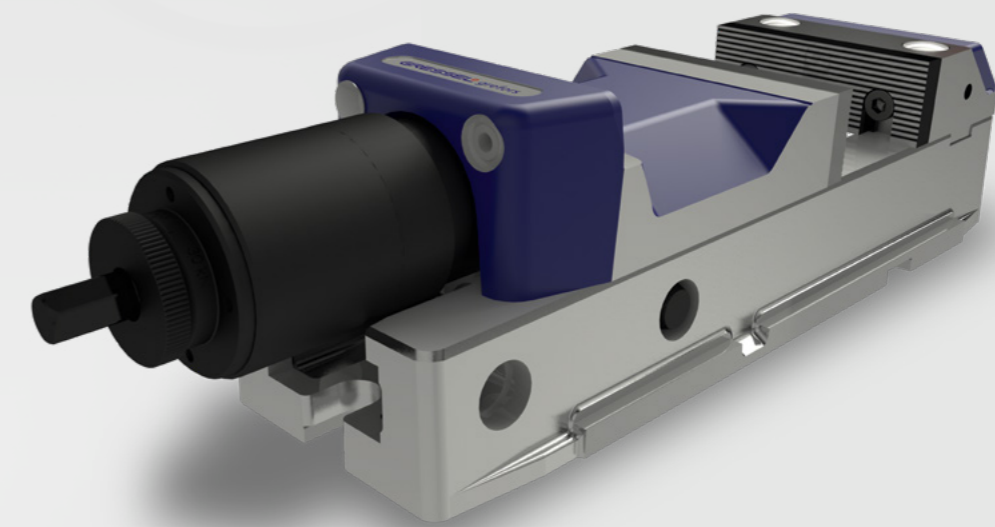


# grefors

6



## Maschinenschraubstock Machine vise

**Bewährtes Hochdruck-Spannsystem**  
Approved high-pressure clamping  
system

Mechanischer Maschinenschraubstock mit  
stufenloser Krafteinstellung von 10 % bis 100 %  
der Spannkraft mit nur 1 Kurbelumdrehung  
und immer gleicher Kurbelendstellung. Schnelle  
Spannbereichsverstellung über Absteckbolzen.

Mechanical machine vise with continuous force  
adjustment. 10% to 100% of the stepless clamping  
force with only 1 rotation of the hand crank stepless  
the same final crank position. Quick adjustment  
of the clamping range using locking pins.

# Ihre Nutzen

## Your benefits

6

### Zeit und Kraft sparen – nur 1 Kurbelumdrehung

#### Save time and energy – only 1 turn of the crank

- Spannzeit <1 Sekunde
- nur eine Kurbelumdrehung für volle Spannkraft
- definierte Kurbelendlagenstellung
- kein Verlust der Spannkraft wegen mechanischer Kraftübersetzung
- Clamping time <1 second
- only one turn of the crank required for full clamping force
- defined final position of the crank
- no loss of clamping force due to mechanical force transmission



### Einfaches Handling

#### Easy to handle

- stufenlose Spannkrafteinstellung
- von Hand bis 60 kN einstellbar
- stufenlos und ohne Werkzeug
- präzise dosiert
- sicher und schnell
- stepless clamping force adjustment
- manually adjustable up to 60 kN
- stepless adjustment and no tools necessary
- precise clamping force regulation
- reliable and quick

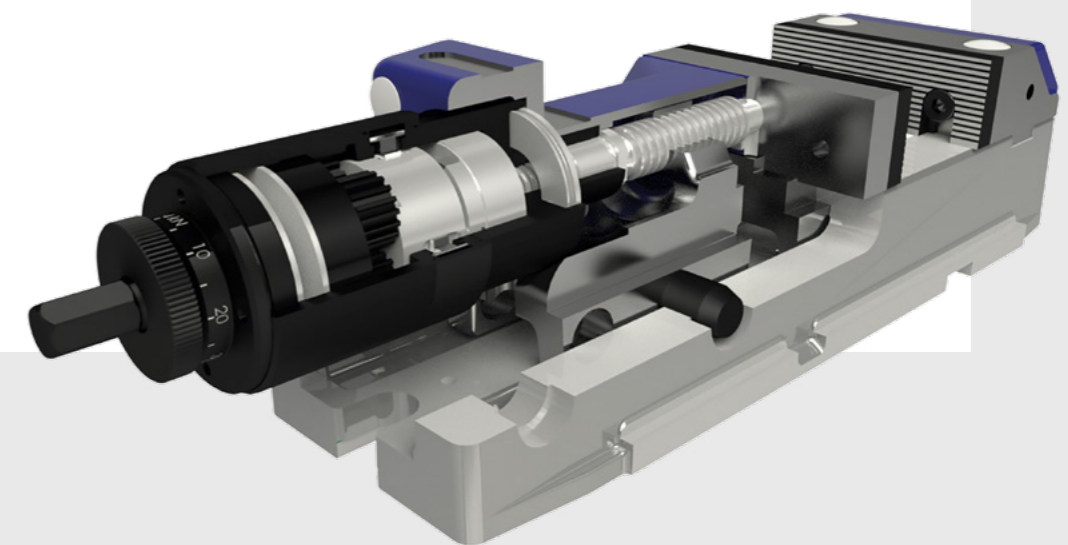


6

### Hohe Bearbeitungspräzision

#### High machining precision

- mechanisch spannen
- robuste Ausführung
- hohe Wiederholgenauigkeit
- sicher verriegelt, vibrationsicher
- mechanical clamping
- robust design
- high repeat accuracy
- securely locked, resistant to vibration



# Systemübersicht grefors

## System overview grefors

### ① Modulares System Modular system

- vielseitiges Aufsatzbackensystem
- versatile top jaw system

### ② Komplett gekapselt Completely encapsulated

- Kraft- und Verstellmechanismus gekapselt
- Schutz vor Spänen und Flüssigkeiten
- Force and adjustment mechanism encapsulated
- Protection against chips and coolant

### ③ Mechanische Kraftübersetzung Mechanical force transmission

- mit Vorspannung zur Werkstückpositionierung
- Spannkraft wird mechanisch verriegelt
- vibrationsicher
- with preclamping for workpiece positioning
- Mechanically locked clamping force
- resistant to vibration

### ④ Stufenlose Spannkrafteinstellung Continuous adjustment of the clamping force

- von Hand einstellbar, kein Werkzeug notwendig
- konstante Wiederholgenauigkeit
- manually adjustable, no tools necessary
- consistent repeatability

### ⑤ Nur 1 Kurbelumdrehung Only 1 turn of the crank

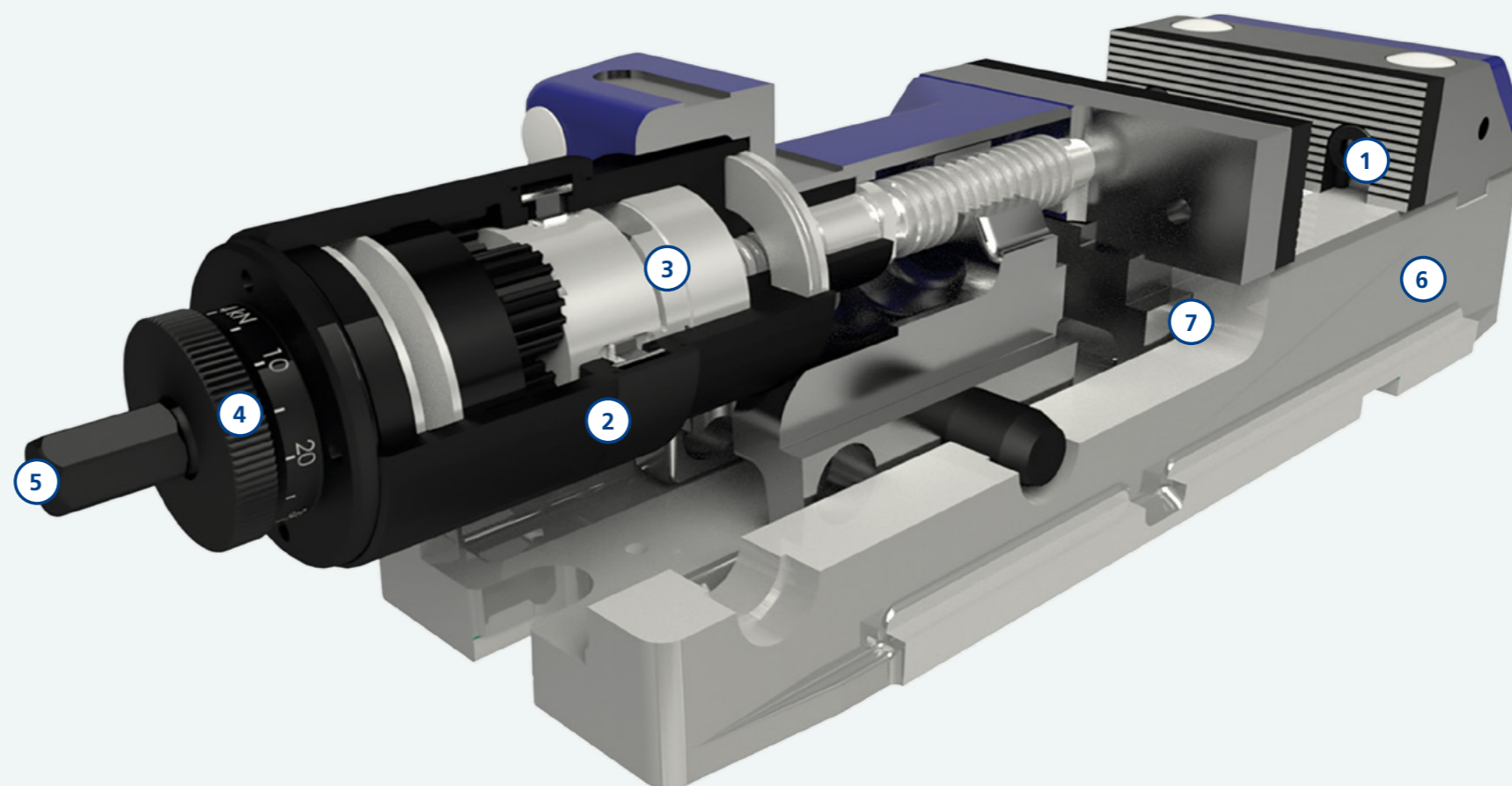
- von 10–100 % der Spannkraft mit nur 1 Kurbelumdrehung
- immer gleiche Kurbelendstellung
- from 10–100 % of the clamping force with only 1 turn of the crank
- crank always at the same final position

### ⑥ Niedriger Grundkörper Low base body

- verzugsfrei
- Sphäroguss
- distortion-free
- Spheroidal cast iron

### ⑦ Innenliegende Schieberführungen Internal slider guides

- grosse Werkstückauflage
- flammgehärtet
- large workpiece support
- flame-hardened



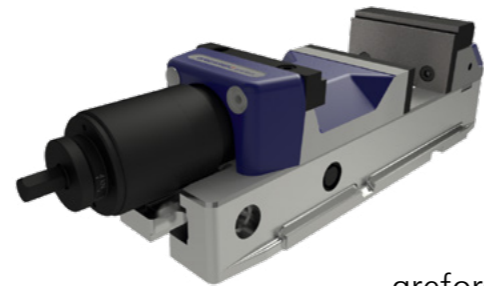
## Baukasten Construction kit



grefos

Standard  
Standard

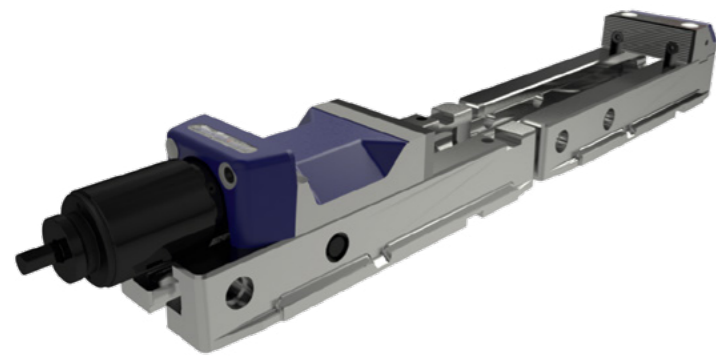
Seite/page 267



grefos-VS  
grefos-ECR

vergrösserte Spannereich  
extended clamping range

Seite/page 268

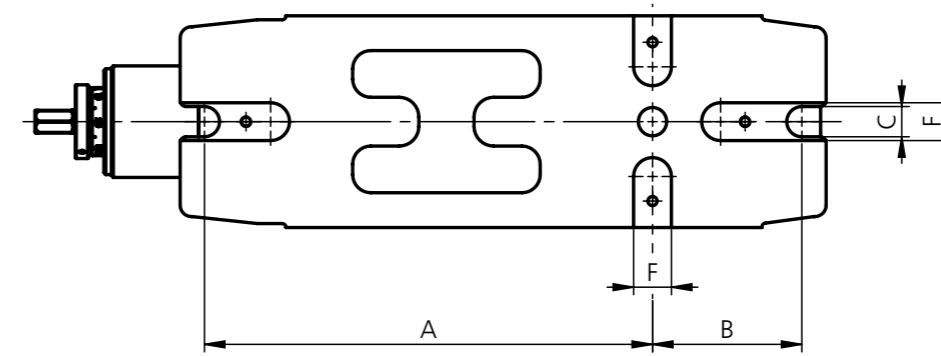


grefos

verlängert  
extended

Seite/page 269

## Standard Schnittstelle Standard interface



| Typ Type   | A   | B   | C  | F <sub>HT</sub> |
|------------|-----|-----|----|-----------------|
| grefos 100 | 240 | 80  | 15 | 20              |
| grefos 125 | 280 | 100 | 18 | 20              |
| grefos 160 | 380 | 130 | 22 | 20              |

Masse (mm) Dimensions (mm)

## Technische Informationen Technical information

### 1. Funktionsprinzip grefors Functional principle grefors

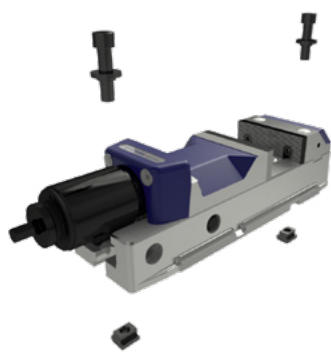
Der grefors ist für das Spannen von Rohteilen und bearbeiteten Werkstücken konzipiert. Die Vielseitigkeit wird über die Wahl des Zubehörs erreicht. Der Kraftaufbau ist rein mechanisch und wird über ein mechanisches Kraftelement realisiert. Die Krafteinstellung erfolgt stufenlos über einen Einstellring. Die eingestellte Spannkraft wird durch eine Kurbelumdrehung der Handkurbel erreicht. Der grefors kann mit wenigen Handgriffen montiert und demontiert werden.

The grefors is designed for the clamping of both blanks and machined workpieces. Versatility is achieved through the selection of accessories. The clamping force is generated entirely mechanically by means of a mechanical force element and can be steplessly modified by means of the adjustment ring. The clamping force is achieved by one rotation of the crank. The grefors can be mounted and dismantled in just a few steps.

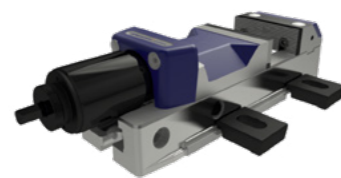
### 2. Spannkraften grefors Clamping forces grefors

| Baugröße Size | Spannkraft Clamp. force |
|---------------|-------------------------|
| grefors 100   | 4–30 kN                 |
| grefors 125   | 4–40 kN                 |
| grefors 160   | 5–60 kN                 |

### 3. Aufspannen/Ausrichten Clamping/alignment



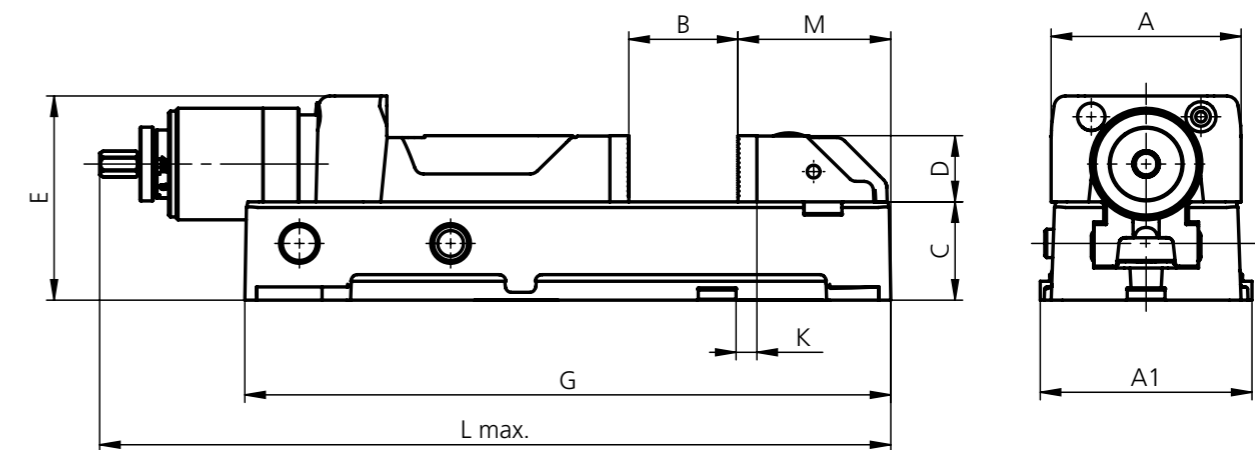
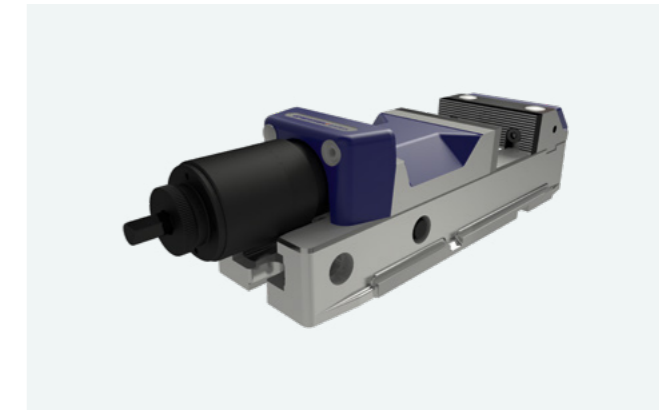
Ausrichtung durch Präzisionsnutensteine auf dem Nutentisch mit Längs- bzw. Quernut 20H7 im Grundkörper  
Alignment through precision slot nuts on the t-slot machine table with longitudinal or cross groove 20H7 in the base body



Aufspannen mit Schrauben durch den Grundkörper oder seitlich mit Spannpratzen  
Clamping with screws through the base body or laterally with clamping claws

## grefors

Maschinenschraubstock  
Machine vise



| Typ Type    | A   | A1  | B     | C  | D  | E   | G   | K <sub>±0,015</sub> | L <sub>max.</sub> | M   |
|-------------|-----|-----|-------|----|----|-----|-----|---------------------|-------------------|-----|
| grefors 100 | 100 | 112 | 0–159 | 52 | 35 | 108 | 342 | 11                  | 521               | 81  |
| grefors 125 | 125 | 140 | 0–201 | 62 | 40 | 118 | 400 | 28                  | 584               | 85  |
| grefors 160 | 160 | 176 | 0–300 | 78 | 50 | 149 | 544 | 40                  | 784               | 112 |

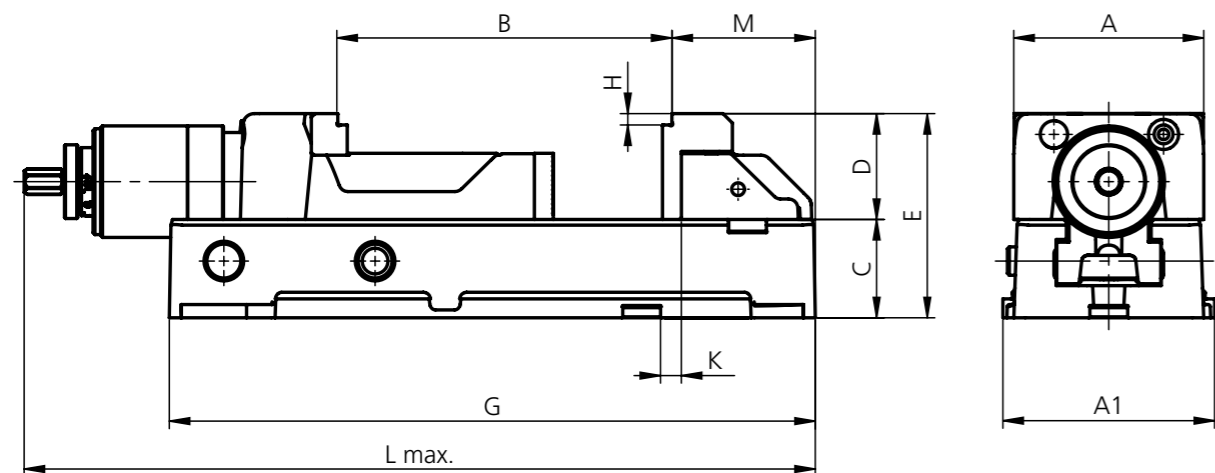
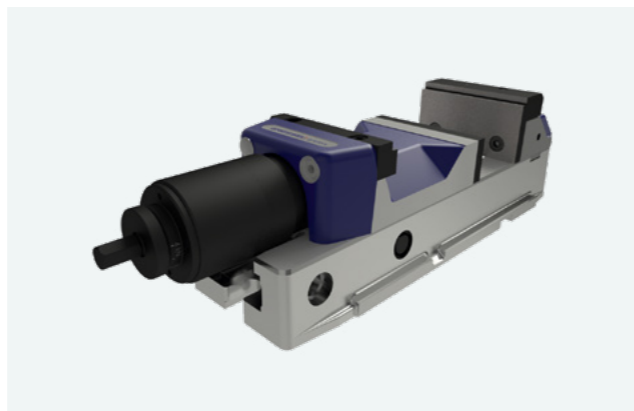
Masse (mm) Dimensions (mm)

| Typ Type    | Beschreibung Description              | Backenbreite Jaw width mm | Spannkraft Clamp. force kN | Gewicht Weight kg | Lieferumfang Delivery details   | Bestell-Nr. Order No. |
|-------------|---------------------------------------|---------------------------|----------------------------|-------------------|---|-----------------------|
| grefors 100 | Maschinenschraubstock<br>Machine vise | 100                       | 4–30                       | 20                | Standardbacken Oberfläche profiliert, Handkurbel, 4 Spannpratzen<br>Standard jaws with profiled surface, hand crank, 4 clamping claws | MHS.100.500.01        |
| grefors 125 | Maschinenschraubstock<br>Machine vise | 125                       | 4–40                       | 27                | Standardbacken Oberfläche profiliert, Handkurbel, 4 Spannpratzen<br>Standard jaws with profiled surface, hand crank, 4 clamping claws | MHS.125.500.01        |
| grefors 160 | Maschinenschraubstock<br>Machine vise | 160                       | 5–60                       | 55                | Standardbacken Oberfläche profiliert, Handkurbel, 4 Spannpratzen<br>Standard jaws with profiled surface, hand crank, 4 clamping claws | MHS.160.500.01        |

# grefors-VS grefors-ECR

Maschinenschraubstock mit  
vergrößerem Spannbereich (VS)

Machine vise with increased  
clamping range (ECR)



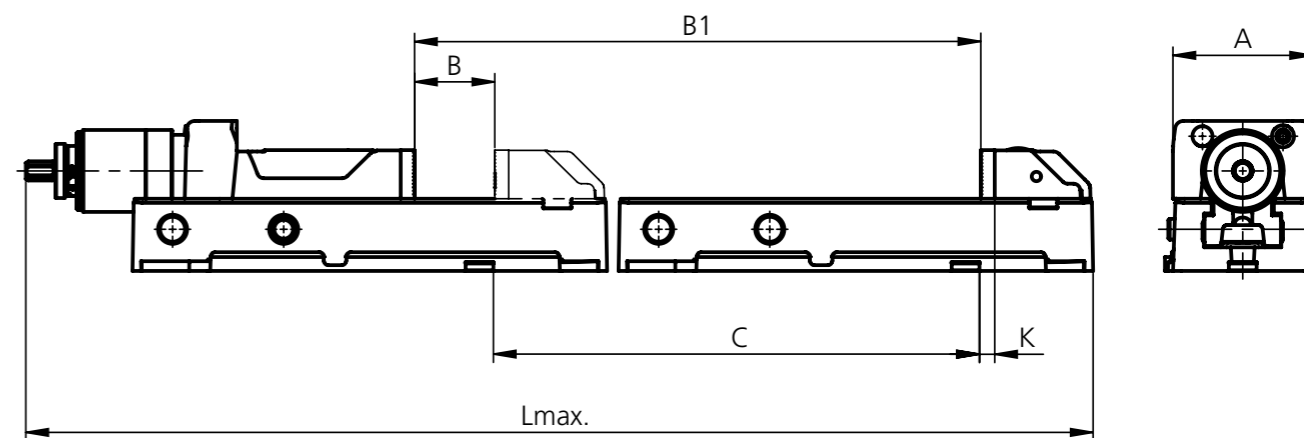
| Typ Type                          | A   | A1  | B       | C  | D  | E   | G   | H | $K_{\pm 0.015}$ | $L_{max.}$ | M   |
|-----------------------------------|-----|-----|---------|----|----|-----|-----|---|-----------------|------------|-----|
| grefors 100-VS<br>grefors 100-ECR | 100 | 112 | 118–278 | 52 | 56 | 108 | 342 | 6 | 11              | 521        | 76  |
| grefors 125-VS<br>grefors 125-ECR | 125 | 140 | 137–338 | 62 | 56 | 118 | 400 | 6 | 28              | 584        | 80  |
| grefors 160-VS<br>grefors 160-ECR | 160 | 176 | 169–470 | 78 | 71 | 149 | 544 | 6 | 40              | 784        | 107 |

Masse (mm) Dimensions (mm)

| Typ Type    | Backenbreite<br>Jaw width<br>mm | Bestell-Nr. Schraubstock<br>Order No. vise | Bestell-Nr. Stufenbacken<br>Order No. stepped jaws |
|-------------|---------------------------------|--|--|
| grefors 100 | 100-VS/ECR                      | MHS.100.500.01                             | MHA.100.530.01                                     |
| grefors 125 | 125-VS/ECR                      | MHS.125.500.01                             | MHA.125.530.01                                     |
| grefors 160 | 160-VS/ECR                      | MHS.160.500.01                             | MHA.160.530.01                                     |

# grefors

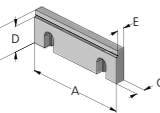
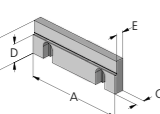
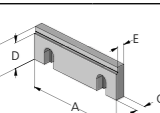
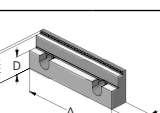
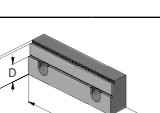
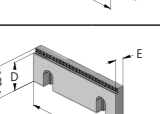
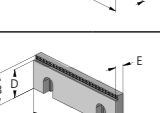
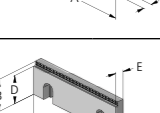
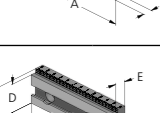
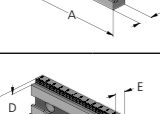
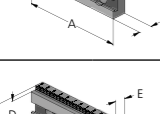
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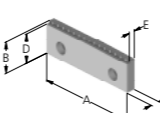
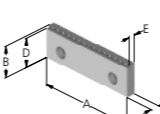
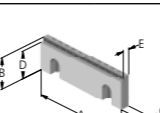
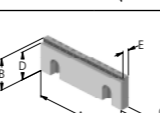
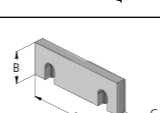
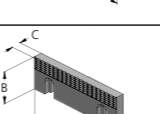
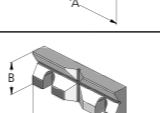
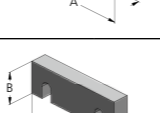
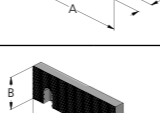
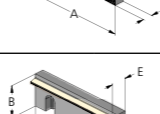
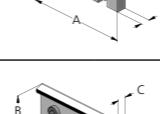



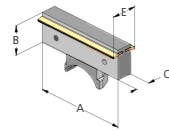
| Typ Type    | A   | B     | B1      | C   | $K_{\pm 0.015}$ | $L_{max.}$ |
|-------------|-----|-------|---------|-----|-----------------|------------|
| grefors 100 | 100 | 0–159 | 350–509 | 350 | 11              | 871.3      |
| grefors 125 | 125 | 0–201 | 410–611 | 410 | 28              | 994.1      |
| grefors 160 | 160 | 0–300 | 550–850 | 550 | 40              | 1334.15    |


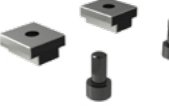



Masse (mm) Dimensions (mm)







| Typ Type    | Backenbreite<br>Jaw width<br>mm | Bestell-Nr. Schraubstock<br>Order No. vise | Bestell-Nr. Grundkörper<br>Verlängerung<br>Order No. base body extension |
|-------------|---------------------------------|--|--|
| grefors 100 | 100                             | MHS.100.500.01                             | MHA.100.540.01   |
| grefors 125 | 125                             | MHS.125.500.01                             | MHA.125.540.01   |
| grefors 160 | 160                             | MHS.160.500.01                             | MHA.160.540.01   |

| grefos Aufsatzbacken Top jaws   |  | Masse (mm)<br>Dimensions (mm) |    |      |    |      | Passend zu Typ<br>Suitable for type | Bestell-Nr.<br>Order No. |
|---|--|-------------------------------|----|------|----|------|-------------------------------------|--------------------------|
| Bezeichnung<br>Designation  | Masse (mm)<br>Dimensions (mm)  | A                             | B  | C    | D  | E    | grefos                              | Bestell-Nr.<br>Order No. |
|   |  |                               |    |      |    |      |                                     |                          |
|   |  | 125                           | 40 | 11.5 |    |      | X                                   | MHS.125.545.01           |
|   |  | 160                           | 50 | 13.5 |    |      | X                                   | MHS.160.545.01           |
|    | <b>Stufenbacke 5 mm (100)</b><br><b>8 mm (125+160)</b><br>inkl. Schrauben (1 Stk.)<br>Stepped jaw 5 mm (100)<br>8 mm (125+160)<br>incl. screws (1 pc.) | 100                           | 35 | 10   | 30 | 7.5  | X                                   | MHS.100.190.11           |
|   |  | 125                           | 40 | 11.5 | 32 | 9.5  | X                                   | MHS.125.190.11           |
|   |  | 160                           | 50 | 13.5 | 42 | 10.5 | X                                   | MHS.160.190.11           |
|    | <b>Stufenbacke 17 mm</b><br>inkl. Schrauben<br>(1 Stk.)<br>Stepped jaw 17 mm<br>incl. screws<br>(1 pc.)  | 125                           | 40 | 11.5 | 23 | 9.5  | X                                   | MSA.125.188.11           |
|    | <b>Stufenbacke beschichtet</b><br><b>5 mm</b> inkl. Schrauben<br>(1 Stk.)<br>Stepped jaw coated<br>5 mm incl. screws<br>(1 pc.)                        | 100                           | 35 | 10   | 30 | 7.5  | X                                   | MSA.100.189.11           |
|   |  | 125                           | 40 | 11.5 | 35 | 9.5  | X                                   | MSA.125.189.11           |
|   |  | 160                           | 50 | 13.5 | 45 | 10.5 | X                                   | MSA.160.189.11           |
|   | <b>Stufenbacke 18 mm und</b><br><b>3 mm grip</b> inkl. Schrauben<br>(1 Stk.)<br>Stepped jaw 18 mm and<br>3 mm grip incl. screws<br>(1 pc.)             | 125                           | 40 | 21.5 | 22 | 37   | X                                   | MSA.125.167.11           |
|  | <b>Stufenbacke breit</b><br><b>18 mm und 3 mm grip</b><br>inkl. Schrauben (1 Stk.)<br>Stepped jaw width<br>18 mm and 3 mm grip<br>incl. screws (1 pc.) | 125                           | 40 | 24   | 22 | 37   | X                                   | MSA.125.168.11           |
|  | <b>Stufenbacke grip 3 mm</b><br>inkl. Schrauben<br>(1 Stk.)<br>Stepped jaw grip 3 mm<br>incl. screws<br>(1 pc.)  | 100                           | 35 | 10   | 32 | 7.5  | X                                   | MHS.100.172.12           |
|   |  | 125                           | 40 | 11.5 | 37 | 9    | X                                   | MHS.125.172.12           |
|   |  | 160                           | 50 | 13.5 | 47 | 11   | X                                   | MHS.160.172.12           |
|  | <b>Stufenbacke grip 5 mm</b><br>inkl. Schrauben<br>(1 Stk.)<br>Stepped jaw grip 5 mm<br>incl. screws<br>(1 pc.)  | 100                           | 35 | 10   | 30 | 7.5  | X                                   | MHS.100.171.01           |
|   |  | 125                           | 40 | 11.5 | 35 | 9    | X                                   | MHS.125.171.01           |
|   |  | 160                           | 50 | 13.5 | 45 | 11   | X                                   | MHS.160.171.01           |
|  | <b>Stufenbacke grip 8 mm</b><br>inkl. Schrauben<br>(1 Stk.)<br>Stepped jaw grip 8 mm<br>incl. screws<br>(1 pc.)  | 100                           | 35 | 10   | 27 | 7.5  | X                                   | MHS.100.170.12           |
|   |  | 125                           | 40 | 11.5 | 32 | 9    | X                                   | MHS.125.170.12           |
|   |  | 160                           | 50 | 13.5 | 42 | 11   | X                                   | MHS.160.170.12           |
|  | <b>Stufenbacke grip</b><br><b>3 mm mit T-Nut</b><br>inkl. Schrauben (1 Stk.)<br>Stepped jaw grip<br>3 mm with t-slot<br>incl. screws (1 pc.)           | 100                           | 35 | 17.5 | 32 | 11.5 | X                                   | MSA.100.152.11           |
|   |  | 125                           | 40 | 17.5 | 37 | 11.5 | X                                   | MSA.125.152.11           |
|  | <b>Stufenbacke grip</b><br><b>5 mm mit T-Nut</b><br>inkl. Schrauben (1 Stk.)<br>Stepped jaw grip<br>5 mm with t-slot<br>incl. screws (1 pc.)           | 100                           | 35 | 17.5 | 30 | 11.5 | X                                   | MSA.100.151.11           |
|   |  | 125                           | 40 | 17.5 | 35 | 11.5 | X                                   | MSA.125.151.11           |
|   |  | 160                           | 50 | 20   | 45 | 13.5 | X                                   | MSA.160.151.11           |
|  | <b>Stufenbacke grip</b><br><b>8 mm mit T-Nut</b><br>inkl. Schrauben (1 Stk.)<br>Stepped jaw grip<br>8 mm with t-slot<br>incl. screws (1 pc.)           | 100                           | 35 | 10   | 27 | 7.5  | X                                   | MSA.100.170.01           |
|   |  | 125                           | 40 | 17.5 | 32 | 11.5 | X                                   | MSA.125.150.11           |
|   |  | 160                           | 50 | 20   | 42 | 13.5 | X                                   | MSA.160.150.11           |

| grefos Aufsatzbacken Top jaws   |  | Masse (mm)<br>Dimensions (mm) |    |      |    |      | Passend zu Typ<br>Suitable for type | Bestell-Nr.<br>Order No. |
|---|--|-------------------------------|----|------|----|------|-------------------------------------|--------------------------|
| Bezeichnung<br>Designation  | Masse (mm)<br>Dimensions (mm)  | A                             | B  | C    | D  | E    | grefos                              | Bestell-Nr.<br>Order No. |
|   |  |                               |    |      |    |      |                                     |                          |
|   |  | 125                           | 32 | 13.5 |    |      | X                                   | MSA.125.155.01           |
|   |  | 160                           | 32 | 13.5 |    |      | X                                   | MSA.160.155.01           |
|    | <b>Stufenbacke carbide-grip</b><br><b>3 mm</b><br>(1 Stk.)<br>Stepped carbide-grip jaw<br>3 mm<br>(1 pc.)  | 100                           | 35 | 10   | 32 | 7    | X                                   | MSA.100.160.01           |
|   |  | 125                           | 40 | 11.5 | 37 | 8.5  | X                                   | MSA.125.160.01           |
|   |  | 160                           | 50 | 13.5 | 47 | 10.5 | X                                   | MSA.160.160.01           |
|    | <b>Stufenbacke carbide-grip</b><br><b>5 mm</b><br>(1 Stk.)<br>Stepped carbide-grip jaw<br>5 mm<br>(1 pc.)  | 100                           | 35 | 12   | 30 | 7    | X                                   | MSA.100.161.01           |
|   |  | 125                           | 40 | 11.5 | 35 | 8.5  | X                                   | MSA.125.161.01           |
|   |  | 160                           | 50 | 15.5 | 45 | 10.5 | X                                   | MSA.160.161.01           |
|    | <b>Stufenbacke grip 5 mm für</b><br><b>Aluminium und Kunststoff</b><br>(1 Stk.)<br>Stepped jaw grip 5 mm for<br>aluminium and plastic<br>(1 pc.) | 125                           | 40 | 11.5 | 35 | 8    | X                                   | MHZ.125.094.11           |
|   | <b>Stufenbacke Prägeprofil</b><br><b>LANG</b><br>(1 Stk.)<br>Stepped jaw pre-stamp<br>profile LANG<br>(1 pc.)                                    | 125                           | 40 | 11.5 | 37 |      | X                                   | MSA.125.153.01           |
|  | <b>Backe geschliffen</b><br>inkl. Schrauben<br>(1 Stk.)<br>Ground jaw<br>incl. screws<br>(1 pc.)   | 100                           | 35 | 10   |    |      | X                                   | MHS.100.198.11           |
|   |  | 125                           | 40 | 11.5 |    |      | X                                   | MHS.125.198.11           |
|   |  | 160                           | 50 | 13.5 |    |      | X                                   | MHS.160.198.11           |
|  | <b>Backe grip</b><br>inkl. Schrauben<br>(1 Stk.)<br>Grip jaw<br>incl. screws<br>(1 pc.)  | 100                           | 35 | 10   |    |      | X                                   | MHS.100.193.11           |
|   |  | 125                           | 40 | 11.5 |    |      | X                                   | MHS.125.193.11           |
|   |  | 160                           | 50 | 13.5 |    |      | X                                   | MHS.160.193.11           |
|  | <b>Prismabacke</b><br><b>125 ø14-48 mm</b><br>inkl. Schrauben (1 Stk.)<br>Prismatic jaw<br>125 ø14-48 mm<br>incl. screws (1 pc.)                 | 100                           | 35 | 15.5 |    |      | X                                   | MHS.100.191.11           |
|   |  | 125                           | 40 | 17.5 |    |      | X                                   | MHS.125.191.11           |
|   |  | 160                           | 50 | 19.5 |    |      | X                                   | MHS.160.191.11           |
|  | <b>Backe weich</b><br>inkl. Schrauben<br>(1 Stk.)<br>Soft jaw<br>incl. screws<br>(1 pc.)   | 100                           | 35 | 16   |    |      | X                                   | MHS.100.192.11           |
|   |  | 125                           | 40 | 20   |    |      | X                                   | MHS.125.192.11           |
|   |  | 160                           | 50 | 20   |    |      | X                                   | MHS.160.192.11           |
|  | <b>Backe gehauen (Stahl)</b><br>inkl. Schrauben<br>(1 Stk.)<br>Serrated jaw (steel)<br>incl. screws<br>(1 pc.)                                   | 100                           | 35 | 10.7 |    |      | X                                   | MHS.100.199.11           |
|   |  | 125                           | 40 | 12.2 |    |      | X                                   | MHS.125.199.11           |
|   |  | 160                           | 50 | 14.2 |    |      | X                                   | MHS.160.199.11           |
|  | <b>Federblatt-</b><br><b>Niederzugbacke</b><br>inkl. Schrauben (1 Stk.)<br>Pull-down jaw<br>with spring plate<br>incl. screws (1 pc.)            | 100                           | 35 | 10   |    | 18.5 | X                                   | MHS.100.196.01           |
|   |  | 125                           | 40 | 11.5 |    | 19   | X                                   | MHS.125.196.01           |
|   |  | 160                           | 50 | 13.5 |    | 21   | X                                   | MHS.160.196.01           |
|  | <b>Federblech-</b><br><b>Niederzugbacke</b><br>inkl. Schrauben (1 Stk.)<br>Pull-down jaw<br>with spring plate<br>incl. screws (1 pc.)            | 100                           | 34 | 10   |    |      | X                                   | MSA.100.194.01           |
|   |  | 125                           | 35 | 10   |    |      | X                                   | MSA.125.194.01           |
|   |  | 160                           | 45 | 12   |    |      | X                                   | MSA.160.194.01           |

| grefos Aufsatzbacken Top jaws   |  | Masse (mm)<br>Dimensions (mm) |    |      |   |    | Passend zu Typ<br>Suitable for type | Bestell-Nr.<br>Order No. |
|---|--|-------------------------------|----|------|---|----|-------------------------------------|--------------------------|
| Bezeichnung<br>Designation  | Masse (mm)<br>Dimensions (mm)  | A                             | B  | C    | D | E  | grefos                              | Bestell-Nr.<br>Order No. |
|   |  |                               |    |      |   |    |                                     |                          |
|   |  | 125                           | 40 | 25   |   |    | X                                   | MSA.125.240.01           |
|   |  | 160                           | 50 | 27.5 |   |    | X                                   | MSA.160.240.01           |
|  | <b>Backe mit Positionierstiften</b><br>inkl. Schrauben (1 Stk.)<br>Jaw with positioning pins<br>incl. screws (1 pc.)                                       | 125                           | 40 | 20   |   |    | X                                   | MSA.125.183.01           |
|  | <b>Zwischenbacke mit Nut</b><br>inkl. 2 Federblätter<br>und Schrauben (1 Stk.)<br>Intermediate jaw with slot<br>incl. 2 spring plate<br>and screws (1 pc.) | 100                           | 35 | 28   |   | 45 | X                                   | GPZ.100.057.01           |
|   |  | 125                           | 40 | 20   |   | 35 | X                                   | MSA.125.205.01           |
|   |  | 160                           | 50 | 20   |   | 35 | X                                   | MSA.160.205.01           |

| grefos Zubehör Accessories  |  | Passend zu Typ<br>Suitable for type | Bestell-Nr.<br>Order No. |
|---|--|-------------------------------------|--------------------------|
|  | <b>Werkstückunterlagen Set</b><br>für grefos 125<br>Workpiece supports set<br>for grefos 125   | grefos 125                          | MSA.125.210.01           |
|  | <b>Präzisions-Nutensteine mit Schrauben</b><br>für T-Nut<br>(Satz à 2 Stk.)<br>Precision slot nuts with screws<br>for t-slot<br>(Set of 2 pcs.)  | 12 mm/M6                            | MAA.110.012.01           |
|   |  | 14 mm/M6                            | MAA.110.014.01           |
|   |  | 16 mm/M6                            | MAA.110.016.01           |
|   |  | 18 mm/M6                            | MAA.110.018.01           |
|  | <b>Aufspannschrauben für Spannpratzen</b><br>für T-Nut<br>(Satz à 2 Stk.)<br>Clamping screws for clamping claws<br>for t-slot<br>(Set of 2 pcs.) | 12 mm/M10                           | MAA.000.012.01           |
|   |  | 14 mm/M12                           | MAA.000.014.01           |
|   |  | 16 mm/M14                           | MAA.000.016.01           |
|   |  | 18 mm/M16                           | MAA.000.018.01           |
|  | <b>Spannpratzen</b><br>(2 Stk.)<br>Clamping claws<br>(2 pcs.)  | grefos                              | GPA.000.015.01           |
|  | <b>Federblatt</b><br>für Federblatt-Niederzugbacke<br>(1 Stk.)<br>Spring plate<br>for spring plate pull-down jaw<br>(1 pc.)                      | 100                                 | MHS.100.197.11           |
|   |  | 125                                 | MHS.125.197.11           |
|   |  | 160                                 | MHS.160.197.11           |

| grefos Zubehör Accessories  |  | Passend zu Typ<br>Suitable for type | Bestell-Nr.<br>Order No. |
|---|--|-------------------------------------|--------------------------|
|    | <b>Winkeltrieb</b><br>Angular drive  | grefos 100                          | MHA.125.510.02           |
|   |  | grefos 125                          | MHA.125.510.02           |
|   |  | grefos 160                          | MHA.160.510.02           |
|    | <b>Handkurbel</b><br>Hand crank  | grefos 100                          | MHS.125.570.02           |
|   |  | grefos 125                          | MHS.125.570.02           |
|   |  | grefos 160                          | MHS.160.570.01           |
|    | <b>Werkstückanschlag</b><br>für M8/M10<br>Workpiece stop<br>for M8/M10   | grefos 100                          | MSA.000.275.01           |
|   |  | grefos 125                          | MSA.000.275.01           |
|   |  | grefos 125                          | MSA.000.275.01           |
|    | <b>Werkstückunterlagen</b><br>für grefos 100, Höhe ...<br>(Satz à 2 Stk.)<br>Workpiece supports<br>for grefos 100, height ...<br>(Set of 2 pcs.) | 11 mm                               | MSA.100.280.01           |
|   |  | 16 mm                               | MSA.100.281.01           |
|   |  | 25.5 mm                             | MSA.100.282.01           |
|   |  | 29.5 mm                             | MSA.100.283.01           |
|  | <b>Werkstückunterlagen</b><br>für grefos 125, Höhe ...<br>(Satz à 2 Stk.)<br>Workpiece supports<br>for grefos 125, height ...<br>(Set of 2 pcs.) | 11 mm                               | MSA.125.211.01           |
|   |  | 16 mm                               | MSA.125.216.01           |
|   |  | 21 mm                               | MSA.125.221.01           |
|   |  | 26 mm                               | MSA.125.226.01           |
|   |  | 29 mm                               | MSA.125.229.01           |
|   |  | 32.5 mm                             | MSA.125.232.01           |
|   |  | 36 mm                               | MSA.125.236.01           |
|  | <b>Werkstückunterlagen</b><br>für grefos 160, Höhe ...<br>(Satz à 2 Stk.)<br>Workpiece supports<br>for grefos 160, height ...<br>(Set of 2 pcs.) | 26 mm                               | MSA.160.281.01           |
|   |  | 39 mm                               | MSA.160.282.01           |
|   |  | 42.5 mm                             | MSA.160.283.01           |