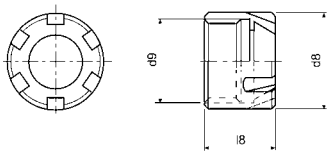



### Kugelgelagert
### *With roller-bearing*

| Für SZ / *For collet* | d5 6H | l1 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| OZ 16 (415E) | M33 x 1,5 | 24 | 09-GOC-16 |
| OZ 20 (4541E) | M42 x 2 | 28 | 09-GOC-20 |
| OZ 25 (462E) | M48 x 2 | 30 | 09-GOC-25 |
| OZ 32 (467E) | M60 x 2,5 | 33,5 | 09-GOC-32 |
| OZ 40 (468E) | M68 x 2,5 | 37 | 09-GOC-40 |

# Überwurfmuttern ER
# *Clamping nuts ER*

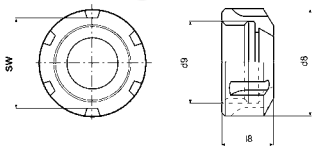





## Mini
## *Mini*

| Für SZ / *For collet* | d9 mm | d8 mm | L8 mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| ER 8 | M10 x 0,75 | 12 | 10,8 | 09-G-8M |
| ER 11 | M13 x 0,75 | 16 | 12 | 09-G-11M |
| ER 16 | M19 x 1 | 22 | 18 | 09-G-16M |
| ER 20 | M24 x 1 | 28 | 19 | 09-G-20M |
| ER 25 | M30 x 1 | 35 | 20 | 09-G-25M |

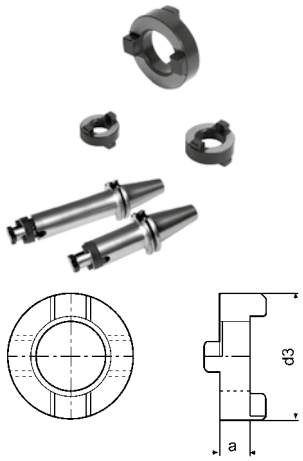





## Standard
## *Standard*

| Für SZ / *For collet* | d9 mm | d8 mm | L8 mm | SW | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| ER 16 | M22 x 1,5 | 32 | 17 | 27 | 09-UM-ER16 |
| ER 20 | M25 x 1,5 | 35 | 18,5 | 30 | 09-UM-ER20 |
| ER 25 | M32 x 1,5 | 42 | 20 | 37 | 09-UM-ER25 |
| ER 32 | M40 x 1,5 | 50 | 22,5 | 45 | 09-UM-ER32 |
| ER 40 | M50 x 1,5 | 63 | 25,5 | 58 | 09-UM-ER40 |
| ER 50 | M64 x 2,0 | 78 | 35,5 | 72 | 09-UM-ER50 |

# Mitnehmerringe
# *Clutch drive rings*




## Für Fräsdorne DIN 6366
## *For combination end mill holders DIN 6366*

| Fräsdorn / *Arbor* | d3 mm | a mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| D13 | 28 | 10 | 09-ATR-D13 |
| D16 | 32 | 10 | 09-ATR-D16 |
| D22 | 40 | 12 | 09-ATR-D22 |
| D27 | 48 | 12 | 09-ATR-D27 |
| D32 | 58 | 14 | 09-ATR-D32 |
| D40 | 70 | 14 | 09-ATR-D40 |
| D50 | 90 | 16 | 09-ATR-D50 |

# Mitnehmersteine
# *Drive keys*



## Mitnehmersteine mit Schraube
## *Drive keys with screw*

NEU *NEW* !

| Für Ø / *For Ø* mm | h x b x l mm | Schraube / *Screw* | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 16 | 8 x 10 x 9,8 | M3 x 12 | 09-MNS-M3/12 |
| 22 | 10 x 11 x 11,2 | M4 x 12 | 09-MNS-M4/12 |
| 27 | 12 x 14 x 12,6 | M4 x 16 | 09-MNS-M4/16 |
| 32 | 14 x 22 x 14 | M5 x 16 | 09-MNS-M5/16 |
| 40 | 16 x 23 x 16 | M5 x 20 | 09-MNS-M5/20 |
| 50 | 18 x 32 x 18 | M6 x 20 | 09-MNS-M6/20 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Passfedern
*Feather keys*



## Für Kombi-Fräseraufsteckdorne
## *For combination end mill adaptors*

NEU *NEW* !

- mit Abdrückschraube
- *with push-off screw*

| h x b x l<br>mm | Schraube /<br>*Screw* | Art.-Nr. /<br>*Order no.* |
|---|---|---|
| 4 x 4 x 20 | M2 x 4 | 09-PAF-M2/4 |
| 6 x 6 x 25 | M3 x 5 | 09-PAF-M3/6 |
| 7 x 7 x 25 | M3 x 6 | 09-PAF-M3/7 |
| 8 x 7 x 28 | M3 x 6 | 09-PAF-M3/8 |
| 10 x 8 x 32 | M3 x 6 | 09-PAF-M3/10 |

# Spannschrauben
*Clamping screw*



## Für Weldon Spannfutter, DIN 1835B
## *For Weldon chucks, DIN 1835B*

NEU *NEW* !

| Für Ø /<br>*For Ø*<br>mm | Gewinde /<br>*Thread*<br>mm | L<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 6 | M6 | 10 | 09-WSS-M6/10 |
| 8 | M8 | 10 | 09-WSS-M8/10 |
| 10 | M10 | 12 | 09-WSS-M10/12 |
| 12-14 | M12 | 16 | 09-WSS-M12/16 |
| 16-18 | M14 | 16 | 09-WSS-M14/16 |
| 20 | M16 | 16 | 09-WSS-M16/16 |
| 25 | M18 x 2 | 20 | 09-WSS-M18/20 |
| 32-40 | M20 x 2 | 20 | 09-WSS-M20/20 |

## Austreiber
## *Ejectors*



| MK / *MT* | Länge / *Length* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 0 | 90 | 01-2000 |
| 1+2 | 140 | 01-2002 |
| 3 | 190 | 01-2003 |
| 4 | 225 | 01-2004 |
| 5+6 | 265 | 01-2005 |

## Halbautomatische Austreiber
## *Half automatic ejectors*

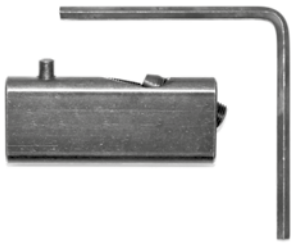
- Einhandbedienung
- Vermeidung von Spindelbeschädigungen beim Lösen der Werkzeuge

- *single-hand operation*
- *no risk of damage to the spindle when removing the tools*



| MK / *MT* | Länge / *Length* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 1+2+3 | 317 | 01-8003 |
| 4+5+6 | 380 | 01-8006 |

## Schraubquerkeile
## *Driving tenons*



- zum Spannen von Kegelschäften mit Mitnehmerlappen und Querkeilschlitz
- große Sicherheit durch festen Sitz
- schnelles Spannen und Lösen mit einer Schraube
- Schonung der Spindellager

- *secure clamping of taper shanks with tenons and driving slots*
- *higher safety thanks to tight fit*
- *fast clamping and removing with one screw*
- *less impact on spindle bearings*

| Innen-MK / *Internal MT* | Für Spindel-Ø / *For spindle-Ø* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 3 | 36 | 09-SQ-3-36 |
| 4 | 48 | 09-SQ-4-48 |
| 4 | 63 | 09-SQ-4-63 |
| 5 | 63 | 09-SQ-5-63 |
| 5 | 80 | 09-SQ-5-80 |
| 6 | 100 | 09-SQ-6-100 |

## Kühlmittelröhrchen
## *Coolant tubes*



| Für / *For* HSK | D mm | F mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 32 | 6 | M10x1 | 17-KMR32 |
| 40 | 8 | M12x1 | 17-KMR40 |
| 50 | 10 | M16x1 | 17-KMR50 |
| 63 | 12 | M18x1 | 17-KMR63 |
| 80 | 14 | M20x1,5 | 17-KMR80 |
| 100 | 16 | M24x1,5 | 17-KMR100 |



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Werkzeug-Regale
# *Tool racks*

## Werkzeugregale 3-stufig, Typ WR3K2
## *Tool racks 3-staged, type WR3K2*

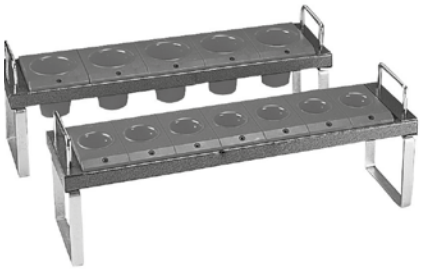


- inkl. Einsätze
- passend für alle Einsätze

- *incl. inserts*
- *suitable for all types of inserts*

| Kegelgröße / *Shank size* | Plätze / *Tool seats* | Art.-Nr. / *Order no.* |
|---|---|---|
| SK 30 / BT 30 | 24 | WZ-WR3K2-SK30 |
| SK 40 / BT 40 | 21 | WZ-WR3K2-SK40 |
| SK 50 / BT 50 | 15 | WZ-WR3K2-SK50 |
| HSK 63 | 18 | WZ-WR3K2-HSK63 |

## Werkzeugregale 1-stufig, Typ WRS2
## *Tool racks 1-staged, type WRS2*



- inkl. Einsätze
- modulares System
- passend für alle Einsätze

- *incl. inserts*
- *modular system*
- *suitable for all types of inserts*

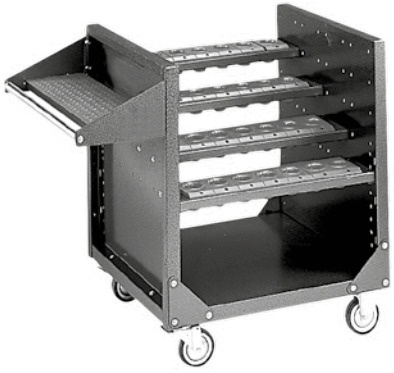
| Kegelgröße / *Shank size* | Plätze / *Tool seats* | Art.-Nr. / *Order no.* |
|---|---|---|
| SK 30 / BT 30 | 8 | WZ-WRS2-SK30 |
| SK 40 / BT 40 | 7 | WZ-WRS2-SK40 |
| SK 50 / BT 50 | 6 | WZ-WRS2-SK50 |
| HSK 63 | 6 | WZ-WRS2-HSK63 |

## Werkzeugregaleinsätze
## *Tool rack inserts*



| Kegelgröße / *Shank size* | Art.-Nr. / *Order no.* |
|---|---|
| SK 30 / BT 30 | WZ-RE2-SK30 |
| SK 40 / BT 40 | WZ-RE2-SK40 |
| SK 50 / BT 50 | WZ-RE2-SK50 |
| HSK 63 | WZ-RE2-HSK63 |

# Werkzeugwagen
# *Tooling trolley*



## Werkzeugwagen
## *Tooling trolley*

NEU *NEW* !

- Maße: 1002 x 650 x 810 mm
- Lieferung erfolgt unmontiert

- *dimensions: 1002 x 650 x 810 mm*
- *delivery unmounted*

| Kegelgröße / *Shank size* | Plätze / *Tool seats* | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|
| SK 30 / BT 30 | 32 | 51 | WZ-WW-SK30 |
| SK 40 / BT 40 | 28 | 51 | WZ-WW-SK40 |
| SK 50 / BT 50 | 20 | 51 | WZ-WW-SK50 |
| HSK 63 | 24 | 51 | WZ-WW-HSK63 |

# Montagehilfen
*Assembly supports*

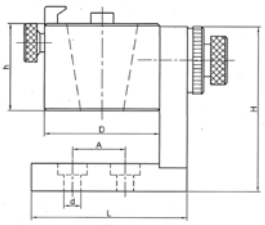


## Montagehilfe aus Aluminium
## *Aluminium assembly support*

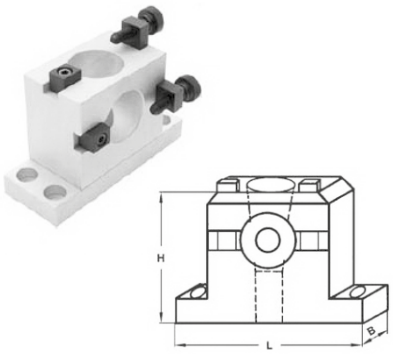
| A x B<br>mm | Für DIN 2080, 69871, ANSI CAT, MAS BT /<br>*For DIN 2080, 69871, ANSI CAT, MAS BT* | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 80 x 75 | ISO-DIN-CAT-BT30 | ● | 09-TAL30 |
| 90 x 85 | ISO-DIN-CAT-BT40 | ● | 09-TAL40 |
| 120 x 115 | ISO-DIN-CAT-BT50 | ● | 09-TAL50 |

## Montageblock, schwenkbar
## *Assembly support, tiltable*





| | Größe /<br>*Size* | D<br>mm | h<br>mm | d<br>mm | H<br>mm | A<br>mm | L<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| NEU/*NEW* | SK 30 / BT 30 | 88 | 50 | 11 | 132 | 55 | 111 | ● | 47-MBSK-30 |
| NEU/*NEW* | SK 40 / BT 40 | 93 | 57 | 11 | 132 | 55 | 111 | ● | 47-MBSK-40 |
| NEU/*NEW* | SK 50 / BT 50 | 118 | 62 | 11 | 176 | 55 | 111 | ● | 47-MBSK-50 |
| | VDI 16 | 78 | 50 | 11 | 132 | 55 | 111 | ● | 47-MBS-16 |
| | VDI 20 | 83 | 50 | 11 | 132 | 55 | 111 | ● | 47-MBS-20 |
| | VDI 25 | 93 | 57 | 11 | 132 | 55 | 111 | ● | 47-MBS-25 |
| | VDI 30 | 93 | 57 | 11 | 132 | 55 | 111 | ● | 47-MBS-30 |
| | VDI 40 | 102 | 57 | 11 | 132 | 55 | 111 | ● | 47-MBS-40 |
| | VDI 50 | 118 | 62 | 11 | 132 | 55 | 111 | ● | 47-MBS-50 |
| NEU/*NEW* | HSK 40 | 88 | 50 | 11 | 132 | 55 | 111 | | 47-MBHSK-40 |
| NEU/*NEW* | HSK 50 | 93 | 57 | 11 | 132 | 55 | 111 | ● | 47-MBHSK-50 |
| NEU/*NEW* | HSK 63 | 98 | 57 | 11 | 132 | 55 | 111 | ● | 47-MBHSK-63 |
| NEU/*NEW* | HSK 100 | 135 | 62 | 11 | 132 | 55 | 111 | ● | 47-MBHSK-100 |



## Montageblock DIN / ISO / BT
## *Assembly support DIN / ISO / BT*

| Kegel /<br>*Shank* | H<br>mm | B<br>mm | L<br>mm | | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|
| 30 | 75 | 47 | 126 | ● | 09-MBW-30 |
| 40 | 100 | 60 | 160 | ● | 09-MBW-40 |
| 50 | 155 | 97 | 180 | ● | 09-MBW-50 |



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

# Measuring - Testing - Positioning
# Parallelunterlagen, Endmaßsätze, Aufspannsätze und Fräserkassetten

## *Measuring - Testing - Positioning*
## *Parallels, gauge block sets, clamping sets and milling cutters*




## Inhalt:


**14.1** | **Messen - Prüfen - Einstellen**
| Prüfdorne
| Nulleinsteller
| Kantentaster
| Messuhren
| Gelenkstative, magnetisch
| Parallelunterlagen
| Endmaßsätze
| Grenz- und Gewindelehrdorne und Ringe
| Spannkraftmessgeräte
| Anzugskraftmessgeräte
**14.2** | **Aufspannsätze und Fräserkassetten**


## *Content:*


***14.1*** | ***Measuring - Testing - Positioning***
| *Test arbors*
| *Zero adjusters*
| *Edge finders*
| *Dial indicators*
| *Magnetic stands*
| *Parallels*
| *Gauge block sets*
| *Plain and thread plug gauges and rings*
| *Clamping force meters*
| *Clamping torque meters*
***14.2*** | ***Clamping sets and milling cutter sets***

# Prüfdorne
# *Test arbors*



## Prüfdorne, DIN 69871 (SK)*
## *Test arbors, DIN 69871 (SK)**

| SK | L mm | Ø mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| SK 30 | 204 | 32 | 1 | 09-PD-SK30 |
| SK 40 | 320 | 40 | 3 | 09-PD-SK40 |
| SK 50 | 320 | 40 | 5 | 09-PD-SK50 |



## Prüfdorne, DIN 69893 (HSK)*
## *Test arbors, DIN 69893 (HSK)**

| HSK | L mm | Ø mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| HSK-A 32 | 180 | 24 | 1 | 09-PD-HSK32 |
| HSK-A 40 | 180 | 24 | 1 | 09-PD-HSK40 |
| HSK-A 50 | 236 | 32 | 2 | 09-PD-HSK50 |
| HSK-A 63 | 346 | 40 | 3 | 09-PD-HSK63 |
| HSK-A 80 | 346 | 40 | 4 | 09-PD-HSK80 |
| HSK-A 100 | 349 | 40 | 5 | 09-PD-HSK100 |



## Prüfdorne, DIN 229 (MK)**
## *Test arbors, DIN 229 (MT)**

| MK / *MT* | L mm | Ø mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| MK 3 | 250 | 25 | 1 | 09-PD-MK3 |
| MK 4 | 300 | 32 | 2 | 09-PD-MK4 |
| MK 5 | 300 | 40 | 5 | 09-PD-MK5 |
| MK 6 | 300 | 50 | 8 | 09-PD-MK6 |



## Prüfdorne, zylindrisch**
## *Test arbors, cylindrical**

| Ø mm | L mm | kg | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 32 | 300 | 2 | 09-PD-ZYL32 |
| 35 | 400 | 3 | 09-PD-ZYL35 |
| 40 | 500 | 5 | 09-PD-ZYL40 |
| 50 | 600 | 10 | 09-PD-ZYL50 |

* - Lieferung im Holzetui inkl. Kalibrierschein
- Rundlaufgenauigkeit: 0,003 mm
- Zylindrizität: 0,003 mm

* - *supplied in wooden case with calibration certificate*
- *concentricity: 0,003 mm*
- *cylindricity: 0,003 mm*

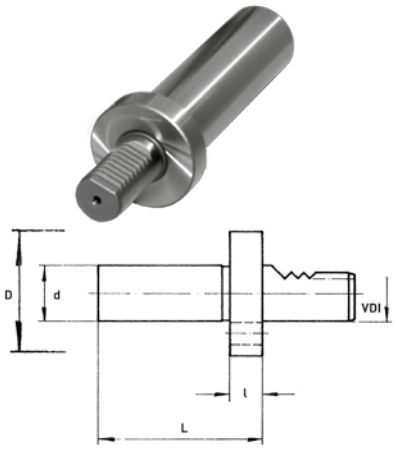
** - Holzetui und Kalibrierschein auf Anfrage
- Rundlaufgenauigkeit: 0,002 mm
- Zylindrizität: 0,002 mm

** - *wooden case and calibration certificate upon request*
- *concentricity: 0,002 mm*
- *cylindricity: 0,002 mm*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

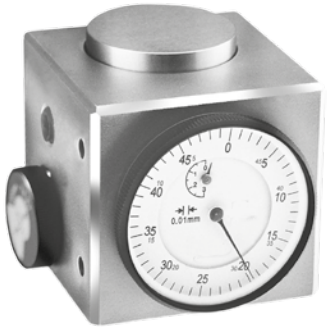
# Prüfdorne
*Test arbors*




## Prüfdorne, DIN 69880 (VDI)
## *Test arbors, DIN 69880 (VDI)*

| VDI mm | d mm | D mm | L mm | l mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 16 | 30 | 40 | 120 | 15 | 83-PD-16-30 |
| 20 | 40 | 50 | 150 | 15 | 83-PD-20-40 |
| 25 | 40 | 58 | 150 | 15 | 83-PD-25-40 |
| 30 | 40 | 68 | 200 | 15 | 83-PD-30-40 |
| 40 | 40 | 83 | 200 | 15 | 83-PD-40-40 |
| 50 | 40 | 98 | 200 | 15 | 83-PD-50-40 |

# Nulleinsteller
*Zero adjusters*



## Nulleinsteller mit integrierter Messuhr
## *Zero adjusters with integrated dial indicator*

NEU NEW !

- zur Erfassung des Werkstücknull-punktes
- Ablesung 0,01 mm

- *for determination of the work piece's zero point*
- *reading 0,01 mm*

| Magnetfuß / *Magnetic base* | Größen / *Sizes* mm | Ablesung / *Reading* mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| ohne / *without* | 56 x 57 x 50 | 0,01 | 42-X50 |
| mit / *with* | 56 x 57 x 50 | 0,01 | 42-X50M |



## Nulleinsteller mit externer Messuhr
## *Zero adjusters with external dial indicator*

NEU NEW !

- zur Erfassung des Werkstücknull-punktes
- Ablesung 0,01 mm

- *for determination of the work piece's zero point*
- *reading 0,01 mm*

| Magnetfuß / *Magnetic base* | Größen / *Sizes* mm | Ablesung / *Reading* mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| ohne / *without* | 58 x 50 | 0,01 | 42-00502 |
| mit / *with* | 58 x 50 | 0,01 | 42-00502M |

# Kantentaster, mechanisch
# *Edge finders, mechanical*





## Im Aluminiumkasten / *In aluminium case*

| Größen / *Sizes* mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 89 x 10 x 10 | ● | 42-1010-A |
| 82,5 x 10 x 10 | ● | 42-10104-A |

## In Plastikhülse / *In plastic case*

| Typ / *Type* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 10 x 10 | ● | 42-1010-N |
| 10 x 10 x 4 (abgesetzt / *stepped)* | ● | 42-10104-N |

## Ersatzfedern / *Set of spare springs*

| Typ / *Type* | | Art.-Nr. / *Order no.* |
|---|---|---|
| Satz à 10 Stück / *Set of 10 pieces* | ● | 42-1010F |

**Leere Boxen siehe Seite 191 /**
***Emtpy boxes see page 191***

# Kantentaster, elektronisch
# *Edge finders, electronical*

- LED-Anzeige
- gehärtet und präzisionsgeschliffen
- Rundlauf 0,01 mm

- *LED display*
- *hardened and precision ground*
- *concentricity 0,01 mm*



## Mit Aluminiumkoffer / *With aluminium case*

| Größen / *Sizes* mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 96,5 x 20 x 10 | ● | 0I-129055-A |



## In Plastikhülse / *In plastic case*

| Größen / *Sizes* mm | | Art.-Nr. / *Order no.* |
|---|---|---|
| 96,5 x 20 x 10 | ● | 0I-129055-N |

**Leere Boxen siehe Seite 191 /**
***Emtpy boxes see page 191***



● **Lagerstandard / *in stock***
◗ **innerhalb weniger Tage / *within a few days***
○ **auf Anfrage / *on request***



Typ 1 /
*Type 1*

## Messuhren, Standard
## *Dial indicators, standard*

NEU NEW !

- nach DIN 878
- Schaft und Taster aus rostfreiem Stahl, gehärtet und geläppt
- diamantgelagert, für Langlebigkeit und Genauigkeit
- Stahlgehäuse
- mit Toleranzmarken

- *according to DIN 878*
- *stem and spindle are made of stainless steel, hardened and lapped*
- *jeweled bearing for durability and stability*
- *steel housing*
- *with tolerance markers*



Typ 2 /
*Type 2*

| Spanne / *Range* mm | Ablesung / *Reading* mm | Gehäuse Ø / *Housing Ø* mm | Typ / *Type* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 0-1 | 0,001 | 40 | 1 | ● | 58-MU-1/0,001 |
| 0-3 | 0,01 | 40 | 2 | ● | 58-MU-3/0,01 |
| 0-4 | 0,01 | 40 | 2 | ● | 58-MU-4/0,01 |
| 0-5 | 0,01 | 40 | 2 | ● | 58-MU-5/0,01 |



## Messuhr, Schutzgrad IP 67
## *Dial indicator, protection level IP 67*

NEU NEW !

- nach DIN 878
- Schaft und Taster aus rostfreiem Stahl, gehärtet und geläppt
- diamantgelagert, für Langlebigkeit und Genauigkeit
- Stahlgehäuse
- mit Toleranzmarken

- *according to DIN 878*
- *stem and spindle are made of stainless steel, hardened and lapped*
- *jeweled bearing for durability and stability*
- *steel housing*
- *with tolerance markers*

| Spanne / *Range* mm | Ablesung / *Reading* mm | Gehäuse Ø / *Housing Ø* mm | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 0-10 | 0,01 | 63 | ● | 58-MU-10/0,01WP |

## Messuhren digital, Schutzgrad IP 65
## *Indicators digital, protection level IP 65*

NEU *NEW* !



- mit LCD-Display
- inkl. 3V Batterie
- mit Datenausgang

- *with LCD display*
- *incl. 3V battery*
- *with data output*

| Spanne / *Range* mm | Ablesung / *Reading* mm | Genauigkeit / *Accuracy* mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 0-12,7 | 0,001 | 0,02 | 58-DMU-13/0,01 |
| 0-25,4 | 0,001 | 0,02 | 58-DMU-25/0,01 |
| 0-50,8 | 0,001 | 0,02 | 58-DMU-51/0,01 |

## Feinzeiger
## *Dial comparator*

NEU *NEW* !



- mit Feineinstellung
- stoß-, wasser- und staubgeschützt
- diamantgelagert, für Langlebigkeit und Genauigkeit
- mit Toleranzmarken

- *with fine adjustment*
- *shock-, water- and dustproof*
- *jeweled bearing for durability and stability*
- *with tolerance markers*

| Spanne / *Range* mm | Ablesung / *Reading* mm | Art.-Nr. / *Order no.* |
|---|---|---|
| ± 0,05 | 0,001 | 58-KM-0,05 |

## Fühlhebelmessgeräte
## *Dial test indicators*

NEU *NEW* !



- antimagnetisch
- diamantgelagert, für Langlebigkeit und Genauigkeit
- Tastspitze aus Stahl

- *anti-magnetic*
- *jeweled bearing for durability and stability*
- *steel contact point*

| Spanne / *Range* mm | Ablesung / *Reading* mm | Durchmesser / *Diameter* mm | Länge / *Length* mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 0-0,8 | 0,01 | 37,5 | 16,5 | 58-FHM-0,08/0,01 |
| 0-0,8 | 0,01 | 37,5 | 46,4 | 58-FHM-0,08/0,01XL |

| Typ / *Type* | Art.-Nr. / *Order no.* |
|---|---|
| Einsatz kurz / *Spare pin short* (16,50 mm) | 58-FHM-TK |
| Einsatz lang / *Spare pin long* (46,40 mm) | 58-FHM-TL |



## Magnetisches Gelenkstativ, mechanische Ausführung
## *Magnetic stand, mechanical type*

NEU NEW !

- Arm aluminiumlegiert
- Feineinstellung
- Schwalbenschwanznut
- An- / Ausschalter

- *aluminium alloyed arm*
- *fine adjustment*
- *dovetail groove*
- *on- / off-switch*

| Magnetkraft / *Magnetic force* kg | Magnetfuß / *Base* mm | Armlänge / *Stem length* mm | Gewindebohrung / *Tapped hole* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 100 | 74 x 50 x 55 | 370 | M10 x 1,25 | ◗ | 58-MST-370 |



## Magnetisches Gelenkstativ, hydraulische Ausführung
## *Magnetic stand, hydraulic type*

NEU NEW !

- Arm aluminiumlegiert
- Feineinstellung
- Schwalbenschwanznut
- An- / Ausschalter

- *aluminium alloyed arm*
- *fine adjustment*
- *dovetail groove*
- *on- / off-switch*

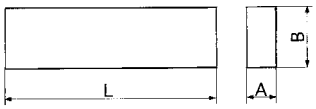
| Magnetkraft / *Magnetic force* kg | Magnetfuß / *Base* mm | Armlänge / *Stem length* mm | Gewindebohrung / *Tapped hole* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 60 | 60 x 50 x 55 | 380 | M18 x 1,25 | ◗ | 58-MST-380H |

# Parallelunterlagen
# *Parallels*

Material: Legierter Werkzeugstahl
53 - 57 HRC
Toleranzen: A = 0,01 mm
B = 0,005 mm

*Material: Alloyed tool steel*
*53 - 57 HRC*
*Tolerance: A = 0,01 mm*
*B = 0,005 mm*

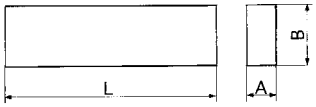





## Im Holzkasten
## *In wooden case*

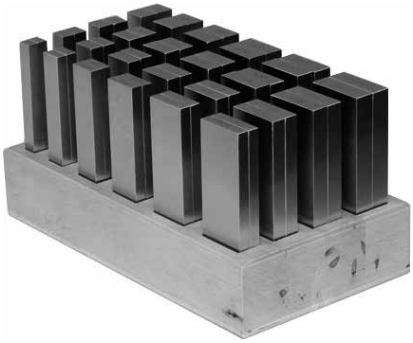
| L mm | A mm | B mm | Menge / *Quantity* | Paare / *Pairs* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 100 | 4 | 10/14/18/22/26 30/34/38/42 | je 2 / *2 each* | 9 | ● | 13-MLRD-100/4 |
| 120 | 8 | 12/17/22/25 28/32/36/38 | je 2 / *2 each* | 8 | ● | 13-MLRD-120/8 |
| 160 | 4 | 10/14/18/22/26 30/34/38/42 | je 2 / *2 each* | 9 | ● | 13-MLRD-160/4 |
| 160 | 8 | 12/17/22/25 28/32/36/38 | je 2 / *2 each* | 8 | ● | 13-MLRD-160/8 |
| 200 | 8 | 17/22/26/28 32/36/38/42 | je 2 / *2 each* | 8 | ● | 13-MLRD-200/8 |






## Im Holzkasten
## *In wooden case*

| L mm | A mm | B mm | Menge / *Quantity* | Paare / *Pairs* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 120 | 10 | 14/16/18/20/ 22/ 24/ 26/ 28/ 30/ 32/ 35/ 40 | je 2 / *2 each* | 12 | ● | 13-PUS-120/10 |
| 150 | 10 | 14/16/18/20/22/24/ 26/28/30/32/ 35/40/45/50 | je 2 / *2 each* | 14 | ● | 13-PUS-150/10 |



## Im Holzständer, 56-62 HRC
## *In wooden tray, 56-62 HRC*

| L mm | B x A mm | Menge / *Quantity* | Paare / *Pairs* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 100* | 5x2/10x2/15x2/20x2/6x3/11x3/16x3/21x3/ 7x4/12x4/17x4/22x4/8x5/13x5/18x5/23x5/ 9x6/14x6/19x6/24x6 | je 2 / *2 each* | 20 | ● | 13-PUS-100HL |
| 125 | 11x8/16x8/21x8/26x8/31x8/36x8/13x10/ 18x10/23x10/28x10/33x10/38x10/15x12/ 20x12/25x12/30x12/35x12/40x12/17x14/ 22x14/27x14/32x14/37x14/42x14 | je 2/ *2 each* | 24 | ● | 13-PUS-125HL |
| 150 | 11x8/16x8/21x8/26x8/31x8/36x8/ 13x10/18x10/23x10/28x10/33x10/38x10/ 15x12/20x12/25x12/30x12/35x12/40x12/ 17x14/22x14/27x14/32x14/37x14/42x14 | je 2 / *2 each* | 24 | ● | 13-PUS-150HL |

* in Holzkasten
** in wooden case*



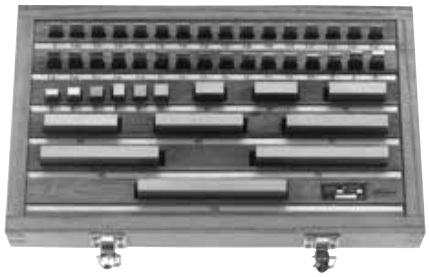


● **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Endmaßsätze im Holzkasten
## *Gauge block sets in wooden case*

NEU / *NEW* !

- nach DIN EN ISO 3650
- *according to DIN EN ISO 3650*



Stahl / *Steel*

## Stahl / *Steel*

- aus hochwertigem legierten Stahl
- Härte HRC64
- *made from high-quality alloy steel*
- *hardness HRC64*

| Menge / *Quantity* | Größe / *Size* mm | Schritte / *Steps* mm | Stücke / *Pieces* | Güte / *Grade* | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 32 | 1,005 | - | 1 | 0 | ● | 13-EMS-32/0 |
| | 1,01 - 1,09 | 0,01 | 9 | | | |
| | 1,1 - 1,9 | 0,1 | 9 | | | |
| | 1 - 9 | 1 | 9 | 1 | ● | 13-EMS-32/1 |
| | 10 - 30 | 10 | 3 | | | |
| | 50 | - | 1 | | | |
| 47 | 1,005 | - | 1 | 0 | ● | 13-EMS-47/0 |
| | 1,01 - 1,9 | 0,01 | 9 | | | |
| | 1,1 - 1,9 | 0,1 | 9 | | | |
| | 1 - 24 | 1 | 24 | 1 | ● | 13-EMS-47/1 |
| | 25 - 100 | 25 | 4 | | | |
| 87 | 1,001 - 1,009 | 0,001 | 9 | 0 | ● | 13-EMS-87/0 |
| | 1,01 - 1,49 | 0,01 | 49 | | | |
| | 0,5 - 9,5 | 0,5 | 19 | 1 | ● | 13-EMS-87/1 |
| | 10 - 100 | 10 | 10 | | | |
| 103 | 1,0005 | - | 1 | 0 | ● | 13-EMS-103/0 |
| | 1,01 - 1,49 | 0,001 | 49 | | | |
| | 0,5 - 24,5 | 0,5 | 49 | 1 | ● | 13-EMS-103/1 |
| | 25 - 100 | 25 | 4 | | | |



Hartmetall / *Carbide*

## Hartmetall / *Carbide*

| | | | | | | |
|---|---|---|---|---|---|---|
| 32 | 1,005 | - | 1 | 0 | ● | 13-EMHM-32/0 |
| | 1,01 - 1,09 | 0,01 | 9 | | | |
| | 1,1 - 1,9 | 0,1 | 9 | | | |
| | 1 - 9 | 1 | 9 | 1 | ● | 13-EMHM-32/1 |
| | 10, 20, 30, 50 | 10 | 4 | | | |
| 47 | 1,005 | - | 1 | 0 | ● | 13-EMHM-47/0 |
| | 1,01 - 1,2 | 0,01 | 20 | | | |
| | 1,3 - 1,9 | 0,1 | 7 | | | |
| | 1 - 9 | 1 | 9 | 1 | ● | 13-EMHM-47/1 |
| | 10 - 100 | 25 | 10 | | | |
| 87 | 1,001 - 1,009 | 0,001 | 9 | 0 | ● | 13-EMHM-87/0 |
| | 1,01 - 1,49 | 0,01 | 49 | | | |
| | 0,5 - 9,5 | 0,5 | 19 | 1 | ● | 13-EMHM-487/1 |
| | 10 - 100 | 10 | 10 | | | |



Keramik / *Ceramic*

## Keramik / *Ceramic*

- antimagnetisch
- doppelt so hart wie Stahl
- *antimagnetic*
- *twice as hard as steel*

| | | | | | | |
|---|---|---|---|---|---|---|
| 32 | 1,005 | - | 1 | 0 | ● | 13-EMK-32/0 |
| | 1,01 - 1,09 | 0,01 | 9 | | | |
| | 1,1 - 1,9 | 0,1 | 9 | | | |
| | 1 - 9 | 1 | 9 | 1 | ● | 13-EMK-32/1 |
| | 10 - 30, 50 | 10 | 4 | | | |
| 47 | 1,005 | - | 1 | 0 | ● | 13-EMK-47/0 |
| | 1,01 - 1,2 | 0,01 | 20 | | | |
| | 1,3 - 1,9 | 0,1 | 7 | | | |
| | 1 - 9 | 1 | 9 | 1 | ● | 13-EMK-47/1 |
| | 10 - 100 | 10 | 10 | | | |

# Grenz- und Gewindelehrdorne und Ringe
*Plain and thread plug gauges and rings*

## Grenzlehrdorne
## *Plain plug gauges*

NEU NEW !



- Genauigkeit nach DIN 7162/7164
- Maße nach DIN 2245
- Gehärteter Lehrenstahl
- bis 60 mm mit 2 Enden, ab 60 mm mit 1 Ende

- *accuracy to DIN 7162/7164*
- *dimensions according to DIN 2245*
- *hardened gauge steel*
- *up to 60 mm double ended, from 60 mm single ended*

| Größe / *Size* Ø mm | Art.-Nr. / *Order no.* | Größe / *Size* Ø mm | Art.-Nr. / *Order no.* |
|---|---|---|---|
| 2 | 58-ESD-2 | 33 | 58-ESD-33 |
| 3 | 58-ESD-3 | 34 | 58-ESD-34 |
| 4 | 58-ESD-4 | 35 | 58-ESD-35 |
| 5 | 58-ESD-5 | 36 | 58-ESD-36 |
| 6 | 58-ESD-6 | 37 | 58-ESD-37 |
| 7 | 58-ESD-7 | 38 | 58-ESD-38 |
| 8 | 58-ESD-8 | 40 | 58-ESD-40 |
| 9 | 58-ESD-9 | 42 | 58-ESD-42 |
| 10 | 58-ESD-10 | 44 | 58-ESD-44 |
| 11 | 58-ESD-11 | 45 | 58-ESD-45 |
| 12 | 58-ESD-12 | 46 | 58-ESD-46 |
| 13 | 58-ESD-13 | 47 | 58-ESD-47 |
| 14 | 58-ESD-14 | 48 | 58-ESD-48 |
| 15 | 58-ESD-15 | 50 | 58-ESD-50 |
| 16 | 58-ESD-16 | 52 | 58-ESD-52 |
| 17 | 58-ESD-17 | 55 | 58-ESD-55 |
| 18 | 58-ESD-18 | 60 | 58-ESD-60 |
| 19 | 58-ESD-19 | 62 | 58-ESD-62 |
| 20 | 58-ESD-20 | 65 | 58-ESD-65 |
| 21 | 58-ESD-21 | 68 | 58-ESD-68 |
| 22 | 58-ESD-22 | 70 | 58-ESD-70 |
| 23 | 58-ESD-23 | 72 | 58-ESD-72 |
| 24 | 58-ESD-24 | 75 | 58-ESD-75 |
| 25 | 58-ESD-25 | 80 | 58-ESD-80 |
| 26 | 58-ESD-26 | 85 | 58-ESD-85 |
| 28 | 58-ESD-28 | 90 | 58-ESD-90 |
| 30 | 58-ESD-30 | 95 | 58-ESD-95 |
| 31 | 58-ESD-31 | 98 | 58-ESD-98 |
| 32 | 58-ESD-32 | 100 | 58-ESD-100 |

## Grenzlehrdornsatz
## *Set of plain plug gauges*

NEU NEW !



| Größe / *Size* Ø mm | Art.-Nr. / *Order no.* |
|---|---|
| 3, 4, 5, 6, 8, 10, 12 | 58-ESD-SATZ |





Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Grenzlehrringe
## *Plain setting ring gauges*

NEU / *NEW* !




- Genauigkeit nach DIN 2250C
- gehärteter Lehrenstahl
- Kalibrierung auf Anfrage

- *accuracy to DIN 2250C*
- *hardened gauge steel*
- *calibration upon request*

| Größe / *Size* Ø mm | | Art.-Nr. / *Order no.* | | Größe / *Size* Ø mm | | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|
| 3 | ● | 58-ESR-3 | | 30 | ● | 58-ESR-30 | |
| 4 | ● | 58-ESR-4 | | 32 | ● | 58-ESR-32 | |
| 5 | ● | 58-ESR-5 | | 34 | ● | 58-ESR-34 | |
| 6 | ● | 58-ESR-6 | | 35 | ● | 58-ESR-35 | |
| 7 | ● | 58-ESR-7 | | 36 | ● | 58-ESR-36 | |
| 8 | ● | 58-ESR-8 | | 37 | ● | 58-ESR-37 | |
| 9 | ● | 58-ESR-9 | | 38 | ● | 58-ESR-38 | |
| 10 | ● | 58-ESR-10 | | 40 | ● | 58-ESR-40 | |
| 11 | ● | 58-ESR-11 | | 42 | ● | 58-ESR-42 | |
| 12 | ● | 58-ESR-12 | | 44 | ● | 58-ESR-44 | |
| 13 | ● | 58-ESR-13 | | 45 | ● | 58-ESR-45 | |
| 14 | ● | 58-ESR-14 | | 46 | ● | 58-ESR-46 | |
| 15 | ● | 58-ESR-15 | | 47 | ● | 58-ESR-47 | |
| 16 | ● | 58-ESR-16 | | 48 | ● | 58-ESR-48 | |
| 17 | ● | 58-ESR-17 | | 50 | ● | 58-ESR-50 | |
| 18 | ● | 58-ESR-18 | | 55 | ● | 58-ESR-55 | |
| 19 | ● | 58-ESR-19 | | 60 | ● | 58-ESR-60 | |
| 20 | ● | 58-ESR-20 | | 65 | ● | 58-ESR-65 | |
| 21 | ● | 58-ESR-21 | | 70 | ● | 58-ESR-70 | |
| 22 | ● | 58-ESR-22 | | 75 | ● | 58-ESR-75 | |
| 23 | ● | 58-ESR-23 | | 80 | ● | 58-ESR-80 | |
| 24 | ● | 58-ESR-24 | | 85 | ● | 58-ESR-85 | |
| 25 | ● | 58-ESR-25 | | 90 | ● | 58-ESR-90 | |
| 26 | ● | 58-ESR-26 | | 95 | ● | 58-ESR-95 | |
| 28 | ● | 58-ESR-28 | | 100 | ● | 58-ESR-100 | |

## Gewindelehrdorne, „Gut“ und „Ausschuss“
## *Thread plug gauges, „GO“ and „NO GO“*

NEU NEW !



- nach DIN 13
- gehärteter Lehrenstahl
- Toleranz 6H
- mit Gut- und Ausschussseite

- *according to DIN 13*
- *hardened gauge steel*
- *tolerance 6H*
- *with GO and NO GO tips*

| Größe / *Size* | | Art.-Nr. / *Order no.* |
|---|---|---|
| M2 | ● | 58-GLD-M2 |
| M2,5 | ● | 58-GLD-M2,5 |
| M3 | ● | 58-GLD-M3 |
| M4 | ● | 58-GLD-M4 |
| M5 | ● | 58-GLD-M5 |
| M6 | ● | 58-GLD-M6 |
| M7 | ● | 58-GLD-M7 |
| M8 | ● | 58-GLD-M8 |
| M9 | ● | 58-GLD-M9 |
| M10 | ● | 58-GLD-M10 |
| M11 | ● | 58-GLD-M11 |
| M12 | ● | 58-GLD-M12 |
| M14 | ● | 58-GLD-M14 |
| M16 | ● | 58-GLD-M16 |
| M18 | ● | 58-GLD-M18 |
| M20 | ● | 58-GLD-M20 |
| M22 | ● | 58-GLD-M22 |
| M24 | ● | 58-GLD-M24 |
| M30 | ● | 58-GLD-M30 |
| M33 | ● | 58-GLD-M33 |
| M36 | ● | 58-GLD-M36 |
| M42 | ● | 58-GLD-M42 |
| M45 | ● | 58-GLD-M45 |
| M48 | ● | 58-GLD-M48 |
| M60 | ● | 58-GLD-M60 |

## Gewindelehrdornsatz, „Gut“ und „Ausschuss“
## *Set of thread plug gauges*, „GO“ and „NO GO“

NEU NEW !



| Größe / *Size* | | Art.-Nr. / *Order no.* |
|---|---|---|
| M3, M4, M5, M6, M8, M10, M12 | ● | 58-GLD-SATZ |



● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*




## Gewindelehrringe, „GUT“
## *Thread ring gauges, „GO“*

NEU / *NEW* !

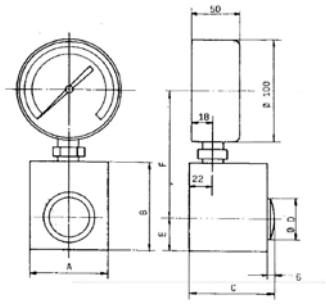
- nach DIN 13
- gehärteter Lehrenstahl
- Toleranz 6g

- *according to DIN 13*
- *hardened gauge steel*
- *tolerance 6g*

| Größe / *Size* | | Art.-Nr. / *Order no.* |
|---|---|---|
| M2 | ● | 58-GLR-M2 |
| M2,5 | ● | 58-GLR-M2,5 |
| M3 | ● | 58-GLR-M3 |
| M4 | ● | 58-GLR-M4 |
| M5 | ● | 58-GLR-M5 |
| M6 | ● | 58-GLR-M6 |
| M8 | ● | 58-GLR-M8 |
| M10 | ● | 58-GLR-M10 |
| M12 | ● | 58-GLR-M12 |
| M14 | ● | 58-GLR-M14 |
| M16 | ● | 58-GLR-M16 |
| M18 | ● | 58-GLR-M18 |
| M20 | ● | 58-GLR-M20 |
| M24 | ● | 58-GLR-M24 |
| M30 | ● | 58-GLR-M30 |
| M36 | ● | 58-GLR-M36 |
| M48 | ● | 58-GLR-M48 |

# Spannkraftmessgeräte
# *Clamping force meters*





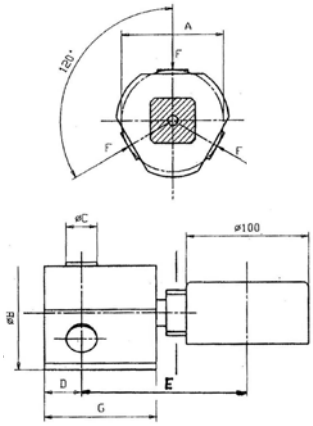
## Spannkraftmessgeräte für Schraubstöcke
## *Clamping force meters for vices*

- zur Überprüfung der Spannkraft an Schraub- und Spannstöcken
- Messbereiche: 0,6 kN - 100 kN
- Messgenauigkeit: ± 1% vom Skalenendwert

- *to determine the power of clamping devices*
- *measuring range: 0,6 kN - 100 kN*
- *precision: ± 1% of the end scale value*

| Spannkraft / *Gripping force* kN | A mm | B mm | C mm | Ø D mm | E mm | F mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 0,6-6,0 | 45 | 50 | 45 | 12 | 14 | 108 | 1,2 | ◗ | 14-SKS-S6 |
| 1,0-10,0 | 45 | 50 | 45 | 12 | 14 | 108 | 1,2 | ◗ | 14-SKS-S10 |
| 1,6-16,0 | 50 | 60 | 50 | 16 | 20 | 112 | 1,6 | ◗ | 14-SKS-S16 |
| 2,5-25,0 | 55 | 65 | 55 | 20 | 20 | 117 | 1,7 | ◗ | 14-SKS-S25 |
| 4,0-40,0 | 55 | 69 | 55 | 25 | 23 | 114 | 2,0 | ◗ | 14-SKS-S40 |
| 6,0-60,0 | 65 | 72 | 65 | 30 | 25 | 119 | 2,7 | ◗ | 14-SKS-S60 |
| 10,0-100,0 | 75 | 85 | 85 | 40 | 32 | 125 | 4,6 | ◗ | 14-SKS-S100 |





## Spannkraftmessgeräte für Dreibackenfutter
## *Clamping force meters for three-jaw chucks*

- Messgenauigkeit: ± 1,5% vom Skalenendwert
- Messbereich: 0,6 kN - 400 kN
- Krafteinleitung durch 3 Kolben

- *precision ± 1,5% of the end scale value*
- *measuring range: 0,6 - 400 kN*
- *transmission of force by 3 pistons*

| Spannkraft / *Gripping force* kN | Spannkr. p. Backe / *Grip. force p. jaw* kN | Ø A mm | Ø B mm | Ø C mm | D mm | E mm | G mm | kg | | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|---|
| 0,6-6 | 3 x 2 | 40 | 40 | 10 | 12 | 105 | 45 | 0,8 | ○ | 00-SKD3-6 |
| 1-10 | 3 x 3,33 | 40 | 40 | 10 | 12 | 105 | 45 | 0,8 | ○ | 00-SKD3-10 |
| 3-30 | 3 x 10 | 40 | 45 | 13 | 15 | 110 | 50 | 1,2 | ○ | 00-SKD3-30 |
| 6-60 | 3 x 20 | 55 | 60 | 20 | 20 | 110 | 60 | 1,9 | ○ | 00-SKD3-60 |
| 9-90 | 3 x 30 | 65 | 70 | 22 | 23 | 120 | 65 | 2,5 | ○ | 00-SKD3-90 |
| 12-120 | 3 x 40 | 65 | 70 | 25 | 26 | 120 | 65 | 2,5 | ○ | 00-SKD3-120 |
| 15-150 | 3 x 50 | 85 | 90 | 30 | 32 | 118 | 70 | 4,0 | ○ | 00-SKD3-150 |
| 18-180 | 3 x 60 | 85 | 90 | 30 | 32 | 118 | 70 | 4,0 | ○ | 00-SKD3-180 |
| 21-210 | 3 x 70 | 95 | 100 | 35 | 37 | 123 | 80 | 5,5 | ○ | 00-SKD3-210 |
| 24-240 | 3 x 80 | 95 | 100 | 35 | 37 | 123 | 85 | 8,0 | ○ | 00-SKD3-240 |
| 30-300 | 3 x 100 | 120 | 125 | 35 | 40 | 125 | 85 | 8,0 | ○ | 00-SKD3-300 |
| 40-400 | 3 x 133,3 | 120 | 125 | 35 | 40 | 125 | 85 | 8,0 | ○ | 00-SKD3-400 |

**Prüfprotokolle auf Anfrage erhältlich**
***Test certificates available upon request***

**Spannkraftmessgerät für Zwei- und Vierbackenfutter lieferbar auf Anfrage**
***Clamping force meter for two- and four-jaw chucks available upon request***



○ **Lagerstandard** / ***in stock***
◗ **innerhalb weniger Tage** / ***within a few days***
○ **auf Anfrage** / ***on request***

# Anzugskraftmessgeräte
*Tigthening force meters*



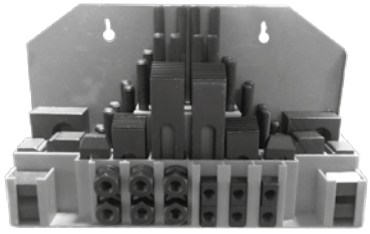
## Anzugskraftmessgeräte für Werkzeugspindeln
## *Tigthening force meters for spindles*

- Lieferung im Holzetui inkl. Kalibrierschein
- *delivered in wooden case with calibration certificate*

| Größe / *Size* | | Art.-Nr. / *Order no.* |
|---|---|---|
| SK30 / DIN 69871 | ○ | 14-SKWA-SK30 |
| SK40 / DIN 69871 | ○ | 14-SKWA-SK40 |
| SK50 / DIN 69871 | ○ | 14-SKWA-SK50 |
| HSK 32 | ○ | 14-SKWA-HSK32 |
| HSK 40 | ○ | 14-SKWA-HSK40 |
| HSK 50 | ○ | 14-SKWA-HSK50 |
| HSK 63 | ○ | 14-SKWA-HSK63 |
| HSK 80 | ○ | 14-SKWA-HSK80 |
| HSK 100 | ○ | 14-SKWA-HSK100 |

**Anzugskraftmessgeräte für DIN 2080 und MAS BT auf Anfrage lieferbar**
***Tigthening force meters for DIN 2080 and MAS BT available upon request***

# Werkzeugsätze
*Tool sets*



## Aufspannsätze
## *Clamping sets*

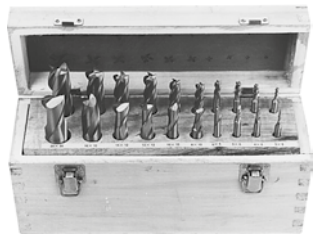
58-tlg. Basissortiment mit den am häufigsten benötigten Spannelementen. Zum schnellen Aufspannen von Werkstücken oder Vorrichtungen auf T-Nutentischen. Lieferung komplett mit Kassette, als Wandhalter verwendbar.

*Set of 58 frequently used clamping elements for fast mounting of work pieces or fixation on T-groove tables. Incl. rack for mounting on a wall.*

Lieferumfang:
6 Nutensteine, 6 Bundmuttern
4 Verbindungsmuttern, 6 gestufte Spannblockpaare (12 Stk.), 6 Spannpratzen, 24 Gewindebolzen

*Scope of supply:*
*6 T-slot nuts, 6 flange nuts, 4 coupling nuts, 6 stepped block pairs (12 pcs), 6 clamps, 24 studs*

| Anzugsgewinde / *Tightening thread* | T-Nutensteine / *T-nuts* | | Art.-Nr. / *Order no.* |
|---|---|---|---|
| M8 | 10 mm | ● | 11-ASS-M8 |
| M10 | 12 mm | ● | 11-ASS-M10 |
| M12 | 14 mm | ● | 11-ASS-M12 |
| M14 | 16 mm | ● | 11-ASS-M14 |
| M16 | 18 mm | ● | 11-ASS-M16 |
| M20 | 22 mm | ● | 11-ASS-M20 |



## Titan-Fräserkassette
## *TiN-coated milling cutters*

Ausführung nach DIN 327 (2-schneidig) bzw. nach DIN 844B (4-schneidig) je nach Durchmesser, 20-tlg. Satz, in Holzkiste verpackt. 2 - 5 fache Standzeit durch TiN-Beschichtung.

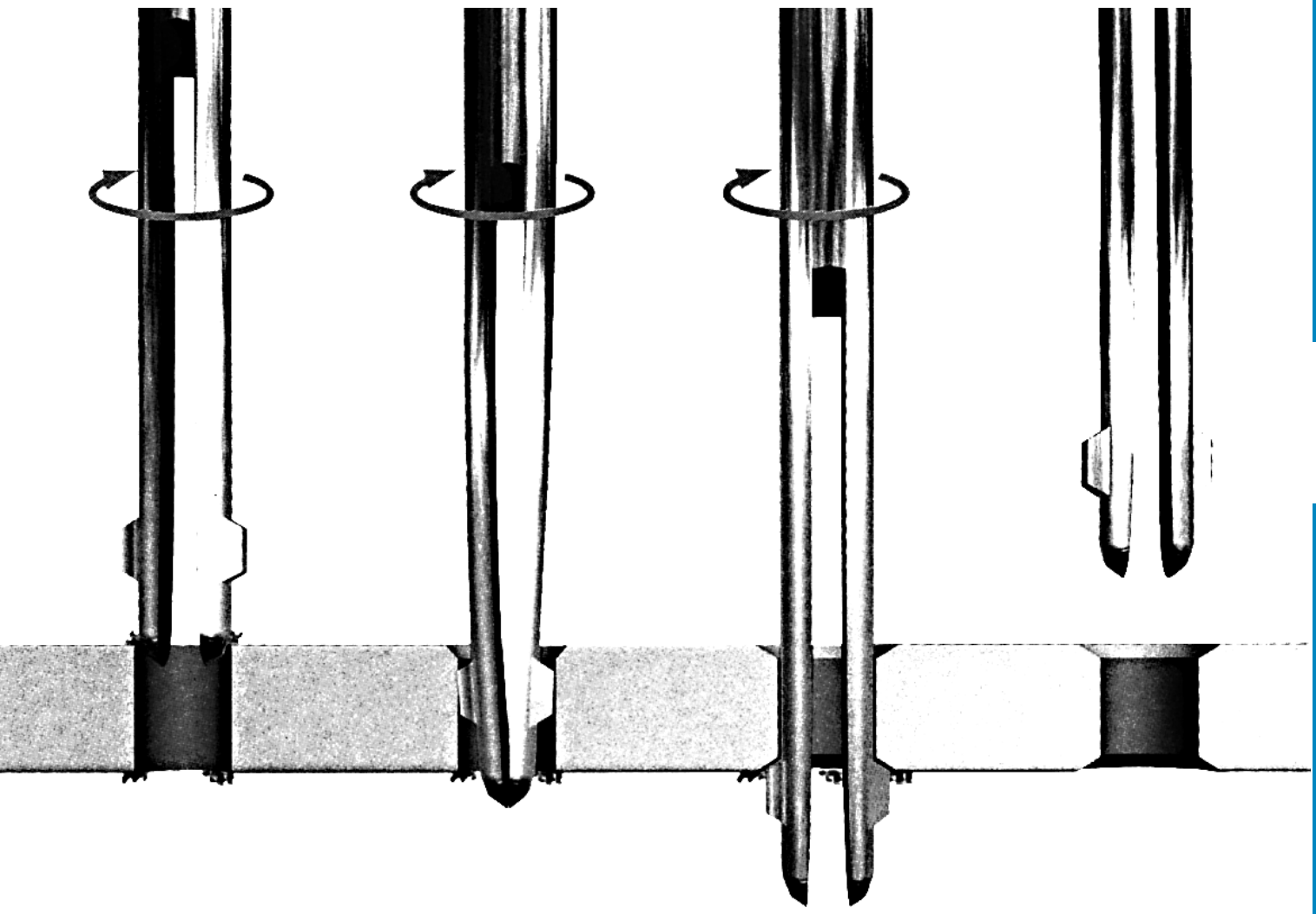
*According to DIN 327 (2 flutes) or DIN 844B (4 flutes) depending on the relevant diameter, 20 mills per set. With TiN-coating for increased service life.*

| Je Ø in DIN 327 und DIN 844B / *One drill each in DIN 327 and DIN 844B* | | Art.-Nr. / *Order no.* |
|---|---|---|
| 3 / 4 / 5 / 6 / 8 / 10 / 12 / 14 / 18 / 20 mm | ● | 11-TFK-3-20 |

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Entgratwerkzeug X-Grat

## *Deburring tool X-Grat*



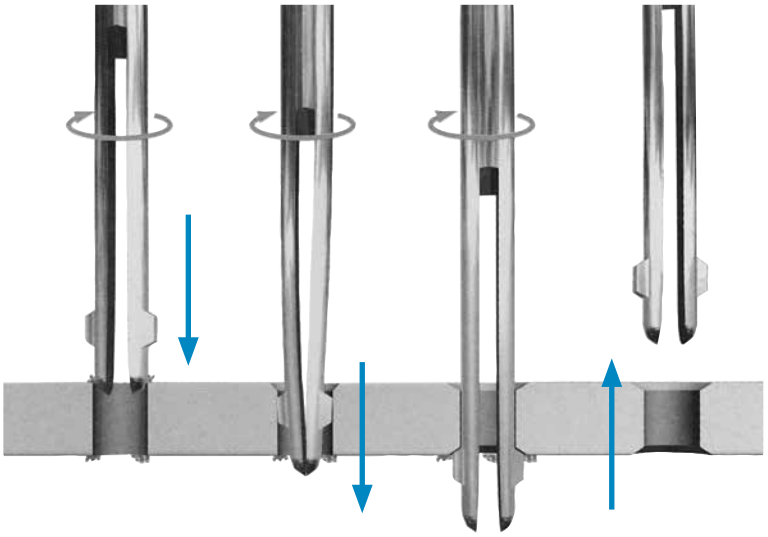
# Entgratwerkzeug X-Grat
*Deburring tool X-Grat*



## Beidseitige Bohrloch-Entgratung in einem Durchgang
## *Bore-hole deburring on both sides in a single operation*

- Material: HSS
- kein Spindelstopp nötig!
- Entgratung an unzugänglichen Stellen (z.B. Hohlkörper)
- Einsparung einer zweiten Aufspannung
- einfache und stabile Bauweise
- besonders geeignet für Massenfertigung
- geeignet für jede Maschine und nahezu jedes Werkstück
- Winkel Vorwärtssenkung: 45°
- Winkel Rückwärtssenkung: 33°

- *material: HSS*
- *no spindle stop required!*
- *chamfering in inaccessible locations (eg. hollow objects)*
- *no turning of work piece required*
- *simple and rugged design*
- *most suitable for mass production*
- *one piece construction allows cutting chips to clear easily*
- *readily adaptable to all kinds of production machines*
- *forward deburring angle: 45°*
- *reverse deburring angle: 33°*



| Größe / *Size* | UPM / *RPM* | Vorschub / *Feed rate* mm |
|---|---|---|
| 1,0~5,0 | 1750 | 0,02~0,10 |
| 6,0~9,0 | 800-1000 | 0,02~0,15 |
| ≥ 10,0 | 600~650 | 0,05~0,20 |

## Bearbeitungszeit 0,9 Sek.*
## *Machining time 0,9 sec.**

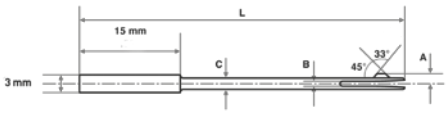
* Anwendungsbeispiel
* *Example*





Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Entgratwerkzeug X-Grat
## *Deburring tool X-Grat*




| Größenbereich / *Range of hole size* mm | C mm | L mm | A mm | B mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 1,0-1,1 | 0,9 | 45 | 0,9 | 0,3 | 1E-XG-1,0 |
| 1,1-1,2 | 1,0 | 45 | 1,0 | 0,3 | 1E-XG-1,1 |
| 1,2-1,3 | 1,1 | 45 | 1,1 | 0,3 | 1E-XG-1,2 |
| 1,3-1,4 | 1,2 | 45 | 1,2 | 0,3 | 1E-XG-1,3 |
| 1,4-1,5 | 1,3 | 45 | 1,3 | 0,3 | 1E-XG-1,4 |
| 1,5-1,6 | 1,4 | 50 | 1,4 | 0,5 | 1E-XG-1,5 |
| 1,6-1,7 | 1,5 | 50 | 1,5 | 0,5 | 1E-XG-1,6 |
| 1,7-1,8 | 1,6 | 50 | 1,6 | 0,5 | 1E-XG-1,7 |
| 1,8-1,9 | 1,7 | 60 | 1,7 | 0,5 | 1E-XG-1,8 |
| 1,9-2,0 | 1,8 | 60 | 1,8 | 0,5 | 1E-XG-1,9 |
| 2,0-2,2 | 1,9 | 60 | 1,9 | 0,5 | 1E-XG-2,0 |
| 2,2-2,4 | 2,1 | 80 | 2,1 | 1,0 | 1E-XG-2,2 |
| 2,4-2,6 | 2,3 | 80 | 2,3 | 1,0 | 1E-XG-2,4 |
| 2,6-2,8 | 2,5 | 80 | 2,5 | 1,0 | 1E-XG-2,6 |




| Größenbereich / *Range of hole size* mm | d mm | L mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 2,80-3,18 | 2,75 | 101,6 | 3,18 | 4,45 | 1E-XG-2,8 |
| 3,18-3,55 | 3,15 | 101,6 | 3,18 | 4,45 | 1E-XG-3,18 |
| 3,55-3,96 | 3,58 | 101,6 | 3,18 | 4,45 | 1E-XG-3,55 |
| 3,96-4,36 | 3,94 | 101,6 | 3,18 | 4,45 | 1E-XG-3,96 |
| 4,36-4,74 | 4,34 | 101,6 | 3,18 | 4,45 | 1E-XG-4,36 |
| 4,74-5,15 | 4,72 | 101,6 | 3,18 | 6,22 | 1E-XG-4,74 |
| 5,15-5,56 | 5,13 | 101,6 | 3,18 | 6,22 | 1E-XG-5,15 |



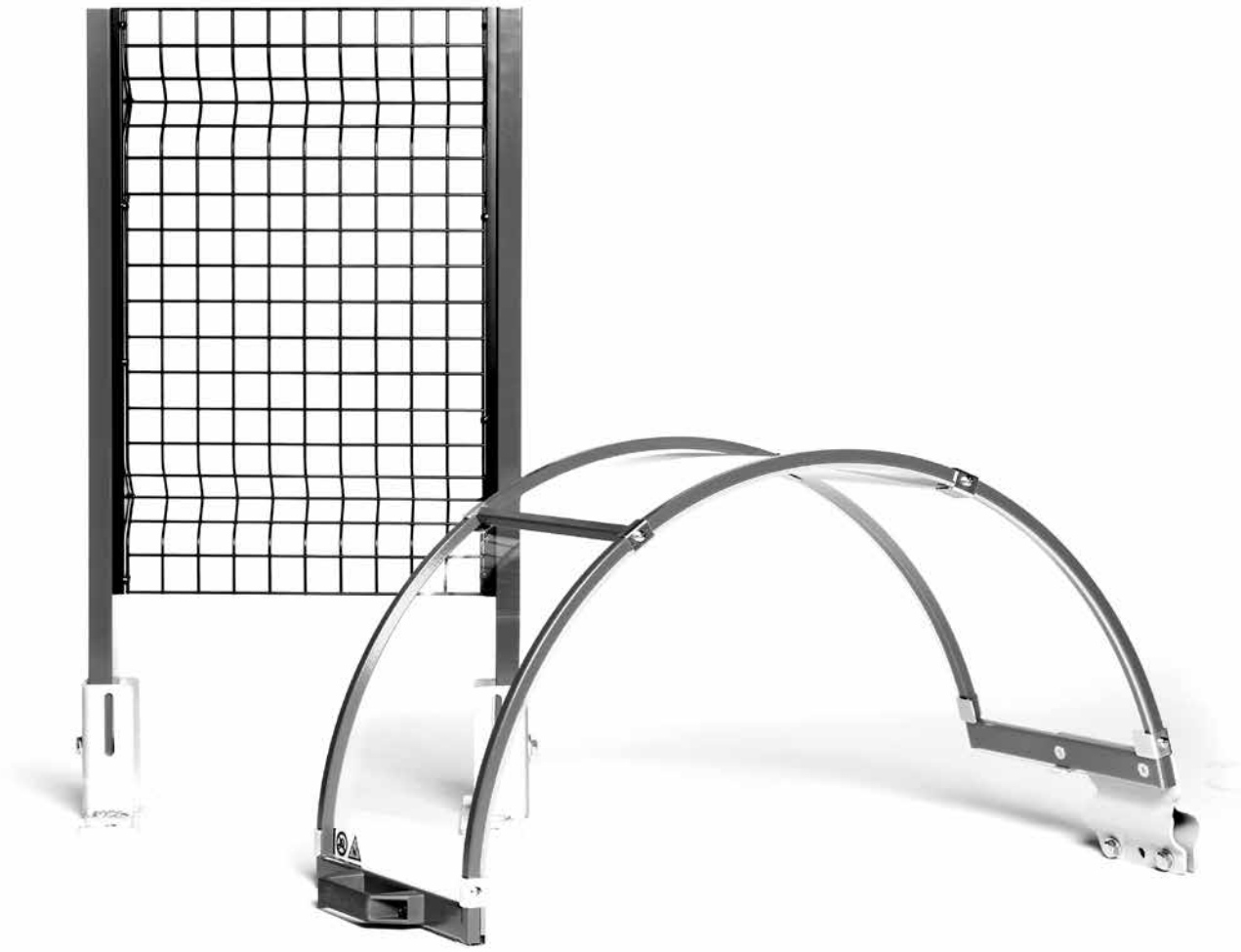

| Größenbereich / *Range of hole size* mm | d mm | L mm | a mm | b mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|
| 5,56-5,94 | 5,54 | 101,6 | 6,48 | 6,22 | 1E-XG-5,56 |
| 5,94-6,35 | 5,92 | 101,6 | 6,48 | 6,22 | 1E-XG-5,94 |
| 6,35-6,75 | 6,32 | 101,6 | 6,48 | 6,22 | 1E-XG-6,35 |
| 6,76-7,14 | 6,73 | 101,6 | 6,48 | 6,22 | 1E-XG-6,76 |
| 7,13-7,54 | 7,11 | 101,6 | 6,48 | 6,22 | 1E-XG-7,13 |
| 7,54-7,95 | 7,52 | 101,6 | 7,24 | 6,48 | 1E-XG-7,54 |
| 7,95-8,33 | 7,92 | 101,6 | 7,24 | 6,48 | 1E-XG-7,95 |
| 8,33-8,71 | 8,31 | 101,6 | 7,24 | 6,48 | 1E-XG-8,33 |
| 8,71-9,11 | 8,69 | 101,6 | 7,24 | 6,48 | 1E-XG-8,71 |
| 9,11-9,52 | 9,09 | 101,6 | 7,24 | 6,48 | 1E-XG-9,11 |
| 9,52-9,90 | 9,50 | 112,7 | 8,00 | 6,22 | 1E-XG-9,52 |
| 9,90-10,31 | 9,88 | 112,7 | 8,00 | 6,22 | 1E-XG-9,9 |
| 10,31-10,72 | 10,29 | 112,7 | 8,00 | 6,22 | 1E-XG-10,31 |
| 10,69-11,13 | 10,67 | 112,7 | 8,00 | 6,22 | 1E-XG-10,69 |
| 11,10-11,51 | 11,07 | 139,7 | 8,76 | 6,99 | 1E-XG-11,1 |
| 11,51-11,88 | 11,48 | 139,7 | 8,76 | 6,99 | 1E-XG-11,51 |
| 11,88-12,29 | 11,86 | 139,7 | 8,76 | 6,99 | 1E-XG-11,88 |
| 12,29-12,70 | 12,26 | 139,7 | 8,76 | 6,99 | 1E-XG-12,29 |
| 12,70-13,08 | 12,67 | 177,8 | 9,78 | 7,75 | 1E-XG-12,7 |
| 13,08-13,48 | 13,05 | 177,8 | 9,78 | 7,75 | 1E-XG-13,08 |
| 13,49-13,89 | 13,46 | 177,8 | 9,78 | 7,75 | 1E-XG-13,49 |
| 13,87-14,30 | 13,84 | 177,8 | 9,78 | 7,75 | 1E-XG-13,87 |
| 14,30-14,68 | 14,27 | 190,5 | 10,54 | 10,29 | 1E-XG-14,30 |
| 14,68-15,09 | 14,65 | 190,5 | 10,54 | 10,29 | 1E-XG-14,68 |
| 15,09-15,47 | 15,06 | 190,5 | 10,54 | 11,05 | 1E-XG-15,09 |
| 15,47-15,87 | 15,44 | 190,5 | 10,54 | 11,05 | 1E-XG-15,47 |
| 15,87-16,28 | 15,84 | 212,6 | 11,30 | 11,05 | 1E-XG-15,87 |

**Andere Abmessungen und TiN-beschichtete Ausführungen auf Anfrage erhältlich**
***Other sizes and TiN-coated version available upon request***

Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Schutzeinrichtungen und Schutzzäune

## *Safety guards and safety panels*



## Inhalt:


**16.1 | Schutzeinrichtungen**

| für Drehmaschinen

| für Fräsmaschinen

| für Ständerbohrmaschinen

| für Schleifmaschinen

| mit Magnetfuß

| Not-Aus Steuerungseinheiten

**16.2 | Schutzzäune**


## *Content:*


***16.1 | Safety guards***

| *for lathes*

| *for milling machines*

| *for drilling machines*

| *for grinding machines*

| with magnetic base

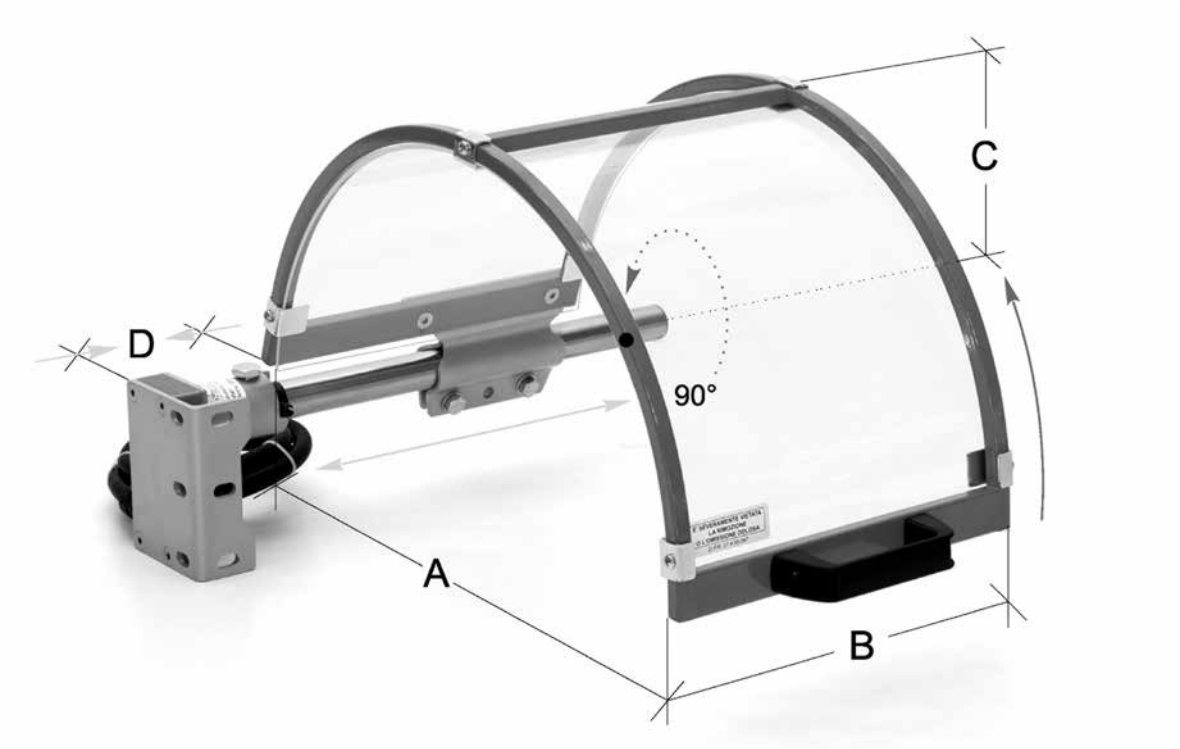
| *Safety switch control panels*

***16.2 | Safety panels***

## Futterschutzeinrichtungen, klappbar
## *Safety hoods for chucks, foldable*

- aufklappbare Futterschutzhaube aus Acrylglas mit robustem Stahlrahmen
- mit Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- einfache Montage an der Rückseite des Spindelstockes
- verstellbare Halterung
- Durchmesser A der Haube sollte ca. 150-200 mm größer als das Drehfutter sein

- *foldable steel-framed hood made from acrylic glass*
- *with safety micro-switch*
- *protection against chips, lubricant and coolant*
- *easy adaption to the back of the spindle*
- *various adjustments*
- *diameter A of the safety hood should be 150-200 mm larger than the lathe chuck*




| A<br>mm | B<br>mm | C<br>mm | D<br>mm | Art.-Nr. /<br>*Order no.* | |
|---|---|---|---|---|---|
| 300 | 200 | 180 | 0-215 | ZE-FS10-300 | |
| 400 | 235 | 230 | 0-150 | ZE-FS10-400 | |
| 500 | 235 | 280 | 0-150 | ZE-FS10-500 | |
| 600 | 235 | 330 | 0-150 | ZE-FS10-600 | |



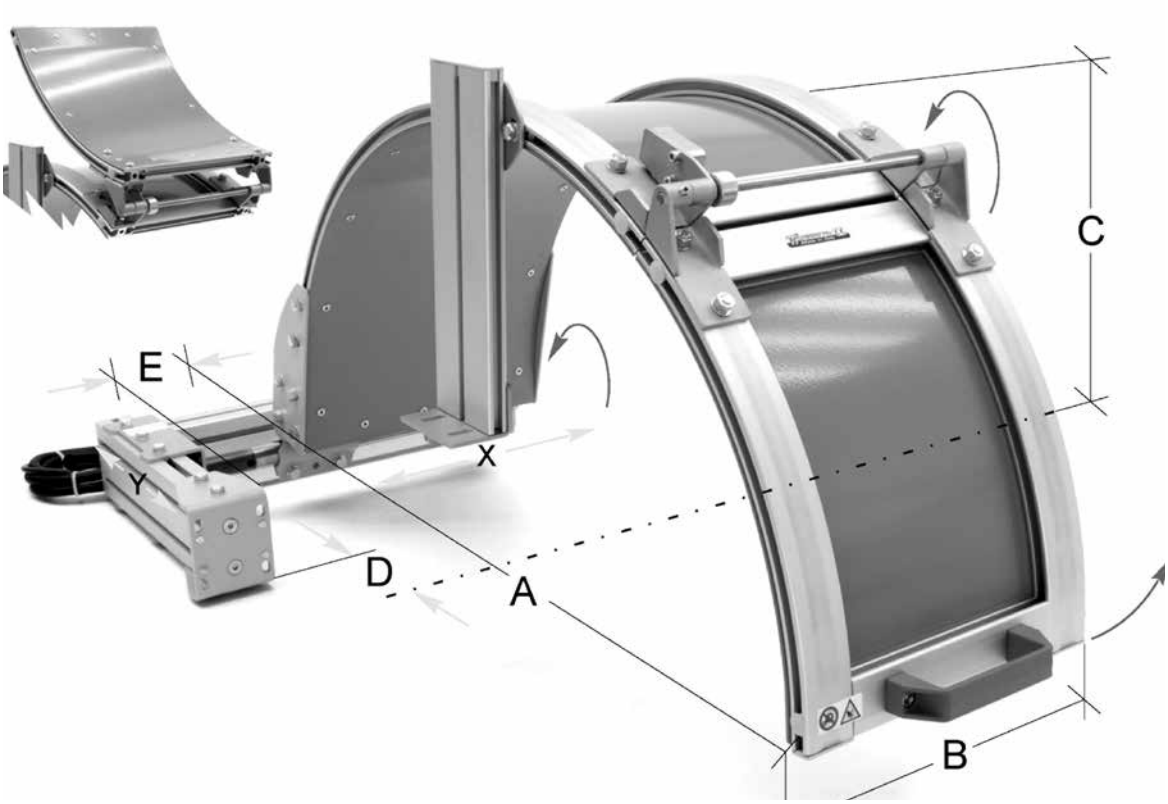


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Futterschutzeinrichtungen für große Futter, klappbar
## *Safety hoods for big chucks, foldable*

- für große Futter bis Ø 1000 mm
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- mit Mikrosicherheitsschalter
- verstellbar auf x/y-Weg
- geteiltes, doppelt aufklappbares Schild aus Aluminium, das ein Öffnen der Vorderseite oder der kompletten Futterschutzeinrichtung ermöglicht
- Durchmesser A der Haube sollte ca. 150-200 mm größer als das Drehfutter sein

- *for chucks up to Ø 1000 mm*
- *protection against chips, lubricant and coolant*
- *with safety micro-switch*
- *fully x-y adjustable*
- *semi-circular shield, made from aluminium, divided into two sections to allow either opening of front side only or the entire hood*
- *diameter A of the safety hood should be 150-200 mm larger than the lathe chuck*

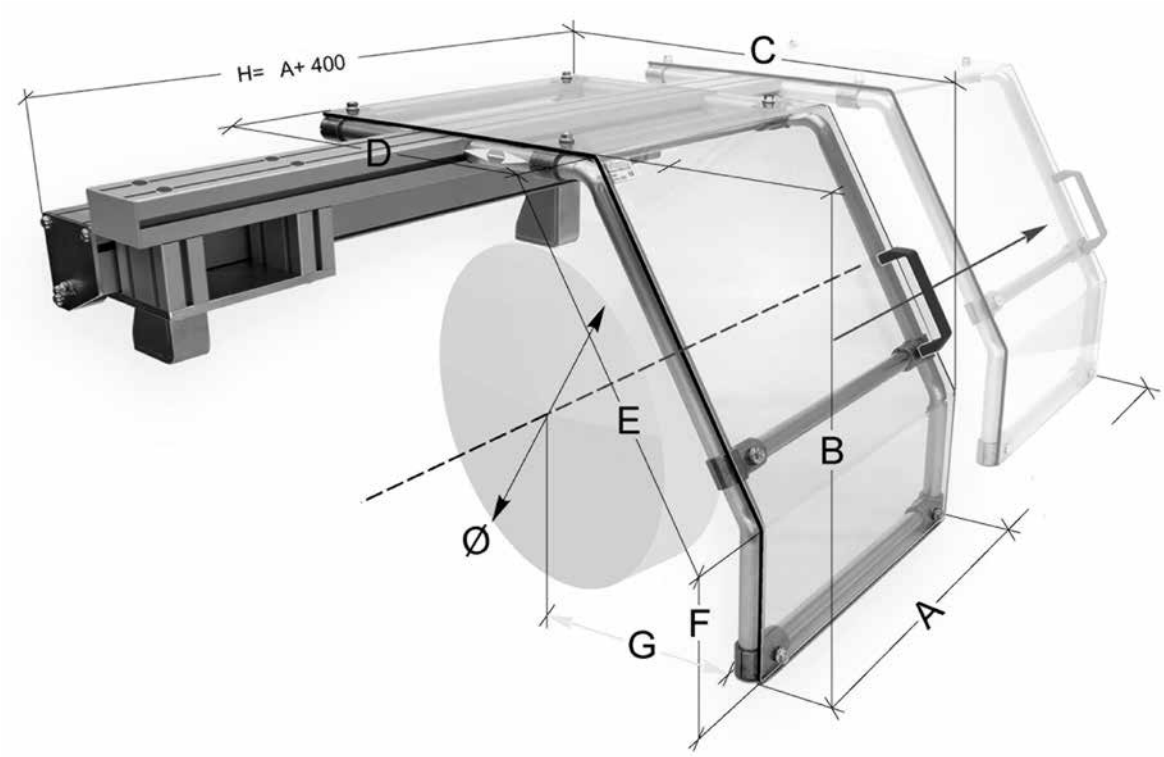



| A<br>mm | B<br>mm | C<br>mm | D<br>mm | E<br>mm | Art.-Nr. /<br>*Order no.* | |
|---|---|---|---|---|---|---|
| 800 | 300 | 400 | 165-375 | 5-120 | ZE-FS04-080 | |
| 1000 | 350 | 500 | 265-475 | 5-70 | ZE-FS04-100 | |
| 1200 | 350 | 600 | 365-575 | 5-70 | ZE-FS04-120 | |

## Futterschutzeinrichtungen, verschiebbar
## *Safety hoods, slidable*

- verschiebbare Futterschutzhaube aus Acrylglas mit robustem Stahlrahmen und Führungsschiene aus Aluminium
- mit Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- einfache Montage an der Rückseite des Spindelstockes
- verstellbare Halterung
- Durchmesser C der Haube sollte ca. 150-200 mm größer als das Drehfutter sein

- *sliding steel-framed shield made from acrylic glass and auto-carrying guide*
- *with safety micro-switch*
- *protection against chips, lubricant and coolant*
- *easy adaption to the back of the spindle*
- *various adjustments*
- *diameter C of the safety hood should be 150-200 mm larger than the lathe chuck*




| für Futter-Ø / *for chuck-Ø* | Ø | A mm | B mm | C mm | D mm | E mm | F mm | G mm | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|---|---|---|---|---|
| 250-315 | 400-500 | 450 | 430 | 655 | 480 | 350 | 125 | 280-540 | ZE-FS20-400 | |
| 400 | 600-700 | 450 | 520 | 855 | 640 | 430 | 150 | 320-740 | ZE-FS20-600 | |
| 500-630 | 800-900 | 450 | 640 | 1065 | 800 | 530 | 180 | 370-950 | ZE-FS20-800 | |



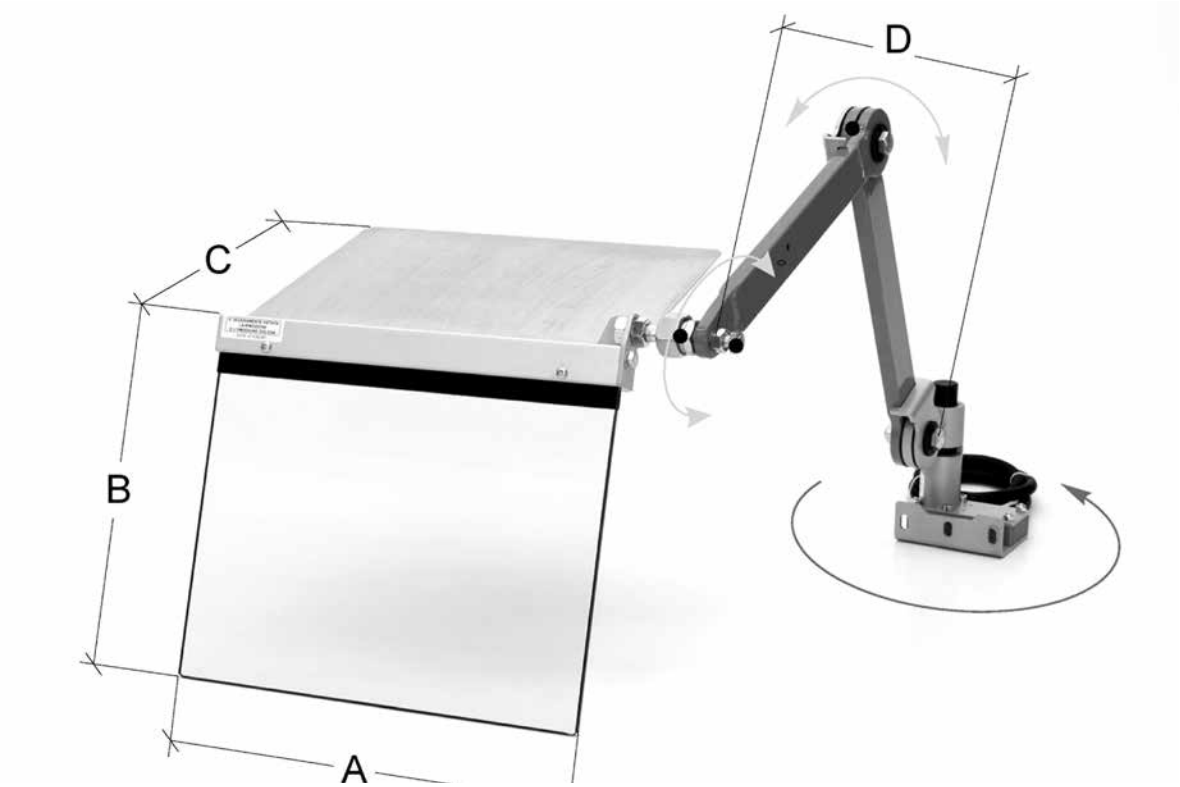


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Schutzeinrichtungen für Drehmaschinen
## *Lathe carriage safety guards*

- mehrfach verstellbar, 180° drehbar
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- mit Mikrosicherheitsschalter
- Schutzschild aus Acrylglas
- Anbringung am Bettschlitten
- das Schild wird von Gelenkarmen getragen

- *multi-adjustable, 180° rotatable*
- *protection against chips, lubricant and coolant*
- *with safety micro-switch*
- *shield made from acrylic glass*
- *installation on the longitudinal carriage*
- *supported by articulated arms*

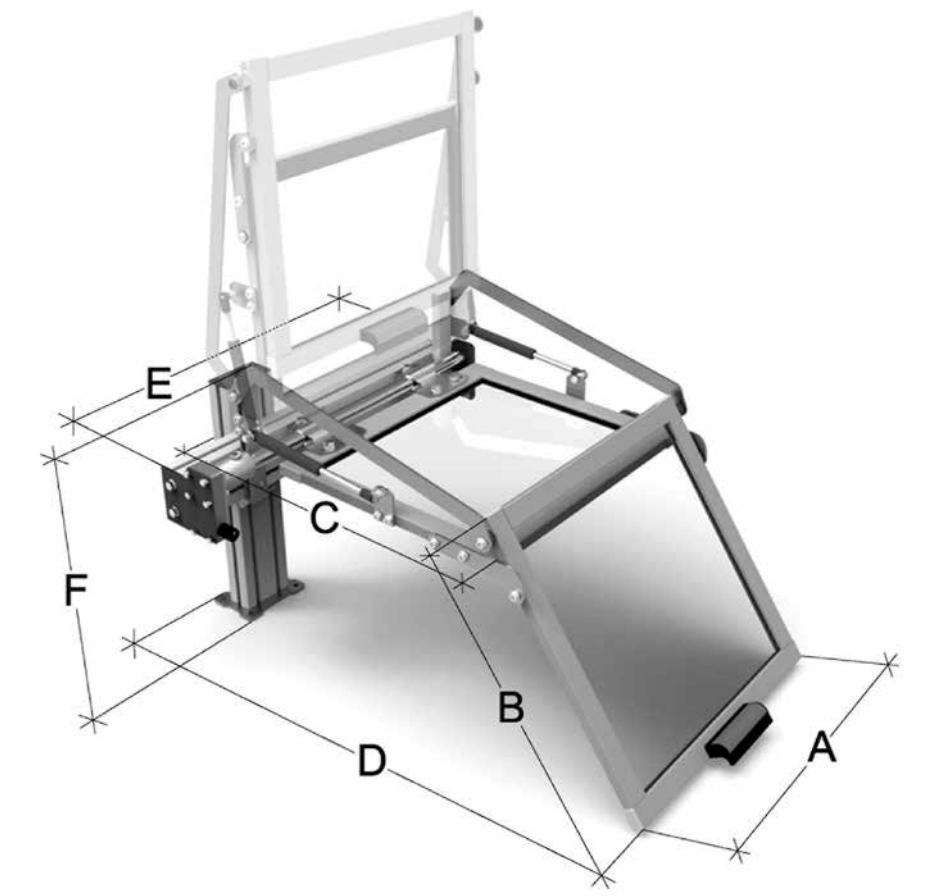



| A mm | B mm | C mm | D max. mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|
| 350 | 300 | 280 | 550 | ZE-FS11-350/550 |
| 400 | 350 | 310 | 550 | ZE-FS11-400/550 |
| 400 | 350 | 310 | 800 | ZE-FS12-400/800 |

## Futterschutzeinrichtungen, klappbar
## *Safety hoods for chucks, tiltable*

- Schild öffnet vertikal (Gasdruckfeder)
- mit Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- einfache Montage an der Rückseite des Längsschlittens

- *shield opens vertically (gas filled spring)*
- *with safety micro-switch*
- *protection against chips, lubricant and coolant*
- *easy adaption to the longitudinal slide*




| A mm | B mm | C mm | D mm | E mm | F mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|
| 450 | 450 | 400 | 760 | 630 | 500 | ZE-FSK12-450 |
| 850 | 450 | 400 | 760 | 1030 | 500 | ZE-FSK12-850 |
| 1050 | 450 | 400 | 760 | 1230 | 500 | ZE-FSK12-1050 |



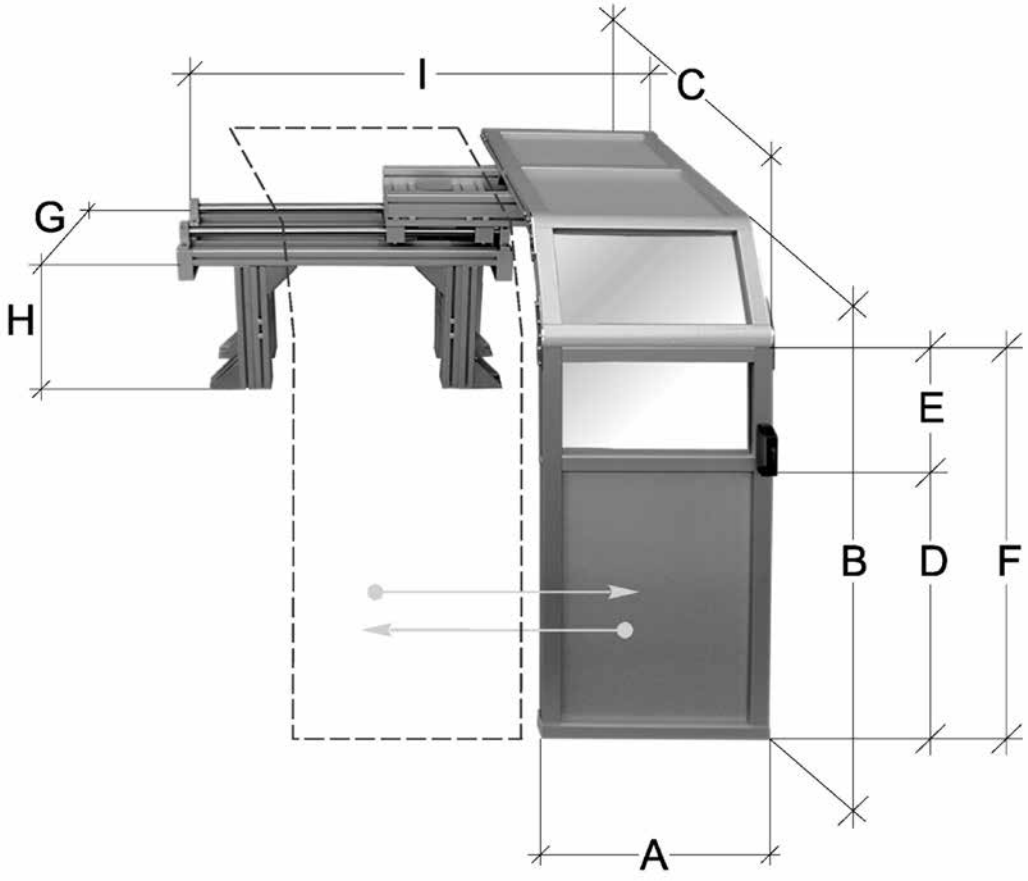


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Futterschutzeinrichtungen, verschiebbar, extrahoch
## *Safety hoods, slideable, extra high*

- für große Futter bis Ø 1200 mm
- verschiebbare Futterschutzhaube
- mit Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- einfache Montage an der Oberseite des Spindelstockes
- Durchmesser C der Haube sollte ca. 150-200 mm größer als das Drehfutter sein

- *for chucks up to Ø 1200 mm*
- *slideable shield*
- *with safety micro-switch*
- *protection against chips, lubricant and coolant*
- *easy adaption to the head auf the machine*
- *diameter C of the safety hood should be 150-200 mm larger than the lathe-chuck*

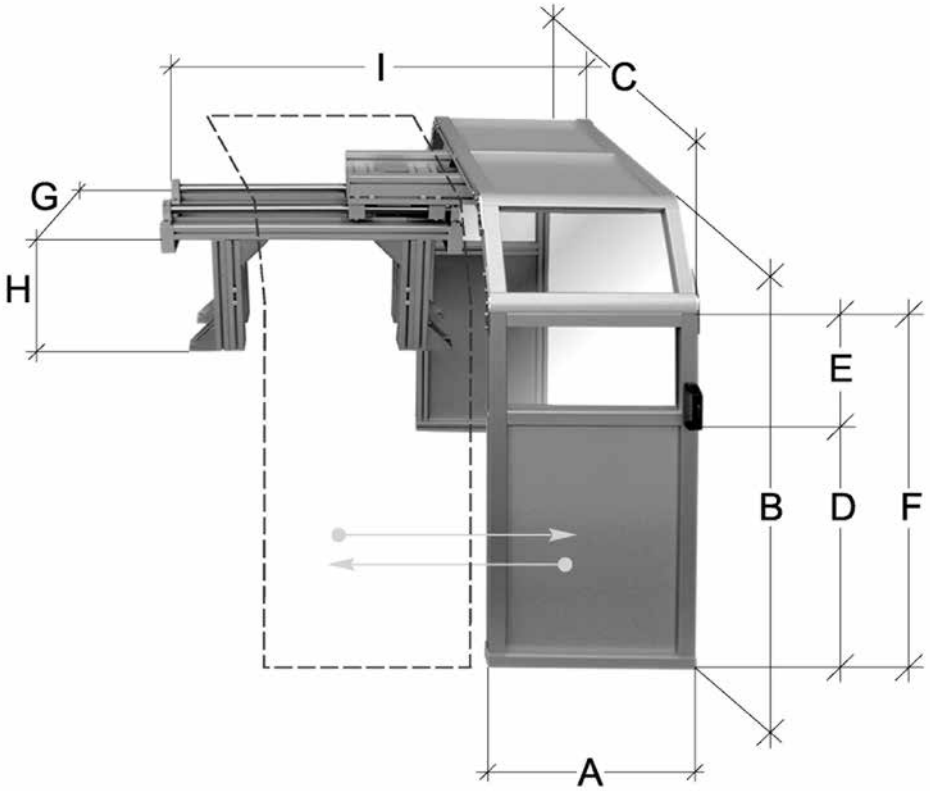



| A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 550 | 1000 | 1000 | 518 | 282 | 800 | 300 | 390-590 | 930-1490 | ZE-FS21-1000 |
| 550 | 1500 | 1400 | 918 | 282 | 1200 | 300 | 390-590 | 930-1490 | ZE-FS21-1500 |

## Futterschutzeinrichtungen beidseitig, verschiebbar, extrahoch
## *Safety hoods bilateral, slideable, extra high*

- für große Futter bis Ø 1200 mm
- verschiebbare Futterschutzhaube, beidseitig
- mit Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- einfache Montage an der Oberseite des Spindelstockes
- Durchmesser C der Haube sollte ca. 150-200 mm größer als das Drehfutter sein

- *for chucks up to Ø 1200 mm*
- *slideable, bilateral shield*
- *with safety micro-switch*
- *protection against chips, lubricant and coolant*
- *easy adaption to the head auf the machine*
- *diameter C of the safety hood should be 150-200 mm larger than the lathe-chuck*




| A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | Art.-Nr. / *Order no.* |
|---|---|---|---|---|---|---|---|---|---|
| 550 | 1000 | 1000 | 518 | 282 | 800 | 300 | 390-590 | 930-1490 | ○ ZE-FS22-1000 |
| 550 | 1500 | 1400 | 918 | 282 | 1200 | 300 | 390-590 | 930-1490 | ○ ZE-FS22-1500 |



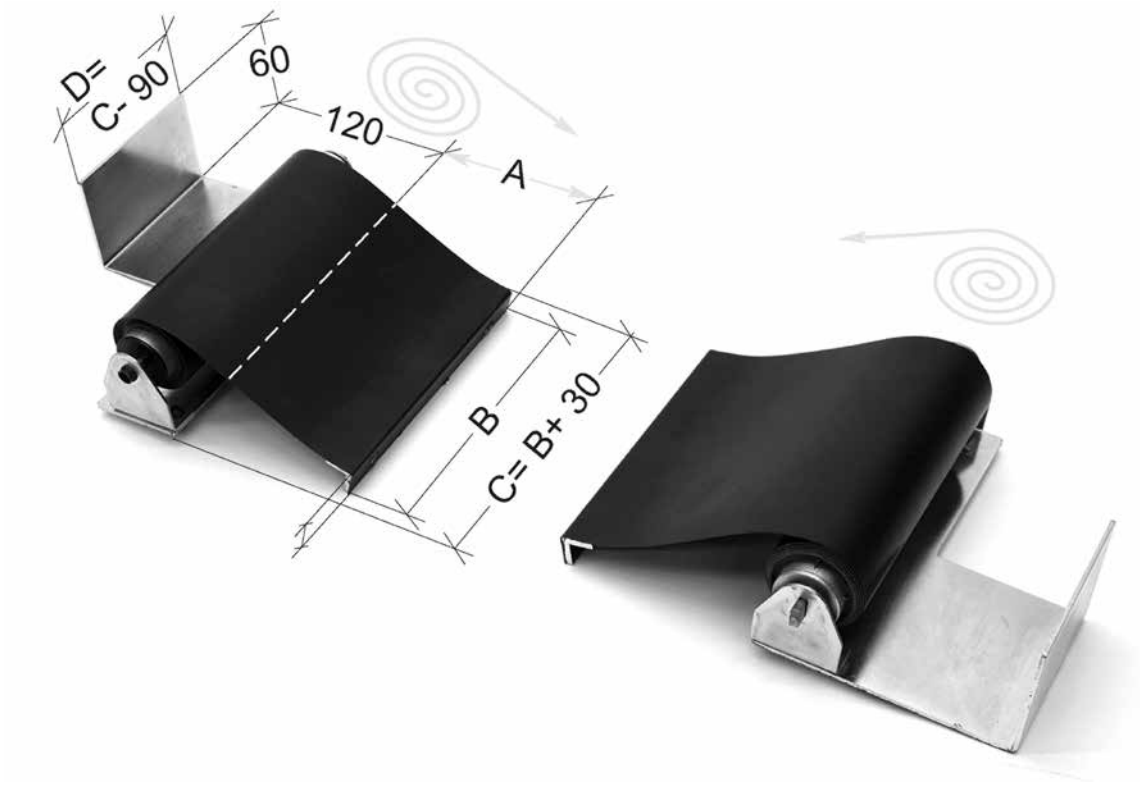


● Lagerstandard / *in stock*
◗ innerhalb weniger Tage / *within a few days*
○ auf Anfrage / *on request*

## Ausziehbare Spindelabdeckungen
## *Roll up spindle covers*

- zweiteilige, ausziehbare Leit- und Zugspindelabdeckung
- 2 Textilbänder bestehend aus kühlmittelresistentem und hitzebeständigem Material
- mit Montageplatte zur Befestigung am Maschinenbett

- *bipartite roll-up spindle cover*
- *2 protective textile ribbons, heat and coolant resistant*
- *incl. base plate for fixation on machine*




| A max<br>mm | B<br>mm | C<br>mm | D<br>mm | Art.-Nr. /<br>*Order no.* | |
|---|---|---|---|---|---|
| (2 x) 1200 | 150 | 180 | 90 | ZE-RSS-1200 | |
| (2 x) 1500 | 200 | 230 | 140 | ZE-RSS-1500 | |
| (2 x) 2000 | 200 | 230 | 140 | ZE-RSS-2000 | |
| (2 x) 3000 | 250 | 280 | 190 | ZE-RSS-3000 | |

## Schutzeinrichtungen für Fräsmaschinen, einstellbar
## *Safety guards for universal milling machines, adjustable*

- mit beweglichen Gelenkarmen
- Schild kann horizontal geöffnet werden
- komplette Schutzeinrichtung kann aus dem Arbeitsbereich geschwungen werden
- mit doppeltem Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel

- *with articulated arms*
- *shield can be opened horizontally*
- *entire safety guard can be displaced from workplace for better accessibility*
- *with double safety microswitch*
- *protection against chips, lubricant and coolant*

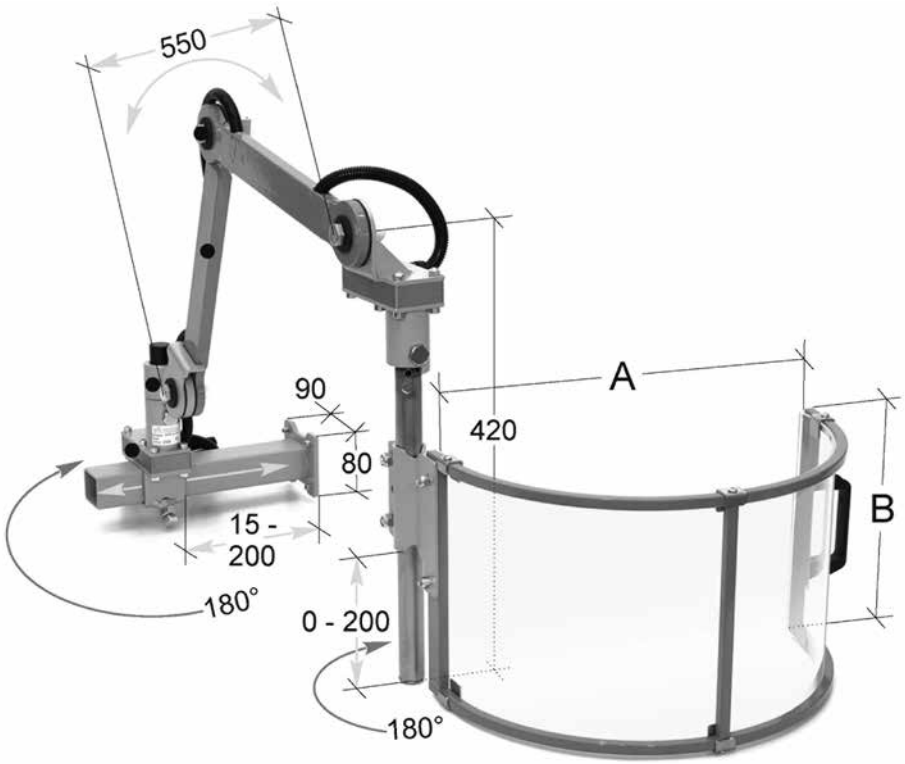



Abb. zeigt Befestigung von links
*Figure shows mounting from left*

**2 Ausführungen: Befestigung von rechts oder links - bitte in der Bestellung angeben**
***2 models: mounting from right or left - please specify in your order***

| A<br>mm | B<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|
| 300 | 200 | ZE-FS30-300 |
| 400 | 235 | ZE-FS30-400 |
| 500 | 235 | ZE-FS30-500 |
| 600 | 235 | ZE-FS30-600 |





Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Schutzeinrichtungen für Fräsmaschinen
## *Safety guards for universal milling machines*

- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- mit Mikrosicherheitsschalter
- mehrfach verstellbar durch Gelenkarme
- geeignet für häufige Umrüstung
- Acrylglas-Schild 180° nach oben zu öffnen
- komplett aus dem Arbeitsfeld wegschwenkbar

- *protection against chips, lubricant and coolant*
- *with safety micro-switch*
- *articulated arms for multiple adjustment*
- *suitable for frequent retooling*
- *shield made from acrylic glass, vertically foldable (180°) with position locking knob*
- *completely slewable out of working area*

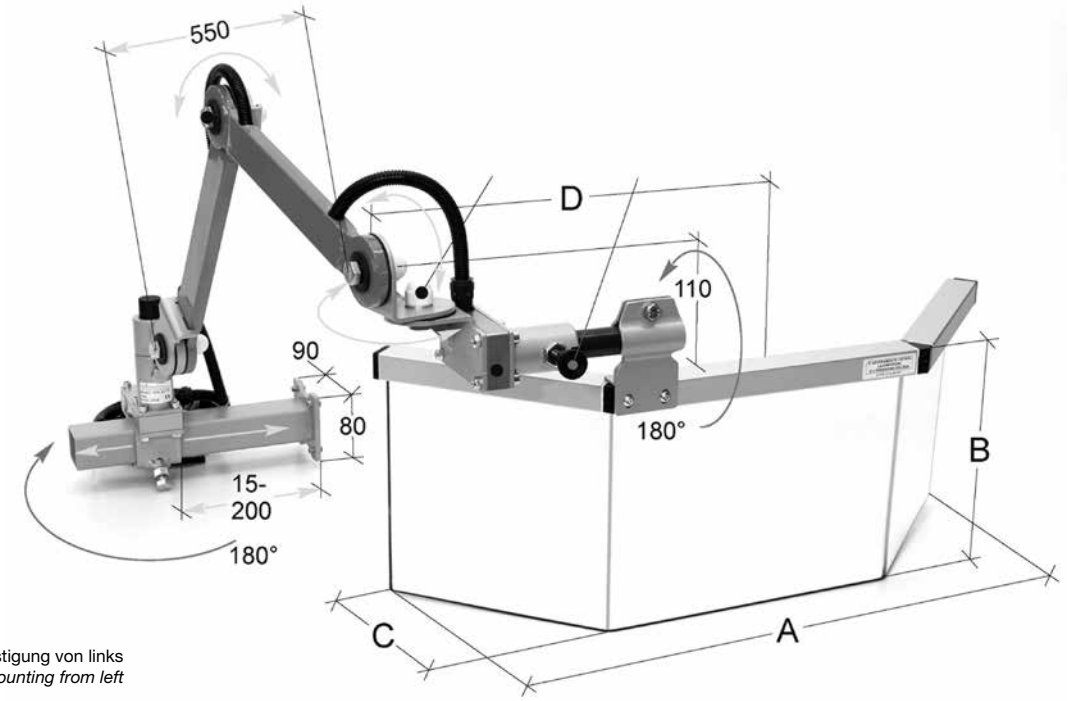



Abb. zeigt Befestigung von links
*Figure shows mounting from left*

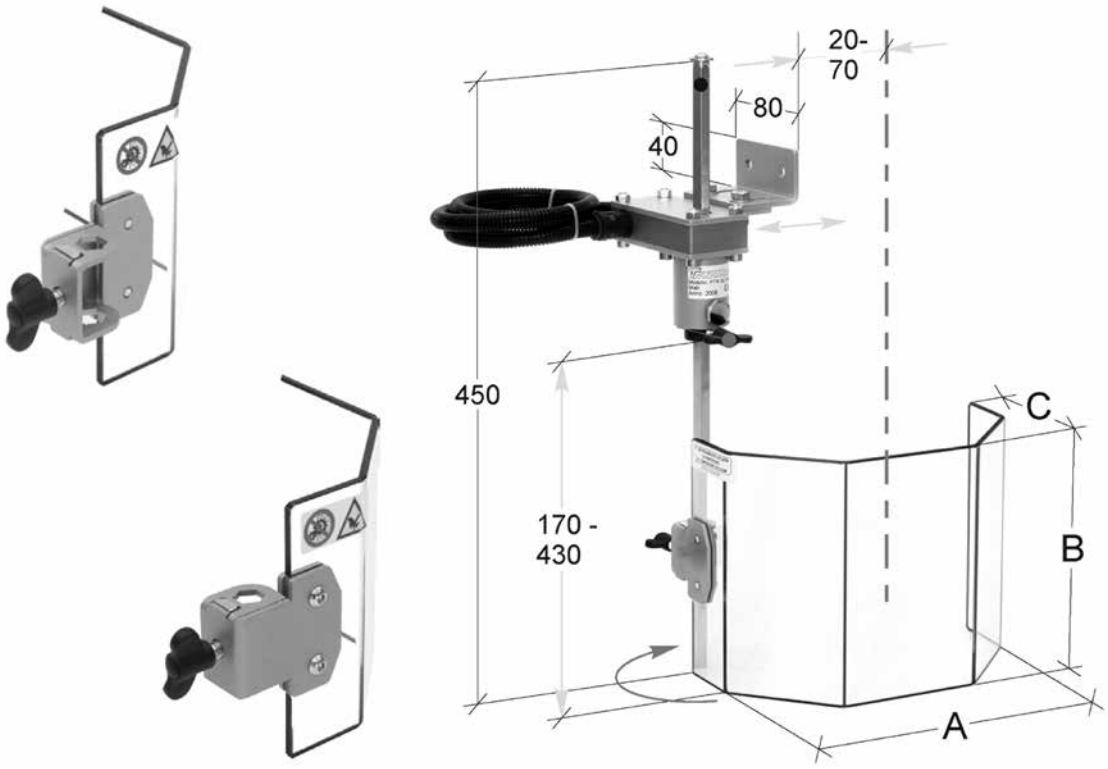
### 2 Ausführungen: Befestigung von rechts oder links - bitte in der Bestellung angeben
### *2 models: mounting from right or left - please specify in your order*

| A mm | B mm | C mm | D mm | Art.-Nr. / *Order no.* | |
|---|---|---|---|---|---|
| 620 | 250 | 170 | 405 | ZE-FS02-620 | ● |
| 725 | 300 | 200 | 430 | ZE-FS02-725 | ● |

## Schutzeinrichtungen für Ständerbohrmaschinen
## *Safety guards for drilling machines*

- geeignet für Ständerbohrmaschinen
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- mit Mikrosicherheitsschalter
- mit zweifacher (vertikaler) Verstellmöglichkeit
- Befestigung an der linken Seite der Maschine
- semi-oktagonales, austauschbares Schutzschild aus Polykarbonat
- zur Innen- oder Außenbefestigung

- *suitable for column drilling machines*
- *protection against chips, lubricant and coolant*
- *with safety micro-switch*
- *adjustable in 2 vertical positions*
- *mounting on the left side of the machine*
- *semi-octagonal, replaceable shield made from polycarbonate*
- *inside or outside mouting*




| A<br>mm | B<br>mm | C<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 230 | 130 | 115 | ZE-BS-130 |
| 230 | 180 | 115 | ZE-BS-180 |



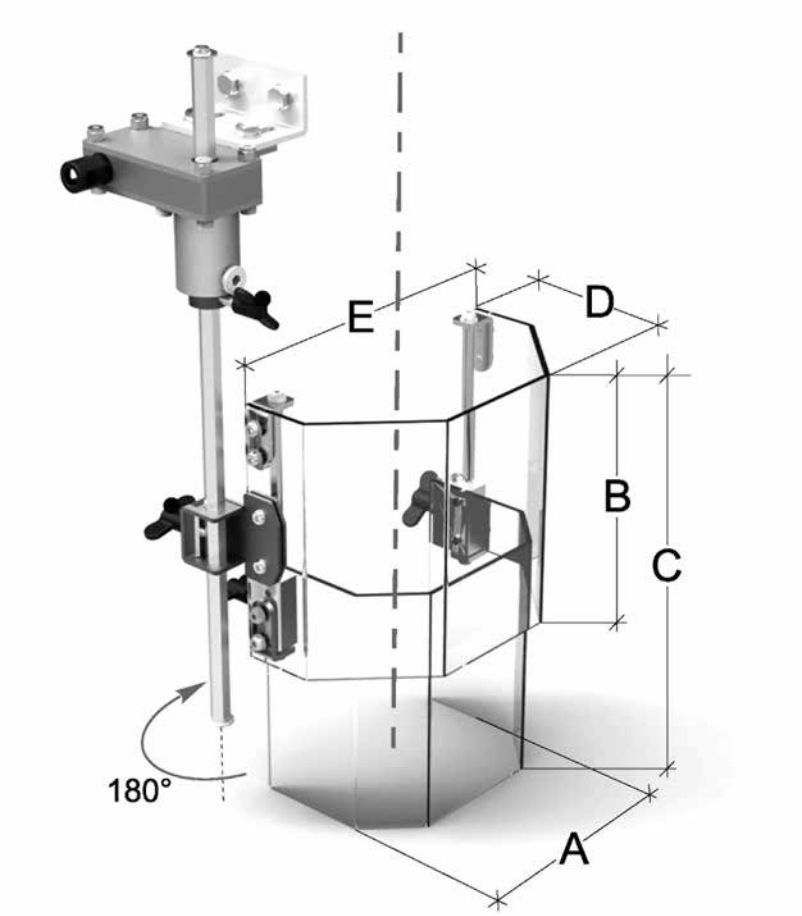


Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Teleskopabdeckung für Ständerbohrmaschinen
## *Telescopic safety guard for drilling machines*

- vertikal verstellbar
- Abdeckung öffnet seitlich (180°)
- mit Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel

- *vertically adjustable*
- *shield opens laterally (180°)*
- *with safety micro-switch*
- *protection against chips, lubricant and coolant*

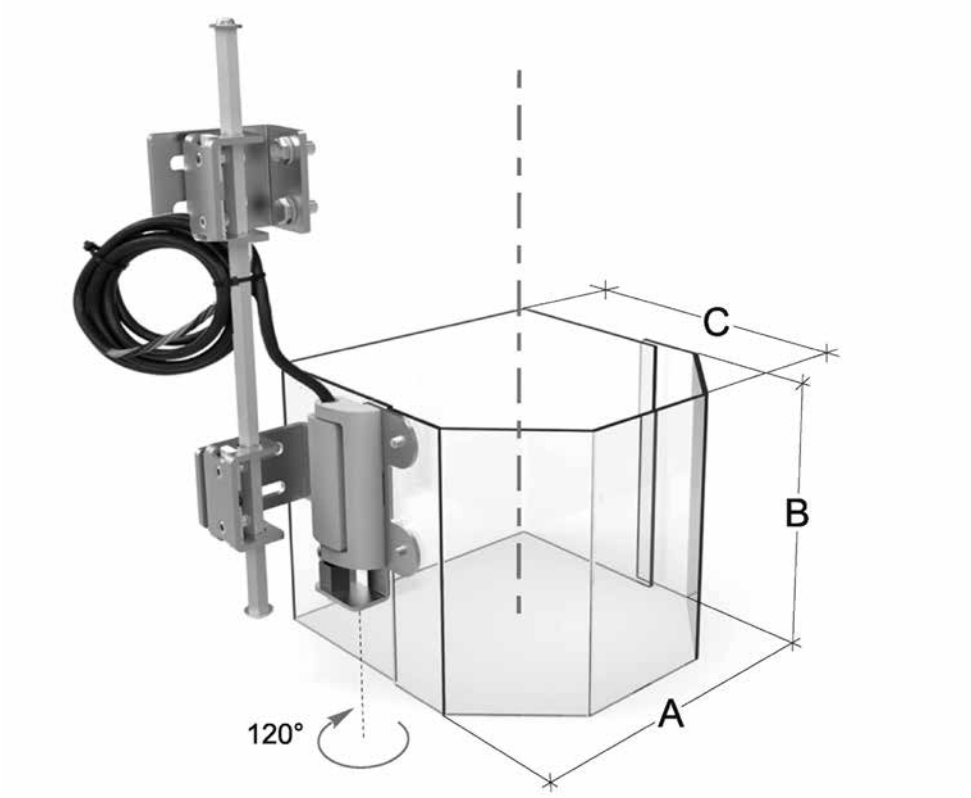



| A<br>mm | B<br>mm | C<br>mm | D<br>mm | E<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|---|---|
| 172 | 180 | 180-300 | 114 | 230 | ● ZE-TBS05-180 |

## Rundumabdeckungen für Ständerbohrmaschinen
## *Circumferential protections for drilling machines*

- Rundumabdeckung öffnet seitlich
- mit Mikrosicherheitsschalter
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- einfache Montage an der linken Seite des Spindelkopfes

- *circumferential shield opens laterally*
- *with safety micro-switch*
- *protection against chips, lubricant and coolant*
- *easy adaption to the left side of the machine*

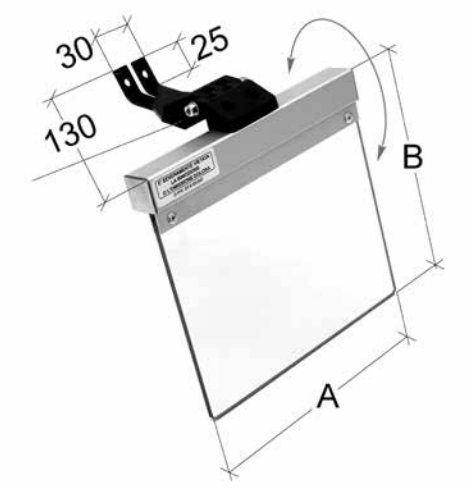



| A<br>mm | B<br>mm | C<br>mm | Art.-Nr. /<br>*Order no.* |
|---|---|---|---|
| 220 | 130 | 235 | ZE-RBS30-130 |
| 220 | 180 | 235 | ZE-RBS30-180 |





Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*




## Schutzeinrichtungen mit 2 Schutzschilden für Schleifmaschinen
## *Safety guards, double-shielded for grinding machines*

- mit Gelenk zur Schnelleinstellung
- Schild aus Acrylglas

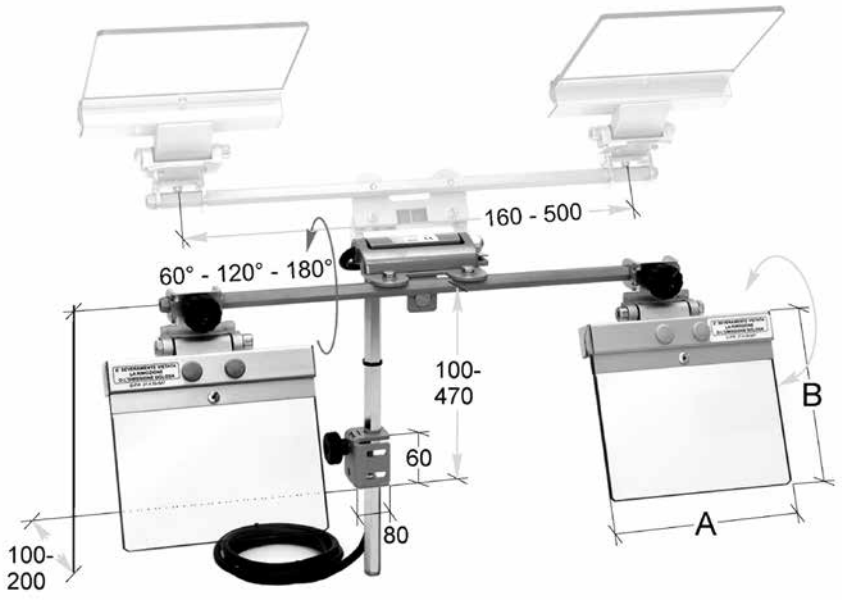
- *with articulated joint for rapid adjustment*
- *shield made from acrylic glass*

| A mm | B mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 160 | 145 | ZE-SMS02-160 |
| 200 | 185 | ZE-SMS02-200 |

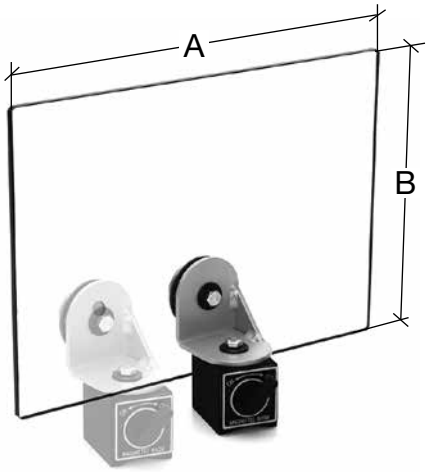
## Schutzeinrichtung mit 2 Schutzschilden für Schleifmaschinen
## *Safety guard, double-shielded for grinding machines*

- mehrfach verstellbar mit zwei aufklappbaren Schilden aus Acrylglas
- zum Schutz vor Spänen, Spritzwasser und Kühlmittel
- mit Mikrosicherheitsschalter

- *multiple adjustment with 2 shields made from acrylic glass*
- *protection against chips, lubricant and coolant*
- *with safety micro-switch*




| A mm | B mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 160 | 145 | ZE-SMS11-160D |
| 200 | 185 | ZE-SMS11-200D |



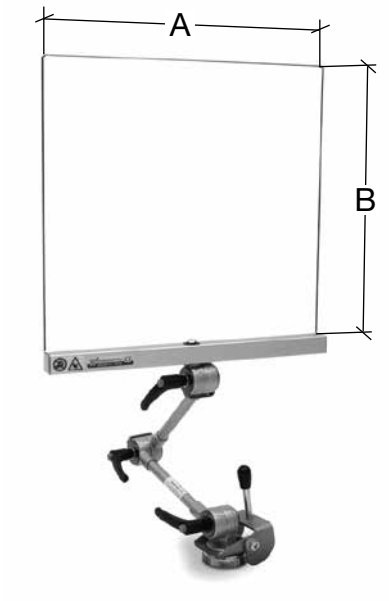

## Schutzschilder mit Magnetfuß
## *Safety guards with magnetic base*

NEU NEW !

- Schutzschild in 2 Positionen justierbar
- Spannkraft 40 kg

- *adjustable in 2 positions*
- *clamping force 40 kg*

| A mm | B mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 350 | 250 | ZE-MS20-350/250 |
| 400 | 300 | ZE-MS20-400/300 |




## Schutzschilder mit Magnetfuß und Gelenkarm
## *Safety guards with magnetic base and articulated arm*

NEU NEW !

- frei justierbarer Schild
- vertikal und horizontal einstellbar
- Spannkraft 110 kg

- *freely adjustable shield*
- *vertically and horizontally adjustable*
- *clamping force 110 kg*

| A mm | B mm | Art.-Nr. / *Order no.* |
|---|---|---|
| 400 | 400 | ZE-MS30-400/400 |
| 400 | 500 | ZE-MS30-400/500 |
| 500 | 400 | ZE-MS30-500/400 |







Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

## Not-Aus Steuerungseinheiten mit Spannungswarnleuchte
## *Safety switch control with voltage warning light*



- Transformator 400/24V-30VA
- Gussgehäuse
- inkl. Magnetschutzschalter
- mit Kurzschluss- und Überlastungs-schutz
- Sicherheitsrelais mit Reset-Funktion
- Schaltkreise durch zwei Sicherungen abgesichert
- **bei Bestellung bitte Spannung und Leistungsaufnahme (kW) der Maschine angeben**

- *transformer 400/24V-30VA*
- *die-cast box*
- *with magnetothermal safety switch*
- *with short circuit and overload protection*
- *safety thermal relay with automatic reset*
- *with 2 auxiliary circuit protection fuses*
- ***in case of order please indicate voltage and power (kW) of the machine***

| Abmessungen / *Dimensions* mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 192 x 167 x 96 | ZE-NA-GE10 | |



- Transformator 400/24V-20VA
- Gussgehäuse
- mit Kurzschluss- und Überlastungs-schutz
- Sicherheitsrelais mit Reset-Funktion
- Schaltkreise durch zwei Sicherungen abgesichert
- für Maschinen bis max. 4,3 kW

- *transformer 400/24V-20VA*
- *die-cast box*
- *with short circuit and overload protection*
- *safety thermal relay with automatic reset*
- *with 2 auxiliary circuit protection fuses*
- *for machines with 4,3 kW max.*

| Abmessungen / *Dimensions* mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 192 x 167 x 96 | ZE-NA-GE12 | |

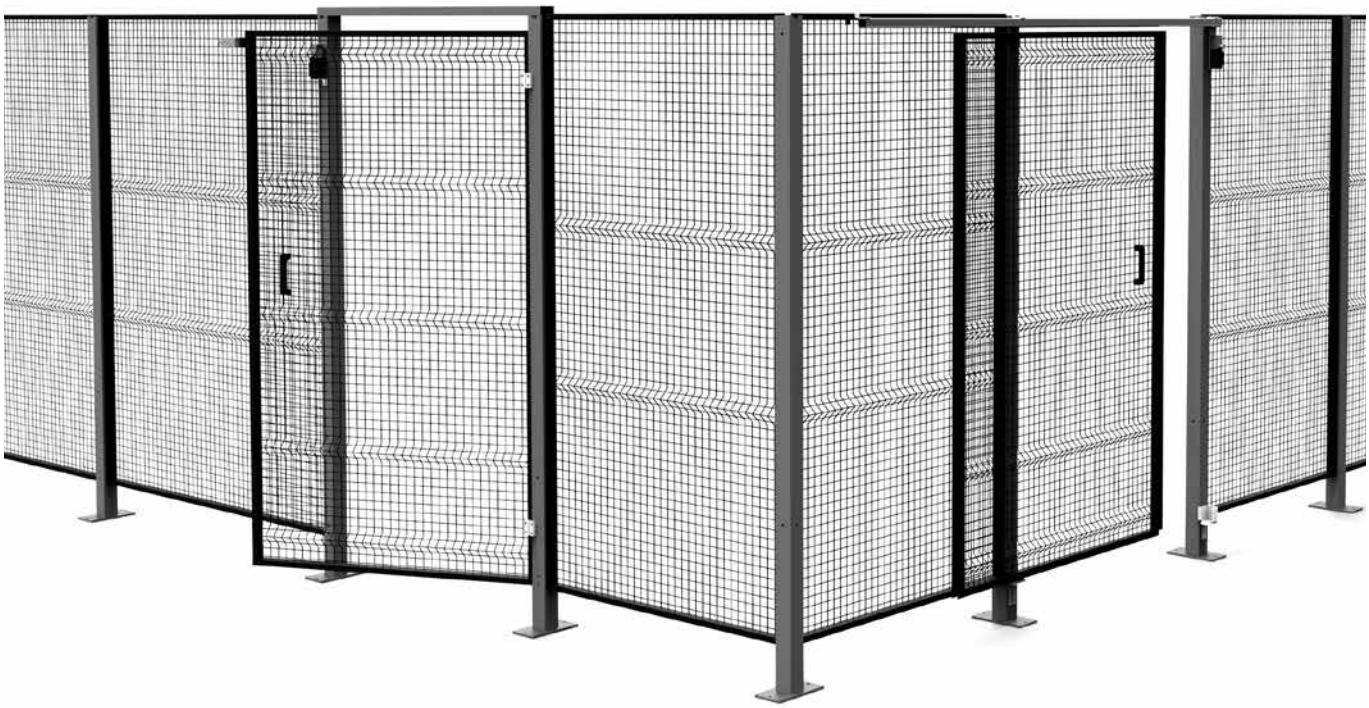


- Transformator 400/24V-30VA
- Stahlgehäuse
- inkl. Magnetschutzschalter
- Sicherheitstür öffnet nur im unbestromten Zustand
- mit Doppel-Fernsteuerungsknopf
- mit Kurzschluss- und Überlastungs-schutz
- mit Sicherheitsrelais
- Schaltkreise durch zwei Sicherungen abgesichert
- **bei Bestellung bitte Spannung und Leistungsaufnahme (kW) der Maschine angeben**

- *transformer 400/24V-30VA*
- *steel box*
- *with magnetothermal safety switch*
- *door is opening only de-energized condition*
- *with double remote control switch*
- *with short circuit and overload protection*
- *with safety relay*
- *with 2 auxiliary circuit protection fuses*
- ***in case of order please indicate voltage and power (kW) of the machine***

| Abmessungen / *Dimensions* mm | Art.-Nr. / *Order no.* | |
|---|---|---|
| 254 x 219 x 110 | ZE-NA-GE15 | |

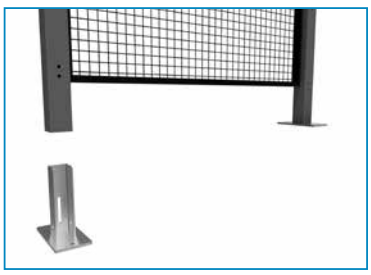
# Schutzzäune
## *Safety panels*





- vielseitig kombinierbare Schutzsysteme (erweiterbar)
- zur Sicherheit von Personen und Maschinen
- die Schutzsysteme werden individuell an Ihre Bedürfnisse angepasst

- *modular protective systems*
- *for the safety of operators and machines*
- *the system may be adapted individually to your needs*



- schnelle und einfache Montage

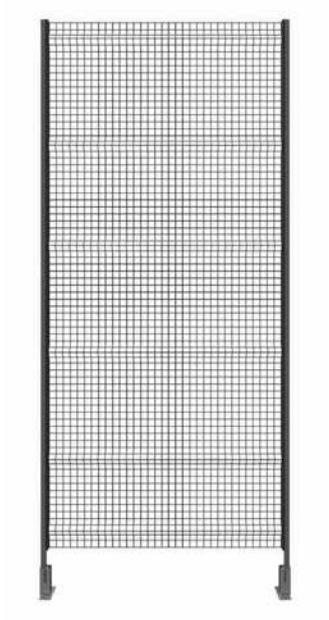
- *simple and quick assembly*



Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Schutzzäune
# *Safety panels*

- Zäune aus verschiedenen Materialien verfügbar
- *different panel materials available*



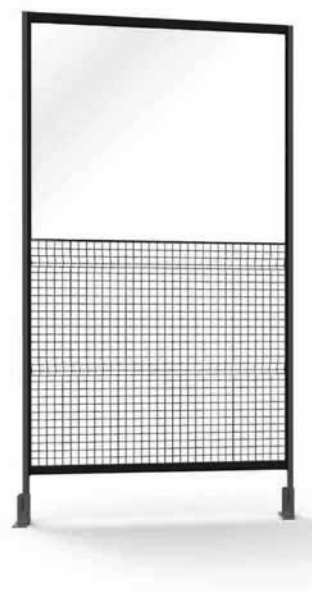
**Maschendraht**
***Mesh wire***



**Metall**
***Metal***



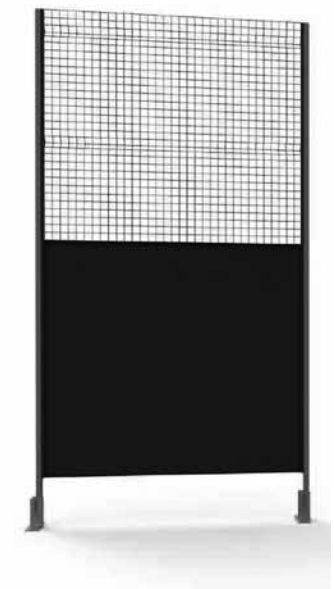
**Kunststoff**
***Polycarbonat***



**Kunststoff + Maschendraht**
***Polycarbonat + mesh wire***



**Kunststoff + Metall**
***Polycarbonat + metal***



**Maschendraht + Metall**
***Mesh wire + metal***

➤ **lieferbar auf Anfrage**

➤ ***available upon request***

# Schutztüren
*Safety doors*

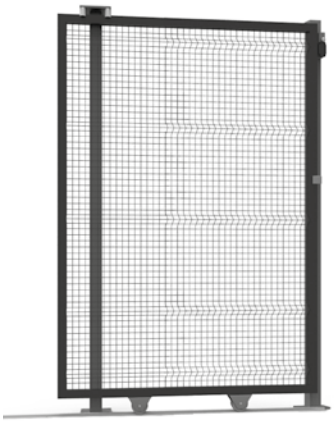
- Vielzahl an Türen lieferbar
- *great variety of door types available*



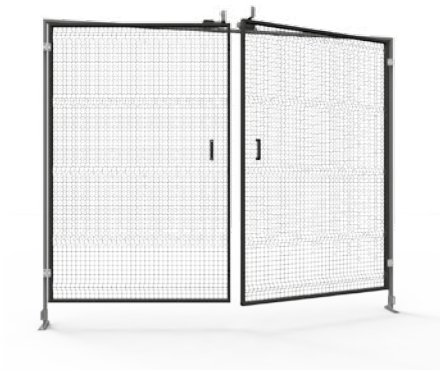
**Flügeltür**
***Leaf door***



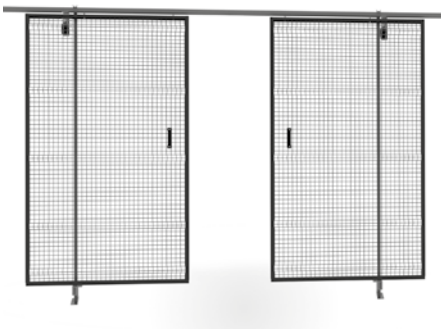
**Schiebetür mit oberer Schiene**
***Sliding door (upper guide)***



**Schiebetür mit Bodenschiene**
***Sliding door (lower guide)***



**Flügeltür (doppelt)**
***Double leaf door***



**Schiebetür mit oberer Schiene (doppelt)**
***Double sliding door (upper guide)***



**Schiebetür mit Bodenschiene (doppelt)**
***Double sliding door (lower guide)***

➤ **lieferbar auf Anfrage**

➤ ***available upon request***





Lagerstandard / *in stock*
innerhalb weniger Tage / *within a few days*
auf Anfrage / *on request*

# Stichwortverzeichnis


**A**

Abdrückmuttern ..... 123
Abstechhalter VDI ..... 158, 159
Abstechstähle ..... 196
Alukoffer ..... 191, 202
angetriebene Werkzeuge ..... 172-176
Anzugsbolzen ..... 230-232
Aufsatzbacken, hart f. Keilstangenfutter ..... 31
Aufsatzbacken, hart f. Kraftspannfutter ..... 63
Aufsatzbacken, hart f. Planspiralfutter ..... 24
Aufsatzbacken, weich f. Keilstangenfutter ..... 31
Aufsatzbacken, weich f. Kraftspannfutter ..... 63
Aufsatzbacken, weich f. Planspiralfutter ..... 25
Aufspannsets ..... 267
Aufspannwinkel ..... 90, 91
Aufspannwürfel ..... 92
Aufsteckreibahlen-Halter ..... 203
Ausdrehköpfe ..... 234
Austreiber ..... 250
Austreiblappen ..... 247

**B**

Backen-Ausdrehringe ..... 46, 47, 65
Backen für Schraubstöcke ..... 130, 134-139, 151
Bohrbacken f. Planspiralfutter ..... 23
Bohrfutter, NC ..... 213
Bohrfutter, Schnellspann- ..... 102
Bohrfutteraufnahmen ..... 206, 211, 217
Bohrmaschinenschraubstöcke ..... 142
Bohrstangen ..... 197
Bohrstangenhalter VDI (E2, E2S) ..... 160
Bohrstangenhalter VDI, Doppel- ..... 162
Bohrstangenhalter VDI, geschlitzt ..... 161

**C**

Camlockbolzen, DIN 55029 ..... 27

**D**

Direktspannzangen MK ..... 187
Doppelspanner ..... 131
Drehbacken f. Planspiralfutter ..... 23
Drehfutter stationär ..... 77-79
Drehfutter, 2-Backen ..... 12
Drehfutter, 3-Backen ..... 13-16, 20, 22, 28
Drehfutter, 4-Backen ..... 17, 18
Drehfutter, 6-Backen ..... 21
Drehfutteranschlag ..... 47
Drehplatten für Schraubstöcke ..... 130, 138, 144

**E**

Einlegeprismen ..... 197
Einrichtehalter VDI ..... 167
Einstellringe ..... 263
Endmaßsatz ..... 261
Entgratwerkzeuge ..... 271
Erodierschraubstöcke ..... 147, 148

**F**

Flansche DIN 55026 ..... 40, 41, 60
Flansche DIN 55027 ..... 40,42
Flansche DIN 55029 ..... 41,42
Flansche für Rundtische ..... 74,76
Fräsdorne f. Aufschraubfräser ..... 213, 214, 219, 220, 227
Fräsdornringe ..... 245
Fräseranzugsschrauben ..... 247
Fräsersätze ..... 267
Fühlhebelmessgeräte ..... 258

**G**

Gelenkstative hydraulisch ..... 259
Gelenkstative mechanisch ..... 259
Gewindebohrer-Spannhülsen ..... 98, 99
Gewindebohrzangen ..... 184-186
Gewindelehrdorne ..... 264
Gewindelehrringe ..... 265
Gewindeschneid-Apparate ..... 238
Gewindeschneid-Einsätze ..... 237
Gewindeschneid-Schnellwechselfutter ..... 235, 236
Grenzlehrdorne ..... 262
Grundbacken f. Keilstangenfutter ..... 31
Grundbacken f. Planspiralfutter ..... 24

**H**

Hochdruckspanner, mechanisch ..... 135
Hohlspindelanschläge ..... 242
Hydraulikzylinder ..... 61
Hydrodehnspannfutter ..... 214, 220, 228

**K**

Kantentaster, elektronisch ..... 256
Kantentaster, mechanisch ..... 256
Kegeldorne ..... 100, 101
Kegelhülsen ..... 125

Kegelwischer ..... 244
Keilspanner ..... 85
Keilstangenfutter ..... 30
Klauenkästen ..... 84
Klemmhülsen ..... 97
Kombi-Fräseraufsteckdorne ..... 204, 205, 209, 216, 226
Komparatoren ..... 258
Körnerspitzen, Einsätze ..... 114-116
Körnerspitzen, fest ..... 121, 122
Körnerspitzen, mitlaufend ..... 110-120
Körnerspitzen, mitlaufend VDI ..... 165
Kraftspannfutter, 2/3-Backen ..... 50
Kraftspannfutter, 2-Backen ..... 49
Kraftspannfutter, 3-Backen ..... 51-59
Kraftspannfutter, 4-Backen ..... 56, 57
Kreuztische ..... 86-88
Kreuztische angetrieben ..... 89
Kugelspritzdüsen ..... 168
Kühlmittelröhrchen ..... 229, 250
Kurzbohrfutter ..... 105-107, 165

## M

Magnetspannplatten ..... 83
Maschinenschraubstock, hydraulisch ..... 138, 140
Maschinenschraubstock, mechanisch ..... 141
Mehrbereichs-Spannzangen ..... 238
Mehrfach-Spanner ..... 133
Messerkopfaufnahmen ..... 205, 209, 216, 226
Messuhren ..... 257
Messuhren digital ..... 258
Mitnehmerbolzen ..... 124
Mitnehmerringe ..... 248
Mitnehmersteine ..... 248
MK-Hülsen ..... 197, 206, 207, 211, 218, 226
Monoblockbacken f. Keilstangenfutter ..... 31
Monoblockbacken f. Planspiralfutter ..... 25, 29
Monoblockbacken f. Wescott-Futter ..... 32, 33
Montageblöcke ..... 252
Morsekegelaufnahmen VDI (F) ..... 163

## N

Notfallspannzangen ..... 188
Nulleinsteller ..... 255
Nutensteine ..... 243
Nutensteine f. Kraftspannfutter ..... 64

## O

O-Ringe ..... 169

## P

Parallelunterlagen ..... 260
Passfedern ..... 249
Pendelhalter ..... 224
Pendelhalter VDI ..... 166
Planscheiben ..... 35-38
Planspiralen ..... 26
Planspiralfutter BASIC ..... 28, 29
Planspiralfutter, 2-Backen ..... 12
Planspiralfutter, 3-Backen ..... 13-16, 20, 22, 28
Planspiralfutter, 4-Backen ..... 17, 18
Planspiralfutter, 6-Backen ..... 21
Pneumatikspanner ..... 132
Prismenblöcke ..... 80, 82
Prismenblöcke magnetisch ..... 81
Prüfdorne ..... 227, 254
Prüfdorne VDI ..... 167, 255

## R

Rasterwürfel ..... 92
Räumstempel ..... 166
Räumwerkzeughalter VDI ..... 166
Reduzierbuchsen f. Fräseraufnahmen ..... 224
Reduzierbuchsen, geschlitzt VDI ..... 168
Reduzierbuchsen, Hydrodehn- ..... 95
Reduzierbuchsen, ungeschlitzt VDI ..... 168
Reduzierhülsen MK ..... 94
Reitstöcke ..... 73, 74
Ritzel ..... 26
Rohlinge ..... 208, 213, 219, 227
Rohlinge VDI ..... 154, 155
Rundtische ..... 70, 75, 76

## S

Sägeblattaufnahmen ..... 224
Schleifschraubstöcke ..... 145, 146
Schlüssel für ER ..... 246
Schlüssel für Fräseranzugsschrauben ..... 246
Schlüssel für Anzugsbolzen ..... 232
Schlüssel für Drehfutter ..... 27
Schlüssel für Kühlmittelröhrchen ..... 229
Schlüssel für OZ ..... 246
Schnellwechselstahlhalter BASIC ..... 198, 199
Schnellwechselstahlhalter Multisuisse ..... 195-197
Schrauben für Grundbacken ..... 27
Schrauben Weldon ..... 249
Schraubquerkeile ..... 250

Schraubstöcke Carminati ..... 149, 150
Schraubstöcke CMC..... 128,1 29
Schraubstöcke Ersatzteile ..... 139
Schraubstöcke, 3-Achsen ..... 142
Schrumpffutter.....215, 221, 228, 229
Schutzabdeckungen ..... 281, 284-286
Schutzhauben.....274-280
Schutzschilder .....282, 287, 288
Schutzstopfen VDI..... 169
Segmentbacken f. Kraftspannfutter ..... 64
Sicherheitsmitnehmer ..... 242
Spannkraftmesser .....266, 267
Spanntische..... 76,77
Spannzangen 161E ..... 188
Spannzangen 163E ..... 188
Spannzangen 173E ..... 188
Spannzangen 185E ..... 188
Spannzangen 193E ..... 188
Spannzangen 369E ..... 187
Spannzangen 385E ..... 187
Spannzangen 386E ..... 187
Spannzangen 574E ..... 187
Spannzangen 575E ..... 187
Spannzangen ER..... 181
Spannzangen ER, abgedichtet ..... 183
Spannzangen ER, Präzision..... 182
Spannzangen OZ ..... 180
Spannzangenanschläge..... 190
Spannzangenfutter .....204, 207, 212, 218, 222-225
Spannzangenfutter VDI ..... 161
Spannzangenfutter, hydraulisch ..... 66
Spannzangenfutter, manuell ..... 67,68
Spannzangenfutter, pneumatisch..... 66
Spannzangensätze..... 189,190
Spanzangenfutter 5C ..... 67
Spindelhülsen ..... 96
Stangengreifer VDI ..... 164
Stehbolzen, DIN 55027 ..... 26
Stirnmitnehmer ..... 124
Synchron-Gewindeschneidfutter..... 239, 240

## T

Teilapparate .....70-72, 75
Teilscheiben für Rundtische..... 73, 76
Teleskophalter für Schraubstöcke ..... 143

## U

Überwurfmuttern ER ..... 248
Überwurfmuttern OZ..... 247
Umkehrbacken f. Keilstangenfutter..... 30
Umkehrbacken f. Wescott-Futter ..... 32, 33

## V

Verlängerungshülsen MK ..... 94, 95

## W

Weldon-Futter..... 203, 206, 210, 211, 217, 225
Weldon-Futter mit Kühlmittelring.....208, 212, 219
Wendeplatten-Bohrerhalter VDI (E1)..... 159
Werkbankschraubstöcke ..... 143
Werkstückanschläge für Schraubstock..... 243
Werkstückanschläge VDI ..... 167
Werkstückanschläge, universell..... 151, 243
Werkzeughalter axial VDI (C1-C4)..... 157, 158
Werkzeughalter für Mori Seiki ..... 177
Werkzeughalter für Nakamura ..... 178
Werkzeughalter radial VDI (B1-B8) .....155-157
Werkzeughalter vierkant VDI (D1-D2) ..... 158
Werkzeugregale..... 251
Werkzeugsätze ..... 202
Werkzeugwagen..... 251
Wescott-Drehfutter..... 32, 33

## Z

Zentrierdorne ..... 74
Zentrierkegel, fest..... 123
Zentrierkegel, mitlaufend.....116, 117, 119
Zentrischspanner..... 144, 145
Zugrohradapter..... 60

# Keyword index


## A

adaptor plates DIN 55026 ... 40, 41, 60
adaptor plates DIN 55027 ... 40, 42
adaptor plates DIN 55029 ... 41, 42
adaptor plates for round tables ... 74, 76
aluminium cases ... 191, 202
angle plates ... 76, 77, 90, 91
assembly blocks ... 252

## B

ball spray nozzle ... 168
bar puller VDI ... 164
base jaws f. lathe chucks ... 24
base jaws f. wedge bar chucks ... 31
blanks ... 208, 213, 219, 227
blanks VDI ... 154, 155
boring bar holder VDI ... 160
boring bar holder VDI, double ... 162
boring bar holder VDI, slotted ... 161
boring bars ... 197
boring heads ... 234
box jaws ... 84
broaching cutters ... 166
broaching toolholders VDI ... 166

## C

centers, fixed ... 121, 122
centers, inserts ... 114-116
centers, revolving ... 110-120
centers, revolving VDI ... 165
centrification arbors ... 74
clamping cubes ... 92
clamping force meter ... 266, 267
clamping nuts ER ... 248
clamping nuts OZ ... 247
clamping sets ... 267
clamping sleeves ... 97
clutch drive rings ... 248
collet chucks ... 204, 207, 212, 218, 222-225
collet chucks 5C ... 67
collet chucks VDI ... 161
collet chucks, hydraulic ... 66
collet chucks, manual ... 67, 68
collet chucks, pneumatic ... 66
collets 161E ... 188
collets 163E ... 188
collets 173E ... 188
collets 185E ... 188
collets 193E ... 188
collets 369E ... 187
collets 385E ... 187
collets 386E ... 187
collets 574E ... 187
collets 575E ... 187
collets ER ... 181
collets ER, precision ... 182
collets ER, sealed ... 183
collets OZ ... 180
collets, sets ... 189, 190
collets, wide range ... 238
combination arbors ... 204, 205, 209, 216, 226
conic bushes ... 125
coolant tubes ... 229, 250
cross retaining screws ... 247
cross tables ... 86-88
cross tables driven ... 89
cutting-off blades ... 196
cutting-off holder VDI ... 158, 159

## D

deburring tools ... 271
dial comparators ... 258
dial indicators ... 257
dial indicators digital ... 258
dial test indicators ... 258
dividing heads ... 70-72, 75
dividing plates for round tables ... 73, 76
double vice ... 131
draw-off nuts ... 123
draw tube adapter ... 60
drill chuck arbors ... 206, 211, 217
drill chucks NC ... 213
drill chucks, keyless ... 102
drill chucks, universal ... 105-107, 165
drilling machine vice ... 142
drive keys ... 248
drive pins ... 124
driven tools ... 172-176
driver arbors for reamers ... 203
driving tenons ... 250

## E

edge finders, electronical ... 256

edge finders, mechanical ..... 256
ejectors ..... 250
emergency collets ..... 188
erosion vices ..... 147, 148
extension sleeves MT ..... 94, 95

F

face drivers ..... 124
face mill holders ..... 205, 209, 216, 226
feather keys ..... 249
floating chucks ..... 224
floating chucks VDI ..... 166

G

gauge block sets ..... 261
grid cube ..... 92

H

hard rev. jaws f. wedge bar chucks ..... 30
hard rev. jaws f. Wescott chucks ..... 32, 33
hydraulic cylinder ..... 61
hydraulic expansion chucks ..... 214, 220, 228

I

independent chucks ..... 35-38
inside solid jaws f. lathe chucks ..... 23

J

jaw turning rings ..... 46, 47, 65
jaws for vices ..... 130, 134-139, 151

K

keys for coolant tubes ..... 229
keys for lathe chucks ..... 27

L

lathe chucks BASIC ..... 28, 29
lathe chucks, 2-jaws ..... 12
lathe chucks, 3-jaws ..... 13-16, 20, 22, 28
lathe chucks, 4-jaws ..... 17, 18
lathe chucks, 6-jaws ..... 21
lathe chucks, stationary ..... 77-79

M

machine vice, mechanically ..... 141
magnetic plates ..... 83
milling arbors, screw-on type ..... 213, 214, 219, 220, 227
milling drill sets ..... 267
morse taper collets ..... 187
morse taper sleeves ..... 197, 206, 207, 211, 218, 226
morse taper sleeves VDI (F) ..... 163

O

O-rings ..... 169
outside solid jaws ..... 23

P

parallels ..... 260
pinions ..... 26
plug gauges ..... 262, 264
power chucks, 2/3-jaws ..... 50
power chucks, 2-jaws ..... 49
power chucks, 3-jaws ..... 51-59
power chucks, 4-jaws ..... 56, 57
power vice, mechanically ..... 135
prisms ..... 197
protection hoods ..... 274-280, 282-288
protection plugs VDI ..... 169
pull studs ..... 230-232

R

reduction sleeves f. milling chucks ..... 224
reduction sleeves MT ..... 94
reduction sleeves VDI ..... 168
reduction sleeves, hydraulic chucks ..... 95
reduction sleeves, slotted VDI ..... 168
ring gauges ..... 263, 265
round jaws for power chucks ..... 64
round tables ..... 70, 75, 76

S

safety drive rings ..... 242
saw blade holder ..... 224
screws for base jaws ..... 27
screws Weldon ..... 249
scrolls ..... 26
setting holder VDI ..... 167
shrink chucks ..... 215, 221, 228, 229
soft solid jaws f. lathe chucks ..... 25, 29
soft solid jaws f. wedge bar chucks ..... 31
soft solid jaws f. Wescott chucks ..... 32, 33
spacing collars ..... 245
spare parts for vices ..... 139
spindle sleeves ..... 96
spindle stops ..... 242
stands hydraulical ..... 259

stands mechanical ... 259
stop for lathe chucks ... 47
stops for collets ... 190
stops for VDI ... 167
stops for vices ... 243
stops, universal ... 151, 243
studs DIN 55027 ... 26
studs DIN 55029 ... 27
swivel bases for vices ... 130, 138, 144
synchro-tapping chucks ... 239, 240

## T

table vices ... 143
tailstocks ... 73, 74
tangs ... 247
taper arbor ... 100, 101
taper cleaners ... 244
tapping chucks, quick-change ... 235, 236
tapping chucks, reversal ... 238
tapping collets ... 184-186
tapping inserts ... 237
tapping sleeves ... 98, 99
telescopic arm for vices ... 143
testing arbors ... 227, 254
testing arbors VDI ... 167, 255
T-nuts ... 243
T-nuts for power chucks ... 64
tool holders VDI axial (C1-C4) ... 157, 158
tool holders VDI radial (B1-B8) ... 155-157
tool holders VDI, square (D1-D2) ... 158
tool kits ... 202
tool maker's vices ... 145, 146
tool posts BASIC ... 198, 199
tool posts Multisuisse ... 195-197
tool racks ... 251
tool trolleys ... 251
toolholders for Mori Seiki ... 177
toolholders for Nakamura ... 178
top jaws, hard f. lathe chucks ... 24
top jaws, hard f. power chucks ... 63
top jaws, hard f. wedge bar chucks ... 31
top jaws, soft f. lathe chucks ... 25
top jaws, soft f. power chucks ... 63
top jaws, soft f. wedge bar chucks ... 31
tube center, fixed ... 123
tube center, revolving ... 116, 117, 119

## U

U-drill holder VDI (E1) ... 159

## V

V- blocks ... 80, 82
V- blocks magnetic ... 81
vices Carminati ... 149, 150
vices hydraulically ... 138, 140
vices pneumatically ... 132
vices type CMC ... 128, 129
vices, 3-axis ... 142
vices, multiflex ... 133
vices, self-centering ... 144, 145

## W

wedge bar chucks ... 30
wedge clamps ... 85
Weldon chucks ... 203, 206, 210, 211, 217, 225
Weldon chucks with coolant ring ... 208, 212, 219
Wescott chucks ... 32, 33
wrenches cross retaining screws ... 246
wrenches ER ... 246
wrenches OZ ... 246

## Z

zero adjuster ... 255

# Allgemeine Geschäftsbedingungen

## I. Angebot und Vertragsabschluss

1. Für Bestellungen und Lieferungen gelten nachstehende Bedingungen. Sie werden vom Besteller mit Auftragserteilung, spätestens mit der Annahme der ersten Lieferung/Leistung anerkannt und gelten für die gesamte Dauer der Geschäftsverbindung. Telefonischen oder mündlichen Ergänzungen bzw. abweichenden Bedingungen des Bestellers ist widersprochen. Sie sind nur verbindlich sofern sie von uns schriftlich bestätigt wurden.
2. Unsere Angebote sind freibleibend. Aufträge gelten als angenommen, wenn sie von uns schriftlich bestätigt werden. Erfolgt die Lieferungen/Leistung unverzüglich ohne Bestätigung, so gilt die Rechnung gleichzeitig als Auftragsbestätigung.
3. Mehr- und Minderlieferungen bei Sonderwerkzeugen bis 10%, mindestens jedoch 1 Stück, sind zulässig. Berechnet wird die jeweilige Lieferung.
4. Alle Angaben über Gewicht, Abmessungen, Leistungen und sonstige technische Daten, die in unseren Unterlagenenthalten sind, sind nur annähernd maßgebend, soweit sie nicht ausdrücklich als verbindlich bezeichnet sind.

## II. Lieferung und Preise

1. Wir liefern ab Werk, ausschließlich Verpackungen auf Rechnung und Gefahr des Käufers.
2. Unsere Preise gelten zuzüglich der gesetzlichen Umsatzsteuer.
3. Zugesagte Lieferfristen sind unverbindlich und stehen unter dem Vorbehalt richtiger und rechtzeitiger Selbstbelieferung. Die Lieferfristen verlängern sich angemessen bei Maßnahmen im Rahmen von Arbeitskämpfen, insbesondere Streik und Aussperrung, sowie beim Eintritt unvorhergesehener, unverschuldeter Hindernisse. Die vorbezeichneten Umstände sind auch dann von uns nicht zu vertreten, wenn sie während eines bereits vorliegenden Verzuges entstehen. Beginn und Ende derartiger Hindernisse werden wir in wichtigen Fällen dem Besteller baldmöglichst mitteilen.
4. Der Mindestbestellwert beträgt 40 EUR.

## III. Warenrücksendungen und Gutschriften

1. Die Rücksendung von Waren zur Gutschrift ist NUR nach vorheriger Absprache und Genehmigung durch uns möglich.
2. Die Rückgabe der Ware muss in neuwertigem Originalzustand, unbeschädigt und mit vollständigem Zubehör sowie in Originalverpackung erfolgen. Andernfalls kann sie nicht gutgeschrieben werden.
3. Die Wiedereinlagerungsgebühr beträgt grundsätzlich 10% des Warenwerts, mindestens jedoch EUR 10,00. Bei Ersatzbestellung eines gleichwertigen Artikels reduziert sich diese Gebühr auf 5% bzw. EUR 5,00.
4. Die Berechnung höherer Wiedereinlagerungsgebühren aufgrund besonderer Umstände des Falles bzw. des Zustands der zurückgesandten Ware sowie die nachträgliche Ablehnung der Rücknahme nach Prüfung durch uns behalten wir uns jedoch ausdrücklich vor.
5. Artikel, die keine Katalogartikel sind (z.B. Sonderbeschaffungen, Sondermengen und/oder Sonderanfertigungen) können NICHT zurückgegeben werden.
6. Ware, deren Auslieferung länger als 6 Monate zurückliegt, kann NICHT zur Gutschrift zurückgegeben werden.
7. Unfreie Rücksendungen werden nicht angenommen und gehen mit dem Vermerk „Annahme verweigert“ an den Absender zurück.

## IV. Zahlung, Zahlungsverzug

1. Die Zahlung ist gemäß den Zahlungsbedingungen zu leisten.
2. Bei verspäteter Zahlung sind Verzugszinsen in Höhe von 8% über dem jeweiligen Basiszinssatz zu entrichten. Zahlungsverzug berechtigt uns zum Rücktritt ohne Fristsetzung. Bei Zahlungsverzug mit einer Rechnung werden unsere sämtlichen Forderungen aus Geschäftsverbindungen mit dem Käufer sofort zahlungsfällig.

## V. Bestellung auf Abruf

1. Bestellungen, die von uns auf Abruf bestätigt werden, müssen – sofern nichts Besonderes vereinbart ist – spätestens innerhalb eines Jahres ab Bestelldatum abgenommen werden.

## VI. Eigentumsvorbehalt

1. Die Ware bleibt, ausgenommen der Fall der Weiterveräußerung im ordnungsgemäßen Geschäftsgang, unser Eigentum bis zur vollständigen Bezahlung des Kaufpreises und aller unserer bei Warenlieferung bereits entstandenen Forderungen. Die Forderung des Bestellers aus dem Weiterverkauf unserer unter Eigentumsvorbehalt gelieferten Waren nebst sämtlicher hieraus resultierender Nebenforderungen werden bereits jetzt an uns zur Sicherheit abgetreten. Der Besteller ist ermächtigt, die abgetretenen Forderungen solange einzuziehen, wie er seiner Zahlungspflicht uns gegenüber nachkommt. Bei Verarbeitung der Vorbehaltsware erwerben wir Eigentum an der neuen Sache. Bei Verarbeitung, Vermischung oder Vermengung der Vorbehaltsware mit anderen Gegenständen erwerben wir das Miteigentum entsprechend dem Warenteil.
2. Der Besteller ist verpflichtet, bei Weiterverkauf unter Eigentumsvorbehalt die Kaufpreisforderung gegen den Dritten in einem jederzeit nachprüfbaren Verzeichnis niederzulegen, damit die Forderung als uns zustehend erkennbar ist.
3. Der Eigentumsvorbehalt bleibt auch dann bestehen, wenn unsere Forderungen aus der gelieferten Vorbehaltsware jeweils in ein Kontokorrent eingestellt und der Schlußsaldo gezogen und anerkannt wird.
4. Der Besteller verpflichtet sich, die Vorbehaltsware seinerseits unter Eigentumsvorbehalt weiterzuverkaufen.
5. Verpfändung oder Sicherungsübereignung der Vorbehaltsware bzw. der abgetretenen Forderungen sowie Factoring sind unzulässig.
6. Auf unser Verlangen hat der Besteller die Schuldner der abgetretenen Forderungen mitzuteilen, alle zum Einzug erforderlichen Angaben zu machen und die dazugehörigen Unterlagen auszuhändigen. Wir können den Schuldnern die Abtretung anzeigen.
7. Von einer Pfändung oder anderer Beeinträchtigung der gelieferten Ware durch Dritte muss uns der Kunde unverzüglich benachrichtigen. Alle uns durch die Pfändung entstehenden Kosten trägt der Kunde.
8. Bei Zahlungsverzug, drohender Zahlungseinstellung, im Falle unbefriedigender Auskunft über Zahlungsfähigkeit bzw. Vermögenslage des Bestellers oder, wenn Zwangsvollstreckungen oder Wechselprozesse gegen ihn vorkommen, sind wir befugt, die gelieferte Ware zurückzunehmen. Der Besteller ist zur Herausgabe verpflichtet. Die Kosten der Rücknahme und der Verwertung der Ware trägt der Besteller.
9. Der Antrag auf Eröffnung des Insolvenzverfahrens berechtigt uns, vom Vertrag zurückzutreten und die sofortige Rückgabe des Liefergegenstandes zu verlangen.

## VII. Mängelrüge

1. Erkennbare offensichtliche Mängel können nur unverzüglich schriftlich gerügt werden, spätestens jedoch innerhalb einer Frist von 8 Tagen nach Empfang der Lieferung.
2. Bei begründeter Mängelrüge dürfen Zahlungen nur in angemessenem Verhältnis zum aufgetretenen Mangel zurückbehalten werden.

## VIII. Gewährleistung und Haftung

Für Mängel der Lieferung haften wir wie folgt:
1. Alle diejenigen Teile sind nach unserer Wahl unentgeltlich nachzubessern oder zu ersetzen, die innerhalb von 12 Monaten vom Tag des Versandes an gerechnet, infolge eines vor dem Gefahrenübergang liegenden Umstandes, insbesondere wegen fehlerhafter Bauart, schlechter Baustoffe oder mangelhafter Ausführung unbrauchbar geworden sind oder deren Brauchbarkeit erheblich beeinträchtigt wurde. Die Feststellung der Mängel muss uns unverzüglich schriftlich gemeldet werden. Eine Verletzung dieser Rügepflicht enthebt uns von jeder Gewährleistung. Nachbesserungsversuche sind mehrmals zulässig und dürfen nur durch uns vorgenommen werden. Der Kunde hat uns hierzu die erforderliche Zeit und Gelegenheit zu geben, sonst sind wir von der Mängelhaftung befreit. Ersetzte Teile werden unser Eigentum.
2. Bessert der Besteller oder ein Dritter unsachgemäß nach, haften wir nicht für die daraus entstehenden Folgen. Werden vom Kunden oder Dritten ohne unsere Zustimmung Instandsetzungen, Beschädigungen oder Änderungen vorgenommen, die mit dem geltend gemachten Mangel in Verbindung stehen, entfällt unsere Gewährleistungspflicht.
3. Keine Gewähr wird insbesondere in folgenden Fällen übernommen: ungeeignete oder unsachgemäße Verwendung, fehlerhafte Montage bzw. Inbetriebsetzung durch den Besteller oder Dritte, natürliche Abnutzung, fehlerhafte oder nachlässige Behandlung, nicht ordnungsgemäße Wartung, ungeeignete Betriebsmittel, chemische, elektrochemische oder elektrische Einflüsse.
4. Wir sind im Falle unserer Verpflichtung, neu hergestellte Sachen nachzubessern, nur verpflichtet, die zum Zwecke der Nachbesserung erforderlich werdenden Aufwendungen des Bestellers, insbesondere Transport-, Wege- und eventuelle Arbeits- und Materialkosten zu erstatten, nicht aber darüber hinausgehende Schäden, soweit uns nicht grobes Verschulden trifft.
5.. Für Mängel des vom Besteller angelieferten Materials haften wir nicht. Bei Fertigung nach Zeichnung des Bestellers haften wir nur für zeichnungsgemäße Ausführung.
6. Für wesentliche Fremderzeugnisse beschränkt sich unsere Haftung auf die Abtretung der Haftungsansprüche, die uns gegen den Lieferer des Fremderzeugnisses zustehen.
7. Weitere Ansprüche des Bestellers, insbesondere ein Anspruch auf Ersatz von Schäden, die nicht an dem Liefergegenstand selbst entstanden sind, sind ausgeschlossen. Dieser Haftungsausschluss gilt nicht bei Vorsatz oder grober Fahrlässigkeit unserer gesetzlichen Vertreter oder leitenden Angestellten.

## IX. Haftung für Nebenpflichten, sonstige Haftung

1. Die in unseren allgemeinen Verkaufsunterlagen, in Vorschlägen, Projektierungen usw. enthaltenen anwendungstechnischen Angaben befreien den Kunden nicht von seiner Verpflichtung, sich durch eigene Prüfung von der Eignung unserer Produkte für den von ihm beabsichtigten Zweck zu überzeugen. Haftungsansprüche aus schuldhafter Verletzung der uns obliegenden Nebenpflichten sind in jedem Falle ausgeschlossen, soweit nicht grobe Fahrlässigkeit oder Vorsatz unserer gesetzlichen Vertreter oder leitenden Angestellten vorliegt. Gegebenenfalls beschränkt sich diese auf höchstens 5 % vom Wert der betreffenden Lieferung bzw. Leistung.

## X. Recht des Lieferers auf Rücktritt

1. Ist die Durchführung eines Auftrages, der aufgrund eines Entwurfes oder einer Zeichnung des Bestellers ausgeführt werden soll, wegen fehlenden technischen oder technologischen Vorraussetzungen, unmöglich (z.B. Konstruktionsmangel), so steht uns das Recht zu, ganz oder teilweise vom Vertrag zurückzutreten. Schadenersatzansprüche des Bestellers wegen eines solchen Rücktritts bestehen nicht.

## XI. Schutzrechte

1. Für alle in unseren Unterlagen enthaltenen oder in unseren Angeboten beigefügten Abbildungen, Skizzen, Zeichnungen behalten wir uns Eigentums- und Urheberrechte vor. Jegliche Verwendung, Zugänglichmachung, Nachahmung oder Vervielfältigung ist ohne unsere ausdrückliche Genehmigung verboten.
2. Der Besteller übernimmt für die von ihm beizubringenden Unterlagen, Pläne, Muster oder dgl. die alleinige Verantwortung. Der Besteller hat dafür einzustehen, dass von ihm vorgelegte Ausführungszeichnungen in Schutzrechte Dritter, nicht eingreifen. Wir sind dem Besteller gegenüber nicht zur Prüfung verpflichtet, ob durch Abgabe von Angeboten, die aufgrund der vom Besteller vorgelegten Ausführungszeichnungen erstellt worden sind, irgendwelche Schutzrechte Dritter verletzt werden, es sei denn, es trifft uns bzw. einen leitenden Angestellten Vorsatz oder grobes Verschulden. Sollten wir von Dritten in Anspruch genommen werden, so hat uns der Besteller freizustellen und uns schadlos zu halten.
3. Betriebsmittel, die zur Herstellung der Vertragsgegenstände angefertigt werden, bleiben unser Eigentum und werden nicht ausgeliefert, auch wenn sie ganz oder teilweise berechnet werden.

## XII. Erfüllungsort und Gerichtsstand

1. Gerichtsstand ist das für den Sitz des Lieferers zuständige Gericht. Der Lieferer ist jedoch berechtigt, am Hauptsitz des Bestellers Klage zu erheben.
2. Für die vertraglichen Beziehungen gilt ausschließlich das Recht des Landes in welchem der Verkäufer seinen Sitz hat.

## XIII. Sonstiges

1. Dem Besteller erklären wir ausdrücklich unsere Bereitschaft, mit uns inhaltlich andere Vertragsbedingungen auszuhandeln als wir sie in den vorstehenden AGB festgelegt haben. Unwirksamkeit einzelner Vertragspunkte berührt den Bestand des übrigen Vertrages nicht. Ist eine Regelung unwirksam, so gilt das gesetzlich Zulässige.
2. Wir speichern Daten des Kunden im Rahmen der Geschäftsbeziehung mittels elektronischer Datenverarbeitung.

© 2016

# Terms and conditions

### I. Quotation, Conclusion of Contract

1. The present Terms and Conditions shall apply exclusively for all our supplies and deliveries. They are considered accepted by the Purchaser once he accepts the first delivery and shall be valid for the entire duration of business relation. Any amendments by the Purchaser – verbal or by phone – shall not be accepted. They shall only be binding if confirmed by us in writing.
2. Our quotations shall always be subject to change without notice. Orders shall be considered accepted if confirmed by us in writing. If any delivery/service is provided immediately without any confirmation, the invoice shall also be deemed to be the order confirmation.

3. Excess or short deliveries of up to 10 % of the order quantity (at least 1 off) are acceptable for special tools made to the customer's specification. The respective delivery shall be invoiced.

4. All details like weight, dimensions, performance and other technical parameters shall be considered approximative unless they are explicitly defined as binding.

### II. Delivery and Pricing

1. Our deliveries are made on an "ex works" basis at the Purchaser's risk and expense.
2. Prices are understood plus the statutory Value Added Tax.
3. Delivery dates confirmed by us shall not be binding but subject to a correct and punctual supply to ourselves. Delivery periods shall be prolonged adequately in case of labour disputes, strikes, lockouts and by other unforeseeable events beyond our control. We shall not be held responsible for the aforementioned events even if they occur within an existing delay. The Purchaser shall be informed on the beginning and end of such event.
4. The minimum order value amounts to Euro 40,00.

### III. Return of goods and credit notes

1. Goods must ONLY be returned for credit after prior approval by the seller.
2. Any goods returned must be in original packing, undamaged and with full accessories included. Otherwise no credit note can be issued.
3. A restorage fee of 10% of the order value shall be charged, however, a minimum of 10,00 €. If an order is placed in return, we will charge 5% or 5,00 € resp.
4. We expressly reserve the right to charge higher restorage fees under certain circumstances e.g. a poor state of returned goods or to subsequently refuse acceptance at all.
5. Items beyond the standard range of our catalogue (e.g. special goods or quantities and/or special productions) MUST NOT be returned at all.
6. Goods bought more than 6 months ago must not be sent back.
7. Goods returned to us carriage forward, shall not be accepted and returned at the Purchaser's expense.

### IV. Payment, Default of Payment

1. Payments shall have to be made according to the terms set forth on the relevant invoice.
2. For delayed payments we will charge default interest in the amount of 8% above the relative base rate. Default of payment entitles us to a cancellation of the contract without prior notice. If payment of one invoice is delayed all other payments resulting from the business relationship shall become due immediately.

### V. Make-and-Hold-Orders

1. Orders confirmed by us on a make-and-hold-basis have to be called off within one year after the date of order at the latest.

### VI. Retention of Title

1. All goods delivered shall remain our property until full payment of the purchase price (incl. all related claims incurred with shipment of the goods) has been effected. Any claims of the Purchaser resulting from a resale of our goods – delivered under retention of title – shall be deemed to be ceded to us as security. The Purchaser is allowed to collect receivables for the ceded claims as long as he fulfills his payment obligations with the seller. If title retention goods are processed, we acquire property of the new product. In case of any processing, commingling or mixture of our title retention goods with other products, we acquire a co-ownership according of the share of our product.
2. In case of any resale of title retention goods by the Purchaser, the latter shall be obliged to provide all information necessary to collect payment.
3. Any retention of tile shall persist even if our claims are forming part of a current account, a final balance has been determined and acknowledges.
4. The Purchaser shall be obliged to resell our goods with a retention-of-title-clause, too.
5. Pledging or security transfer of our title retained goods and/or ceded claims as well as factoring are impermissible.
6. Upon our instigation the Purchaser shall have to inform all debtors of any ceded claims, provide all information required for collection and submit the corresponding documents.
7. Prior to any seizure of the goods delivered or any other impairment whatsoever by a third party, the seller has to be informed. Any costs entailed by such seizure of pledge shall have to be borne by the customer.
8. We are entitled to withdraw delivered goods in case of any late payments, payment stops, insufficient information about the Purchaser's liquidity or his financial status, pending compulsory executions or procedures based on claims arising out of bills of exchange. The Purchaser is obliged to hand over the delivered goods. Any costs incurred shall have to be borne by the Purchaser.
9. Any petition in insolvency proceedings shall entitle us to resign from the contract and insist on a return of the delivered object.

### VII. Claims

1. Obvious quality flaws or defects shall have to be announced in writing immediately, however, no later than 8 days after receipt of the goods.
2. In case of any justified complaints, payments shall only be reduced in reasonable proportion to the defect incurred.

### VIII. Warranty and Liabilities

We are liable for the following defects in quality:
1. All parts or services will be remedied, at our discretion, free of charge or redelivered or provided again, that are found to feature a quality defect during the statutory period of limitation – irrespective of service life – providing the origin thereof already existed at the time of passing of risk. Claims to quality defects will become statute-barred in 12 (twelve) months. The period of time commences with the passing of risk. We shall have to be informed immediately in writing if the material sold by us is found to be defective. Failure to do so shall release us from any warranty obligation. We have the right to remedy defects which must be carried out by ourselves or qualified personnel entrusted by us.The Purchaser shall have to grant us sufficient time for remedial action. Replaced items become our property.
2. If the Purchaser or any third party carries out said remedial action, we shall not be held responsible for any consequences. If goods are remedied, repaired or modified by the Purchaser or a third party without prior approval by us, we shall be released from any warranty claims.
3. Warranty claims shall not be accepted in case of inappropriate use, faulty assembly and/or putting into operation by the Purchaser or a third party, normal wear, misuse or improper handling, insufficient maintenance, chemical, electro-chemical or electrical influences.
4. Our obligation to remedy delivered items shall only cover transport, material and labour costs. Unless in cases of gross negligence, we shall not be liable for any further costs incurred.
5. We shall not be liable for defects of material supplied by the Purchaser. If manufacture is carried out according to the Purchaser's drawing, we shall only be responsible for an execution according to said drawing.
6. For essential third-party products our liabiity shall be limited to the liability claim towards the supplier of the aforementioned third-party product.
7. Further claims of the Purchaser - in particular with regard to indemnification of damage, not having occurred to the delivered object itself - shall be excluded. Such disclaimer shall of course not be applicable in cases of gross negligence of our legal representative or senior executives.

### IX. Overall Liabilities

1. Any application-related information provided in our general sales catalogue, project documents etc. shall not release the Purchaser from his obligation to convince himself of the adequacy and suitability of our products for the intended use. Any liability claims based on culpable infringement of other collateral duties shall be excluded in any case, unless attributable to gross negligence or willful intent of our legal representatives or leading staff. Where applicable, such liability shall be limited to a maximum of 5 % of the pertinent order value.

### X. Supplier's Right of Withdrawal from the Contract

1. If the performance of an order that is based on the Purchaser's draft or drawing turns out to be not feasible for any reason (e.g. missing technical or technological design requirements), we shall be entitled to withdraw – fully or in part – from the contract. No claims for damages shall be accepted by the Purchaser resulting from such withdrawal.

### XI. Trade mark rights

1. For all sketches, drawings, photographs and other illustrations contained in our documents and quotations we reserve both property and copy rights.
Any reproduction, duplication, disclosure to third parties shall be prohibited unless expressly authorized by us.
2. The Purchaser shall assume sole responsibility for all kinds of document, plans, samples or the like to be submitted. Moreover, he shall assure that said documents will not infringe on any property rights of third parties. We cannot be held responsible for any execution drawings submitted by the Purchaser that are affecting any property or trade mark rights unless a deliberate act or gross negligence becomes evident by us or a member of the leading management. If any claims should be asserted by third parties, the Purchaser shall have to indemnify and hold us harmless.
3. Production facilities manufactured for the purpose of fabrication of the subject-matter of the contract, shall not be delivered but remain our property even if invoiced fully or in part.

### XII. Place of jurisdiction and payment

1. Place of performance and jurisdiction shall be the registered office of the relevant seller. We are, however, entitled to file a suit at the Purchaser's headquarters.
2. Contractual relationships shall be governed by the laws of the seller's headquarters.

### XIII. Miscellaneous

1. We expressly declare our willingness to negotiate contractual terms other than those set forth in the present "General Terms and Conditions". The ineffectiveness of individual contract terms, however, shall not affect the validity of the remaining ones. Should one term prove to be ineffective, it shall be replaced by its legal equivalent.
2. Purchaser's data shall be stored within the frame of regular data processing on the basis of the existing business relations.

© 2016


















# HELMUTH A. JENSEN A/S

Islevdalvej 187 • 2610 Rødovre • Denmark • Tel. +45 44 91 11 77 • Telefax +45 44 92 13 53
E-mail: info@viking1913.dk • Website: www.viking1913.dk

DEUTSCHLAND

Gültig ab 01.01.2017 / *Valid from 01.01.2017*