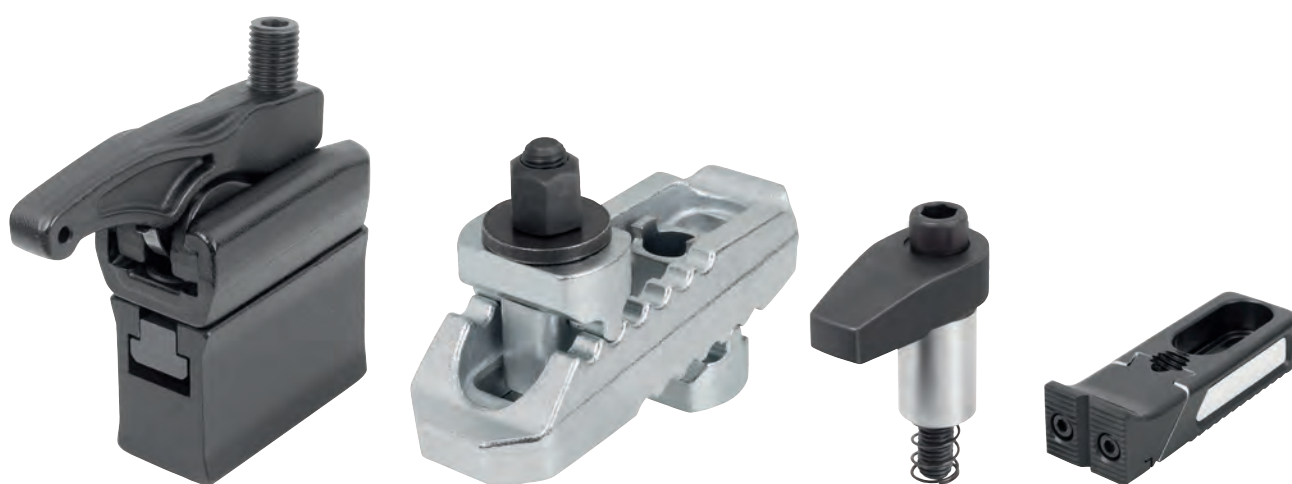


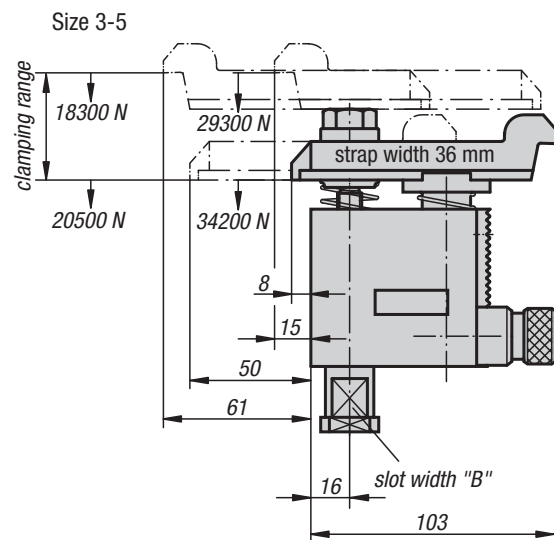
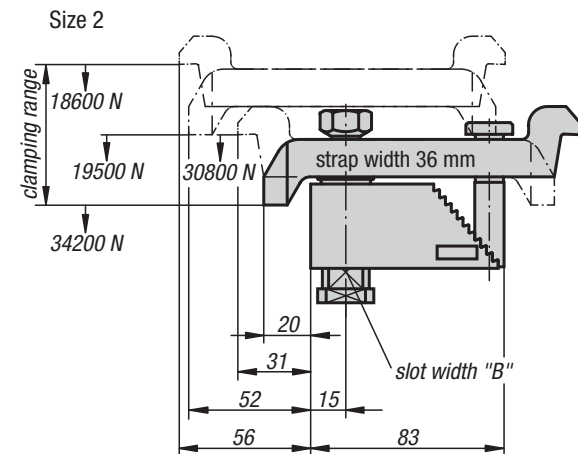
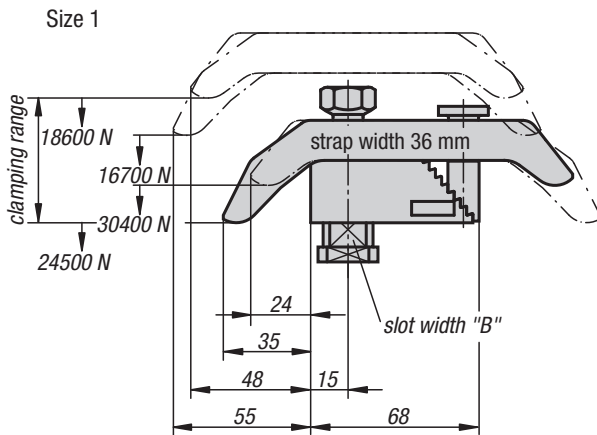
## Clamping elements





## Clamp straps

with adjustment unit



### Material:

Base, ductile iron.

Clamp strap and clamping screw carbon steel.

### Version:

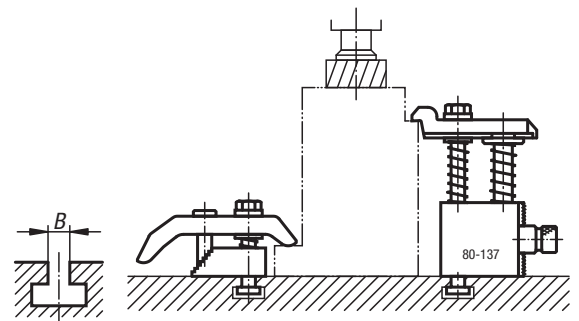
Black oxidised.

### Sample order:

K0004.40X16 (include slot width B)

### Note:

These clamp strap modules are universal, flexible clamps constructed from individual components building a compact unit. There are no loose parts which first have to be altered for a clamping operation. The compact design allows these clamps to be placed close to the workpiece enabling the full area of the machine table to be used.



## KIPP Clamp straps with adjustment unit

| Order No. | Size | Clamp range | Slot width B<br>DIN 650 |
|-----------|------|-------------|-------------------------|
| K0004.10X | 1    | 0-35        | 12/14/16/18             |
| K0004.20X | 2    | 25-85       | 12/14/16/18             |
| K0004.30X | 3    | 80-137      | 12/14/16/18             |
| K0004.40X | 4    | 125-224     | 12/14/16/18             |
| K0004.50X | 5    | 160-300     | 12/14/16/18             |

## Clamping units

pin-end strap



### Material, version:

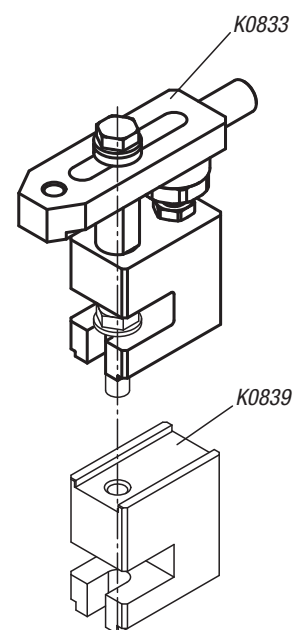
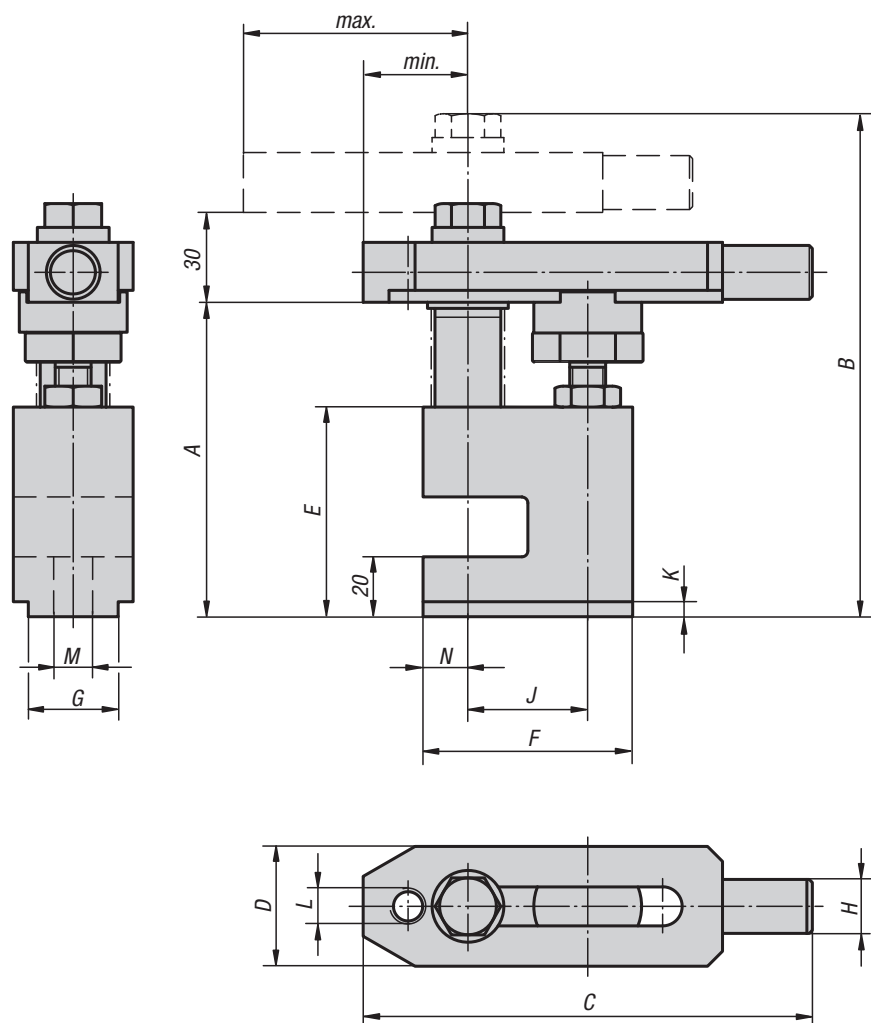
Body carbon steel, black oxidised.  
Strap carbon steel, tempered and black oxidised.  
Clamping screw carbon steel, tempered and black oxidised.

### Sample order:

K0833.12105

### Note:

Both ends of the strap can be used for clamping workpieces. The clamps can be combined with other fixture elements, such as K0839, K0821, K0307.



### KIPP Clamping units, pin-end strap

| Order No.   | A   | B   | C   | D  | E  | F  | G  | H  | J  | K | L   | M  | N  | min. | max. |
|-------------|-----|-----|-----|----|----|----|----|----|----|---|-----|----|----|------|------|
| K0833.12105 | 105 | 168 | 150 | 40 | 70 | 70 | 30 | 18 | 40 | 5 | M12 | 13 | 15 | 35   | 75   |
| K0833.16110 | 110 | 188 | 190 | 50 | 75 | 90 | 40 | 24 | 50 | 5 | M16 | 17 | 20 | 45   | 95   |

## Riser blocks

Form P

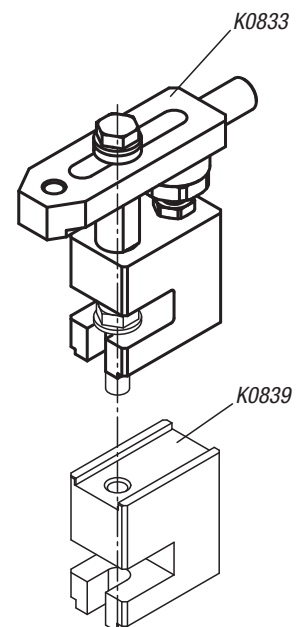
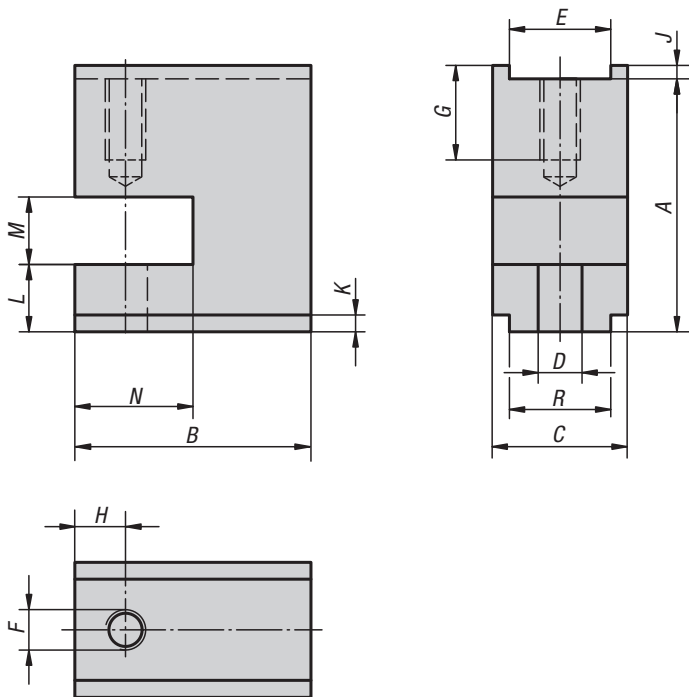


**Material:**  
Carbon steel.

**Version:**  
Black oxidised.

**Sample order:**  
K0839.12075

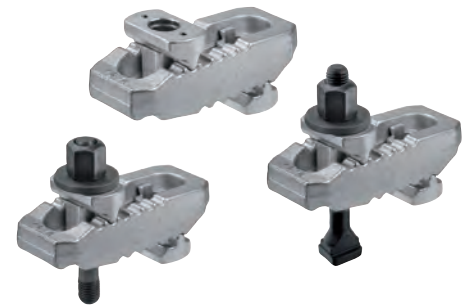
**Note:**  
These riser blocks Form P are used together with clamping straps to clamp high workpieces.



### KIPP Riser blocks Form P

| Order No.   | A   | B  | C  | D  | E  | F   | G  | H  | J | K | L  | M  | N  | R  |
|-------------|-----|----|----|----|----|-----|----|----|---|---|----|----|----|----|
| K0839.12075 | 75  | 70 | 40 | 13 | 30 | M12 | 24 | 15 | 4 | 5 | 20 | 20 | 35 | 30 |
| K0839.12100 | 100 | 70 | 40 | 13 | 30 | M12 | 24 | 15 | 3 | 5 | 20 | 20 | 35 | 30 |
| K0839.16075 | 75  | 90 | 50 | 17 | 40 | M16 | 30 | 20 | 4 | 5 | 20 | 20 | 45 | 40 |
| K0839.16100 | 100 | 90 | 50 | 17 | 40 | M16 | 30 | 20 | 3 | 5 | 20 | 20 | 45 | 40 |

## Clamp strap assemblies



### Material:

Steel.

### Version:

Form A: Tempered and electro zinc-plated.

Form B: Tempered and electro zinc-plated.

Complete with DIN 787 screw for T-slots, DIN 6340 washer and DIN 6330B nut.

Form C: Tempered and electro zinc-plated.

Complete with DIN 6379 stud, DIN 6340 washer and DIN 6330B nut.

### Sample order:

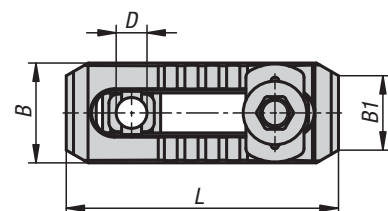
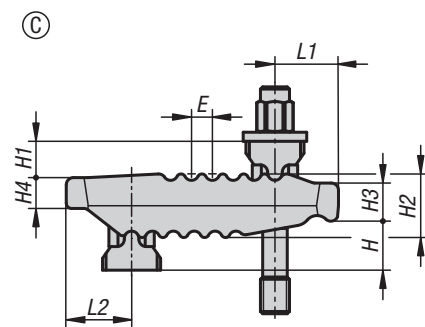
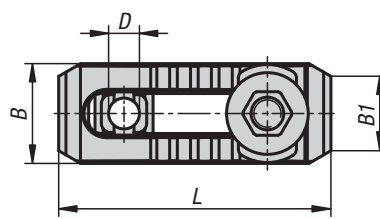
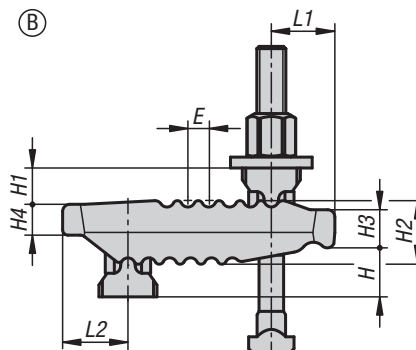
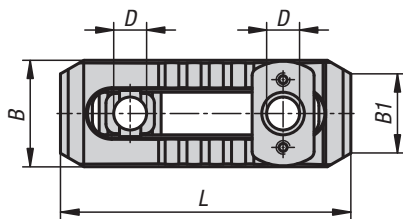
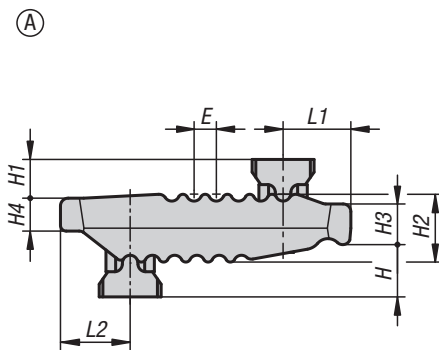
K1165.113115

### Note:

These clamp strap assemblies can be quickly and infinitely adapted to the clamping situation. The clamp straps have different heel types both sides enabling the best end to be selected depending on the specific application. These extremely versatile clamp straps are suitable for use by metal cutting or non-cutting machining and also for press and injection-moulding applications.

### Accessories:

K1204 Adjustable heel supports



## Clamp strap assemblies



## KIPP Clamp strap assemblies

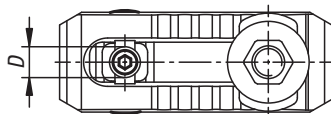
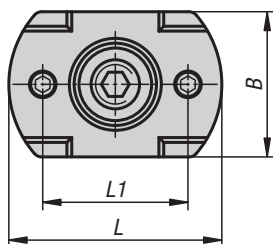
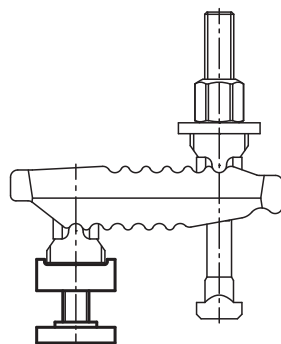
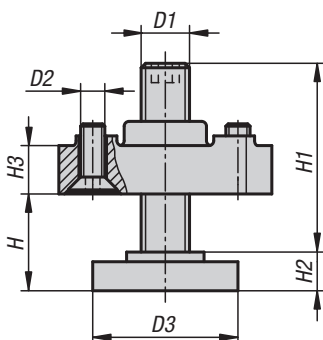
| Order No.    | Form | B  | B1 | D  | E  | H<br>clamping range | H1 | H2 | H3 | H4 | L   | L1 | L2 | Slot<br>width | Clamping<br>force<br>kN |
|--------------|------|----|----|----|----|---------------------|----|----|----|----|-----|----|----|---------------|-------------------------|
| K1165.113115 | A    | 44 | 30 | 13 | 11 | 0-55                | 18 | 27 | 17 | 12 | 115 | 25 | 30 | 10-12-14      | 30                      |
| K1165.117150 | A    | 55 | 41 | 17 | 12 | 0-70                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | 12-14-16-18   | 40                      |
| K1165.121187 | A    | 62 | 30 | 21 | 14 | 0-80                | 30 | 42 | 27 | 20 | 187 | 44 | 44 | 16-18-20-22   | 60                      |
| K1165.125235 | A    | 70 | 30 | 25 | 17 | 0-100               | 31 | 51 | 34 | 24 | 235 | 60 | 47 | 20-22-24-28   | 75                      |
| K1165.125285 | A    | 73 | 30 | 25 | 17 | 0-100               | 35 | 56 | 35 | 24 | 285 | 62 | 51 | 20-22-24-28   | 75                      |

| Order No.<br>with t-slot nut | Form | B  | B1 | D  | E  | H<br>clamping range | H1 | H2 | H3 | H4 | L   | L1 | L2 | Slot<br>width | Fastening<br>screw(s) | Clamping<br>force<br>kN |
|------------------------------|------|----|----|----|----|---------------------|----|----|----|----|-----|----|----|---------------|-----------------------|-------------------------|
| K1165.210115100              | B    | 44 | 30 | 13 | 11 | 0-40                | 18 | 27 | 17 | 12 | 115 | 25 | 30 | 10            | M10X100               | 25                      |
| K1165.212115125              | B    | 44 | 30 | 13 | 11 | 0-55                | 18 | 27 | 17 | 12 | 115 | 25 | 30 | 12            | M12X125               | 30                      |
| K1165.214115125              | B    | 44 | 30 | 13 | 11 | 0-55                | 18 | 27 | 17 | 12 | 115 | 25 | 30 | 14            | M12X125               | 30                      |
| K1165.212150160              | B    | 55 | 41 | 17 | 12 | 0-70                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | 12            | M12X160               | 35                      |
| K1165.214150160              | B    | 55 | 41 | 17 | 12 | 0-70                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | 14            | M12X160               | 35                      |
| K1165.216150160              | B    | 55 | 41 | 17 | 12 | 0-70                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | 16            | M16X160               | 40                      |
| K1165.218150160              | B    | 55 | 41 | 17 | 12 | 0-70                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | 18            | M16X160               | 40                      |
| K1165.216187200              | B    | 62 | 30 | 21 | 14 | 0-80                | 30 | 42 | 27 | 20 | 187 | 44 | 44 | 16            | M16X200               | 55                      |
| K1165.218187200              | B    | 62 | 30 | 21 | 14 | 0-80                | 30 | 42 | 27 | 20 | 187 | 44 | 44 | 18            | M16X200               | 55                      |
| K1165.220187200              | B    | 62 | 30 | 21 | 14 | 0-80                | 30 | 42 | 27 | 20 | 187 | 44 | 44 | 20            | M20X200               | 60                      |
| K1165.222187200              | B    | 62 | 30 | 21 | 14 | 0-80                | 30 | 42 | 27 | 20 | 187 | 44 | 44 | 22            | M20X200               | 60                      |
| K1165.220235250              | B    | 70 | 30 | 25 | 17 | 0-100               | 31 | 51 | 34 | 24 | 235 | 60 | 47 | 20            | M20X250               | 70                      |
| K1165.222235250              | B    | 70 | 30 | 25 | 17 | 0-100               | 31 | 51 | 34 | 24 | 235 | 60 | 47 | 22            | M20X250               | 70                      |
| K1165.224235250              | B    | 70 | 30 | 25 | 17 | 0-100               | 31 | 51 | 34 | 24 | 235 | 60 | 47 | 24            | M24X250               | 75                      |
| K1165.228235250              | B    | 70 | 30 | 25 | 17 | 0-100               | 31 | 51 | 34 | 24 | 235 | 60 | 47 | 28            | M24X250               | 75                      |

| Order No.<br>with stud | Form | B  | B1 | D  | E  | H<br>clamping range | H1 | H2 | H3 | H4 | L   | L1 | L2 | Fastening<br>screw(s) | Clamping<br>force<br>kN |
|------------------------|------|----|----|----|----|---------------------|----|----|----|----|-----|----|----|-----------------------|-------------------------|
| K1165.312115100        | C    | 44 | 30 | 13 | 11 | 0-30                | 18 | 27 | 17 | 12 | 115 | 25 | 30 | M12X100               | 30                      |
| K1165.312115125        | C    | 44 | 30 | 13 | 11 | 0-55                | 18 | 27 | 17 | 12 | 115 | 25 | 30 | M12X125               | 30                      |
| K1165.312150125        | C    | 55 | 41 | 17 | 12 | 0-50                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | M12X125               | 40                      |
| K1165.312150160        | C    | 55 | 41 | 17 | 12 | 0-70                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | M12X160               | 40                      |
| K1165.316150125        | C    | 55 | 41 | 17 | 12 | 0-40                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | M16X125               | 40                      |
| K1165.316150160        | C    | 55 | 41 | 17 | 12 | 0-70                | 20 | 36 | 21 | 17 | 150 | 35 | 36 | M16X160               | 40                      |
| K1165.320187160        | C    | 62 | 30 | 21 | 14 | 0-40                | 30 | 42 | 27 | 20 | 187 | 44 | 44 | M20X160               | 60                      |
| K1165.320187200        | C    | 62 | 30 | 21 | 14 | 0-80                | 30 | 42 | 27 | 20 | 187 | 44 | 44 | M20X200               | 60                      |
| K1165.320235200        | C    | 70 | 30 | 25 | 17 | 0-70                | 31 | 51 | 34 | 24 | 235 | 60 | 47 | M20X200               | 75                      |
| K1165.320235250        | C    | 70 | 30 | 25 | 17 | 0-100               | 31 | 51 | 34 | 24 | 235 | 60 | 47 | M20X250               | 75                      |
| K1165.324235200        | C    | 70 | 30 | 25 | 17 | 0-50                | 31 | 51 | 34 | 24 | 235 | 60 | 47 | M24X200               | 75                      |
| K1165.324235250        | C    | 70 | 30 | 25 | 17 | 0-100               | 31 | 51 | 34 | 24 | 235 | 60 | 47 | M24X250               | 75                      |

## Adjustable heel supports

for clamp strap assembly



### Material:

Carbon steel.

### Version:

Body tempered and electro zinc-plated.  
Support bolt tempered, grade 8.8.

### Sample order:

K1204.1039

### Note:

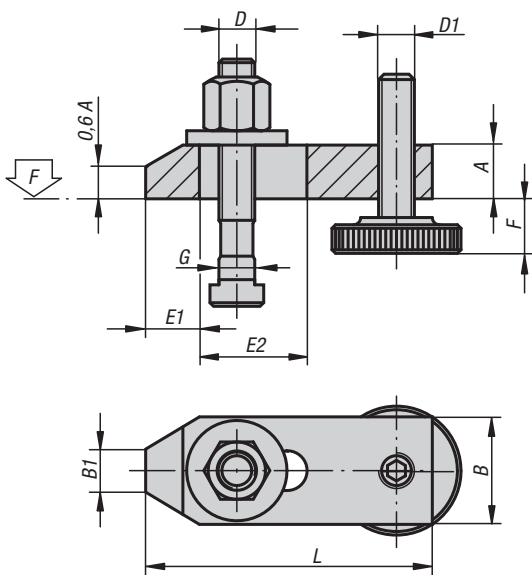
These adjustable heel supports consist of support plate, support bolt and fastening screws for the strap heel support.

Adjustable heel supports are used to increase the clamping height of the clamp strap assemblies.

## KIPP Adjustable heel supports for clamp strap assembly

| Order No.   | B  | D  | D1  | D2 | D3 | H<br>clamping range | H1  | H2 | H3 | L  | L1 |
|-------------|----|----|-----|----|----|---------------------|-----|----|----|----|----|
| K1204.1039  | 30 | 13 | M10 | M5 | 30 | 8-30                | 39  | 8  | 10 | 44 | 30 |
| K1204.1249  | 42 | 17 | M12 | M5 | 36 | 10-37               | 49  | 10 | 16 | 54 | 35 |
| K1204.1294  | 42 | 17 | M12 | M5 | 36 | 10-80               | 94  | 10 | 16 | 54 | 35 |
| K1204.1655  | 50 | 21 | M16 | M5 | 42 | 13-41               | 55  | 13 | 20 | 60 | 40 |
| K1204.1690  | 50 | 21 | M16 | M5 | 42 | 13-73               | 90  | 13 | 20 | 60 | 40 |
| K1204.2069  | 50 | 25 | M20 | M6 | 50 | 16-52               | 69  | 16 | 25 | 70 | 50 |
| K1204.20109 | 50 | 25 | M20 | M6 | 50 | 16-91               | 109 | 16 | 25 | 70 | 50 |

## Clamp strap assemblies

**Material:**

Carbon steel.

Screws tempered to 8.8.

**Version:**

Clamp painted. Screws black oxidised.

**Sample order:**

K0003.1616

**Note:**

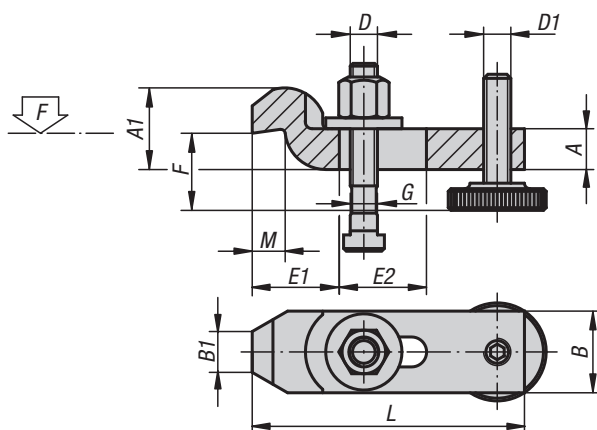
"F" is dependent on the depth of the DIN 650 slot.

## KIPP Clamp strap assemblies

| Order No.  | L   | A  | B  | B1 | E1 | E2 | F     | G<br>for<br>T-slot | D       | D1  | F<br>kN |
|------------|-----|----|----|----|----|----|-------|--------------------|---------|-----|---------|
| K0003.1010 | 80  | 15 | 30 | 12 | 15 | 30 | 8-32  | 10                 | M10x80  | M10 | 13,9    |
| K0003.1212 | 100 | 20 | 40 | 14 | 21 | 40 | 10-40 | 12                 | M12x100 | M12 | 20,2    |
| K0003.1214 | 100 | 20 | 40 | 14 | 21 | 40 | 10-38 | 14                 | M12x100 | M12 | 20,2    |
| K0003.1616 | 125 | 25 | 50 | 18 | 26 | 45 | 13-49 | 16                 | M16x125 | M16 | 37,8    |
| K0003.1618 | 125 | 25 | 50 | 18 | 26 | 45 | 13-46 | 18                 | M16x125 | M16 | 37,8    |
| K0003.2020 | 160 | 30 | 60 | 22 | 30 | 60 | 16-65 | 20                 | M20x160 | M20 | 58,8    |
| K0003.2022 | 160 | 30 | 60 | 22 | 30 | 60 | 16-65 | 22                 | M20x160 | M20 | 58,8    |

## Clamp strap assemblies

goose-neck



### Material:

Carbon steel.

Screws tempered to 8.8.

### Version:

Straps painted.

Screws black oxidised.

### Sample order:

K1450.1616

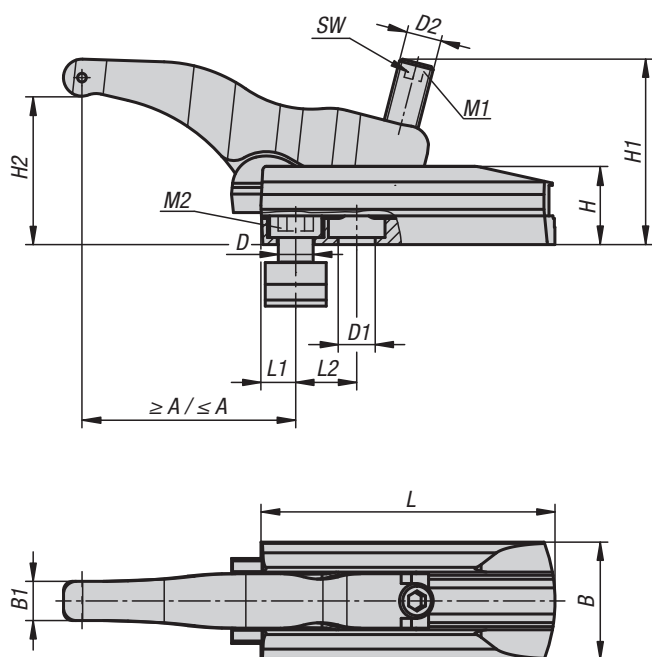
### Note:

"F" is dependent on the depth of the DIN 650 slot.

### KIPP Clamp strap assemblies, goose-neck

| Order No.  | L   | A  | A1 | B  | B1 | E1 | E2 | F     | G<br>for<br>T-slot | D       | D1  | M  | F<br>kN |
|------------|-----|----|----|----|----|----|----|-------|--------------------|---------|-----|----|---------|
| K1450.1010 | 100 | 15 | 30 | 30 | 15 | 32 | 32 | 22-46 | 10                 | M10x80  | M10 | 12 | 13,9    |
| K1450.1212 | 125 | 20 | 40 | 40 | 20 | 40 | 40 | 28-58 | 12                 | M12x100 | M12 | 16 | 20,2    |
| K1450.1214 | 125 | 20 | 40 | 40 | 20 | 40 | 40 | 28-56 | 14                 | M12x100 | M12 | 16 | 20,2    |
| K1450.1616 | 160 | 25 | 50 | 50 | 25 | 49 | 50 | 36-72 | 16                 | M16x125 | M16 | 20 | 37,8    |
| K1450.1618 | 160 | 25 | 50 | 50 | 25 | 49 | 50 | 36-69 | 18                 | M16x125 | M16 | 20 | 37,8    |
| K1450.2020 | 200 | 30 | 60 | 60 | 30 | 55 | 70 | 43-92 | 20                 | M20x160 | M20 | 24 | 58,8    |
| K1450.2022 | 200 | 30 | 60 | 60 | 30 | 55 | 70 | 43-92 | 22                 | M20x160 | M20 | 24 | 58,8    |

## Power clamp



### Material:

Carbon steel.

### Version:

Forged, black electro zinc-plated.

### Sample order:

K1205.112135

### Note:

We recommend using a lubricating paste to reduce wear to the adjustment screw.

Risers are available to increase the height of the power clamp.

Supplied with clamping element, support element, DIN 508 slot key and grade 12.9 bolt.

### Application:

The height of the clamping arm can be infinitely adjusted using the adjustment screw and the workpiece can then be clamped.

### Advantages:

- Very high retaining forces of 30–49 kN.
- Low height.
- Simple element assembly.
- Enables very fast, simple clamping.
- Infinitely adjustable height and length.
- Use in 14-28 mm T-slots or M12, M16, M20 grid systems.
- Thrust pad available in smooth and serrated versions.

### Accessories:

Raiser K1206

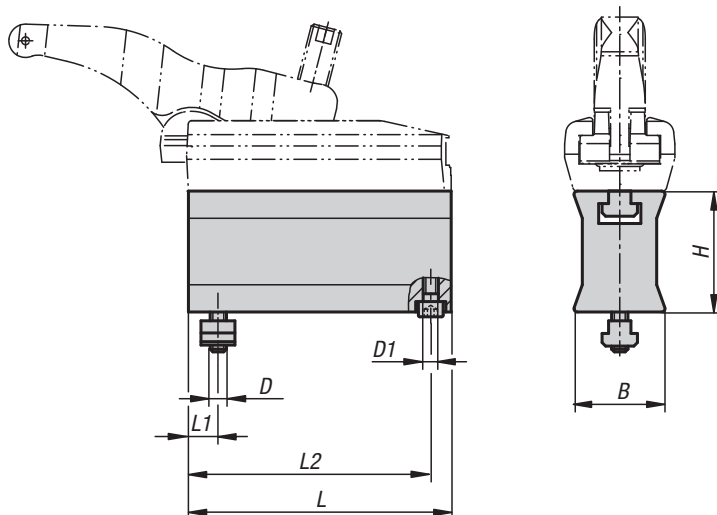
Thrust pads K1215

## KIPP Power clamp

| Order No.    | Version 1 | H2   | A min. | A max. | B  | B1 | Slot width | D   | D1 | D2  | H  | H1  | L   | L1 | L2 | SW | Clamping force kN | Tightening torque M1 Nm | Tightening torque M2 Nm |
|--------------|-----------|------|--------|--------|----|----|------------|-----|----|-----|----|-----|-----|----|----|----|-------------------|-------------------------|-------------------------|
| K1205.112135 | long      | 6-68 | 13     | 110    | 54 | 18 | 14         | M12 | 13 | M16 | 36 | 85  | 135 | 13 | 25 | 8  | 30                | 100                     | 70                      |
| K1205.116135 | long      | 6-68 | 16     | 114    | 54 | 18 | 18         | M16 | 17 | M16 | 36 | 85  | 135 | 16 | 28 | 8  | 30                | 100                     | 150                     |
| K1205.116155 | long      | 5-80 | 16     | 134    | 60 | 20 | 18         | M16 | 17 | M20 | 42 | 105 | 155 | 16 | 32 | 10 | 43                | 220                     | 150                     |
| K1205.120175 | long      | 7-88 | 19     | 165    | 75 | 25 | 22         | M20 | 21 | M24 | 52 | 125 | 175 | 19 | 36 | 12 | 49                | 220                     | 200                     |
| K1205.212095 | short     | 6-50 | 12     | 82     | 54 | 18 | 14         | M12 | 13 | M16 | 36 | 78  | 95  | 12 | 20 | 8  | 32                | 120                     | 70                      |
| K1205.216110 | short     | 6-50 | 15     | 95     | 60 | 20 | 18         | M16 | 17 | M20 | 42 | 92  | 110 | 15 | 26 | 10 | 40                | 150                     | 150                     |

## Risers

for power clamp



### Material:

Carbon steel.

### Version:

Forged, black electro zinc-plated.

### Sample order:

K1206.012060

### Application:

The raiser is positioned and fastened to the machine table, the power clamp is then screwed onto the raiser. By turning the adjustment screw on the power clamp, the height of the clamping arm can be infinitely adjusted and the workpiece clamped.

### Advantages:

- Other clamping heights can be achieved by mounting multiple risers one on the other.
- Infinite transition between clamping heights.
- Simple element assembly.
- For use in 14-28 mm T-slots or M12, M16, M20 grid systems.

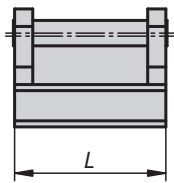
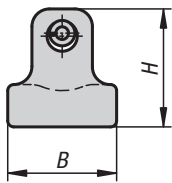
## KIPP Raiser for power clamp

| Order No.    | Version 2 | Slot width | B    | D   | D1  | H  | L   | L1 | L2  | Clamping force kN |
|--------------|-----------|------------|------|-----|-----|----|-----|----|-----|-------------------|
| K1206.012060 | long      | 14         | 45   | M12 | M8  | 60 | 135 | 12 | 127 | 30                |
| K1206.016070 | long      | 18         | 48   | M16 | M8  | 70 | 155 | 16 | 145 | 43                |
| K1206.020080 | long      | 22         | 58   | M20 | M10 | 80 | 175 | 19 | 165 | 49                |
| K1206.112060 | short     | 14         | 44,5 | M12 | M8  | 60 | 95  | 12 | 88  | 32                |
| K1206.116070 | short     | 18         | 47,5 | M16 | M8  | 70 | 110 | 16 | 100 | 40                |

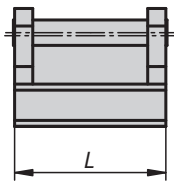
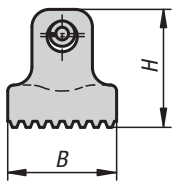
Thrust pads  
for power clamp



Ⓐ



Ⓑ



**Material:**  
Stainless steel

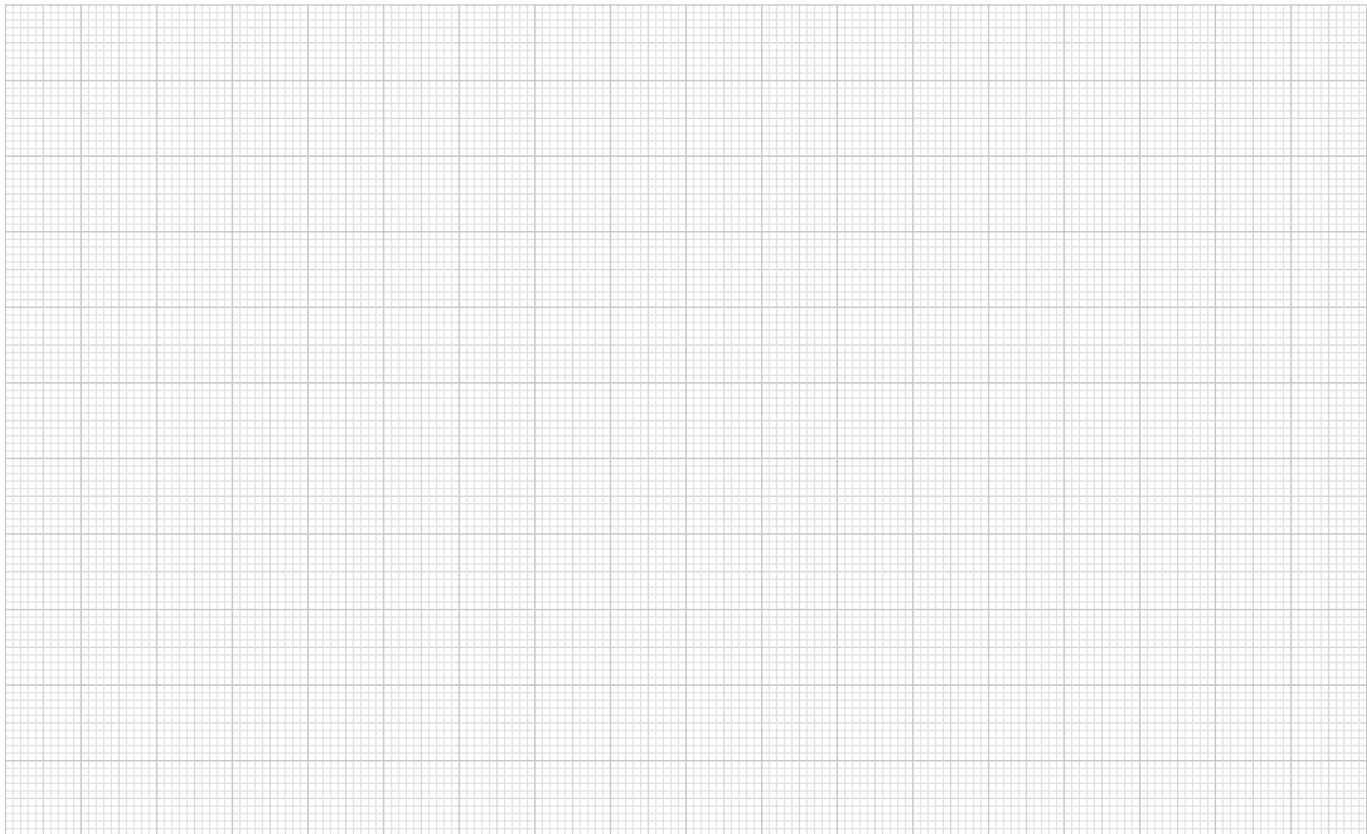
**Sample order:**  
K1215.025

**Note:**  
Power clamps can be fitted with serrated or smooth thrust pads.

KIPP Thrust pads for power clamp

| Order No.<br>Form A | Order No.<br>Form B | B  | H    | L  |
|---------------------|---------------------|----|------|----|
| K1215.025           | K1215.125           | 18 | 19,5 | 25 |
| K1215.030           | K1215.130           | 20 | 24   | 30 |
| K1215.036           | K1215.136           | 25 | 28   | 36 |

Notes



## Clamp straps

pin-end



### Material:

Carbon steel.

### Version:

Tempered and black oxidised.

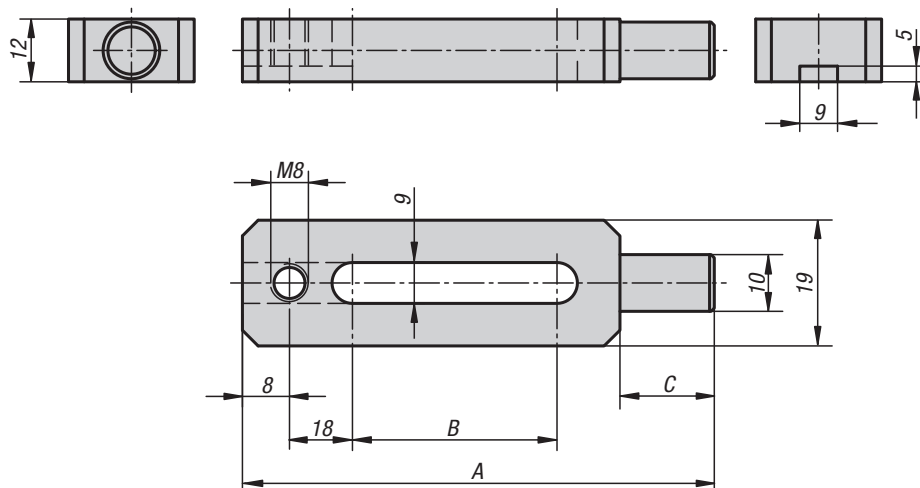
### Sample order:

K0834.08063

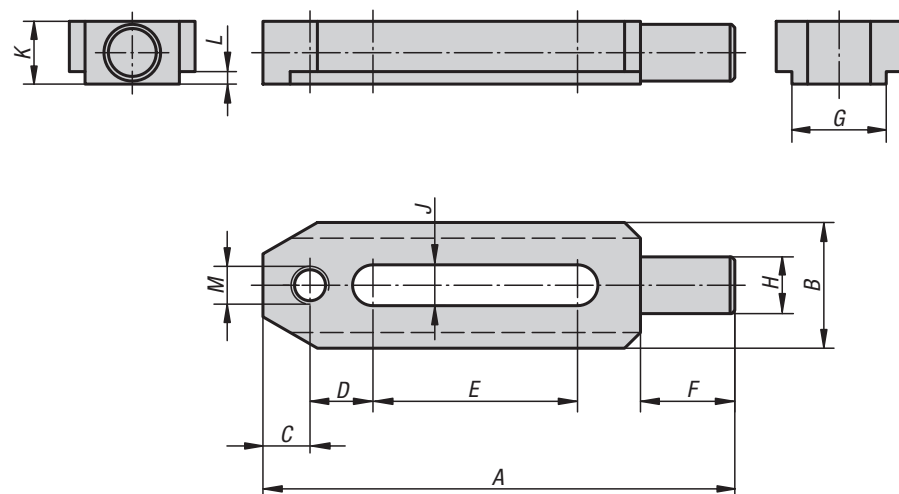
### Note:

Pin-end straps can be used in conjunction with other fixture elements, such as K0839, K0821, K0307.

(A)



(B)



### KIPP Pin-end straps Form A

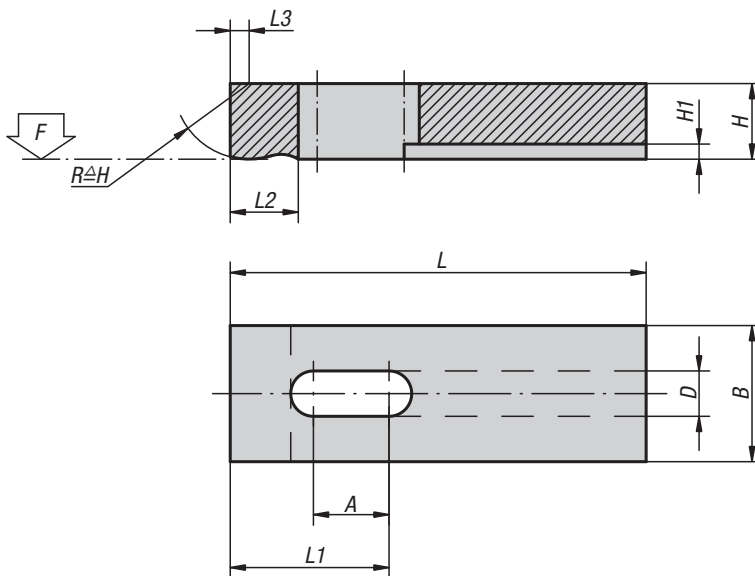
| Order No.   | A  | B  | C  |
|-------------|----|----|----|
| K0834.08063 | 63 | 15 | 14 |
| K0834.08075 | 75 | 20 | 20 |

### KIPP Pin-end straps Form B

| Order No.   | A   | B  | C  | D  | E  | F  | G  | H  | J  | K  | L | M   |
|-------------|-----|----|----|----|----|----|----|----|----|----|---|-----|
| K0834.12150 | 150 | 40 | 15 | 20 | 65 | 30 | 30 | 18 | 13 | 20 | 4 | M12 |
| K0834.16190 | 190 | 50 | 20 | 25 | 80 | 36 | 40 | 24 | 18 | 28 | 5 | M16 |

## Clamp straps

slotted heel



### Material:

Carbon steel 1.1191

### Version:

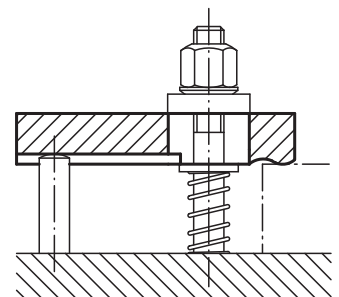
Black oxidised.

### Sample order:

K0001.101

### Note:

For suitable supports and adjustable rest pads, see K0305 and K0306.



### KIPP Clamp straps, slotted heel

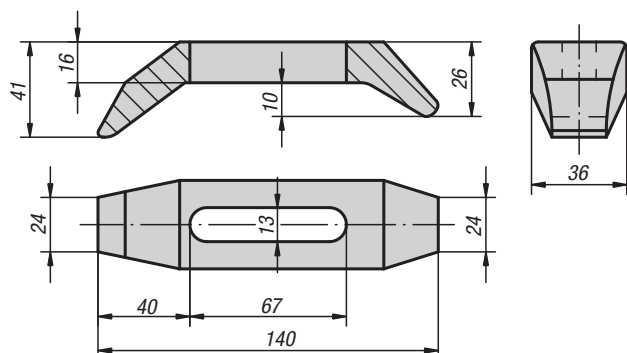
| Order No. | A  | B  | D   | H  | H1  | L   | L1 | L2 | L3  | F<br>kN |
|-----------|----|----|-----|----|-----|-----|----|----|-----|---------|
| K0001.05  | 8  | 12 | 5,5 | 8  | 3   | 32  | 14 | 8  | 1,2 | 3,42    |
| K0001.06  | 10 | 16 | 7   | 10 | 3   | 40  | 17 | 10 | 1,6 | 4,82    |
| K0001.08  | 12 | 20 | 9   | 12 | 4   | 50  | 22 | 12 | 2   | 8,77    |
| K0001.10  | 16 | 25 | 11  | 16 | 4,5 | 63  | 28 | 16 | 2,5 | 13,9    |
| K0001.12  | 20 | 32 | 14  | 20 | 5   | 80  | 35 | 20 | 3   | 20,2    |
| K0001.14  | 25 | 40 | 16  | 25 | 6   | 100 | 44 | 25 | 4   | 27,6    |
| K0001.16  | 42 | 50 | 18  | 30 | 6   | 160 | 73 | 32 | 5   | 37,8    |
| K0001.20  | 52 | 60 | 22  | 30 | 8   | 200 | 92 | 40 | 6   | 58,8    |
| K0001.051 | 13 | 12 | 5,5 | 8  | 3   | 50  | 23 | 8  | 1,2 | 3,42    |
| K0001.061 | 17 | 16 | 7   | 10 | 3   | 63  | 29 | 10 | 1,6 | 4,82    |
| K0001.081 | 21 | 20 | 9   | 12 | 4   | 80  | 37 | 12 | 2   | 8,77    |
| K0001.101 | 26 | 25 | 11  | 16 | 4,5 | 100 | 46 | 16 | 2,5 | 13,9    |
| K0001.121 | 33 | 32 | 14  | 20 | 5   | 125 | 58 | 20 | 3   | 20,2    |
| K0001.141 | 42 | 40 | 16  | 30 | 6   | 160 | 74 | 25 | 4   | 27,6    |

# Clamp straps

goose-neck



K0002.01 (0,5 kg)

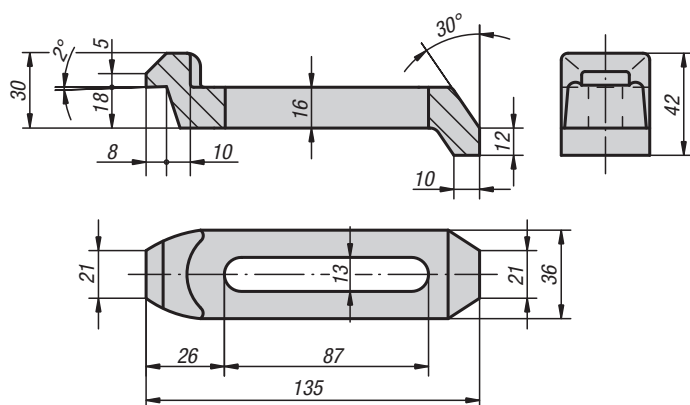


**Material:**  
Carbon steel 1.7225

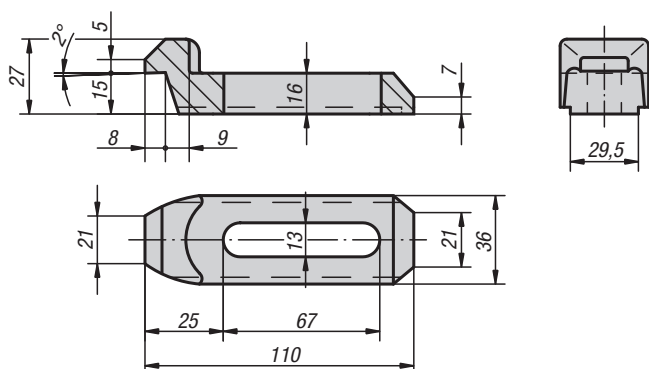
**Version:**  
Tempered to 1000 N/mm<sup>2</sup>, black oxidised.

**Sample order:**  
K0002.10

K0002.05 (0,48 kg)



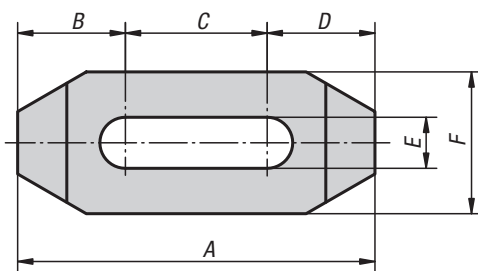
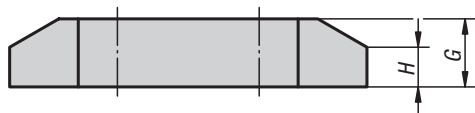
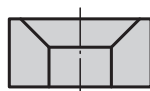
K0002.10 (0,35 kg)



## KIPP Clamp straps goose-neck

| Order No. | Item        |
|-----------|-------------|
| K0002.01  | Clamp Strap |
| K0002.05  | Clamp Strap |
| K0002.10  | Clamp Strap |

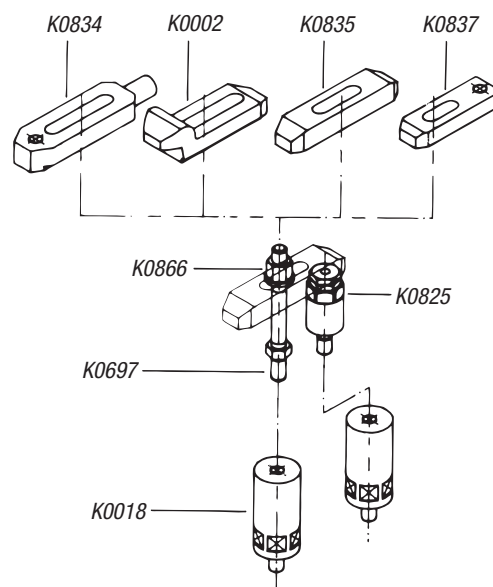
## Clamp straps



**Material:**  
Carbon steel.

**Version:**  
Tempered and black oxidised.

**Sample order:**  
K0835.08063



### KIPP Clamp straps

| Order No.   | A   | B    | C  | D    | E  | F  | G  | H  |
|-------------|-----|------|----|------|----|----|----|----|
| K0835.08063 | 63  | 19   | 25 | 19   | 9  | 25 | 12 | 7  |
| K0835.08080 | 80  | 24   | 32 | 24   | 9  | 25 | 12 | 7  |
| K0835.08100 | 100 | 30   | 40 | 30   | 9  | 25 | 16 | 10 |
| K0835.10063 | 63  | 19   | 25 | 19   | 11 | 25 | 12 | 7  |
| K0835.10080 | 80  | 24   | 32 | 24   | 11 | 25 | 16 | 10 |
| K0835.10100 | 100 | 30   | 40 | 30   | 11 | 25 | 16 | 10 |
| K0835.10125 | 125 | 40   | 45 | 40   | 11 | 32 | 19 | 13 |
| K0835.10160 | 160 | 55   | 50 | 55   | 11 | 32 | 19 | 13 |
| K0835.12063 | 63  | 19   | 25 | 19   | 13 | 32 | 16 | 10 |
| K0835.12080 | 80  | 24   | 32 | 24   | 13 | 32 | 16 | 10 |
| K0835.12100 | 100 | 30   | 40 | 30   | 13 | 32 | 19 | 13 |
| K0835.12125 | 125 | 40   | 45 | 40   | 13 | 32 | 19 | 13 |
| K0835.12160 | 160 | 55   | 50 | 55   | 13 | 32 | 25 | 15 |
| K0835.16080 | 80  | 27,5 | 25 | 27,5 | 17 | 32 | 16 | 10 |
| K0835.16100 | 100 | 34   | 32 | 34   | 17 | 38 | 19 | 13 |
| K0835.16125 | 125 | 42,5 | 40 | 42,5 | 17 | 38 | 19 | 13 |
| K0835.16160 | 160 | 55   | 50 | 55   | 17 | 38 | 25 | 15 |
| K0835.20100 | 100 | 34   | 32 | 34   | 21 | 38 | 19 | 13 |
| K0835.20125 | 125 | 42,5 | 40 | 42,5 | 21 | 38 | 25 | 15 |
| K0835.20160 | 160 | 55   | 50 | 55   | 21 | 38 | 25 | 15 |
| K0835.20200 | 200 | 68,5 | 63 | 68,5 | 21 | 50 | 25 | 15 |

## Clamp straps

tapped both ends



**Material:**

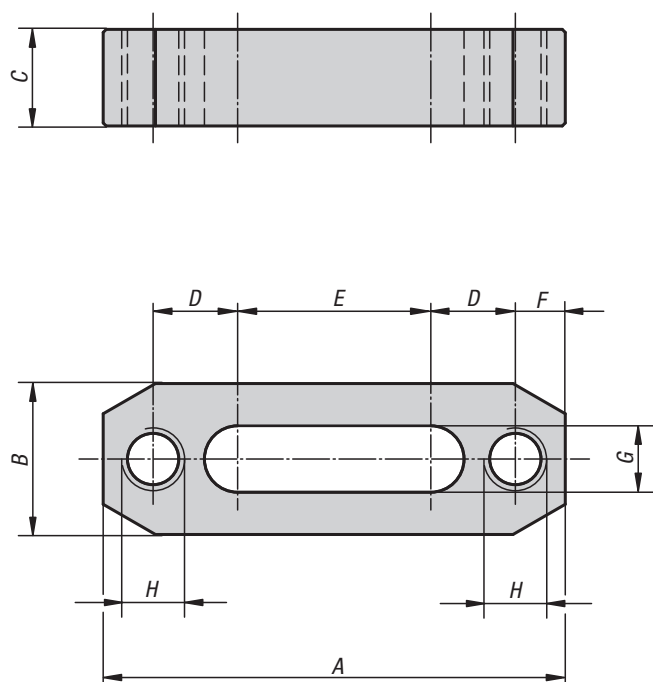
Carbon steel 1.0503.

**Version:**

Tempered and black oxidised.

**Sample order:**

K0836.08063

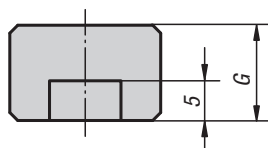
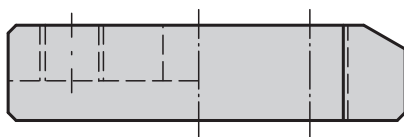


### KIPP Clamp straps, tapped both ends

| Order No.   | A   | B  | C  | D    | E  | F  | G  | H   | Clamping force<br>N | Tightening torque<br>max. Nm |
|-------------|-----|----|----|------|----|----|----|-----|---------------------|------------------------------|
| K0836.08063 | 63  | 25 | 12 | 12   | 25 | 7  | 9  | M8  | 6900                | 22                           |
| K0836.08080 | 80  | 25 | 12 | 17   | 32 | 7  | 9  | M8  | 6900                | 22                           |
| K0836.10080 | 80  | 25 | 16 | 14   | 32 | 10 | 11 | M10 | 11300               | 45                           |
| K0836.10100 | 100 | 25 | 16 | 20   | 40 | 10 | 11 | M10 | 11300               | 45                           |
| K0836.10125 | 125 | 25 | 16 | 30   | 45 | 10 | 11 | M10 | 11300               | 45                           |
| K0836.12100 | 100 | 32 | 19 | 20   | 40 | 10 | 13 | M12 | 16700               | 80                           |
| K0836.12125 | 125 | 32 | 19 | 30   | 45 | 10 | 13 | M12 | 16700               | 80                           |
| K0836.12160 | 160 | 32 | 22 | 45   | 50 | 10 | 13 | M12 | 16700               | 80                           |
| K0836.16125 | 125 | 38 | 19 | 30,5 | 40 | 12 | 17 | M16 | 18000               | 115                          |
| K0836.16160 | 160 | 38 | 22 | 43   | 50 | 12 | 17 | M16 | 18000               | 115                          |
| K0836.16200 | 200 | 38 | 25 | 58   | 60 | 12 | 17 | M16 | 20200               | 129                          |
| K0836.20125 | 125 | 38 | 22 | 27,5 | 40 | 15 | 21 | M20 | 19700               | 157                          |
| K0836.20160 | 160 | 38 | 22 | 40   | 50 | 15 | 21 | M20 | 19700               | 157                          |
| K0836.20200 | 200 | 50 | 25 | 55   | 60 | 15 | 21 | M20 | 22900               | 183                          |

## Clamp straps

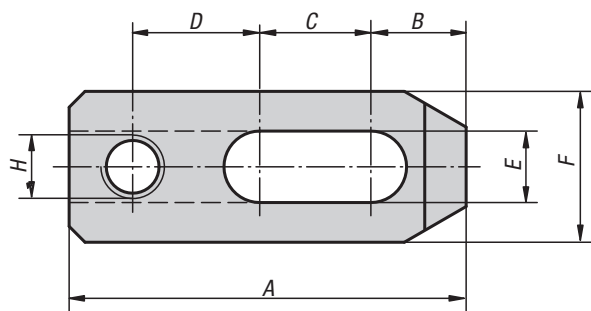
tapped heel



**Material:**  
Carbon steel.

**Version:**  
Tempered and black oxidised.

**Sample order:**  
K0837.08040

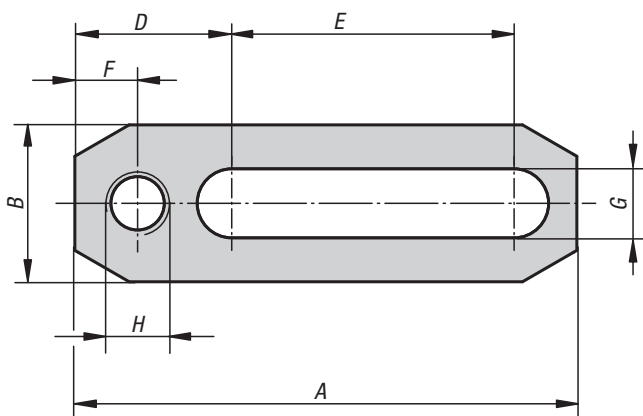
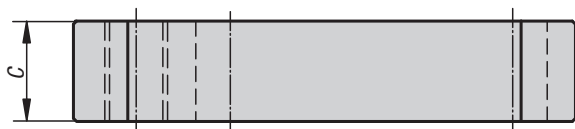
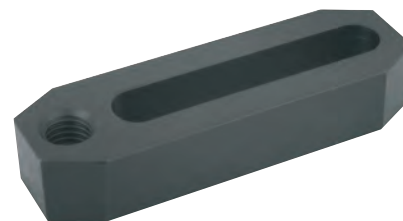


### KIPP Clamp straps, tapped heel

| Order No.   | A   | B  | C  | D  | E  | F  | G  | H   |
|-------------|-----|----|----|----|----|----|----|-----|
| K0837.08040 | 40  | 10 | 6  | 16 | 9  | 19 | 12 | M8  |
| K0837.08050 | 50  | 12 | 14 | 16 | 9  | 19 | 12 | M8  |
| K0837.08063 | 63  | 12 | 27 | 16 | 9  | 19 | 12 | M8  |
| K0837.10050 | 50  | 12 | 8  | 20 | 11 | 25 | 12 | M10 |
| K0837.10063 | 63  | 15 | 18 | 20 | 11 | 25 | 12 | M10 |
| K0837.10080 | 80  | 15 | 32 | 23 | 11 | 25 | 16 | M10 |
| K0837.10100 | 100 | 15 | 40 | 35 | 11 | 25 | 16 | M10 |
| K0837.10125 | 125 | 15 | 50 | 50 | 11 | 25 | 16 | M10 |
| K0837.12063 | 63  | 14 | 14 | 24 | 13 | 32 | 16 | M12 |
| K0837.12080 | 80  | 20 | 25 | 24 | 13 | 32 | 16 | M12 |
| K0837.12100 | 100 | 20 | 40 | 29 | 13 | 32 | 19 | M12 |
| K0837.12125 | 125 | 20 | 50 | 44 | 13 | 32 | 19 | M12 |
| K0837.12160 | 160 | 20 | 60 | 69 | 13 | 32 | 19 | M12 |
| K0837.16080 | 80  | 18 | 17 | 30 | 17 | 38 | 19 | M16 |
| K0837.16100 | 100 | 25 | 30 | 30 | 17 | 38 | 25 | M16 |
| K0837.16125 | 125 | 25 | 45 | 40 | 17 | 38 | 25 | M16 |
| K0837.16160 | 160 | 25 | 65 | 55 | 17 | 38 | 25 | M16 |
| K0837.20160 | 160 | 32 | 60 | 52 | 21 | 50 | 25 | M20 |
| K0837.20200 | 200 | 32 | 80 | 72 | 21 | 50 | 25 | M20 |

## Clamp straps

tapped heel



### Material:

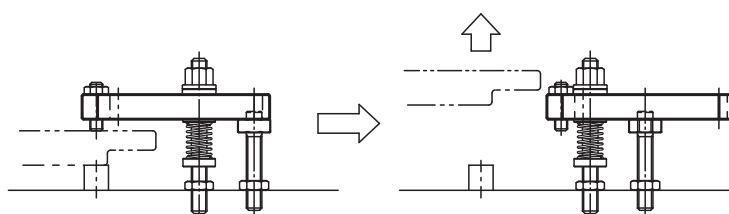
Carbon steel 1.0503.

### Version:

Tempered and black oxidised.

### Sample order:

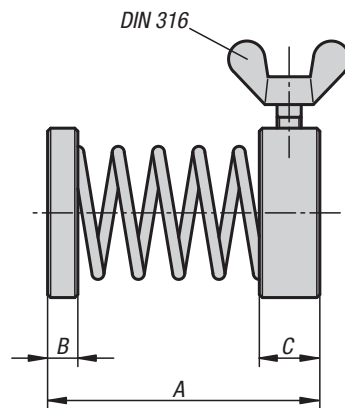
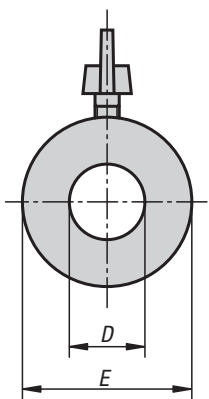
K0838.08063



### KIPP Clamp straps, tapped heel

| Order No.   | A   | B  | C  | D  | E   | F  | G  | H   | Clamping force<br>N | Tightening torque<br>max. Nm |
|-------------|-----|----|----|----|-----|----|----|-----|---------------------|------------------------------|
| K0838.08063 | 63  | 19 | 12 | 19 | 36  | 7  | 9  | M8  | 3200-8000           | 17                           |
| K0838.08080 | 80  | 19 | 12 | 19 | 53  | 7  | 9  | M8  | 3500-8600           | 17                           |
| K0838.10080 | 80  | 25 | 16 | 25 | 45  | 10 | 11 | M10 | 6800-16900          | 45                           |
| K0838.10100 | 100 | 25 | 16 | 25 | 65  | 10 | 11 | M10 | 7300-18300          | 45                           |
| K0838.10125 | 125 | 25 | 16 | 25 | 90  | 10 | 11 | M10 | 7700-19300          | 45                           |
| K0838.12100 | 100 | 32 | 19 | 28 | 60  | 10 | 13 | M12 | 10200-25600         | 80                           |
| K0838.12125 | 125 | 32 | 19 | 28 | 85  | 10 | 13 | M12 | 11000-27500         | 80                           |
| K0838.12160 | 160 | 32 | 19 | 28 | 120 | 10 | 13 | M12 | 11600-29000         | 80                           |
| K0838.16125 | 125 | 38 | 25 | 36 | 73  | 12 | 17 | M16 | 12100-30300         | 129                          |
| K0838.16160 | 160 | 38 | 25 | 36 | 108 | 12 | 17 | M16 | 13200-33000         | 129                          |
| K0838.16200 | 200 | 38 | 25 | 36 | 148 | 12 | 17 | M16 | 13900-34700         | 129                          |
| K0838.20160 | 160 | 50 | 25 | 45 | 90  | 15 | 21 | M20 | 15000-36000         | 183                          |
| K0838.20200 | 200 | 50 | 32 | 45 | 130 | 15 | 21 | M20 | 16000-37000         | 183                          |
| K0838.20250 | 250 | 50 | 32 | 45 | 180 | 15 | 21 | M20 | 17000-38000         | 183                          |

## Clamp springs

**Material:**

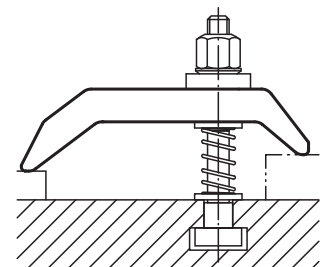
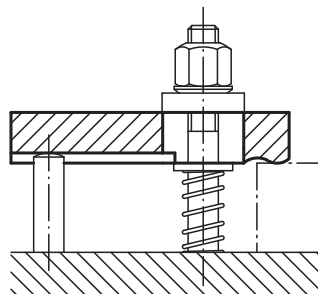
Thrust and retaining ring carbon steel.  
Spring, spring steel.

**Version:**

Thrust and retaining ring black oxidised.  
Spring bright.

**Sample order:**

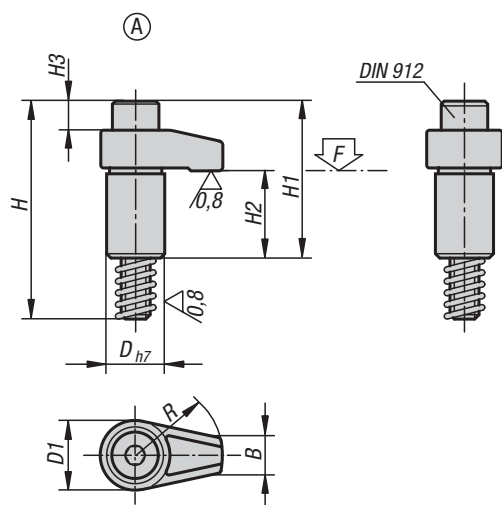
K0859.12046

**KIPP Clamp springs**

| Order No.   | A  | B | C | D    | E  | Wing nuts to<br>DIN 316 |
|-------------|----|---|---|------|----|-------------------------|
| K0859.08029 | 29 | 2 | 6 | 8,5  | 16 | M4x6                    |
| K0859.12046 | 46 | 3 | 8 | 13   | 25 | M4x10                   |
| K0859.16050 | 50 | 4 | 8 | 16,5 | 28 | M5x10                   |

## Hook clamps ground

Form A/B/C

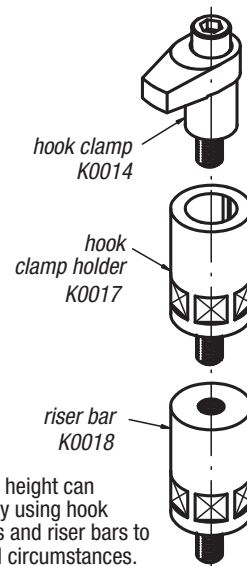
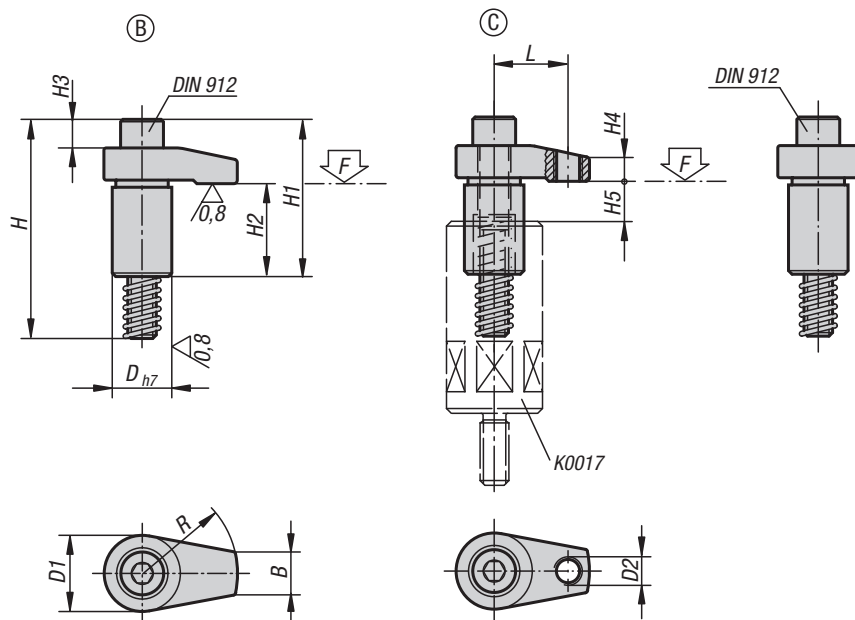


**Material:**  
Carbon steel, tempered.

**Version:**  
Black oxidised. Shaft OD ground.

**Sample order:**  
K0014.216040

**Note:**  
The stated clamping forces (F max.) and tightening torques are valid within the stated clamping ranges (H5).



The clamping height can be adjusted by using hook clamp holders and riser bars to suit individual circumstances.

### KIPP Hook clamps, ground, Form A/B/C

| Order No.    | Form | D  | D1 | D2  | H   | H1 | H2 | H3 | H4 | H5<br>max.<br>clamping range | B  | L  | R  | Socket<br>head screw<br>DIN 912 | Tightening<br>torque<br>max. Nm | F<br>max. kN |
|--------------|------|----|----|-----|-----|----|----|----|----|------------------------------|----|----|----|---------------------------------|---------------------------------|--------------|
| K0014.110030 | A    | 20 | 25 | -   | 75  | 54 | 30 | 9  | 10 | 12                           | 12 | -  | 30 | M10x65                          | 37,2                            | 13           |
| K0014.110040 | A    | 20 | 25 | -   | 75  | 54 | 30 | 9  | 10 | 12                           | 12 | -  | 40 | M10x65                          | 31,4                            | 9,8          |
| K0014.208020 | B    | 18 | 22 | -   | 58  | 37 | 23 | 2  | 7  | 10                           | 10 | -  | 20 | M8x50                           | 37,2                            | 13,6         |
| K0014.208025 | B    | 18 | 22 | -   | 58  | 37 | 23 | 2  | 7  | 10                           | 10 | -  | 25 | M8x50                           | 32,3                            | 10,9         |
| K0014.208030 | B    | 18 | 22 | -   | 58  | 37 | 23 | 2  | 7  | 10                           | 10 | -  | 30 | M8x50                           | 29,4                            | 9            |
| K0014.212040 | B    | 25 | 32 | -   | 92  | 66 | 39 | 11 | 12 | 15                           | 18 | -  | 40 | M12x80                          | 58,8                            | 17,5         |
| K0014.212050 | B    | 25 | 32 | -   | 92  | 68 | 39 | 11 | 12 | 15                           | 18 | -  | 50 | M12x80                          | 49                              | 14           |
| K0014.212060 | B    | 25 | 32 | -   | 92  | 68 | 39 | 11 | 12 | 15                           | 18 | -  | 60 | M12x80                          | 45,1                            | 11,6         |
| K0014.216040 | B    | 32 | 36 | -   | 101 | 75 | 39 | 15 | 15 | 15                           | 22 | -  | 40 | M16x85                          | 166,6                           | 37,9         |
| K0014.216050 | B    | 32 | 36 | -   | 101 | 75 | 39 | 15 | 15 | 15                           | 22 | -  | 50 | M16x85                          | 147                             | 30,4         |
| K0014.216060 | B    | 32 | 36 | -   | 101 | 75 | 39 | 15 | 15 | 15                           | 22 | -  | 60 | M16x85                          | 127,4                           | 25,2         |
| K0014.312140 | C    | 25 | 32 | M12 | 92  | 66 | 39 | 11 | 10 | 15                           | 18 | 31 | 40 | M12x80                          | 58,8                            | 22,6         |
| K0014.312150 | C    | 25 | 32 | M12 | 92  | 68 | 39 | 11 | 13 | 15                           | 18 | 38 | 50 | M12x80                          | 49                              | 18,5         |
| K0014.312160 | C    | 25 | 32 | M12 | 92  | 68 | 39 | 11 | 13 | 15                           | 18 | 46 | 60 | M12x80                          | 45,1                            | 15,2         |
| K0014.316150 | C    | 32 | 36 | M12 | 101 | 75 | 39 | 15 | 16 | 15                           | 22 | 38 | 50 | M16x85                          | 147                             | 38           |
| K0014.316160 | C    | 32 | 36 | M12 | 101 | 75 | 39 | 15 | 16 | 15                           | 22 | 46 | 60 | M16x85                          | 127,4                           | 33           |

## Hook clamp holders

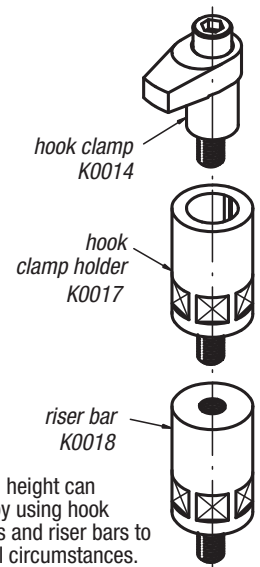
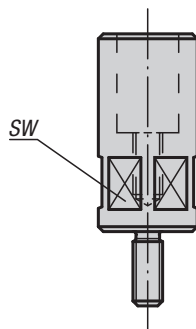
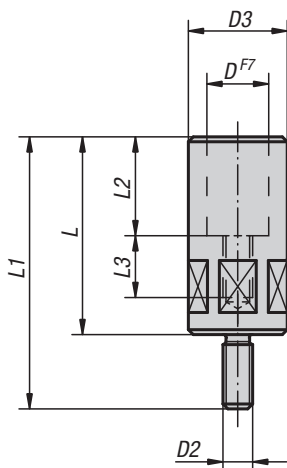


**Material:**  
Carbon steel.

**Version:**  
Black oxidised.

**Sample order:**  
K0017.12080

**Note:**  
Hook clamp holders are for holding and raising hook clamps.



The clamping height can be adjusted by using hook clamp holders and riser bars to suit individual circumstances.

### KIPP Hook clamp holders

| Order No.   | D  | D1  | D2  | D3 | L   | L1  | L2 | L3 | SW | Tightening torque max. Nm |
|-------------|----|-----|-----|----|-----|-----|----|----|----|---------------------------|
| K0017.08055 | 18 | M8  | M8  | 24 | 55  | 74  | 25 | 20 | 22 | 29,4                      |
| K0017.10063 | 20 | M10 | M12 | 32 | 63  | 93  | 30 | 21 | 30 | 39,2                      |
| K0017.10080 | 20 | M10 | M12 | 32 | 80  | 110 | 30 | 23 | 30 | 39,2                      |
| K0017.12080 | 25 | M12 | M12 | 40 | 80  | 110 | 40 | 25 | 36 | 49                        |
| K0017.12100 | 25 | M12 | M12 | 40 | 100 | 130 | 40 | 28 | 36 | 49                        |
| K0017.16080 | 32 | M16 | M16 | 50 | 80  | 110 | 40 | 25 | 46 | 78,4                      |
| K0017.16100 | 32 | M16 | M16 | 50 | 100 | 130 | 40 | 28 | 46 | 78,4                      |

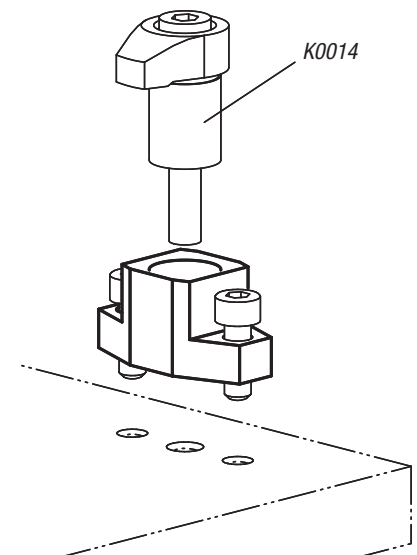
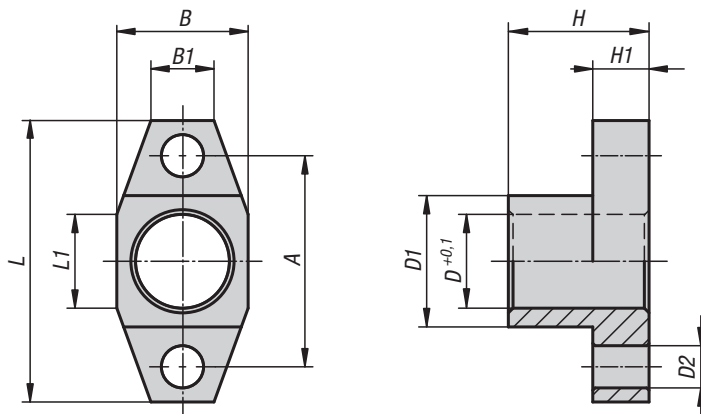
## Hook clamp holders



**Material:**  
Carbon steel 1.0503.

**Version:**  
Black oxidised.

**Sample order:**  
K0851.08025

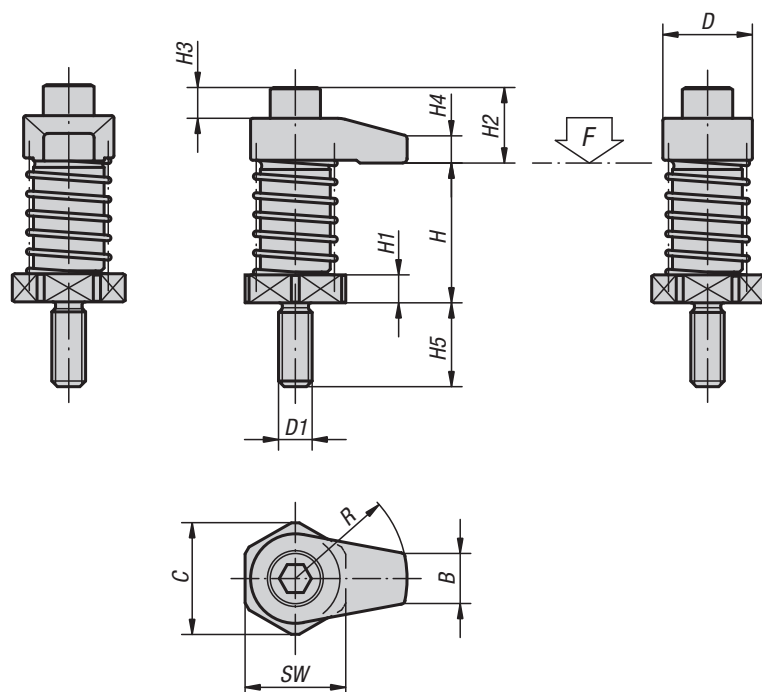


### KIPP Hook clamp holders

| Order No.   | A  | B  | B1   | D  | D1 | D2   | H  | H1 | L  | L1 |
|-------------|----|----|------|----|----|------|----|----|----|----|
| K0851.08025 | 38 | 24 | 11,3 | 18 | 24 | 6,6  | 25 | 10 | 50 | 15 |
| K0851.10030 | 45 | 28 | 13,4 | 20 | 28 | 9    | 30 | 12 | 60 | 20 |
| K0851.12040 | 55 | 35 | 15   | 25 | 35 | 11   | 40 | 14 | 75 | 20 |
| K0851.16040 | 65 | 42 | 20,2 | 32 | 42 | 13,5 | 40 | 16 | 85 | 25 |

# Hook clamps

with collar



## Material:

Hook clamps and hook clamp holders carbon steel, tempered.

## Version:

Black oxidised.

## Sample order:

K0015.12060

## Note:

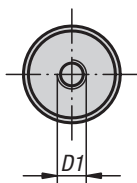
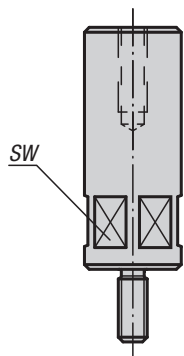
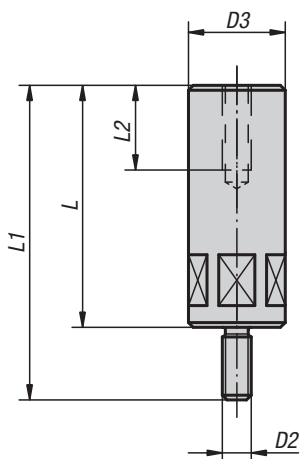
Hook clamps with collar can be screwed directly into grid holes etc. without counterbore.

For suitable riser elements, see riser bars K0018.

## KIPP Hook clamps with collar

| Order No.   | D  | D1  | H<br>clamping range | H1 | H2 | H3 | H4 | H5 | B  | C  | R  | SW | Tightening<br>torque<br>max. Nm | F<br>max. kN |
|-------------|----|-----|---------------------|----|----|----|----|----|----|----|----|----|---------------------------------|--------------|
| K0015.08020 | 22 | M8  | 35 - 45             | 6  | 14 | 2  | 7  | 19 | 10 | 25 | 20 | 22 | 20                              | 7,9          |
| K0015.08025 | 22 | M8  | 35 - 45             | 6  | 14 | 2  | 7  | 19 | 10 | 25 | 25 | 22 | 20                              | 7,3          |
| K0015.08030 | 22 | M8  | 35 - 45             | 6  | 14 | 2  | 7  | 19 | 10 | 25 | 30 | 22 | 20                              | 6,7          |
| K0015.08120 | 22 | M8  | 45 - 55             | 16 | 14 | 2  | 7  | 19 | 10 | 25 | 20 | 22 | 20                              | 7,9          |
| K0015.08125 | 22 | M8  | 45 - 55             | 16 | 14 | 2  | 7  | 19 | 10 | 25 | 25 | 22 | 20                              | 7,3          |
| K0015.08130 | 22 | M8  | 45 - 55             | 16 | 14 | 2  | 7  | 19 | 10 | 25 | 30 | 22 | 20                              | 6,7          |
| K0015.12040 | 32 | M12 | 50 - 65             | 10 | 27 | 11 | 10 | 30 | 18 | 40 | 40 | 36 | 45                              | 13,5         |
| K0015.12050 | 32 | M12 | 50 - 65             | 10 | 29 | 11 | 12 | 30 | 18 | 40 | 50 | 36 | 45                              | 12,6         |
| K0015.12060 | 32 | M12 | 50 - 65             | 10 | 29 | 11 | 12 | 30 | 18 | 40 | 60 | 36 | 45                              | 11,7         |
| K0015.12140 | 32 | M12 | 65 - 80             | 25 | 27 | 11 | 10 | 30 | 18 | 40 | 40 | 36 | 45                              | 13,5         |
| K0015.12150 | 32 | M12 | 65 - 80             | 25 | 29 | 11 | 12 | 30 | 18 | 40 | 50 | 36 | 45                              | 12,6         |
| K0015.12160 | 32 | M12 | 65 - 80             | 25 | 29 | 11 | 12 | 30 | 18 | 40 | 60 | 36 | 45                              | 11,7         |
| K0015.16040 | 36 | M16 | 50 - 65             | 10 | 36 | 15 | 15 | 30 | 22 | 40 | 40 | 36 | 60                              | 13,4         |
| K0015.16050 | 36 | M16 | 50 - 65             | 10 | 36 | 15 | 15 | 30 | 22 | 40 | 50 | 36 | 60                              | 12,4         |
| K0015.16060 | 36 | M16 | 50 - 65             | 10 | 36 | 15 | 15 | 30 | 22 | 40 | 60 | 36 | 60                              | 12           |
| K0015.16140 | 36 | M16 | 65 - 80             | 25 | 36 | 15 | 15 | 30 | 22 | 40 | 40 | 36 | 60                              | 13,4         |
| K0015.16150 | 36 | M16 | 65 - 80             | 25 | 36 | 15 | 15 | 30 | 22 | 40 | 50 | 36 | 60                              | 12,4         |
| K0015.16160 | 36 | M16 | 65 - 80             | 25 | 36 | 15 | 15 | 30 | 22 | 40 | 60 | 36 | 60                              | 12           |

## Riser bars

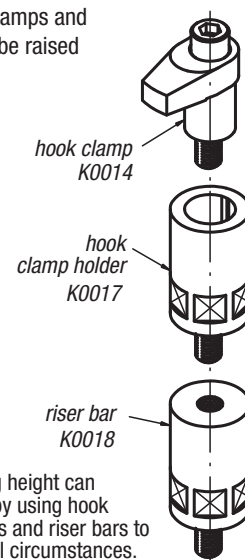


**Material:**  
Carbon steel.

**Version:**  
Black oxidised.

**Sample order:**  
K0018.16050

**Note:**  
The height of the hook clamps and hook clamp holders can be raised using these riser bars.



The clamping height can be adjusted by using hook clamp holders and riser bars to suit individual circumstances.

### KIPP Riser bars

| Order No.   | D1  | D2  | D3 | L   | L1  | L2 | SW | Tightening torque max. Nm |
|-------------|-----|-----|----|-----|-----|----|----|---------------------------|
| K0018.08032 | M8  | M8  | 24 | 32  | 51  | 20 | 22 | 29,4                      |
| K0018.08040 | M8  | M8  | 24 | 40  | 59  | 20 | 22 | 29,4                      |
| K0018.08050 | M8  | M8  | 24 | 50  | 69  | 20 | 22 | 29,4                      |
| K0018.08065 | M8  | M8  | 24 | 65  | 84  | 20 | 22 | 29,4                      |
| K0018.12050 | M12 | M12 | 40 | 50  | 80  | 35 | 36 | 49                        |
| K0018.12065 | M12 | M12 | 40 | 65  | 95  | 35 | 36 | 49                        |
| K0018.12080 | M12 | M12 | 40 | 80  | 110 | 35 | 36 | 49                        |
| K0018.12100 | M12 | M12 | 40 | 100 | 130 | 35 | 36 | 49                        |
| K0018.12125 | M12 | M12 | 40 | 125 | 155 | 35 | 36 | 49                        |
| K0018.12160 | M12 | M12 | 40 | 160 | 190 | 35 | 36 | 49                        |
| K0018.12200 | M12 | M12 | 40 | 200 | 230 | 35 | 36 | 49                        |
| K0018.16050 | M16 | M16 | 50 | 50  | 80  | 35 | 46 | 78,4                      |
| K0018.16065 | M16 | M16 | 50 | 65  | 95  | 35 | 46 | 78,4                      |
| K0018.16080 | M16 | M16 | 50 | 80  | 110 | 35 | 46 | 78,4                      |
| K0018.16100 | M16 | M16 | 50 | 100 | 130 | 35 | 46 | 78,4                      |
| K0018.16125 | M16 | M16 | 50 | 125 | 155 | 35 | 46 | 78,4                      |
| K0018.16160 | M16 | M16 | 60 | 160 | 190 | 35 | 55 | 78,4                      |
| K0018.16200 | M16 | M16 | 60 | 200 | 230 | 35 | 55 | 78,4                      |

## Hook clamps

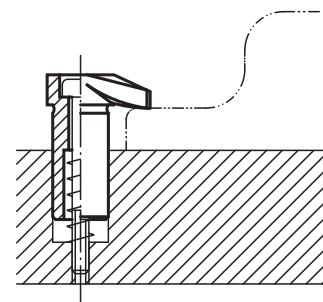
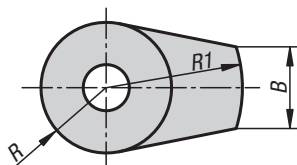
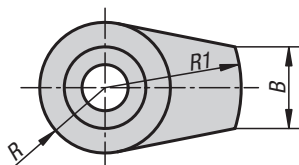
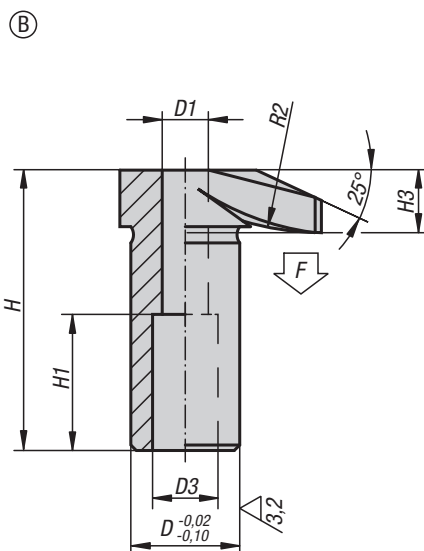
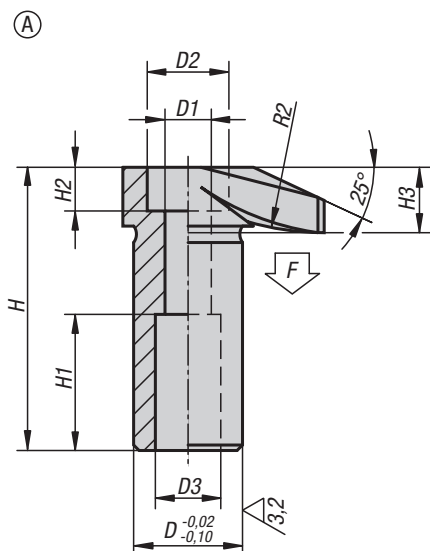


**Material:**  
Carbon steel, tempered.

**Version:**  
Black oxidised.

**Sample order:**  
K0012.10

**Accessories:**  
Springs K1554 and socket head screws K0869.



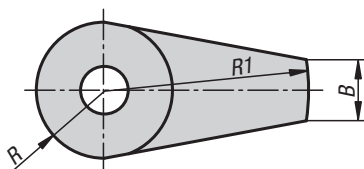
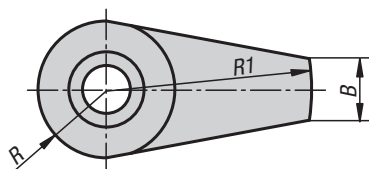
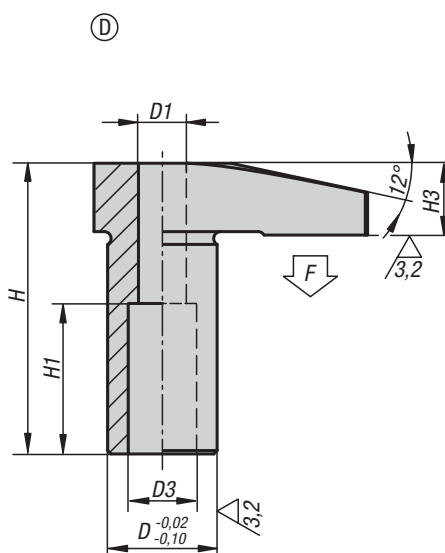
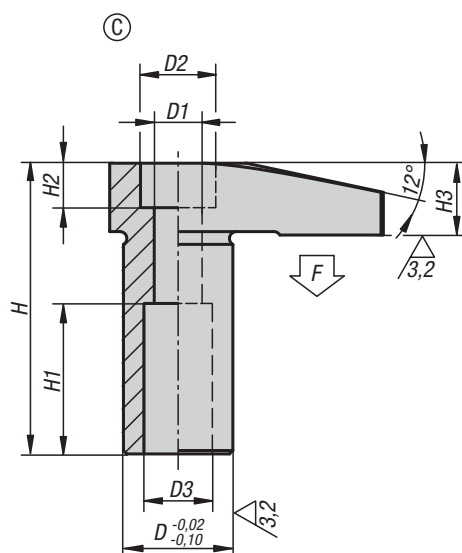
### KIPP Hook clamps

| Order No. | Form | D  | D1   | D2 | D3 | H  | H1 | H2 | H3 | B  | R  | R1 | R2 | F<br>max. kN |
|-----------|------|----|------|----|----|----|----|----|----|----|----|----|----|--------------|
| K0012.06  | A    | 16 | 6,5  | 11 | 10 | 42 | 20 | 6  | 10 | 11 | 9  | 20 | 30 | 4,8          |
| K0012.08  | A    | 20 | 8,5  | 15 | 12 | 52 | 25 | 8  | 12 | 15 | 12 | 25 | 50 | 8,8          |
| K0012.10  | A    | 25 | 10,5 | 18 | 14 | 66 | 32 | 10 | 16 | 17 | 14 | 32 | 60 | 13,9         |
| K0012.12  | A    | 32 | 12,5 | 20 | 17 | 83 | 40 | 12 | 20 | 20 | 18 | 40 | 80 | 20,2         |

| Order No. | Form | D  | D1   | D3 | H    | H1 | H3   | B  | R  | R1 | R2 | F<br>max. kN |
|-----------|------|----|------|----|------|----|------|----|----|----|----|--------------|
| K0012.106 | B    | 16 | 6,5  | 10 | 41,5 | 20 | 9,5  | 11 | 9  | 20 | 30 | 4,8          |
| K0012.108 | B    | 20 | 8,5  | 12 | 51,5 | 25 | 11,5 | 15 | 12 | 25 | 50 | 8,8          |
| K0012.110 | B    | 25 | 10,5 | 14 | 65,5 | 32 | 15,5 | 17 | 14 | 32 | 60 | 13,9         |
| K0012.112 | B    | 32 | 12,5 | 17 | 82,5 | 40 | 19,5 | 20 | 18 | 40 | 80 | 20,2         |

## Hook clamps

with long hook



**Material:**  
Carbon steel, tempered.

**Version:**  
Black oxidised.

**Sample order:**  
K0012.406

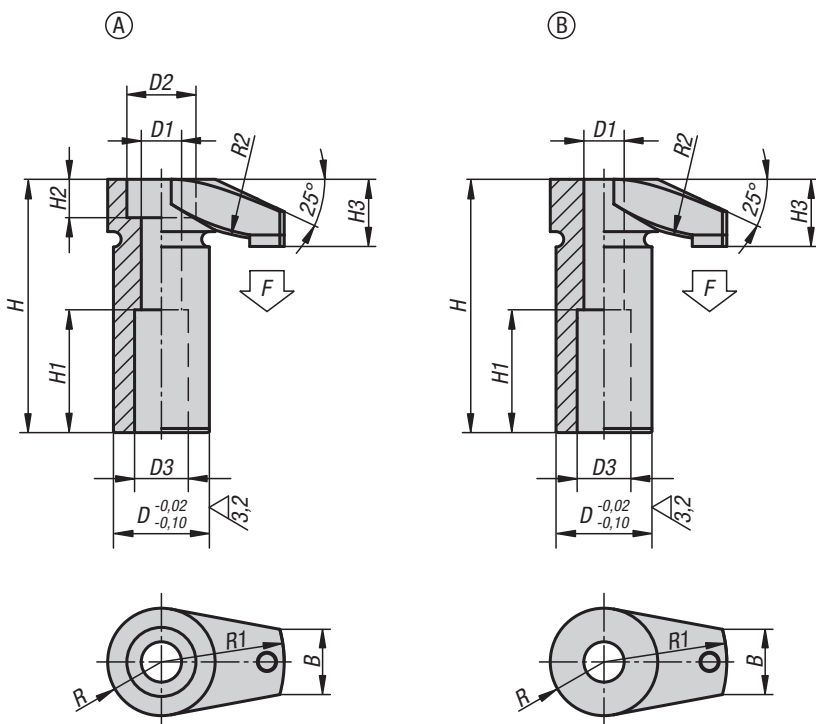
### KIPP Hook clamps with long hook

| Order No. | Form | B  | D  | D1   | D2 | D3 | H    | H1 | H2 | H3   | R    | R1 | F<br>max. kN |
|-----------|------|----|----|------|----|----|------|----|----|------|------|----|--------------|
| K0012.406 | C    | 9  | 16 | 7    | 11 | 10 | 42,5 | 22 | 6  | 10,5 | 10   | 30 | 4,5          |
| K0012.408 | C    | 12 | 20 | 8,6  | 15 | 12 | 52,5 | 25 | 8  | 12,5 | 12,5 | 40 | 6,5          |
| K0012.410 | C    | 18 | 25 | 10,6 | 18 | 14 | 66,5 | 32 | 10 | 16,5 | 16   | 50 | 11,8         |

| Order No. | Form | B  | D  | D1   | D3 | H    | H1 | H3   | R    | R1 | F<br>max. kN |
|-----------|------|----|----|------|----|------|----|------|------|----|--------------|
| K0012.506 | D    | 9  | 16 | 7    | 10 | 42,5 | 22 | 10,5 | 10   | 30 | 4,5          |
| K0012.508 | D    | 12 | 20 | 8,6  | 12 | 52,5 | 25 | 12,5 | 12,5 | 40 | 6,5          |
| K0012.510 | D    | 18 | 25 | 10,6 | 14 | 66,5 | 32 | 16,5 | 16   | 50 | 11,8         |

## Hook clamps

with soft pad



### Material:

Carbon steel.

Soft pad POM or polyurethane 99 Shore A.

### Version:

Tempered and black oxidised.

### Sample order:

K0012.206

### Note:

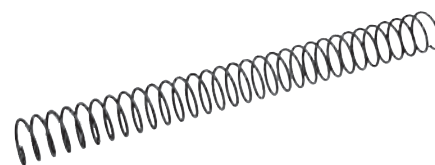
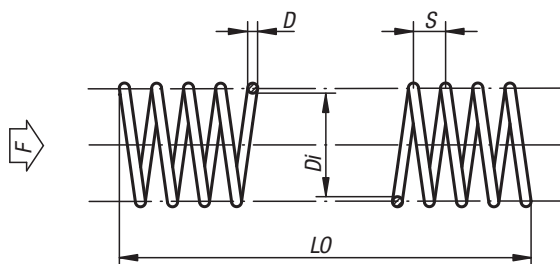
The pressed in plastic inserts offer optimal damage protection for sensitive workpiece faces.

## KIPP Hook clamps with soft pad

| Order No.  | Form | Component material | D  | D1   | D2 | D3 | H    | H1 | H2 | H3   | B  | R  | R1 | R2 | F max. kN |
|------------|------|--------------------|----|------|----|----|------|----|----|------|----|----|----|----|-----------|
| K0012.206  | A    | polyacetal         | 16 | 6,5  | 11 | 10 | 42   | 20 | 6  | 10,5 | 11 | 9  | 20 | 30 | 4,8       |
| K0012.208  | A    | polyacetal         | 20 | 8,5  | 15 | 12 | 52   | 25 | 8  | 13,5 | 15 | 12 | 25 | 50 | 8,8       |
| K0012.210  | A    | polyacetal         | 25 | 10,5 | 18 | 14 | 66   | 32 | 10 | 17,5 | 17 | 14 | 32 | 60 | 11,6      |
| K0012.212  | A    | polyacetal         | 32 | 12,5 | 20 | 17 | 83   | 40 | 12 | 21   | 20 | 18 | 40 | 80 | 18,8      |
| K0012.2106 | B    | polyacetal         | 16 | 6,5  | -  | 10 | 41,5 | 20 | -  | 10   | 11 | 9  | 20 | 30 | 4,8       |
| K0012.2108 | B    | polyacetal         | 20 | 8,5  | -  | 12 | 51,5 | 25 | -  | 13   | 15 | 12 | 25 | 50 | 8,8       |
| K0012.2110 | B    | polyacetal         | 25 | 10,5 | -  | 14 | 65,5 | 32 | -  | 17   | 17 | 14 | 32 | 60 | 11,6      |
| K0012.2112 | B    | polyacetal         | 32 | 12,5 | -  | 17 | 82,5 | 40 | -  | 21   | 20 | 18 | 40 | 80 | 18,8      |
| K0012.306  | A    | polyurethane       | 16 | 6,5  | 11 | 10 | 42   | 20 | 6  | 10,5 | 11 | 9  | 20 | 30 | 4,8       |
| K0012.308  | A    | polyurethane       | 20 | 8,5  | 15 | 12 | 52   | 25 | 8  | 13,5 | 15 | 12 | 25 | 50 | 8,8       |
| K0012.310  | A    | polyurethane       | 25 | 10,5 | 18 | 14 | 66   | 32 | 10 | 17,5 | 17 | 14 | 32 | 60 | 11,6      |
| K0012.312  | A    | polyurethane       | 32 | 12,5 | 20 | 17 | 83   | 40 | 12 | 21   | 20 | 18 | 40 | 80 | 18,8      |
| K0012.3106 | B    | polyurethane       | 16 | 6,5  | -  | 10 | 41,5 | 20 | -  | 10   | 11 | 9  | 20 | 30 | 4,8       |
| K0012.3108 | B    | polyurethane       | 20 | 8,5  | -  | 12 | 51,5 | 25 | -  | 13   | 15 | 12 | 25 | 50 | 8,8       |
| K0012.3110 | B    | polyurethane       | 25 | 10,5 | -  | 14 | 65,5 | 32 | -  | 17   | 17 | 14 | 32 | 60 | 11,6      |
| K0012.3112 | B    | polyurethane       | 32 | 12,5 | -  | 17 | 82,5 | 40 | -  | 21   | 20 | 18 | 40 | 80 | 18,8      |

## Springs

for clamp straps



**Material:**

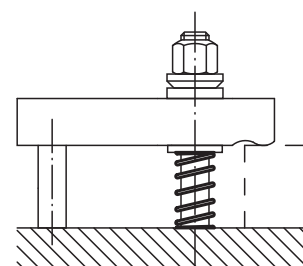
Spring steel wire EN 10270-1-DH.

**Sample order:**

K1554.12

**Note:**

Springs are only available in 400 mm lengths.



### KIPP Springs for clamp straps

| Order No. | D   | Di   | LO  | S | Spring force<br>F approx. N | Compression<br>factor under f |
|-----------|-----|------|-----|---|-----------------------------|-------------------------------|
| K1554.06  | 1   | 6,5  | 400 | 3 | 32                          | 1,3                           |
| K1554.08  | 1   | 8,5  | 400 | 4 | 25                          | 2,1                           |
| K1554.10  | 1,2 | 10,5 | 400 | 4 | 35                          | 2,7                           |
| K1554.12  | 1,4 | 12,5 | 400 | 5 | 47                          | 3,3                           |
| K1554.14  | 1,5 | 14,5 | 400 | 6 | 50                          | 4                             |
| K1554.16  | 1,6 | 16,5 | 400 | 7 | 53                          | 4,8                           |
| K1554.18  | 1,8 | 18,5 | 400 | 7 | 68                          | 5,4                           |
| K1554.20  | 1,8 | 20,5 | 400 | 8 | 62                          | 6,5                           |
| K1554.24  | 2   | 25   | 400 | 9 | 70                          | 8,6                           |

## Hook clamps

with collar



**Material:**

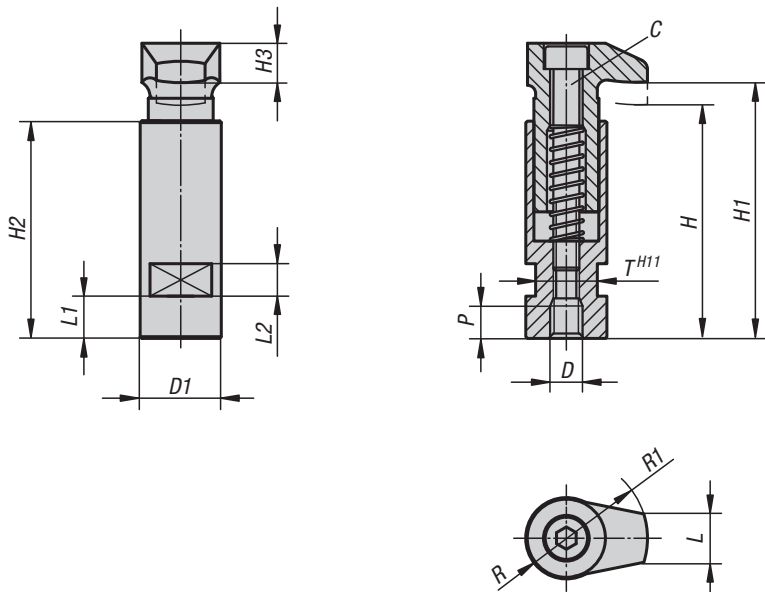
Carbon steel.

**Version:**

Tempered and black oxidised.

**Sample order:**

K0013.06

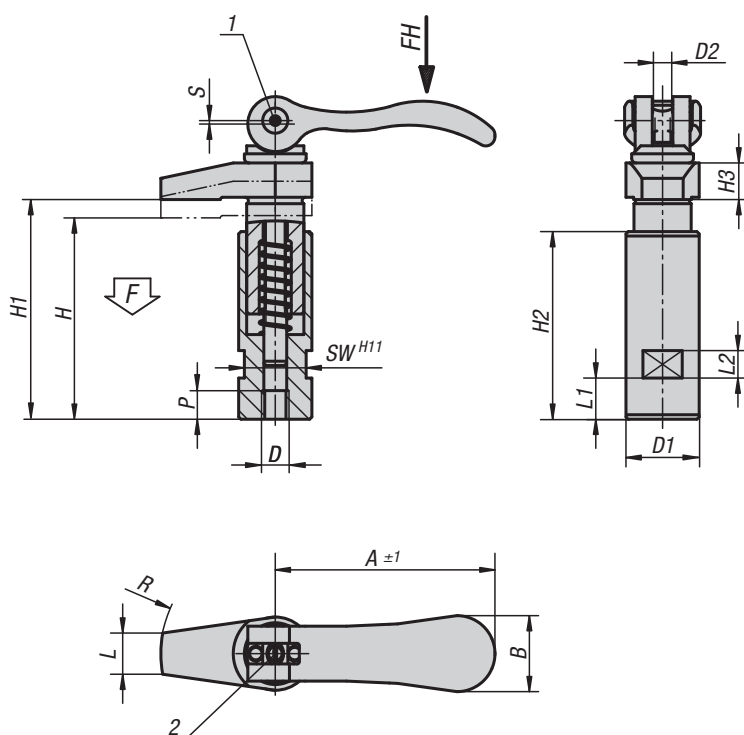


### KIPP Hook clamps with collar

| Order No. | C   | D   | D1 | H   | H1  | H2  | H3 | L  | L1 | L2 | P  | R  | R1 | T  | Clamping force<br>kN |
|-----------|-----|-----|----|-----|-----|-----|----|----|----|----|----|----|----|----|----------------------|
| K0013.06  | M6  | M6  | 20 | 56  | 60  | 53  | 10 | 11 | 9  | 8  | 8  | 9  | 20 | 17 | 4,82                 |
| K0013.08  | M6  | M8  | 20 | 56  | 60  | 53  | 10 | 11 | 9  | 8  | 8  | 9  | 20 | 17 | 8,77                 |
| K0013.10  | M8  | M10 | 25 | 72  | 79  | 67  | 12 | 15 | 13 | 10 | 10 | 12 | 25 | 19 | 13,9                 |
| K0013.12  | M10 | M12 | 32 | 88  | 96  | 82  | 16 | 17 | 18 | 12 | 12 | 14 | 32 | 27 | 20,2                 |
| K0013.16  | M12 | M16 | 40 | 109 | 118 | 102 | 20 | 20 | 22 | 12 | 16 | 18 | 40 | 32 | 37,8                 |

## Hook clamps

with collar and cam lever



### Material:

Body and hook, high-carbon steel.  
Handles, cast aluminium EN AC-46200.  
Thrust washer, fibreglass reinforced plastic PA 66 GF 35-X.  
Hinge pin, stud and washer stainless steel 1.4305.

### Version:

Body and hook tempered and black oxidised.  
Handles, black powder-coated.  
Thrust washer black.  
Hinge pin, stud and washer bright.

### Sample order:

K0013.106

### Note:

Ideal for clamping where the parts are to be inserted from above as the hook can be swivelled out of the way.

The exact clamping height is set by the fine thread on the stud using a screwdriver. This setting can be secured with the locking screw. The length S corresponds to the cam travel.

### Drawing reference:

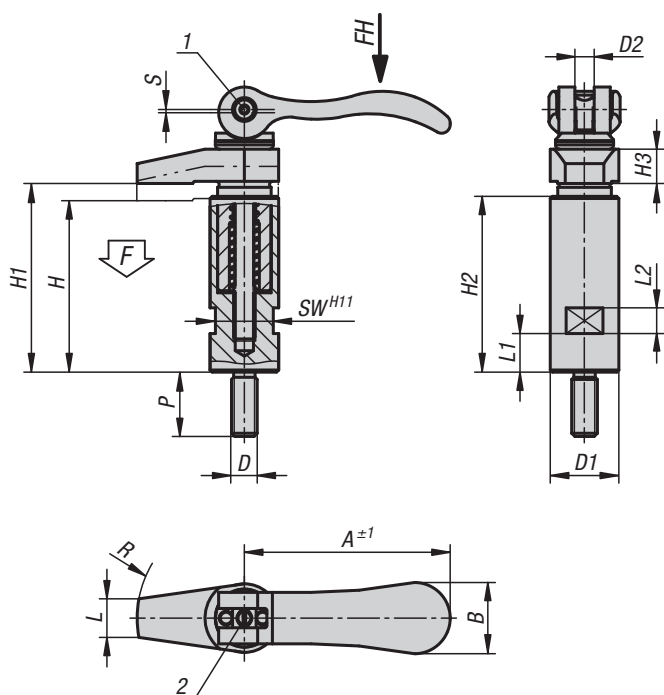
- 1) Locking screw for pin
- 2) Screw for fine adjustment of lever

## KIPP Hook clamps with collar and cam lever

| Order No. | D   | D1 | D2      | H  | H1 | H2 | H3 | L  | L1 | L2 | A    | B    | P  | R  | SW | Travel S | F kN | Hand force FH N |
|-----------|-----|----|---------|----|----|----|----|----|----|----|------|------|----|----|----|----------|------|-----------------|
| K0013.106 | M6  | 20 | M6x0,5  | 56 | 60 | 53 | 10 | 9  | 9  | 8  | 70,4 | 21,5 | 8  | 30 | 17 | 1,2      | 4    | 120             |
| K0013.108 | M8  | 20 | M6x0,5  | 56 | 60 | 53 | 10 | 9  | 9  | 8  | 70,4 | 21,5 | 8  | 30 | 17 | 1,2      | 4    | 120             |
| K0013.110 | M10 | 25 | M8x0,75 | 72 | 79 | 67 | 12 | 12 | 13 | 10 | 96   | 33,3 | 10 | 40 | 19 | 1,5      | 8    | 350             |
| K0013.112 | M12 | 32 | M8x0,75 | 88 | 96 | 82 | 15 | 18 | 18 | 12 | 96   | 33,3 | 12 | 50 | 27 | 1,5      | 8    | 350             |

## Hook clamps

with collar and cam lever



### Material:

Body and hook, high-carbon steel.  
Handles, cast aluminium EN AC-46200.  
Thrust washer, fibreglass reinforced plastic PA 66 GF 35-X.  
Hinge pin, stud and washer stainless steel 1.4305.

### Version:

Body and hook tempered and black oxidised.  
Handles, black powder-coated.  
Thrust washer black.  
Hinge pin, stud and washer bright.

### Sample order:

K0013.208

### Note:

Ideal for clamping where the parts are to be inserted from above as the hook can be swivelled out of the way.

The exact clamping height is set by the fine thread on the stud using a screwdriver. This setting can be secured with the locking screw. The length S corresponds to the cam travel.

### Drawing reference:

- 1) Locking screw for pin
- 2) Screw for fine adjustment of lever

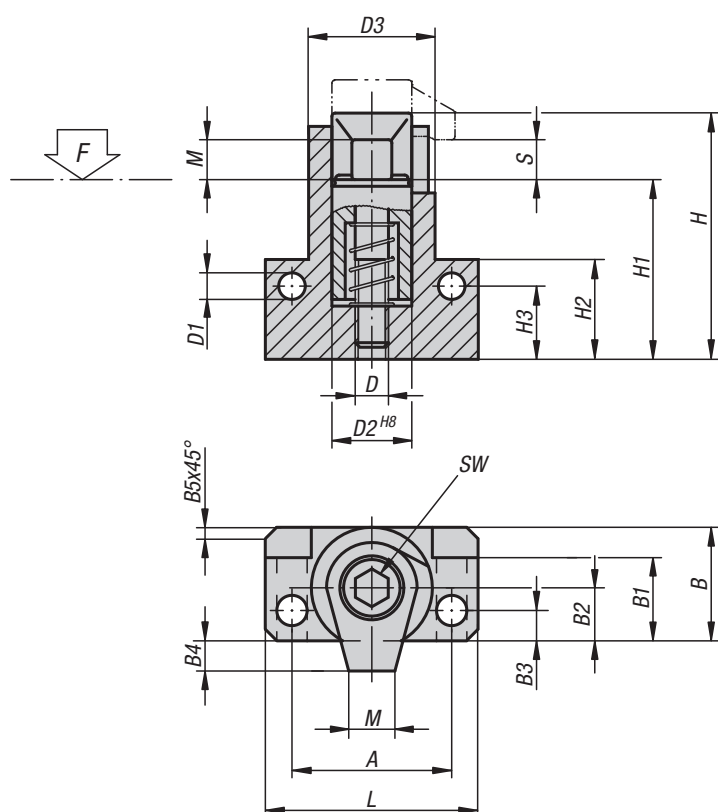
## KIPP Hook clamps with collar and cam lever

| Order No. | D   | D1 | D2      | H  | H1 | H2 | H3 | L  | L1 | L2 | A    | B    | P  | R  | SW | Travel S | F kN | Hand force FH N |
|-----------|-----|----|---------|----|----|----|----|----|----|----|------|------|----|----|----|----------|------|-----------------|
| K0013.206 | M6  | 20 | M6x0,5  | 56 | 60 | 53 | 10 | 9  | 9  | 8  | 70,4 | 21,5 | 20 | 30 | 17 | 1,2      | 4    | 120             |
| K0013.208 | M8  | 20 | M6x0,5  | 56 | 60 | 53 | 10 | 9  | 9  | 8  | 70,4 | 21,5 | 20 | 30 | 17 | 1,2      | 4    | 120             |
| K0013.210 | M10 | 25 | M8x0,75 | 72 | 79 | 67 | 12 | 12 | 13 | 10 | 96   | 33,3 | 25 | 40 | 19 | 1,5      | 8    | 350             |
| K0013.212 | M12 | 32 | M8x0,75 | 88 | 96 | 82 | 18 | 18 | 18 | 12 | 96   | 33,3 | 30 | 50 | 27 | 1,5      | 8    | 350             |



A large rectangular area filled with a light gray grid pattern, intended for taking notes.

## Hook clamps with mounting bracket



### Material:

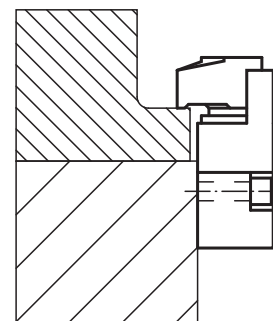
Hook clamps and clamping screw carbon steel, tempered.

### Version:

Black oxidised.

### Sample order:

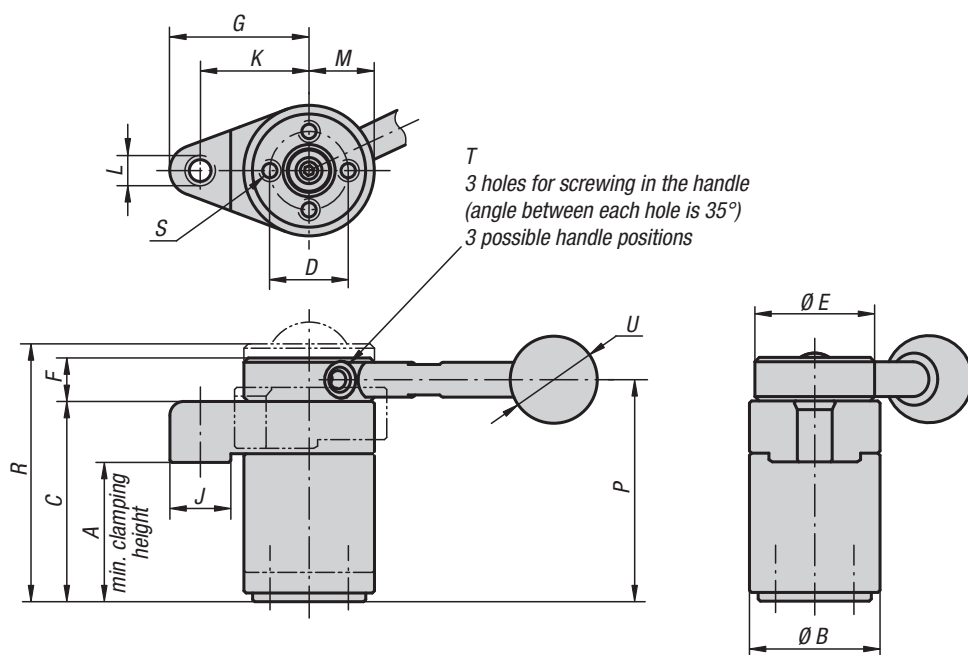
K0016.12



## KIPP Hook clamps with mounting bracket

| Order No. | D   | D1   | D2 | D3 | A  | B    | B1   | B2   | B3  | B4   | B5  | H   | H1   | H2 | H3 | L  | M  | S | SW | Tightening torque max. Nm | F max. kN |
|-----------|-----|------|----|----|----|------|------|------|-----|------|-----|-----|------|----|----|----|----|---|----|---------------------------|-----------|
| K0016.08  | M8  | 6,4  | 20 | 28 | 38 | 26   | 19,5 | 12   | 6   | 6    | 2,5 | 62  | 47,5 | 25 | 18 | 50 | 10 | 4 | 6  | 30                        | 17        |
| K0016.10  | M10 | 8,4  | 24 | 34 | 48 | 31   | 22,5 | 14   | 7,5 | 9    | 3   | 74  | 57,5 | 30 | 21 | 64 | 12 | 5 | 8  | 50                        | 18        |
| K0016.12  | M12 | 10,5 | 28 | 40 | 55 | 36,5 | 26   | 16,5 | 9   | 10,5 | 3,5 | 87  | 67   | 35 | 24 | 75 | 15 | 5 | 10 | 60                        | 20        |
| K0016.16  | M16 | 12,8 | 34 | 48 | 65 | 43,5 | 31   | 19,5 | 10  | 16,5 | 4   | 112 | 87   | 45 | 32 | 88 | 20 | 5 | 14 | 120                       | 24        |

## Swing clamps



### Material:

Carbon steel.  
Ball knob plastic.

### Version:

Tempered and black oxidised.  
Ball knob thermoset PF 31, black.

### Sample order:

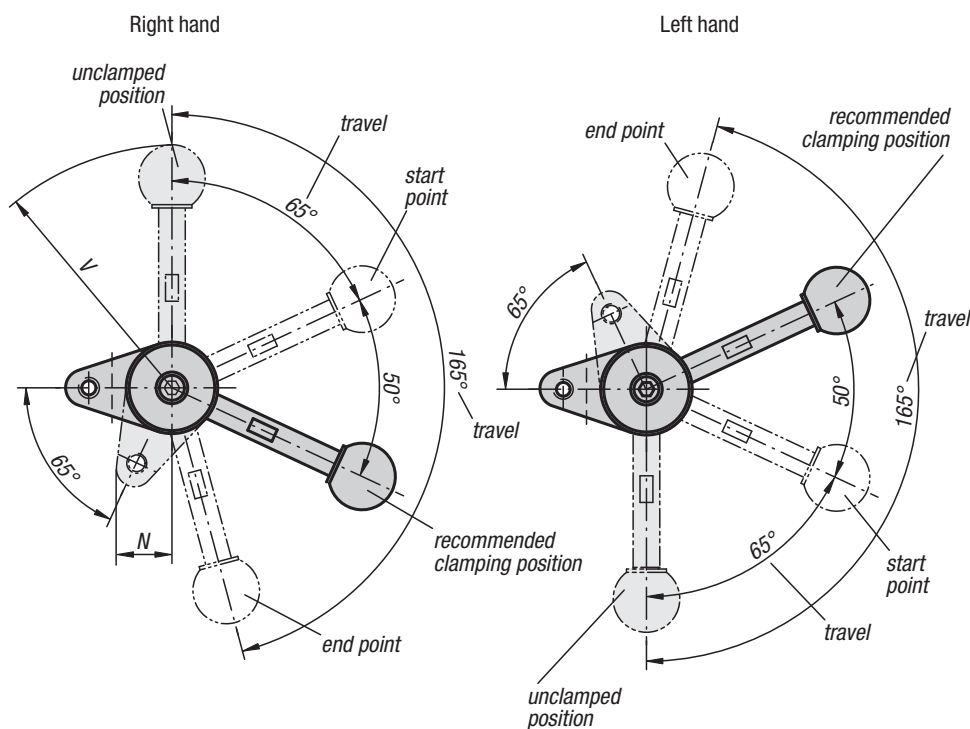
K0912.013232

### Note:

\* Admissible hand force to operate the handle.

### Accessories:

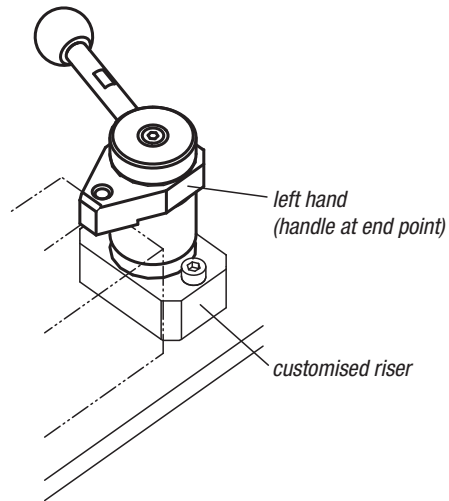
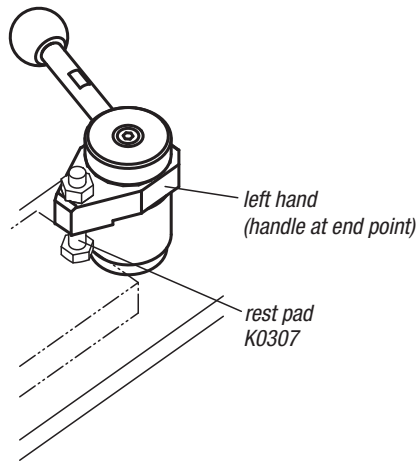
Standard handles K0915.  
Screw-in handles with adjustable torque K0916.  
Clamping arm for swing clamp K0912.03006010 and K0912.04007516.



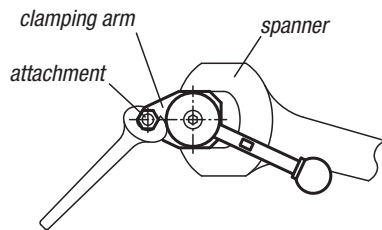
## KIPP Swing clamps

| Order No.<br>left | Order No.<br>right | Grip        | A<br>min. | A<br>max. | B  | C  | D  | E  | F  | G  | J  | K  | L  | M  | N    | P    | R    | S     | T  | U  | V   | F=retaining force<br>N | Hand<br>force<br>FH N |
|-------------------|--------------------|-------------|-----------|-----------|----|----|----|----|----|----|----|----|----|----|------|------|------|-------|----|----|-----|------------------------|-----------------------|
| K0912.003232      | K0912.103232       | without     | 31,4      | 32,6      | 30 | 46 | 18 | 30 | 10 | 32 | 14 | 25 | M6 | 15 | 17   | 51   | 57,5 | M4x8  | M5 | -  | -   | 800                    | 150*                  |
| K0912.004540      | K0912.104540       | without     | 44,1      | 45,9      | 40 | 63 | 25 | 38 | 13 | 40 | 16 | 32 | M8 | 20 | 22,5 | 69,5 | 78,1 | M6x12 | M6 | -  | -   | 1200                   | 200*                  |
| K0912.013232      | K0912.113232       | with handle | 31,4      | 32,6      | 30 | 46 | 18 | 30 | 10 | 32 | 14 | 25 | M6 | 15 | 17   | 51   | 57,5 | M4x8  | M5 | 20 | 73  | 800                    | 150*                  |
| K0912.014540      | K0912.114540       | with handle | 44,1      | 45,9      | 40 | 63 | 25 | 38 | 13 | 40 | 16 | 32 | M8 | 20 | 22,5 | 69,5 | 78,1 | M6x12 | M6 | 25 | 107 | 1200                   | 200*                  |

# Technical Information for swing clamps

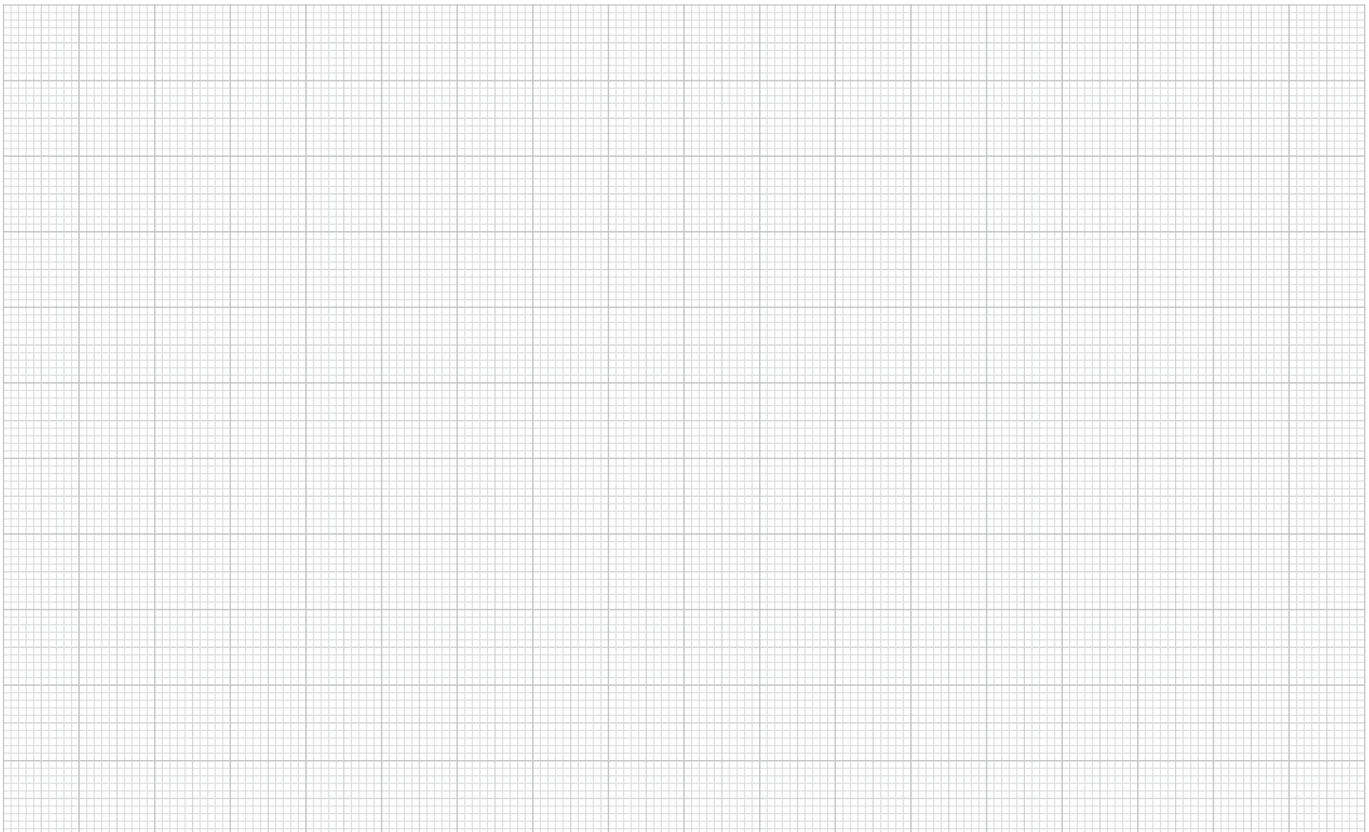


## Mounting an attachment



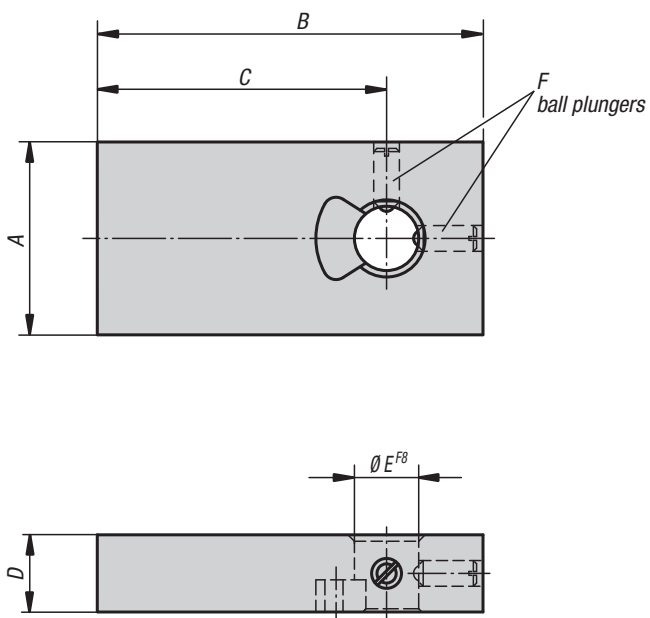
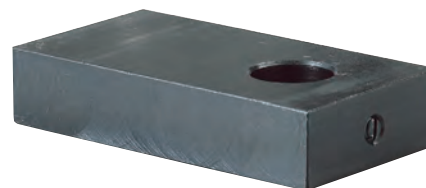
When mounting an attachment on the clamping arm, use a spanner to lock the arm and prevent it from turning.

## Notes



## Clamping arms

for swing clamp

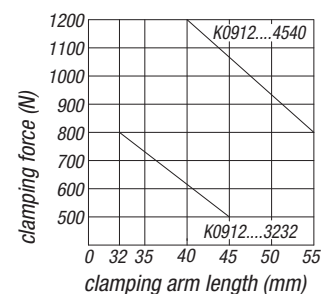


**Material:**  
Carbon steel.

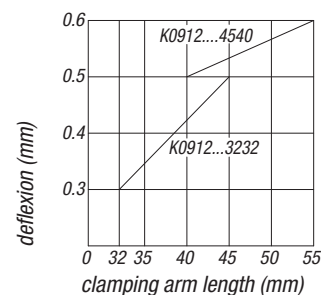
**Version:**  
Black oxidised.

**Sample order:**  
K0912.03006010

clamping arm length C vs. clamping force



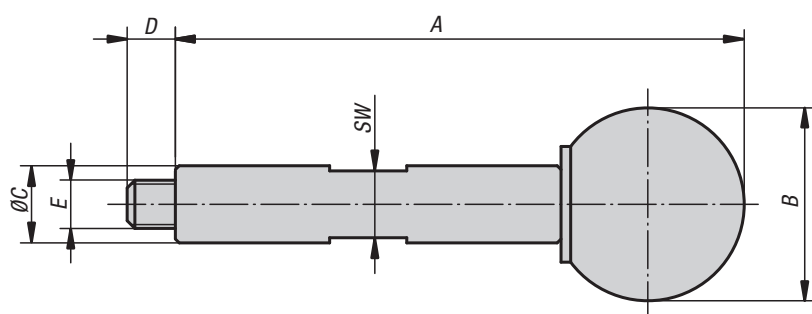
clamping arm length C vs. deflexion during clamping



### KIPP Clamping arms for swing clamp

| Order No.      | A  | B  | C  | D  | E  | F  |
|----------------|----|----|----|----|----|----|
| K0912.03006010 | 30 | 60 | 45 | 12 | 10 | M4 |
| K0912.04007516 | 40 | 75 | 55 | 16 | 16 | M5 |

## Handles screw-in

**Material:**

Grip carbon steel.

Ball knob thermoset PF 31.

**Version:**

Grip, black oxidised.

Ball knob, black.

**Sample order:**

K0915.5059

**KIPP Handles screw-in**

| Order No.   | A  | B  | C  | D | E  | SW |
|-------------|----|----|----|---|----|----|
| K0915.05059 | 59 | 20 | 8  | 5 | M5 | 7  |
| K0915.06089 | 89 | 25 | 10 | 6 | M6 | 8  |

## Handles screw-in

with torque limit



**Material:**

Carbon steel.

**Version:**

Hardened, black oxidised.

**Sample order:**

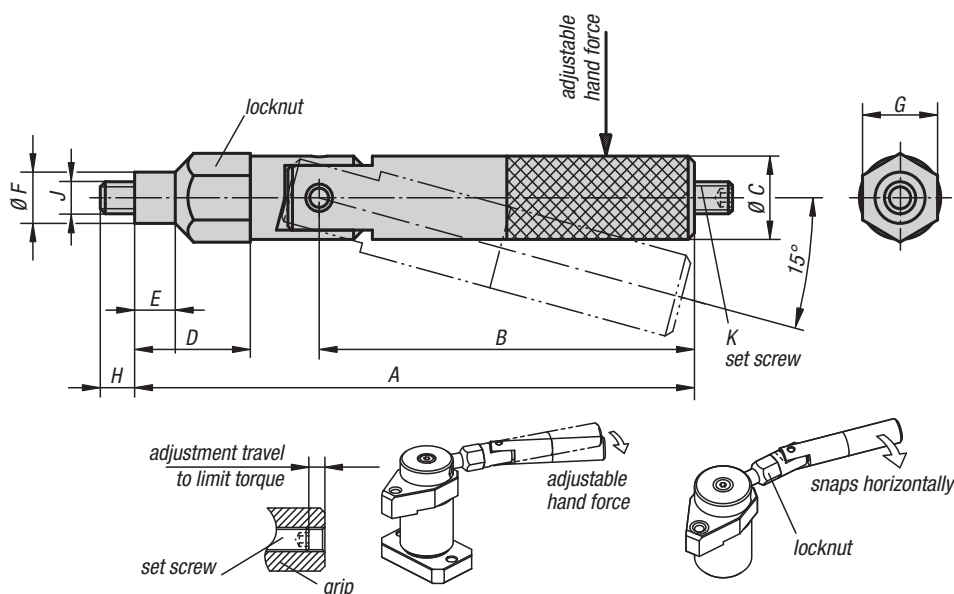
K0916.05090

**Note:**

The desired clamping force can be set by using the set screw to alter the torque. The handle snaps 15° when the set torque is achieved.

**Note:**

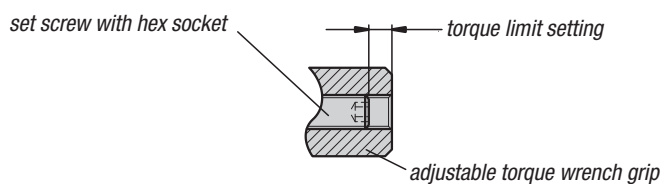
Ensure that the handle is set to snap horizontally.



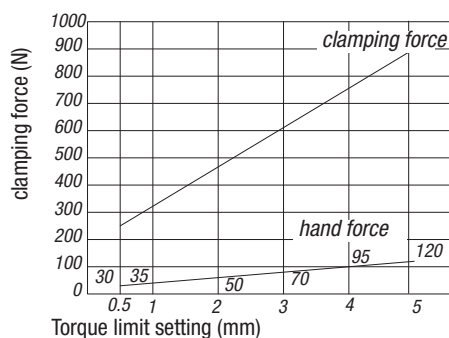
### KIPP Handles, screw-in, with torque limit

| Order No.   | A    | B  | C  | D    | E   | F  | G  | H   | J  | K     | Hand force FH N |
|-------------|------|----|----|------|-----|----|----|-----|----|-------|-----------------|
| K0916.05090 | 89,5 | 60 | 13 | 18,5 | 6,5 | 8  | 12 | 5,5 | M5 | M5x16 | 0-150           |
| K0916.06119 | 119  | 84 | 15 | 23   | 8   | 10 | 14 | 6,5 | M6 | M6x20 | 0-200           |

## Performance curves

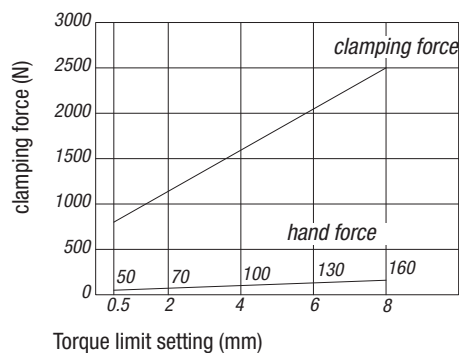


Pull Clamps K0910.3240...

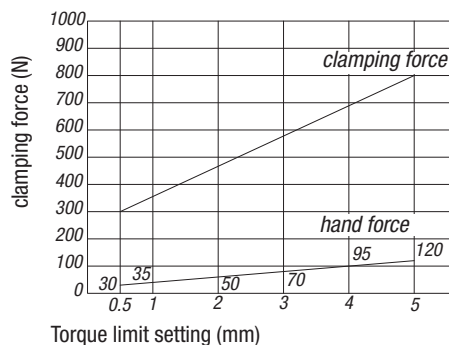


If clamping force is 900 N, Load-Setting Distance will be 5 mm. Hand force will be 120 N.

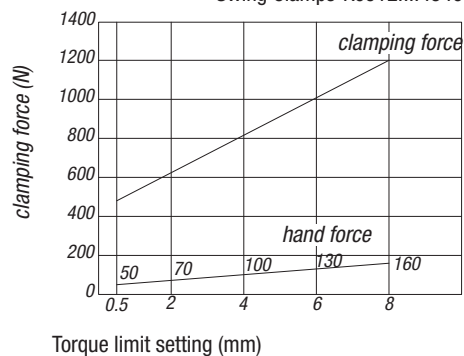
Pull Clamps K0910.4050...



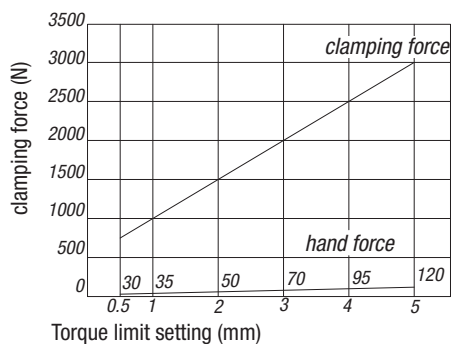
Swing Clamps K0912....3232



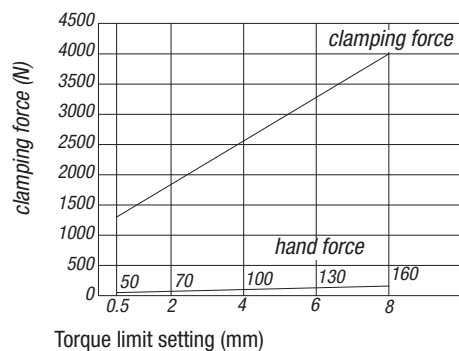
Swing Clamps K0912....4540



Side Clamps K0928.0500  
K0928.0501



Side Clamps K0928.0800  
K0928.0801



Note:  
The above performance curves apply to degreased clamps

## Swing clamps

mini, with cam lever



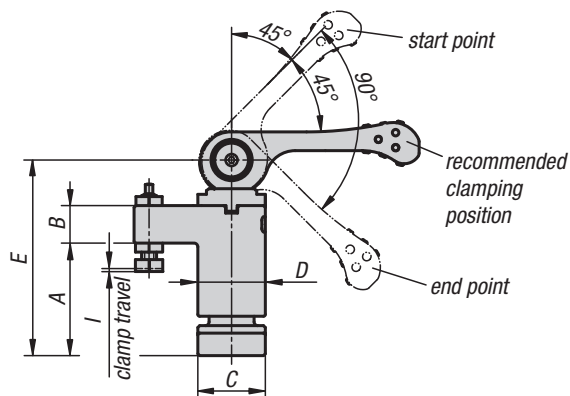
**Material:**  
Carbon steel.

**Version:**  
Tempered and black oxidised.

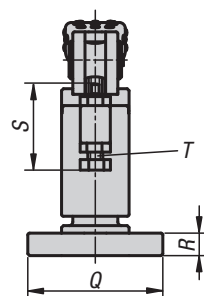
**Sample order:**  
K0925.0100

**Note:**  
Swing clamps are used where the clamping points must be free when the workpiece is loaded or removed.

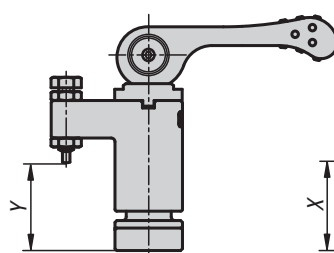
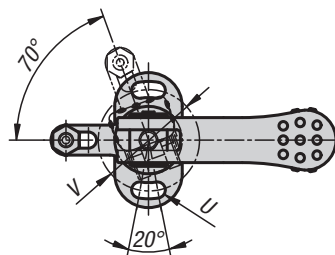
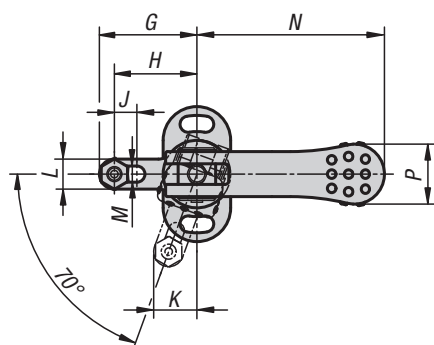
\* Admissible hand force for the handle.



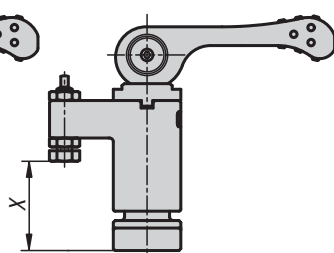
Right hand



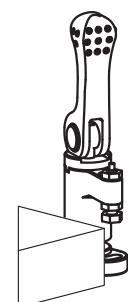
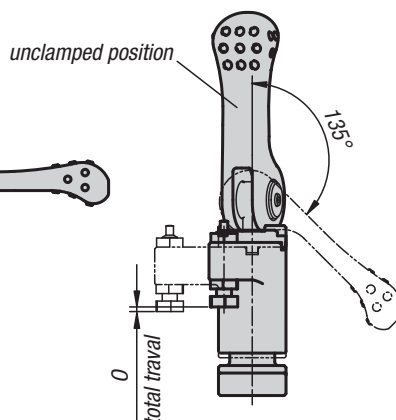
Left hand



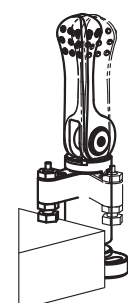
clamping  
rough surfaces



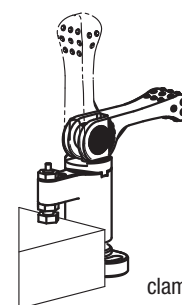
clamping  
machined surfaces



unclamped



swivel

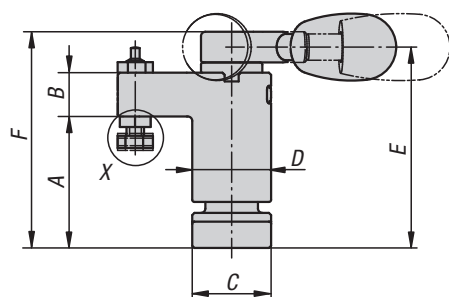


clamp

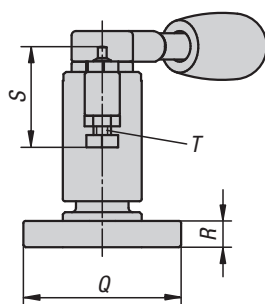
### KIPP Swing clamps, mini, with cam lever

| Order No.<br>left | Order No.<br>right | A  | B  | C  | D  | E   | G  | H  | I   | J | K    | L  | M    | N   | O   | P  | Q  | R  | S    | T   | U    | V  | X<br>min. | X<br>max. | Y<br>min. | Y<br>max. | F=retaining force<br>N | Hand<br>force<br>FH N |
|-------------------|--------------------|----|----|----|----|-----|----|----|-----|---|------|----|------|-----|-----|----|----|----|------|-----|------|----|-----------|-----------|-----------|-----------|------------------------|-----------------------|
| K0925.0100        | K0925.1100         | 30 | 10 | 18 | 18 | 52  | 26 | 22 | 0,8 | 6 | 11,5 | 8  | 4,3  | 50  | 1,2 | 16 | 36 | 6  | 22,8 | M4  | 4,3  | 27 | 22,4      | 25,2      | 22        | 24,8      | 800                    | 100*                  |
| K0925.0150        | K0925.1150         | 40 | 14 | 23 | 23 | 68  | 35 | 30 | 1   | 8 | 15,3 | 10 | 5,3  | 63  | 1,5 | 19 | 45 | 8  | 28,5 | M5  | 5,3  | 34 | 30,8      | 33,8      | 31,7      | 34,7      | 1500                   | 150*                  |
| K0925.0200        | K0925.1200         | 50 | 18 | 30 | 30 | 87  | 45 | 37 | 1,2 | 8 | 20,7 | 16 | 8,4  | 80  | 1,8 | 24 | 65 | 12 | 45,5 | M8  | 8,4  | 48 | 31,9      | 39,6      | 32,9      | 40,6      | 2100                   | 200*                  |
| K0925.0300        | K0925.1300         | 60 | 22 | 40 | 40 | 107 | 55 | 45 | 1,5 | 8 | 25,4 | 20 | 10,4 | 100 | 2,3 | 30 | 85 | 15 | 57   | M10 | 10,5 | 64 | 35,7      | 46,7      | 38,2      | 49,2      | 2800                   | 300*                  |

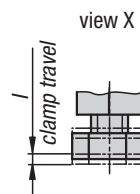
# Swing clamps mini



Right hand



Left hand



view X



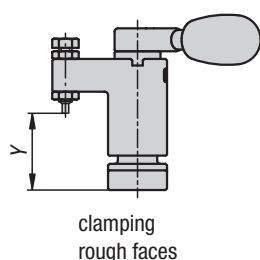
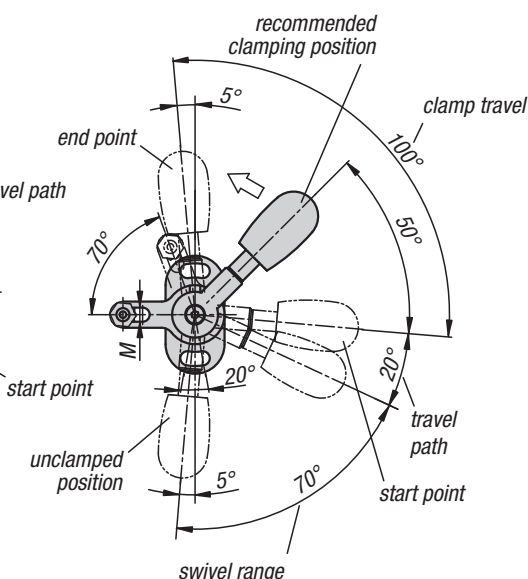
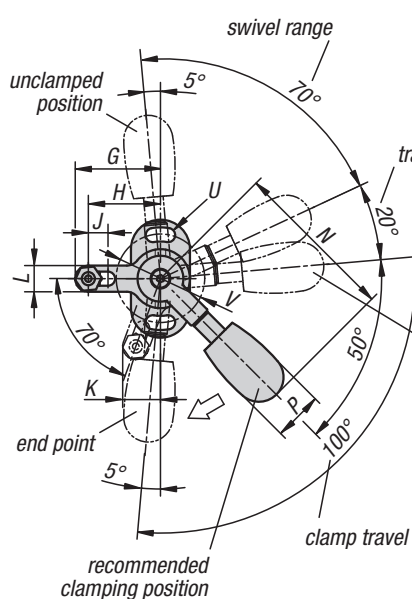
**Material:**  
Carbon steel.  
Grip plastic.

**Version:**  
Tempered, black oxidised.  
Grip black.

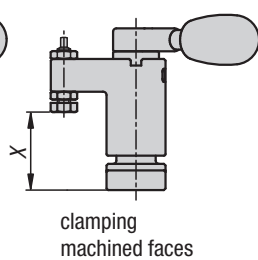
**Sample order:**  
K0926.0100

**Note:**  
Swing clamps are used where the clamping points must be free when the workpiece is loaded or removed.

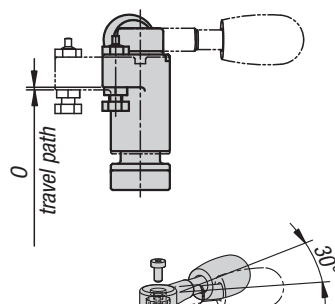
\* Admissible hand force for the handle.



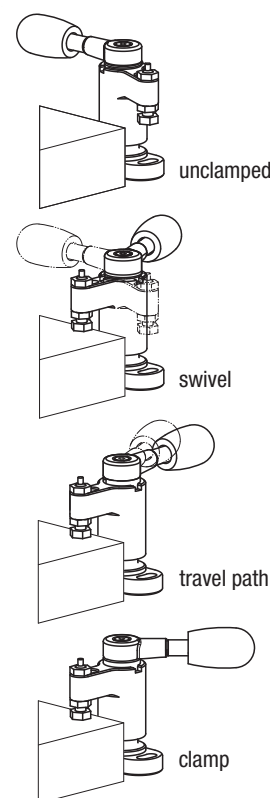
clamping rough faces



clamping machined faces



The position of the grip can be adjusted in 30° increments



## KIPP Swing clamps mini

| Order No.<br>left | Order No.<br>right | A  | B  | C  | D  | E    | F   | G  | H  | I   | J | K    | L  | M    | N   | O   | P  | Q  | R  | S    | T   | U    | V  | X<br>min. | X<br>max. | Y<br>min. | Y<br>max. | F=retaining force<br>N | Hand<br>force<br>FH N |
|-------------------|--------------------|----|----|----|----|------|-----|----|----|-----|---|------|----|------|-----|-----|----|----|----|------|-----|------|----|-----------|-----------|-----------|-----------|------------------------|-----------------------|
| K0926.0100        | K0926.1100         | 30 | 10 | 18 | 18 | 45,8 | 49  | 26 | 22 | 1   | 6 | 11,5 | 8  | 4,3  | 50  | 0,8 | 15 | 36 | 6  | 22,8 | M4  | 4,3  | 27 | 22,3      | 25,3      | 21,9      | 24,9      | 1100                   | 100*                  |
| K0926.0150        | K0926.1150         | 40 | 14 | 23 | 23 | 61,3 | 66  | 35 | 30 | 1,4 | 8 | 15,3 | 10 | 5,3  | 63  | 1,1 | 20 | 45 | 8  | 28,5 | M5  | 5,3  | 34 | 30,6      | 34        | 31,5      | 34,9      | 1800                   | 150*                  |
| K0926.0200        | K0926.1200         | 50 | 18 | 30 | 30 | 76,5 | 82  | 45 | 37 | 1,5 | 8 | 20,7 | 16 | 8,4  | 80  | 1,4 | 26 | 65 | 12 | 45,5 | M8  | 8,4  | 48 | 31,7      | 39,7      | 32,7      | 40,7      | 2200                   | 200*                  |
| K0926.0300        | K0926.1300         | 60 | 22 | 40 | 40 | 93   | 100 | 55 | 45 | 1,9 | 8 | 25,4 | 20 | 10,4 | 100 | 1,7 | 33 | 85 | 15 | 57   | M10 | 10,5 | 64 | 35,5      | 46,9      | 38        | 49,4      | 3500                   | 300*                  |

## Swing clamps

pneumatic



### Material:

Carbon steel.

### Version:

Clamping element nickel-plated.

Clamping bolt tempered and nickel-plated.

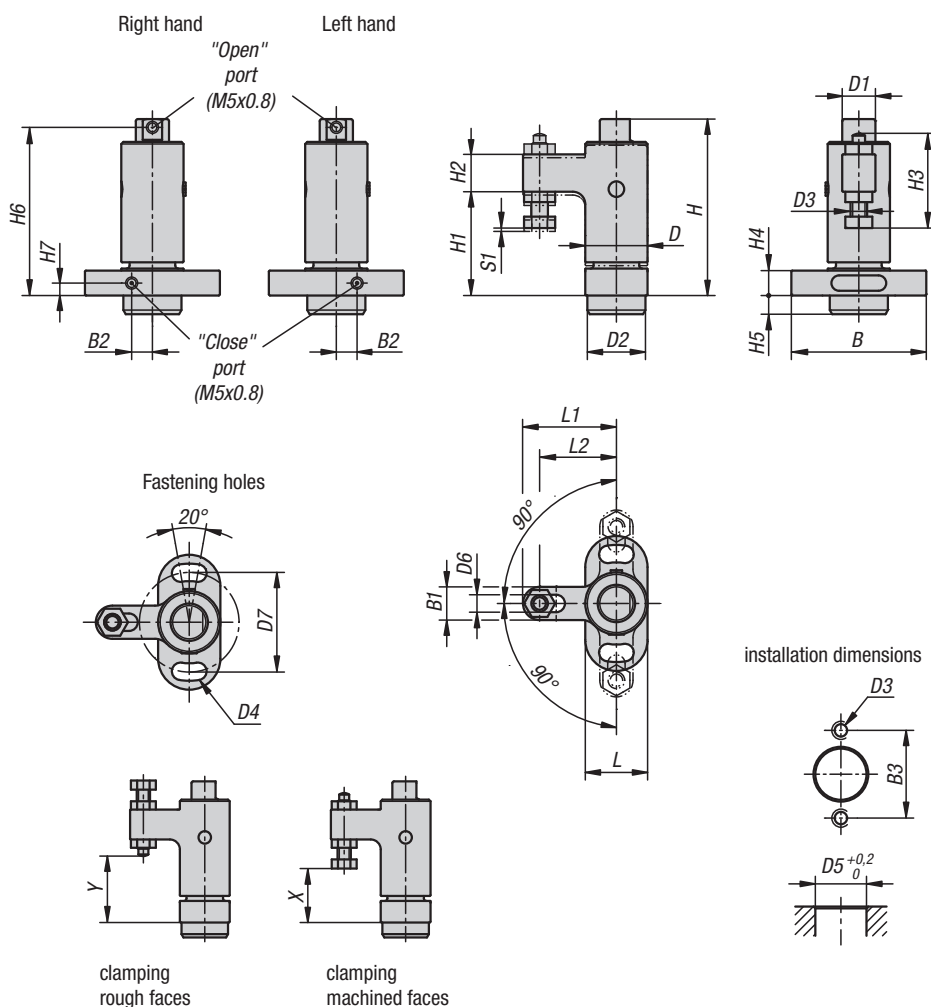
### Sample order:

K1388.13945

### Note:

The pneumatic swing clamp is suitable for clamping workpieces from above. The swivel and clamping function occurs pneumatically. The swivel function enables unobstructed insertion and removal of the workpiece. Optimum accessibility to the workpiece is guaranteed. The foot of the housing offers universal fastening possibilities, enabling the swing clamp to be optimally aligned with the workpiece being clamped. The swing clamps are available in left or right swivelling versions. Pneumatic swing clamps can also be placed in multiple positions on the workpiece and operated in a particular order. They can be controlled manually or automatically.

The clamping force and retaining force indicated are based on 0.5 MPa.



# Swing clamps

pneumatic

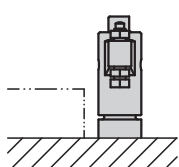


## Setting the distance between the workpiece and thrust screw:

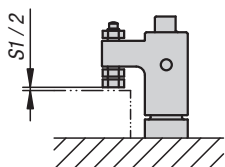
The distance between thrust screw and workpiece should be ca. half of the clamping travel (S1).

The clamping arm swivels in horizontally.

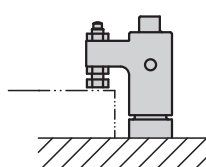
Carry out the following steps to set the thrust screw correctly.



1. Open the clamp by applying compressed air to the "open" port.

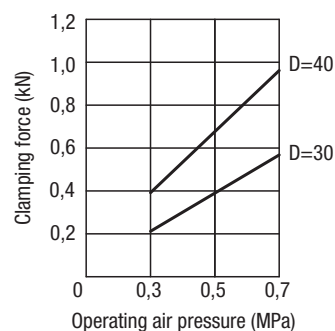


2. Manually swivel the arm to the clamping position. Set the distance between the thrust screw and the workpiece top face to half the clamping travel (S1).



3. Secure the thrust screw in place using locknuts.

Performance curve



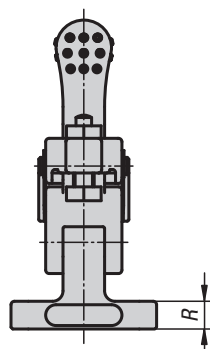
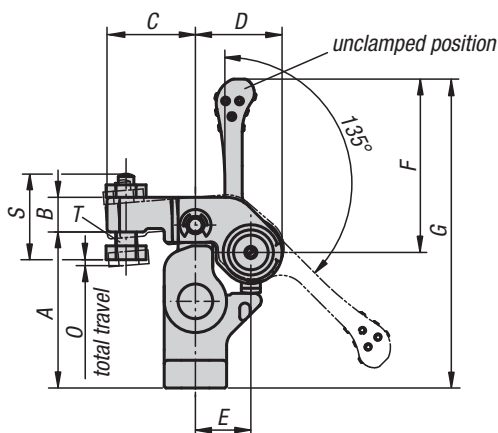
## KIPP Pneumatic swing clamps

| Order No.   | Version 1 | B  | B1 | B2 | B3 | D  | D1 | D2 | D3  | D4   | D5 | D6   | D7 | H   | H1 | H2 |
|-------------|-----------|----|----|----|----|----|----|----|-----|------|----|------|----|-----|----|----|
| K1388.13945 | right     | 65 | 16 | 10 | 48 | 30 | 16 | 28 | M8  | 8,4  | 28 | 8,4  | 48 | 85  | 50 | 18 |
| K1388.03945 | left      | 65 | 16 | 10 | 48 | 30 | 16 | 28 | M8  | 8,4  | 28 | 8,4  | 48 | 85  | 50 | 18 |
| K1388.15155 | right     | 85 | 20 | 13 | 64 | 40 | 22 | 35 | M10 | 10,5 | 35 | 10,4 | 64 | 106 | 65 | 22 |
| K1388.05155 | left      | 85 | 20 | 13 | 64 | 40 | 22 | 35 | M10 | 10,5 | 35 | 10,4 | 64 | 106 | 65 | 22 |

| Order No.   | H3   | H4 | H5 | H6  | H7 | L  | L1 | L2 | S1<br>(travel) | F=retaining force<br>N | Holding<br>force<br>F kN | Operating<br>pressure<br>MPa | X<br>min. | X<br>max. | Y<br>min. | Y<br>max. |
|-------------|------|----|----|-----|----|----|----|----|----------------|------------------------|--------------------------|------------------------------|-----------|-----------|-----------|-----------|
| K1388.13945 | 45,5 | 12 | 9  | 81  | 6  | 30 | 45 | 37 | 1,2            | 400                    | 0,8                      | 0,3 - 0,7                    | 32,5      | 39        | 33,5      | 40        |
| K1388.03945 | 45,5 | 12 | 9  | 81  | 6  | 30 | 45 | 37 | 1,2            | 400                    | 0,8                      | 0,3 - 0,7                    | 32,5      | 39        | 33,5      | 40        |
| K1388.15155 | 57   | 15 | 11 | 101 | 8  | 40 | 55 | 45 | 1,6            | 650                    | 1,3                      | 0,3 - 0,7                    | 41,5      | 51        | 44        | 53,5      |
| K1388.05155 | 57   | 15 | 11 | 101 | 8  | 40 | 55 | 45 | 1,6            | 650                    | 1,3                      | 0,3 - 0,7                    | 41,5      | 51        | 44        | 53,5      |

# Swivel hold-down clamp

mini, with cam lever

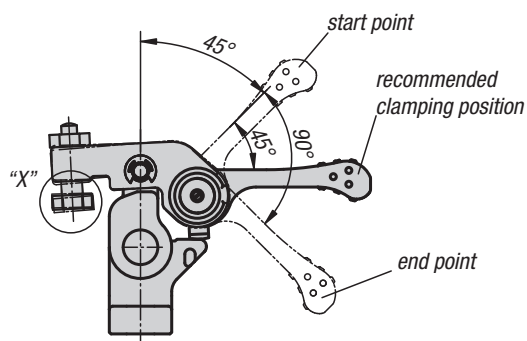
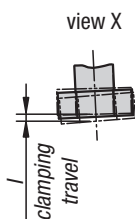
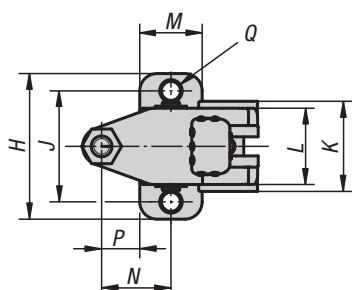


**Material:**  
Carbon steel.

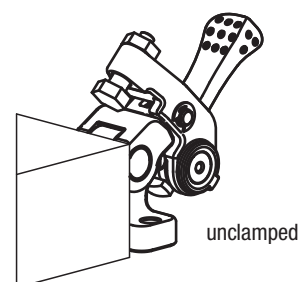
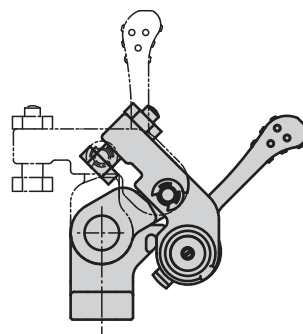
**Sample order:**  
K0927.100

**Note:**  
Swing clamps are used where the clamping points must be free when the workpiece is loaded or removed.

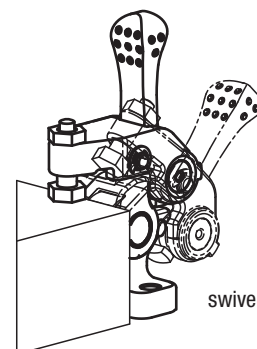
\* Admissible hand force for the handle.



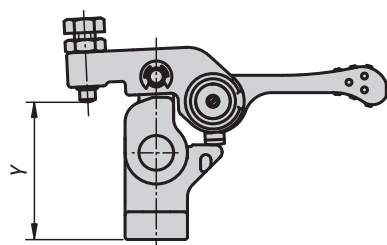
unclamped



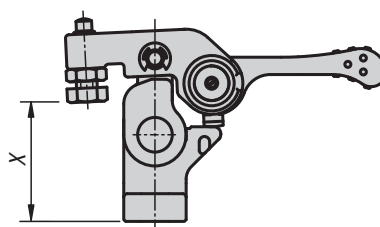
unclamped



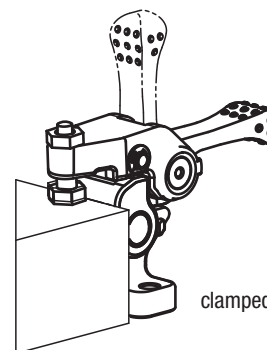
swivel



clamping  
rough faces



clamping  
machined faces



clamped

## KIPP Swivel hold-down clamp, mini, with cam lever

| Order No. | A  | B  | C    | D  | E  | F  | G   | H  | I   | J  | K  | L  | M  | N  | O   | P  | Q   | R  | S    | T  | X<br>min. | X<br>max. | Y<br>min. | Y<br>max. | F=retaining force<br>N | Hand<br>force<br>FH N |
|-----------|----|----|------|----|----|----|-----|----|-----|----|----|----|----|----|-----|----|-----|----|------|----|-----------|-----------|-----------|-----------|------------------------|-----------------------|
| K0927.100 | 45 | 10 | 25,5 | 25 | 16 | 50 | 89  | 42 | 1   | 32 | 26 | 22 | 18 | 20 | 1,5 | 11 | 5,5 | 8  | 24   | M6 | 31,5      | 40,5      | 34,5      | 43,5      | 700                    | 100*                  |
| K0927.150 | 55 | 12 | 32   | 31 | 20 | 63 | 109 | 52 | 1,2 | 40 | 32 | 28 | 22 | 25 | 1,8 | 14 | 6,6 | 10 | 30,5 | M8 | 36,4      | 48,6      | 41,4      | 53,6      | 1100                   | 150*                  |

## Down-thrust clamps

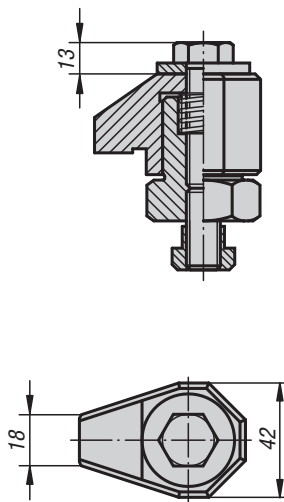
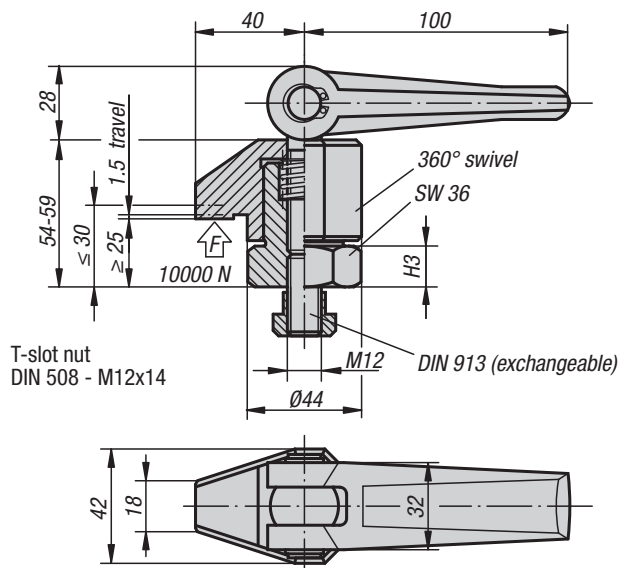


K1231.11

Form A  
with cam lever

K1231.21

Form B  
with clamping screw



**Material:**  
Steel.

**Version:**  
Case-hardened, black oxidised and ground.

**Sample order:**  
K1231.23

**Note:**  
The clamping heights can be increased with riser bars K0018 and for K1231.12 to K1231.14 and K1231.22 to K1231.24 reduced by self-aligning pads K0282.

- The clamps have the following advantages:
- rapid clamping by hand via threaded spindle and spiral cam.
  - quick and easy workpiece exchange by pivoting the clamp arm.
  - compact design, small clamping space required.
  - simple adaptation to tall clamping heights using the riser cylinders.

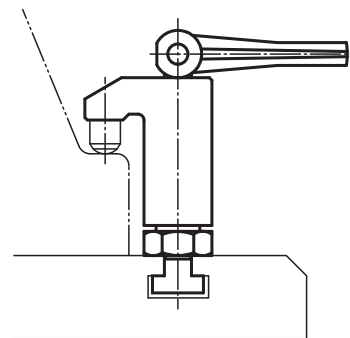
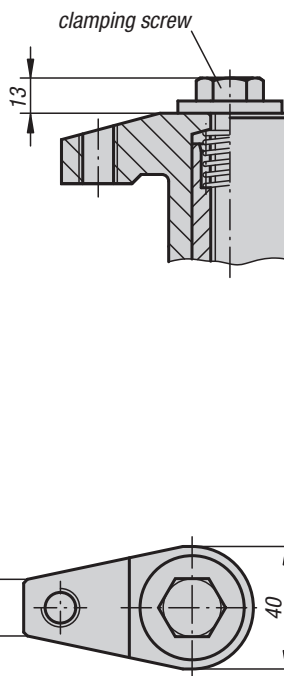
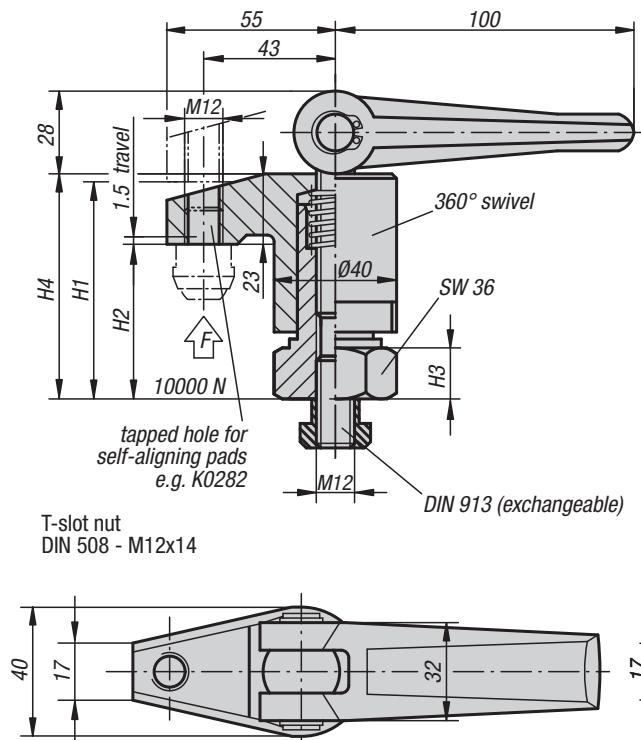
- The clamps can be mounted in two ways:
- 1) in a T-slot.
  - 2) by the M12 screw directly in a fixture base.

K1231.12, K1231.13, K1231.14

Form A  
with cam lever

K1231.22, K1231.23, K1231.24

Form B  
with clamping screw



### KIPP Down-thrust clamps

| Order No.<br>Form A | Order No.<br>Form B | Clamping<br>height<br>max. H1 | Clamping<br>height<br>min. H2 | H3 | H4      |
|---------------------|---------------------|-------------------------------|-------------------------------|----|---------|
| K1231.11            | K1231.21            | 30                            | 25                            | 15 | 54-59   |
| K1231.12            | K1231.22            | 70                            | 50                            | 15 | 73-93   |
| K1231.13            | K1231.23            | 98                            | 68                            | 15 | 91-121  |
| K1231.14            | K1231.24            | 135                           | 95                            | 22 | 118-158 |

## Thrust clamps



### Material, version:

Cam tool steel, hardened and black oxidised.  
Shaft carbon steel, hardened and black oxidised.  
Grip carbon steel, black oxidised.  
Ball knob black thermoset PF 31.

### Sample order:

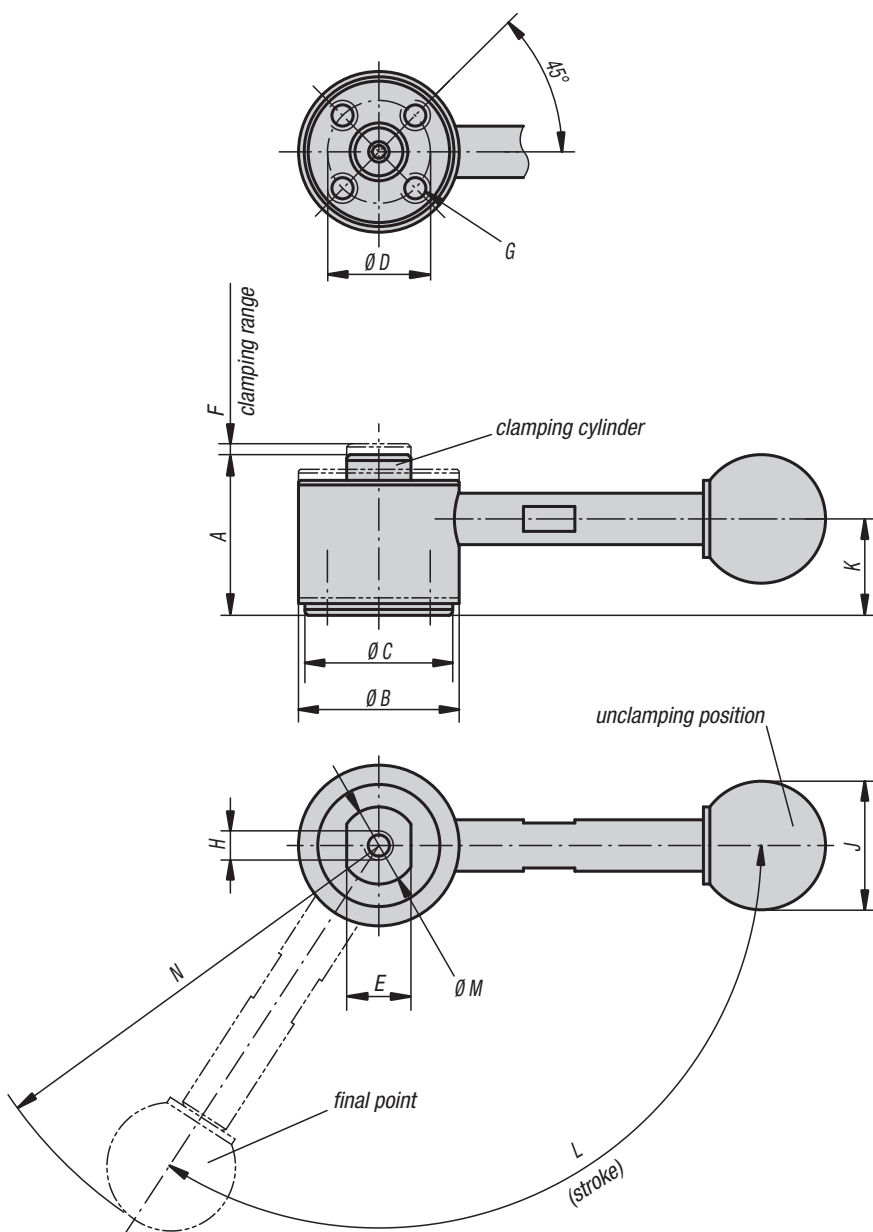
K0914.252501

### Note:

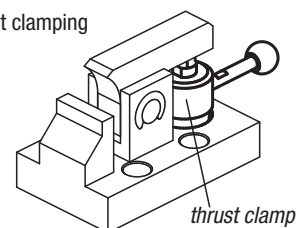
\* Admissible hand force for the handle.

### Accessories:

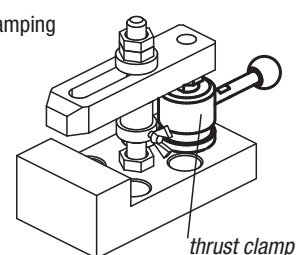
Standard handles K0915.  
Screw-in handles with torque limit K0916.



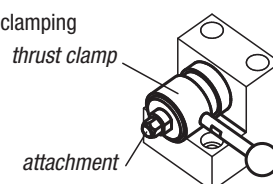
### downthrust clamping



### vertical clamping



### horizontal clamping

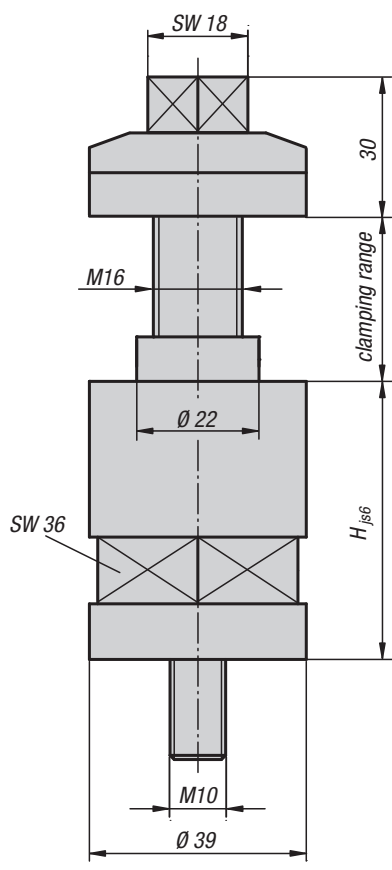


When mounting an attachment on the clamping cylinder, hold the shaft using a spanner to prevent turning.

## KIPP Thrust clamps

| Order No.    | Version 1    | A min. | A max. | B  | C  | D  | E  | F   | G      | H      | J  | K    | L    | M  | N    | Clamping force N | Hand force FH N |
|--------------|--------------|--------|--------|----|----|----|----|-----|--------|--------|----|------|------|----|------|------------------|-----------------|
| K0914.252500 | without grip | 25     | 26,7   | 25 | 23 | 16 | 10 | 1,7 | M4 x 6 | M4x6   | -  | 15   | 123° | 12 | -    | 3000             | 150*            |
| K0914.252501 | with grip    | 25     | 26,7   | 25 | 23 | 16 | 10 | 1,7 | M4 x 6 | M4x6   | 20 | 15   | 123° | 12 | 69,5 | 3000             | 150*            |
| K0914.323200 | without grip | 32     | 34,5   | 32 | 30 | 20 | 13 | 2,5 | M6 x 9 | M6 x 9 | -  | 19,5 | 135° | 15 | -    | 4000             | 200*            |
| K0914.323201 | with grip    | 32     | 34,5   | 32 | 30 | 20 | 13 | 2,5 | M6 x 9 | M6 x 9 | 25 | 19,5 | 135° | 15 | 103  | 4000             | 200*            |

## Clamping bolts

**Material:**

Clamping bolt, steel.  
Clamping screw, carbon steel.  
Clamping ring brass.

**Version:**

Clamping bolt hardened and black oxidised.  
Clamping screw black oxidised.  
Clamping ring bright.

**Sample order:**

K1232.100

**Note:**

The clamping bolts can be fixed to the machine table directly with T-slot nuts. Clamping parallel to the table is guaranteed by low tolerance classes (js6) for the height.

The clamping range is 8 – 40 mm. Clamping screws for the ranges 40 – 67 and 65 – 87 mm are also available.

The intermediate plate prevents damage to the machine table, as well as shifting during tightening. The brass clamping ring prevents impressions on the workpiece.

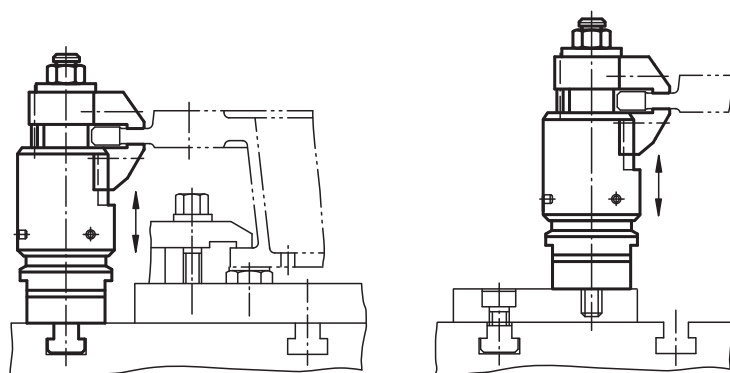
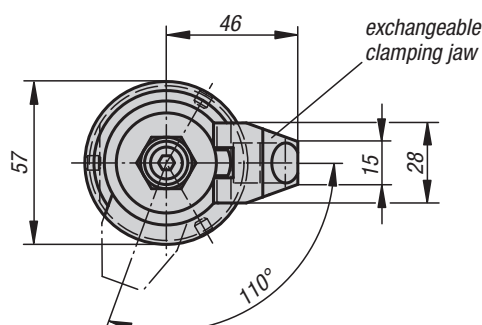
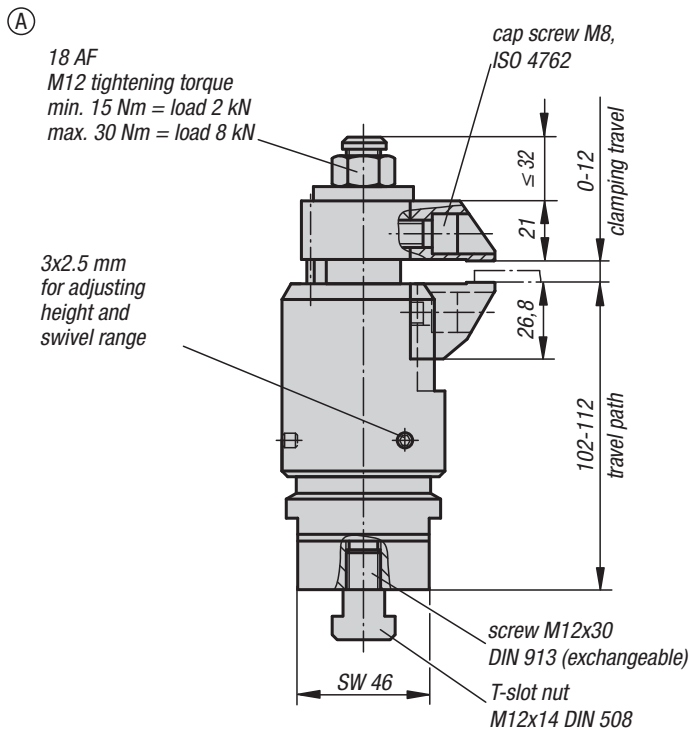
**KIPP Clamping bolts**

| Order No. | H   | Clamp range |
|-----------|-----|-------------|
| K1232.050 | 50  | 8-40        |
| K1232.100 | 100 | 8-40        |

**KIPP Clamping screws**

| Order No.  | Clamp range |
|------------|-------------|
| K1232.4067 | 40-67       |
| K1232.6587 | 65-87       |

# Floating clamp



## Material:

Base body and jaws steel.  
Housing aluminium.

## Version:

Body nitrided, black oxidised and ground.  
Jaws nitrided and black oxidised.  
Housing red anodised.

## Sample order:

K1228.100812

## Note:

The floating clamp is used to clamp and support overhanging clamping points on components. It prevents vibrations and deflection during machining.

## Method of operation:

1. Push the floating clamp down.
2. Pivot the jaws to the stop. The floating clamp contacts the bottom of the workpiece with a light spring force.
3. Tighten the floating clamp with the SW 18 hexagon nut (note the min. and max. torque). During clamping the workpiece is clamped and simultaneously supported.
4. Reverse the process to release.

## Assembly:

### Form A:

Fasten the floating clamp to the fixture with the M12 screw.

Adjust the height stop and swivel range using the red sleeve and lock with the 3x2.5 mm grub screws. When setting the height leave generous clearance above.

For safe operation the M12 tapped hole must always be closed.

For specific clamping applications the standard jaws can be altered or replaced.

### Form B:

Fasten floating clamp with M6 fastening hole to a fixture.

Adjust the height stop and pivot range with the red adjusting sleeve and clamp with grub screws (4x AF 2.5). When setting the height limit, allow ample play at the top.

For specific clamping situations, the standard jaw plates can be modified or replaced.

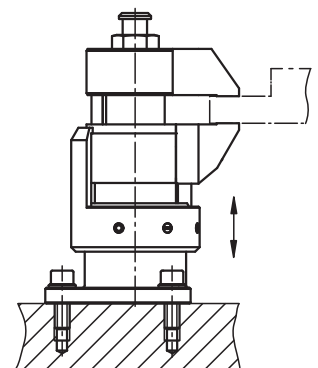
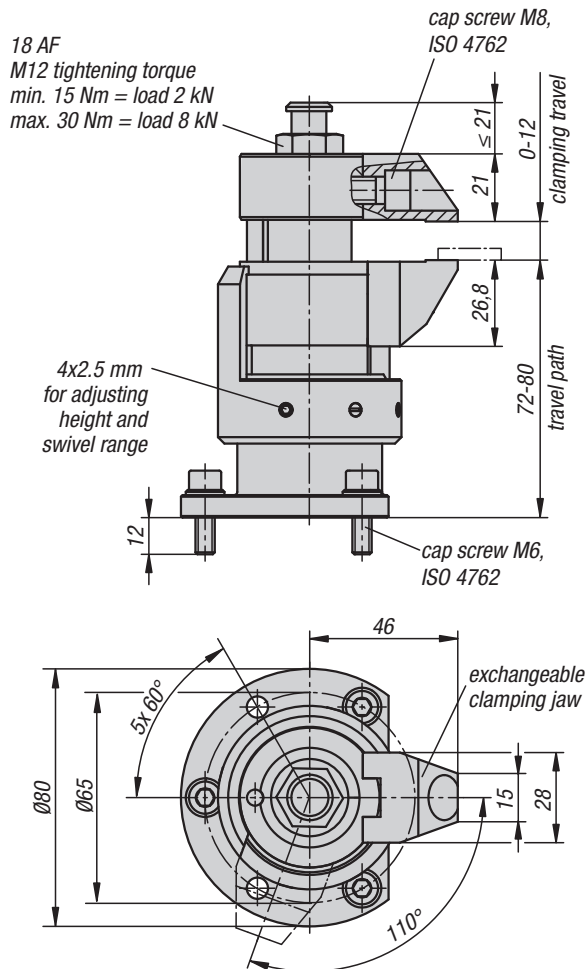
## KIPP Floating clamp

| Order No.    | Travel path | max. clamping travel | Load capacity N | Clamping force N |
|--------------|-------------|----------------------|-----------------|------------------|
| K1228.100812 | 10          | 12                   | 8000            | 8000             |

## Floating clamp



⑧



## KIPP Floating clamp

| Order No.    | Travel path | max.<br>clamping<br>travel | Load<br>capacity<br>N | Clamping<br>force<br>N |
|--------------|-------------|----------------------------|-----------------------|------------------------|
| K1228.080812 | 8           | 12                         | 8000                  | 8000                   |

# Floating clamp

with separate workpiece clamp and interlock



## Material:

Base body and jaws steel.  
Housing aluminium.

## Version:

Body nitrided, black oxidised and ground.  
Jaws nitrided and black oxidised.  
Housing blue anodised.

## Sample order:

K1227.100812

## Note:

The floating clamp is used to clamp and support overhanging points on thin walled, sensitive and pliable components. It prevents vibrations and bending during machining.

## Method of operation:

1. Push the floating clamp down.
2. Pivot the jaws in. The lower jaw contacts the workpiece with a light spring force.
3. Tighten the AF 18 hexagon nut with max. 15 Nm torque. The jaws clamp the workpiece, the clamp is still floating.
4. Tighten the AF 10 hexagon nut with max. 10 Nm torque. The clamping process is completed.
5. Reverse the process to release.

## Assembly:

Form A:

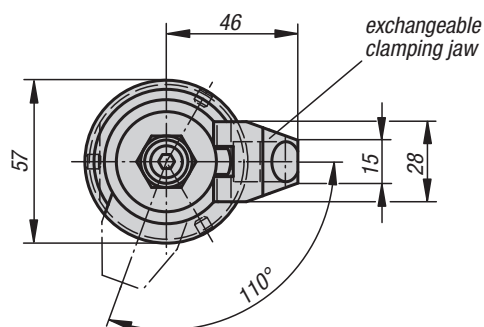
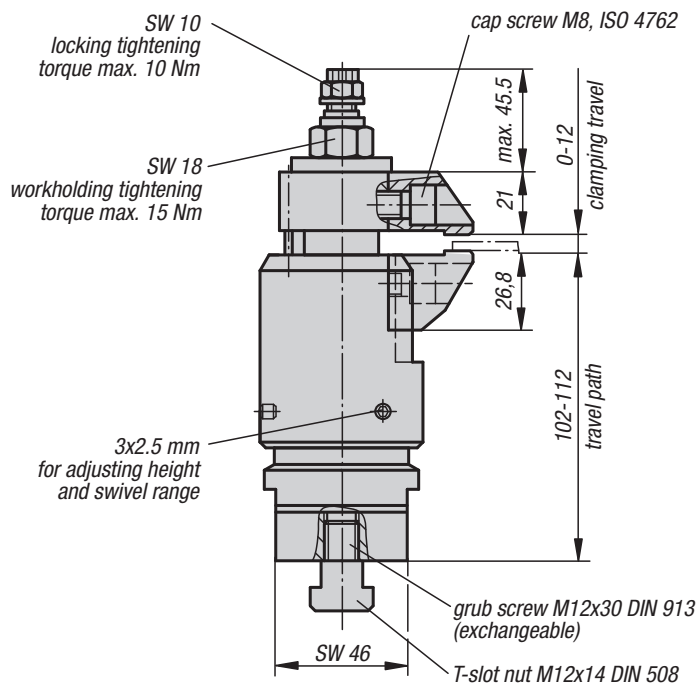
Fasten the floating clamp to the fixture with the M12 screw.

Adjust the height stop and the swivel range using the blue sleeve and lock with the 3x2.5 mm grub screws. When setting the height leave generous clearance above.

For safe operation the M12 tapped hole must always be closed.

For specific clamping applications the standard jaws

Ⓐ



## KIPP Floating clamp with separate workpiece clamp and interlock

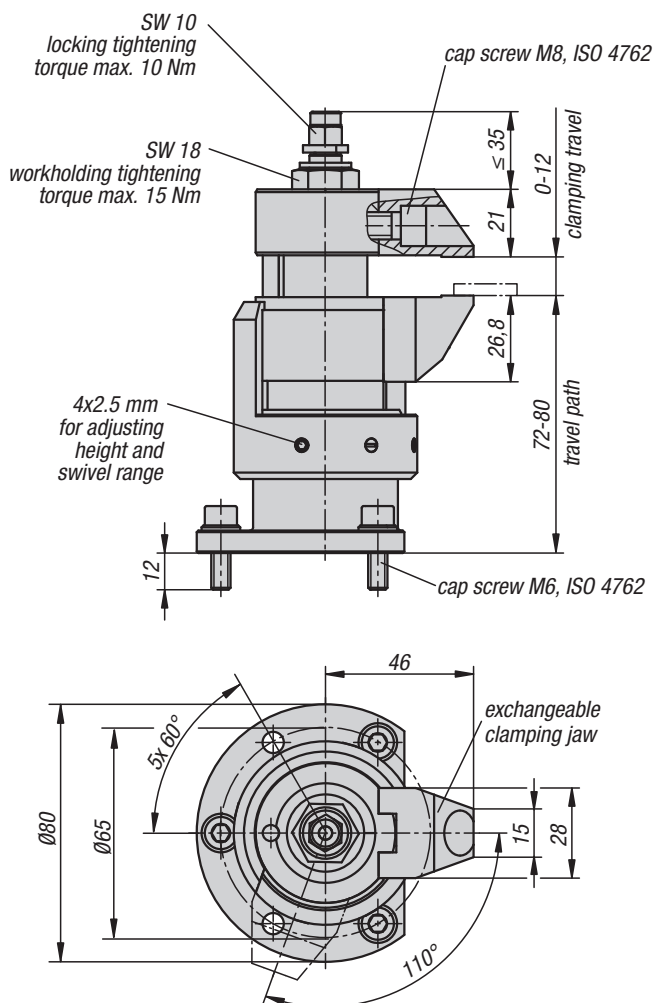
| Order No.    | Form | Travel path | max.<br>clamping<br>travel | Load<br>capacity<br>N | Clamping<br>force<br>N |
|--------------|------|-------------|----------------------------|-----------------------|------------------------|
| K1227.100812 | A    | 10          | 12                         | 8000                  | 8000                   |

# Floating clamp

with separate workpiece clamp and interlock



Ⓑ



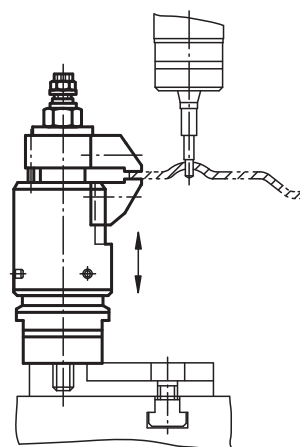
can be altered or replaced.

Form B:

Fasten the floating clamp with M6 fastening holes to a fixture.

Adjust the height stop and pivot range using the blue adjusting sleeve and clamp with grub screws (4x AF 2.5). When setting the height limit, allow ample play at the top.

For specific clamping situations, the standard jaw plates can be modified or replaced.

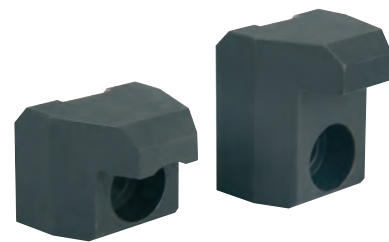


## KIPP Floating clamp with separate workpiece clamp and interlock

| Order No.    | Form | Travel path | max. clamping travel | Load capacity N | Clamping force N |
|--------------|------|-------------|----------------------|-----------------|------------------|
| K1227.080812 | B    | 8           | 12                   | 8000            | 8000             |

## Clamping jaws

for floating clamps

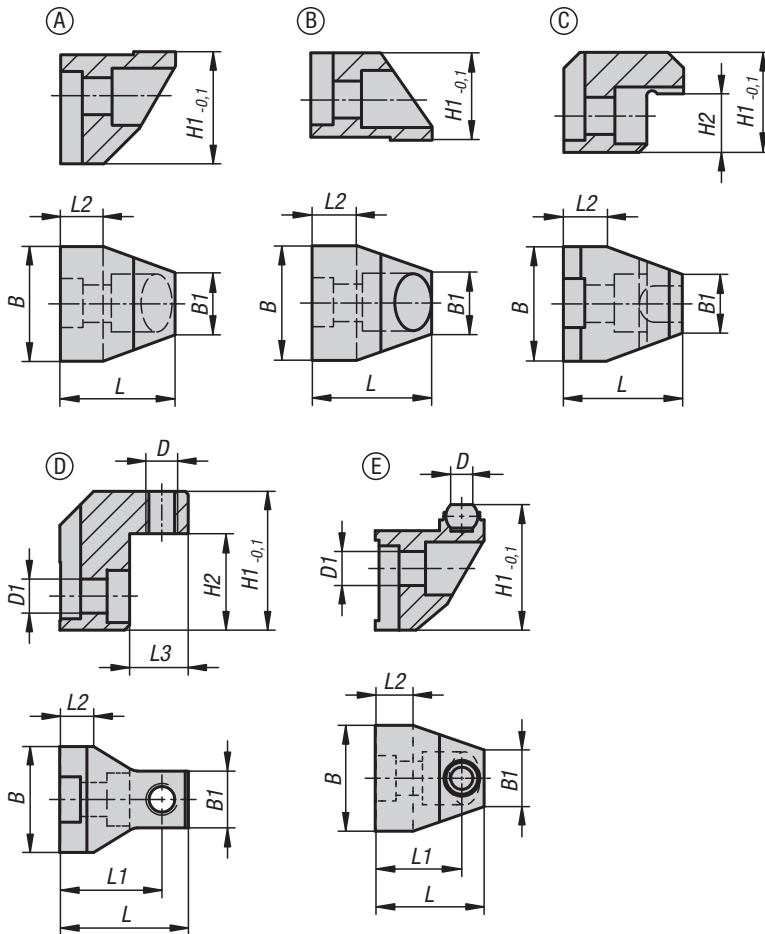


**Material:**  
Steel.

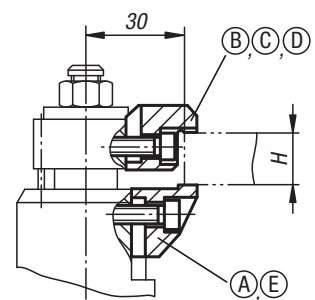
**Version:**  
Nitrided and black oxidised.

**Sample order:**  
K1490.90000

**Note:**  
The clamping jaws can be used for floating clamps to increase the clamping range.



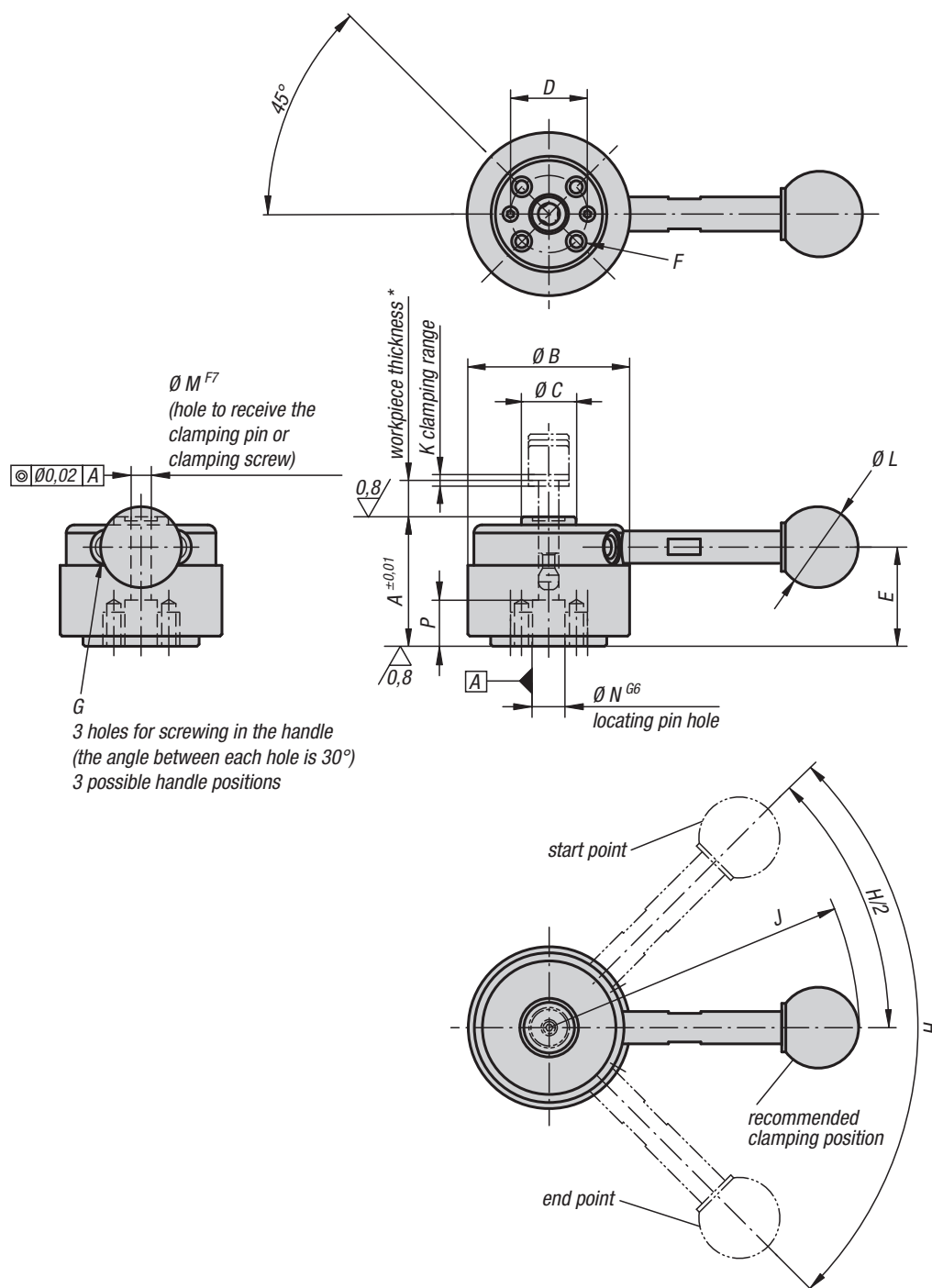
| Order No.   | H = clamping range max.<br>in combination with<br>K1490.90000 [mm] | H = clamping range max.<br>in combination with<br>K1490.910000 [mm] |
|-------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| K1490.90416 | 4-16                                                               | -                                                                   |
| K1490.91527 | 15-27                                                              | -                                                                   |
| K1490.92638 | 26-38                                                              | -                                                                   |
| K1490.90029 | 29                                                                 | 23                                                                  |
| K1490.90040 | 40                                                                 | 34                                                                  |



### KIPP Clamping jaws for floating clamps

| Order No.    | Form | Version 1          | B  | B1 | D   | D1  | H<br>clamping range | H1   | H2   | L    | L1   | L2   | L3 |
|--------------|------|--------------------|----|----|-----|-----|---------------------|------|------|------|------|------|----|
| K1490.90000  | A    | standard lower jaw | 28 | 15 | -   | -   | -                   | 26,8 | -    | 28   | -    | 10   | -  |
| K1490.90012  | B    | standard upper jaw | 28 | 15 | -   | -   | 0 - 12              | 21   | -    | 29,5 | -    | 11,5 | -  |
| K1490.90416  | C    | exchange upper jaw | 28 | 15 | -   | -   | 4 - 16              | 24,5 | 3,5  | 29,5 | -    | 11,5 | -  |
| K1490.91527  | C    | exchange upper jaw | 28 | 15 | -   | -   | 15 - 27             | 24,5 | 14,5 | 29,5 | -    | 11,5 | -  |
| K1490.92638  | C    | exchange upper jaw | 28 | 15 | -   | -   | 26 - 38             | 35,5 | 25,5 | 29,5 | -    | 11,5 | -  |
| K1490.90029  | D    | upper jaw          | 28 | 15 | M8  | 4,5 | -                   | 29,5 | 16,5 | 31,5 | 24,5 | 8    | 16 |
| K1490.90040  | D    | upper jaw          | 28 | 15 | M8  | 4,5 | -                   | 40,5 | 27,5 | 31,5 | 24,5 | 8    | 16 |
| K1490.910000 | E    | lower jaw          | 28 | 15 | 5,8 | 4,5 | -                   | 32,8 | -    | 30   | 23   | 10   | -  |

## Pull clamps



### Material:

Housing and cam tool steel.  
Grip carbon steel.  
Ball knob thermoset PF 31.

### Version:

Housing and cam hardened and black oxidised.  
Grip black oxidised.  
Ball knob black.

### Sample order:

K0910.324001

### Note:

\* Max. workpiece thickness see clamping pin K0910 (dimension C).  
\*\* Admissible hand force for the handle.

### Accessories:

Standard handles K0915.  
Screw-in handles with adjustable torque K0916.

## KIPP Pull clamps

| Order No.    | Version 1    | A  | B  | C    | D  | E    | F    | G  | H    | J     | K   | L  | M | N  | P  | Clamping force N | Recommended workpiece thickness tolerance | Hand force FH N | Holding force N |
|--------------|--------------|----|----|------|----|------|------|----|------|-------|-----|----|---|----|----|------------------|-------------------------------------------|-----------------|-----------------|
| K0910.324000 | without grip | 32 | 40 | 13,5 | 18 | 24,5 | M4x8 | M5 | 90°  | -     | 1,5 | -  | 5 | 8  | 10 | 900              | ±0,3*                                     | 150**           | 2000            |
| K0910.324001 | with grip    | 32 | 40 | 13,5 | 18 | 24,5 | M4x8 | M5 | 90°  | 76,5  | 1,5 | 20 | 5 | 8  | 10 | 900              | ±0,3*                                     | 150**           | 2000            |
| K0910.405000 | without grip | 40 | 50 | 18   | 25 | 30,7 | M6x9 | M6 | 110° | -     | 2   | -  | 8 | 12 | 13 | 2500             | ±0,5*                                     | 200**           | 5500            |
| K0910.405001 | with grip    | 40 | 50 | 18   | 25 | 30,7 | M6x9 | M6 | 110° | 111,5 | 2   | 25 | 8 | 12 | 13 | 2500             | ±0,5*                                     | 200**           | 5500            |

## Clamping pins



### Material:

Carbon steel.

### Version:

Pins tempered and ground.  
Knurled knob tempered, black oxidised.

### Sample order:

K0910.005050

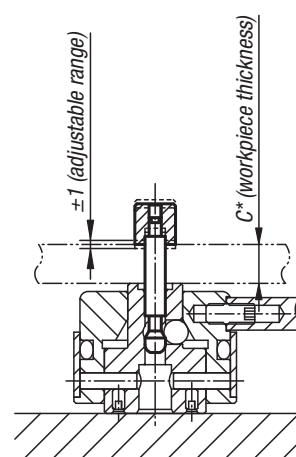
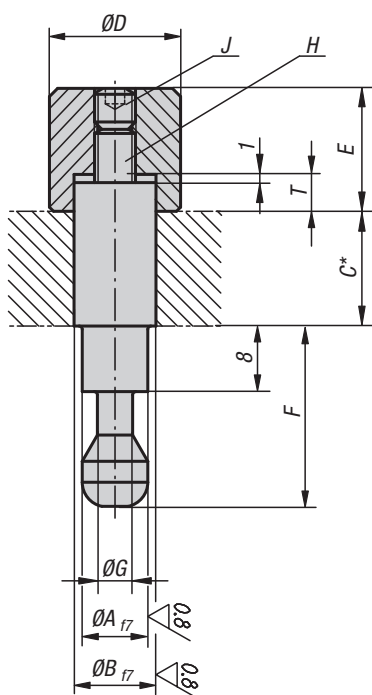
### Note:

\* The clamping pin can be altered to suit the workpiece thickness.

### Accessories:

to:

K0910.3240... (K0910.005050 and K0910.006050),  
K0910.4050... (K0910.008080 and K0910.010080)



## KIPP Clamping pins

| Order No.    | A | B  | C  | D  | E  | F  | G   | H  | J    | T   |
|--------------|---|----|----|----|----|----|-----|----|------|-----|
| K0910.005050 | 5 | 5  | 50 | 10 | 10 | 17 | 3   | M3 | M3x4 | 3   |
| K0910.006050 | 5 | 6  | 50 | 10 | 10 | 17 | 3   | M3 | M3x4 | 3   |
| K0910.008080 | 8 | 8  | 80 | 16 | 15 | 22 | 4,3 | M5 | M5x5 | 4,5 |
| K0910.010080 | 8 | 10 | 80 | 16 | 15 | 22 | 4,3 | M5 | M5x5 | 4,5 |

## Clamping screws



### Material:

Carbon steel.

### Version:

Tempered and black oxidised.

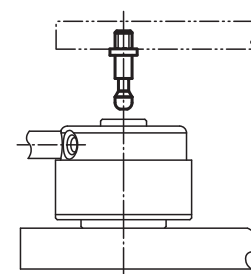
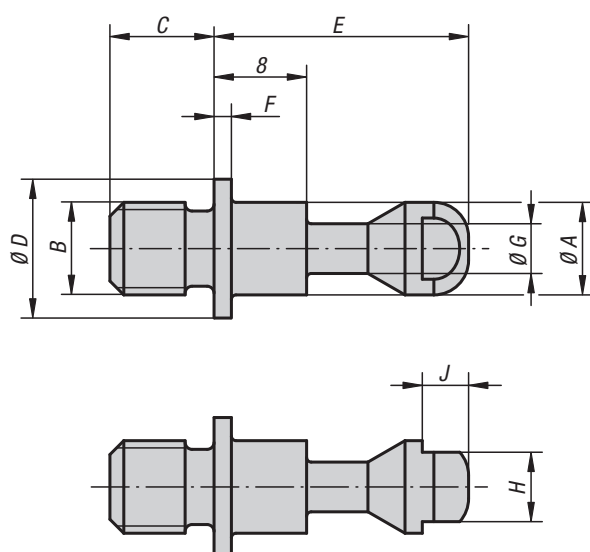
### Sample order:

K0910.105060

### Accessories:

To:

K0910.3240 for K0910.105060 and K0910.106070,  
K0910.4050 for K0910.108090 and K0910.110110

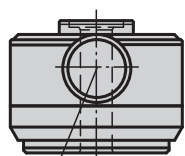


## KIPP Clamping screws

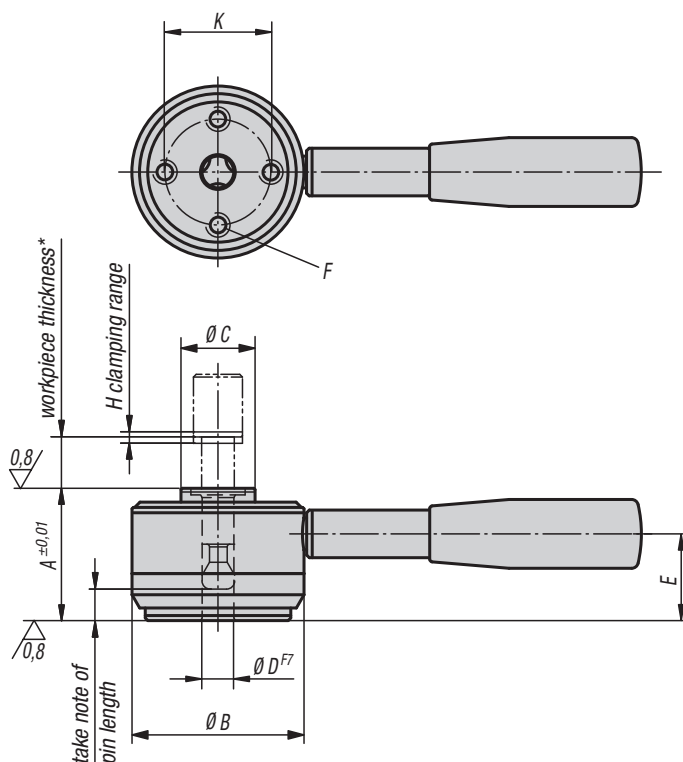
| Order No.    | A | B   | C  | D  | E  | F   | G   | H | J   |
|--------------|---|-----|----|----|----|-----|-----|---|-----|
| K0910.105060 | 5 | M5  | 6  | 8  | 17 | 1,2 | 3   | 4 | 2,5 |
| K0910.106070 | 5 | M6  | 7  | 8  | 17 | 1,2 | 3   | 4 | 2,5 |
| K0910.108090 | 8 | M8  | 9  | 12 | 22 | 1,5 | 4,3 | 6 | 4   |
| K0910.110110 | 8 | M10 | 11 | 12 | 22 | 1,5 | 4,3 | 6 | 4   |

## Pull clamps

(high force)



J  
3 holes for screwing in the handle  
(angle between each hole is 35°)  
3 possible handle positions



### Material:

Housing, clamping ring and handles,  
carbon steel.  
Grip thermoset PF 31.

### Version:

Housing and clamping ring hardened and  
black oxidised.  
Handles black oxidised.  
Grip black.

### Sample order:

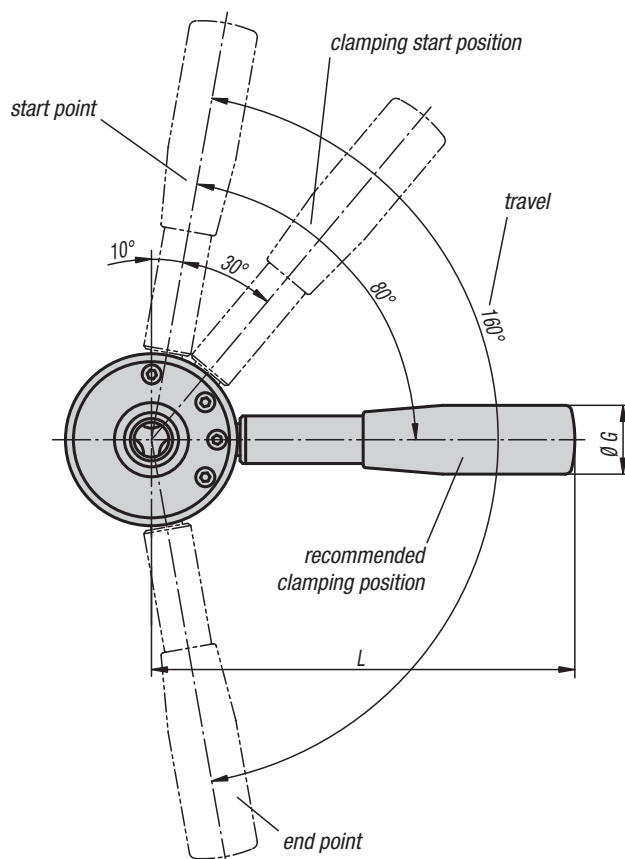
K0911.506501

### Note:

When clamping with a high force  
clamping pin the recommended  
workpiece tolerances must be  
maintained. The grip lever must lay  
between the recommended clamping  
position and end point for safe clamping.

\* Max. workpiece thickness, see clamping  
pin K0911 (dimension C).

\*\* Admissible hand force for the handle.

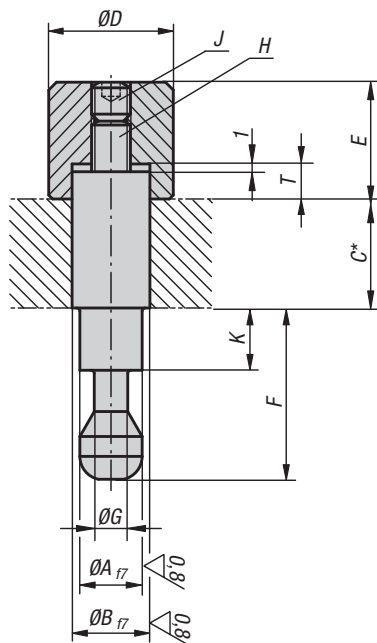
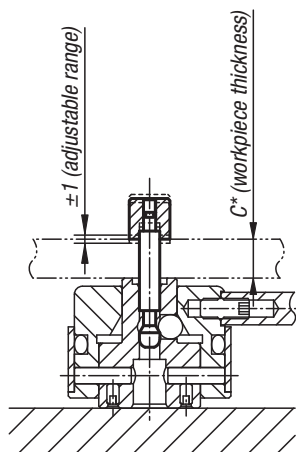


### KIPP Pull clamps (high force)

| Order No.    | A  | B  | C  | D  | E  | F      | G  | H   | J  | K  | L   | Clamping<br>force<br>N | Recommended<br>workpiece thickness<br>tolerance | Hand<br>force<br>FH N | Holding<br>force<br>N |
|--------------|----|----|----|----|----|--------|----|-----|----|----|-----|------------------------|-------------------------------------------------|-----------------------|-----------------------|
| K0911.506501 | 50 | 65 | 28 | 12 | 36 | M8x14  | 26 | 2   | 10 | 40 | 160 | 6000                   | ±0,5*                                           | 600**                 | 8000                  |
| K0911.638001 | 63 | 80 | 34 | 16 | 45 | M10x18 | 28 | 2,5 | 12 | 50 | 180 | 8000                   | ±0,8*                                           | 600**                 | 14000                 |

## Clamping pins

(high force)



**Material:**  
Carbon steel.

**Version:**  
Pins tempered and ground.  
Knurled knob tempered,  
black oxidised.

**Sample order:**  
K0911.412100

**Note:**  
\* The clamping pin can be altered to suit the  
workpiece thickness.

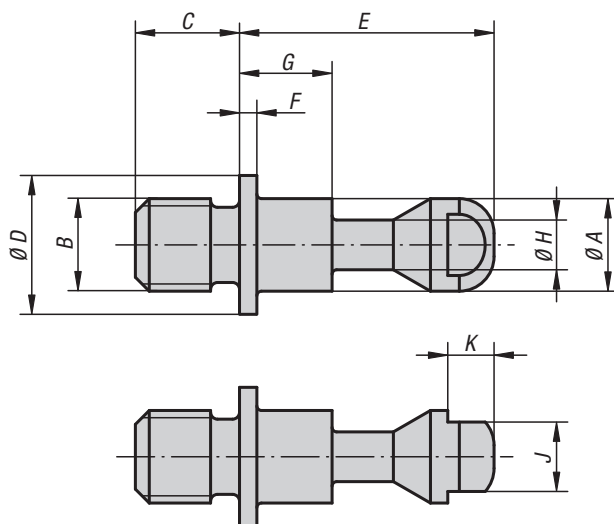


### KIPP Clamping pins (high force)

| Order No.    | A  | B  | C   | D  | E  | F  | G   | H   | J      | K    | T | Suitable for |
|--------------|----|----|-----|----|----|----|-----|-----|--------|------|---|--------------|
| K0911.412100 | 12 | 12 | 100 | 18 | 23 | 38 | 6,5 | M8  | M8x8   | 21,5 | 7 | K0911.506501 |
| K0911.416100 | 12 | 16 | 100 | 24 | 23 | 38 | 6,5 | M8  | M8x8   | 21,5 | 7 | K0911.506501 |
| K0911.516120 | 16 | 16 | 120 | 24 | 29 | 48 | 9,5 | M10 | M10x10 | 28   | 9 | K0911.638001 |
| K0911.520120 | 16 | 20 | 120 | 30 | 29 | 48 | 9,5 | M10 | M10x10 | 28   | 9 | K0911.638001 |

## Clamping screws

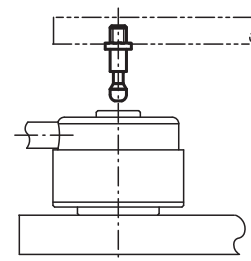
(high force)



**Material:**  
Carbon steel.

**Version:**  
Tempered and black oxidised.

**Sample order:**  
K0911.1412013



### KIPP Clamping screws (high force)

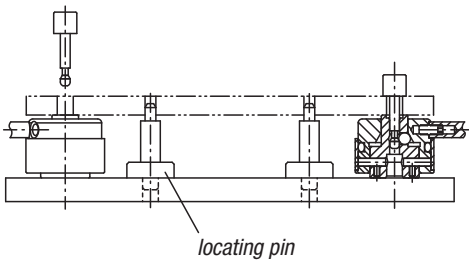
| Order No.     | A  | B   | C  | D  | E  | F   | G    | H   | J  | K | Suitable for |
|---------------|----|-----|----|----|----|-----|------|-----|----|---|--------------|
| K0911.1412013 | 12 | M12 | 13 | 20 | 38 | 2   | 21,5 | 6,5 | 10 | 4 | K0911.506501 |
| K0911.1416017 | 12 | M16 | 17 | 20 | 38 | 2   | 21,5 | 6,5 | 10 | 4 | K0911.506501 |
| K0911.1516017 | 16 | M16 | 17 | 25 | 48 | 2,5 | 28   | 9,5 | 13 | 5 | K0911.638001 |
| K0911.1520021 | 16 | M20 | 21 | 25 | 48 | 2,5 | 28   | 9,5 | 13 | 5 | K0911.638001 |

# How to locate workpiece

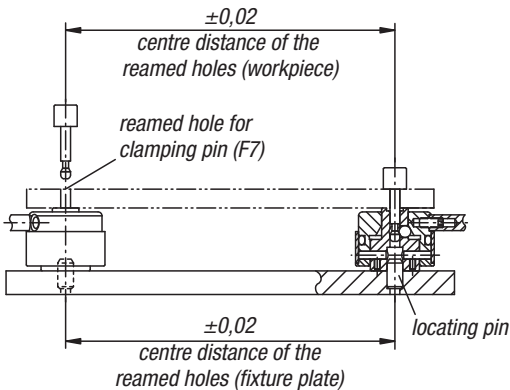


## Workpiece positioning

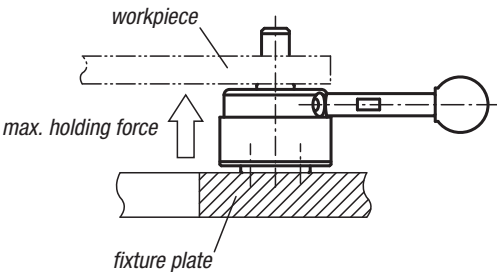
Clamping by means of pull clamp and clamping pin



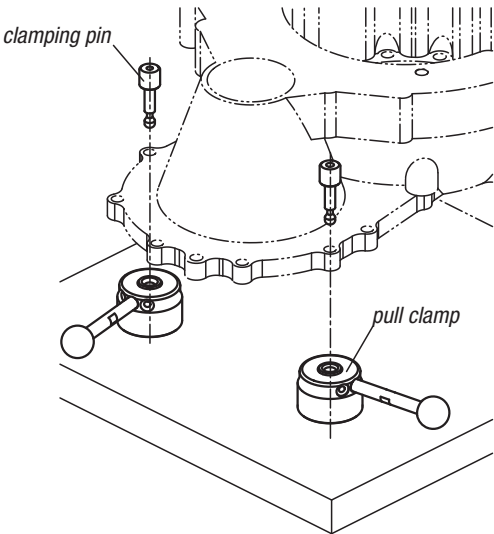
Simultaneous clamping and positioning of a workpiece



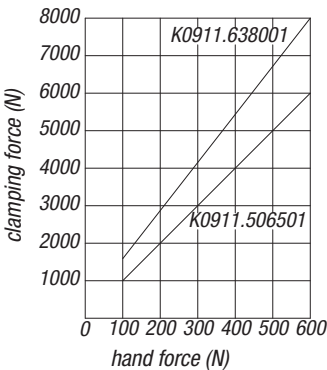
## Holding forces for workpiece processing



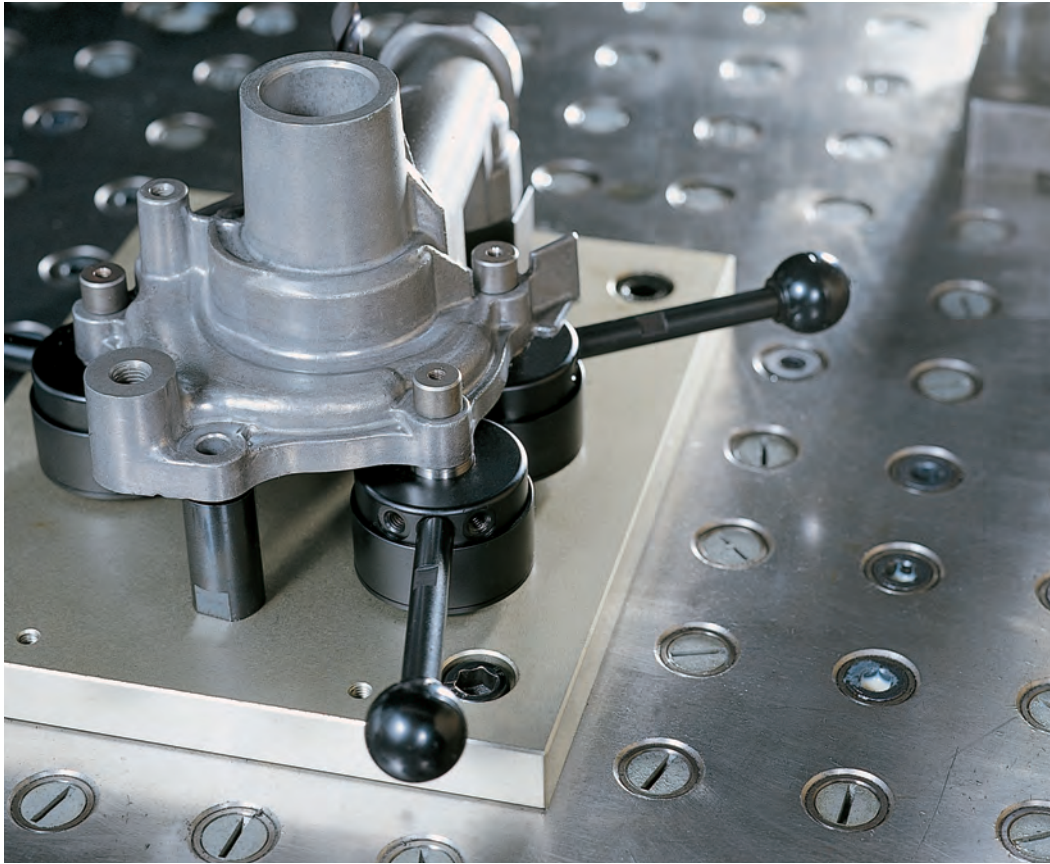
Make sure that no force exceeding the values in the table is affecting the bottom of the workpiece.



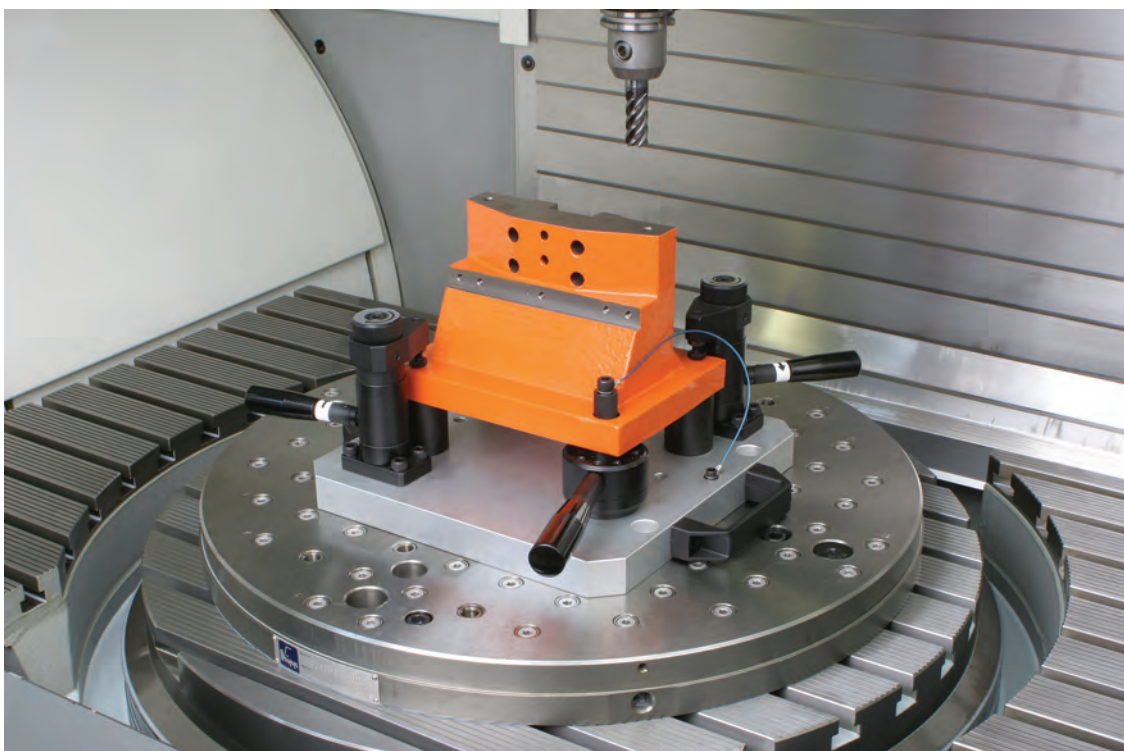
performance curve



## Pull clamps



## Pull clamps + Swing clamps (high force)



## Pull clamps

pneumatic



### Material:

Carbon steel.

### Version:

Clamping element hardened, ground and black oxidised.

### Sample order:

K1390.40075

### Note:

Pneumatic pull clamps are used to clamp workpieces and fixtures.

The draw bolts are screwed onto the workpiece or fixture.

### Clamping procedure:

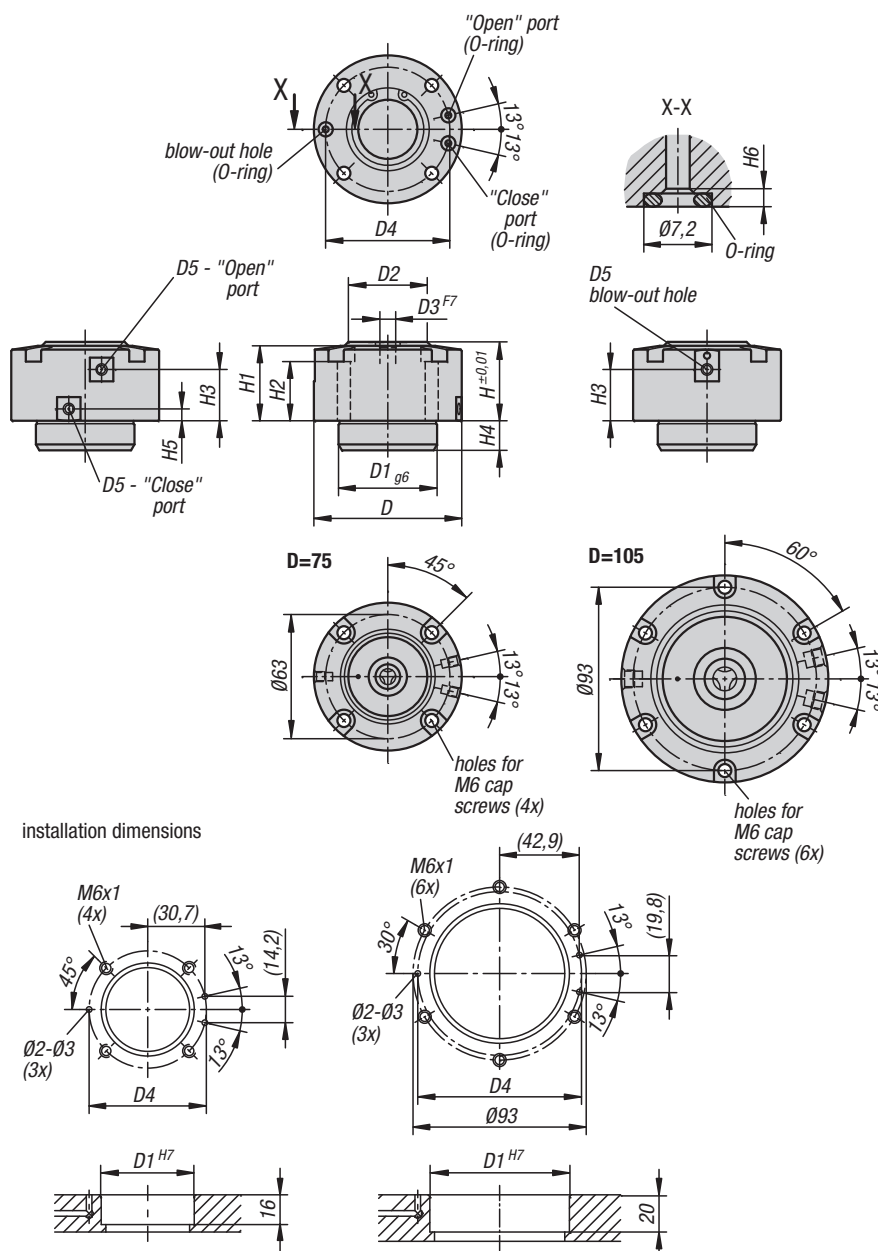
Open the clamping element by applying compressed air to the „open“ connection.

Close clamping element (for clamping) by applying compressed air to the „close“ connection.

The third connection (D5) is used to blow out and clean the seating face. It can also be used to ensure the workpiece is correctly seated, or to ease lifting the workpiece off after the opening procedure.

The system can also be used as a zero-point clamping system.

The clamping forces indicated are based on 0.5 MPa.



## KIPP Pull clamps, pneumatic

| Order No.   | D   | D1 | D2 | D3 | D4 | D5    | H  | H1 | H2 | H3 | H4 | H5 | H6  | Clamping force<br>kN | Operating pressure<br>MPa |
|-------------|-----|----|----|----|----|-------|----|----|----|----|----|----|-----|----------------------|---------------------------|
| K1390.40075 | 75  | 50 | 40 | 8  | 63 | M5    | 40 | 38 | 30 | 26 | 15 | 6  | 1,9 | 1                    | 0,3 - 1,0                 |
| K1390.50105 | 105 | 75 | 63 | 12 | 88 | G 1/8 | 50 | 47 | 35 | 31 | 19 | 10 | 1,9 | 2,5                  | 0,3 - 1,0                 |

## Pull clamps

pneumatic

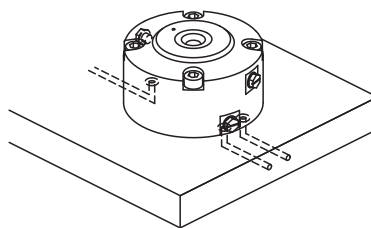
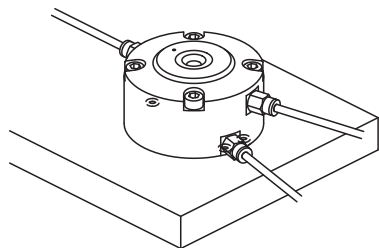
### Mounting instructions:

#### Using the side ports:

- Seal the lower ports with the O-rings provided.
- Check that no air coming is escaping from here.

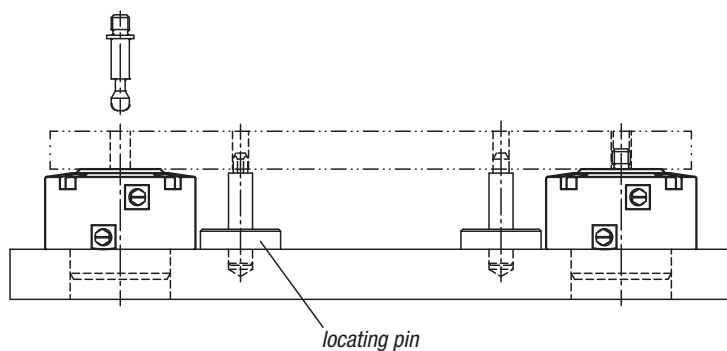
#### Using the lower ports:

- Fit the O-rings provided into the lower port.
- The side ports must be closed.

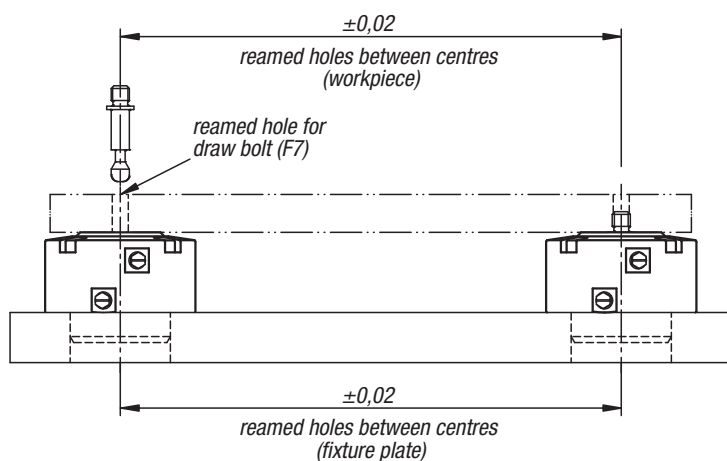


### Positioning the workpiece

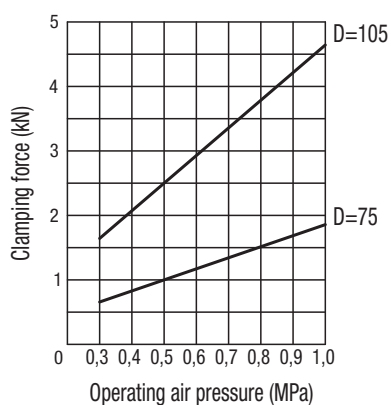
Clamping with pull clamp and draw bolt



Simultaneous clamping and positioning of a workpiece

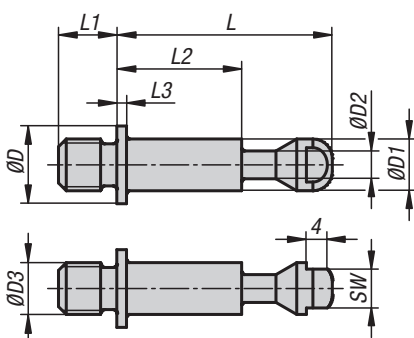


### Performance curve



## Draw bolts

for pneumatic pull clamps



### Material:

Carbon steel.

### Version:

Tempered and black oxidised.

### Sample order:

K1391.108090

### Note:

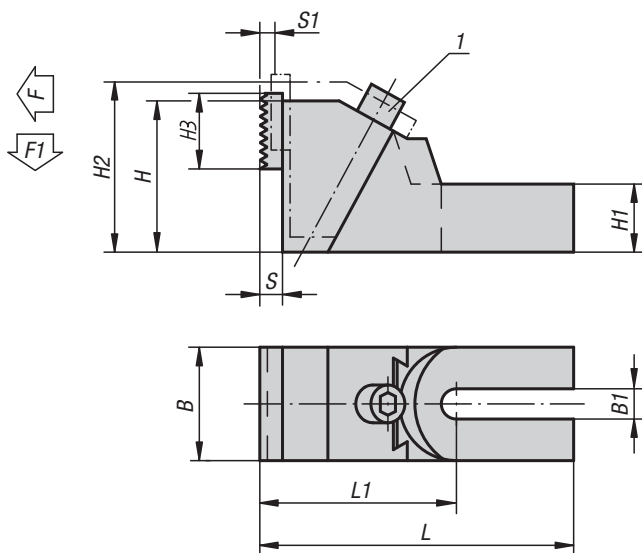
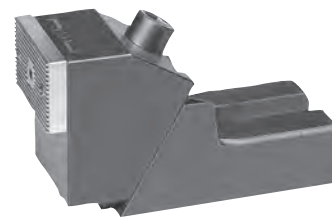
These draw bolts for the pneumatic pull clamp are screwed directly into the workpiece. This enables the workpiece to be quickly connected to and released from the pull clamp over a pneumatic valve.

The system can also be used as a zero-point clamping system.

## KIPP Clamping screws for pneumatic pull clamps

| Order No.    | D  | D1 | D2  | D3  | L  | L1 | L2   | L3  | SW |
|--------------|----|----|-----|-----|----|----|------|-----|----|
| K1391.108090 | 12 | 8  | 4,3 | M8  | 38 | 9  | 24   | 1,5 | 6  |
| K1391.110011 | 12 | 8  | 4,3 | M10 | 38 | 11 | 24   | 1,5 | 6  |
| K1391.112013 | 20 | 12 | 6,5 | M12 | 48 | 13 | 31,5 | 2   | 10 |
| K1391.116017 | 20 | 12 | 6,5 | M16 | 48 | 17 | 31,5 | 2   | 10 |

## Robust side clamps



### Material:

Body malleable iron.  
Jaws mild steel.

### Version:

Black oxidised.  
Jaws case-hardened.

### Sample order:

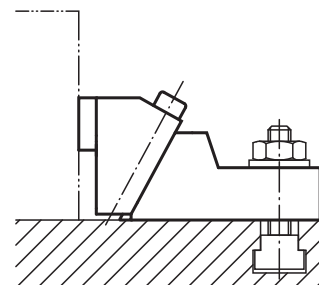
K0891.26

### Note:

The jaws are reversible, smooth side for machined parts, serrated side for rough surfaces. We recommend using two bolts to mount the clamp to the machine table!

### Drawing reference:

1) tightening torque max. 50 Nm

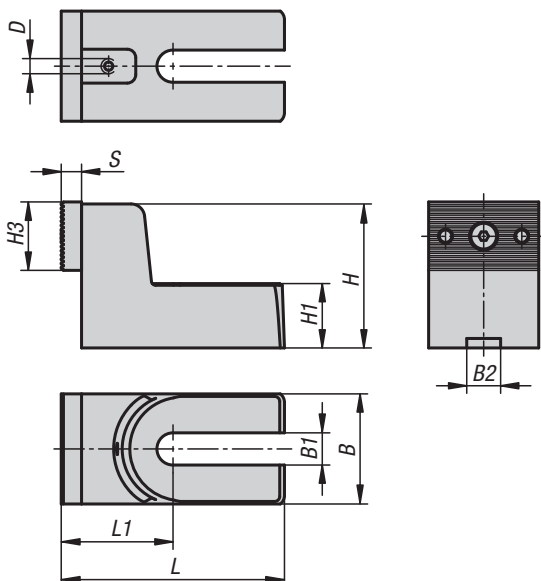


## KIPP Robust side clamps

| Order No. | suitable for slot width | L     | L1    | B  | B1 | H   | H1 | H2  | H3 | S  | S1 | F N   | F1 N |
|-----------|-------------------------|-------|-------|----|----|-----|----|-----|----|----|----|-------|------|
| K0891.19  | 12,14,16,18             | 177,5 | 112,5 | 65 | 19 | 85  | 37 | 99  | 40 | 12 | 8  | 18800 | 2260 |
| K0891.26  | 20,22,24,28,30          | 226,5 | 136,5 | 75 | 26 | 100 | 45 | 118 | 40 | 12 | 11 | 23050 | 2770 |
| K0891.38  | 32,36,42                | 262,5 | 157,5 | 90 | 38 | 120 | 55 | 145 | 40 | 12 | 15 | 29400 | 3330 |

## Fixed jaws

for robust side clamps



### Material:

Cast steel body  
Low-carbon steel jaw plates.

### Version:

Black oxidised.  
Jaw plates case-hardened.

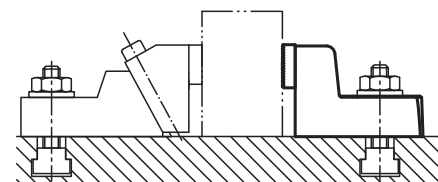
### Sample order:

K1467.19

### Note:

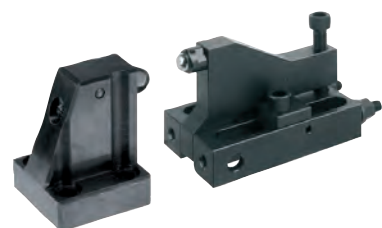
Fixed jaws for workpieces or fixtures which are clamped or fastened on the machine table using a robust side clamp. The jaw plates are reversible, smooth side for machined faces, serrated side for rough faces.

A flat slot key can be used to position the jaw precisely in the machine table slot.



### KIPP Fixed jaws for robust side clamps

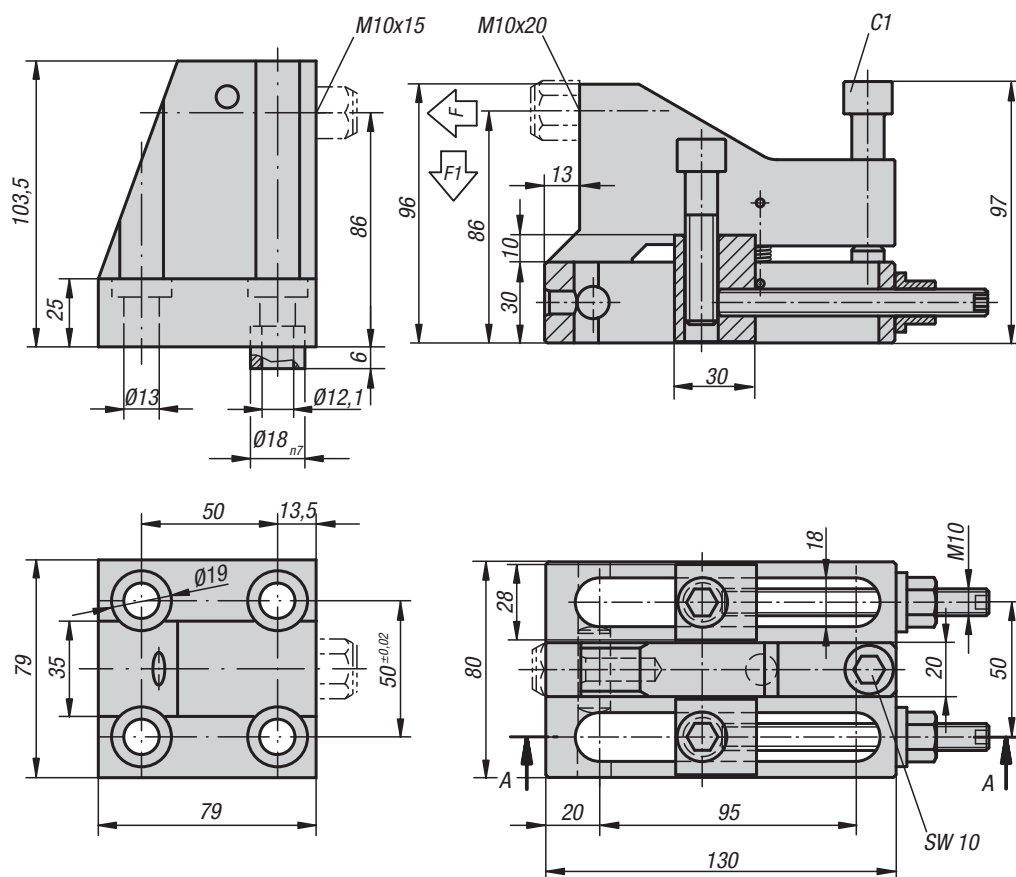
| Order No. | suitable<br>for slot<br>width | B  | B1 | B2 | D  | H   | H1 | H3 | L   | L1   | S  |
|-----------|-------------------------------|----|----|----|----|-----|----|----|-----|------|----|
| K1467.19  | 12,14,16,18                   | 65 | 19 | 20 | M6 | 85  | 38 | 40 | 132 | 66   | 12 |
| K1467.26  | 20,22,24,28,30                | 75 | 26 | 20 | M6 | 100 | 45 | 40 | 177 | 85,5 | 12 |
| K1467.38  | 32,36,42                      | 90 | 38 | 20 | M6 | 120 | 56 | 40 | 211 | 95   | 12 |



K0830.212

K0830.112

A-A



**Material:**

Body steel 1.1191.

**Version:**

Black oxidised.  
Centring bush hardened.

**Sample order:**

**Sample crash:**  
K0830.112  
(self-aligning pad not supplied)

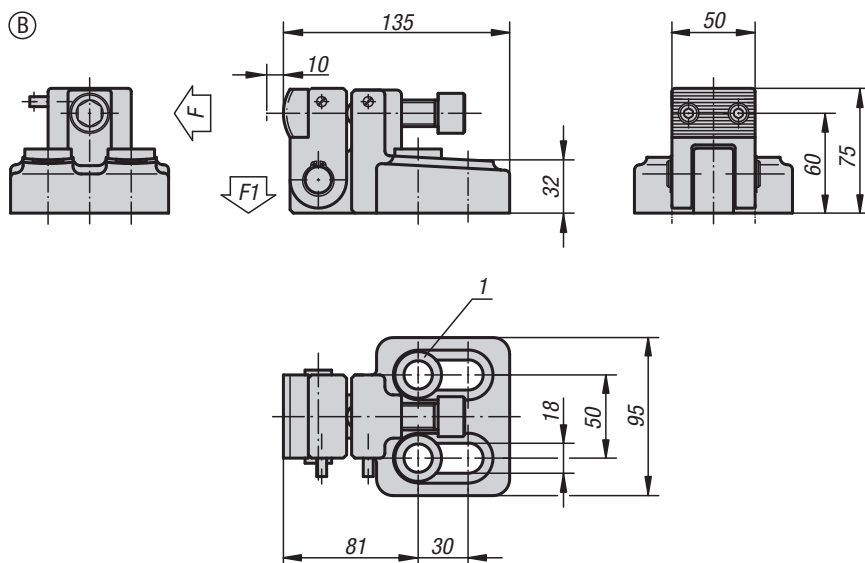
**Note:**

The unit comprises of an adjustable side clamp and a side stop and are used to clamp workpieces with a simultaneous positive down force. The side clamp has two DIN 913 grub screws which can be set to prevent backward slippage during clamping.

## KIPP Side clamps

| Order No. | F<br>N | F1<br>N | Tightening torque<br>of screw C1<br>Nm |
|-----------|--------|---------|----------------------------------------|
| K0830.112 | 25000  | 5000    | 30                                     |
| K0830.212 | 22500  | 4500    | 30                                     |

## Side clamps

**Material:**

Body ductile iron (SG iron).  
Jaw hardened carbon steel.

**Version:**

Painted black.  
Jaw bright.

**Sample order:**

K0831.03

**Note:**

The workpiece is clamped between side clamps and the side stops, simultaneously producing a positive down force.

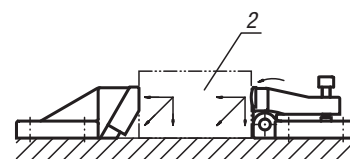
Side clamps and stops are secured with DIN 912 cylinder screws. A secure clamping is ensured when side clamps and side stops are used together.

Form A: 4 M12 washers are supplied.

Form B: 2 conical seats and 2 spherical washers for M12 and M16 are supplied.

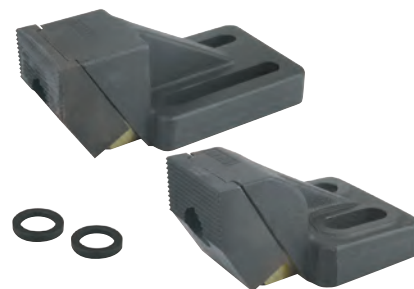
**Drawing reference:**

- 1) spherical washer set for M12 and M16
- 2) workpiece

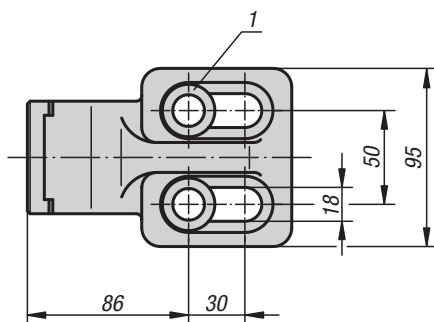
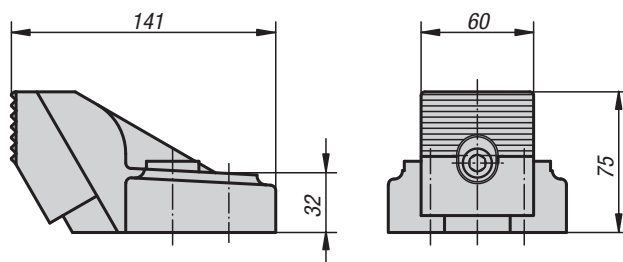
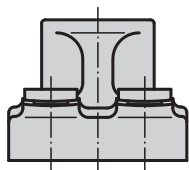
**KIPP Side clamps**

| Order No. | Form | F<br>kN | F1<br>kN | Tightening<br>torque<br>Nm |
|-----------|------|---------|----------|----------------------------|
| K0831.03  | B    | 58      | 2,4      | 150                        |

## Side stops



⑧

**Material:**

Body ductile iron (SG iron).  
Jaw hardened carbon steel.

**Version:**

Painted black.  
Jaw bright.

**Sample order:**

K0832.01

**Note:**

The workpiece is clamped between side clamps and the side stops, simultaneously producing a positive down force.

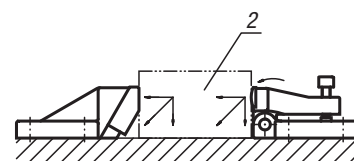
Side clamps and stops are secured with DIN 912 cylinder screws. A secure clamping is ensured when side clamps and side stops are used together.

Form A: 4 M12 washers are supplied.

Form B: 2 conical seats and 2 spherical washers for M12 and M16 are supplied.

**Drawing reference:**

- 1) spherical washer set for M12 and M16
- 2) workpiece

**KIPP Side stops**

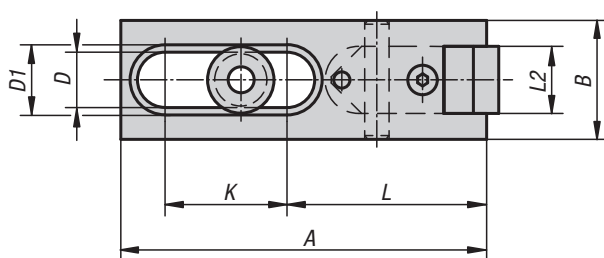
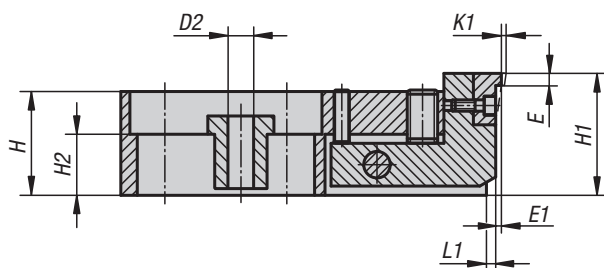
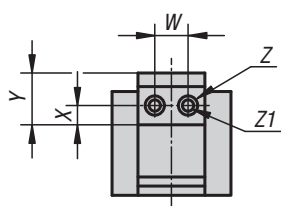
Order No.

Form

K0832.02

B

## Side clamps



### Material:

Body steel.

Jaw mild steel.

Centring bush with collar carbon steel.

### Version:

Black oxidised.

Jaw plates case-hardened.

### Sample order:

K0890.006

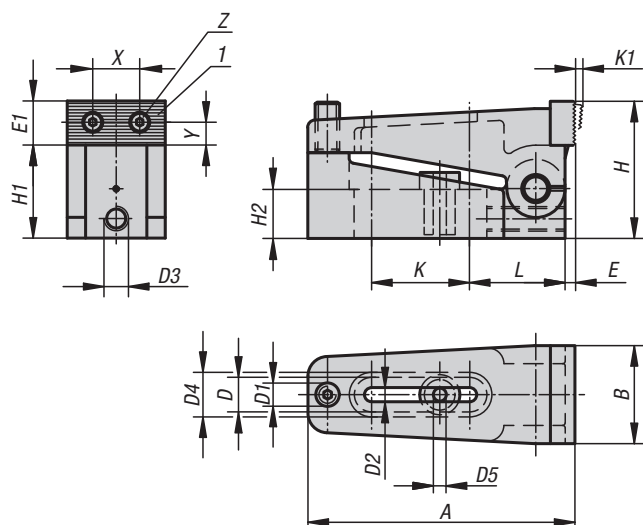
### Note:

These flat design side clamps are ideal for machining low profile workpieces. The hardened jaws also provide positive down force.

## KIPP Side clamps

| Order No. | A   | B  | D    | D1 | D2   | E   | E1  | H  | H1   | H2 | K    | K1  | L    | L1  | L2   | W  | X   | Y  | Z  | Z1  | Clamping force N |
|-----------|-----|----|------|----|------|-----|-----|----|------|----|------|-----|------|-----|------|----|-----|----|----|-----|------------------|
| K0890.006 | 80  | 24 | 12,2 | 16 | 6,5  | 2,5 | 0,6 | 21 | 25,5 | 9  | 25,5 | 2   | 44,5 | 2,5 | 13,5 | 7  | 4,5 | 11 | 5  | 3   | 3000             |
| K0890.010 | 120 | 39 | 18,2 | 24 | 10,5 | 4   | 1   | 34 | 40   | 20 | 40,5 | 2,5 | 65,5 | 4   | 21,5 | 10 | 6   | 15 | 8  | 4,5 | 16000            |
| K0890.016 | 186 | 60 | 26,2 | 35 | 17   | 7   | 1,5 | 51 | 59   | 22 | 60,5 | 4   | 105  | 6,5 | 35,5 | 16 | 9   | 24 | 14 | 9   | 31000            |

## Side clamps



### Material:

Body steel.  
Jaw mild steel.  
Centring bush carbon steel

### Version:

Black oxidised.  
Jaw plates case-hardened.

### Sample order:

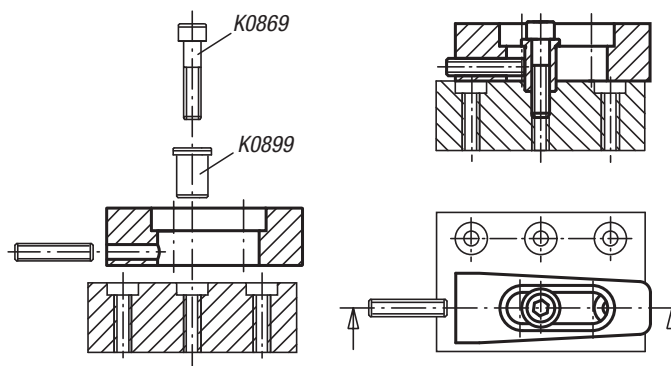
K0033.006

### Note:

The jaws are reversible - smooth side for machined surfaces, serrated side for rough surfaces. A positive down force is also exerted during clamping.

### Drawing reference:

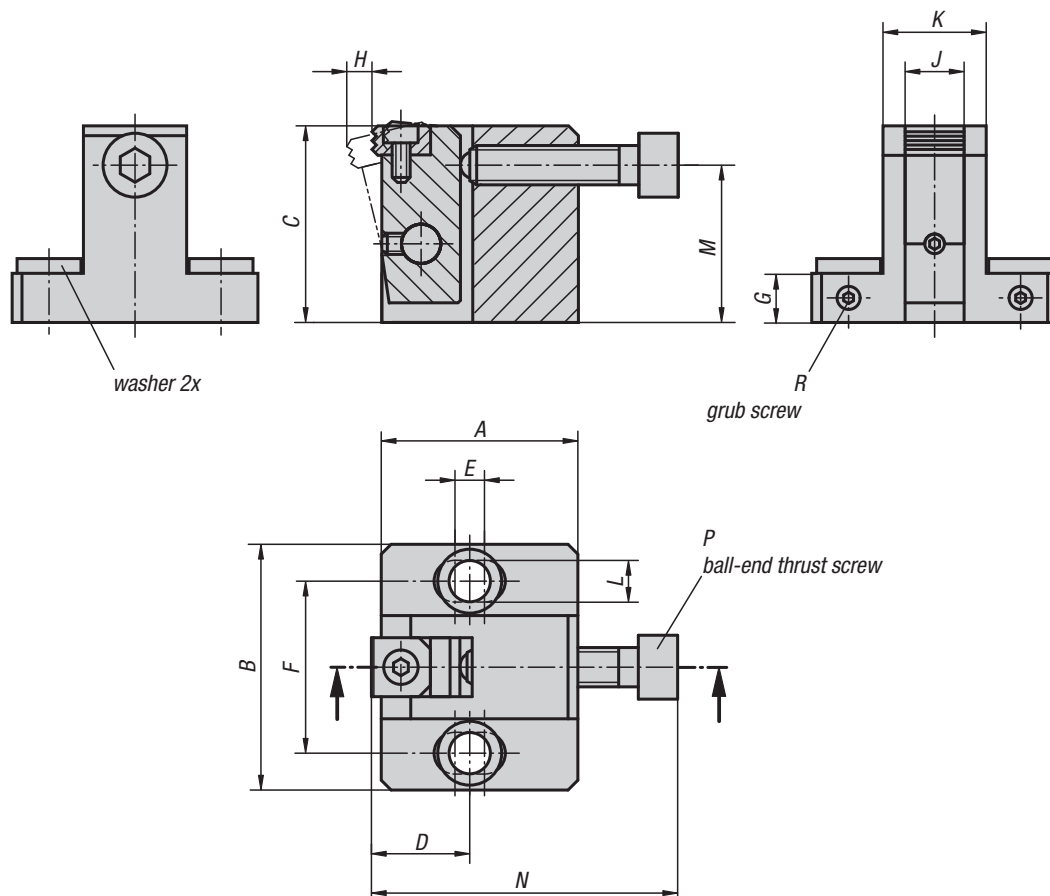
1) reversible jaw



### KIPP Side clamps

| Order No. | A   | B  | D    | D1  | D2 | D3  | D4 | D5   | E   | E1 | H  | H1 | H2   | K    | K1  | L  | X    | Y   | Z  | F=retaining force<br>N |
|-----------|-----|----|------|-----|----|-----|----|------|-----|----|----|----|------|------|-----|----|------|-----|----|------------------------|
| K0033.006 | 73  | 25 | 12,2 | M6  | 7  | M6  | 16 | 6,5  | 2,5 | 11 | 35 | 24 | 12,4 | 25,5 | 2,5 | 27 | 12   | 4,5 | M3 | 10000                  |
| K0033.010 | 110 | 39 | 18,2 | M10 | 11 | M10 | 24 | 10,5 | 4   | 18 | 56 | 38 | 20   | 40,5 | 4   | 39 | 20,5 | 8   | M5 | 40000                  |
| K0033.016 | 170 | 58 | 26,2 | M16 | 17 | M10 | 35 | 17   | 7   | 27 | 85 | 60 | 30   | 60,5 | 7   | 61 | 32   | 13  | M8 | 100000                 |

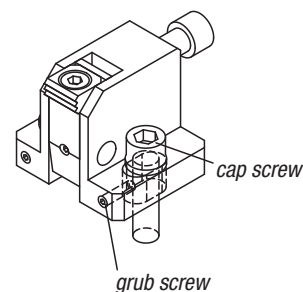
## Side clamps



**Material:**  
Housing and arm carbon steel.  
Jaw tool steel.

**Version:**  
Housing, black oxidised.  
Arm and jaw tempered and black oxidised.

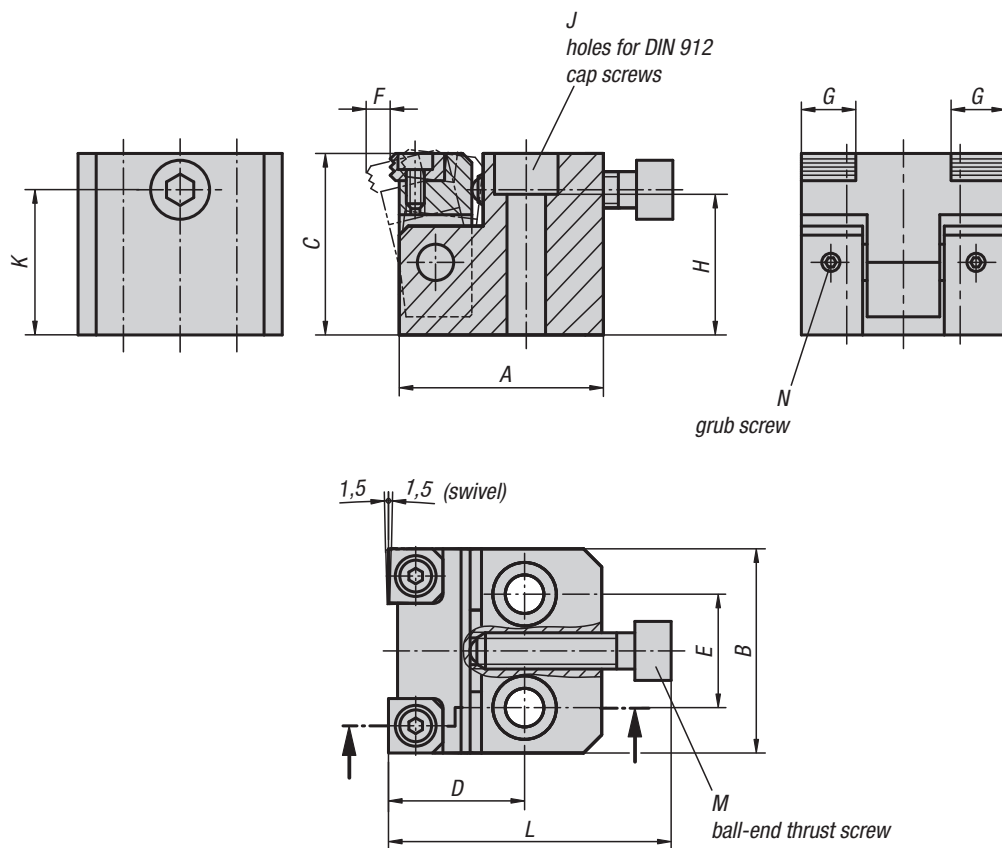
**Sample order:**  
K0929.080400



### KIPP Side clamps

| Order No.    | A  | B  | C  | D  | E  | F  | G  | H    | J  | K  | L   | M  | N    | P        | R     | F=retaining force<br>N | Tightening<br>torque<br>Nm |
|--------------|----|----|----|----|----|----|----|------|----|----|-----|----|------|----------|-------|------------------------|----------------------------|
| K0929.080400 | 40 | 50 | 40 | 20 | 6  | 35 | 10 | 5,3  | 12 | 21 | 8,5 | 32 | 62,5 | M8 x 35  | M4x10 | 15000                  | 25                         |
| K0929.100500 | 50 | 65 | 50 | 25 | 8  | 45 | 12 | 7,1  | 16 | 27 | 11  | 40 | 74   | M10 x 40 | M4x12 | 27000                  | 50                         |
| K0929.120600 | 60 | 70 | 60 | 30 | 10 | 50 | 15 | 8    | 20 | 31 | 13  | 48 | 91   | M12 x 50 | M5x15 | 38000                  | 90                         |
| K0929.160800 | 80 | 90 | 80 | 40 | 15 | 65 | 20 | 10,2 | 25 | 39 | 17  | 64 | 115  | M16 x 60 | M6x20 | 46000                  | 130                        |

## Side clamps



### Material:

Body and arm carbon steel.  
Jaw tool steel.

### Version:

Body black oxidised.  
Arm and jaw tempered and black oxidised.

### Sample order:

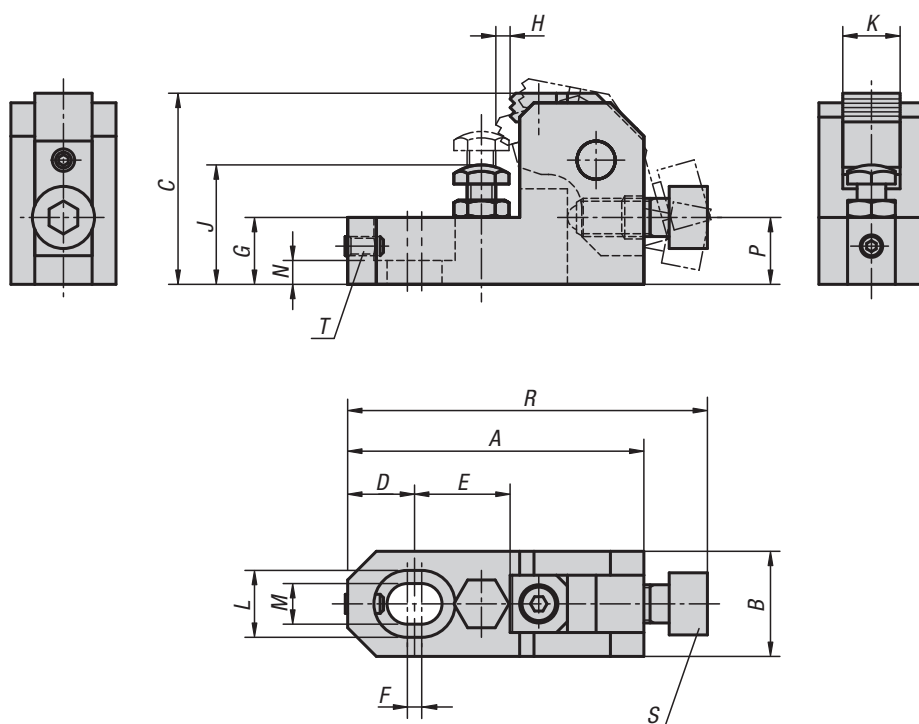
K0930.080400

## KIPP Side clamps

| Order No.    | A  | B  | C  | D  | E  | F   | G  | H  | J   | K  | L    | M      | N    | F=retaining force<br>N | Tightening<br>torque<br>Nm |
|--------------|----|----|----|----|----|-----|----|----|-----|----|------|--------|------|------------------------|----------------------------|
| K0930.080400 | 45 | 45 | 40 | 30 | 25 | 5,3 | 12 | 31 | M8  | 32 | 62,5 | M8x35  | M4x4 | 15000                  | 25                         |
| K0930.100500 | 55 | 55 | 50 | 40 | 30 | 7,1 | 16 | 39 | M10 | 40 | 74   | M10x40 | M4x4 | 27000                  | 50                         |
| K0930.120600 | 65 | 65 | 60 | 45 | 35 | 8   | 20 | 47 | M12 | 48 | 91   | M12x50 | M5x5 | 38000                  | 90                         |

## Side clamps

with rest pad



### Material:

Housing and arm carbon steel.  
Jaw tool steel.

### Version:

Housing tempered and black oxidised.  
Arm black oxidised.  
Jaw tempered and black oxidised.

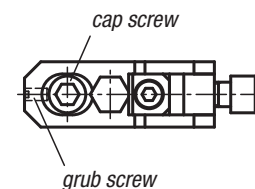
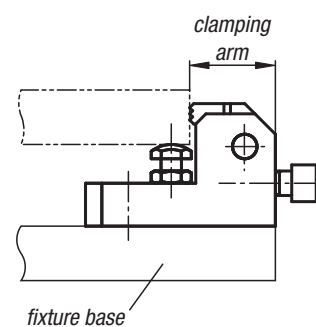
### Sample order:

K0931.02508

### Drawing reference:

T) grub screw

S) ball pressure screw



## KIPP Side clamps with rest pad

| Order No.   | A   | B  | C  | D  | E  | F | G  | H   | J     | K  | L    | M   | N  | P    | R    | S      | T     | F=retaining force<br>N | Tightening<br>torque<br>Nm |
|-------------|-----|----|----|----|----|---|----|-----|-------|----|------|-----|----|------|------|--------|-------|------------------------|----------------------------|
| K0931.02508 | 62  | 22 | 40 | 14 | 20 | 3 | 14 | 3   | 25-32 | 12 | 14   | 8,5 | 5  | 14   | 75,5 | M8x20  | M4x8  | 6000                   | 15                         |
| K0931.03210 | 78  | 25 | 50 | 18 | 25 | 4 | 18 | 3,7 | 32-40 | 16 | 17,5 | 11  | 7  | 17,5 | 95   | M10x25 | M5x10 | 10000                  | 30                         |
| K0931.04012 | 93  | 32 | 60 | 21 | 30 | 5 | 21 | 4,5 | 40-48 | 20 | 20   | 13  | 8  | 21   | 113  | M12x30 | M6x12 | 17000                  | 65                         |
| K0931.04816 | 124 | 38 | 80 | 28 | 40 | 6 | 27 | 6   | 48-63 | 25 | 26   | 17  | 10 | 28   | 151  | M16x40 | M8x16 | 25000                  | 130                        |



A large grid of graph paper for taking notes.

## Side clamps



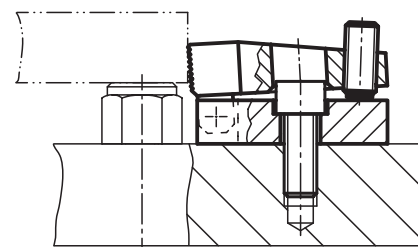
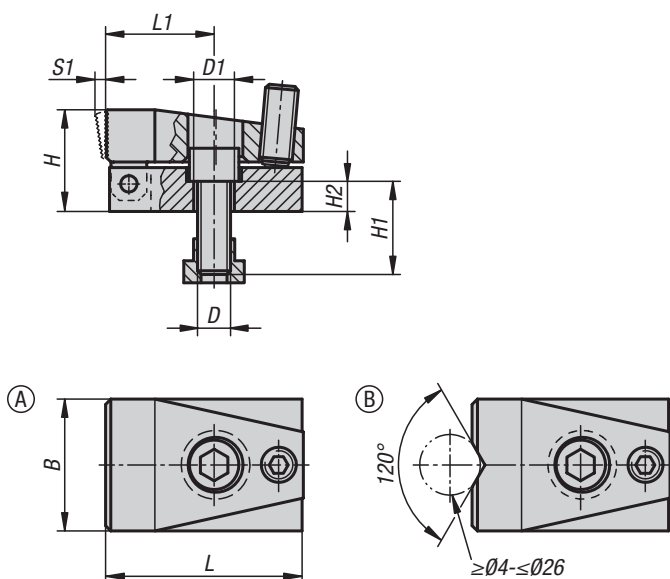
**Material:**  
Steel.

**Version:**  
Case-hardened and black oxidised.

**Sample order:**  
K1386.110

**Note:**  
Tightening the ball-end thrust screw moves the jaw plates forwards. The workpiece is pushed against the fixed stop and simultaneously forced down onto the seating face. The seating face for the workpiece can be mounted directly on the machine table.

**Drawing reference:**  
Form A: with flat jaw  
Form B: with prism jaw

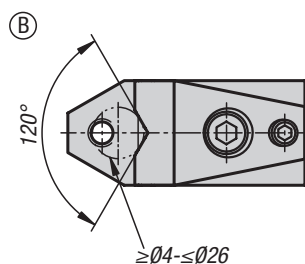
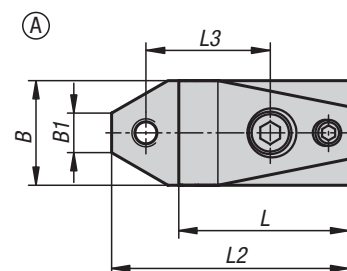
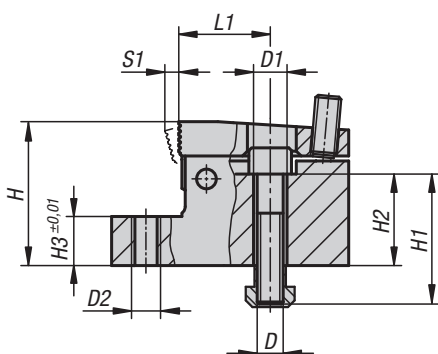
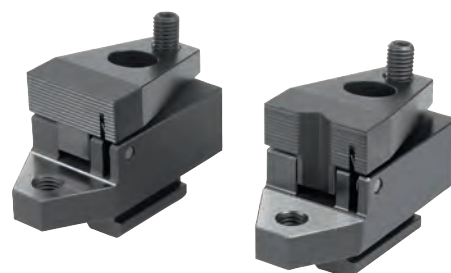


### KIPP Side clamps

| Order No.<br>Form A | Order No.<br>Form B | Slot<br>width | B  | D   | D1   | H  | H1 | H2 | L  | L1 | S1<br>(travel) | Clamping<br>force<br>N | Tightening<br>torque<br>max. Nm |
|---------------------|---------------------|---------------|----|-----|------|----|----|----|----|----|----------------|------------------------|---------------------------------|
| K1386.110           | K1386.210           | 10            | 32 | M8  | 8,4  | 24 | 20 | 8  | 52 | 28 | 3              | 7000                   | 3                               |
| K1386.114           | K1386.214           | 14            | 48 | M12 | 12,5 | 37 | 30 | 11 | 72 | 40 | 4              | 15000                  | 9                               |
| K1386.118           | K1386.218           | 18            | 68 | M16 | 16,5 | 47 | 35 | 13 | 86 | 41 | 7              | 21500                  | 20                              |

## Side clamps

with support



### Material:

Steel.

### Version:

Case-hardened and black oxidised.

### Sample order:

K1387.110

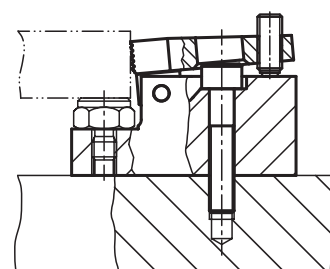
### Note:

Tightening the ball-end thrust screw moves the jaw plates forwards. The workpiece is pushed against the fixed stop and simultaneously forced down onto the seating face. This side clamp has a ground seating face and tapped hole for adjustable support elements.

### Drawing reference:

Form A: with flat jaw

Form B: with prism jaw

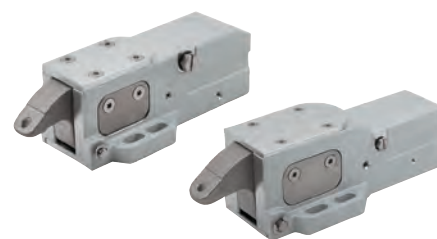


### KIPP Side clamp with support

| Order No.<br>Form A | Order No.<br>Form B | Slot<br>width | B  | B1   | D   | D1  | D2  | H  | H1 | H2 | H3 | L  | L1 | L2   | L3 | S1<br>(travel) | Clamping<br>force<br>N | Tightening<br>torque<br>max. Nm |
|---------------------|---------------------|---------------|----|------|-----|-----|-----|----|----|----|----|----|----|------|----|----------------|------------------------|---------------------------------|
| K1387.110           | K1387.210           | 10            | 32 | 12,1 | M8  | 8,4 | M8  | 44 | 40 | 28 | 15 | 52 | 28 | 72,5 | 38 | 3              | 7000                   | 3                               |
| K1387.114           | K1387.214           | 14            | 48 | 16   | M12 | 13  | M12 | 53 | 45 | 27 | 15 | 72 | 40 | 100  | 55 | 4              | 15000                  | 9                               |
| K1387.118           | K1387.218           | 18            | 68 | 18,8 | M16 | 17  | M16 | 72 | 60 | 38 | 20 | 86 | 41 | 126  | 63 | 7              | 21500                  | 20                              |

## Hold-down clamps

pneumatic



### Material:

Housing aluminium.  
Clamping arm steel.

### Version:

Housing anodised.  
Clamping arm black oxidised.

### Sample order:

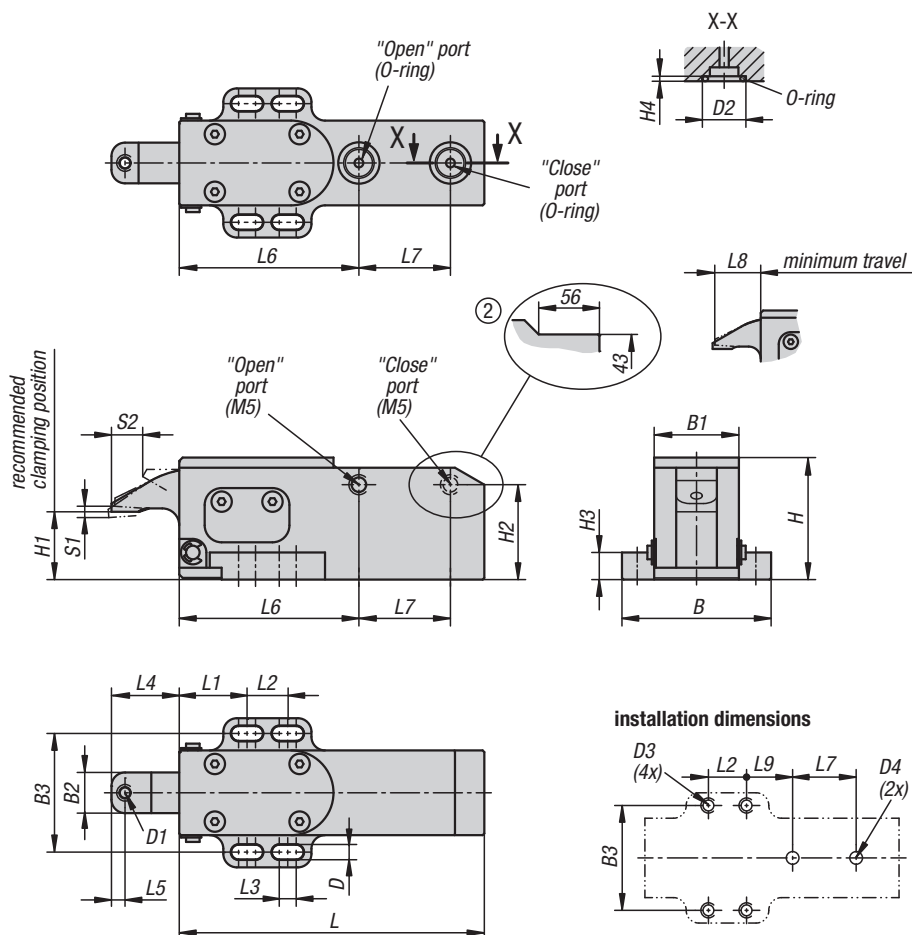
K1409.090

### Note:

The pneumatic hold-down clamp is suitable for clamping workpieces from above. This clamp is operated with standard pressure compressed air. The large swivel angle of the clamping arm makes it easy to insert and remove the workpieces without any obstructions, guaranteeing optimum accessibility to the workpiece. The block design of the housing offers universal fastening possibilities, which means that the clamp can be optimally adapted to the workpiece being clamped. Self-aligning pads with a smooth or serrated faces can be fitted in the clamping arm, enabling rough or machined workpieces to be clamped.

These pneumatic clamps can be placed in multiple positions on the workpiece and operated in any particular order. They can be controlled manually or automatically. As these clamps are pneumatically actuated, they relieve the operator, particularly where frequent clamping processes are carried out.

The clamping forces indicated are based on 0.5 MPa.



## KIPP Pneumatic hold-down clamps

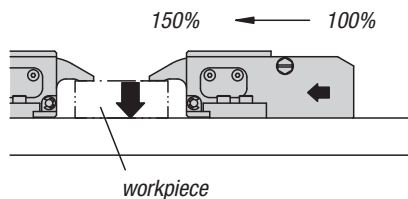
| Order No. | Size | B  | B1 | B2 | B3 | D   | D1 | D2   | D3 | D4  | H  | H1 | H2 | H3 | H4  |
|-----------|------|----|----|----|----|-----|----|------|----|-----|----|----|----|----|-----|
| K1409.090 | 1    | 44 | 25 | 12 | 35 | 4,5 | M4 | 12,2 | M4 | 2-4 | 36 | 20 | 28 | 8  | 1,9 |
| K1409.135 | 2    | 65 | 40 | 18 | 53 | 6,5 | M6 | 18   | M6 | 2-6 | 54 | 30 | 33 | 12 | 2,4 |

| Order No. | L   | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8   | L9 | S1<br>(travel) | S2 | F=retaining force<br>N | Operating<br>pressure<br>MPa |
|-----------|-----|----|----|----|----|----|----|----|------|----|----------------|----|------------------------|------------------------------|
| K1409.090 | 90  | 20 | 12 | 5  | 20 | 4  | 53 | 27 | 19   | 21 | 2              | 9  | 140                    | 0,3 - 1,0                    |
| K1409.135 | 135 | 30 | 20 | 8  | 32 | 6  | 84 | 38 | 30,5 | 34 | 3              | 15 | 320                    | 0,3 - 1,0                    |

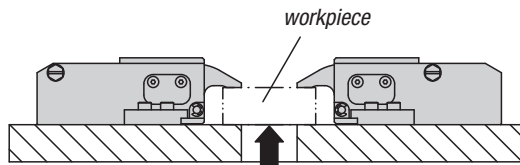
# Hold-down clamps

pneumatic

The clamping mechanism increases the clamping force by 150% compared to a pneumatic cylinder of the same size.



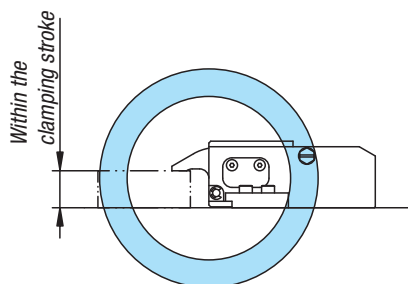
The clamping arm is operated via a wedge mechanism. If the air pressure drops due to an air leak, the wedge mechanism prevents the clamping force from dropping rapidly.



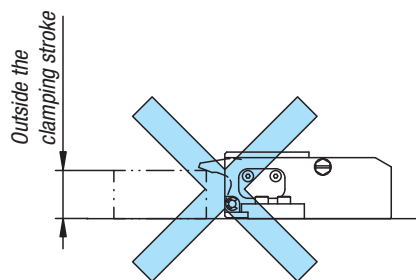
**Permissible counterforce  
(per clamping element)**

| Size | Permissible clamping force (kN) |
|------|---------------------------------|
| 1    | 1                               |
| 2    | 2,2                             |

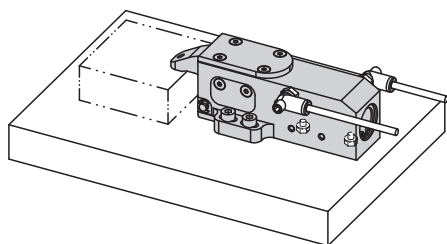
Use side clamp within the clamping travel.



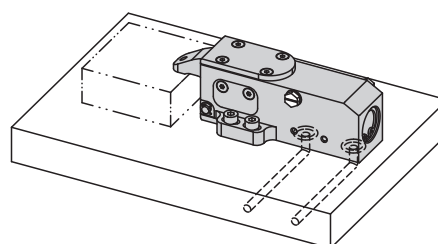
The wedge mechanism is used to clamp the workpiece securely in place.



The wedge mechanism will not function.

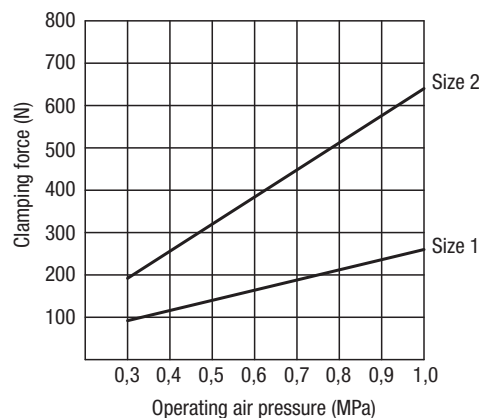


Side port as shown.  
Lower ports must be sealed.

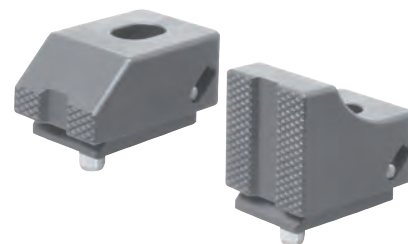
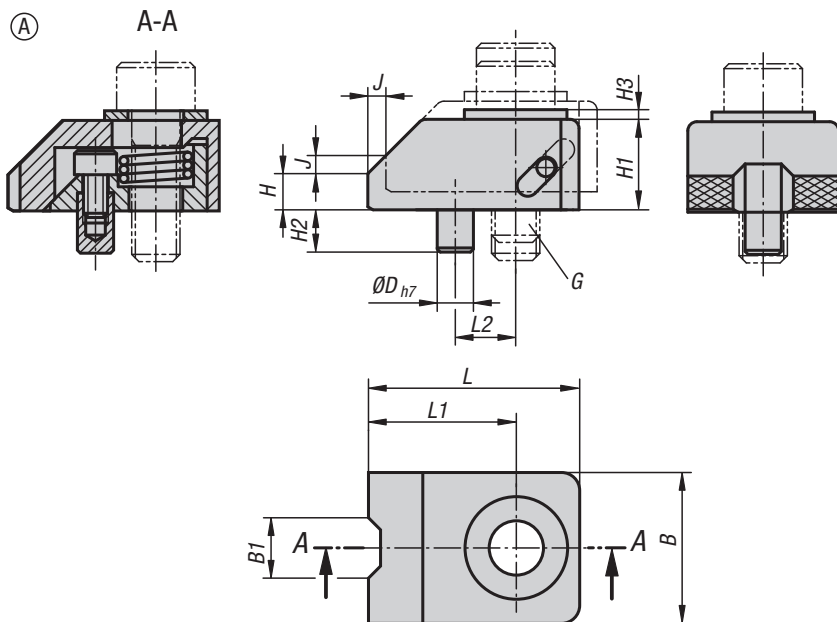


Connection from below.  
The side ports must be sealed.

**Performance curve**



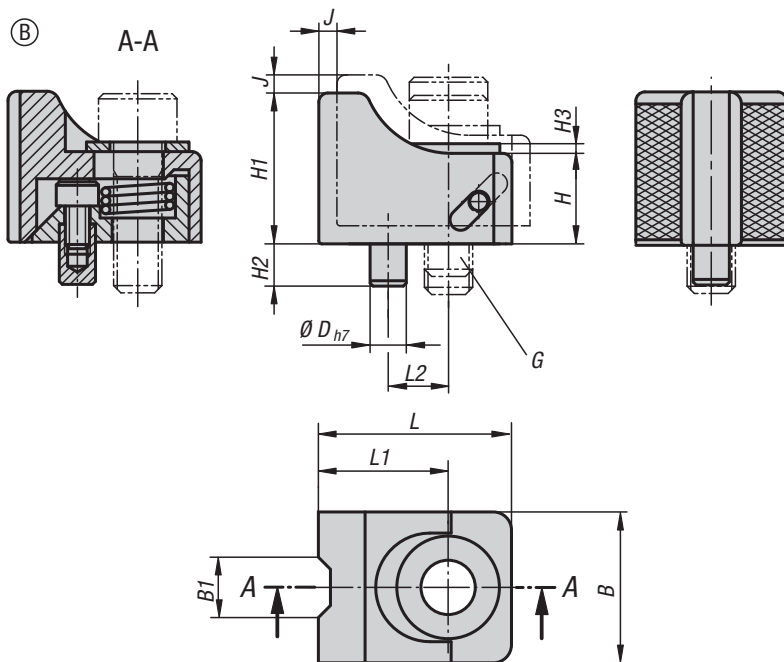
## Toe clamps



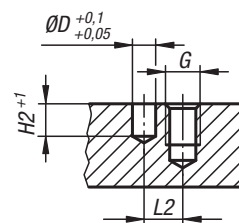
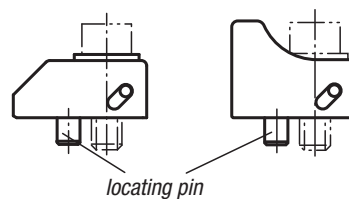
**Material:**  
Carbon steel.

**Version:**  
Tempered and black oxidised.

**Sample order:**  
K0932.0806



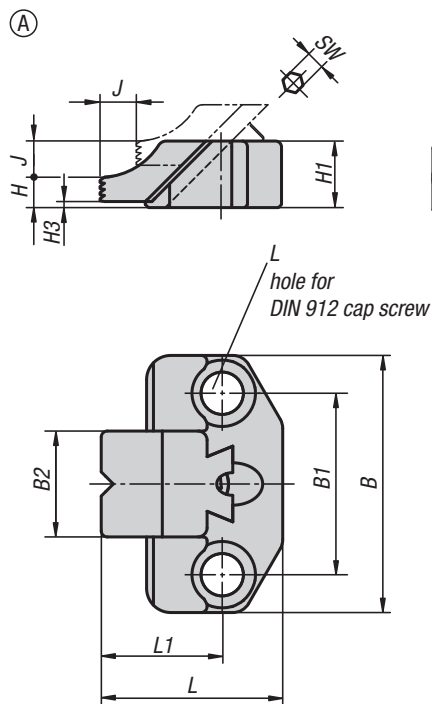
mounting instructions:



### KIPP Toe clamps

| Order No.  | Form | B  | B1 | D  | G   | H  | H1 | H2 | H3  | J | L  | L1   | L2 | Clamping force<br>N | Tightening torque<br>Nm |
|------------|------|----|----|----|-----|----|----|----|-----|---|----|------|----|---------------------|-------------------------|
| K0932.0806 | A    | 25 | 10 | 6  | M8  | 6  | 15 | 7  | 1,6 | 3 | 35 | 24,5 | 10 | 7000                | 25                      |
| K0932.1008 | A    | 30 | 11 | 6  | M10 | 8  | 19 | 7  | 2   | 4 | 43 | 29   | 12 | 8500                | 50                      |
| K0932.1209 | A    | 35 | 12 | 8  | M12 | 9  | 23 | 10 | 2,3 | 5 | 54 | 37   | 16 | 20000               | 90                      |
| K0932.1610 | A    | 40 | 14 | 10 | M16 | 10 | 25 | 10 | 3,2 | 6 | 65 | 45   | 20 | 40000               | 200                     |
| K0932.0825 | B    | 25 | 10 | 6  | M8  | 15 | 25 | 7  | 1,6 | 3 | 32 | 21,5 | 10 | 7000                | 25                      |
| K0932.1032 | B    | 30 | 11 | 6  | M10 | 19 | 32 | 7  | 2   | 4 | 40 | 26   | 12 | 8500                | 50                      |
| K0932.1238 | B    | 35 | 12 | 8  | M12 | 23 | 38 | 10 | 2,3 | 5 | 50 | 33   | 16 | 20000               | 90                      |
| K0932.1645 | B    | 40 | 14 | 10 | M16 | 25 | 45 | 10 | 3,2 | 6 | 60 | 40   | 20 | 40000               | 200                     |

## Toe clamps

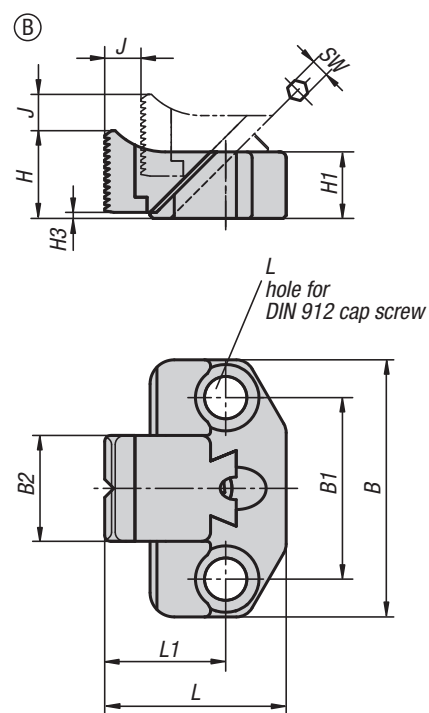


### Material, version:

Body carbon steel, tempered and black oxidised.  
Jaw carbon steel, black oxidised, corners tempered.

### Sample order:

K0933.0808

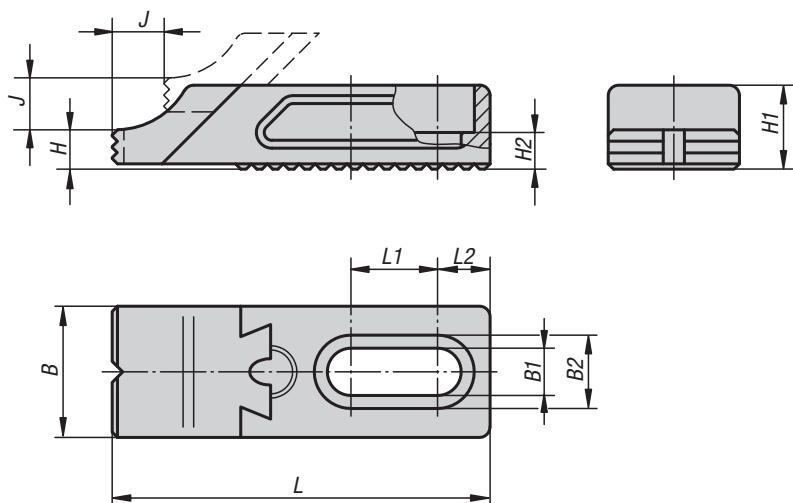


## KIPP Toe clamps

| Order No.  | Form | B   | B1 | B2 | G   | H    | H1 | H2 | H3  | J  | L    | L1 | SW | Clamping force<br>N | Tightening torque<br>Nm |
|------------|------|-----|----|----|-----|------|----|----|-----|----|------|----|----|---------------------|-------------------------|
| K0933.0808 | A    | 65  | 45 | 25 | M8  | 7,5  | 16 | 7  | 1,5 | 7  | 39,5 | 25 | 4  | 4000                | 8                       |
| K0933.1210 | A    | 85  | 60 | 35 | M12 | 10   | 22 | 9  | 2   | 12 | 60   | 40 | 6  | 9000                | 26                      |
| K0933.1614 | A    | 100 | 70 | 40 | M16 | 14   | 30 | 13 | 2   | 14 | 77   | 50 | 8  | 17000               | 60                      |
| K0933.0820 | B    | 65  | 45 | 25 | M8  | 19,5 | 16 | 7  | 1,5 | 7  | 39,5 | 25 | 4  | 4000                | 8                       |
| K0933.1229 | B    | 85  | 60 | 35 | M12 | 29   | 22 | 9  | 2   | 12 | 60   | 40 | 6  | 9000                | 26                      |
| K0933.1638 | B    | 100 | 70 | 40 | M16 | 38   | 30 | 13 | 2   | 14 | 77   | 50 | 8  | 17000               | 60                      |

## Toe clamps

stepped



### Material, version:

Body carbon steel, black oxidised.  
Jaw carbon steel, tempered, black oxidised.

### Sample order:

K0853.92008016

### Note:

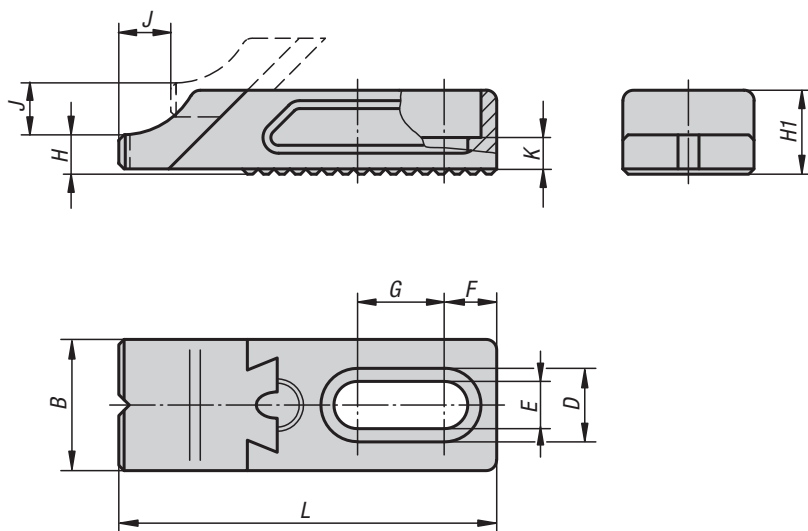
The adjustable toe clamp is used together with the rack plate CL.

### KIPP Toe clamps, stepped

| Order No.      | B  | B1  | B2 | H   | H1 | H2 | J  | L   | L1   | L2   | F1<br>kN | M1<br>Nm |
|----------------|----|-----|----|-----|----|----|----|-----|------|------|----------|----------|
| K0853.92008016 | 25 | 8,5 | 14 | 7,5 | 16 | 7  | 7  | 72  | 16,5 | 10   | 3,6      | 6,5      |
| K0853.92012022 | 35 | 13  | 20 | 10  | 22 | 9  | 12 | 105 | 26,5 | 13,5 | 7,4      | 19       |
| K0853.92016030 | 40 | 17  | 26 | 14  | 30 | 13 | 14 | 137 | 30   | 17,5 | 11,7     | 32       |

## Toe clamps

stepped



### Material, version:

Body carbon steel, black oxidised.  
Jaw carbon steel, tempered.  
The jaw surface is ground.

### Sample order:

K0853.92108016

### Note:

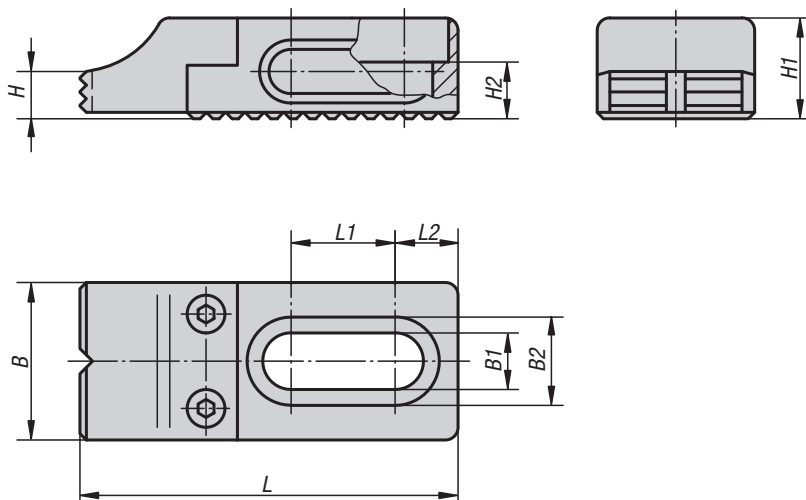
These toe clamps are used together with the rack plate CL.

### KIPP Toe clamps, stepped

| Order No.      | B  | B1  | B2 | H   | H1 | H2 | J  | L   | L1   | L2   | F1<br>kN | M1<br>Nm |
|----------------|----|-----|----|-----|----|----|----|-----|------|------|----------|----------|
| K0853.92108016 | 25 | 8,5 | 14 | 7,5 | 16 | 7  | 7  | 72  | 16,5 | 10   | 3,6      | 6,5      |
| K0853.92112022 | 35 | 13  | 20 | 10  | 22 | 9  | 12 | 105 | 26,5 | 13,5 | 7,4      | 19       |
| K0853.92116030 | 40 | 17  | 26 | 14  | 30 | 13 | 14 | 137 | 30   | 17,5 | 11,7     | 32       |

## Toe stops

stepped



### Material, version:

Body carbon steel, black oxidised.

Jaw carbon steel, tempered and black oxidised.

### Sample order:

K0853.96008016

### Note:

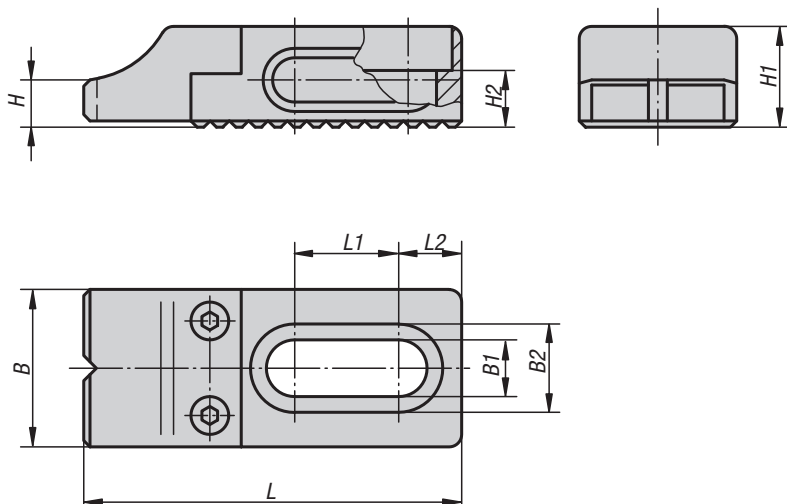
The adjustable stop is used together with the rack plate CL.

### KIPP Toe stops, stepped

| Order No.      | B  | B1  | B2 | H   | H1 | H2 | L   | L1   | L2   |
|----------------|----|-----|----|-----|----|----|-----|------|------|
| K0853.96008016 | 25 | 8,5 | 14 | 7,5 | 16 | 7  | 60  | 16,5 | 10   |
| K0853.96012022 | 35 | 13  | 20 | 10  | 22 | 10 | 90  | 26,5 | 13,5 |
| K0853.96016030 | 40 | 17  | 26 | 14  | 30 | 13 | 115 | 30   | 17,5 |

## Toe stops

stepped



### Material, version:

Body carbon steel, black oxidised.

Jaw carbon steel, tempered and black oxidised.

The jaw surface is ground.

### Sample order:

K0853.96108016

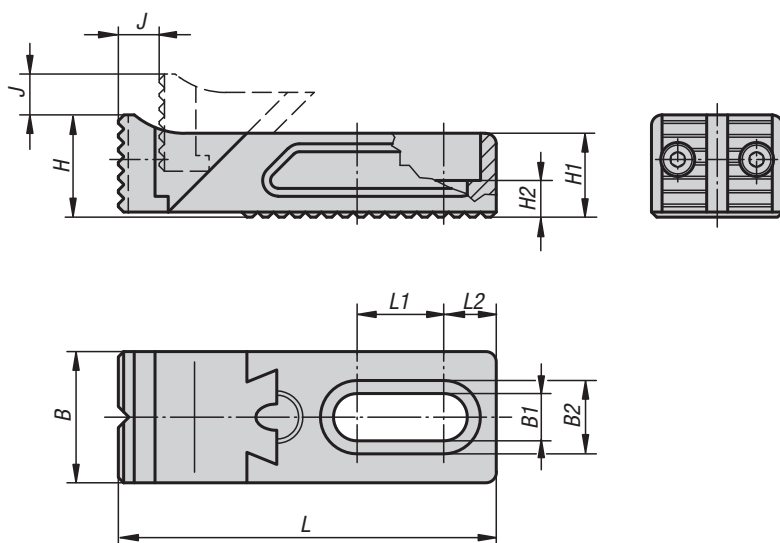
### Note:

The adjustable stop is used together with the rack plate CL.

### KIPP Toe stops, stepped

| Order No.      | B  | B1  | B2 | H   | H1 | H2 | L   | L1   | L2   |
|----------------|----|-----|----|-----|----|----|-----|------|------|
| K0853.96108016 | 25 | 8,5 | 14 | 7,5 | 16 | 7  | 60  | 16,5 | 10   |
| K0853.96112022 | 35 | 13  | 20 | 10  | 22 | 10 | 90  | 26,5 | 13,5 |
| K0853.96116030 | 40 | 17  | 26 | 14  | 30 | 13 | 115 | 30   | 17,5 |

## Toe clamps



### Material, version:

Body carbon steel, black oxidised.

Jaw carbon steel, tempered and black oxidised.

### Sample order:

K0853.93008016

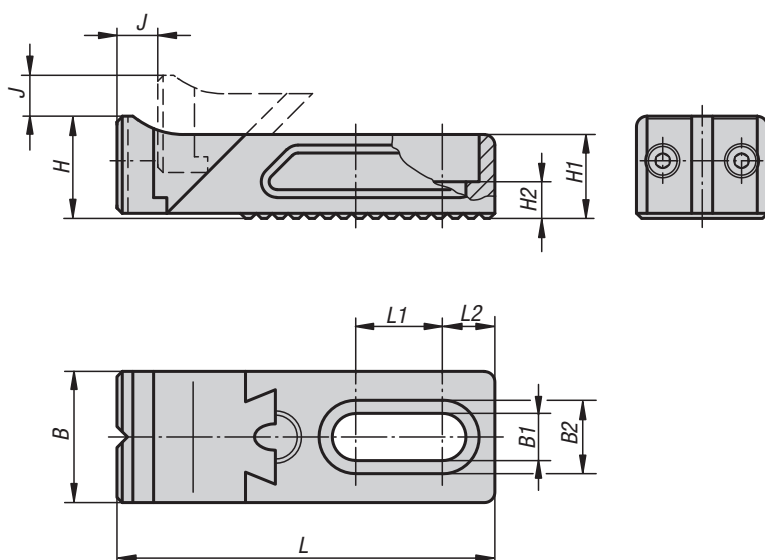
### Note:

The adjustable toe clamp is used together with the rack plate CL.

### KIPP Toe clamps

| Order No.      | B  | B1  | B2 | H    | H1 | H2 | J  | L   | L1   | L2   | F1<br>kN | M1<br>Nm |
|----------------|----|-----|----|------|----|----|----|-----|------|------|----------|----------|
| K0853.93008016 | 25 | 8,5 | 14 | 19,5 | 16 | 7  | 7  | 72  | 16,5 | 10   | 3,6      | 6,5      |
| K0853.93012022 | 35 | 13  | 20 | 29   | 22 | 9  | 12 | 105 | 26,5 | 13,5 | 7,4      | 19       |
| K0853.93016030 | 40 | 17  | 26 | 39   | 30 | 13 | 14 | 137 | 30   | 17,5 | 11,7     | 32       |

## Toe clamps



### Material, version:

Body carbon steel, black oxidised.

Jaw carbon steel, tempered and black oxidised.

The jaw surface is ground.

### Sample order:

K0853.93108016

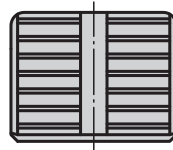
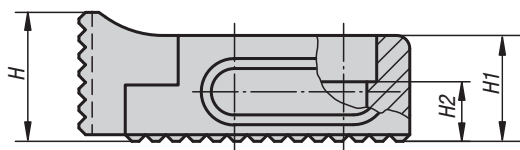
### Note:

The adjustable toe clamp is used together with the rack plate CL.

### KIPP Toe clamps

| Order No.      | B  | B1  | B2 | H    | H1 | H2 | J  | L   | L1   | L2   | F1<br>kN | M1<br>Nm |
|----------------|----|-----|----|------|----|----|----|-----|------|------|----------|----------|
| K0853.93108016 | 25 | 8,5 | 14 | 19,5 | 16 | 7  | 7  | 72  | 16,5 | 10   | 3,6      | 6,5      |
| K0853.93112022 | 35 | 13  | 20 | 29   | 22 | 9  | 12 | 105 | 26,5 | 13,5 | 7,4      | 19       |
| K0853.93116030 | 40 | 17  | 26 | 39   | 30 | 13 | 14 | 137 | 30   | 17,5 | 11,7     | 32       |

## Toe stops



### Material, version:

Body carbon steel, black oxidised.

Jaw carbon steel, tempered and black oxidised.

### Sample order:

K0853.97008016

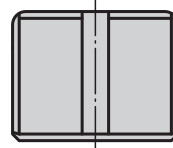
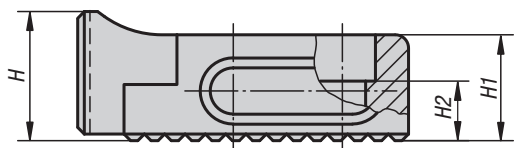
### Note:

The adjustable stop is used together with the rack plate CL.

### KIPP Toe stops

| Order No.      | B  | B1  | B2 | H    | H1 | H2 | L  | L1   | L2   |
|----------------|----|-----|----|------|----|----|----|------|------|
| K0853.97008016 | 25 | 8,5 | 14 | 19,5 | 16 | 7  | 50 | 16,5 | 10   |
| K0853.97012022 | 35 | 13  | 20 | 29   | 22 | 10 | 75 | 20   | 13,5 |
| K0853.97016030 | 40 | 17  | 26 | 39   | 30 | 13 | 95 | 30   | 17,5 |

## Toe stops



### Material, version:

Body carbon steel, black oxidised.

Jaw carbon steel, tempered and black oxidised.

The jaw surface is ground.

### Sample order:

K0853.97108016

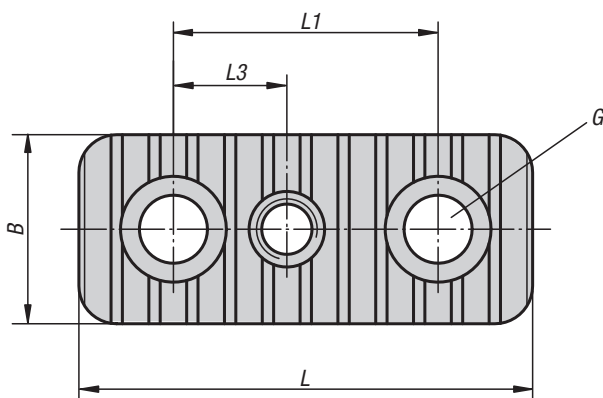
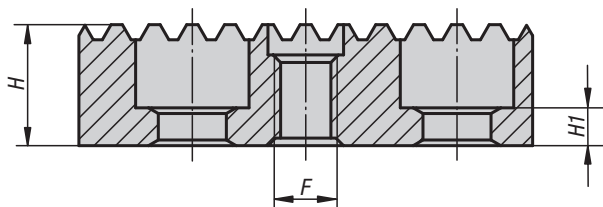
### Note:

The adjustable stop is used together with the rack plate CL.

### KIPP Toe stops

| Order No.      | B  | B1  | B2 | H    | H1 | H2 | L  | L1   | L2   |
|----------------|----|-----|----|------|----|----|----|------|------|
| K0853.97108016 | 25 | 8,5 | 14 | 19,5 | 16 | 7  | 50 | 16,5 | 10   |
| K0853.97112022 | 35 | 13  | 20 | 29   | 22 | 10 | 75 | 26,5 | 13,5 |
| K0853.97116030 | 40 | 17  | 26 | 39   | 30 | 13 | 95 | 30   | 17,5 |

## Rack plates

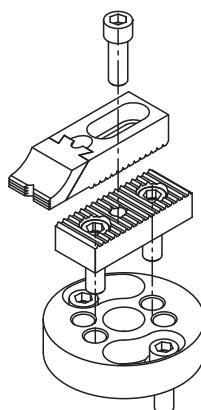


**Material:**  
Carbon steel.

**Version:**  
Black oxidised.

**Sample order:**  
K0853.94008116

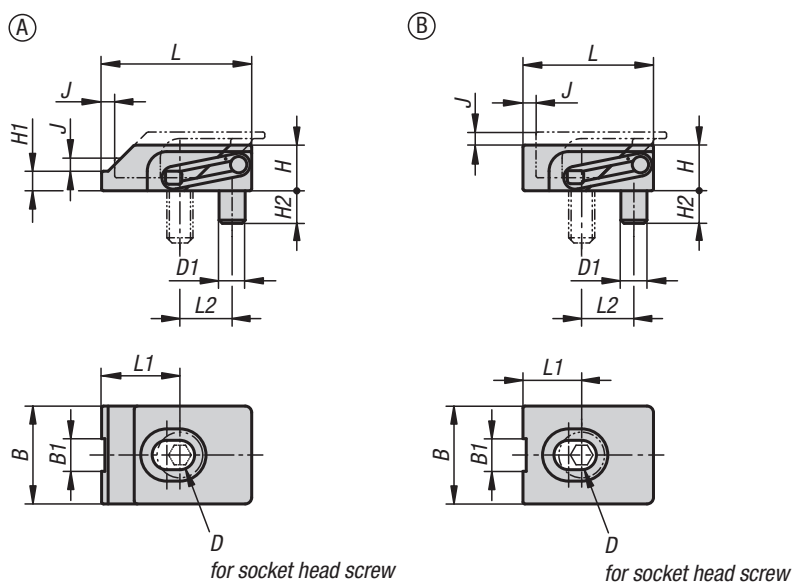
**Note:**  
Rack plates are used to position stepped and standard toe clamps.  
The holes (G) for DIN 912 socket head screws is used to fasten the rack plate to suitable base elements. The tapped hole (F) is used to secure the toe clamps.



### KIPP Rack plates

| Order No.      | B  | F   | G<br>hole for<br>DIN 912 cap screw | H  | H1 | L  | L1 | L3   |
|----------------|----|-----|------------------------------------|----|----|----|----|------|
| K0853.94008116 | 25 | M8  | M8                                 | 16 | 7  | 50 | 25 | 12,5 |
| K0853.94008120 | 25 | M8  | M8                                 | 20 | 9  | 50 | 25 | 12,5 |
| K0853.94008125 | 25 | M8  | M8                                 | 25 | 13 | 50 | 25 | 12,5 |
| K0853.94008132 | 25 | M8  | M8                                 | 32 | 20 | 50 | 25 | 12,5 |
| K0853.94008140 | 25 | M8  | M8                                 | 40 | 28 | 50 | 25 | 12,5 |
| K0853.94012020 | 35 | M12 | M12                                | 20 | 5  | 85 | 50 | 20   |
| K0853.94012025 | 35 | M12 | M12                                | 25 | 12 | 85 | 50 | 20   |
| K0853.94012032 | 35 | M12 | M12                                | 32 | 12 | 85 | 50 | 20   |
| K0853.94012040 | 35 | M12 | M12                                | 40 | 12 | 85 | 50 | 20   |
| K0853.94012050 | 35 | M12 | M12                                | 50 | 12 | 85 | 50 | 20   |
| K0853.94016025 | 40 | M16 | M16                                | 25 | 6  | 90 | 50 | 25   |
| K0853.94016032 | 40 | M16 | M16                                | 32 | 13 | 90 | 50 | 25   |
| K0853.94016040 | 40 | M16 | M16                                | 40 | 15 | 90 | 50 | 25   |
| K0853.94016050 | 40 | M16 | M16                                | 50 | 15 | 90 | 50 | 25   |
| K0853.94016063 | 40 | M16 | M16                                | 63 | 15 | 90 | 50 | 25   |

## Flat clamps



**Material:**  
Carbon steel.

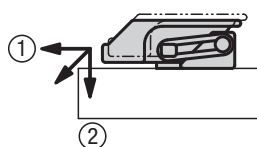
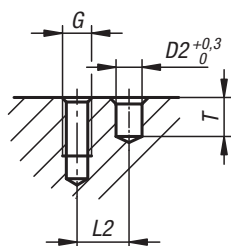
**Version:**  
Hardened (33–39 HRC) and black oxidised.

**Sample order:**  
K1168.204

**Note:**  
Particularly low workpieces can be clamped using these flat clamps.  
Clamping element with pull-down effect.  
Clamping element and fixed block in one compact unit.

**Drawing reference:**  
Dimension L1 refers to clamped state.

### installation instructions



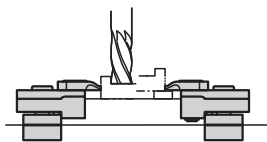
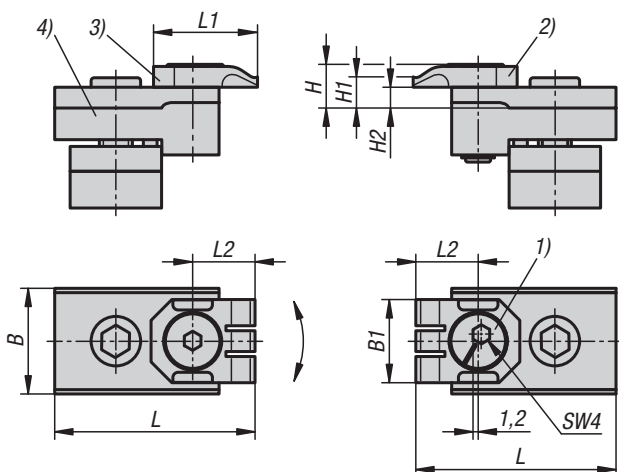
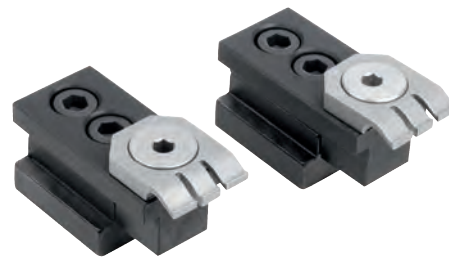
- (Jaws exert positive down force)
- ① Horizontal thrust against workpiece
  - ② Vertical thrust prevents the workpiece lifting

### KIPP Flat clamps

| Order No. | Form | B  | B1 | D1 | D2 | G  | H | H1 | H2 | J   | L  | L1 | L2 | T | Clamping force max. kN | Tightening torque max. Nm |
|-----------|------|----|----|----|----|----|---|----|----|-----|----|----|----|---|------------------------|---------------------------|
| K1168.104 | A    | 15 | 5  | 4  | 4  | M4 | 7 | 3  | 5  | 2   | 23 | 12 | 8  | 6 | 2                      | 2,7                       |
| K1168.105 | A    | 19 | 7  | 5  | 5  | M5 | 9 | 4  | 6  | 2,5 | 28 | 14 | 10 | 7 | 3                      | 5,4                       |
| K1168.204 | B    | 15 | 5  | 4  | 4  | M4 | 7 | -  | 5  | 2   | 20 | 9  | 8  | 6 | 2,5                    | 2,7                       |
| K1168.205 | B    | 19 | 7  | 5  | 5  | M5 | 9 | -  | 6  | 2,5 | 25 | 11 | 10 | 7 | 3,5                    | 5,4                       |

## Flat clamp, steel

for T-slot



Workpiece clamped directly on the table top or supported on rests from below (e.g. for drilling though).

### Material:

Steel body.  
Clamping element and stop made from spring steel.

### Version:

Base element tempered.

### Sample order:

K1540.10

### Note for ordering:

The order number includes one pair, made up of a clamping element and a stop.

### Note:

By turning the cam screw on the clamping element the workpiece is forced downwards (positive down force). The clamping element also forces the workpiece against the stop, thereby providing a flat parallel seating.

The stop side provides a reference that makes precise replications possible.

Cam hub: 1.2 mm.

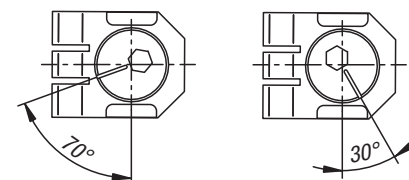
### Application:

Suitable for clamping multiple and individual parts on fixtures and T-slot tables.

### Drawing reference:

- 1) Cam screw
- 2) Clamping element
- 3) Stop
- 4) Body

### Using the cam

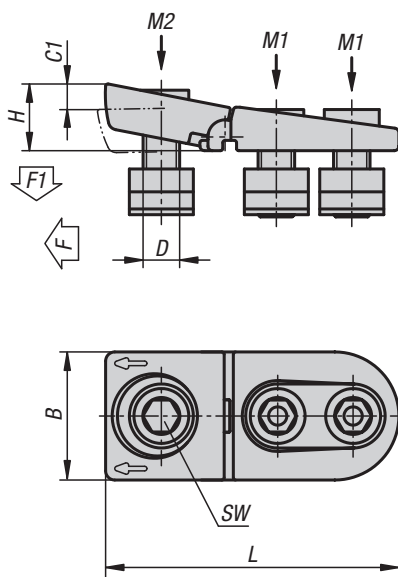


Quick clamp 1/4 rotation

## KIPP Flat clamp, steel, for T-slot

| Order No. | B  | B1 | H    | H1  | H2 | L  | L1 | L2 | SW | Slot width | F<br>kN | Tightening<br>torque<br>Nm |
|-----------|----|----|------|-----|----|----|----|----|----|------------|---------|----------------------------|
| K1540.10  | 18 | 20 | 10,5 | 7,5 | 5  | 46 | 25 | 15 | 4  | 10         | 4       | 9                          |
| K1540.12  | 18 | 20 | 10,5 | 7,5 | 5  | 48 | 25 | 15 | 4  | 12         | 4       | 9                          |
| K1540.14  | 22 | 20 | 10,5 | 7,5 | 5  | 52 | 25 | 15 | 4  | 14         | 4       | 9                          |
| K1540.16  | 25 | 20 | 10,5 | 7,5 | 5  | 48 | 25 | 15 | 4  | 16         | 4       | 9                          |
| K1540.18  | 25 | 20 | 10,5 | 7,5 | 5  | 48 | 25 | 15 | 4  | 18         | 4       | 9                          |

## T-slot clamps



### Material:

Clamping element (front) steel 1.7225.  
Retaining element (rear) steel 1.0503.  
Cap screws and slot keys grade 8.8 steel.

### Version:

Body parts hardened and nickel-plated.  
Fasteners black oxidised.

### Sample order:

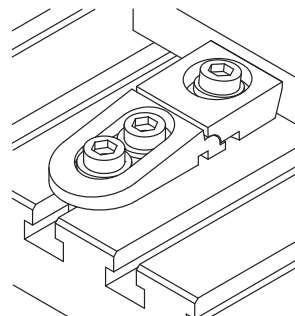
K1413.1214

### Note:

Particularly low workpieces can be clamped using the T-slot clamps. The positive down force helps to hold the workpiece down on the machine table.

### Application:

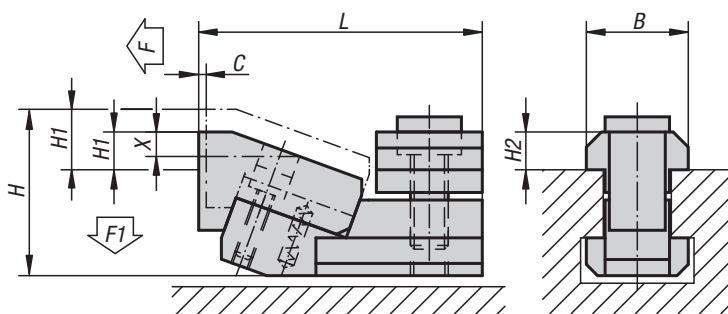
1. Slide the clamp in the machine table T-slot up to the workpiece.
2. Tighten the fastening screws with the appropriate torque.
3. Tighten the clamping screw to clamp the workpiece in place.



## KIPP T-slot clamps

| Order No.  | Slot width | B  | C1 | D   | H  | L   | SW | F<br>kN | F1<br>kN | Tightening torque<br>M1<br>Nm | Tightening torque<br>M2<br>Nm |
|------------|------------|----|----|-----|----|-----|----|---------|----------|-------------------------------|-------------------------------|
| K1413.1214 | 14         | 44 | 8  | M12 | 25 | 112 | 10 | 15      | 7,5      | 65                            | 52                            |
| K1413.1618 | 18         | 56 | 10 | M16 | 30 | 132 | 14 | 25      | 12,5     | 150                           | 120                           |
| K1413.2022 | 22         | 62 | 11 | M20 | 35 | 155 | 17 | 36      | 18       | 300                           | 240                           |

## T-slot clamps



### Material:

Steel.

### Version:

Hardened, black oxidised.

### Sample order:

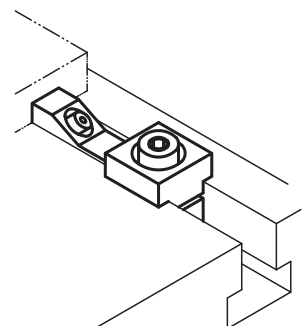
K1230.12

### Note:

These T-slot clamps are especially useful for clamping low profile workpieces. The wedge operated jaws also provide positive down force.

Dimensions "H1" and "X" depend on the max. T-slot depth acc. to DIN 650.

To achieve the minimal clamping height by the minimal slot depth, the jaw can be ground down by the dimension "X".



### KIPP T-slot clamps

| Order No. | Slot width | C   | L  | B  | H  | H1 min. | H1 max. | X | H2 | F kN | F1 kN |
|-----------|------------|-----|----|----|----|---------|---------|---|----|------|-------|
| K1230.12  | 12         | 1,8 | 52 | 18 | 31 | 3,5     | 8,5     | 5 | 7  | 5    | 0,6   |
| K1230.14  | 14         | 1,8 | 55 | 22 | 34 | 2,5     | 7,5     | 5 | 8  | 5,5  | 0,7   |
| K1230.16  | 16         | 2,5 | 68 | 25 | 41 | 4       | 11      | 6 | 9  | 8    | 0,9   |
| K1230.18  | 18         | 2,5 | 71 | 28 | 43 | 2       | 9       | 6 | 10 | 9    | 1     |
| K1230.22  | 22         | 3   | 89 | 35 | 53 | 5       | 14      | 9 | 14 | 16   | 1,9   |

## T-slot clamps



### Material:

Body steel 1.7225.  
Screws steel grade 8.8.

### Version:

Body hardened and nickel-plated.  
Screws black oxidised.

### Sample order:

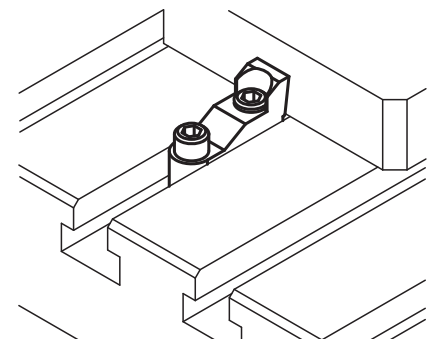
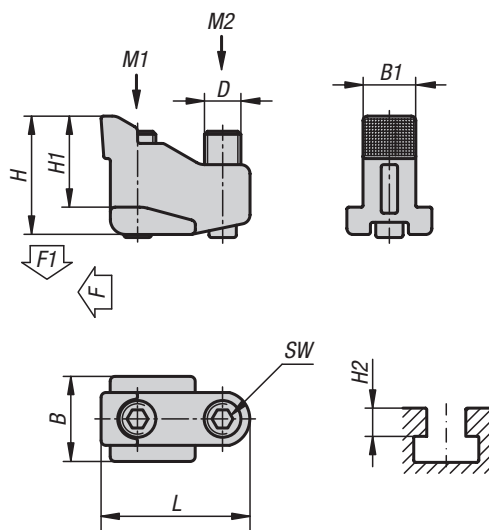
K1412.1014

### Note:

Particularly low workpieces can be clamped using the T-slot clamps. The positive down force pushes the workpiece down on the machine table.

### Application:

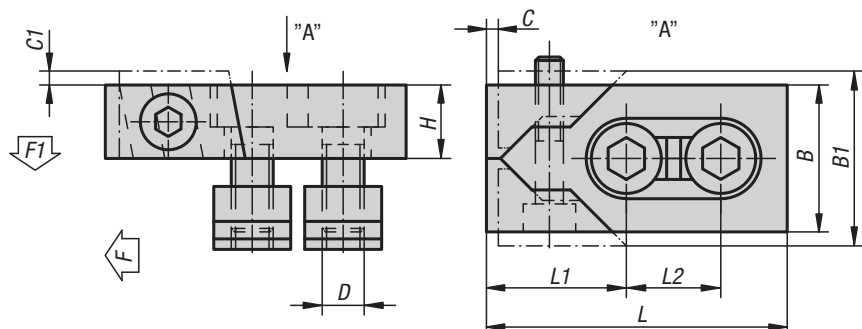
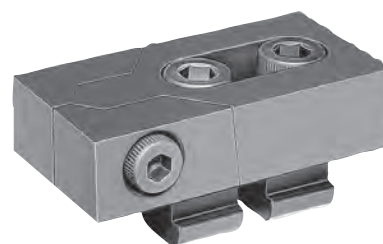
1. Slide the clamp in the machine table T-slot up to the workpiece.
2. Tighten the fastening screws with the appropriate torque.
3. Tighten the clamping screw to clamp the workpiece in place.



### KIPP T-slot clamp

| Order No.  | Slot width | B  | D   | H  | H1 | H2    | L  | B1   | SW | F<br>kN | F1<br>kN | Tightening torque<br>M1<br>Nm | Tightening torque<br>M2<br>Nm |
|------------|------------|----|-----|----|----|-------|----|------|----|---------|----------|-------------------------------|-------------------------------|
| K1412.1214 | 14         | 22 | M10 | 31 | 24 | 14-19 | 40 | 13,6 | 5  | 7       | 3,5      | 18                            | 9                             |
| K1412.1618 | 18         | 28 | M12 | 39 | 30 | 18-24 | 49 | 17,4 | 6  | 10      | 5        | 32                            | 15                            |
| K1412.2022 | 22         | 35 | M16 | 50 | 37 | 22-30 | 63 | 21,5 | 8  | -       | 8        | 75                            | 35                            |

## Low-profile clamps



### Material:

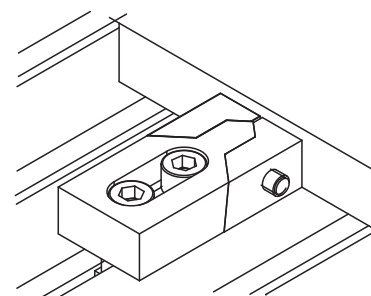
Steel.

### Version:

Hardened, black oxidised.

### Note:

These handy low-profile clamp jaws are ideal for machining most workpiece sizes. The hardened wedge operated jaws also provide positive down force.



### KIPP Low-profile clamps

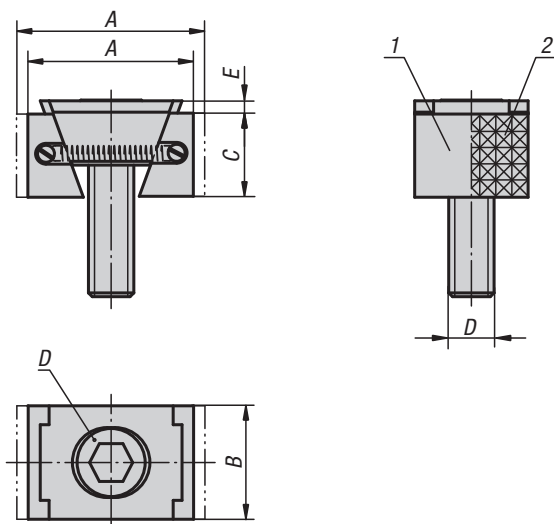
| Order No. | Slot width | L   | L1 | L2 | B  | B1 | H  | C | C1  | D   | F<br>kN | F1<br>kN | Tightening torque<br>max. Nm |
|-----------|------------|-----|----|----|----|----|----|---|-----|-----|---------|----------|------------------------------|
| K1229.12  | 12         | 80  | 39 | 26 | 40 | 47 | 20 | 3 | 2,5 | M10 | 16      | 0,6      | 15                           |
| K1229.14  | 14         | 80  | 39 | 26 | 40 | 47 | 20 | 3 | 2,5 | M12 | 22      | 0,9      | 18                           |
| K1229.16  | 16         | 80  | 39 | 26 | 40 | 47 | 20 | 3 | 3   | M12 | 22      | 0,9      | 18                           |
| K1229.161 | 16         | 100 | 46 | 34 | 50 | 59 | 25 | 4 | 2,5 | M14 | 32      | 1,2      | 25                           |
| K1229.18  | 18         | 100 | 46 | 34 | 50 | 60 | 25 | 4 | 3   | M16 | 36      | 1,4      | 35                           |
| K1229.20  | 20         | 100 | 46 | 34 | 50 | 60 | 25 | 4 | 3   | M16 | 36      | 1,4      | 35                           |
| K1229.22  | 22         | 140 | 65 | 50 | 78 | 95 | 30 | 5 | 4   | M20 | 36      | 1,4      | 45                           |



A large grid of graph paper for taking notes.

# Wedge clamps

jaw face smooth or serrated



## Material:

Wedge and jaw segments carbon steel.

## Version:

Wedge and jaw segments hardened, black.

## Sample order:

K0039.2208

## Note:

The functioning principle make the wedge clamps ideal for series clamping. The wedge form can exert high clamping forces.

These wedge clamps can be mounted in grid holes or T-slots. Tightening the socket screw moves the wedge down and the jaws out pressing the workpieces against the fixtures fixed stops.

The wedge has a slightly elongated hole allowing for movement to compensate for tolerances.

## Spread width:

M8 =  $\pm 0.5$  mm

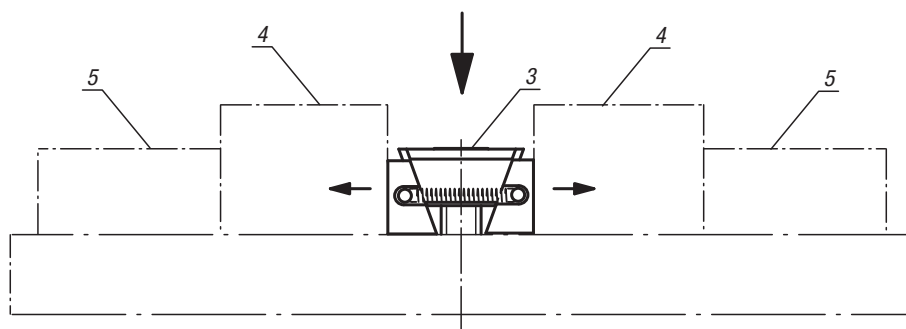
M10 =  $\pm 1.0$  mm

M12 =  $\pm 1.0$  mm

M16 =  $\pm 1.5$  mm

## Drawing reference:

D) DIN 6912 cap screw



- 1) Jaw face smooth
- 2) Jaw face serrated
- 3) Wedge clamps
- 4) Workpiece
- 5) Fixed stop

## KIPP Wedge clamps, narrow version

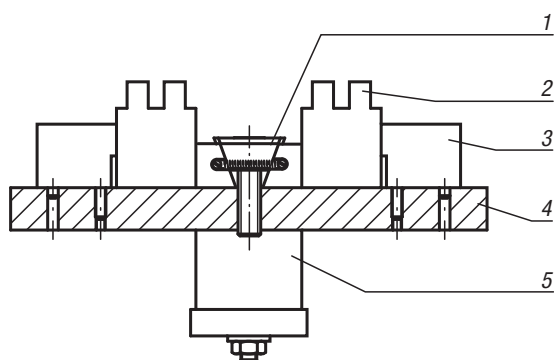
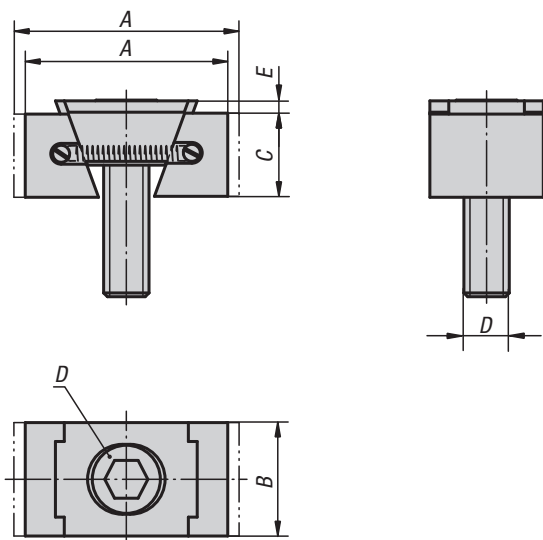
| Order No.<br>smooth | Order No.<br>serrated | A<br>min. | A<br>max. | B  | C  | D      | E   | Clamping<br>force<br>max. kN | Tightening<br>torque<br>max. Nm |
|---------------------|-----------------------|-----------|-----------|----|----|--------|-----|------------------------------|---------------------------------|
| K0039.1108          | K0039.2108            | 30,5      | 33,5      | 24 | 15 | M8X25  | 2   | 15                           | 25                              |
| K0039.1110          | K0039.2110            | 32        | 37        | 28 | 19 | M10X25 | 3,5 | 20                           | 49                              |
| K0039.1112          | K0039.2112            | 44        | 49,5      | 30 | 22 | M12X40 | 3,5 | 30                           | 85                              |
| K0039.1116          | K0039.2116            | 55        | 62        | 40 | 29 | M16X60 | 4   | 50                           | 210                             |

## KIPP Wedge clamps, wide version

| Order No.<br>smooth | Order No.<br>serrated | A<br>min. | A<br>max. | B  | C  | D      | E   | Clamping<br>force<br>max. kN | Tightening<br>torque<br>max. Nm |
|---------------------|-----------------------|-----------|-----------|----|----|--------|-----|------------------------------|---------------------------------|
| K0039.1208          | K0039.2208            | 30,5      | 33,5      | 30 | 15 | M8X25  | 2   | 15                           | 25                              |
| K0039.1210          | K0039.2210            | 32        | 37        | 38 | 19 | M10X25 | 3,5 | 20                           | 49                              |
| K0039.1212          | K0039.2212            | 44        | 49,5      | 48 | 22 | M12X40 | 3,5 | 30                           | 85                              |
| K0039.1216          | K0039.2216            | 55        | 62        | 48 | 29 | M16X60 | 4   | 50                           | 210                             |

# Wedge clamps

machinable



## Material:

Wedge and jaw segments carbon steel.

## Version:

Wedge and jaw segments hardened, black.

## Sample order:

K0649.3110

## Note:

These wedge clamps have extra long jaws. This extra material allows the jaws to be machined to suit the form of the workpiece.

The functioning principle makes the wedge clamps ideal for series clamping. The wedge form can exert high clamping forces.

These wedge clamps can be mounted in grid holes or T-slots. Tightening the socket screw moves the wedge down and the jaws out, pressing the workpieces against the fixtures' fixed stops.

The wedge has a slightly elongated hole allowing for movement to compensate for tolerances.

## Spread width:

M8 = ±0.5 mm

M10 = ±1.0 mm

M12 = ±1.0 mm

M16 = ±1.5 mm

## Attention:

These wedge clamps have a machining allowance per jaw of 3 mm for version M8 and 5 mm for versions M10, M12 and M16.

## Drawing reference:

D) DIN 6912 cap screw

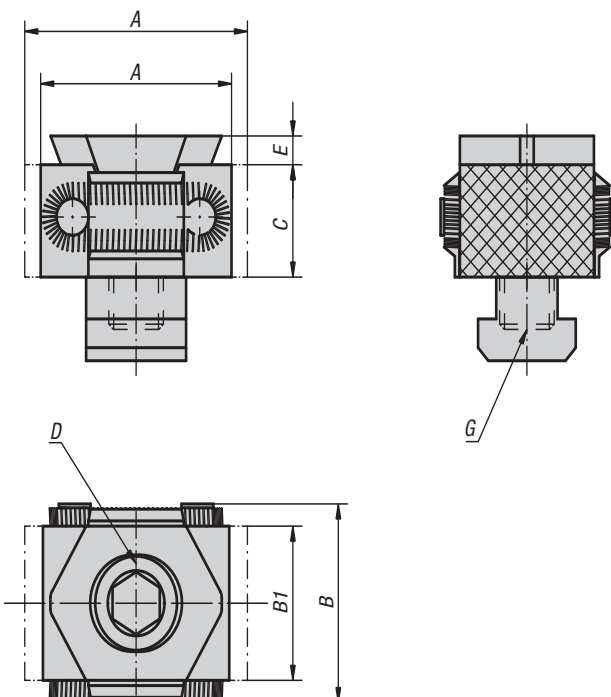
- 1) wedge clamps
- 2) workpiece
- 3) fixed stop
- 4) base plate
- 5) hydraulic/pneumatic cylinder

## KIPP Wedge clamps machinable

| Order No.  | Version | A<br>min. | A<br>max. | B  | C  | D      | E   | Clamping<br>force<br>max. kN | Tightening<br>torque<br>max. Nm |
|------------|---------|-----------|-----------|----|----|--------|-----|------------------------------|---------------------------------|
| K0649.3108 | narrow  | 36,5      | 39,5      | 24 | 15 | M8X25  | 2   | 11                           | 19                              |
| K0649.3110 | narrow  | 42        | 47        | 28 | 19 | M10X25 | 3,5 | 15                           | 37                              |
| K0649.3112 | narrow  | 54        | 59,5      | 30 | 22 | M12X40 | 3,5 | 23                           | 65                              |
| K0649.3116 | narrow  | 65        | 72        | 40 | 29 | M16X60 | 4   | 38                           | 160                             |
| K0649.3208 | wide    | 36,5      | 39,5      | 30 | 15 | M8X25  | 2   | 11                           | 19                              |
| K0649.3210 | wide    | 42        | 47        | 38 | 19 | M10X25 | 3,5 | 15                           | 37                              |
| K0649.3212 | wide    | 54        | 59,5      | 48 | 22 | M12X40 | 3,5 | 23                           | 65                              |
| K0649.3216 | wide    | 65        | 72        | 48 | 29 | M16X60 | 4   | 38                           | 160                             |

## Wedge clamps

jaw faces serrated



### Material:

Body and clamping segments tool steel.

### Version:

Body hardened.

Jaw segments hardened (49-51 HRC) black oxidised.

Wedge faces ground.

### Sample order:

K0040.1618

### Note:

The compact design makes these wedge clamps ideal for horizontal and vertical series clamping. The hardened and ground wedge faces can exert high clamping forces.

These wedge clamps can be mounted in grid holes or T-slots. Tightening the DIN 912 socket screw moves the wedge down and the jaws out pressing the workpieces against the fixtures fixed stops.

**The jaws of version K0040.08 and K0040.0810 are not serrated.**

The wedge has a slightly elongated hole allowing for movement.

Spread width:

K0040.08 =  $\pm 0.5$  mm

K0040.12 =  $\pm 1.0$  mm

K0040.16 =  $\pm 1.5$  mm.

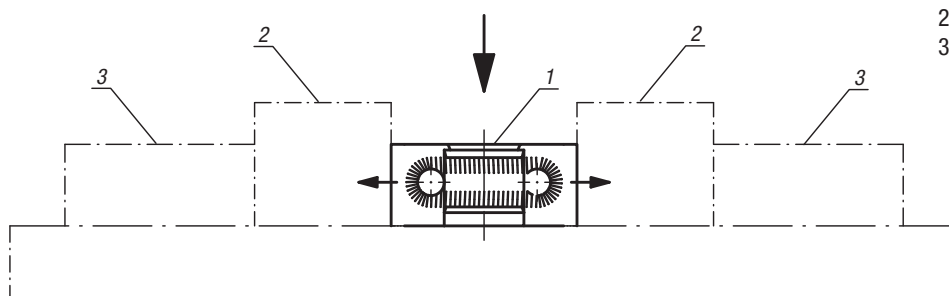
### Drawing reference:

D) DIN 912 cap screw

1) Wedge clamps

2) Workpiece

3) Fixed stop

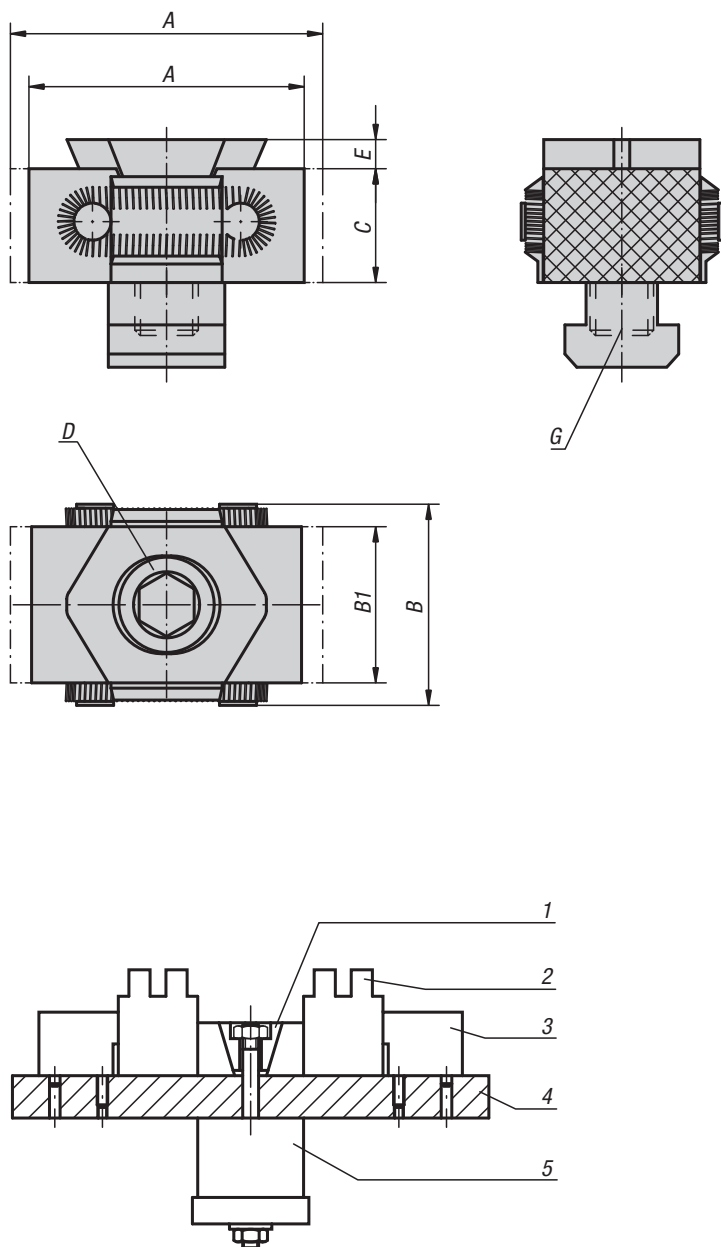


### KIPP Wedge clamps, jaw faces serrated

| Order No.  | Version 1 | A min. | A max. | B  | B1 | C  | D      | E   | Version 2       | G   | Clamping force max. kN | Tightening torque max. Nm |
|------------|-----------|--------|--------|----|----|----|--------|-----|-----------------|-----|------------------------|---------------------------|
| K0040.08   | smooth    | 27     | 31     | 29 | 21 | 15 | M8X25  | 2,5 | for tapped hole | M8  | 15                     | 25                        |
| K0040.0810 | smooth    | 27     | 31     | 29 | 21 | 15 | M8X25  | 2,5 | for t-slot      | 10  | 15                     | 25                        |
| K0040.12   | serrated  | 42     | 49     | 41 | 30 | 22 | M12X40 | 4   | for tapped hole | M12 | 30                     | 85                        |
| K0040.1214 | serrated  | 42     | 49     | 41 | 30 | 22 | M12X30 | 4   | for t-slot      | 14  | 30                     | 85                        |
| K0040.16   | serrated  | 57     | 66     | 56 | 42 | 29 | M16X60 | 5   | for tapped hole | M16 | 50                     | 210                       |
| K0040.1618 | serrated  | 57     | 66     | 56 | 42 | 29 | M16X50 | 5   | for t-slot      | 18  | 50                     | 210                       |

## Wedge clamps

machinable



### Material:

Body tool steel.

Jaw segments tool steel (30 HRC).

### Version:

Body hardened.

Jaw segments black oxidised.

Wedge faces ground.

### Sample order:

K0041.12

### Note:

These wedge clamps have a machining allowance per jaw of 3 mm for version K0041.08 and 5 mm for versions K0041.12 and K0041.16.

This extra material allows the jaws to be machined to suit the form of the workpiece.

**The jaws version K0041.08 and K0041.0810 are not serrated.**

### Spread width:

K0041.08 =  $\pm 0.5$  mm

K0041.12 =  $\pm 1.0$  mm

K0041.16 =  $\pm 1.5$  mm

### On request:

Pre-formed jaw segments or other hardness grades.

### Drawing reference:

D) DIN 912 cap screw

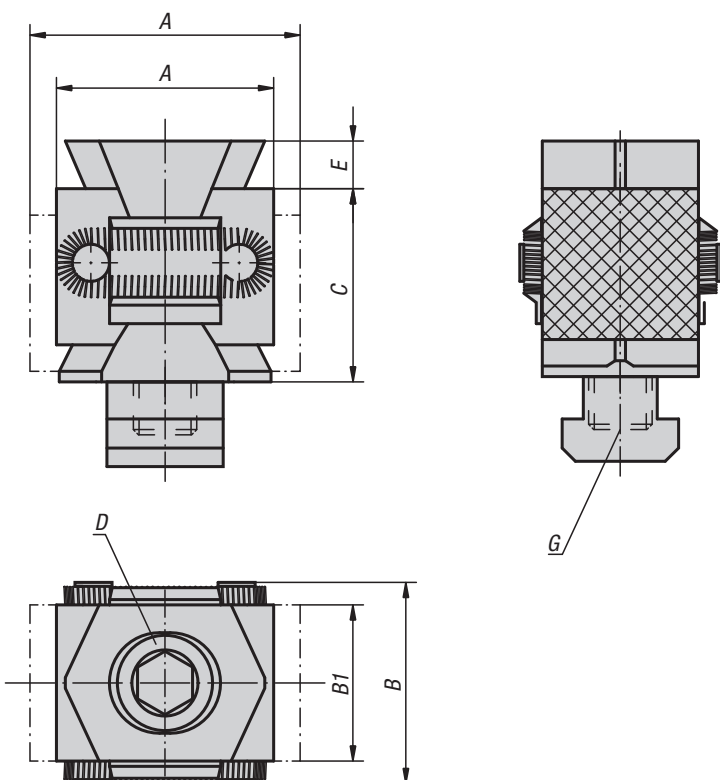
- 1) wedge clamps
- 2) workpiece
- 3) fixed stop
- 4) base plate
- 5) hydraulic/pneumatic cylinder

## KIPP Wedge clamps machinable

| Order No.  | A min. | A max. | B  | B1 | C  | D      | E   | Version 2       | G   | Clamping force max. kN | Tightening torque max. Nm |
|------------|--------|--------|----|----|----|--------|-----|-----------------|-----|------------------------|---------------------------|
| K0041.08   | 33     | 37     | 29 | 21 | 15 | M8X25  | 2,5 | for tapped hole | M8  | 15                     | 25                        |
| K0041.0810 | 33     | 37     | 29 | 21 | 15 | M8X25  | 2,5 | for t-slot      | 10  | 15                     | 25                        |
| K0041.12   | 52     | 59     | 41 | 30 | 22 | M12X40 | 4   | for tapped hole | M12 | 30                     | 85                        |
| K0041.1214 | 52     | 59     | 41 | 30 | 22 | M12X30 | 4   | for t-slot      | 14  | 30                     | 85                        |
| K0041.16   | 67     | 76     | 56 | 42 | 29 | M16X60 | 5   | for tapped hole | M16 | 50                     | 210                       |
| K0041.1618 | 67     | 76     | 56 | 42 | 29 | M16X50 | 5   | for t-slot      | 18  | 50                     | 210                       |

# Wedge clamps double

jaw faces serrated



## Material:

Body and jaw segments tool steel.

## Version:

Body hardened.

Jaw segments hardened (49-51 HRC) and black oxidised.

Wedge faces ground.

## Sample order:

K0042.1214

## Note:

The compact design makes these double wedge clamps ideal for horizontal and vertical series clamping. The hardened and ground wedge faces can exert high clamping forces.

These wedge clamps can be mounted in grid holes or T-slots. Tightening the DIN 912 socket screw pulls the wedges together and the jaws out pressing the workpieces against the fixtures fixed stops.

The double wedges create a positive down force.

Spread width:

K0042.12 =  $\pm 1.0$  mm

K0042.16 =  $\pm 1.5$  mm

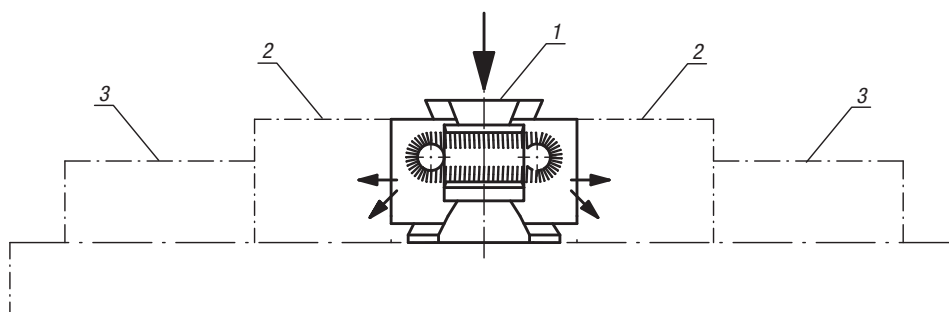
## Drawing reference:

D) DIN 912 cap screw

1) Wedge clamps

2) Workpiece

3) Fixed stop



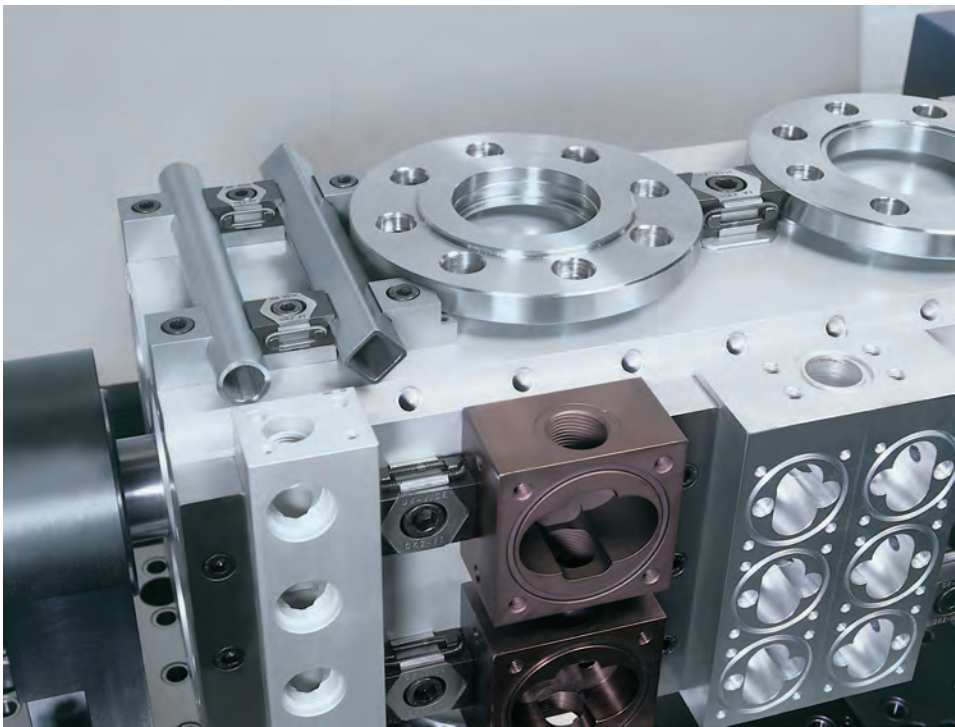
## KIPP Wedge clamps double wedge, jaw faces serrated

| Order No.  | A min. | A max. | B  | B1 | C  | D      | E | Version 2       | G   | Clamping force max. kN | Tightening torque max. Nm |
|------------|--------|--------|----|----|----|--------|---|-----------------|-----|------------------------|---------------------------|
| K0042.12   | 42     | 49     | 41 | 30 | 36 | M12X60 | 5 | for tapped hole | M12 | 40                     | 85                        |
| K0042.1214 | 42     | 49     | 41 | 30 | 36 | M12X50 | 5 | for t-slot      | 14  | 40                     | 85                        |
| K0042.16   | 57     | 67     | 56 | 42 | 50 | M16X80 | 5 | for tapped hole | M16 | 60                     | 210                       |
| K0042.1618 | 57     | 67     | 56 | 42 | 50 | M16X70 | 5 | for t-slot      | 18  | 60                     | 210                       |

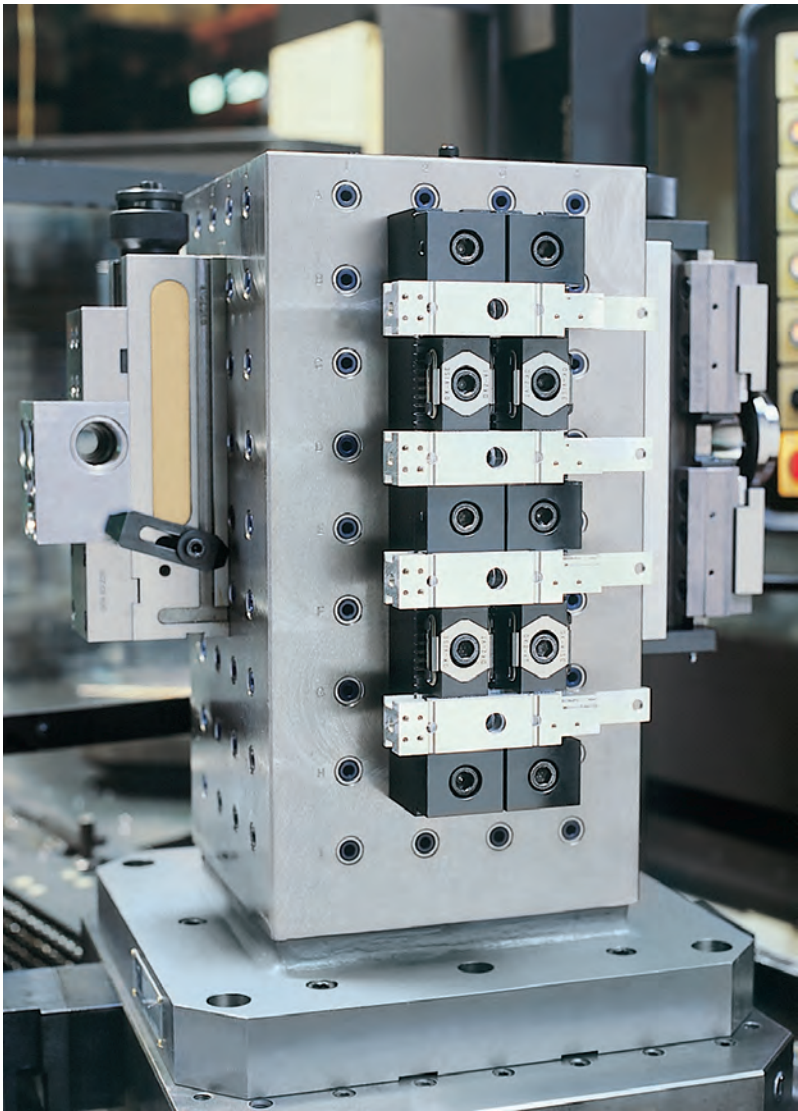
# Example of wedge clamps in use



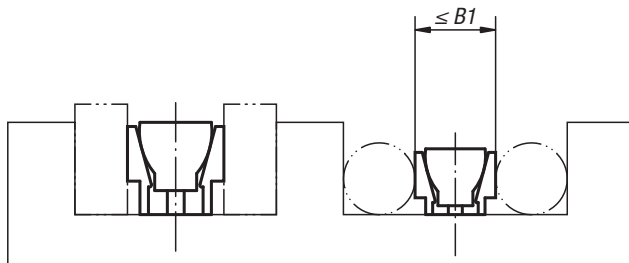
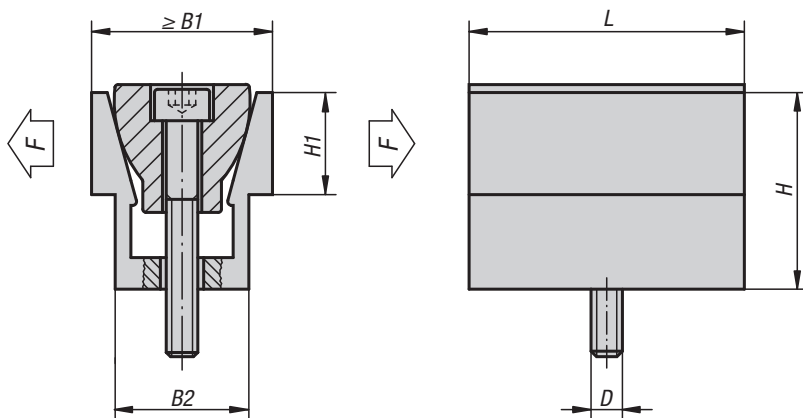
Wedge clamp



Double wedge clamps



# Wedge clamps

**Material:**

Channel aluminium profile.  
Wedge hardened steel.

**Version:**

Channel anodised.  
Wedge black oxidised.

**Sample order:**

K0037.08

**Note:**

Two workpieces can be held simultaneously with the wedge clamp. They are ideal for clamping round or rectangular pieces. The compact design allows space-saving series clamping.

**Drawing reference:**

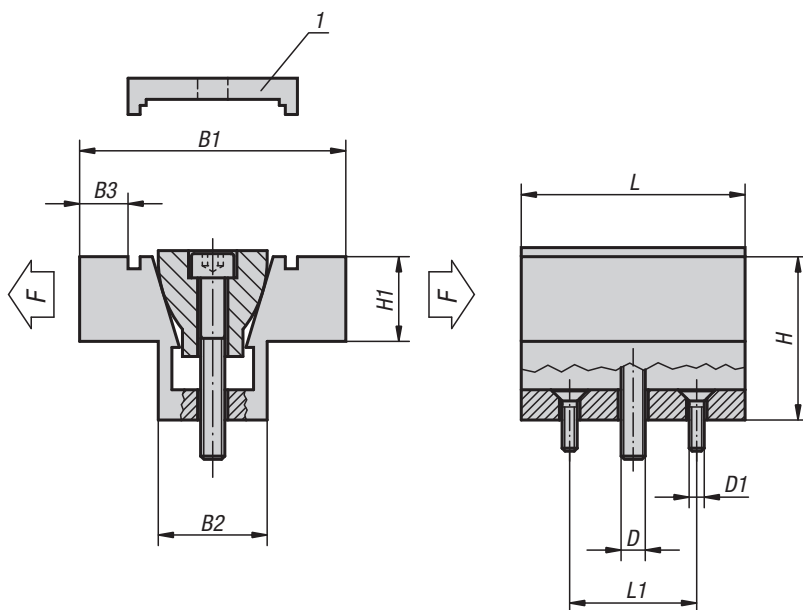
In clamped position dimension B1 max. given in the table should be achieved.

## KIPP Wedge clamps

| Order No. | D   | L    | B1<br>min. - max. | B2   | H    | H1   | Clamping<br>force<br>max. kN | Tightening<br>torque<br>max. Nm |
|-----------|-----|------|-------------------|------|------|------|------------------------------|---------------------------------|
| K0037.04  | M4  | 15,9 | 12,3 - 13,1       | 10,4 | 12,7 | 5,6  | 2,2                          | 3,4                             |
| K0037.06  | M6  | 23,8 | 18,6 - 19,9       | 16,1 | 19   | 9,5  | 6,7                          | 14,3                            |
| K0037.08  | M8  | 31,7 | 24,8 - 26,6       | 20,8 | 25,4 | 12,7 | 8,9                          | 14,5                            |
| K0037.12  | M12 | 47,6 | 37,3 - 39,7       | 30,8 | 38,1 | 19   | 15,6                         | 38,4                            |
| K0037.16  | M16 | 63,5 | 49,7 - 52,8       | 41,2 | 50,8 | 25,4 | 26,7                         | 74,6                            |

## Wedge clamps

machinable



### Material:

Channel aluminium profile.  
Wedge hardened steel.

### Version:

Channel anodised.  
Wedge black oxidised.

### Sample order:

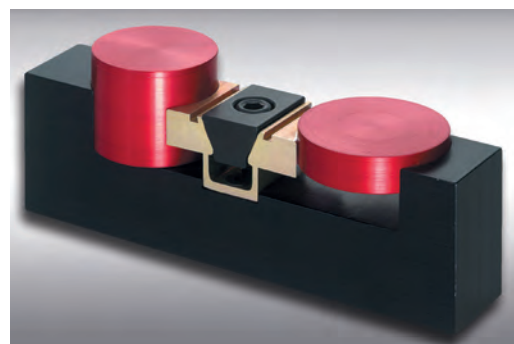
K0038.08

### Note:

Two workpieces can be held simultaneously with the wedge clamp. The jaws have extra material allowing them to be machined to conform to the shape of the workpiece. The compact design allows space-saving series clamping.

### Drawing reference:

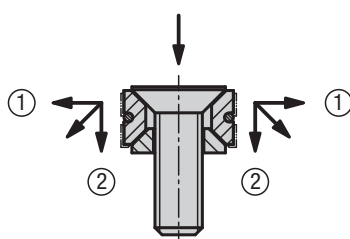
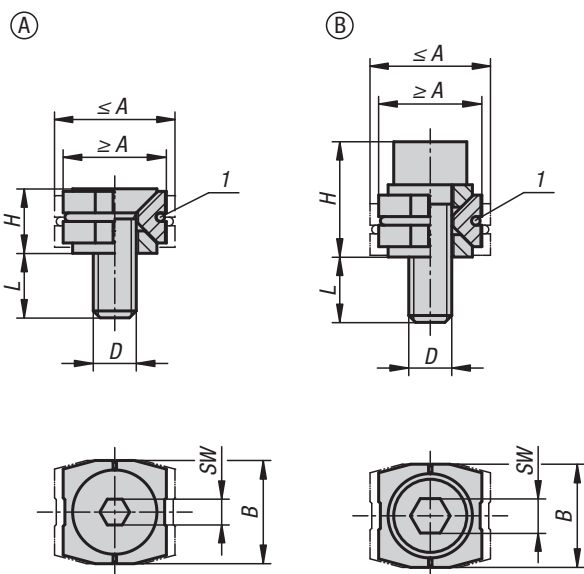
1) The locking plate is only used for machining the form, not for clamping the workpiece.



## KIPP Wedge clamps machinable

| Order No. | D   | D1 | L    | L1    | B1<br>min. - max. | B2   | B3   | H    | H1   | Clamping<br>force<br>max. kN | Tightening<br>torque<br>max. Nm |
|-----------|-----|----|------|-------|-------------------|------|------|------|------|------------------------------|---------------------------------|
| K0038.04  | M4  | M2 | 15,7 | 10,16 | 28,6 - 29,1       | 10,6 | 4,6  | 12,7 | 6,3  | 2,2                          | 3,4                             |
| K0038.06  | M6  | M4 | 23,9 | 15,9  | 38,1 - 39         | 16,1 | 6,6  | 19,1 | 9,4  | 6,7                          | 14,3                            |
| K0038.08  | M8  | M4 | 31,8 | 20,6  | 50,8 - 52         | 20,8 | 9,9  | 25,4 | 12,7 | 8,9                          | 14,5                            |
| K0038.12  | M12 | M5 | 47,5 | 30,5  | 76,2 - 78         | 30,9 | 15,7 | 38,1 | 19   | 15,6                         | 38,4                            |
| K0038.16  | M16 | M6 | 63,5 | 41,28 | 101,6 - 103,9     | 41,3 | 20,3 | 50,8 | 25,4 | 26,7                         | 74,6                            |

## Wedge clamps



(Jaws exert positive down force)  
 ① Horizontal thrust against workpiece  
 ② Vertical thrust prevents the workpiece lifting

**Material:**  
Carbon steel.

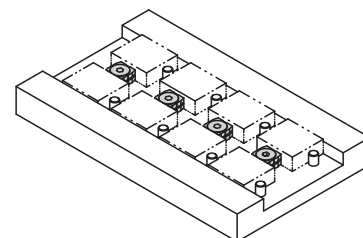
**Version:**  
Jaw plate hardened (33–39 HRC) and black oxidised.

**Sample order:**  
K1167.11205

**Note:**  
Due to the functioning principle, wedge clamps are suitable for clamping in series.  
The wedges generate higher clamping forces.  
The wedge clamps are available with cap screws or countersunk screws.  
Wedge clamps with pull-down effect.

**Drawing reference:**  
Dimension L refers to  $\leq A$ .  
Dimension H refers to  $\geq A$ .

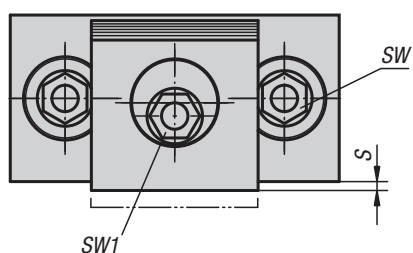
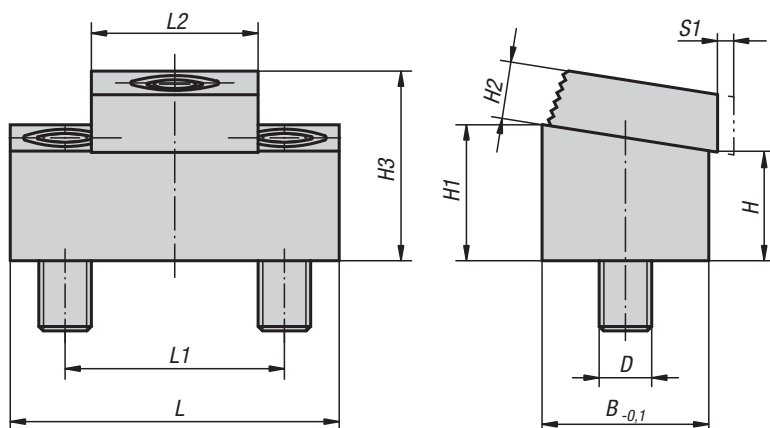
1) O-ring



### KIPP Wedge clamps

| Order No.   | Form | Version 2              | A min. | A max. | B    | D     | H    | L    | SW | Clamping force max. kN | Tightening torque max. Nm |
|-------------|------|------------------------|--------|--------|------|-------|------|------|----|------------------------|---------------------------|
| K1167.11205 | A    | with csk. screw        | 12     | 14     | 12   | M5X15 | 7,5  | 9,5  | 3  | 2                      | 4,3                       |
| K1167.11506 | A    | with csk. screw        | 15     | 17     | 14,8 | M6X16 | 8,7  | 9,3  | 4  | 3,5                    | 7,3                       |
| K1167.11808 | A    | with csk. screw        | 18,5   | 21,5   | 18,4 | M8X20 | 11,8 | 11,3 | 5  | 5                      | 18                        |
| K1167.21205 | B    | with socket head screw | 12     | 14     | 12   | M5X16 | 13,4 | 9,6  | 4  | 3                      | 5,4                       |
| K1167.21506 | B    | with socket head screw | 15     | 17     | 14,8 | M6X18 | 15,8 | 10,2 | 5  | 4,5                    | 9,1                       |
| K1167.21808 | B    | with socket head screw | 18,5   | 21,5   | 18,4 | M8X25 | 21,2 | 14,9 | 6  | 9                      | 22                        |

## Toe clamps compact



### Material:

Steel.

### Version:

Body tempered and black oxidised.  
Square washer case-hardened and brass-plated.

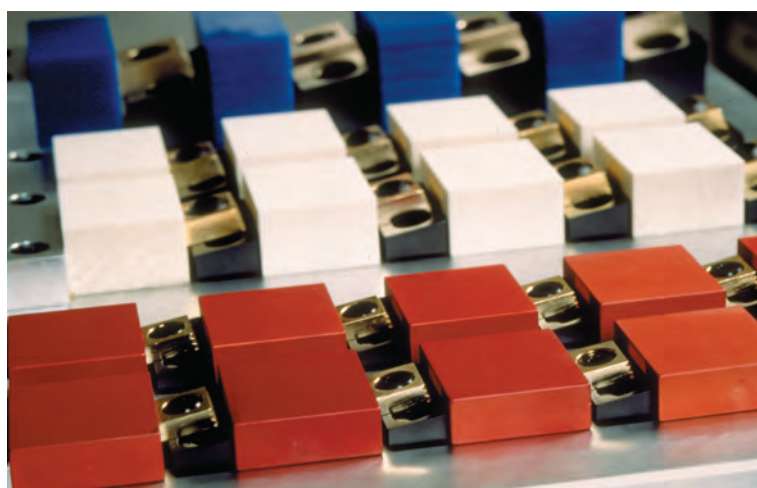
### Sample order:

K0036.10

### Note:

This cam action compact toe clamp requires very little space to produce multi-fixture clamping. Workpieces can be clamped in series by using the back side of a clamp as a stop for the next row. Mount preferably in slots with  $B +0.05$  mm. The height of the clamp can be adjusted by altering the slot depth.

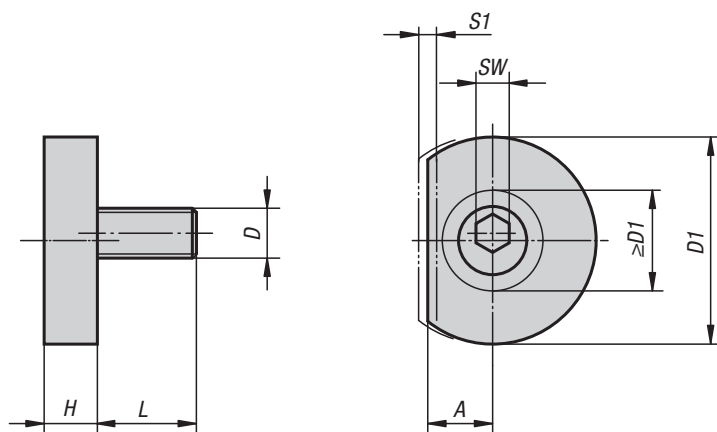
Example of series clamping using compact toe clamps



## KIPP Toe clamps compact

| Order No. | L    | L1   | L2   | B    | H    | H1   | H2  | H3<br>max. | S    | D   | S1<br>(travel) | SW | SW1 | Clamping<br>force<br>kN | Tightening<br>torque<br>max. Nm |
|-----------|------|------|------|------|------|------|-----|------------|------|-----|----------------|----|-----|-------------------------|---------------------------------|
| K0036.08  | 43,2 | 25,4 | 19   | 19   | 12,7 | 15,7 | 6,4 | 21,4       | 1,5  | M8  | 1,6            | 5  | 7   | 8,9                     | 28                              |
| K0036.10  | 54   | 33,5 | 25,4 | 25,4 | 11,4 | 15,4 | 9,7 | 24,5       | 1,8  | M10 | 2              | 7  | 8   | 17,8                    | 88                              |
| K0036.12  | 75   | 50,8 | 38   | 38,1 | 25,5 | 31,5 | 13  | 43         | 2,05 | M12 | 2,5            | 10 | 12  | 26,7                    | 135                             |

## Fixture clamps machinable



**Material:**  
Cam screw alloyed steel.  
Clamping disc steel.

**Version:**  
Cam screw and clamping disc black oxidised.

**Sample order:**  
K0022.06

**Note:**  
These fixture clamps have a round washer that can be machined to suit the contour of the workpiece being clamped. This allows positive clamping for round, contoured or fragile workpieces. The flat edge is the same distance from the screw centre as our hexagonal fixture clamps K0026 allowing an interchange between the two.

"A" = distance from workpiece to screw centre (cam screw).

"D1 min." = maximum depth of contour.

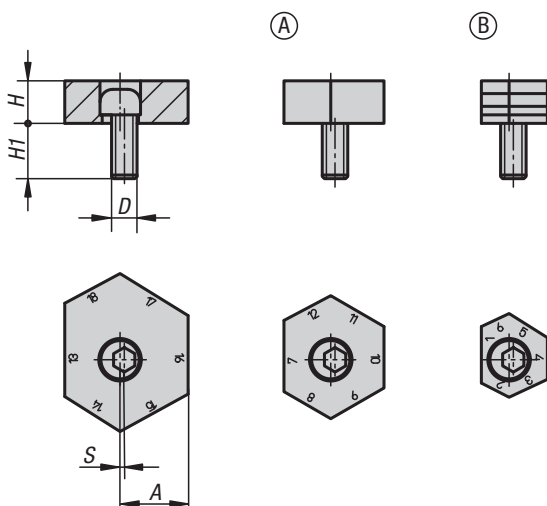
**On request:**  
Replacement cam screws.

### KIPP Fixture clamps machinable

| Order No. | A    | D   | D1   | D1 min. | H    | L    | SW | S1 (travel) | Clamping force kN |
|-----------|------|-----|------|---------|------|------|----|-------------|-------------------|
| K0022.06  | 7,8  | M6  | 24,9 | 12,1    | 6,4  | 11,9 | 4  | 1,01        | 3,3               |
| K0022.10  | 10,2 | M10 | 31,2 | 17,2    | 8,9  | 18   | 7  | 1,52        | 8,9               |
| K0022.12  | 12,7 | M12 | 37,6 | 22,4    | 11,4 | 22,9 | 8  | 2,03        | 17,8              |
| K0022.16  | 15   | M16 | 43,9 | 26,1    | 14   | 28,6 | 12 | 2,54        | 26,7              |

# K0023

## Fixture clamps unequal hexagon



**Material:**  
Cam screw steel tempered to 10.9.  
Hexagon washer mild steel.

**Version:**  
Cam screw black oxidised.  
Hexagon washer hardened and black oxidised.

**Sample order:**  
K0023.13

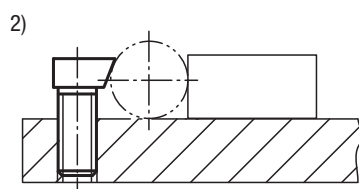
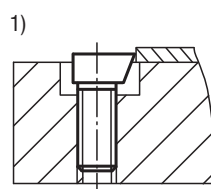
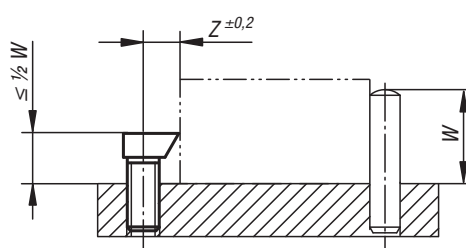
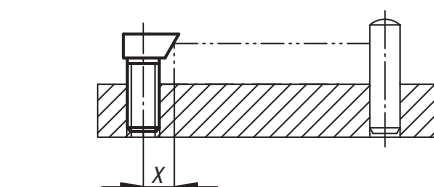
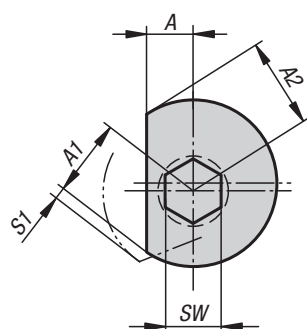
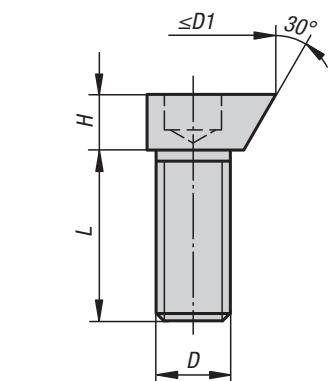
**Note:**  
These unequal hexagon fixture clamps can minimise the cost of clamping in fixtures. The clamping range can be altered up to 17 mm from the same tapped hole. Simply rotate the hexagon washer. The washers are available with smooth edges for machined faces or with serrated edges for rough faces.

**On request:**  
Replacement cam screws.

### KIPP Fixture clamps unequal hexagon

| Order No.<br>Form A<br>smooth | Order No.<br>Form B<br>serrated | Distance A<br>by face No.                | D   | H  | H1 | S<br>(cam travel) | Clamping<br>force<br>kN |
|-------------------------------|---------------------------------|------------------------------------------|-----|----|----|-------------------|-------------------------|
| K0023.09                      | K0023.13                        | 1/12, 2/13, 3/14, 4/15, 5/16, 6/17       | M12 | 10 | 22 | 1                 | 18                      |
| K0023.10                      | K0023.14                        | 7/18, 8/19, 9/20, 10/21, 11/22, 12/23    | M12 | 10 | 22 | 1                 | 18                      |
| K0023.11                      | K0023.15                        | 13/24, 14/25, 15/26, 16/27, 17/28, 18/29 | M12 | 10 | 22 | 1                 | 18                      |

## Spiral cam screws



**Material:**  
Steel.

**Version:**  
Case-hardened ( $56 \pm 1$  HRC) and blue electro zinc-plated.  
Grade 8.8

**Sample order:**  
K0024.0408

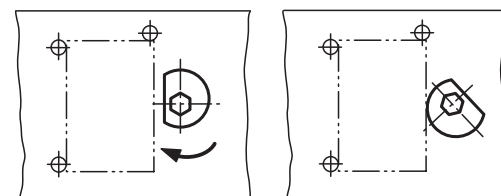
**Note:**  
Robust, compact spiral cam clamping screws that exert a positive down force on diverse workpiece forms.

**Assembly:**  
Drill and tap several holes at a distance X or Z (see diagram). Screw the cam screw into the required height and position with the flat side to the workpiece. Position the workpiece and tighten the cam screw with a hexagon key. Full clamping is achieved with approximately a 1/3 rotation. Lubricate the tapped hole regularly.

Place stops on the face towards which the screw turns to prevent the workpiece rotating away.

**On request:**  
Spiral cam screws with LH thread.

**Drawing reference:**  
1) clamping sheet metal  
2) clamping round parts

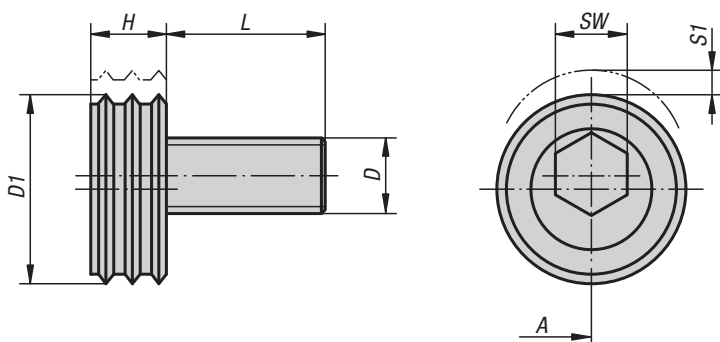


### KIPP Spiral cam screws

| Order No.  | A   | A1   | A2   | D   | D1 max. | H | L  | SW  | S1 (travel) | X    | Z   | Clamping force kN | Tightening torque max. Nm |
|------------|-----|------|------|-----|---------|---|----|-----|-------------|------|-----|-------------------|---------------------------|
| K0024.0408 | 3   | 4,6  | 4    | M4  | 9,2     | 3 | 8  | 2,5 | 0,6         | 3,5  | 4,2 | 0,09              | 1,5                       |
| K0024.0510 | 3,5 | 5,7  | 5    | M5  | 11,4    | 4 | 10 | 3   | 0,7         | 4,2  | 5,2 | 0,1               | 2                         |
| K0024.0612 | 4,5 | 7,1  | 6,1  | M6  | 14,2    | 5 | 12 | 4   | 1           | 5,4  | 6,4 | 0,3               | 4,5                       |
| K0024.0816 | 5,5 | 8,9  | 7,7  | M8  | 18      | 6 | 16 | 5   | 1,2         | 6,6  | 8   | 2,7               | 20                        |
| K0024.1020 | 6,5 | 11,1 | 9,4  | M10 | 22,2    | 7 | 20 | 6   | 1,7         | 8,3  | 9,8 | 4                 | 30                        |
| K0024.1224 | 8   | 13,5 | 11,6 | M12 | 27      | 9 | 24 | 8   | 1,9         | 10,1 | 12  | 5,4               | 44                        |

## Cam screws

with knife edge washer



### Material:

Knife edge washer.  
Cam screw carbon steel.

### Version:

Cam screw tempered to 10.9 and black oxidised.  
Knife edge washer hardened and anodised.

### Sample order:

K0025.16

### Note:

Also called knife edge clamps.  
The hardened knife edge washer is suitable for  
clamping rough cut stock, castings, forgings etc.

"A" = distance from workpiece to screw centre (cam  
screw).

### On request:

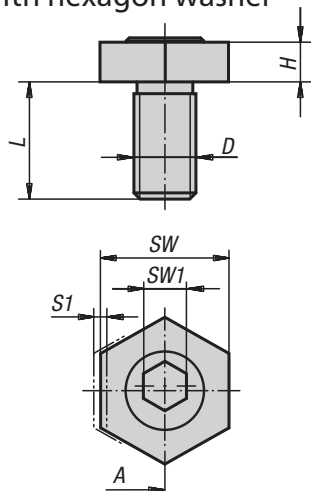
Replacement cam screws.

### KIPP Cam screws with knife edge washer

| Order No. | A    | D   | D1   | L    | H    | SW | S1<br>(travel) | Clamping<br>force<br>kN | Tightening<br>torque<br>max. Nm |
|-----------|------|-----|------|------|------|----|----------------|-------------------------|---------------------------------|
| K0025.12  | 12,7 | M12 | 25,4 | 22,5 | 9,6  | 8  | 2              | 18                      | 88                              |
| K0025.16  | 15   | M16 | 30,1 | 26,8 | 12,7 | 12 | 2,5            | 27                      | 135                             |

## Cam screws

with hexagon washer



### KIPP Cam screws with hexagon washer

| Order No. | A    | D   | H    | L  | SW   | SW1 | S1<br>(travel) | Clamping<br>force<br>kN | Tightening<br>torque<br>max. Nm |
|-----------|------|-----|------|----|------|-----|----------------|-------------------------|---------------------------------|
| K0026.04  | 3,8  | M4  | 2,8  | 10 | 8    | 3   | 0,8            | 0,9                     | 2,2                             |
| K0026.06  | 7,8  | M6  | 4,8  | 12 | 16   | 4   | 1              | 3,4                     | 8,5                             |
| K0026.08  | 10,2 | M8  | 4,8  | 15 | 20,6 | 5   | 1              | 3,6                     | 11,3                            |
| K0026.10  | 10,2 | M10 | 6,4  | 20 | 20,6 | 7   | 1,6            | 9,0                     | 28,06                           |
| K0026.12  | 12,7 | M12 | 9,5  | 25 | 25,4 | 8   | 2              | 18,0                    | 88                              |
| K0026.16  | 15   | M16 | 12,7 | 30 | 30,2 | 12  | 2,5            | 27,0                    | 135                             |



#### Material:

Cam screw carbon steel.  
Hex washer brass.

#### Version:

Cam screw tempered to 10.9 and black oxidised.

#### Sample order:

K0026.12

#### Note:

Also called fixture clamps.

The minimal height of this fixture clamp allows numerous clamping problems in fixture and equipment construction to be solved. The brass hex washer offers a gentle yet extremely stable and safe clamping of workpieces. By using several fixture clamps entire pallets can be set-up.

"A" = distance from workpiece to screw centre (cam screw).

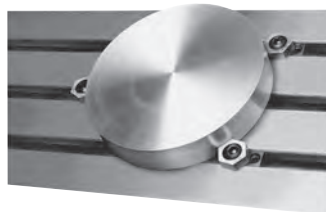
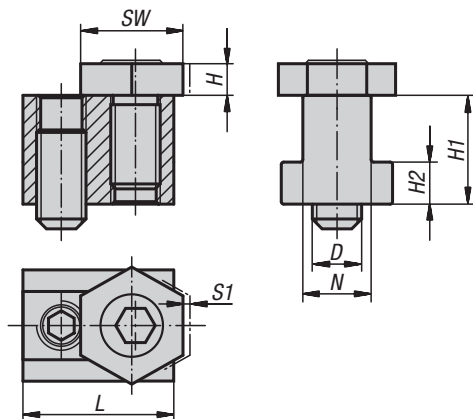
#### On request:

Replacement cam screws.

# K0027

## Cam screws

with hexagon washer, for T-slots



#### Material:

Carbon steel.  
Hex washer brass.

#### Version:

Tempered to 10.9 and black oxidised.

#### Sample order:

K0027.12

#### Note:

Also called fixture clamps for T-slots.

These fixture clamps can be used directly on machine tables or other tables with T-slots. The grub screw at the rear locks the T-nut in the slot. Thin shims are recommended to prevent marking the bottom of the T-slot.

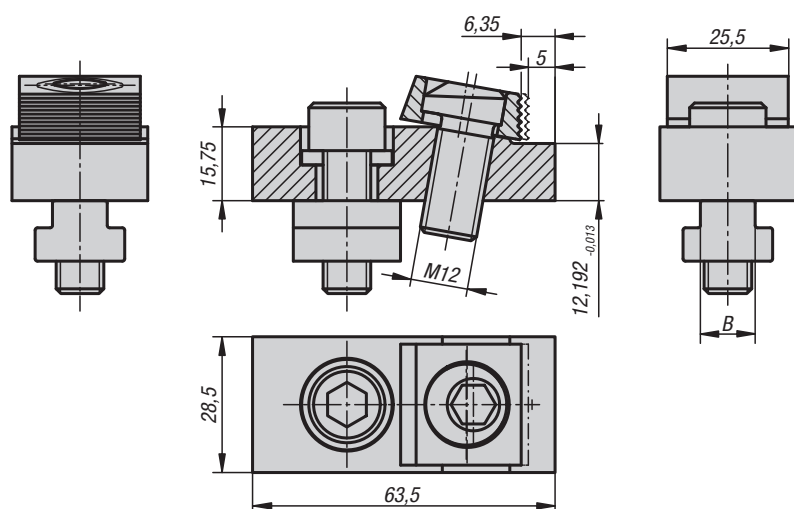
#### On request:

Replacement cam screws.

### KIPP Cam screws with hexagon washer, for T-slots

| Order No. | D   | N  | H    | H1   | H2  | L    | SW | S1<br>(travel) | Clamping<br>force<br>kN |
|-----------|-----|----|------|------|-----|------|----|----------------|-------------------------|
| K0027.08  | M6  | 8  | 4,8  | 9,6  | 4,5 | 23   | 16 | 1              | 3,4                     |
| K0027.10  | M6  | 10 | 4,8  | 14   | 4,5 | 23   | 16 | 1              | 3,4                     |
| K0027.12  | M8  | 12 | 4,8  | 15,5 | 6,5 | 28   | 21 | 1              | 3,6                     |
| K0027.14  | M10 | 14 | 6,4  | 22   | 8,5 | 30,5 | 21 | 1,6            | 9                       |
| K0027.16  | M12 | 16 | 9,5  | 22,5 | 9   | 30,5 | 25 | 2              | 18                      |
| K0027.18  | M12 | 18 | 9,5  | 28,5 | 10  | 34,5 | 25 | 2              | 18                      |
| K0027.20  | M16 | 20 | 12,7 | 32   | 12  | 39   | 30 | 2,5            | 27                      |
| K0027.22  | M16 | 22 | 12,7 | 38,2 | 14  | 44   | 30 | 2,5            | 27                      |

## Cam clamps with riser



**Material:**  
Steel.

**Version:**  
Body tempered and black oxidised.  
Square washer case hardened and brass-plated.

**Sample order:**  
K0028.16

**Note:**  
Also called riser clamps.  
These cam clamps with riser can be used directly on machine tables. A positive down force is exerted during clamping.

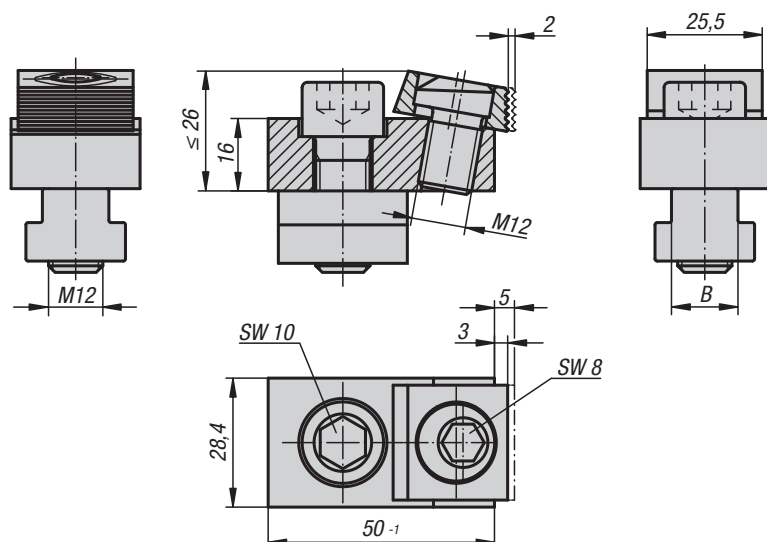
**On request:**  
Replacement cam screws.

### KIPP Cam clamps with riser

| Order No. | B<br>Slot width | Clamping<br>force<br>kN |
|-----------|-----------------|-------------------------|
| K0028.12  | 12              | 12                      |
| K0028.14  | 14              | 12                      |
| K0028.16  | 16              | 12                      |
| K0028.18  | 18              | 12                      |

# K0029

## Toe clamps for T-slots



**Material:**  
Steel.

**Version:**  
Body tempered and black oxidised.  
Square washer case hardened and brass-plated.

**Sample order:**  
K0029.14

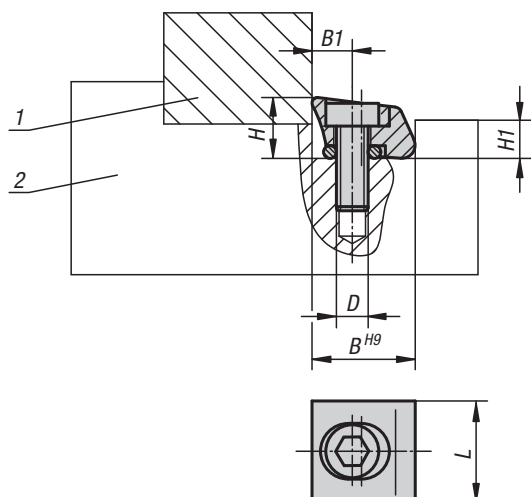
**Note:**  
These toe clamps can be used on machine tables or adapter plates. The positive down force holds the workpiece down on the supporting surface. The square washer can adapt slightly to an angular position i.e. the workpiece does not have to be exactly parallel. The clamping washer has a smooth side for machined surfaces and a serrated side for rough faces.

**On request:**  
Replacement cam screws.

### KIPP Toe clamps for T-slots

| Order No. | B<br>Slot width         | Clamping<br>force<br>kN |
|-----------|-------------------------|-------------------------|
| K0029.00  | without T-nut and screw | 18                      |
| K0029.14  | 14                      | 18                      |
| K0029.16  | 16                      | 18                      |
| K0029.18  | 18                      | 18                      |

## Chock clamps



### Material:

Clamping element steel or brass.

### Version:

Steel hardened.

### Sample order:

K0030.113

### Note:

Also known as pitbull clamps.  
Extremely space-saving design.  
No protruding edges due to lateral clamping.  
Positive down force.

### Drawing reference:

- 1) workpiece
- 2) Fixture

## KIPP Chock clamps

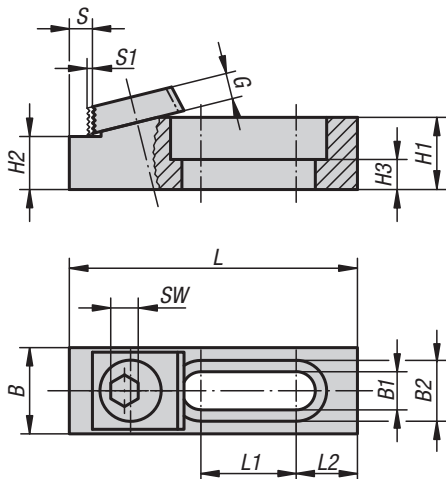
| Order No. | Version         | Main material | D        | B     | B1  | H    | H1  | L   | Clamping travel | Clamping force kN | Tightening torque max. Nm |
|-----------|-----------------|---------------|----------|-------|-----|------|-----|-----|-----------------|-------------------|---------------------------|
| K0030.110 | with knife edge | steel         | M2,5 x 8 | 9,5   | 3,8 | 6    | 3,6 | 9,5 | 0,15            | 2,8               | 1,8                       |
| K0030.113 | with knife edge | steel         | M4 x 12  | 12,7  | 5,1 | 8    | 4,8 | 13  | 0,4             | 6,6               | 5,6                       |
| K0030.119 | with knife edge | steel         | M6X16    | 19,05 | 7,6 | 11,5 | 7,2 | 19  | 0,6             | 16                | 22,5                      |
| K0030.210 | with blunt edge | steel         | M2,5 x 8 | 9,5   | 3,8 | 6    | 3,6 | 9,5 | 0,15            | 2,8               | 1,8                       |
| K0030.213 | with blunt edge | steel         | M4 x 12  | 12,7  | 5,1 | 8    | 4,8 | 13  | 0,4             | 6,6               | 5,6                       |
| K0030.219 | with blunt edge | steel         | M6X16    | 19,05 | 7,6 | 11,5 | 7,2 | 19  | 0,6             | 16                | 22,5                      |
| K0030.310 | with blunt edge | brass         | M2,5 x 8 | 9,5   | 3,8 | 6    | 3,6 | 9,5 | 0,15            | 0,9               | 0,56                      |
| K0030.313 | with blunt edge | brass         | M4 x 12  | 12,7  | 5,1 | 8    | 4,8 | 13  | 0,4             | 1,8               | 2,8                       |
| K0030.319 | with blunt edge | brass         | M6X16    | 19,05 | 7,6 | 11,5 | 7,2 | 19  | 0,6             | 4,2               | 5,6                       |

## Cam clamps

adjustable with riser



K0031.08, K0031.12



### Material:

Steel.

### Version:

Body tempered, black oxidised, riser faces ground.  
Square washer case hardened and brass-plated.

### Sample order:

K0031.12

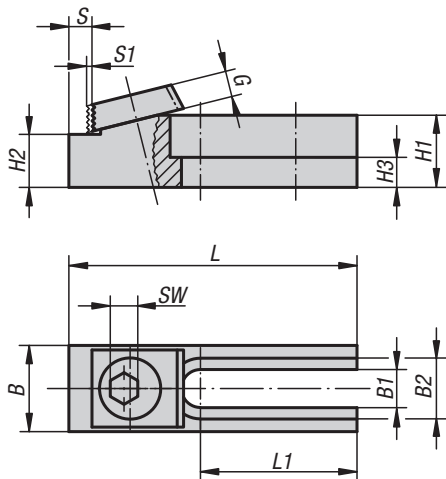
### Note:

Also called multi-fixture clamps and stops.  
Cost-effective custom made clamping fixtures can be produced using the adjustable riser cam clamps together with the matching riser stops.

### On request:

Replacement cam screws.

K0031.16



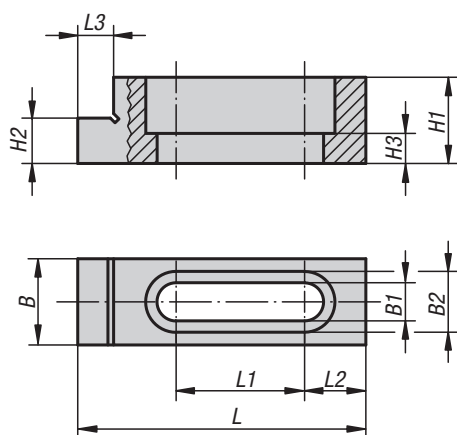
## KIPP Cam clamps adjustable with riser

| Order No. | suitable fastening screw | L    | L1   | L2   | B    | B1  | B2   | H1   | H2            | H3  | S   | S1  | G    | SW | Long hole | Clamping force kN | Tightening torque max. Nm |
|-----------|--------------------------|------|------|------|------|-----|------|------|---------------|-----|-----|-----|------|----|-----------|-------------------|---------------------------|
| K0031.08  | M8                       | 63,5 | 21   | 13,5 | 19   | 8,4 | 13,4 | 15,9 | 11,684 -0,013 | 6,6 | 6,3 | 1,2 | 5,3  | 7  | closed    | 8,9               | 28                        |
| K0031.12  | M12                      | 95,1 | 42,7 | 12,7 | 28,5 | 13  | 19,8 | 15,9 | 12,192 -0,013 | 6,9 | 7,1 | 2   | 9,5  | 8  | closed    | 17,8              | 88                        |
| K0031.16  | M16                      | 107  | 46,3 | -    | 38   | 17  | 24,8 | 41   | 35,001 -0,013 | 21  | 8,3 | 2,5 | 12,7 | 12 | open      | 26,7              | 135                       |

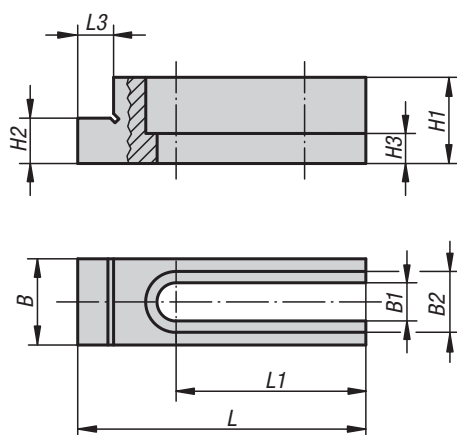
## Riser stops



K0032.08, K0032.12



K0032.16



**Material:**

Steel.

**Version:**

Tempered, black oxidised.  
Riser faces ground.

**Sample order:**

K0032.12

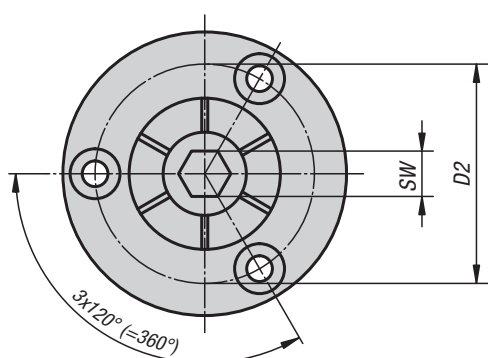
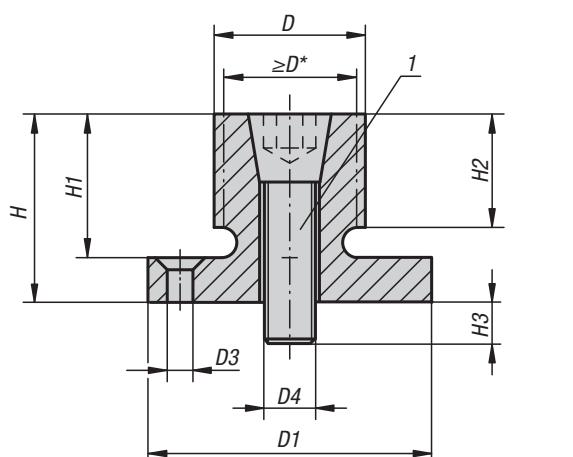
**Note:**

Also called multi-fixture clamps and stops.  
Cost-effective custom made clamping fixtures can be produced using the adjustable riser cam clamps together with the matching riser stops.

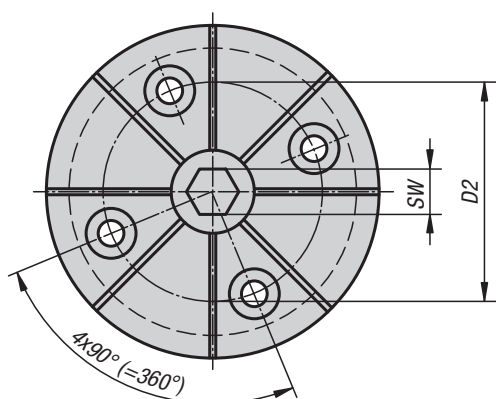
### KIPP Riser stops

| Order No. | suitable fastening screw | L    | L1   | L2   | L3  | B    | B1   | B2   | H1   | H2            | H3   | Long hole |
|-----------|--------------------------|------|------|------|-----|------|------|------|------|---------------|------|-----------|
| K0032.08  | M8                       | 63,5 | 28,3 | 13,5 | 7,9 | 19   | 8,4  | 13,4 | 19   | 11,684 -0,013 | 6,6  | closed    |
| K0032.12  | M12                      | 95,2 | 42,7 | 12,7 | 7,9 | 28,5 | 13,4 | 19,8 | 22   | 12,192 -0,013 | 6,9  | closed    |
| K0032.16  | M16                      | 107  | 46,2 | -    | 9,5 | 38   | 17   | 24,8 | 50,7 | 35,001 -0,013 | 21,3 | open      |

## Mandrel collets



K0357.1630175



**Material:**  
Mandrel mild steel.  
Taper-head screw low-carbon steel

**Version:**  
Mandrel black oxidised.  
Taper-head screw case-hardened.

**Sample order:**  
K0357.081420

**Note:**  
The mandrel collet is ideal for finish machining turned parts. The diameter "D" can be turned or milled to suit the workpiece ID.  
Low design - no interfering clamp straps.  
Tightened using a hex socket wrench or hydraulics.

\* D min. = smallest diameter to which "D" may be turned or milled.

**Assembly:**  
Expand the mandrel approx. 0.1 mm over the relaxed diameter. Turn or mill the mandrel to suit the internal diameter of the workpiece. The base flange can be centred in a pocket or using dowel pins.

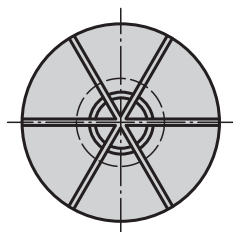
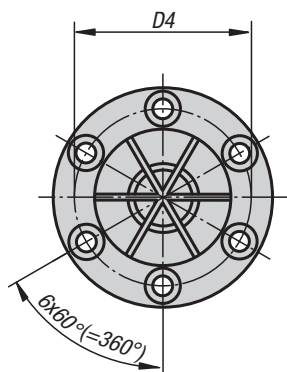
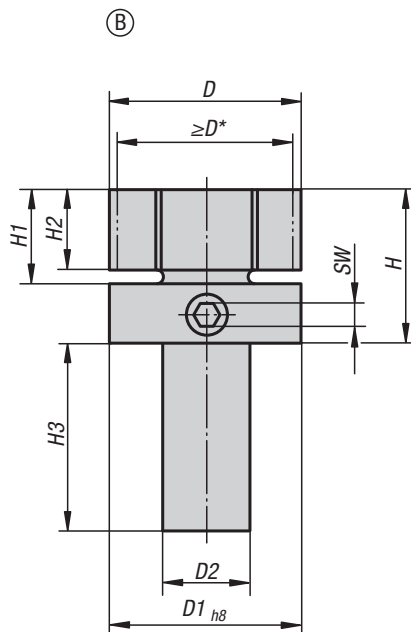
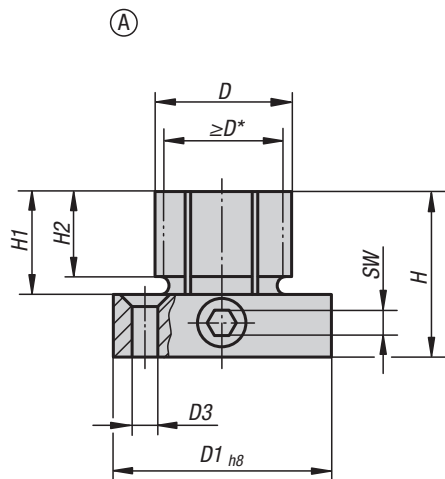
**Drawing reference:**  
1) taper-head screw

### KIPP Mandrel collets

| Order No.     | D    | D min. | D1       | D2   | D3<br>for screw<br>ISO 10642 | D4<br>Tapered-<br>head bolt | H    | H1   | H2   | H3  | SW<br>Tapered-<br>head bolt | Tightening<br>torque<br>max. Nm | Clamping<br>force<br>max. kN |
|---------------|------|--------|----------|------|------------------------------|-----------------------------|------|------|------|-----|-----------------------------|---------------------------------|------------------------------|
| K0357.020407  | 7,4  | 4,1    | 20 h9    | 13,7 | M2                           | M2                          | 10,7 | 7,6  | 6,1  | 4,1 | 1,5                         | 0,7                             | 1,1                          |
| K0357.040812  | 12,4 | 8      | 29,72 h9 | 21   | M3                           | M4                          | 21,8 | 16   | 15   | 8   | 3                           | 5                               | 4,2                          |
| K0357.061214  | 14,2 | 12,2   | 31,5 h9  | 23,1 | M3                           | M6                          | 24,9 | 19   | 15   | 12  | 5                           | 17                              | 8,5                          |
| K0357.081420  | 20   | 13,5   | 37,5 h9  | 29   | M3                           | M8                          | 24,9 | 19   | 15   | 14  | 6                           | 34                              | 11,1                         |
| K0357.062027  | 27   | 18     | 50 h9    | 39,4 | M4                           | M10                         | 28,6 | 22,2 | 17,5 | 17  | 8                           | 60                              | 20                           |
| K0357.102535  | 35,3 | 23     | 56 h9    | 45,5 | M4                           | M12                         | 31,8 | 25,4 | 20,6 | 21  | 10                          | 150                             | 26,3                         |
| K0357.123442  | 42   | 29,3   | 69,5 h8  | 55,9 | M5                           | M16                         | 39,6 | 31,8 | 27   | 22  | 14                          | 280                             | 44,5                         |
| K0357.123452  | 51,5 | 29,3   | 75,5 h9  | 63,9 | M5                           | M16                         | 39,6 | 31,8 | 27   | 22  | 14                          | 280                             | 44,5                         |
| K0357.163077  | 77,7 | 29,3   | 107,5 h9 | 92,5 | M6                           | M16                         | 45,5 | 37,6 | 32,3 | 20  | 14                          | 280                             | 44,5                         |
| K0357.1630103 | 103  | 29,3   | 132,9 h9 | 118  | M6                           | M16                         | 45,5 | 37,6 | 32,3 | 20  | 14                          | 280                             | 44,5                         |
| K0357.1630175 | 175  | 29,3   | 132,9 h9 | 118  | M6                           | M16                         | 45,5 | 37,6 | 32,3 | 20  | 14                          | 280                             | 44,5                         |

## Mandrel collets

with side lock



### Material:

Mandrel mild steel.

Clamping screw carbon steel.

### Version:

Mandrel black oxidised.

Clamping screw tempered to 10.9, hardened and PTFE coated.

### Sample order:

K0643.118029

### Note:

The side lock make these mandrel collets ideal for finish machining parts with blind internal diameters. The diameter "D" can be turned or milled to suit the workpiece ID.

Manual tightening with hexagon socket wrench.

\* D min. = smallest diameter to which "D" may be turned or milled.

### Assembly:

Expand the mandrel approx. 0.1 mm over the relaxed diameter. Turn or mill the mandrel to suit the internal diameter of the workpiece. A locking ring is included for machining.

The shank or flange is centred in a reamed hole or pocket.

Form A is supplied with 6 fastening screws.

### Drawing reference:

Form A:

for machining centres, drilling and milling machines

Form B:

with shaft for holding in lathe chucks



### KIPP Mandrel collets with side lock

| Order No.    | Form | D    | D min. | D1   | D2 | D3<br>for screw<br>ISO 10642 | D4   | H    | H1   | H2   | H3 | SW | Tightening<br>torque<br>max. Nm | Clamping<br>force<br>max. kN |
|--------------|------|------|--------|------|----|------------------------------|------|------|------|------|----|----|---------------------------------|------------------------------|
| K0643.118029 | A    | 28,7 | 17,8   | 50   | -  | M4                           | 39,4 | 41,3 | 22,4 | 17,5 | -  | 6  | 66                              | 20                           |
| K0643.218053 | B    | 53,3 | 18     | 53,3 | 25 | -                            | -    | 44,4 | 25,4 | 21   | 45 | 6  | 66                              | 20                           |

# Mandrel collet

for small bores



## Material:

Stainless steel 1.4305.

## Version:

Bright.

## Sample order:

K1293.104050

## Note:

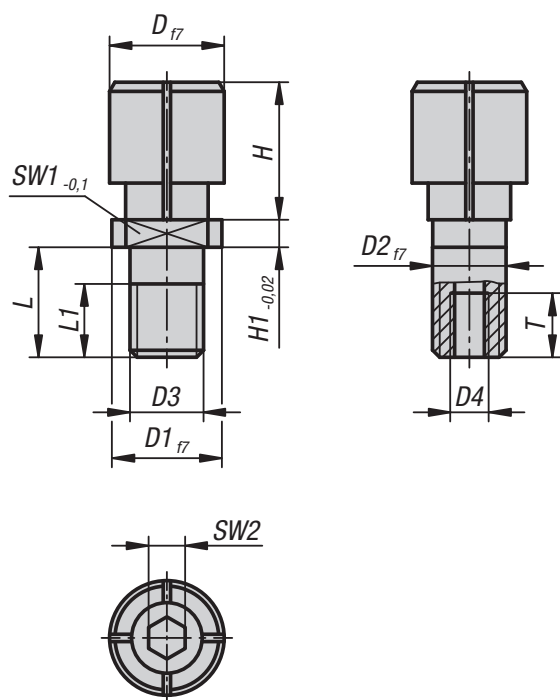
The mandrel collet is used in small through bores to position and clamp workpieces. Clamping is carried out manually from above using a hex key. The mandrel diameter can be ground to suit the application. The bore for the mandrel should have an H7 tolerance.

D min = smallest permissible diameter to which D can be ground.

- applicable for holes from Ø5 to Ø12.5 mm
- compact design, small installation space
- simple handling
- mounting in any position
- different installation types possible
- surface pressure protects the workpiece surface
- individually adaptable to the diameter

## Assembly:

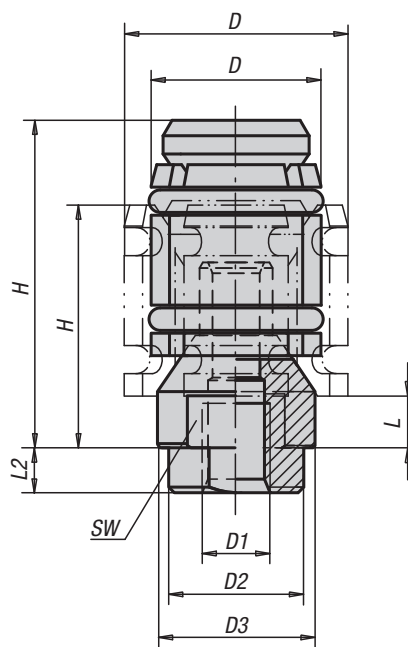
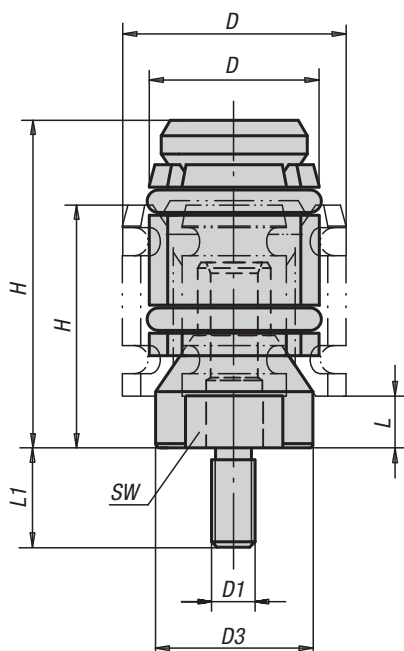
If required, diameter D can be adapted to suit the diameter being held. To do this, expand the mandrel collet ca. 0.2 mm over the required diameter. Grind the OD of the mandrel collet to suit the ID of the workpiece bore.



## KIPP Mandrel collet for small bores

| Order No.    | D    | D min. | D1 | D2 | D3 | D4 | H  | H1  | L  | L1 | SW1 | SW2 | T | Tightening torque max. Nm | Clamping force max. kN |
|--------------|------|--------|----|----|----|----|----|-----|----|----|-----|-----|---|---------------------------|------------------------|
| K1293.105060 | 6    | 5      | 10 | 6  | M6 | M3 | 8  | 2,5 | 10 | 6  | 6   | 2   | 6 | 0,9                       | 0,19                   |
| K1293.106080 | 8    | 6      | 10 | 6  | M6 | M3 | 10 | 2,5 | 10 | 6  | 6   | 2,5 | 6 | 2,4                       | 0,34                   |
| K1293.108100 | 10   | 8      | 12 | 8  | M8 | M4 | 12 | 3   | 12 | 8  | 8   | 3   | 7 | 4,4                       | 0,62                   |
| K1293.110125 | 12,5 | 10     | 12 | 8  | M8 | M4 | 15 | 3   | 12 | 8  | 8   | 4   | 7 | 8,1                       | 0,62                   |

## Centring clamps

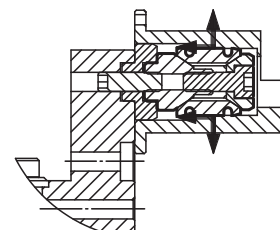
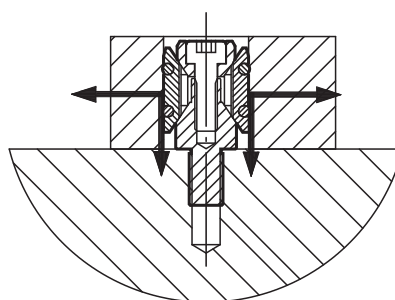
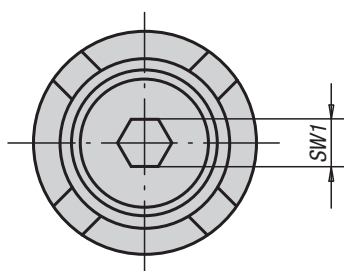


**Material:**  
Body steel.  
Bushes carbon steel.

**Version:**  
Black oxidised.

**Sample order:**  
K0893.0615

**Note:**  
These centring clamps enable workpieces to be centred on and lightly clamped in a bore. The clamps have a wide expansion range. The series covers a bore range of Ø12 to Ø30 mm. To increase the centring accuracy the clamps with internal thread have a centring spigot (D2) for a locating hole. The centring accuracy is  $\pm 0.2$  mm. Centring clamps with female threads fit on M6 grid systems (see illustration).



### KIPP Centring clamps

| Order No.    | Thread type     | D min. | D max. | D1 | D2 | D3   | H min. | H max. | L min. | L1 | L2 | SW | SW1 | Clamping force max. kN | Tightening torque max. Nm |
|--------------|-----------------|--------|--------|----|----|------|--------|--------|--------|----|----|----|-----|------------------------|---------------------------|
| K0893.0615   | internal thread | 12     | 15     | M6 | 12 | 11,4 | 22     | 27,5   | 4,8    | -  | 4  | 9  | 2,5 | 1,5                    | 2,2                       |
| K0893.0619   | internal thread | 15     | 19     | M6 | 12 | 14   | 24,5   | 32     | 4,8    | -  | 4  | 12 | 4   | 2,5                    | 6                         |
| K0893.0624   | internal thread | 19     | 24     | M6 | 12 | 17,8 | 26     | 35     | 4,5    | -  | 4  | 15 | 5   | 4                      | 10                        |
| K0893.0630   | internal thread | 24     | 30     | M6 | 12 | 23   | 32     | 44,5   | 7      | -  | 4  | 19 | 5   | 4,5                    | 10                        |
| K0893.061215 | external thread | 12     | 15     | M6 | -  | 11,4 | 22     | 27,5   | 4,8    | 12 | -  | 9  | 2,5 | 1,5                    | 2,2                       |
| K0893.061219 | external thread | 15     | 19     | M6 | -  | 14   | 24,5   | 32     | 4,8    | 12 | -  | 12 | 4   | 2,5                    | 6                         |
| K0893.081624 | external thread | 19     | 24     | M8 | -  | 17,8 | 26     | 35     | 4,5    | 16 | -  | 15 | 5   | 4                      | 10                        |
| K0893.081630 | external thread | 24     | 30     | M8 | -  | 23   | 32     | 44,5   | 7      | 16 | -  | 19 | 5   | 4,5                    | 10                        |

## Centring clamps

with ball or hexagon segments



### Material:

Body 1.2842.  
Ball and hex segments 1.4112.  
Tension spring 1.4310.

### Version:

Body hardened and black oxidised.  
Ball and hex segments hardened and ground.

### Sample order:

K0358.101203

### Application:

To position and centre existing bores on the machining surface.

### Advantages:

- Precise self-centring.
- Distortion free clamping.
- Large spread range.
- Low overall height.

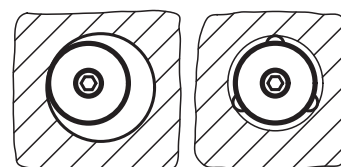
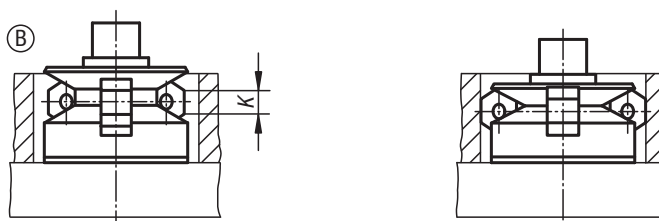
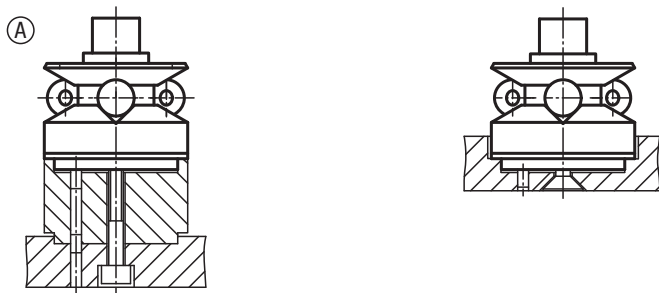
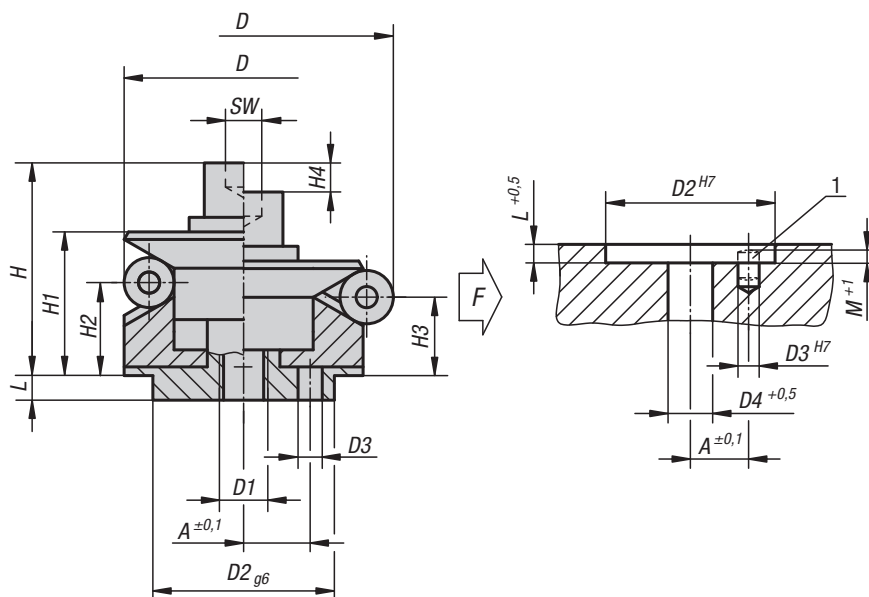
### Technical data:

Repetitive accuracy  $\pm 0.025$   
Concentric accuracy  $\pm 0.05$

### Drawing reference:

Form A:  
With balls for holes where light marking is acceptable.  
Form B:  
With hexagons for sensitive hole surfaces.

1) Mounting aid:  
pin to accurately position the mandrel segments.



# Centring clamps

with ball or hexagon segments



## KIPP Centring clamps with ball segments

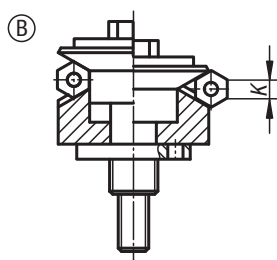
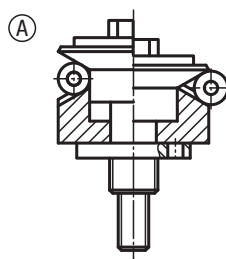
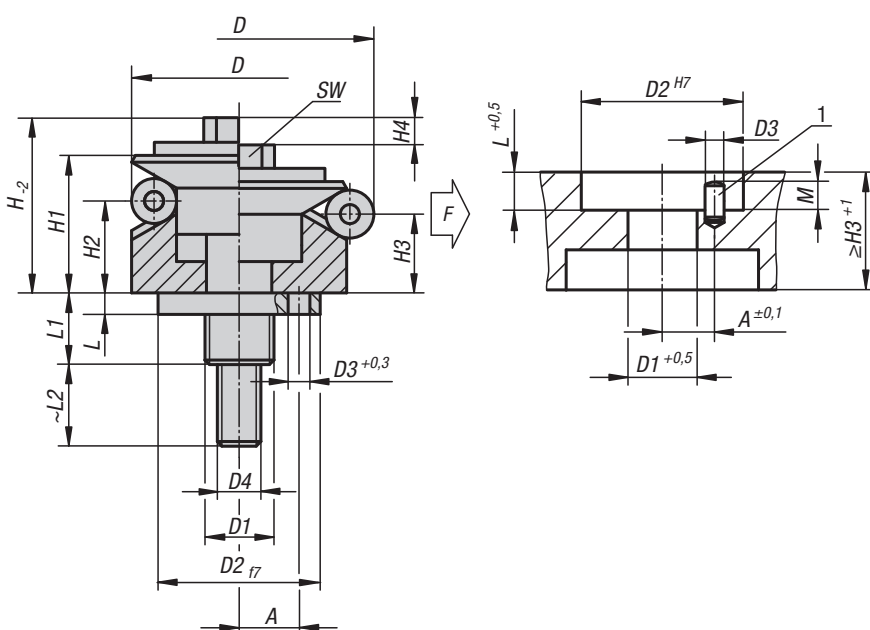
| Order No.    | Form | A   | D min. | D max. | D1  | D2 | D3  | D4   | H    | H1   | H2   | H3   | H4  | L   | M   | SW | Ball Ø | No. of balls | Clamping force max. kN | Tightening torque max. Nm |
|--------------|------|-----|--------|--------|-----|----|-----|------|------|------|------|------|-----|-----|-----|----|--------|--------------|------------------------|---------------------------|
| K0358.101203 | A    | 3,5 | 11,7   | 14,2   | M4  | 10 | 1,5 | 4,3  | 15   | 10   | 4,2  | 3    | 1,5 | 3,5 | 2,5 | 3  | 2,5    | 3            | 0,5                    | 5                         |
| K0358.101504 | A    | 4,5 | 14,5   | 18,5   | M4  | 12 | 2   | 4,3  | 19,5 | 14,5 | 9,8  | 8,6  | 2,3 | 5,5 | 3   | 3  | 4      | 3            | 3,5                    | 5                         |
| K0358.101905 | A    | 5,5 | 18,5   | 22,5   | M5  | 15 | 2,5 | 5,3  | 23,5 | 16,5 | 11,6 | 10,4 | 2,3 | 7,5 | 3   | 4  | 4      | 3            | 4                      | 10                        |
| K0358.102306 | A    | 7   | 22,5   | 26,5   | M6  | 20 | 3   | 6,4  | 28,8 | 19,8 | 14,2 | 13   | 2,3 | 6   | 4   | 5  | 4      | 3            | 4,5                    | 17                        |
| K0358.102706 | A    | 7   | 26,5   | 30,5   | M6  | 20 | 3   | 6,4  | 28,8 | 19,8 | 14,2 | 13   | 2,3 | 6   | 4,5 | 5  | 4      | 3            | 4,5                    | 17                        |
| K0358.103106 | A    | 9   | 30,5   | 38,5   | M6  | 25 | 4   | 6,4  | 32,7 | 23,1 | 14,2 | 11,9 | 4,6 | 7   | 4,5 | 5  | 8      | 3            | 4,5                    | 17                        |
| K0358.103908 | A    | 11  | 38,5   | 46,5   | M8  | 30 | 4   | 8,4  | 39,2 | 27,2 | 17,8 | 15,5 | 4,6 | 7,5 | 4,5 | 6  | 8      | 6            | 6,5                    | 43                        |
| K0358.104708 | A    | 11  | 46,5   | 54,5   | M8  | 30 | 4   | 8,4  | 39,2 | 27,2 | 18   | 15,7 | 4,6 | 7,5 | 4,5 | 6  | 8      | 6            | 6,5                    | 43                        |
| K0358.105510 | A    | 15  | 54,5   | 70,5   | M10 | 45 | 5   | 10,5 | 54,6 | 40,6 | 23,7 | 19,1 | 9,3 | 9   | 5,5 | 8  | 16     | 6            | 8                      | 79                        |
| K0358.107112 | A    | 17  | 70,5   | 86,5   | M12 | 60 | 5   | 13   | 63,1 | 46,1 | 28,3 | 23,7 | 9,3 | 10  | 5,5 | 10 | 16     | 6            | 10                     | 141                       |
| K0358.108712 | A    | 25  | 86,5   | 102,5  | M16 | 60 | 5   | 17   | 73   | 51   | 30,2 | 25,7 | 9,3 | 10  | 5,5 | 14 | 16     | 6            | 12,5                   | 354                       |

## KIPP Centring clamps with hexagon segments

| Order No.    | Form | A   | D min. | D max. | D1  | D2 | D3  | D4   | H    | H1   | H2   | H3   | H4  | L   | M   | K  | SW | No. of hex | Clamping force max. kN | Tightening torque max. Nm |
|--------------|------|-----|--------|--------|-----|----|-----|------|------|------|------|------|-----|-----|-----|----|----|------------|------------------------|---------------------------|
| K0358.201504 | B    | 4,5 | 14,5   | 18,5   | M4  | 12 | 2   | 4,3  | 19,5 | 14,5 | 9,8  | 8,6  | 2,3 | 5,5 | 3   | 4  | 3  | 3          | 3,5                    | 5                         |
| K0358.201905 | B    | 5,5 | 18,5   | 22,5   | M5  | 15 | 2,5 | 5,3  | 23,5 | 16,5 | 11,6 | 10,4 | 2,3 | 7,5 | 3   | 4  | 4  | 3          | 4                      | 10                        |
| K0358.202306 | B    | 7   | 22,5   | 26,5   | M6  | 20 | 3   | 6,4  | 28,8 | 19,8 | 14,2 | 13   | 2,3 | 6   | 4   | 4  | 5  | 3          | 4,5                    | 17                        |
| K0358.202706 | B    | 7   | 26,5   | 30,5   | M6  | 20 | 3   | 6,4  | 28,8 | 19,8 | 14,2 | 13   | 2,3 | 6   | 4,5 | 4  | 5  | 3          | 4,5                    | 17                        |
| K0358.203106 | B    | 9   | 30,5   | 38,5   | M6  | 25 | 4   | 6,4  | 32,7 | 23,1 | 14,2 | 11,9 | 4,6 | 7   | 4,5 | 8  | 5  | 3          | 4,5                    | 17                        |
| K0358.203908 | B    | 11  | 38,5   | 46,5   | M8  | 30 | 4   | 8,4  | 39,2 | 27,2 | 17,8 | 15,5 | 4,6 | 7,5 | 4,5 | 8  | 6  | 6          | 6,5                    | 43                        |
| K0358.204708 | B    | 11  | 46,5   | 54,5   | M8  | 30 | 4   | 8,4  | 39,2 | 27,2 | 18   | 15,7 | 4,6 | 7,5 | 4,5 | 8  | 6  | 6          | 6,5                    | 43                        |
| K0358.205510 | B    | 15  | 54,5   | 70,5   | M10 | 45 | 5   | 10,5 | 54,6 | 40,6 | 23,7 | 19,1 | 9,3 | 9   | 5,5 | 16 | 8  | 6          | 8                      | 79                        |
| K0358.207112 | B    | 17  | 70,5   | 86,5   | M12 | 60 | 5   | 13   | 63,1 | 46,1 | 28,3 | 23,7 | 9,3 | 10  | 5,5 | 16 | 10 | 6          | 10                     | 141                       |
| K0358.208712 | B    | 25  | 86,5   | 102,5  | M16 | 60 | 5   | 17   | 73   | 51   | 30,2 | 25,7 | 9,3 | 10  | 5,5 | 16 | 14 | 6          | 12,5                   | 354                       |

## Centring clamps

with ball or hexagon segments



### Material:

Body 1.2842.  
Ball and hex segments 1.4112.  
Tension spring 1.4310.

### Version:

Body hardened and black oxidised.  
Ball and hex segments hardened and ground.

### Sample order:

K0644.0101203

### Application:

For centre positioning and clamping in blind holes.  
Operated from below, manual or automatic using pneumatics or hydraulics.

### Advantages:

- Precise self-centring.
- Distortion free clamping.
- Large spread range.
- Low overall height.
- Positive down force.

### Technical data:

Repetitive accuracy  $\pm 0.025$   
Concentric accuracy  $\pm 0.05$

### Drawing reference:

Form A:

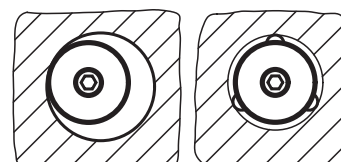
With balls for holes where light marking is acceptable.

Form B:

With hexagons for sensitive hole surfaces.

1) Mounting aid:

pin to accurately position the mandrel segments.



# Centring clamps

with ball or hexagon segments



## KIPP Centring clamps with ball segments

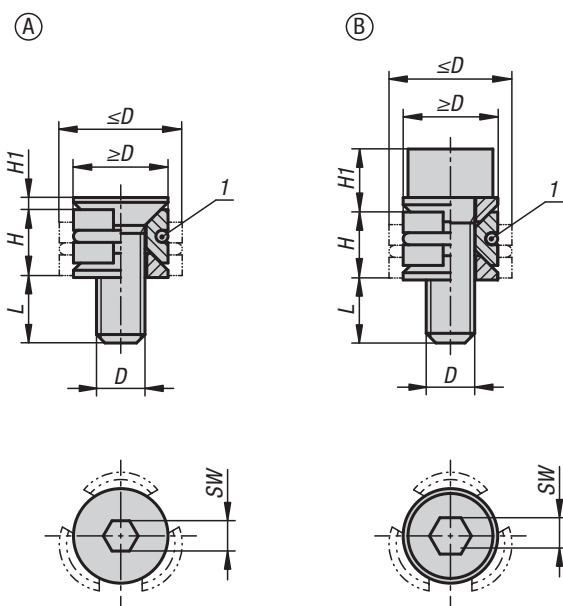
| Order No.     | Form | A   | D min. | D max. | D1      | D2 | D3  | D4  | H    | H1   | H2   | H3   | H4  | L   | L1   | L2 | M   | SW  | Ball Ø | No. of balls | Clamping force max. kN | Tightening torque max. Nm |
|---------------|------|-----|--------|--------|---------|----|-----|-----|------|------|------|------|-----|-----|------|----|-----|-----|--------|--------------|------------------------|---------------------------|
| K0644.0101203 | A    | 3,5 | 11,7   | 14,2   | M5      | 10 | 1,5 | M3  | 12,8 | 10   | 4,2  | 3    | 1,4 | 3,5 | 11   | 10 | 2   | 5,5 | 2,5    | 3            | 0,5                    | 2                         |
| K0644.0101503 | A    | 4,5 | 14,5   | 18,5   | M6      | 12 | 2   | M3  | 17,3 | 14,5 | 9,8  | 8,6  | 2,3 | 5,5 | 14,1 | 12 | 2,5 | 5,5 | 4      | 3            | 3,5                    | 2                         |
| K0644.0101904 | A    | 5,5 | 18,5   | 22,5   | M8      | 15 | 2,5 | M4  | 20,9 | 16,5 | 11,6 | 10,4 | 2,3 | 7,5 | 18,2 | 14 | 3,5 | 7   | 4      | 3            | 4                      | 5                         |
| K0644.0102305 | A    | 7   | 22,5   | 26,5   | M10     | 20 | 3   | M5  | 25,4 | 19,8 | 14,2 | 13   | 2,3 | 6   | 17,4 | 15 | 3,5 | 8   | 4      | 3            | 4,5                    | 10                        |
| K0644.0102705 | A    | 7   | 26,5   | 30,5   | M10     | 20 | 3   | M5  | 25,4 | 19,8 | 14,2 | 13   | 2,3 | 6   | 17,4 | 15 | 3,5 | 8   | 4      | 3            | 4,5                    | 10                        |
| K0644.0103106 | A    | 9   | 30,5   | 38,5   | M12     | 25 | 4   | M6  | 30,3 | 23,1 | 14,2 | 11,9 | 4,6 | 7   | 21,9 | 20 | 3,5 | 10  | 8      | 3            | 4,5                    | 17                        |
| K0644.0103906 | A    | 11  | 38,5   | 46,5   | M12     | 30 | 4   | M6  | 34,2 | 27,2 | 17,8 | 15,5 | 4,6 | 7,5 | 22,5 | 20 | 4,5 | 10  | 8      | 6            | 6,5                    | 17                        |
| K0644.0104706 | A    | 11  | 46,5   | 54,5   | M12     | 30 | 4   | M6  | 34,2 | 27,2 | 18   | 15,7 | 4,6 | 7,5 | 22,5 | 20 | 6,5 | 10  | 8      | 6            | 6,5                    | 17                        |
| K0644.0105508 | A    | 15  | 54,5   | 70,5   | M14x1,5 | 45 | 5   | M8  | 49,9 | 40,6 | 23,7 | 19,1 | 9,3 | 9   | 24,5 | 32 | 6,5 | 13  | 16     | 6            | 8                      | 43                        |
| K0644.0107108 | A    | 17  | 70,5   | 86,5   | M16x1,5 | 60 | 5   | M8  | 55,4 | 46,1 | 28,3 | 23,7 | 9,3 | 10  | 29,4 | 20 | 6,5 | 13  | 16     | 6            | 10                     | 43                        |
| K0644.0108708 | A    | 25  | 86,5   | 102,5  | M16x1,5 | 60 | 5   | M10 | 61,6 | 51   | 30,2 | 25,7 | 9,3 | 10  | 29,4 | 25 | 6,5 | 17  | 16     | 6            | 12,5                   | 79                        |

## KIPP Centring clamps with hexagon segments

| Order No.     | Form | A   | D min. | D max. | D1  | D2 | D3  | D4  | H    | H1   | H2   | H3   | H4  | L   | L1   | L2 | M   | K  | SW  | No. of hex | Clamping force max. kN | Tightening torque max. Nm |
|---------------|------|-----|--------|--------|-----|----|-----|-----|------|------|------|------|-----|-----|------|----|-----|----|-----|------------|------------------------|---------------------------|
| K0644.0201503 | B    | 4,5 | 14,5   | 18,5   | M6  | 12 | 2   | M3  | 17,3 | 14,5 | 9,8  | 8,6  | 1,4 | 5,5 | 14,1 | 12 | 2,5 | 4  | 5,5 | 3          | 3,5                    | 2                         |
| K0644.0201904 | B    | 5,5 | 18,5   | 22,5   | M8  | 15 | 2,5 | M4  | 20,9 | 16,5 | 11,6 | 10,4 | 2,3 | 7,5 | 18,2 | 14 | 3,5 | 4  | 7   | 3          | 4                      | 5                         |
| K0644.0202305 | B    | 7   | 22,5   | 26,5   | M10 | 20 | 3   | M5  | 25,4 | 19,8 | 14,2 | 13   | 2,3 | 6   | 17,4 | 15 | 3,5 | 4  | 8   | 3          | 4,5                    | 10                        |
| K0644.0202705 | B    | 7   | 26,5   | 30,5   | M10 | 20 | 3   | M5  | 25,4 | 19,8 | 14,2 | 13   | 2,3 | 6   | 17,4 | 15 | 3,5 | 4  | 8   | 3          | 4,5                    | 10                        |
| K0644.0203106 | B    | 9   | 30,5   | 38,5   | M12 | 25 | 4   | M6  | 30,3 | 23,1 | 14,2 | 11,9 | 4,6 | 7   | 21,9 | 20 | 3,5 | 8  | 10  | 6          | 4,5                    | 17                        |
| K0644.0203906 | B    | 11  | 38,5   | 46,5   | M12 | 30 | 4   | M6  | 34,2 | 27,2 | 17,8 | 15,5 | 4,6 | 7,5 | 22,5 | 20 | 4,5 | 8  | 10  | 6          | 6,5                    | 17                        |
| K0644.0204706 | B    | 11  | 46,5   | 54,5   | M12 | 30 | 4   | M6  | 34,2 | 27,2 | 18   | 15,7 | 4,6 | 7,5 | 22,5 | 20 | 6,5 | 8  | 10  | 6          | 6,5                    | 17                        |
| K0644.0205508 | B    | 15  | 54,5   | 70,5   | M14 | 45 | 5   | M8  | 49,9 | 40,6 | 23,7 | 19,1 | 9,3 | 9   | 24,5 | 32 | 6,5 | 16 | 13  | 6          | 8                      | 43                        |
| K0644.0207108 | B    | 17  | 70,5   | 86,5   | M16 | 60 | 5   | M8  | 55,4 | 46,1 | 28,3 | 23,7 | 9,3 | 10  | 29,4 | 20 | 6,5 | 16 | 13  | 6          | 10                     | 43                        |
| K0644.0208708 | B    | 25  | 86,5   | 102,5  | M16 | 60 | 5   | M10 | 61,6 | 51   | 30,2 | 25,7 | 9,3 | 10  | 29,4 | 25 | 6,5 | 16 | 16  | 6          | 12,5                   | 79                        |

## Centring clamps

round



**Material:**  
Carbon steel.

**Version:**  
Hardened (33–39 HRC) and black oxidised.

**Sample order:**  
K1166.10804

**Note:**  
The centring clamp enables a workpiece to be centred and clamped in the bore.  
The wedges generate higher clamping forces.  
The centring clamp is available with a cap screw or countersunk screw.  
Centring clamp with pull-down effect.

**Drawing reference:**  
Form A: with countersunk screw  
Form B: with cap screw

Dimension H refers to the height at  $\geq D$ .  
Dimension L refers to the length at  $\leq D$

1) O-ring

### KIPP Centring clamp round

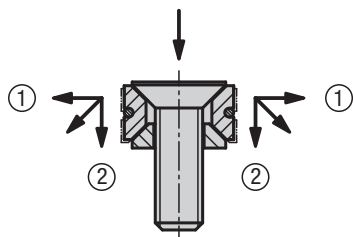
| Order No.   | Form | D       | D min. | D max. | H    | H1   | L    | SW  | Clamping force max. kN | Tightening torque Nm |
|-------------|------|---------|--------|--------|------|------|------|-----|------------------------|----------------------|
| K1166.10804 | A    | M4 x 12 | 8      | 10,3   | 5,5  | 0,9  | 7,3  | 2,5 | 0,9                    | 2,1                  |
| K1166.11005 | A    | M5X15   | 10     | 12,3   | 6,4  | 1,1  | 9,1  | 3   | 1,5                    | 4,3                  |
| K1166.11206 | A    | M6X18   | 12     | 16,3   | 8,6  | 1,3  | 11,2 | 4   | 2,1                    | 7,3                  |
| K1166.11608 | A    | M8X25   | 16     | 22     | 11,5 | 1,6  | 16,2 | 5   | 4                      | 18                   |
| K1166.20804 | B    | M4 x 12 | 8      | 10,3   | 5,5  | 5,1  | 7,1  | 3   | 1,5                    | 2,7                  |
| K1166.21005 | B    | M5X15   | 10     | 12,3   | 6,4  | 6,2  | 9    | 4   | 2,5                    | 5,4                  |
| K1166.21206 | B    | M6X18   | 12     | 16,3   | 8,6  | 7,9  | 10,6 | 5   | 5                      | 9,1                  |
| K1166.21608 | B    | M8X25   | 16     | 22     | 11,5 | 10,4 | 15,4 | 6   | 9                      | 25                   |

# Centring clamps

round

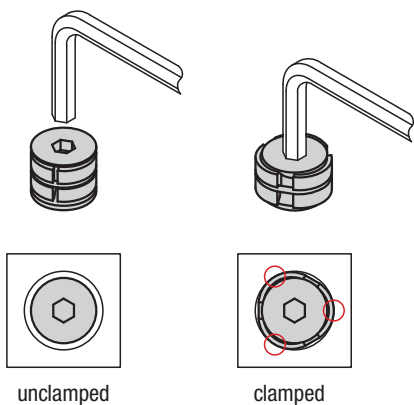
## Technical information:

- These clamps grip the inside diameter of a workpiece.
- The wedge shape enables high clamping forces on the workpiece.

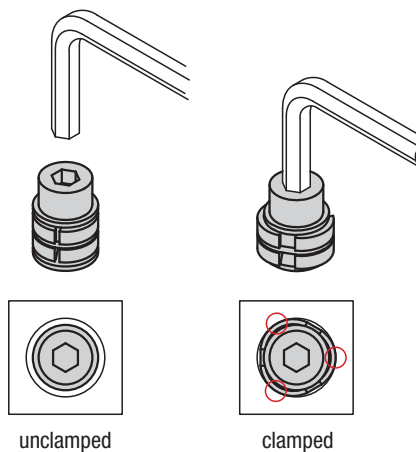


- (Jaws exert positive down force)
- ① Horizontal thrust against workpiece
  - ② Vertical thrust prevents the workpiece lifting

Form A:

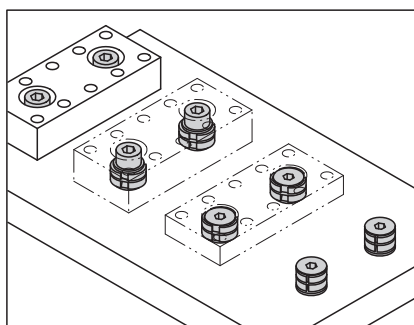


Form B:

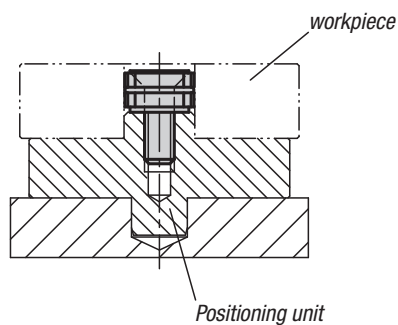


## Note:

The clamp makes point contact with the bore wall when clamped.



For accurate repeat positioning use these clamps together with a positioning unit. Clamping is carried out with the centring clamp.



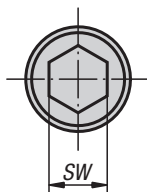
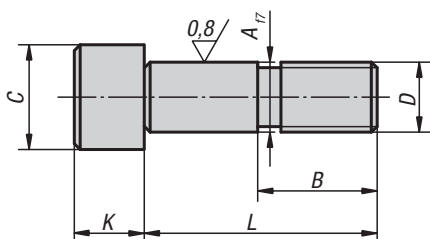


## Locating elements



## Shoulder screws

Form A



**Material:**  
Carbon steel.

**Version:**  
Tempered, black oxidised.  
Precision diameters ground.

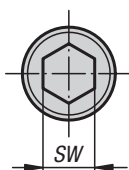
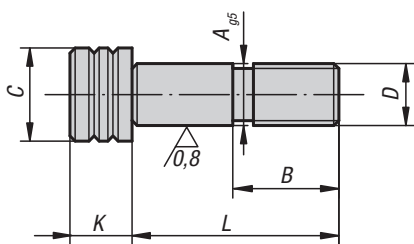
**Sample order:**  
K0815.112045

### KIPP Shoulder screws Form A

| Order No.    | Form | A  | B  | C  | D   | K  | L  | SW | Tightening torque max. Nm |
|--------------|------|----|----|----|-----|----|----|----|---------------------------|
| K0815.112045 | A    | 12 | 22 | 18 | M12 | 12 | 45 | 10 | 88                        |
| K0815.112055 | A    | 12 | 22 | 18 | M12 | 12 | 55 | 10 | 88                        |
| K0815.112065 | A    | 12 | 22 | 18 | M12 | 12 | 65 | 10 | 88                        |
| K0815.112075 | A    | 12 | 22 | 18 | M12 | 12 | 75 | 10 | 88                        |
| K0815.116055 | A    | 16 | 25 | 24 | M16 | 16 | 55 | 14 | 216                       |
| K0815.116065 | A    | 16 | 25 | 24 | M16 | 16 | 65 | 14 | 216                       |
| K0815.116075 | A    | 16 | 25 | 24 | M16 | 16 | 75 | 14 | 216                       |

## Shoulder screws

Form B



**Material:**  
Carbon steel.

**Version:**  
Tempered, black oxidised.  
Precision diameters ground.

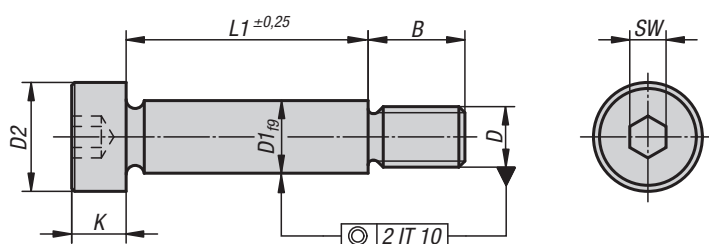
**Sample order:**  
K0815.12065

### KIPP Shoulder screws Form B

| Order No.   | Form | A  | B  | C  | D   | K  | L  | SW | Tightening torque max. Nm |
|-------------|------|----|----|----|-----|----|----|----|---------------------------|
| K0815.12045 | B    | 12 | 22 | 18 | M12 | 12 | 45 | 10 | 88                        |
| K0815.12055 | B    | 12 | 22 | 18 | M12 | 12 | 55 | 10 | 88                        |
| K0815.12065 | B    | 12 | 22 | 18 | M12 | 12 | 65 | 10 | 88                        |
| K0815.12075 | B    | 12 | 22 | 18 | M12 | 12 | 75 | 10 | 88                        |
| K0815.16055 | B    | 16 | 25 | 24 | M16 | 16 | 55 | 14 | 216                       |
| K0815.16065 | B    | 16 | 25 | 24 | M16 | 16 | 65 | 14 | 216                       |
| K0815.16075 | B    | 16 | 25 | 24 | M16 | 16 | 75 | 14 | 216                       |

# Shoulder screws

similar to DIN ISO 7379



## Material:

Steel or stainless steel (A 2)

## Version:

Grade 12.9. Shaft OD ground and bright.  
Bright stainless steel or tempered steel.

## Sample order:

K0705.06X20 (include length L1)

## Note:

Hexagon socket head shoulder screws are precision construction elements for many applications. As they can simplify complicated constructions, they are frequently chosen as the most cost-effective solution. Shoulder screws provide the decisive rationalising effect required today.

## KIPP Shoulder screws similar to DIN ISO 7379

| Order No.  | Main material   | D1 | D   | D2 | B   | K   | SW  | L1                                |
|------------|-----------------|----|-----|----|-----|-----|-----|-----------------------------------|
| K0705.04X  | steel           | 4  | M3  | 7  | 7   | 3   | 2   | 6/8/10/12/16/20                   |
| K0705.05X  | steel           | 5  | M4  | 9  | 8 6 | 4   | 2,5 | 8/10/16/20/30/40                  |
| K0705.06X  | steel           | 6  | M5  | 10 | 9,5 | 4,5 | 3   | 16/20/25/30/40/50/60              |
| K0705.08X  | steel           | 8  | M6  | 13 | 11  | 5,5 | 4   | 16/20/25/30/40/50/60              |
| K0705.10X  | steel           | 10 | M8  | 16 | 13  | 7   | 5   | 16/20/25/30/40/50/60/70/80        |
| K0705.12X  | steel           | 12 | M10 | 18 | 16  | 9   | 6   | 16/20/25/30/40/50/60/70/80/90/100 |
| K0705.16X  | steel           | 16 | M12 | 24 | 18  | 11  | 8   | 30/40/50/60/70/80/90/100/120      |
| K0705.20X  | steel           | 20 | M16 | 30 | 22  | 14  | 10  | 30/40/50/60/70/80/90/100/120      |
| K0705.104X | stainless steel | 4  | M3  | 7  | 7   | 3   | 2   | 6/8/10/16/20                      |
| K0705.105X | stainless steel | 5  | M4  | 9  | 8 6 | 4   | 2,5 | 8/10/16/20/30/40                  |
| K0705.106X | stainless steel | 6  | M5  | 10 | 9,5 | 4,5 | 3   | 16/20/25/30/40/50/60              |
| K0705.108X | stainless steel | 8  | M6  | 13 | 11  | 5,5 | 4   | 16/20/25/30/40/50/60              |
| K0705.110X | stainless steel | 10 | M8  | 16 | 13  | 7   | 5   | 16/20/25/30/40/50/60/70/80        |
| K0705.112X | stainless steel | 12 | M10 | 18 | 16  | 9   | 6   | 16/20/25/30/40/50/60/70/80/90/100 |
| K0705.116X | stainless steel | 16 | M12 | 24 | 18  | 11  | 8   | 30/40/50/60/70/80/90/100/120      |
| K0705.120X | stainless steel | 20 | M16 | 30 | 22  | 14  | 10  | 30/40/50/60/70/80/90/100/120      |

# Shoulder screws

with hexagon head similar to DIN 609


**Material:**

Steel.

**Version:**

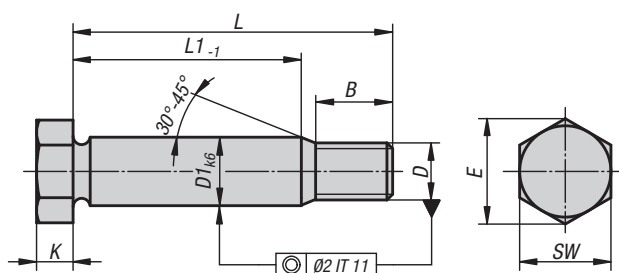
Grade 8.8, black oxidised.  
Shaft OD ground.

**Sample order:**

K0706.09X40 (include length L)

**Note:**

Shoulder screws are used if the screw connection is subjected to transverse forces or if workpieces must be positioned relative to each other.



## KIPP Shoulder screws with hexagon head, similar to DIN 609

| Order No.    | B    | D1 | D   | E     | K   | L   | L1 | SW |
|--------------|------|----|-----|-------|-----|-----|----|----|
| K0706.09X25  | 14,5 | 9  | M8  | 14,38 | 5,3 | 25  | 8  | 13 |
| K0706.09X30  | 14,5 | 9  | M8  | 14,38 | 5,3 | 30  | 13 | 13 |
| K0706.09X35  | 14,5 | 9  | M8  | 14,38 | 5,3 | 35  | 18 | 13 |
| K0706.09X40  | 14,5 | 9  | M8  | 14,38 | 5,3 | 40  | 23 | 13 |
| K0706.09X45  | 14,5 | 9  | M8  | 14,38 | 5,3 | 45  | 28 | 13 |
| K0706.09X50  | 14,5 | 9  | M8  | 14,38 | 5,3 | 50  | 33 | 13 |
| K0706.09X60  | 16,5 | 9  | M8  | 14,38 | 5,3 | 60  | 41 | 13 |
| K0706.11X30  | 17,5 | 11 | M10 | 17,77 | 6,4 | 30  | 10 | 17 |
| K0706.11X35  | 17,5 | 11 | M10 | 17,77 | 6,4 | 35  | 15 | 17 |
| K0706.11X40  | 17,5 | 11 | M10 | 17,77 | 6,4 | 40  | 20 | 17 |
| K0706.11X45  | 17,5 | 11 | M10 | 17,77 | 6,4 | 45  | 25 | 17 |
| K0706.11X50  | 17,5 | 11 | M10 | 17,77 | 6,4 | 50  | 30 | 17 |
| K0706.11X60  | 19,5 | 11 | M10 | 17,77 | 6,4 | 60  | 38 | 17 |
| K0706.11X70  | 19,5 | 11 | M10 | 17,77 | 6,4 | 70  | 48 | 17 |
| K0706.11X80  | 19,5 | 11 | M10 | 17,77 | 6,4 | 80  | 58 | 17 |
| K0706.11X90  | 19,5 | 11 | M10 | 17,77 | 6,4 | 90  | 68 | 17 |
| K0706.11X100 | 19,5 | 11 | M10 | 17,77 | 6,4 | 100 | 78 | 17 |

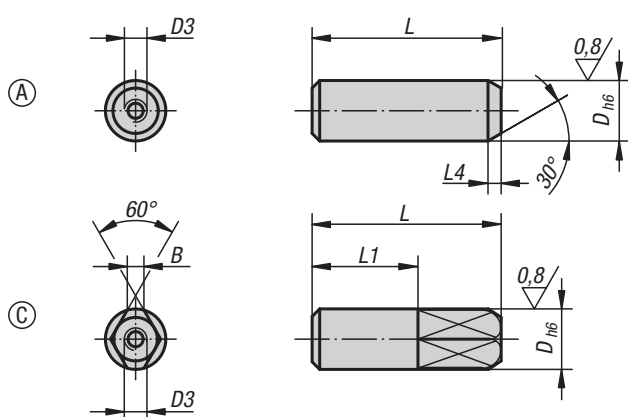
# Shoulder screws

with hexagon head similar to DIN 609



| Order No.    | B    | D1 | D   | E     | K    | L   | L1   | SW |
|--------------|------|----|-----|-------|------|-----|------|----|
| K0706.13X35  | 20,5 | 13 | M12 | 19,85 | 7,5  | 35  | 11,5 | 19 |
| K0706.13X40  | 20,5 | 13 | M12 | 19,85 | 7,5  | 40  | 16,5 | 19 |
| K0706.13X45  | 20,5 | 13 | M12 | 19,85 | 7,5  | 45  | 21,5 | 19 |
| K0706.13X50  | 20,5 | 13 | M12 | 19,85 | 7,5  | 50  | 26,5 | 19 |
| K0706.13X60  | 22,5 | 13 | M12 | 19,85 | 7,5  | 60  | 34,5 | 19 |
| K0706.13X70  | 22,5 | 13 | M12 | 19,85 | 7,5  | 70  | 44,5 | 19 |
| K0706.13X80  | 22,5 | 13 | M12 | 19,85 | 7,5  | 80  | 54,5 | 19 |
| K0706.13X90  | 22,5 | 13 | M12 | 19,85 | 7,5  | 90  | 64,5 | 19 |
| K0706.13X100 | 22,5 | 13 | M12 | 19,85 | 7,5  | 100 | 74,5 | 19 |
| K0706.17X40  | 25   | 17 | M16 | 26,17 | 10   | 40  | 11,5 | 24 |
| K0706.17X45  | 25   | 17 | M16 | 26,17 | 10   | 45  | 16,5 | 24 |
| K0706.17X50  | 25   | 17 | M16 | 26,17 | 10   | 50  | 21,5 | 24 |
| K0706.17X60  | 27   | 17 | M16 | 26,17 | 10   | 60  | 29,5 | 24 |
| K0706.17X70  | 27   | 17 | M16 | 26,17 | 10   | 70  | 39,5 | 24 |
| K0706.17X80  | 27   | 17 | M16 | 26,17 | 10   | 80  | 49,5 | 24 |
| K0706.17X90  | 27   | 17 | M16 | 26,17 | 10   | 90  | 59,5 | 24 |
| K0706.17X100 | 27   | 17 | M16 | 26,17 | 10   | 100 | 69,5 | 24 |
| K0706.21X50  | 28,5 | 21 | M20 | 32,95 | 12,5 | 50  | 17,5 | 30 |
| K0706.21X60  | 30,5 | 21 | M20 | 32,95 | 12,5 | 60  | 25,5 | 30 |
| K0706.21X70  | 30,5 | 21 | M20 | 32,95 | 12,5 | 70  | 35,5 | 30 |
| K0706.21X80  | 30,5 | 21 | M20 | 32,95 | 12,5 | 80  | 45,5 | 30 |
| K0706.21X90  | 30,5 | 21 | M20 | 32,95 | 12,5 | 90  | 55,5 | 30 |
| K0706.21X100 | 30,5 | 21 | M20 | 32,95 | 12,5 | 100 | 65,5 | 30 |
| K0706.21X120 | 30,5 | 21 | M20 | 32,95 | 12,5 | 120 | 85,5 | 30 |
| K0706.25X60  | 36,5 | 25 | M24 | 39,35 | 15   | 60  | 19   | 36 |
| K0706.25X70  | 36,5 | 25 | M24 | 39,35 | 15   | 70  | 29   | 36 |
| K0706.25X80  | 36,5 | 25 | M24 | 39,35 | 15   | 80  | 39   | 36 |
| K0706.25X90  | 36,5 | 25 | M24 | 39,35 | 15   | 90  | 49   | 36 |
| K0706.25X100 | 36,5 | 25 | M24 | 39,35 | 15   | 100 | 59   | 36 |
| K0706.25X120 | 36,5 | 25 | M24 | 39,35 | 15   | 120 | 79   | 36 |

## Removable locating pins Forms A and C

**Material:**

Tool steel.

**Version:**

Hardened and ground (HRC 56 +2).

**Sample order:**

K0817.12

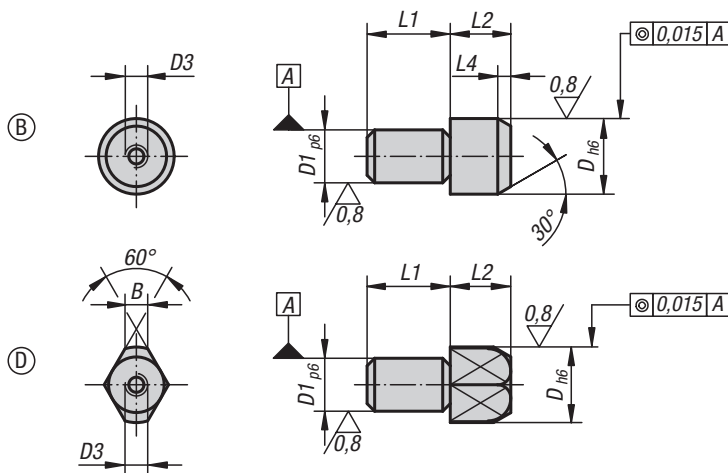
**Note:**

The locating pins can be easily removed with an extractor.

## KIPP Locating pins Form A and C

| Order No.<br>Form A | Order No.<br>Form C | D  | D3 | L  | L1   | L4  | B     |
|---------------------|---------------------|----|----|----|------|-----|-------|
| K0817.08            | K0817.082           | 8  | M3 | 25 | -/14 | 3/- | -/2,2 |
| K0817.10            | K0817.102           | 10 | M3 | 30 | -/17 | 3/- | -/3   |
| K0817.12            | K0817.122           | 12 | M5 | 34 | -/20 | 4/- | -/3,5 |
| K0817.16            | K0817.162           | 16 | M5 | 42 | -/26 | 4/- | -/5   |
| K0817.20            | K0817.202           | 20 | M5 | 47 | -/30 | 5/- | -/6   |
| K0817.25            | K0817.252           | 25 | M5 | 49 | -/30 | 5/- | -/8   |

## Removable locating pins Forms B and D



### Material:

Tool steel.

### Version:

Hardened and ground (HRC 55-60).

### Sample order:

K0818.20

### Note:

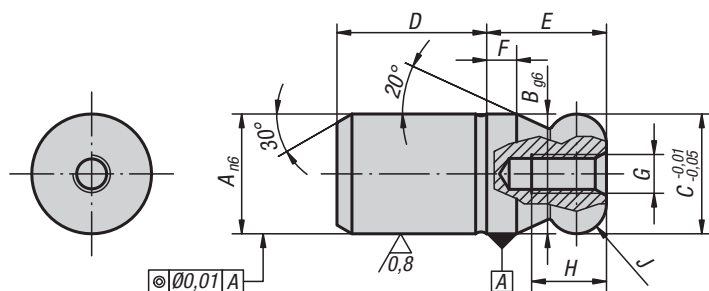
Locating pins can be easily removed with an extractor.

### KIPP Locating pins Form B and D

| Order No.<br>Form B | Order No.<br>Form D | D  | D1 | D3 | L1 | L2 | L4  | B     |
|---------------------|---------------------|----|----|----|----|----|-----|-------|
| K0818.10            | K0818.102           | 10 | 7  | M3 | 11 | 11 | 3   | -/3   |
| K0818.12            | K0818.122           | 12 | 8  | M5 | 13 | 12 | 4   | -/3,5 |
| K0818.16            | K0818.162           | 16 | 12 | M5 | 18 | 14 | 4,5 | -/5   |
| K0818.20            | K0818.202           | 20 | 14 | M5 | 22 | 15 | 5   | -/6   |
| K0818.22            | K0818.222           | 22 | 16 | M5 | 22 | 17 | 5   | -/7   |
| K0818.25            | K0818.252           | 25 | 18 | M5 | 25 | 17 | 5   | -/8   |

## Locating pins

with ball-end Form A



### Material:

Tool steel or 1.4305 stainless steel.

### Version:

Steel hardened and ground.

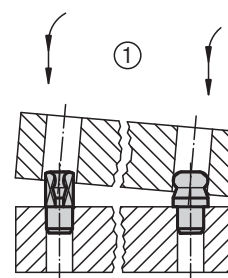
Stainless steel ground and kolsterised.

### Sample order:

K0350.12

### Note:

Ball end locating pins are specially designed to ease the locating process. The tendency to jam, caused by the locating hole not being at right angles to the pin or by the pushing force not being parallel to the pin axis, is minimized by the ball-end form (see illustration 1 for K0351 Form B)

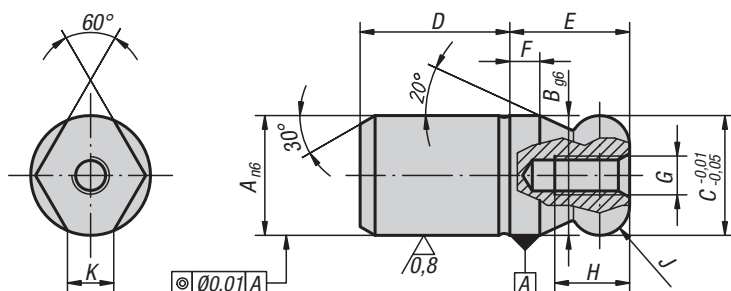


### KIPP Locating pins with ball-end Form A

| Order No.<br>tool steel | Order No.<br>stainless steel | A  | B  | C  | D  | E  | F   | G    | H   | J     |
|-------------------------|------------------------------|----|----|----|----|----|-----|------|-----|-------|
| K0350.05                | K0350.505                    | 5  | 5  | 5  | 6  | 5  | 2   | M2,5 | 4,5 | R 1   |
| K0350.06                | K0350.506                    | 6  | 6  | 6  | 8  | 6  | 2   | M3   | 5   | R 1   |
| K0350.08                | K0350.508                    | 8  | 8  | 8  | 10 | 8  | 2   | M3   | 6   | R 2   |
| K0350.10                | K0350.510                    | 10 | 10 | 10 | 13 | 10 | 2,5 | M3   | 6   | R 2,5 |
| K0350.12                | K0350.512                    | 12 | 12 | 12 | 15 | 12 | 3   | M4   | 8   | R 3   |
| K0350.14                | K0350.514                    | 14 | 14 | 14 | 17 | 14 | 3,5 | M4   | 8   | R 3,5 |
| K0350.16                | K0350.516                    | 16 | 16 | 16 | 20 | 16 | 4   | M5   | 10  | R 4   |
| K0350.20                | K0350.520                    | 20 | 20 | 20 | 25 | 20 | 5   | M5   | 10  | R 5   |
| K0350.25                | -                            | 25 | 25 | 25 | 25 | 25 | 6   | M5   | 10  | R 6   |
| K0350.30                | -                            | 30 | 30 | 30 | 30 | 30 | 8   | M6   | 12  | R 8   |
| K0350.40                | -                            | 40 | 40 | 40 | 40 | 40 | 10  | M6   | 12  | R 10  |
| K0350.50                | -                            | 50 | 50 | 50 | 50 | 50 | 12  | M6   | 12  | R 12  |

## Locating pins

with flattened ball-end Form C



### Material:

Tool steel or 1.4305 stainless steel.

### Version:

Steel hardened and ground.

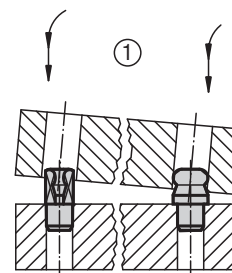
Stainless steel ground and kolsterised.

### Sample order:

K0350.162

### Note:

Ball end locating pins are specially designed to ease the locating process. The tendency to jam, caused by the locating hole not being at right angles to the pin or by the pushing force not being parallel to the pin axis, is minimized by the ball-end form (see illustration 1 for K0351 Form B)

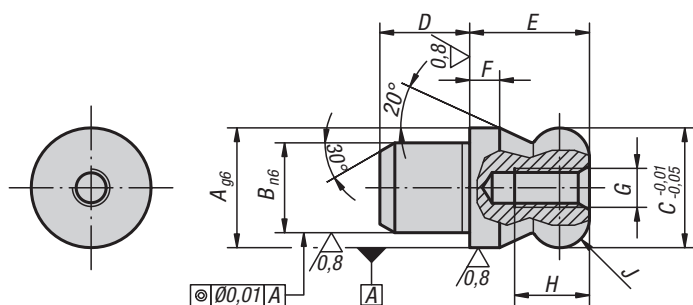


### KIPP Locating pins with flattened ball-end Form C

| Order No.<br>tool steel | Order No.<br>stainless steel | A  | B  | C  | D  | E  | F   | G    | H   | J     | K    |
|-------------------------|------------------------------|----|----|----|----|----|-----|------|-----|-------|------|
| K0350.052               | K0350.5052                   | 5  | 5  | 5  | 6  | 5  | 2   | M2,5 | 4,5 | R 1   | 1,5  |
| K0350.062               | K0350.5062                   | 6  | 6  | 6  | 8  | 6  | 2   | M3   | 5   | R 1   | 1,8  |
| K0350.082               | K0350.5082                   | 8  | 8  | 8  | 10 | 8  | 2   | M3   | 6   | R 2   | 1,9  |
| K0350.102               | K0350.5102                   | 10 | 10 | 10 | 13 | 10 | 2,5 | M3   | 6   | R 2,5 | 2,5  |
| K0350.122               | K0350.5122                   | 12 | 12 | 12 | 15 | 12 | 3   | M4   | 8   | R 3   | 2,5  |
| K0350.142               | K0350.5142                   | 14 | 14 | 14 | 17 | 14 | 3,5 | M4   | 8   | R 3,5 | 3,9  |
| K0350.162               | K0350.5162                   | 16 | 16 | 16 | 20 | 16 | 4   | M5   | 10  | R 4   | 4,3  |
| K0350.202               | K0350.5202                   | 20 | 20 | 20 | 25 | 20 | 5   | M5   | 10  | R 5   | 5    |
| K0350.252               | -                            | 25 | 25 | 25 | 25 | 25 | 6   | M5   | 10  | R 6   | 5,6  |
| K0350.302               | -                            | 30 | 30 | 30 | 30 | 30 | 8   | M6   | 12  | R 8   | 8,8  |
| K0350.402               | -                            | 40 | 40 | 40 | 40 | 40 | 10  | M6   | 12  | R 10  | 12,8 |
| K0350.502               | -                            | 50 | 50 | 50 | 50 | 50 | 12  | M6   | 12  | R 12  | 16,7 |

## Locating pins

with ball-end Form B



### Material:

Tool steel or 1.4305 stainless steel.

### Version:

Steel hardened and ground.

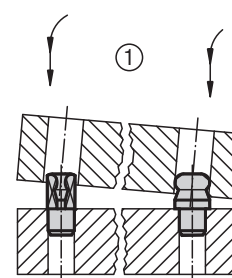
Stainless steel ground and kolsterised.

### Sample order:

K0351.20

### Note:

Ball end locating pins are specially designed to ease the locating process. The tendency to jam, caused by the locating hole not being at right angles to the pin or by the pushing force not being parallel to the pin axis, is minimized by the ball-end form (see illustration).

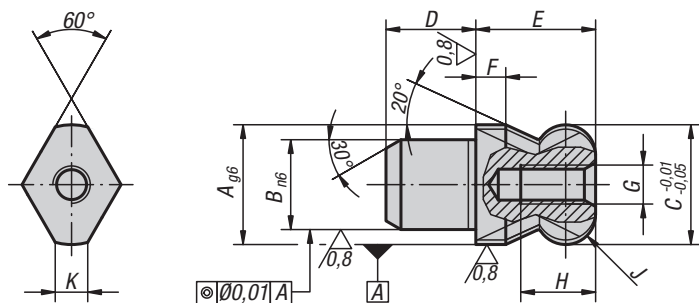


### KIPP Locating pins with ball-end Form B

| Order No.<br>tool steel | Order No.<br>stainless steel | A  | B  | C  | D  | E  | F   | G    | H   | J     |
|-------------------------|------------------------------|----|----|----|----|----|-----|------|-----|-------|
| K0351.06                | K0351.506                    | 6  | 4  | 6  | 4  | 6  | 2   | M2,5 | 4,5 | R 1   |
| K0351.08                | K0351.508                    | 8  | 6  | 8  | 6  | 8  | 2   | M3   | 6   | R 2   |
| K0351.10                | K0351.510                    | 10 | 7  | 10 | 7  | 10 | 2,5 | M3   | 6   | R 2,5 |
| K0351.12                | K0351.512                    | 12 | 8  | 12 | 8  | 12 | 3   | M4   | 8   | R 3   |
| K0351.14                | K0351.514                    | 14 | 10 | 14 | 10 | 14 | 3,5 | M4   | 8   | R 3,5 |
| K0351.16                | K0351.516                    | 16 | 12 | 16 | 12 | 16 | 4   | M5   | 10  | R 4   |
| K0351.20                | K0351.520                    | 20 | 14 | 20 | 14 | 20 | 5   | M5   | 10  | R 5   |
| K0351.22                | -                            | 22 | 16 | 22 | 16 | 22 | 5,5 | M5   | 10  | R 5,5 |
| K0351.25                | -                            | 25 | 18 | 25 | 18 | 25 | 6   | M5   | 10  | R 6   |

## Locating pins

with flattened ball-end Form D



### Material:

Tool steel or 1.4305 stainless steel.

### Version:

Steel hardened and ground.

Stainless steel ground and kolsterised.

### Sample order:

K0351.162

### Note:

Ball end locating pins are specially designed to ease the locating process. The tendency to jam, caused by the locating hole not being at right angles to the pin or by the pushing force not being parallel to the pin axis, is minimized by the ball-end form (see illustration 1 for K0351 Form B)

## KIPP Locating pins with flattened ball-end Form D

| Order No.<br>tool steel | Order No.<br>stainless steel | A  | B  | C  | D  | E  | F   | G    | H   | J     | K    |
|-------------------------|------------------------------|----|----|----|----|----|-----|------|-----|-------|------|
| K0351.062               | K0351.5062                   | 6  | 4  | 6  | 4  | 6  | 2   | M2,5 | 4,5 | R 1   | 1,7  |
| K0351.082               | K0351.5082                   | 8  | 6  | 8  | 6  | 8  | 2   | M3   | 6   | R 2   | 2    |
| K0351.102               | K0351.5102                   | 10 | 7  | 10 | 7  | 10 | 2,5 | M3   | 6   | R 2,5 | 2,5  |
| K0351.122               | K0351.5122                   | 12 | 8  | 12 | 8  | 12 | 3   | M4   | 8   | R 3   | 2,5  |
| K0351.142               | K0351.5142                   | 14 | 10 | 14 | 10 | 14 | 3,5 | M4   | 8   | R 3,5 | 3,76 |
| K0351.162               | K0351.5162                   | 16 | 12 | 16 | 12 | 16 | 4   | M5   | 10  | R 4   | 4,3  |
| K0351.202               | K0351.5202                   | 20 | 14 | 20 | 14 | 20 | 5   | M5   | 10  | R 5   | 5    |
| K0351.222               | -                            | 22 | 16 | 22 | 16 | 22 | 5,5 | M5   | 10  | R 5,5 | 5    |
| K0351.252               | -                            | 25 | 18 | 25 | 18 | 25 | 6   | M5   | 10  | R 6   | 5,6  |

## Locating pins

with internal thread



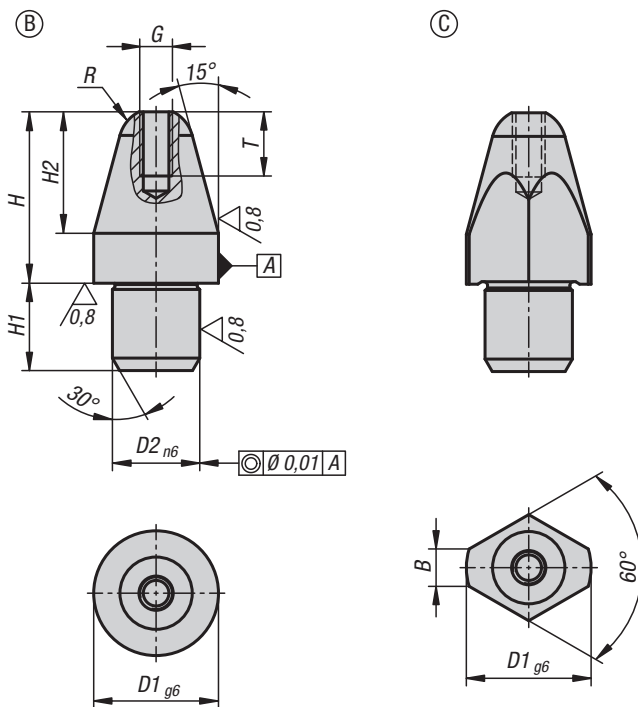
**Material:**  
Steel.

**Version:**  
Hardened and ground (HRC 60 ±2).

**Sample order:**  
K1094.208

**Note:**  
Locating pins are specially designed to ease the locating process. When used in conjunction with the hardened locating bushes K1095, they allow for a rapid, precise and low-wear workpiece exchange.

**Drawing reference:**  
Form B: cylindrical pin  
Form C: rhomboid pin



### KIPP Locating pins, short

| Order No.<br>Form B | Order No.<br>Form C | Version 1 | D1 | D2 | G    | H    | H1 | H2   | R   | B     | T  |
|---------------------|---------------------|-----------|----|----|------|------|----|------|-----|-------|----|
| K1094.208           | K1094.408           | short     | 8  | 6  | M2,5 | 11,4 | 6  | 7,4  | 2,5 | -/2,5 | 5  |
| K1094.210           | K1094.410           | short     | 10 | 7  | M2,5 | 13,7 | 7  | 9,7  | 3   | -/3,0 | 5  |
| K1094.212           | K1094.412           | short     | 12 | 8  | M3   | 16   | 8  | 12   | 3,5 | -/3,5 | 6  |
| K1094.216           | K1094.416           | short     | 16 | 12 | M4   | 20   | 12 | 15   | 5   | -/5   | 8  |
| K1094.220           | K1094.420           | short     | 20 | 14 | M5   | 25,5 | 14 | 19,5 | 6   | -/6   | 10 |

### KIPP Locating pins, long

| Order No.<br>Form B | Order No.<br>Form C | Version 1 | D1 | D2 | G    | H    | H1 | H2   | R   | B     | T  |
|---------------------|---------------------|-----------|----|----|------|------|----|------|-----|-------|----|
| K1094.308           | K1094.508           | long      | 8  | 6  | M2,5 | 17,4 | 6  | 7,4  | 2,5 | -/2,5 | 5  |
| K1094.310           | K1094.510           | long      | 10 | 7  | M2,5 | 21,7 | 7  | 9,7  | 3   | -/3,0 | 5  |
| K1094.312           | K1094.512           | long      | 12 | 8  | M3   | 24   | 8  | 12   | 3,5 | -/3,5 | 6  |
| K1094.316           | K1094.516           | long      | 16 | 12 | M4   | 29   | 12 | 15   | 5   | -/5   | 8  |
| K1094.320           | K1094.520           | long      | 20 | 14 | M5   | 35,5 | 14 | 19,5 | 6   | -/6   | 10 |

# Locating bushes

for locating pins


**Material:**

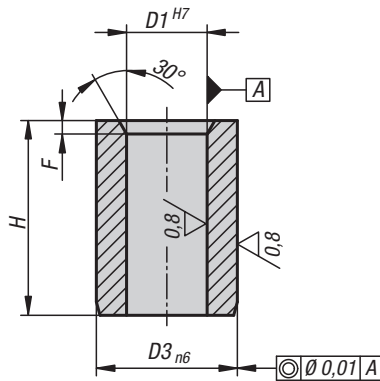
Steel.

**Version:**

Hardened and ground (HRC 60 ±2).

**Sample order:**

K1095.0812



## KIPP Locating bushes for locating pins

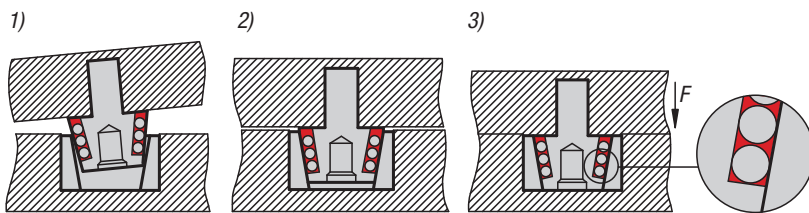
| Order No.  | Version 1 | D1 | D3 | F   | H  |
|------------|-----------|----|----|-----|----|
| K1095.0812 | short     | 8  | 12 | 1,2 | 12 |
| K1095.1014 | short     | 10 | 15 | 1,5 | 14 |
| K1095.1216 | short     | 12 | 18 | 1,5 | 16 |
| K1095.1620 | short     | 16 | 26 | 1,5 | 20 |
| K1095.2026 | short     | 20 | 30 | 2,5 | 26 |
| K1095.0818 | long      | 8  | 12 | 1,2 | 18 |
| K1095.1022 | long      | 10 | 15 | 1,5 | 22 |
| K1095.1224 | long      | 12 | 18 | 1,5 | 24 |
| K1095.1630 | long      | 16 | 26 | 1,5 | 30 |
| K1095.2036 | long      | 20 | 30 | 2,5 | 36 |

# Technical note for centring unit



## Functional description

- 1) To join two plates fitted with the centring unit, the cone is simply positioned into the bush.
- 2) The balls on the cone are now in light contact with the inner surface of the bush, but there is still a small gap between the two plates.
- 3) When a down force ( $F$ ) is applied, the precision balls in the rubber jacket are pressed onto the surface of the cone and the surfaces of the two plates align with each other. The metal conical surfaces of the bush and cone both have the same overall hardness and can only deform within their elastic limit where the precision balls make contact. So the balls cannot damage the surfaces. Due to the prevailing balance of forces, the cone always strives to align itself with the centre of the bush. This centre alignment means that the component is always positioned precisely and with high repeat precision in the axis.



- Temperature differences of up to 30 K can be compensated for
- The rubber does not embrittle and is insensitive to dirt or swarf
- Embedded swarf splinters do not effect the system
- Ester-based or antifreeze coolants should be avoided
- Some form of undercut should be added to the receiving hole so that the bush can be pulled out and replaced

## Centring unit in detail

| Description                                                  |  |
|--------------------------------------------------------------|--|
| <b>1 Cone</b>                                                |  |
| <b>2 Bush</b>                                                |  |
| <b>3 Positioning diameter for easy assembly</b>              |  |
| <b>4 Lead-in chamfer for easy assembly</b>                   |  |
| <b>5 Rubber for holding the precision balls</b>              |  |
| <b>6 Precision balls as centring element</b>                 |  |
| <b>7 Tapped hole for removing the cone</b>                   |  |
| <b>8 Undercut for flat-parallel installation of the cone</b> |  |
| <b>9 Lead-in chamfer for easy assembly</b>                   |  |

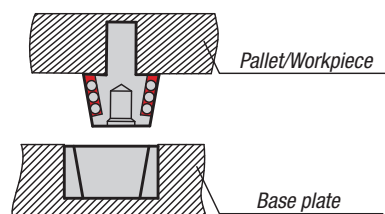


## Minimum down force exerted by a retraction mechanism (e.g. bolts)

| Size                     | 1   |   | 3   |    |
|--------------------------|-----|---|-----|----|
| Number of centring units | 1   | 4 | 1   | 4  |
| Minimum down force (kN)  | 1,5 | 6 | 1,5 | 10 |

The down force applied by the retraction mechanism must be taken up by the components, as the centring units are only designed for centring, not taking up forces. Application of the minimum down force creates a frictional bond between the two components, leaving the centring units free from lateral forces.

- The maximum working temperature is +80 °C
- Generally, the bush is pressed into the baseplate and the cone is pressed into a pallet or the workpiece
- The maximum centre offset between bush and cone should not exceed 3 mm when mating



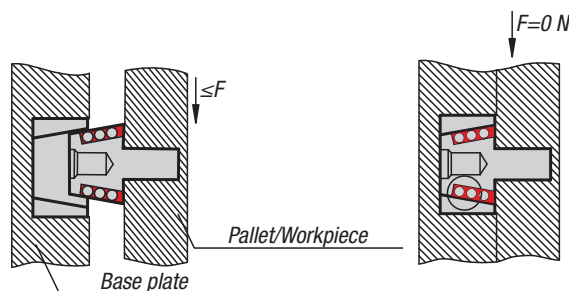
## Special aspects for horizontal mounting

The same mounting dimensions apply as for vertical mounting. Since the workpieces take up the lateral forces when clamped by a down force, the centring units are left free of lateral forces. However, during pallet changes or when mating workpieces the centring units should only be subjected to the following maximum lateral forces:

| Size                     | 1  |   | 3   |   |
|--------------------------|----|---|-----|---|
| Number of centring units | 1  | 4 | 1   | 4 |
| Lateral force Fmax (N)   | 35 |   | 250 |   |

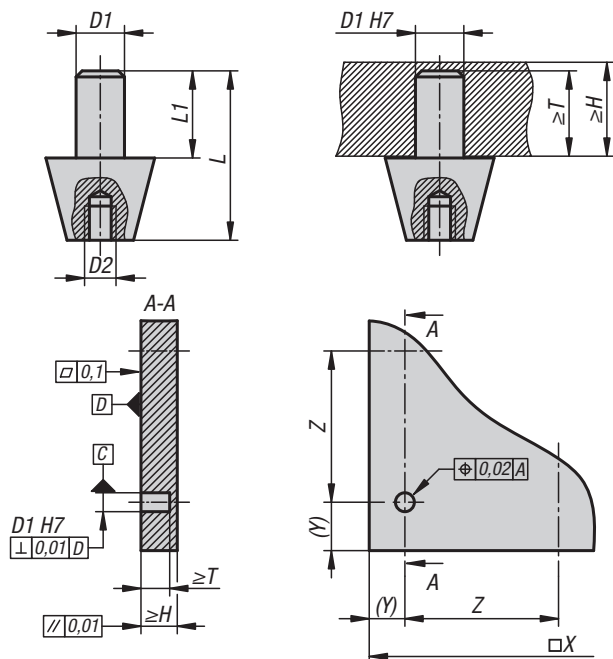
Mating

Clamped position



## Positioning cones, steel,

for centring units



### Material:

Cone, steel.  
Balls, ball bearing steel.

### Version:

Cone hardened and ground.  
Balls embedded in rubber which is vulcanised on the cones.

### Sample order:

K1627.3

### Note:

In conjunction with the position bushings, the position cones form a centring unit for the high-precision positioning of two components. The system achieves a repeat accuracy of  $<0.003$  mm. The bonded rubber does not become brittle and is insensitive to contamination or swarf. Small embedded swarf splinters do not effect the system.

### Temperature range:

+80°C.

### Functional principle:

When the positioning cone and bush are mated, the balls are pressed together within the rubber's elastic range and thus locate the two parts in which they have been fitted, with maximum accuracy. To ensure that the rubber in which the balls are embedded is deformed within the elastic range, one must merely ensure that the depth of the hole into which the positioning bush is later pressed is precisely observed. The positioning cone is supplied ready to fit into the positioning bush and must simply be fitted into the counterpart component. Henceforth, a precise zero point positioning system is in place.

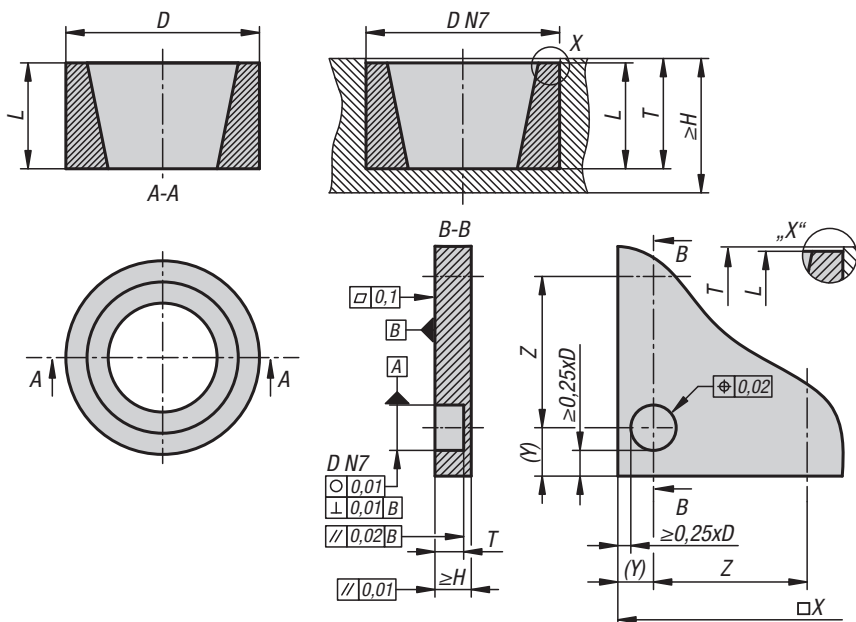


### KIPP Cone centring unit

| Order No. | Size | D1 | D2 | H<br>min. | L<br>max. | L1 | T<br>min. | for Art. No. |
|-----------|------|----|----|-----------|-----------|----|-----------|--------------|
| K1627.1   | 1    | 6  | M4 | 12        | 17,5      | 9  | 9         | K1628.1      |
| K1627.3   | 3    | 10 | M8 | 21        | 35        | 18 | 18        | K1628.3      |

## Positioning bush steel

for centring units



**Material:**  
Steel.

**Version:**  
Hardened and ground.

**Sample order:**  
K1628.3

**Note:**  
These positioning bushes match positioning cones.

**Temperature range:**  
+80°C.



### KIPP Bush centring unit

| Order No. | Size | D  | H min. | L max. | T      | for Art. No. |
|-----------|------|----|--------|--------|--------|--------------|
| K1628.1   | 1    | 16 | 12,5   | 8,5    | 9-0,1  | K1627.1      |
| K1628.3   | 3    | 32 | 25     | 17,5   | 18-0,1 | K1627.3      |

## Locating pins expanding



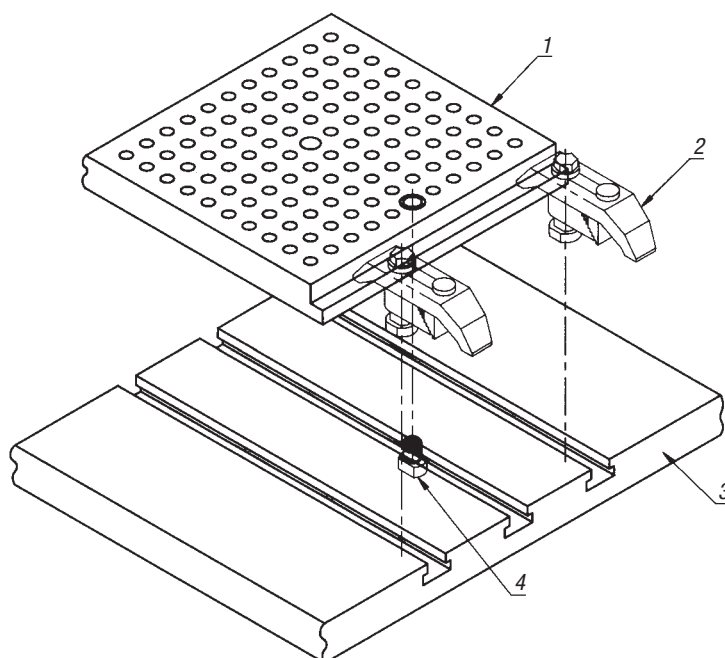
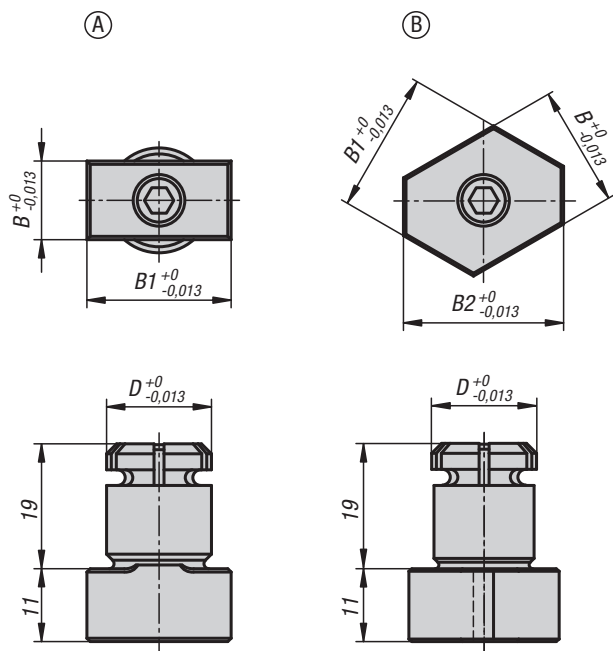
**Material:**  
Carbon steel.

**Version:**  
Tempered and black oxidised.  
Locating diameter and guide faces ground.

**Sample order:**  
K0356.1610

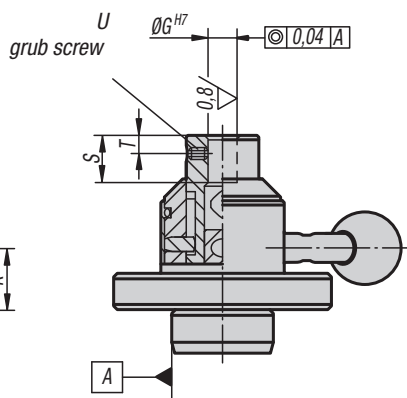
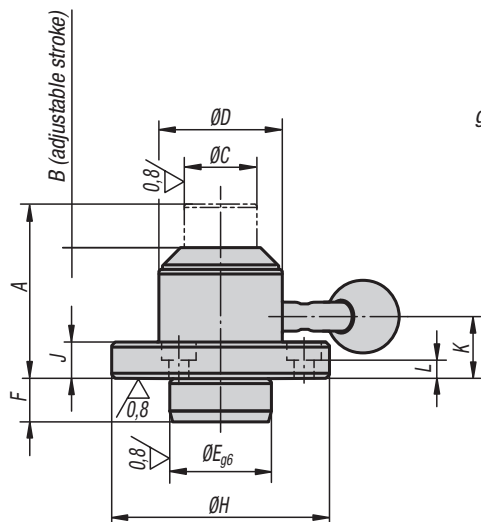
**Note:**  
These expanding locating pins enable e.g. tooling plates to be positioned in the T-slots of machine tables (see illustration).  
The plates to be positioned must have two holes matching the expanding pin diameter.  
The expansion screw has a broached through hexagonal hole allowing the pin to be tightened or loosened from two sides.

**Drawing reference:**  
1) tooling plate  
2) clamp straps  
3) machine table  
4) expanding locating pin



### KIPP Locating pins, expanding

| Order No.  | Form | D  | B  | B1 | B2 | Recommended<br>Ø |
|------------|------|----|----|----|----|------------------|
| K0356.1610 | A    | 16 | 10 | 20 | -  | 16,01 ±0,01      |
| K0356.1612 | A    | 16 | 12 | 22 | -  | 16,01 ±0,01      |
| K0356.1614 | B    | 16 | 14 | 16 | 18 | 16,01 ±0,01      |
| K0356.2024 | B    | 20 | 24 | 28 | 32 | 20,01 ±0,01      |



**Material, version:**

Body and locating pin carbon steel, tempered and black oxidised.

Handle carbon steel, tempered.

Ball knob black thermoset PF 31.

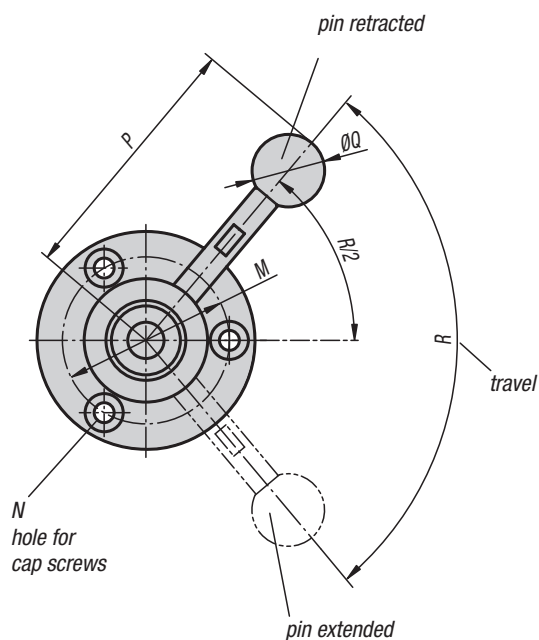
**Sample order:**

K0918.2808

**Note:**

\* Admissible hand force for the handle.

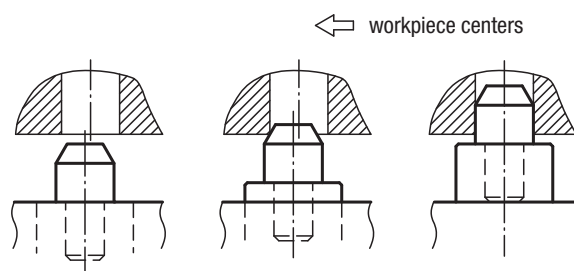
\*\* Workpieces up to this weight can be located.



1. roughly position

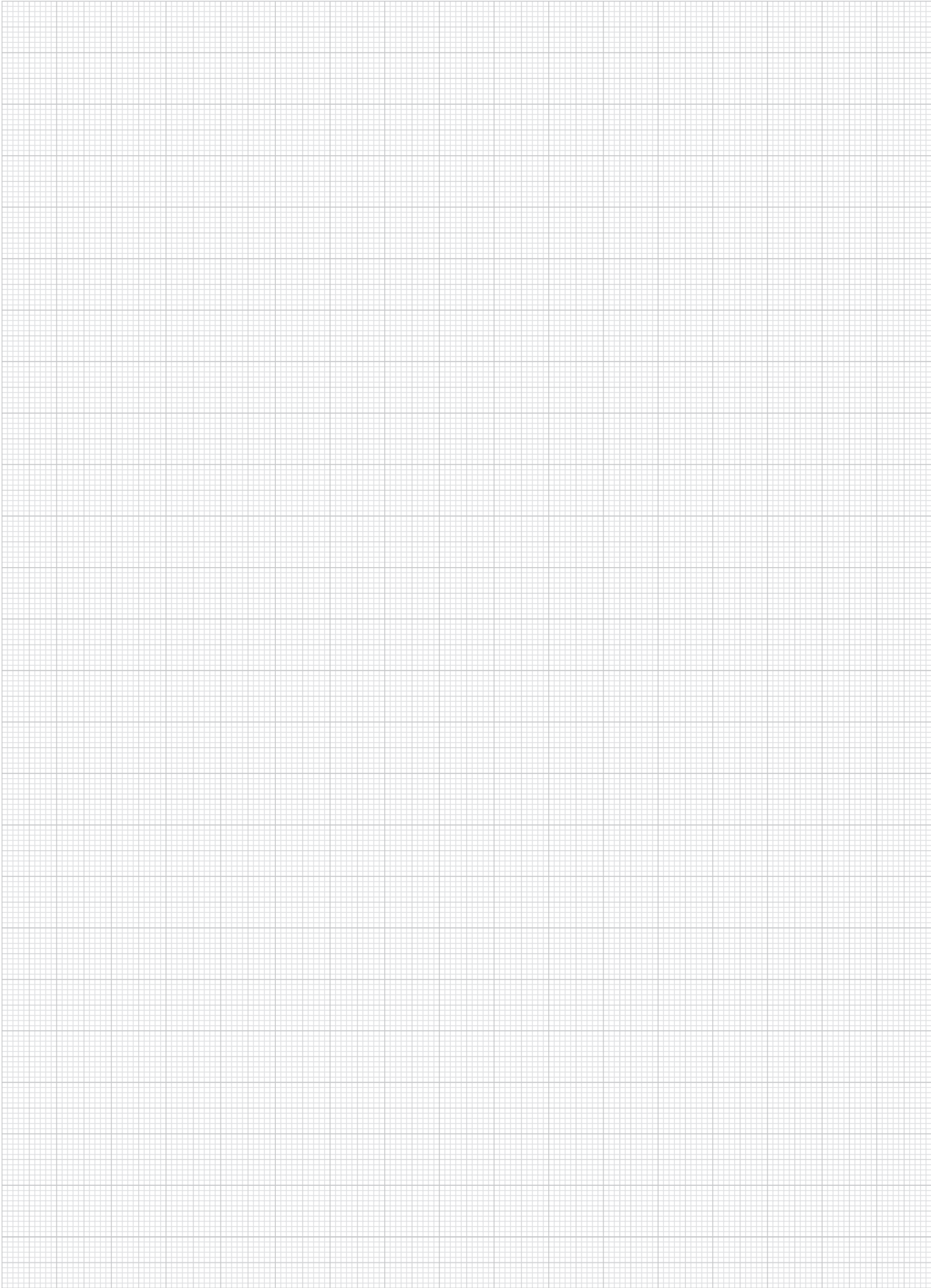
2. raise pin

3. located



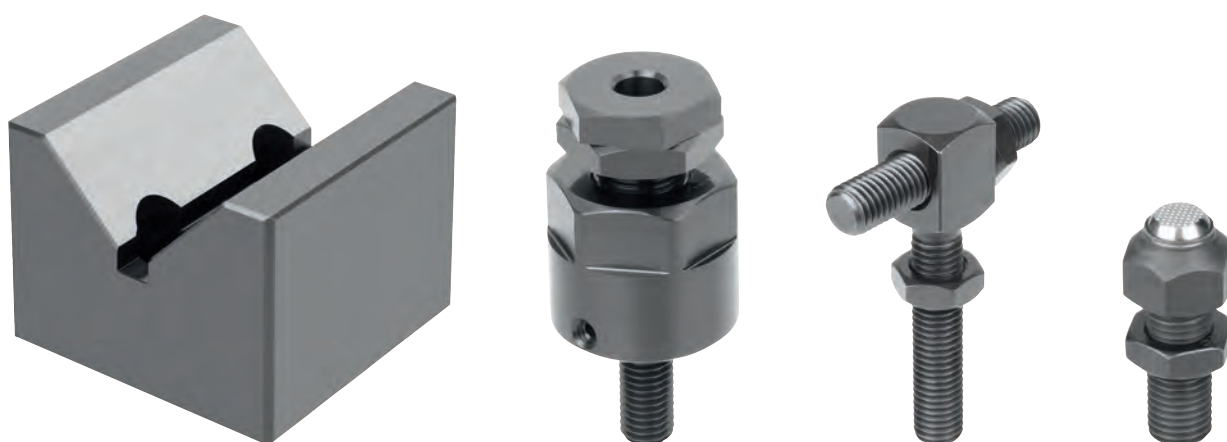
## KIPP Positioning units

| Order No.  | A  | B  | C  | D  | E  | F  | G  | H  | J  | K  | L | M  | N  | P  | Q  | R   | S  | T | U    | Hand force<br>FH N | Max.<br>workpiece weight<br>kg |
|------------|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|-----|----|---|------|--------------------|--------------------------------|
| K0918.2808 | 48 | 12 | 20 | 34 | 28 | 12 | 8  | 60 | 10 | 17 | 5 | 46 | M5 | 71 | 20 | 100 | 13 | 5 | M4x5 | 150*               | 250**                          |
| K0918.4212 | 61 | 15 | 30 | 48 | 42 | 14 | 12 | 80 | 13 | 23 | 7 | 63 | M6 | 94 | 25 | 90  | 15 | 8 | M6x8 | 200*               | 300**                          |

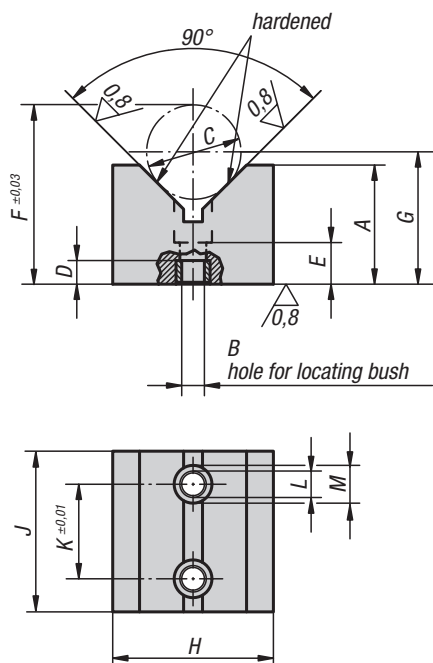




## Rest and stop elements



## V-blocks, vertical



**Material:**  
Carbon steel.

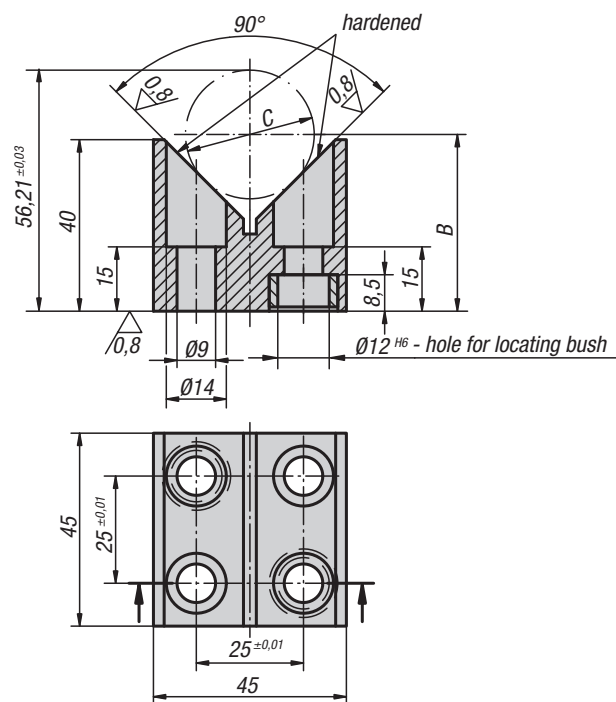
**Version:**  
Black oxidised.  
Prism and contact faces ground.

**Sample order:**  
K0819.60008032

### KIPP V-blocks vertical

| Order No.      | A  | B<br>Ø for<br>locating bush | C<br>min. | C<br>max. | C<br>Test-Ø | D   | E  | F    | G | H  | J  | K  | L | M  |
|----------------|----|-----------------------------|-----------|-----------|-------------|-----|----|------|---|----|----|----|---|----|
| K0819.60008032 | 32 | 12 H6                       | 10        | 25        | 15±0,003    | 8,5 | 13 | 40,1 | - | 25 | 45 | 25 | 9 | 14 |

## V-blocks, vertical



**Material:**  
Carbon steel.

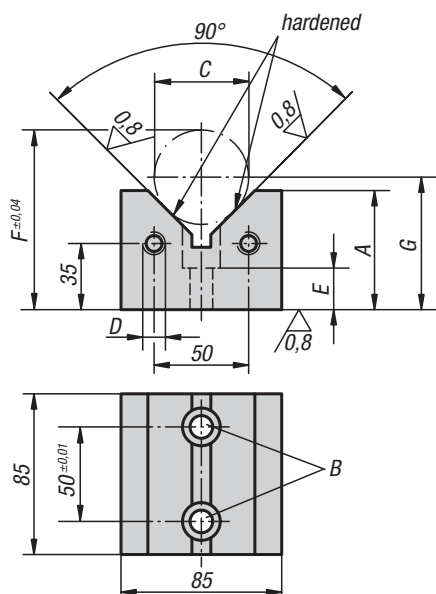
**Version:**  
Black oxidised.  
Prism and contact faces ground.

**Sample order:**  
K0819.60008040

### KIPP V-blocks vertical

| Order No.      | C<br>min. | C<br>max. | C<br>Test-Ø | B |
|----------------|-----------|-----------|-------------|---|
| K0819.60008040 | 15        | 50        | 30±0,003    | - |

## V-blocks, vertical



**Material:**  
Carbon steel.

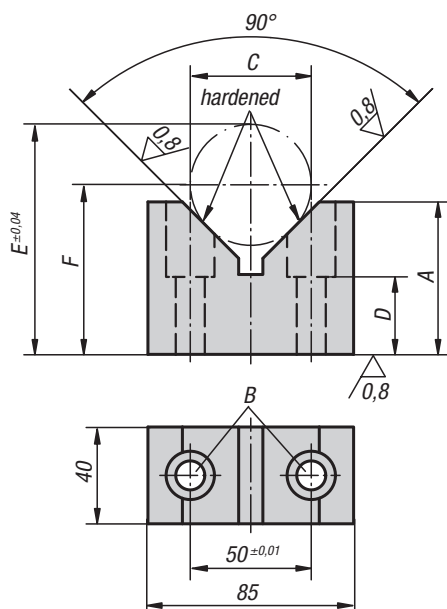
**Version:**  
Black oxidised.  
Prism and contact faces ground.

**Sample order:**  
K0819.60012063

### KIPP V-blocks vertical

| Order No.      | A  | B<br>Ø for<br>shoulder screw | C<br>min. | C<br>max. | C<br>Test-Ø | D   | E  | F       | G | Suitable<br>shoulder screw |
|----------------|----|------------------------------|-----------|-----------|-------------|-----|----|---------|---|----------------------------|
| K0819.60012063 | 63 | 12 F7                        | 15        | 80        | 50±0.003    | M12 | 22 | 95,071  | - | K0815.112055               |
| K0819.60012075 | 75 | 12 F7                        | 15        | 100       | 70±0.003    | M12 | 22 | 124,142 | - | K0815.112055               |
| K0819.60016063 | 63 | 16 F7                        | 15        | 80        | 50±0.003    | M16 | 25 | 95,071  | - | K0815.116065               |
| K0819.60016075 | 75 | 16 F7                        | 15        | 100       | 70±0.003    | M16 | 25 | 124,142 | - | K0815.116065               |

## V-blocks, vertical



**Material:**  
Carbon steel.

**Version:**  
Black oxidised.  
Prism and contact faces ground.

**Sample order:**  
K0819.60512063

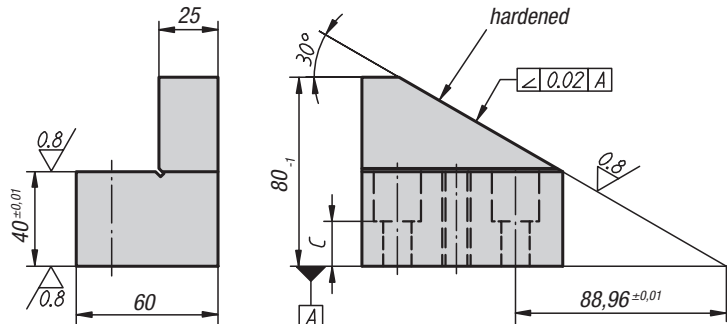
### KIPP V-blocks, vertical

| Order No.      | A  | B<br>Ø for<br>shoulder screw | C<br>min. | C<br>max. | C<br>Test-Ø | D  | E       | F             | Suitable<br>shoulder screw |
|----------------|----|------------------------------|-----------|-----------|-------------|----|---------|---------------|----------------------------|
| K0819.60512063 | 63 | 12 F7                        | 15        | 80        | 50±0,003    | 32 | 95,071  | C/2x√2+34,716 | K0815.112065               |
| K0819.60512075 | 75 | 12 F7                        | 15        | 100       | 70±0,003    | 32 | 124,142 | C/2x√2+39,645 | K0815.112065               |
| K0819.60516063 | 63 | 16 F7                        | 15        | 80        | 50±0,003    | 25 | 95,071  | C/2x√2+34,716 | K0815.116065               |
| K0819.60516075 | 75 | 16 F7                        | 15        | 100       | 70±0,003    | 25 | 124,142 | C/2x√2+39,645 | K0815.116065               |

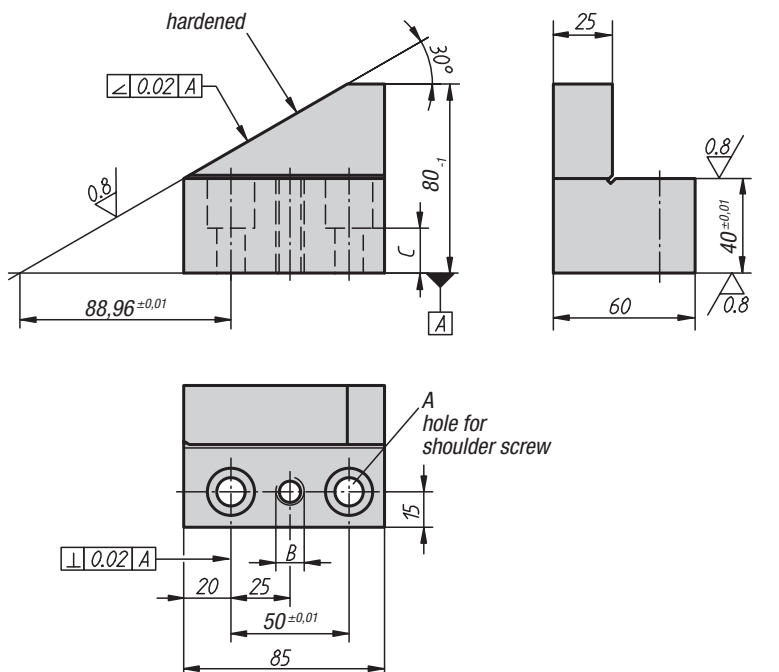
## V-blocks split



right hand



left hand

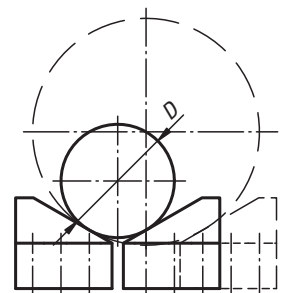


**Material:**  
Carbon steel.

**Version:**  
Black oxidised.  
Half prism (30°) and contact faces ground.

**Sample order:**  
K0819.6301230

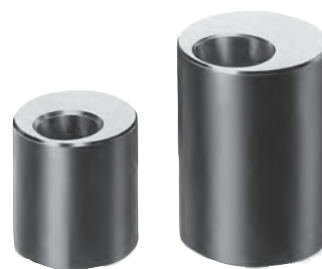
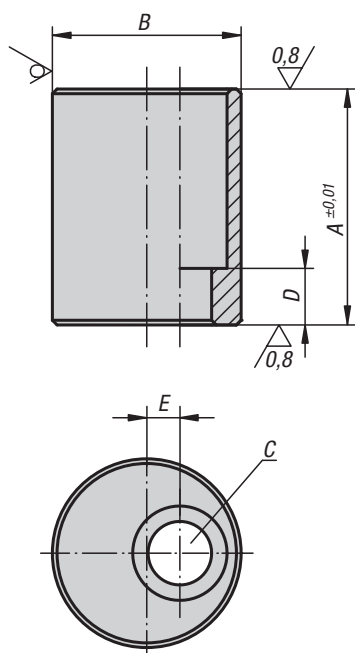
**Note:**  
Right-hand and left-hand split V-blocks are used for positioning round parts. Split V-blocks permit adjustment to the respective workpiece diameter.



### KIPP V-blocks split

| Order No.<br>right | Order No.<br>left | A     | B   | C  | D<br>min. | D<br>max. | Suitable<br>shoulder screw |
|--------------------|-------------------|-------|-----|----|-----------|-----------|----------------------------|
| K0819.6301230      | K0819.6311230     | 12 F7 | M12 | 23 | 50        | 600       | K0815.112055               |
| K0819.6301630      | K0819.6311630     | 16 F7 | M16 | 20 | 50        | 600       | K0815.116055               |

## Eccentric supports



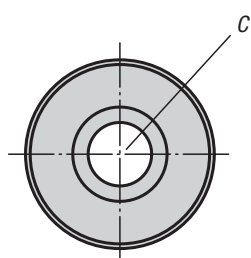
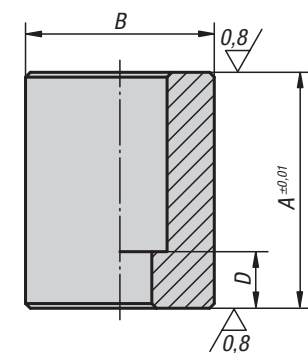
**Material:**  
Special steel alloy.

**Version:**  
Tempered, black oxidised.  
Contact faces ground.

**Sample order:**  
K0822.10040

### KIPP Eccentric supports

| Order No.   | A   | B  | C<br>hole for<br>DIN 912 cap screw | D  | E   |
|-------------|-----|----|------------------------------------|----|-----|
| K0822.08016 | 16  | 25 | M8                                 | 7  | 3,5 |
| K0822.08020 | 20  | 25 | M8                                 | 7  | 3,5 |
| K0822.08025 | 25  | 25 | M8                                 | 7  | 3,5 |
| K0822.08032 | 32  | 25 | M8                                 | 7  | 3,5 |
| K0822.08040 | 40  | 25 | M8                                 | 7  | 3,5 |
| K0822.08050 | 50  | 25 | M8                                 | 7  | 3,5 |
| K0822.10020 | 20  | 32 | M10                                | 9  | 5   |
| K0822.10025 | 25  | 32 | M10                                | 9  | 5   |
| K0822.10032 | 32  | 32 | M10                                | 9  | 5   |
| K0822.10040 | 40  | 32 | M10                                | 9  | 5   |
| K0822.10050 | 50  | 32 | M10                                | 9  | 5   |
| K0822.10063 | 63  | 32 | M10                                | 9  | 5   |
| K0822.12020 | 20  | 40 | M12                                | 7  | 7   |
| K0822.12025 | 25  | 40 | M12                                | 12 | 7   |
| K0822.12032 | 32  | 40 | M12                                | 12 | 7   |
| K0822.12040 | 40  | 40 | M12                                | 12 | 7   |
| K0822.12050 | 50  | 40 | M12                                | 12 | 7   |
| K0822.12063 | 63  | 40 | M12                                | 12 | 7   |
| K0822.12080 | 80  | 40 | M12                                | 22 | 7   |
| K0822.12100 | 100 | 40 | M12                                | 22 | 7   |
| K0822.12125 | 125 | 40 | M12                                | 22 | 7   |
| K0822.16025 | 25  | 50 | M16                                | 8  | 10  |
| K0822.16032 | 32  | 50 | M16                                | 15 | 10  |
| K0822.16040 | 40  | 50 | M16                                | 15 | 10  |
| K0822.16050 | 50  | 50 | M16                                | 15 | 10  |
| K0822.16063 | 63  | 50 | M16                                | 15 | 10  |
| K0822.16080 | 80  | 50 | M16                                | 35 | 10  |
| K0822.16100 | 100 | 50 | M16                                | 35 | 10  |
| K0822.16125 | 125 | 50 | M16                                | 35 | 10  |



**Material:**  
Carbon steel.

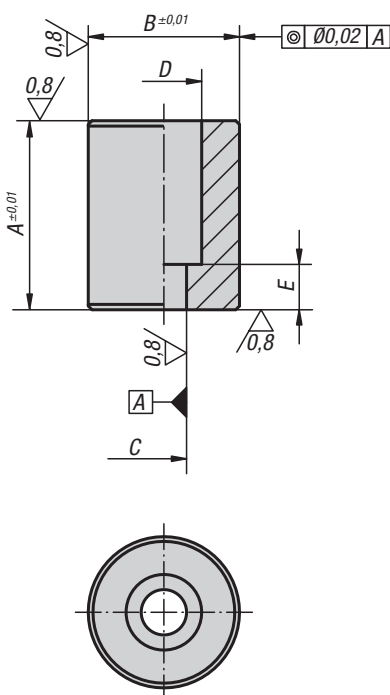
**Version:**  
Tempered, black oxidised.  
Contact faces ground.

**Sample order:**  
K0823.08016

## KIPP Supports

| Order No.   | A   | B  | C<br>hole for<br>DIN 912 cap screw | D  |
|-------------|-----|----|------------------------------------|----|
| K0823.08016 | 16  | 25 | M8                                 | 7  |
| K0823.08020 | 20  | 25 | M8                                 | 7  |
| K0823.08025 | 25  | 25 | M8                                 | 7  |
| K0823.08032 | 32  | 25 | M8                                 | 7  |
| K0823.08040 | 40  | 25 | M8                                 | 7  |
| K0823.08050 | 50  | 25 | M8                                 | 7  |
| K0823.10020 | 20  | 32 | M10                                | 9  |
| K0823.10025 | 25  | 32 | M10                                | 9  |
| K0823.10032 | 32  | 32 | M10                                | 9  |
| K0823.10040 | 40  | 32 | M10                                | 9  |
| K0823.10050 | 50  | 32 | M10                                | 9  |
| K0823.10063 | 63  | 32 | M10                                | 9  |
| K0823.12020 | 20  | 40 | M12                                | 7  |
| K0823.12025 | 25  | 40 | M12                                | 12 |
| K0823.12032 | 32  | 40 | M12                                | 12 |
| K0823.12040 | 40  | 40 | M12                                | 12 |
| K0823.12050 | 50  | 40 | M12                                | 12 |
| K0823.12063 | 63  | 40 | M12                                | 12 |
| K0823.12080 | 80  | 40 | M12                                | 22 |
| K0823.12100 | 100 | 40 | M12                                | 22 |
| K0823.16025 | 25  | 50 | M16                                | 8  |
| K0823.16032 | 32  | 50 | M16                                | 15 |
| K0823.16040 | 40  | 50 | M16                                | 15 |
| K0823.16050 | 50  | 50 | M16                                | 15 |
| K0823.16063 | 63  | 50 | M16                                | 15 |
| K0823.16080 | 80  | 50 | M16                                | 35 |
| K0823.16100 | 100 | 50 | M16                                | 35 |
| K0823.16125 | 125 | 50 | M16                                | 35 |

## Locating supports



### Material:

Carbon steel.

### Version:

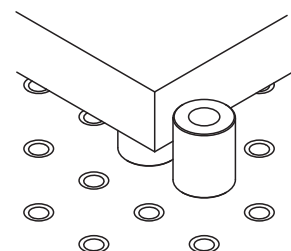
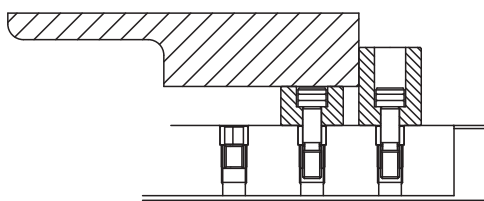
Tempered.  
OD and support faces ground.

### Sample order:

K0816.08020

### Note:

Depending on the system (M8, M12, M16), the locating supports are positioned and secured using shoulder screws or locating sleeves with socket head screw.



## KIPP Locating supports

| Order No.   | A   | B  | C<br>Ø for<br>shoulder screw | D  | E  | Suitable<br>shoulder screw |
|-------------|-----|----|------------------------------|----|----|----------------------------|
| K0816.12025 | 25  | 40 | 12 H7                        | 20 | 12 | K0815.12045                |
| K0816.12050 | 50  | 40 | 12 H7                        | 20 | 12 | K0815.12045                |
| K0816.12075 | 75  | 40 | 12 H7                        | 20 | 12 | K0815.12045                |
| K0816.16050 | 50  | 50 | 16 H7                        | 26 | 15 | K0815.16055                |
| K0816.16075 | 75  | 50 | 16 H7                        | 26 | 15 | K0815.16055                |
| K0816.16100 | 100 | 50 | 16 H7                        | 26 | 25 | K0815.16065                |
| K0816.16125 | 125 | 50 | 16 H7                        | 26 | 25 | K0815.16065                |

## Support blocks

**Material:**

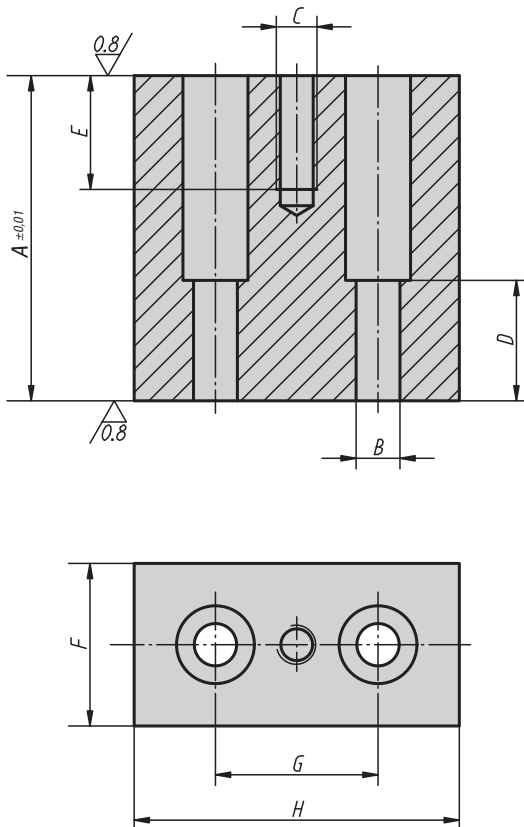
Carbon steel.

**Version:**Tempered, black oxidised.  
Contact faces ground.**Sample order:**

K0827.36012020

**Note:**

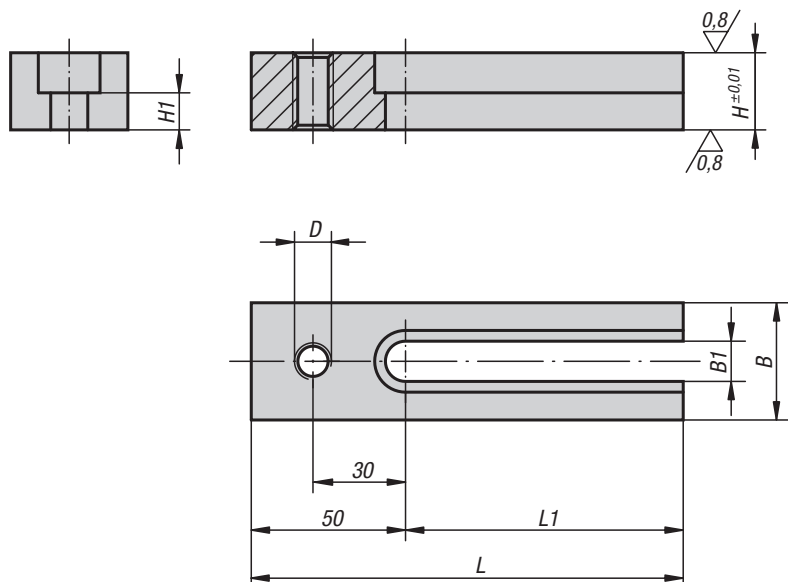
Support blocks are for placing under long workpieces to prevent bending during machining or clamping. The tapped hole is for mounting fixture elements between the grid holes.



## KIPP Support blocks

| Order No.      | A   | B<br>hole for<br>DIN 912 screw | C   | D  | E  | F  | G  | H   |
|----------------|-----|--------------------------------|-----|----|----|----|----|-----|
| K0827.36012020 | 20  | M12                            | M12 | 7  | 20 | 50 | 50 | 100 |
| K0827.36012025 | 25  | M12                            | M12 | 12 | 25 | 50 | 50 | 100 |
| K0827.36012032 | 32  | M12                            | M12 | 19 | 32 | 50 | 50 | 100 |
| K0827.36012040 | 40  | M12                            | M12 | 27 | 40 | 50 | 50 | 100 |
| K0827.36012050 | 50  | M12                            | M12 | 37 | 35 | 50 | 50 | 100 |
| K0827.36012063 | 63  | M12                            | M12 | 37 | 35 | 50 | 50 | 100 |
| K0827.36012080 | 80  | M12                            | M12 | 37 | 35 | 50 | 50 | 100 |
| K0827.36012100 | 100 | M12                            | M12 | 37 | 35 | 50 | 50 | 100 |
| K0827.36012125 | 125 | M12                            | M12 | 37 | 35 | 50 | 50 | 100 |
| K0827.36016025 | 25  | M16                            | M16 | 8  | 25 | 50 | 50 | 100 |
| K0827.36016032 | 32  | M16                            | M16 | 15 | 32 | 50 | 50 | 100 |
| K0827.36016040 | 40  | M16                            | M16 | 23 | 40 | 50 | 50 | 100 |
| K0827.36016050 | 50  | M16                            | M16 | 33 | 35 | 50 | 50 | 100 |
| K0827.36016063 | 63  | M16                            | M16 | 46 | 35 | 50 | 50 | 100 |
| K0827.36016080 | 80  | M16                            | M16 | 46 | 35 | 50 | 50 | 100 |
| K0827.36016100 | 100 | M16                            | M16 | 46 | 35 | 50 | 50 | 100 |

## Seating blocks adjustable

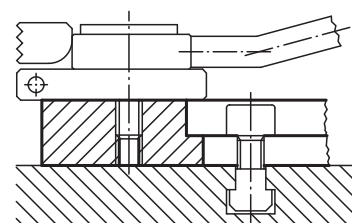


**Material:**  
Carbon steel.

**Version:**  
Tempered, black oxidised.  
Contact faces ground.

**Sample order:**  
K0824.12125

**Note:**  
The tapped hole is for mounting fixture components.  
The slot allows the riser to be set in any desired position.

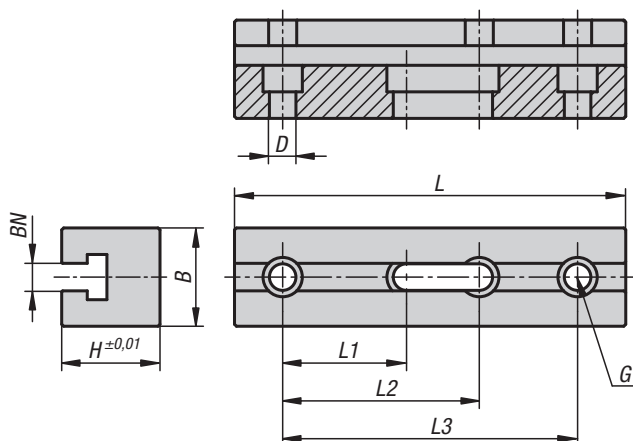


### KIPP Seating blocks adjustable

| Order No.   | D   | L   | L1 | B  | B1 | H  | H1 |
|-------------|-----|-----|----|----|----|----|----|
| K0824.12025 | M12 | 90  | 40 | 38 | 13 | 25 | 12 |
| K0824.12032 | M12 | 90  | 40 | 38 | 13 | 32 | 19 |
| K0824.12040 | M12 | 90  | 40 | 38 | 13 | 40 | 27 |
| K0824.12050 | M12 | 90  | 40 | 38 | 13 | 50 | 37 |
| K0824.12125 | M12 | 140 | 90 | 38 | 13 | 25 | 12 |
| K0824.12132 | M12 | 140 | 90 | 38 | 13 | 32 | 19 |
| K0824.12140 | M12 | 140 | 90 | 38 | 13 | 40 | 27 |
| K0824.12150 | M12 | 140 | 90 | 38 | 13 | 50 | 37 |
| K0824.16032 | M16 | 90  | 40 | 50 | 17 | 32 | 15 |
| K0824.16040 | M16 | 90  | 40 | 50 | 17 | 40 | 23 |
| K0824.16050 | M16 | 90  | 40 | 50 | 17 | 50 | 33 |
| K0824.16132 | M16 | 140 | 90 | 50 | 17 | 32 | 15 |
| K0824.16140 | M16 | 140 | 90 | 50 | 17 | 40 | 23 |
| K0824.16150 | M16 | 140 | 90 | 50 | 17 | 50 | 33 |

## Straps

for fixture components



**Material:**  
Steel 1.7131.

**Version:**  
black oxidised,  
case-hardened and ground.

**Sample order:**  
K1537.14149

**Note:**  
The straps are used to fasten fixture components via the T-slot.  
The hole spacing on the straps enable flexible mounting on the machine table or a base element.  
Diagonal installation is possible due to the combination of the fastening hole and fastening slot.

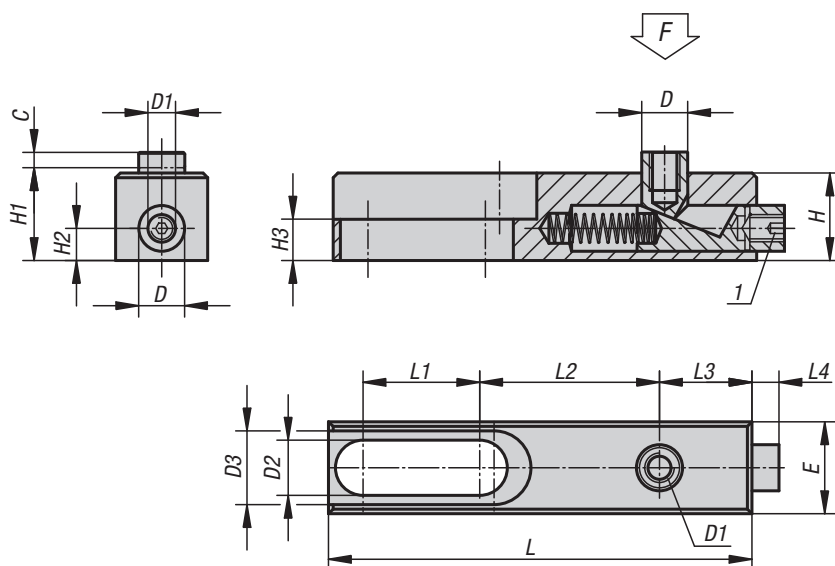
**Accessories:**  
DIN 912 cap screws  
Nuts for DIN 508 T-slots

### KIPP Straps for fixture components

| Order No.   | BN=slot width | B  | D    | H  | L   | L1 | L2  | L3  | G<br>for<br>socket head screw |
|-------------|---------------|----|------|----|-----|----|-----|-----|-------------------------------|
| K1537.14149 | 14            | 48 | 13,5 | 50 | 149 | 63 | 100 | -   | M12                           |
| K1537.14199 | 14            | 48 | 13,5 | 50 | 199 | 63 | 100 | 150 | M12                           |
| K1537.18149 | 18            | 58 | 17,5 | 60 | 149 | 63 | 100 | -   | M16                           |
| K1537.18199 | 18            | 58 | 17,5 | 60 | 199 | 63 | 100 | 150 | M16                           |

# K0889

## Workpiece supports



**Material:**  
Steel.

**Version:**  
Case-hardened, black oxidised and ground.

**Sample order:**  
K0889.006

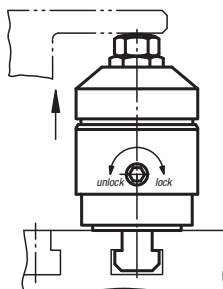
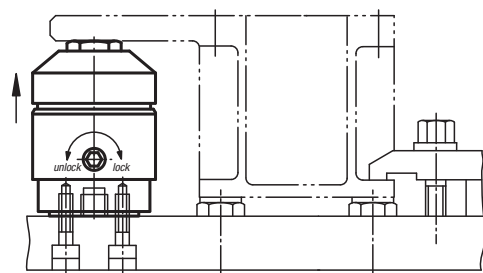
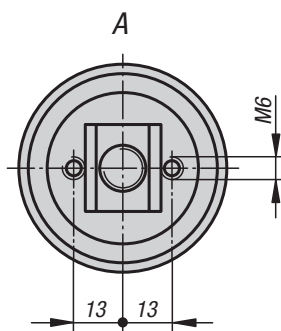
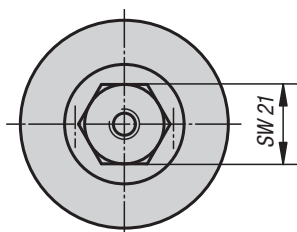
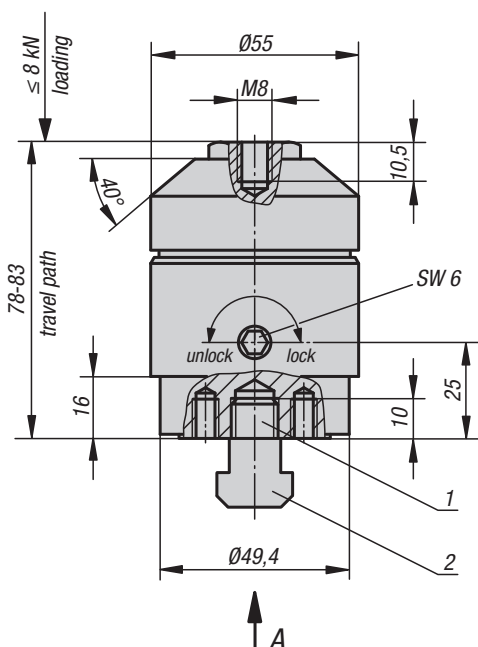
**Note:**  
These supports are placed under long or thin workpieces to prevent vibration or bending during milling, drilling, grinding or shaping operations.

**Drawing reference:**  
1) set screw

### KIPP Workpiece supports

| Order No. | C | D  | D1  | D2   | D3   | E  | H  | H1   | H2 | H3 | L   | L1   | L2 | L3 | L4 | F<br>kN |
|-----------|---|----|-----|------|------|----|----|------|----|----|-----|------|----|----|----|---------|
| K0889.006 | 4 | 10 | M6  | 8,2  | 16,2 | 20 | 19 | 19,5 | 7  | 9  | 92  | 25,5 | 39 | 20 | 6  | 3       |
| K0889.010 | 6 | 16 | M10 | 12,5 | 24,4 | 30 | 30 | 31   | 10 | 10 | 149 | 44   | 61 | 32 | 11 | 15      |

## Support elements



**Material:**  
Main body hardened steel.  
Housing aluminium.

**Version:**  
Main body nitrated, manganese phosphated and ground.  
Housing red anodised.

**Note:**  
The support element is for supporting overhanging workpiece parts. It prevents vibration and bending during machining.

**Method of operation:**

1. Turn the cam screw (hex. socket SW 6) on the side of the housing, the support bolt will move out under light spring load until it makes contact with the workpiece.
2. Continue to turn to „lock“ position. The support bolt locks without changing position.
3. Turn the cam screw in the opposite direction and the support bolt will unlock. Continue turning to the „unlock“ position and the support bolt will slide back into the body.

**Assembly:**

Mount the support element to the fixture using the two M6 tapped holes.

Alternatively: Exchange the M12x10 plug screw for a M12x30 grub screw and mount the support directly onto the machine table with a T-nut.

For safe operation the M12 tapped hole must always be filled.

It is possible to countersink the support element by 16 mm.

Various rest pads can be mounted into the M8 tapped hole on the support bolt.

Supplied with M12x30 grub screw and M12 nut for T-slots (DIN 508).

**Drawing reference:**

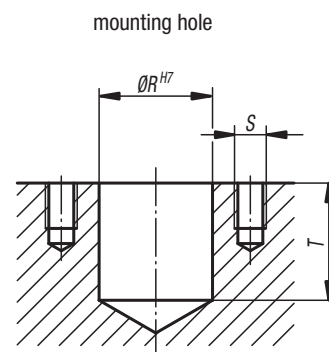
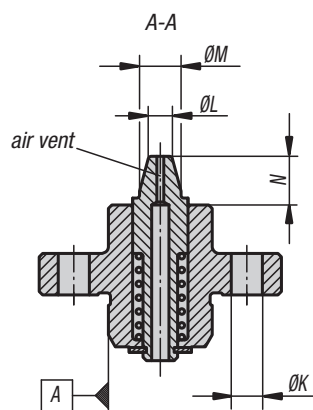
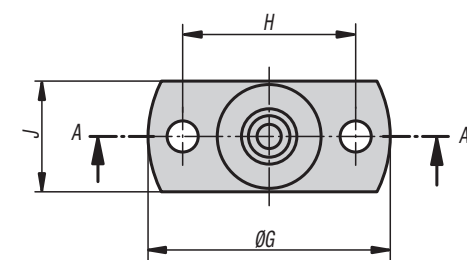
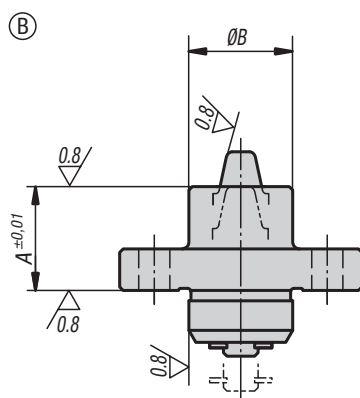
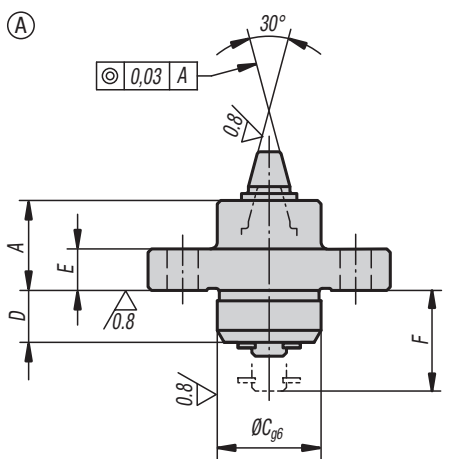
- 1) grub screw M12x30 DIN 913 (exchangeable)
- 2) nut for T-slots M12x14 DIN 508

## KIPP Support element

| Order No.  | Load capacity<br>N | Travel path |
|------------|--------------------|-------------|
| K1224.0508 | 8000               | 5 mm        |

## Positioning units

spring-loaded



### Material, version:

Body carbon steel, hardened and black oxidised.  
Locating pin hardened tool steel.

### Sample order:

K0917.15060

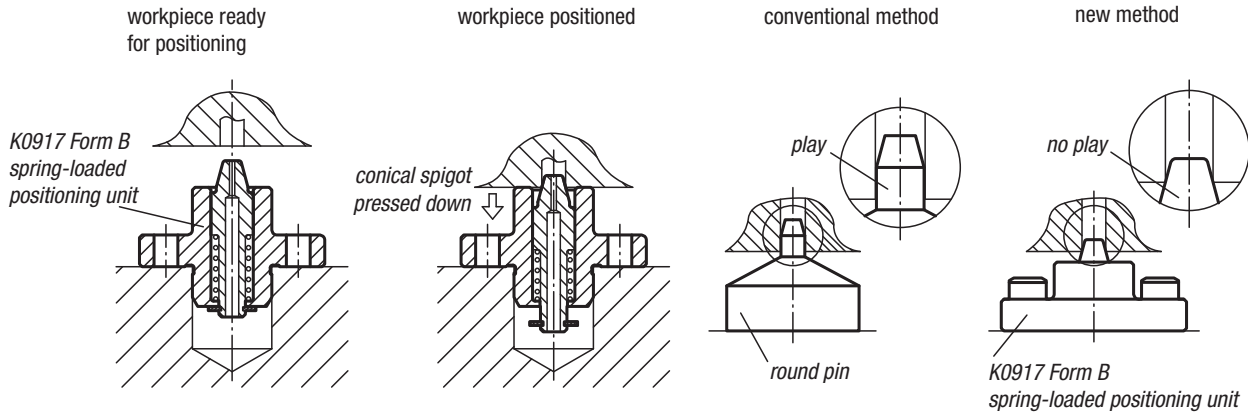
### Note:

\* The conical spigot can position holes within these limits.

### KIPP Positioning units, spring-loaded

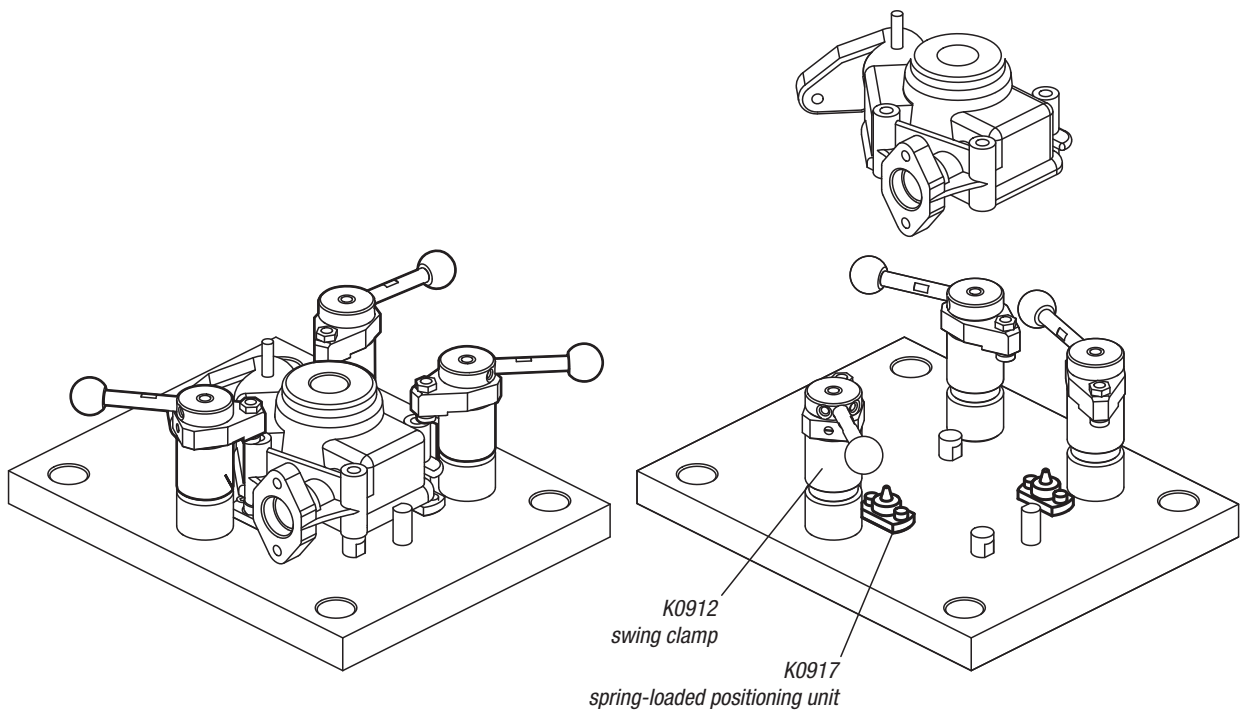
| Order No.   | Form | A  | B  | C  | D   | E | F  | G  | H  | J  | K   | L   | M  | N   | R  | S  | T  | Receiving hole | Spring force cone N |
|-------------|------|----|----|----|-----|---|----|----|----|----|-----|-----|----|-----|----|----|----|----------------|---------------------|
| K0917.15060 | A    | 13 | 15 | 15 | 7,5 | 6 | 15 | 35 | 25 | 16 | 4,5 | 3,5 | 6  | 7,4 | 15 | M4 | 16 | ø3,8 - ø5,2*   | 6,4 - 19,3          |
| K0917.15070 | A    | 13 | 15 | 15 | 7,5 | 6 | 15 | 35 | 25 | 16 | 4,5 | 4,5 | 7  | 7,4 | 15 | M4 | 16 | ø4,8 - ø6,2*   | 6,4 - 19,3          |
| K0917.20090 | A    | 18 | 20 | 20 | 10  | 8 | 20 | 40 | 30 | 22 | 4,5 | 5,5 | 9  | 9,3 | 20 | M4 | 21 | ø5,8 - ø8,2*   | 5,5 - 20,5          |
| K0917.20110 | A    | 18 | 20 | 20 | 10  | 8 | 20 | 40 | 30 | 22 | 4,5 | 7,5 | 11 | 9,3 | 20 | M4 | 21 | ø7,8 - ø10,2*  | 5,5 - 20,5          |

| Order No.   | Form | A  | B  | C  | D   | E | F  | G  | H  | J  | K   | L   | M  | N   | R  | S  | T  | Receiving hole | Spring force cone N |
|-------------|------|----|----|----|-----|---|----|----|----|----|-----|-----|----|-----|----|----|----|----------------|---------------------|
| K0917.15061 | B    | 15 | 15 | 15 | 7,5 | 6 | 15 | 35 | 25 | 16 | 4,5 | 3,5 | 6  | 5,4 | 15 | M4 | 16 | ø3,8 - ø5,2*   | 6,4 - 19,3          |
| K0917.15071 | B    | 15 | 15 | 15 | 7,5 | 6 | 15 | 35 | 25 | 16 | 4,5 | 4,5 | 7  | 5,4 | 15 | M4 | 16 | ø4,8 - ø6,2*   | 6,4 - 19,3          |
| K0917.20091 | B    | 20 | 20 | 20 | 10  | 8 | 20 | 40 | 30 | 22 | 4,5 | 5,5 | 9  | 7,3 | 20 | M4 | 21 | ø5,8 - ø8,2*   | 5,5 - 20,5          |
| K0917.20111 | B    | 20 | 20 | 20 | 10  | 8 | 20 | 40 | 30 | 22 | 4,5 | 7,5 | 11 | 7,3 | 20 | M4 | 21 | ø7,8 - ø10,2*  | 5,5 - 20,5          |



The conical spigot is pushed down when the workpiece is mounted on the positioning unit.

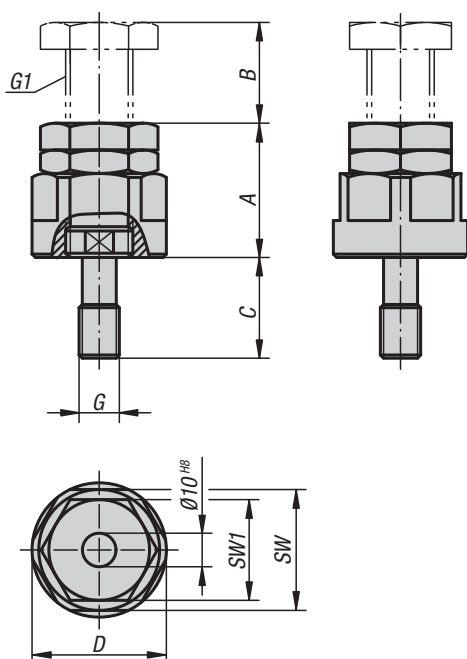
The conical spigot ensures precise positioning.



**Note:**

To prevent the positioning unit lifting the workpiece, hold it down by hand when loosening the swing clamp.

## Adjustable supports



### Material:

Carbon steel.

### Version:

Black oxidised.  
Adjustment spindle tempered.

### Sample order:

K0825.16100

### Note:

Inserts K0826 can be mounted in the top to suit the application.

## KIPP Adjustable supports

| Order No.   | A<br>min. | B<br>max. | C  | D  | SW | SW1 | G   | G1      |
|-------------|-----------|-----------|----|----|----|-----|-----|---------|
| K0825.12040 | 40        | 10        | 30 | 40 | 36 | 30  | M12 | M20x1,5 |
| K0825.12050 | 50        | 20        | 30 | 40 | 36 | 30  | M12 | M20x1,5 |
| K0825.12070 | 70        | 40        | 30 | 40 | 36 | 30  | M12 | M20x1,5 |
| K0825.12100 | 100       | 50        | 30 | 50 | 46 | 36  | M12 | M24x2   |
| K0825.12150 | 150       | 100       | 30 | 50 | 46 | 36  | M12 | M24x2   |
| K0825.16040 | 40        | 10        | 30 | 40 | 36 | 30  | M16 | M20x1,5 |
| K0825.16050 | 50        | 20        | 30 | 40 | 36 | 30  | M16 | M20x1,5 |
| K0825.16070 | 70        | 40        | 30 | 40 | 36 | 30  | M16 | M20x1,5 |
| K0825.16100 | 100       | 50        | 30 | 50 | 46 | 36  | M16 | M24x2   |
| K0825.16150 | 150       | 100       | 30 | 50 | 46 | 36  | M16 | M24x2   |

## Inserts

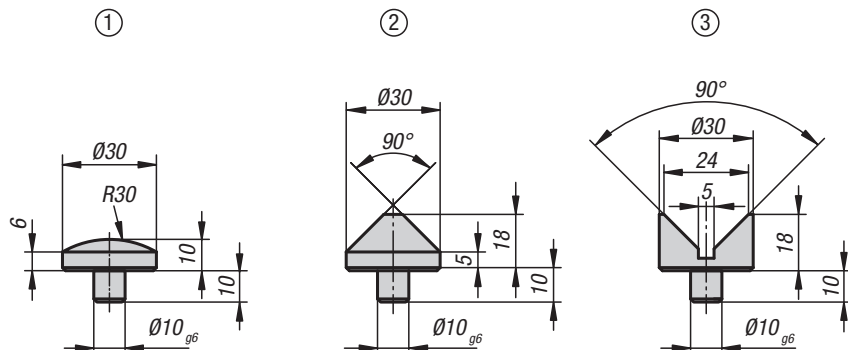


**Material:**  
Carbon steel.

**Version:**  
Tempered to 1100-1200 N/mm<sup>2</sup>, black oxidised.

**Sample order:**  
K0826.02

**Drawing reference:**  
1) rounded insert  
2) cone insert  
3) prism insert



### KIPP Inserts

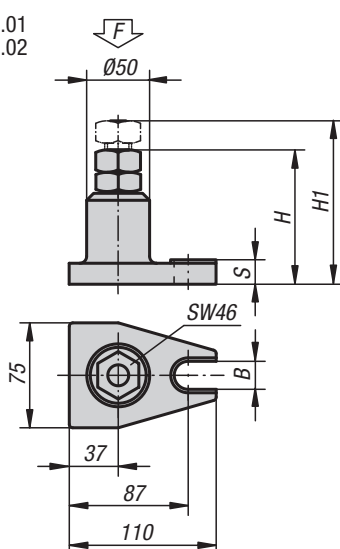
| Order No. | Version        |
|-----------|----------------|
| K0826.01  | Rounded Insert |
| K0826.02  | Cone Insert    |
| K0826.03  | Prism Insert   |

# K1233

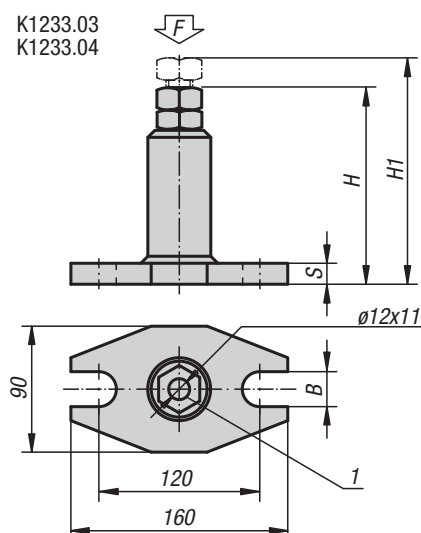
## Atlas jack

with locknut

K1233.01  
K1233.02



K1233.03  
K1233.04



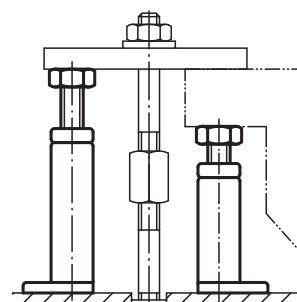
**Material:**  
Carbon steel.

**Version:**  
Hammer tone, spindle with 30 x 6 trapezoidal thread.

**Sample order:**  
K1233.01

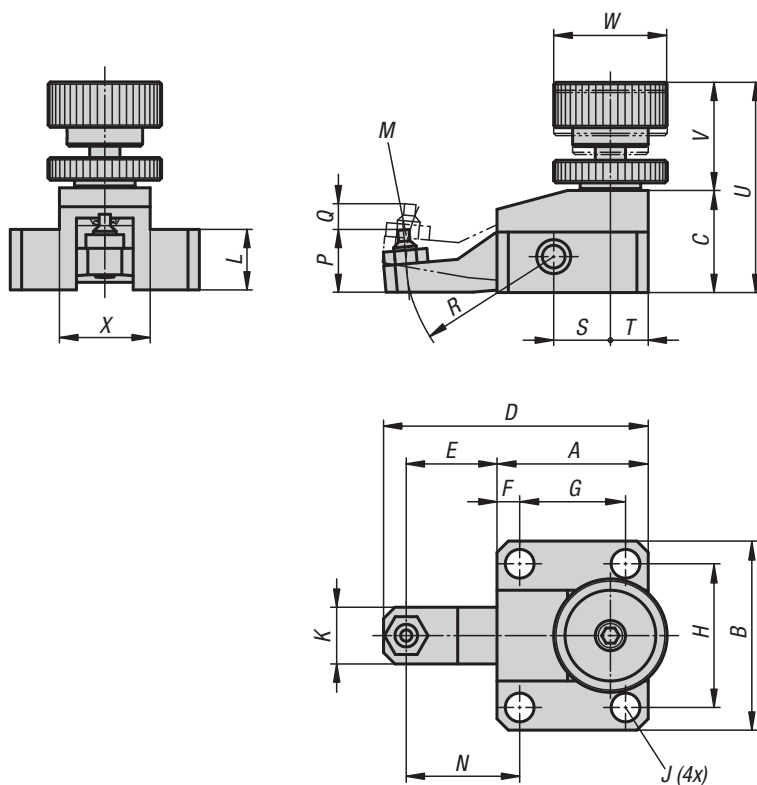
### KIPP Atlas jack with locknut

| Order No. | Adjustment range | base plate | H   | H1  | B  | S  | F<br>kN |
|-----------|------------------|------------|-----|-----|----|----|---------|
| K1233.01  | 100 - 140        | 76x111     | 100 | 140 | 18 | 17 | 60      |
| K1233.02  | 140 - 200        | 76x111     | 140 | 200 | 18 | 17 | 60      |
| K1233.03  | 200 - 320        | 90x160     | 200 | 320 | 22 | 22 | 40      |
| K1233.04  | 320 - 540        | 90x160     | 320 | 540 | 22 | 25 | 25      |



## Workpiece supports

adjustable



### Material:

Carbon steel 1.0503.

### Version:

Black oxidised.

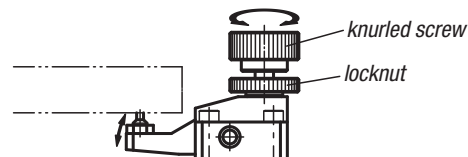
### Sample order:

K0919.08020

### Note:

Workpiece supports are for supporting overhanging workpiece parts to prevent vibrations and bending during machining.

They should not be subjected to strong forces from a clamping element and are not intended as supports under a clamping point.



- 1.) Turning the knurled screw moves the support arm up or down.
- 2.) Once the rest is in contact with the workpiece, the screw can be locked with the locknut.

### KIPP Workpiece supports, adjustable

| Order No.   | A  | B  | C  | D  | E    | F   | G  | H  | J   | K  | L  | M     | N  | P  | Q | R    | S  | T  | U  | V  | W  | X  | Clamping force<br>N | Tightening torque<br>max. Nm |
|-------------|----|----|----|----|------|-----|----|----|-----|----|----|-------|----|----|---|------|----|----|----|----|----|----|---------------------|------------------------------|
| K0919.08020 | 40 | 50 | 27 | 70 | 24   | 6   | 28 | 38 | 6,6 | 15 | 16 | M6x16 | 30 | 17 | 6 | 39   | 15 | 10 | 56 | 29 | 30 | 24 | 300                 | 1,5                          |
| K0919.10027 | 55 | 65 | 34 | 95 | 31,5 | 8,5 | 38 | 48 | 9   | 18 | 20 | M8x22 | 40 | 23 | 8 | 51,5 | 20 | 15 | 68 | 34 | 36 | 29 | 350                 | 2                            |

## Workpiece supports

adjustable



### Material:

Carbon steel.

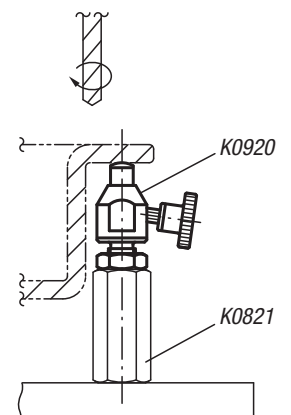
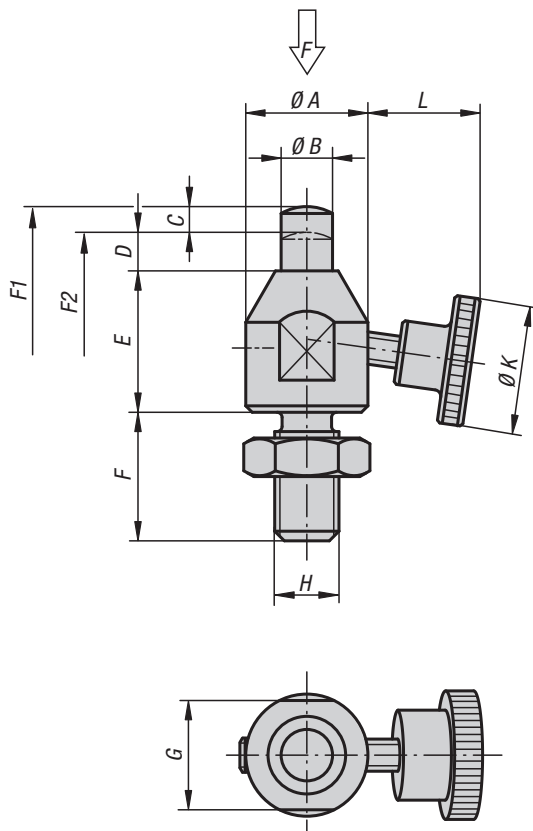
### Version:

Body black oxidised.

Rest pad hardened and black oxidised.

### Sample order:

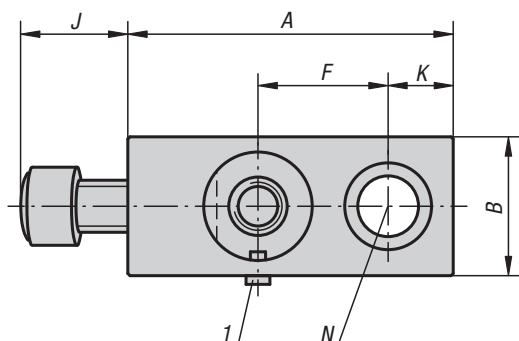
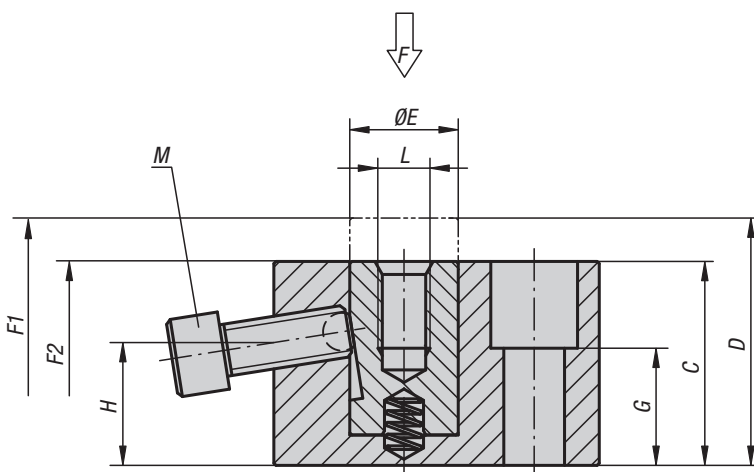
K0920.08023



### KIPP Workpiece supports, adjustable

| Order No.   | A  | B  | C<br>(travel) | D | E  | F  | G  | H   | K  | L    | F<br>N | Spring force<br>initial pressure<br>F1 approx. N | Spring force<br>final pressure<br>F2 approx. N |
|-------------|----|----|---------------|---|----|----|----|-----|----|------|--------|--------------------------------------------------|------------------------------------------------|
| K0920.08023 | 15 | 6  | 3             | 5 | 18 | 16 | 13 | M8  | 20 | 13,2 | 200    | 1,5                                              | 3                                              |
| K0920.10028 | 19 | 8  | 4             | 6 | 22 | 20 | 17 | M10 | 25 | 16,3 | 300    | 1,8                                              | 3                                              |
| K0920.12031 | 22 | 10 | 4             | 6 | 25 | 24 | 19 | M12 | 28 | 22,3 | 400    | 1,8                                              | 3                                              |

## Workpiece supports



### Material:

Carbon steel.

### Version:

Body black oxidised.

Thrust pin tempered and black oxidised.

### Sample order:

K0921.06029

### Drawing reference:

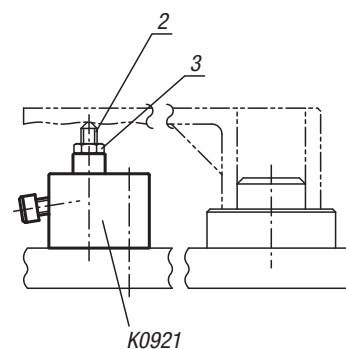
M = ball pressure screw

N = through hole for socket head screw DIN 912

1) rotation lock

2) screw rest

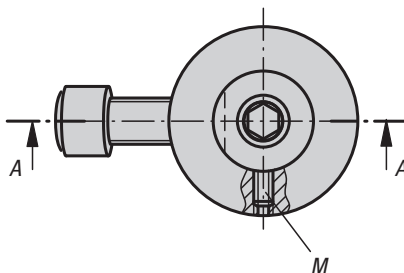
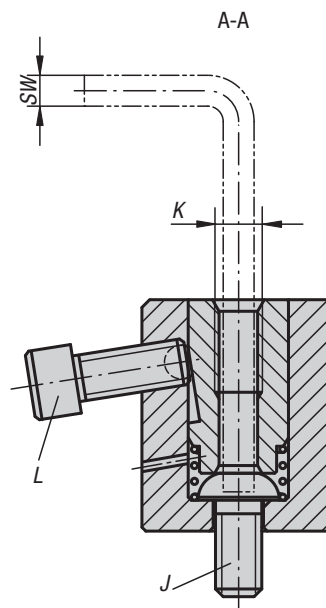
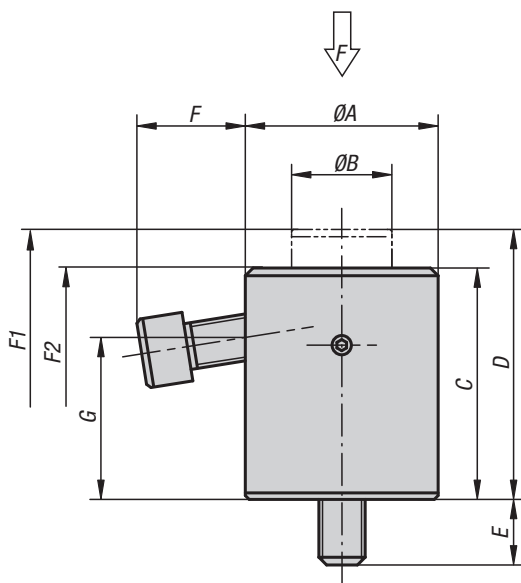
3) hexagonal nut



## KIPP Workpiece supports

| Order No.   | A  | B  | C  | D  | E  | F  | G  | H    | J  | K  | L      | M      | N   | F<br>N | Spring force<br>initial pressure<br>F1 approx. N | Spring force<br>final pressure<br>F2 approx. N |
|-------------|----|----|----|----|----|----|----|------|----|----|--------|--------|-----|--------|--------------------------------------------------|------------------------------------------------|
| K0921.06029 | 38 | 19 | 29 | 35 | 12 | 15 | 15 | 17,6 | 13 | 8  | M6x10  | M6x16  | M6  | 4000   | 0                                                | 6                                              |
| K0921.08037 | 50 | 22 | 37 | 47 | 16 | 20 | 20 | 21,1 | 16 | 10 | M8x15  | M8x20  | M8  | 6000   | 0                                                | 7                                              |
| K0921.12047 | 75 | 32 | 47 | 57 | 25 | 30 | 27 | 28,3 | 25 | 15 | M12x20 | M12x30 | M12 | 9000   | 1                                                | 11                                             |

## Workpiece support cylinders



### Material:

Carbon steel.

### Version:

Body black oxidised.

Thrust pin hardened and black oxidised.

### Sample order:

K0922.06039

### Drawing reference:

J = mounting screw

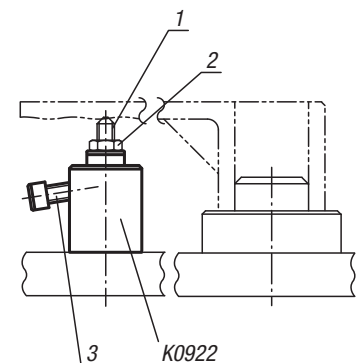
L = ball-end thrust screw

M = grub screw

1) screw rest

2) hexagonal nut

3) ball-end thrust screw



## KIPP Workpiece support cylinders

| Order No.   | A  | B  | C  | D  | E  | F    | G    | J   | K      | L      | M     | SW | F<br>N | Spring force<br>initial pressure<br>F1 approx. N | Spring force<br>final pressure<br>F2 approx. N |
|-------------|----|----|----|----|----|------|------|-----|--------|--------|-------|----|--------|--------------------------------------------------|------------------------------------------------|
| K0922.06039 | 28 | 14 | 33 | 39 | 10 | 14,1 | 22   | M6  | M6x12  | M6x16  | M4x8  | 4  | 4000   | 10                                               | 22                                             |
| K0922.08052 | 35 | 19 | 42 | 52 | 15 | 18,8 | 28,5 | M8  | M8x16  | M8x20  | M4x8  | 5  | 6000   | 10                                               | 27                                             |
| K0922.12070 | 50 | 26 | 60 | 70 | 17 | 28,5 | 42   | M12 | M12x24 | M12x30 | M5x12 | 8  | 9000   | 15                                               | 30                                             |
| K0922.16080 | 60 | 33 | 70 | 80 | 22 | 26,5 | 47   | M16 | M16x32 | M12x30 | M5x15 | 10 | 9000   | 15                                               | 35                                             |

## Support bolts



### Material:

Carbon steel, tempered.

### Version:

Black oxidised.

### Sample order:

K0297.16016

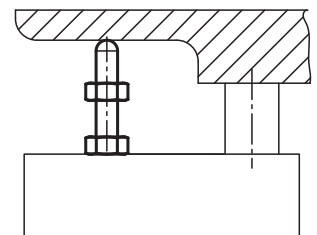
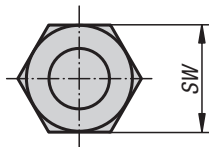
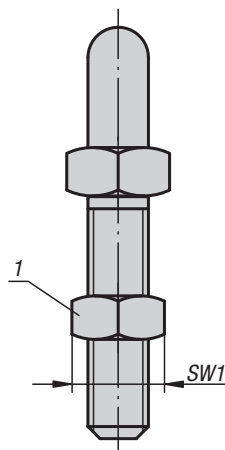
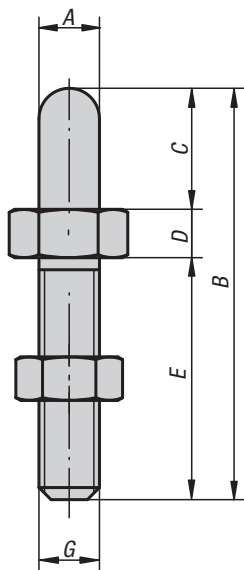
### Note:

The rounded nose also allows support bolts to be used as positioning elements for workpieces with matching holes.

The versions K0297.20020 and K0297-20040 have an octagonal collar.

### Drawing reference:

1) locknut



### KIPP Support bolts

| Order No.   | A  | B   | C  | D  | E  | G   | SW | SW1 |
|-------------|----|-----|----|----|----|-----|----|-----|
| K0297.06006 | 6  | 37  | 6  | 6  | 25 | M6  | 13 | 10  |
| K0297.06012 | 6  | 43  | 12 | 6  | 25 | M6  | 13 | 10  |
| K0297.08008 | 8  | 45  | 8  | 7  | 30 | M8  | 13 | 13  |
| K0297.08016 | 8  | 53  | 16 | 7  | 30 | M8  | 13 | 13  |
| K0297.10010 | 10 | 58  | 10 | 8  | 40 | M10 | 17 | 17  |
| K0297.10020 | 10 | 68  | 20 | 8  | 40 | M10 | 17 | 17  |
| K0297.12012 | 12 | 72  | 12 | 10 | 50 | M12 | 19 | 19  |
| K0297.12024 | 12 | 84  | 24 | 10 | 50 | M12 | 19 | 19  |
| K0297.16016 | 16 | 89  | 16 | 13 | 60 | M16 | 24 | 24  |
| K0297.16032 | 16 | 105 | 32 | 13 | 60 | M16 | 24 | 24  |
| K0297.20020 | 20 | 115 | 20 | 15 | 80 | M20 | 36 | 30  |
| K0297.20040 | 20 | 135 | 40 | 15 | 80 | M20 | 36 | 30  |

## Support bolts

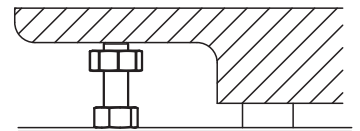
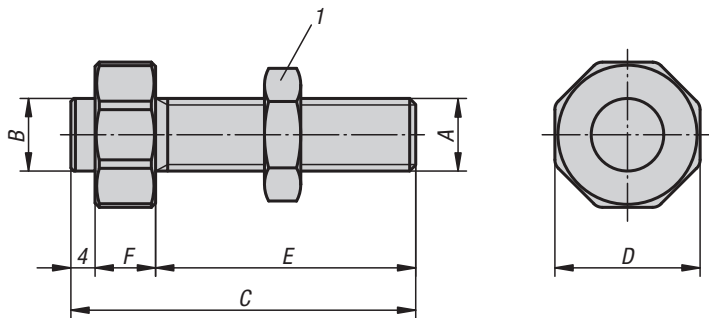


**Material:**  
Carbon steel.

**Version:**  
Tempered and black oxidised.

**Sample order:**  
K0828.08041

**Drawing reference:**  
1) locknut



## KIPP Support bolts

| Order No.   | A   | B  | C  | D  | E  | F  |
|-------------|-----|----|----|----|----|----|
| K0828.08041 | M8  | 8  | 41 | 17 | 30 | 7  |
| K0828.08051 | M8  | 8  | 51 | 17 | 40 | 7  |
| K0828.12057 | M12 | 12 | 57 | 24 | 43 | 10 |
| K0828.12072 | M12 | 12 | 72 | 24 | 58 | 10 |
| K0828.16057 | M16 | 16 | 57 | 30 | 43 | 10 |
| K0828.16072 | M16 | 16 | 72 | 30 | 58 | 10 |

## Rest pads

**Material:**

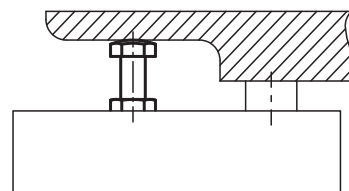
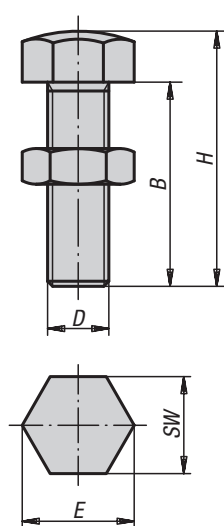
Carbon steel or brass

**Version:**

Tempered and black oxidised.

**Sample order:**

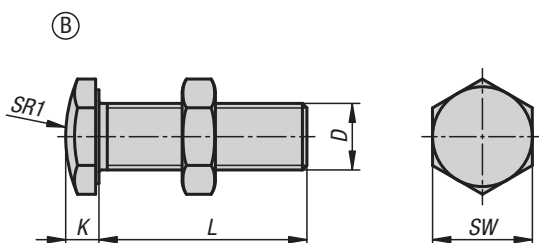
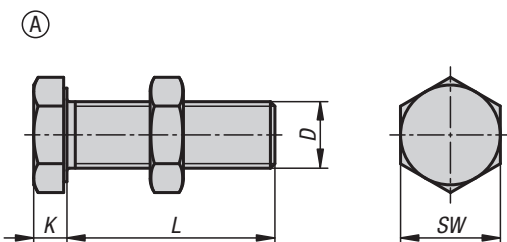
K0307.16055



## KIPP Rest pads

| Order No.   | Main material     | B  | D   | E    | H  | SW |
|-------------|-------------------|----|-----|------|----|----|
| K0307.06030 | high carbon steel | 25 | M6  | 11,5 | 30 | 10 |
| K0307.06040 | high carbon steel | 35 | M6  | 11,5 | 40 | 10 |
| K0307.06050 | high carbon steel | 45 | M6  | 11,5 | 50 | 10 |
| K0307.08036 | high carbon steel | 30 | M8  | 15   | 36 | 13 |
| K0307.08046 | high carbon steel | 40 | M8  | 15   | 46 | 13 |
| K0307.08056 | high carbon steel | 50 | M8  | 15   | 56 | 13 |
| K0307.10042 | high carbon steel | 35 | M10 | 19,6 | 42 | 17 |
| K0307.10048 | high carbon steel | 40 | M10 | 19,6 | 48 | 17 |
| K0307.10058 | high carbon steel | 50 | M10 | 19,6 | 58 | 17 |
| K0307.10068 | high carbon steel | 60 | M10 | 19,6 | 68 | 17 |
| K0307.12048 | high carbon steel | 42 | M12 | 21,9 | 50 | 19 |
| K0307.12070 | high carbon steel | 60 | M12 | 21,9 | 70 | 19 |
| K0307.12080 | high carbon steel | 70 | M12 | 21,9 | 80 | 19 |
| K0307.16055 | high carbon steel | 45 | M16 | 27,7 | 55 | 24 |
| K0307.16075 | high carbon steel | 65 | M16 | 27,7 | 75 | 24 |
| K0307.16085 | high carbon steel | 75 | M16 | 27,7 | 85 | 24 |
| K0307.12148 | brass             | 42 | M12 | 21,9 | 50 | 19 |
| K0307.16155 | brass             | 45 | M16 | 27,7 | 55 | 24 |

## Stop screws



### Material:

Steel grade 10.9  
(M3 8.8)

### Version:

Stop screw black oxidised.  
Nut electro zinc-plated.

### Sample order:

K1200.10820  
(include length L e.g. 20 for L = 20 mm)

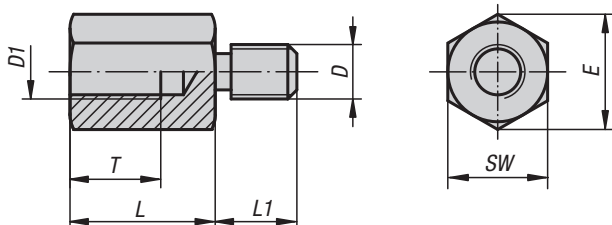
### Note:

Size M3 stop screw only available in grade 8.8.

## KIPP Stop screws

| Order No.   | Form | D   | L                                      | K   | SW  | SR1 |
|-------------|------|-----|----------------------------------------|-----|-----|-----|
| K1200.103** | A    | M3  | 16/25                                  | 2   | 5,5 | -   |
| K1200.104** | A    | M4  | 16/25/35                               | 2,5 | 7   | -   |
| K1200.105** | A    | M5  | 16/25/35                               | 3,5 | 8   | -   |
| K1200.106** | A    | M6  | 25/35/40                               | 3,8 | 10  | -   |
| K1200.108** | A    | M8  | 12/16/20/25/30/35/40/45/50/55/65/70/85 | 5   | 13  | -   |
| K1200.110** | A    | M10 | 35/40/50/60                            | 6   | 17  | -   |
| K1200.112** | A    | M12 | 40/60/70                               | 7   | 19  | -   |
| K1200.116** | A    | M16 | 50/60/70                               | 9,5 | 24  | -   |
| K1200.203** | B    | M3  | 16/25                                  | 2   | 5,5 | 10  |
| K1200.204** | B    | M4  | 16/25/35                               | 2,5 | 7   | 10  |
| K1200.205** | B    | M5  | 16/25/35                               | 3,5 | 8   | 12  |
| K1200.206** | B    | M6  | 25/35/40                               | 3,8 | 10  | 15  |
| K1200.208** | B    | M8  | 12/16/20/25/30/35/40/45/50/55/65/70/85 | 5   | 13  | 20  |
| K1200.210** | B    | M10 | 35/40/50/60                            | 6   | 17  | 30  |
| K1200.212** | B    | M12 | 40/60/70                               | 7   | 19  | 30  |
| K1200.216** | B    | M16 | 50/60/70                               | 9,5 | 24  | 35  |

## Extension pieces

**Material:**

Carbon steel.

**Version:**

Black oxidised.

**Sample order:**

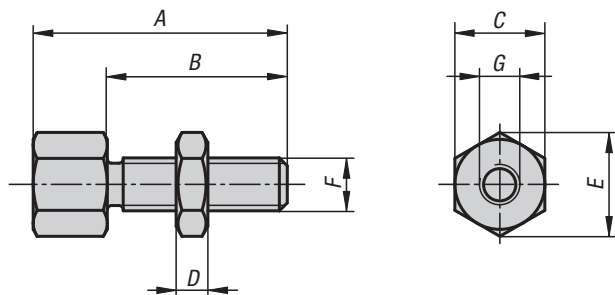
K0821.120750

**Note:**

Extension pieces are used to extend self-aligning pads, spring plungers, positioning feet, rest pads etc.

## KIPP Extension pieces

| Order No.    | L  | L1 | T  | D   | D1  | E    | SW |
|--------------|----|----|----|-----|-----|------|----|
| K0821.08025  | 25 | 13 | 15 | M8  | M8  | 15   | 13 |
| K0821.08032  | 32 | 13 | 15 | M8  | M8  | 15   | 13 |
| K0821.08040  | 40 | 13 | 15 | M8  | M8  | 15   | 13 |
| K0821.10025  | 25 | 15 | 17 | M10 | M10 | 19,6 | 17 |
| K0821.10032  | 32 | 15 | 17 | M10 | M10 | 19,6 | 17 |
| K0821.10040  | 40 | 15 | 17 | M10 | M10 | 19,6 | 17 |
| K0821.10050  | 50 | 16 | 20 | M10 | M10 | 19,6 | 17 |
| K0821.10075  | 75 | 16 | 20 | M10 | M10 | 19,6 | 17 |
| K0821.120320 | 32 | 18 | 20 | M12 | M12 | 25,4 | 22 |
| K0821.120500 | 50 | 18 | 20 | M12 | M12 | 25,4 | 22 |
| K0821.120750 | 75 | 18 | 20 | M12 | M12 | 25,4 | 22 |
| K0821.160320 | 32 | 25 | 20 | M16 | M16 | 31,2 | 27 |
| K0821.160500 | 50 | 25 | 30 | M16 | M16 | 31,2 | 27 |
| K0821.160750 | 75 | 25 | 30 | M16 | M16 | 31,2 | 27 |
| K0821.108025 | 25 | 19 | 15 | M8  | M8  | 15   | 13 |
| K0821.108032 | 32 | 19 | 15 | M8  | M8  | 15   | 13 |
| K0821.108040 | 40 | 19 | 15 | M8  | M8  | 15   | 13 |
| K0821.112032 | 32 | 30 | 20 | M12 | M12 | 25,4 | 22 |
| K0821.112050 | 50 | 30 | 20 | M12 | M12 | 25,4 | 22 |
| K0821.112075 | 75 | 30 | 20 | M12 | M12 | 25,4 | 22 |
| K0821.116032 | 32 | 30 | 20 | M16 | M16 | 31,2 | 27 |
| K0821.116050 | 50 | 30 | 30 | M16 | M16 | 31,2 | 27 |
| K0821.116075 | 75 | 30 | 30 | M16 | M16 | 31,2 | 27 |



**Material:**  
Carbon steel.

**Version:**  
Black oxidised.

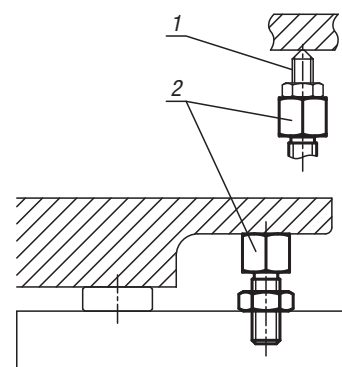
**Sample order:**  
K0308.0803006

**Note:**  
Various rests can be mounted on this jack screw.

**Drawing reference:**

1) screw rest

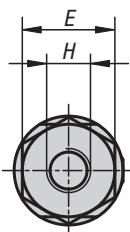
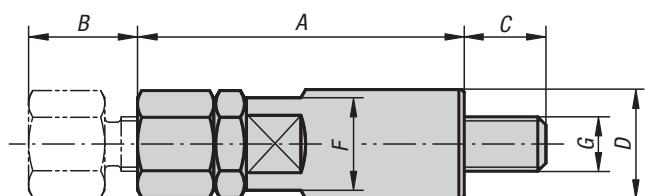
2) jack screw



### KIPP Jack screws

| Order No.     | A  | B  | C  | D  | E    | F   | G        |
|---------------|----|----|----|----|------|-----|----------|
| K0308.0803006 | 30 | 20 | 13 | 5  | 14,4 | M8  | M6 x 6   |
| K0308.0804006 | 40 | 30 | 13 | 5  | 14,4 | M8  | M6 x 6   |
| K0308.1003808 | 38 | 24 | 17 | 6  | 18,9 | M10 | M8 x 8   |
| K0308.1004808 | 48 | 34 | 17 | 6  | 18,9 | M10 | M8 x 8   |
| K0308.1205110 | 51 | 33 | 22 | 7  | 24,5 | M12 | M10 x 10 |
| K0308.1206610 | 66 | 48 | 22 | 7  | 24,5 | M12 | M10 x 10 |
| K0308.1606212 | 62 | 40 | 27 | 10 | 30,1 | M16 | M12 x 12 |
| K0308.1607712 | 77 | 55 | 27 | 10 | 30,1 | M16 | M12 x 12 |

## Jack screws extended



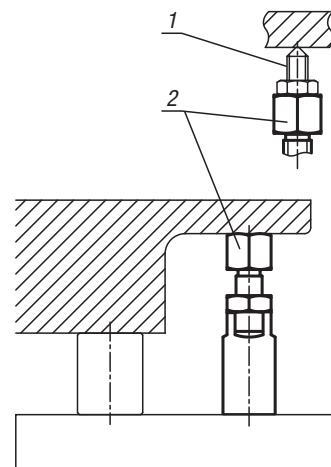
**Material:**  
Carbon steel.

**Version:**  
Black oxidised.

**Sample order:**  
K0923.08040

**Drawing reference:**  
1) screw rest  
2) jack screw

Jack screw for mounting various rests



### KIPP Jack screws extended

| Order No.   | A  | B  | C  | D  | E  | F  | G   | H        |
|-------------|----|----|----|----|----|----|-----|----------|
| K0923.08040 | 40 | 10 | 12 | 16 | 13 | 13 | M8  | M6 x 6   |
| K0923.08050 | 50 | 20 | 12 | 16 | 13 | 13 | M8  | M6 x 6   |
| K0923.10050 | 50 | 10 | 14 | 20 | 17 | 17 | M10 | M8 x 8   |
| K0923.10060 | 60 | 20 | 14 | 20 | 17 | 17 | M10 | M8 x 8   |
| K0923.12065 | 65 | 15 | 19 | 24 | 22 | 22 | M12 | M10 x 10 |
| K0923.12080 | 80 | 30 | 19 | 24 | 22 | 22 | M12 | M10 x 10 |
| K0923.16080 | 80 | 15 | 24 | 32 | 27 | 27 | M16 | M12 x 12 |
| K0923.16095 | 95 | 30 | 24 | 32 | 27 | 27 | M16 | M12 x 12 |

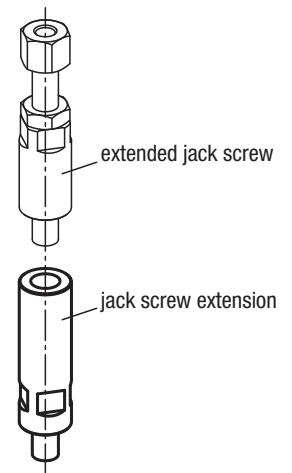
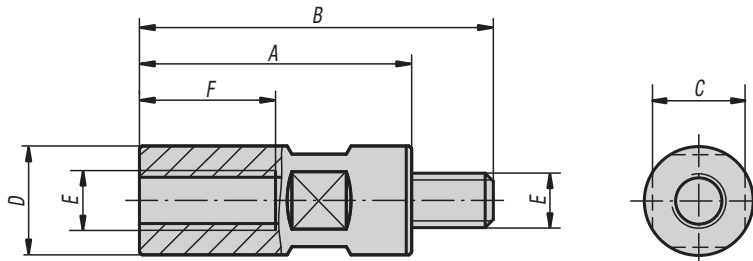
## Extensions for jack screws



**Material:**  
Carbon steel.

**Version:**  
Black oxidised.

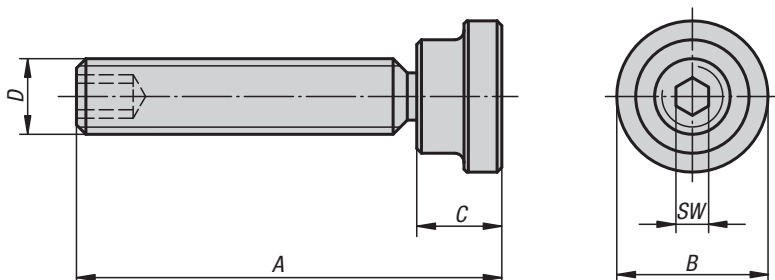
**Sample order:**  
K0924.08032



### KIPP Extensions for jack screws

| Order No.   | A   | B   | C  | D  | E   | F  |
|-------------|-----|-----|----|----|-----|----|
| K0924.08032 | 32  | 44  | 13 | 16 | M8  | 20 |
| K0924.08040 | 40  | 52  | 13 | 16 | M8  | 20 |
| K0924.08050 | 50  | 62  | 13 | 16 | M8  | 20 |
| K0924.08065 | 65  | 77  | 13 | 16 | M8  | 20 |
| K0924.08080 | 80  | 92  | 13 | 16 | M8  | 20 |
| K0924.08100 | 100 | 112 | 13 | 16 | M8  | 20 |
| K0924.10040 | 40  | 54  | 17 | 20 | M10 | 25 |
| K0924.10050 | 50  | 64  | 17 | 20 | M10 | 25 |
| K0924.10065 | 65  | 79  | 17 | 20 | M10 | 25 |
| K0924.10080 | 80  | 94  | 17 | 20 | M10 | 25 |
| K0924.10100 | 100 | 114 | 17 | 20 | M10 | 25 |
| K0924.12050 | 50  | 69  | 22 | 24 | M12 | 30 |
| K0924.12065 | 65  | 84  | 22 | 24 | M12 | 30 |
| K0924.12080 | 80  | 99  | 22 | 24 | M12 | 30 |
| K0924.12100 | 100 | 119 | 22 | 24 | M12 | 30 |
| K0924.12125 | 125 | 144 | 22 | 24 | M12 | 30 |
| K0924.12160 | 160 | 179 | 22 | 24 | M12 | 30 |
| K0924.16050 | 50  | 74  | 27 | 32 | M16 | 32 |
| K0924.16065 | 65  | 89  | 27 | 32 | M16 | 40 |
| K0924.16080 | 80  | 104 | 27 | 32 | M16 | 40 |
| K0924.16100 | 100 | 124 | 27 | 32 | M16 | 40 |
| K0924.16125 | 125 | 149 | 27 | 32 | M16 | 40 |
| K0924.16160 | 160 | 184 | 27 | 32 | M16 | 40 |

# Grub screws with thrust pad



## Material, version:

Thrust pad: carbon steel, tempered, black oxidised.

Grub screw: carbon steel, tempered.

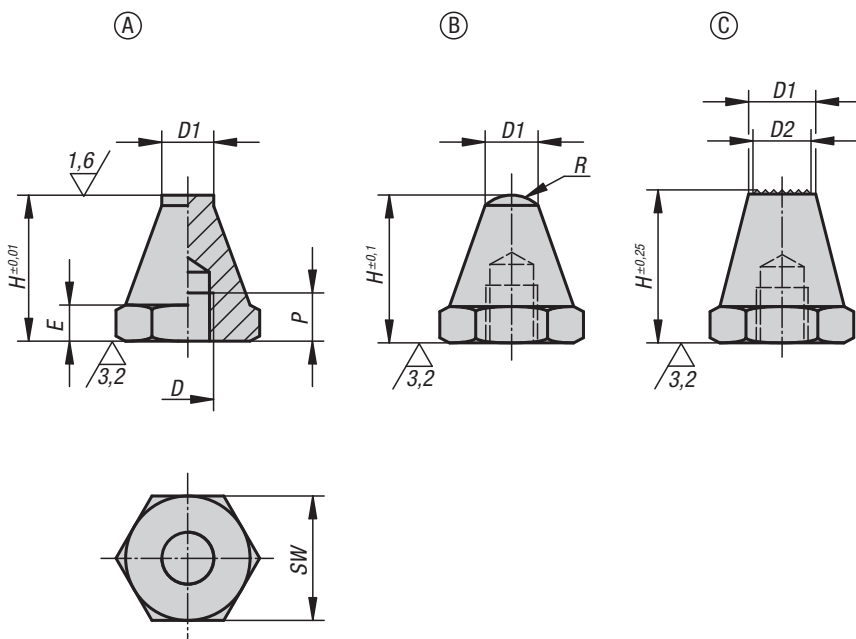
## Sample order:

K0829.08X43

## KIPP Grub screws with thrust pad

| Order No.    | A   | B  | C  | D   | SW |
|--------------|-----|----|----|-----|----|
| K0829.08X43  | 43  | 16 | 9  | M8  | 4  |
| K0829.08X63  | 63  | 16 | 9  | M8  | 4  |
| K0829.10X64  | 64  | 20 | 11 | M10 | 5  |
| K0829.10X84  | 84  | 20 | 11 | M10 | 5  |
| K0829.12X65  | 65  | 25 | 13 | M12 | 6  |
| K0829.12X85  | 85  | 25 | 13 | M12 | 6  |
| K0829.12X105 | 105 | 25 | 13 | M12 | 6  |
| K0829.16X85  | 85  | 32 | 15 | M16 | 8  |
| K0829.16X105 | 105 | 32 | 15 | M16 | 8  |
| K0829.16X130 | 130 | 32 | 15 | M16 | 8  |
| K0829.20X105 | 105 | 40 | 16 | M20 | 10 |
| K0829.20X130 | 130 | 40 | 16 | M20 | 10 |
| K0829.20X155 | 155 | 40 | 16 | M20 | 10 |

## Rest pads



### Material:

Body high carbon steel.

### Version:

Body tempered and black oxidised.

### Sample order:

K0294.106012

### Note:

Rest pads are for supporting machined and non-machined parts. They can also be used as stops and thrust pads in fixtures and toolmaking. Studs or grub screws can be screwed and glued into the tapped hole D to make a rest pad with external thread.

### Drawing reference:

Form A: flat face

Form B: ball end

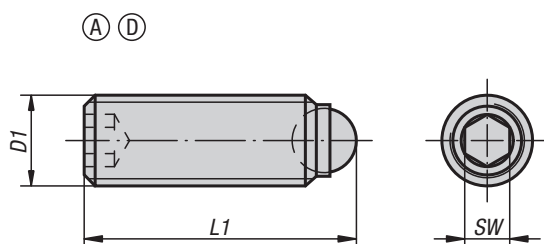
Form C: diamond grip

## KIPP Rest pads

| Order No.<br>Form A | Order No.<br>Form B | Order No.<br>Form C | D   | D1 | D2      | E | H    | P  | R         | SW |
|---------------------|---------------------|---------------------|-----|----|---------|---|------|----|-----------|----|
| K0294.106012        | K0294.206012        | K0294.306012        | M6  | 6  | -/-/5   | 3 | 12,5 | 4  | -/5/-     | 11 |
| K0294.106025        | K0294.206025        | K0294.306025        | M6  | 6  | -/-/5   | 3 | 25   | 7  | -/5/-     | 11 |
| K0294.108015        | K0294.208015        | K0294.308015        | M8  | 8  | -/-/6   | 4 | 15   | 6  | -/8,5/-   | 13 |
| K0294.108030        | K0294.208030        | K0294.308030        | M8  | 8  | -/-/6   | 4 | 30   | 9  | -/8,5/-   | 13 |
| K0294.110020        | K0294.210020        | K0294.310020        | M10 | 10 | -/-/8   | 5 | 20   | 9  | -/9/-     | 17 |
| K0294.110040        | K0294.210040        | K0294.310040        | M10 | 10 | -/-/8   | 5 | 40   | 13 | -/9/-     | 17 |
| K0294.112025        | K0294.212025        | K0294.312025        | M12 | 12 | -/-/9,5 | 6 | 25   | 11 | -/12,75/- | 19 |
| K0294.112050        | K0294.212050        | K0294.312050        | M12 | 12 | -/-/9,5 | 6 | 50   | 16 | -/12,75/- | 19 |
| K0294.116030        | K0294.216030        | K0294.316030        | M16 | 16 | -/-/13  | 8 | 30   | 12 | -/17/-    | 24 |
| K0294.116060        | K0294.216060        | K0294.316060        | M16 | 16 | -/-/13  | 8 | 60   | 20 | -/17/-    | 24 |

# Ball-end thrust screws without head

with full ball


**Material:**

Screw, high-carbon steel, grade 10.9  
Ball, ball-bearing steel or POM.

**Version:**

Screw black.  
Ball hardened bright or POM.

**Sample order:**

K0383.10810

**Note:**

Ball-end thrust screws with full ball are used when a clean, polished contact surface is required.  
Longer versions have been specially designed to be glued in, allowing mechanical connecting elements with external thread to be made cost-effectively for small and medium-sized series.

**Drawing reference:**

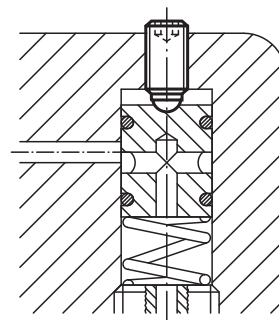
Form A: steel ball  
Form D: POM ball

## KIPP Ball-end thrust screws without head with full ball

| Order No.<br>Form A | Order No.<br>Form D | D1 | L1   | Ball Ø | SW  | Load rating<br>max. kN<br>(static load only) |
|---------------------|---------------------|----|------|--------|-----|----------------------------------------------|
| K0383.1046          | K0383.3046          | M4 | 6    | 2,5    | 2   | 3,5/0,3                                      |
| K0383.1048          | K0383.3048          | M4 | 8    | 2,5    | 2   | 3,5/0,3                                      |
| K0383.10410         | K0383.30410         | M4 | 10   | 2,5    | 2   | 3,5/0,3                                      |
| K0383.10412         | K0383.30412         | M4 | 12   | 2,5    | 2   | 3,5/0,3                                      |
| K0383.10416         | K0383.30416         | M4 | 16   | 2,5    | 2   | 3,5/0,3                                      |
| K0383.1058          | K0383.3058          | M5 | 8    | 3      | 2,5 | 4,5/0,5                                      |
| K0383.10510         | K0383.30510         | M5 | 10   | 3      | 2,5 | 4,5/0,5                                      |
| K0383.10512         | K0383.30512         | M5 | 12   | 3      | 2,5 | 4,5/0,5                                      |
| K0383.10516         | K0383.30516         | M5 | 16   | 3      | 2,5 | 4,5/0,5                                      |
| K0383.10520         | K0383.30520         | M5 | 20   | 3      | 2,5 | 4,5/0,5                                      |
| K0383.10525         | K0383.30525         | M5 | 25   | 3      | 2,5 | 4,5/0,5                                      |
| K0383.10610         | K0383.30610         | M6 | 10,8 | 4      | 3   | 9/0,9                                        |
| K0383.10612         | K0383.30612         | M6 | 12,8 | 4      | 3   | 9/0,9                                        |
| K0383.10616         | K0383.30616         | M6 | 16,8 | 4      | 3   | 9/0,9                                        |
| K0383.10620         | K0383.30620         | M6 | 20,8 | 4      | 3   | 9/0,9                                        |
| K0383.10625         | K0383.30625         | M6 | 25,8 | 4      | 3   | 9/0,9                                        |
| K0383.10650         | -                   | M6 | 50,8 | 4      | 3   | 9                                            |
| K0383.10660         | -                   | M6 | 60,8 | 4      | 3   | 9                                            |
| K0383.10680         | -                   | M6 | 80,8 | 4      | 3   | 9                                            |

# Ball-end thrust screws without head

with full ball

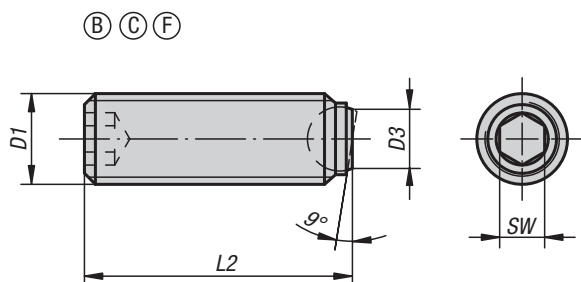


## KIPP Ball-end thrust screws without head with full ball

| Order No.<br>Form A | Order No.<br>Form D | D1  | L1   | Ball Ø | SW | Load rating<br>max. kN<br>(static load only) |
|---------------------|---------------------|-----|------|--------|----|----------------------------------------------|
| K0383.10810         | K0383.30810         | M8  | 11,2 | 5,5    | 4  | 10/1,5                                       |
| K0383.10812         | K0383.30812         | M8  | 13,2 | 5,5    | 4  | 10/1,5                                       |
| K0383.10816         | K0383.30816         | M8  | 17,2 | 5,5    | 4  | 15/1,5                                       |
| K0383.10820         | K0383.30820         | M8  | 21,2 | 5,5    | 4  | 15/1,5                                       |
| K0383.10825         | K0383.30825         | M8  | 26,2 | 5,5    | 4  | 15/1,5                                       |
| K0383.10830         | K0383.30830         | M8  | 31,2 | 5,5    | 4  | 15/1,5                                       |
| K0383.10850         | -                   | M8  | 51,2 | 5,5    | 4  | 15                                           |
| K0383.10860         | -                   | M8  | 61,2 | 5,5    | 4  | 15                                           |
| K0383.10880         | -                   | M8  | 81,2 | 5,5    | 4  | 15                                           |
| K0383.11012         | K0383.31012         | M10 | 13,7 | 7      | 5  | 20/2                                         |
| K0383.11016         | K0383.31016         | M10 | 17,7 | 7      | 5  | 20/2                                         |
| K0383.11020         | K0383.31020         | M10 | 21,7 | 7      | 5  | 20/2                                         |
| K0383.11025         | K0383.31025         | M10 | 26,7 | 7      | 5  | 20/2                                         |
| K0383.11035         | K0383.31035         | M10 | 36,7 | 7      | 5  | 20/2                                         |
| K0383.11216         | K0383.31216         | M12 | 18   | 8,5    | 6  | 30/3                                         |
| K0383.11220         | K0383.31220         | M12 | 22   | 8,5    | 6  | 30/3                                         |
| K0383.11225         | -                   | M12 | 27   | 8,5    | 6  | 30                                           |
| K0383.11230         | K0383.31230         | M12 | 32   | 8,5    | 6  | 30/3                                         |
| K0383.11232         | -                   | M12 | 34   | 8,5    | 6  | 30                                           |
| K0383.11240         | K0383.31240         | M12 | 42   | 8,5    | 6  | 30/3                                         |
| K0383.11620         | -                   | M16 | 23,3 | 12     | 8  | 60                                           |
| K0383.11625         | -                   | M16 | 28,3 | 12     | 8  | 60                                           |
| K0383.11635         | -                   | M16 | 38,3 | 12     | 8  | 60                                           |
| K0383.11650         | -                   | M16 | 53,3 | 12     | 8  | 60                                           |
| K0383.12030         | -                   | M20 | 34,2 | 15     | 10 | 90                                           |
| K0383.12040         | -                   | M20 | 44,2 | 15     | 10 | 90                                           |
| K0383.12060         | -                   | M20 | 64,2 | 15     | 10 | 90                                           |
| K0383.12435         | -                   | M24 | 39,7 | 18     | 12 | 120                                          |
| K0383.12450         | -                   | M24 | 54,7 | 18     | 12 | 120                                          |
| K0383.12480         | -                   | M24 | 84,7 | 18     | 12 | 120                                          |

## Ball-end thrust screws without head

with flattened ball



### Material:

Screw carbon steel, grade 10.9  
Ball, ball-bearing steel or POM.

### Version:

Screw black.  
Ball hardened bright or POM.

### Sample order:

K0383.41012

### Note:

Surfaces which are not flat and parallel can be firmly clamped or supported with Form B, C or F with flattened ball, the movable ball can adapt itself up to 9°.

Longer versions have been specially designed to glue in, allowing mechanical connecting elements with external thread to be made cost-effectively for small and medium-sized series.

### Drawing reference:

Form B: steel ball  
Form C: POM ball  
Form F: steel ball diamond grip

### KIPP Ball-end thrust screws without head with flattened POM ball

| Order No.   | Form | D1 | D3  | L2   | Ball Ø | SW  | Load rating<br>max. kN<br>(static load only) |
|-------------|------|----|-----|------|--------|-----|----------------------------------------------|
| K0383.7046  | C    | M4 | 1,8 | 5,9  | 2,5    | 2   | 0,3                                          |
| K0383.7048  | C    | M4 | 1,8 | 7,9  | 2,5    | 2   | 0,3                                          |
| K0383.70410 | C    | M4 | 1,8 | 9,9  | 2,5    | 2   | 0,3                                          |
| K0383.70412 | C    | M4 | 1,8 | 11,9 | 2,5    | 2   | 0,3                                          |
| K0383.70416 | C    | M4 | 1,8 | 15,9 | 2,5    | 2   | 0,3                                          |
| K0383.7058  | C    | M5 | 2,1 | 7,8  | 3      | 2,5 | 0,5                                          |
| K0383.70510 | C    | M5 | 2,1 | 9,8  | 3      | 2,5 | 0,5                                          |
| K0383.70512 | C    | M5 | 2,1 | 11,8 | 3      | 2,5 | 0,5                                          |
| K0383.70516 | C    | M5 | 2,1 | 15,8 | 3      | 2,5 | 0,5                                          |
| K0383.70520 | C    | M5 | 2,1 | 19,8 | 3      | 2,5 | 0,5                                          |
| K0383.70525 | C    | M5 | 2,1 | 24,8 | 3      | 2,5 | 0,5                                          |
| K0383.70610 | C    | M6 | 3   | 10,3 | 4      | 3   | 0,9                                          |
| K0383.70612 | C    | M6 | 3   | 12,3 | 4      | 3   | 0,9                                          |
| K0383.70616 | C    | M6 | 3   | 16,3 | 4      | 3   | 0,9                                          |
| K0383.70620 | C    | M6 | 3   | 20,3 | 4      | 3   | 0,9                                          |
| K0383.70625 | C    | M6 | 3   | 25,3 | 4      | 3   | 0,9                                          |
| K0383.70810 | C    | M8 | 4,2 | 10,4 | 5,5    | 4   | 1,5                                          |
| K0383.70812 | C    | M8 | 4,2 | 12,4 | 5,5    | 4   | 1,5                                          |
| K0383.70816 | C    | M8 | 4,2 | 16,4 | 5,5    | 4   | 1,5                                          |
| K0383.70820 | C    | M8 | 4,2 | 20,4 | 5,5    | 4   | 1,5                                          |
| K0383.70825 | C    | M8 | 4,2 | 25,4 | 5,5    | 4   | 1,5                                          |
| K0383.70830 | C    | M8 | 4,2 | 30,4 | 5,5    | 4   | 1,5                                          |

### KIPP Ball-end thrust screws without head with flattened serrated steel ball

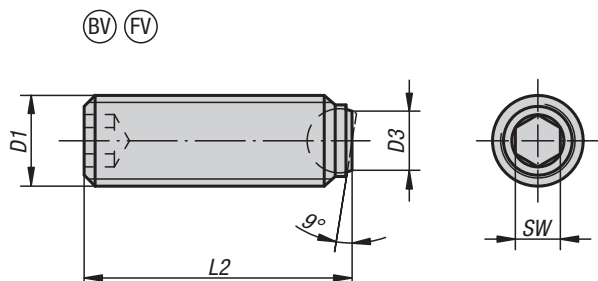
| Order No.   | Form | D1  | D3   | L2 | Ball Ø | SW | Load rating<br>max. kN<br>(static load only) |
|-------------|------|-----|------|----|--------|----|----------------------------------------------|
| K0383.41012 | F    | M10 | 6    | 12 | 7      | 5  | 20                                           |
| K0383.41016 | F    | M10 | 6    | 16 | 7      | 5  | 20                                           |
| K0383.41025 | F    | M10 | 6    | 25 | 7      | 5  | 20                                           |
| K0383.41035 | F    | M10 | 6    | 35 | 7      | 5  | 20                                           |
| K0383.41216 | F    | M12 | 7,2  | 16 | 8,5    | 6  | 30                                           |
| K0383.41220 | F    | M12 | 7,2  | 20 | 8,5    | 6  | 30                                           |
| K0383.41230 | F    | M12 | 7,2  | 30 | 8,5    | 6  | 30                                           |
| K0383.41240 | F    | M12 | 7,2  | 40 | 8,5    | 6  | 30                                           |
| K0383.41620 | F    | M16 | 10,7 | 20 | 12     | 8  | 60                                           |
| K0383.41625 | F    | M16 | 10,7 | 25 | 12     | 8  | 60                                           |
| K0383.41635 | F    | M16 | 10,7 | 35 | 12     | 8  | 60                                           |
| K0383.41650 | F    | M16 | 10,7 | 50 | 12     | 8  | 60                                           |

## KIPP Ball-end thrust screws without head with flattened steel ball

| Order No.   | Form | D1  | D3   | L2   | Ball Ø | SW  | Load rating<br>max. kN<br>(static load only) |
|-------------|------|-----|------|------|--------|-----|----------------------------------------------|
| K0383.2046  | B    | M4  | 1,4  | 5,8  | 2,5    | 2   | 3,5                                          |
| K0383.2048  | B    | M4  | 1,4  | 7,8  | 2,5    | 2   | 3,5                                          |
| K0383.20410 | B    | M4  | 1,4  | 9,8  | 2,5    | 2   | 3,5                                          |
| K0383.20412 | B    | M4  | 1,4  | 11,8 | 2,5    | 2   | 3,5                                          |
| K0383.20416 | B    | M4  | 1,4  | 15,8 | 2,5    | 2   | 3,5                                          |
| K0383.2058  | B    | M5  | 2    | 7,6  | 3      | 2,5 | 4,5                                          |
| K0383.20510 | B    | M5  | 2    | 9,6  | 3      | 2,5 | 4,5                                          |
| K0383.20512 | B    | M5  | 2    | 11,6 | 3      | 2,5 | 4,5                                          |
| K0383.20516 | B    | M5  | 2    | 15,6 | 3      | 2,5 | 4,5                                          |
| K0383.20520 | B    | M5  | 2    | 19,6 | 3      | 2,5 | 4,5                                          |
| K0383.20525 | B    | M5  | 2    | 24,6 | 3      | 2,5 | 4,5                                          |
| K0383.20610 | B    | M6  | 3    | 10,1 | 4      | 3   | 9                                            |
| K0383.20612 | B    | M6  | 3    | 12,1 | 4      | 3   | 9                                            |
| K0383.20616 | B    | M6  | 3    | 16,1 | 4      | 3   | 9                                            |
| K0383.20620 | B    | M6  | 3    | 20,1 | 4      | 3   | 9                                            |
| K0383.20625 | B    | M6  | 3    | 25,1 | 4      | 3   | 9                                            |
| K0383.20650 | B    | M6  | 3    | 50,1 | 4      | 3   | 9                                            |
| K0383.20660 | B    | M6  | 3    | 60,1 | 4      | 3   | 9                                            |
| K0383.20680 | B    | M6  | 3    | 80,1 | 4      | 3   | 9                                            |
| K0383.20810 | B    | M8  | 4,1  | 10,3 | 5,5    | 4   | 10                                           |
| K0383.20812 | B    | M8  | 4,1  | 12,3 | 5,5    | 4   | 10                                           |
| K0383.20816 | B    | M8  | 4,1  | 16,3 | 5,5    | 4   | 15                                           |
| K0383.20820 | B    | M8  | 4,1  | 20,3 | 5,5    | 4   | 15                                           |
| K0383.20825 | B    | M8  | 4,1  | 25,3 | 5,5    | 4   | 15                                           |
| K0383.20830 | B    | M8  | 4,1  | 30,3 | 5,5    | 4   | 15                                           |
| K0383.20850 | B    | M8  | 4,1  | 50,3 | 5,5    | 4   | 15                                           |
| K0383.20860 | B    | M8  | 4,1  | 60,3 | 5,5    | 4   | 15                                           |
| K0383.20880 | B    | M8  | 4,1  | 80,3 | 5,5    | 4   | 15                                           |
| K0383.21012 | B    | M10 | 5,6  | 12,3 | 7      | 5   | 20                                           |
| K0383.21016 | B    | M10 | 5,6  | 16,3 | 7      | 5   | 20                                           |
| K0383.21020 | B    | M10 | 5,6  | 20,3 | 7      | 5   | 20                                           |
| K0383.21025 | B    | M10 | 5,6  | 25,3 | 7      | 5   | 20                                           |
| K0383.21035 | B    | M10 | 5,6  | 35,3 | 7      | 5   | 20                                           |
| K0383.21216 | B    | M12 | 7    | 16,2 | 8,5    | 6   | 30                                           |
| K0383.21220 | B    | M12 | 7    | 20,2 | 8,5    | 6   | 30                                           |
| K0383.21230 | B    | M12 | 7    | 30,2 | 8,5    | 6   | 30                                           |
| K0383.21240 | B    | M12 | 7    | 40,2 | 8,5    | 6   | 30                                           |
| K0383.21620 | B    | M16 | 10,7 | 20   | 12     | 8   | 60                                           |
| K0383.21625 | B    | M16 | 10,7 | 25   | 12     | 8   | 60                                           |
| K0383.21635 | B    | M16 | 10,7 | 35   | 12     | 8   | 60                                           |
| K0383.21650 | B    | M16 | 10,7 | 50   | 12     | 8   | 60                                           |
| K0383.22030 | B    | M20 | 13,5 | 30   | 15     | 10  | 90                                           |
| K0383.22040 | B    | M20 | 13,5 | 40   | 15     | 10  | 90                                           |
| K0383.22060 | B    | M20 | 13,5 | 60   | 15     | 10  | 90                                           |
| K0383.22435 | B    | M24 | 15,8 | 35   | 18     | 12  | 120                                          |
| K0383.22450 | B    | M24 | 15,8 | 50   | 18     | 12  | 120                                          |
| K0383.22480 | B    | M24 | 15,8 | 80   | 18     | 12  | 120                                          |

## Ball-end thrust screws without head

with flattened ball and rotation lock



### Material:

Screw, high-carbon steel, grade 10.9  
Ball, ball-bearing steel.

### Version:

Screw black.  
Ball hardened, bright.

### Sample order:

K0383.50820

### Note:

Surfaces which are not flat and parallel can be firmly clamped or supported with a flattened ball, the movable ball can adapt itself up to 9°. Longer versions have been designed especially to be glued in. This enables mechanical connecting elements with male thread to be made cost-effectively for small and medium-sized series.

### Drawing reference:

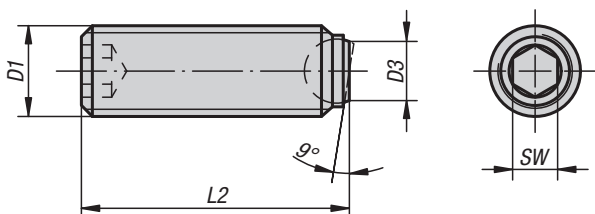
Form BV: flattened ball non-rotating  
Form FV: flattened ball diamond grip non-rotating

## KIPP Ball-end thrust screws without head, with flattened ball and rotation lock

| Order No.<br>Form BV | Order No.<br>Form FV | D1  | D3   | L2   | Ball Ø | SW | Load rating<br>max. kN<br>(static load only) |
|----------------------|----------------------|-----|------|------|--------|----|----------------------------------------------|
| K0383.50612          | -                    | M6  | 3    | 12,1 | 4      | 3  | 6                                            |
| K0383.50616          | -                    | M6  | 3    | 16,1 | 4      | 3  | 6                                            |
| K0383.50620          | -                    | M6  | 3    | 20,1 | 4      | 3  | 6                                            |
| K0383.50625          | -                    | M6  | 3    | 25,1 | 4      | 3  | 6                                            |
| K0383.50816          | K0383.60816          | M8  | 4,1  | 16,3 | 5,5    | 4  | 9                                            |
| K0383.50820          | K0383.60820          | M8  | 4,1  | 20,3 | 5,5    | 4  | 9                                            |
| K0383.50825          | K0383.60825          | M8  | 4,1  | 25,3 | 5,5    | 4  | 9                                            |
| K0383.50830          | K0383.60830          | M8  | 4,1  | 30,3 | 5,5    | 4  | 9                                            |
| K0383.51020          | K0383.61020          | M10 | 5,6  | 20,3 | 7      | 5  | 12                                           |
| K0383.51025          | K0383.61025          | M10 | 5,6  | 25,3 | 7      | 5  | 12                                           |
| K0383.51035          | K0383.61035          | M10 | 5,6  | 35,3 | 7      | 5  | 12                                           |
| K0383.51040          | K0383.61040          | M10 | 5,6  | 40,2 | 7      | 5  | 12                                           |
| K0383.51220          | K0383.61220          | M12 | 7    | 20,2 | 8,5    | 6  | 18                                           |
| K0383.51230          | K0383.61230          | M12 | 7    | 30,2 | 8,5    | 6  | 18                                           |
| K0383.51240          | K0383.61240          | M12 | 7    | 40,2 | 8,5    | 6  | 18                                           |
| K0383.51250          | K0383.61250          | M12 | 7    | 50   | 8,5    | 6  | 18                                           |
| K0383.51635          | K0383.61635          | M16 | 10,7 | 35   | 12     | 8  | 36                                           |
| K0383.51650          | K0383.61650          | M16 | 10,7 | 50   | 12     | 8  | 36                                           |
| K0383.52030          | K0383.62030          | M20 | 13,5 | 30   | 15     | 10 | 60                                           |
| K0383.52040          | K0383.62040          | M20 | 13,5 | 40   | 15     | 10 | 60                                           |
| K0383.52050          | K0383.62050          | M20 | 13,5 | 50   | 15     | 10 | 60                                           |
| K0383.52060          | K0383.62060          | M20 | 13,5 | 60   | 15     | 10 | 60                                           |
| K0383.52435          | K0383.62435          | M24 | 15,8 | 35   | 18     | 12 | 80                                           |
| K0383.52450          | K0383.62450          | M24 | 15,8 | 50   | 18     | 12 | 80                                           |
| K0383.52480          | K0383.62480          | M24 | 15,8 | 80   | 18     | 12 | 80                                           |

# Ball-end thrust screws without head

stainless steel with flattened ball and rotation lock



## Material:

Screw and ball stainless steel.

## Version:

Stainless steel bright.

## Sample order:

K0384.50612

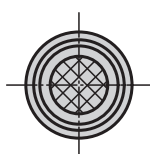
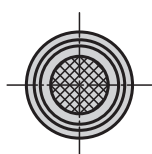
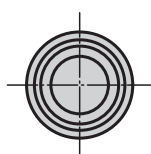
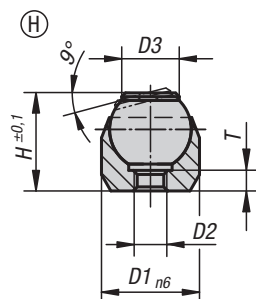
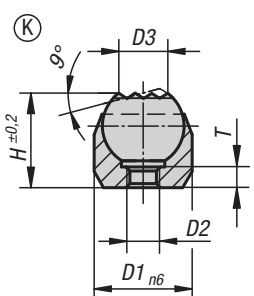
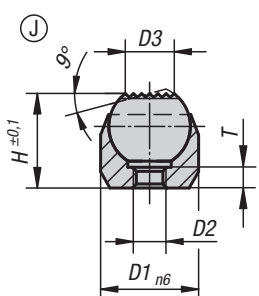
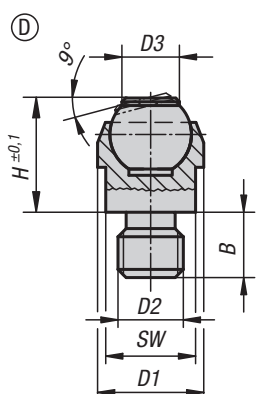
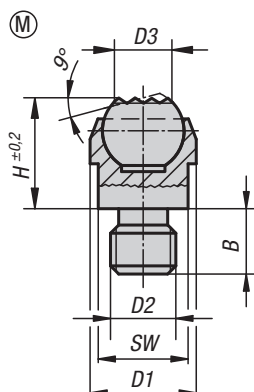
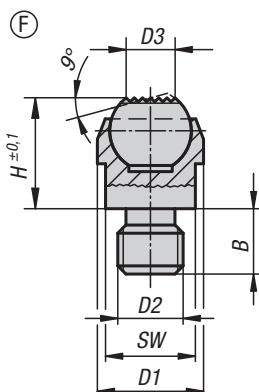
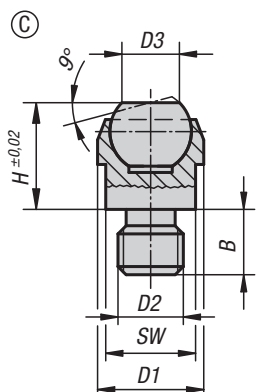
## Note:

Surfaces which are not flat and parallel can be firmly clamped or supported with a flattened ball, the movable ball can adapt itself up to 9°. Longer versions have been designed especially to be glued in. This enables mechanical connecting elements with male thread to be made cost-effectively for small and medium-sized series. Ball has rotation lock.

## KIPP Ball-end thrust screws without head stainless steel with flattened ball and rotation lock

| Order No.   | D1  | D3   | L2   | Ball Ø | SW |
|-------------|-----|------|------|--------|----|
| K0384.50612 | M6  | 3    | 12,1 | 4      | 3  |
| K0384.50616 | M6  | 3    | 16,1 | 4      | 3  |
| K0384.50620 | M6  | 3    | 20,1 | 4      | 3  |
| K0384.50625 | M6  | 3    | 25,1 | 4      | 3  |
| K0384.50816 | M8  | 4,1  | 16,3 | 5,5    | 4  |
| K0384.50820 | M8  | 4,1  | 20,3 | 5,5    | 4  |
| K0384.50825 | M8  | 4,1  | 25,3 | 5,5    | 4  |
| K0384.50830 | M8  | 4,1  | 30,3 | 5,5    | 4  |
| K0384.51020 | M10 | 5,6  | 20,3 | 7      | 5  |
| K0384.51025 | M10 | 5,6  | 25,3 | 7      | 5  |
| K0384.51035 | M10 | 5,6  | 35,3 | 7      | 5  |
| K0384.51040 | M10 | 5,6  | 40,2 | 7      | 5  |
| K0384.51220 | M12 | 7    | 20,2 | 8,5    | 6  |
| K0384.51230 | M12 | 7    | 30,2 | 8,5    | 6  |
| K0384.51240 | M12 | 7    | 40,2 | 8,5    | 6  |
| K0384.51250 | M12 | 7    | 50   | 8,5    | 6  |
| K0384.51635 | M16 | 10,7 | 35   | 12     | 8  |
| K0384.51650 | M16 | 10,7 | 50   | 12     | 8  |

## Self-aligning pads

**Material:**

Body carbon steel.  
Ball, ball bearing steel 1.2067.  
Form D: Ball with POM insert.  
Form H: Ball with POM insert.  
Form K: Ball with carbide insert.  
Form M has a carbide ball.

**Version:**

Body tempered and phosphated.  
Ball hardened.  
Form M ball nickel plated.

**Sample order:**

K0282.120

**Note:**

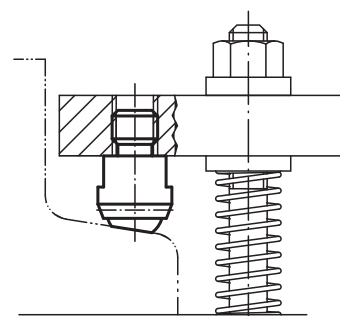
Self-aligning pads serve as stops, supports and thrust pads in fixture constructions.

Ball secured against rotation.

\* Valid only if the minimum bore depth is observed.

**Drawing reference:**

Form C: with male thread, flattened ball, smooth.  
Form D: with male thread, flattened ball, with POM insert.  
Form F: with male thread, flattened ball, diamond grip.  
Form M: with male thread, flattened ball, with carbide insert.  
Form G: press fit, flattened ball, smooth.  
Form H: press fit, flattened ball, with POM insert.  
Form J: press fit, flattened ball, diamond grip.  
Form K: press fit, flattened ball, with carbide insert.



## Self-aligning pads

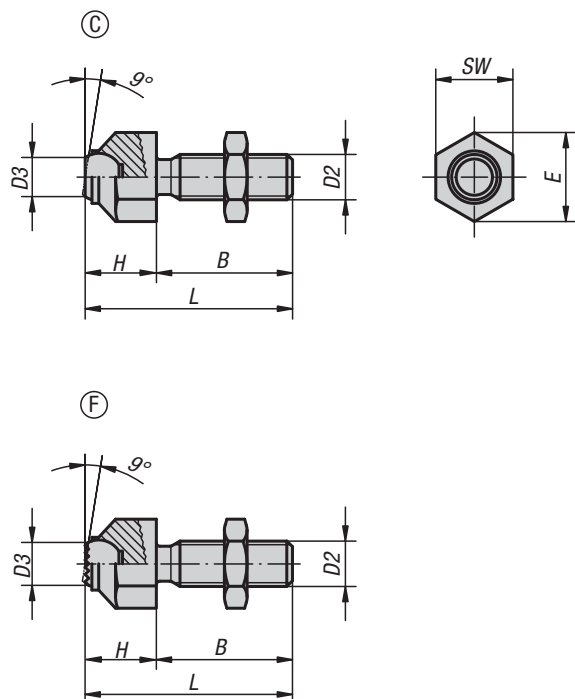


## KIPP Self-aligning pads

| Order No. | Form | B  | D1 | D2    | D3   | H    | Ball-Ø | SW                | Load rating<br>max. kN<br>(static load only) |
|-----------|------|----|----|-------|------|------|--------|-------------------|----------------------------------------------|
| K0282.108 | C    | 8  | 13 | M8    | 7,2  | 13   | 10     | 11                | 10                                           |
| K0282.110 | C    | 10 | 20 | M10   | 10,5 | 18   | 16     | 17                | 25                                           |
| K0282.112 | C    | 12 | 20 | M12   | 10,5 | 18   | 16     | 17                | 25                                           |
| K0282.116 | C    | 16 | 30 | M16   | 20   | 27   | 25     | 27                | 90                                           |
| K0282.120 | C    | 20 | 50 | M20   | 34,5 | 35   | 40     | 41                | 165                                          |
| Order No. | Form | B  | D1 | D2    | D3   | H    | Ball-Ø | SW                | Load rating<br>max. kN<br>(static load only) |
| K0282.208 | D    | 8  | 13 | M8    | 7,9  | 13   | 10     | 11                | 10                                           |
| K0282.210 | D    | 10 | 20 | M10   | 12,7 | 18   | 16     | 17                | 25                                           |
| K0282.212 | D    | 12 | 20 | M12   | 12,7 | 18   | 16     | 17                | 25                                           |
| Order No. | Form | B  | D1 | D2    | D3   | H    | Ball-Ø | SW                | Load rating<br>max. kN<br>(static load only) |
| K0282.308 | F    | 8  | 13 | M8    | 7,2  | 13   | 10     | 11                | 10                                           |
| K0282.310 | F    | 10 | 20 | M10   | 10,5 | 18   | 16     | 17                | 25                                           |
| K0282.312 | F    | 12 | 20 | M12   | 10,5 | 18   | 16     | 17                | 25                                           |
| K0282.316 | F    | 16 | 30 | M16   | 20   | 27   | 25     | 27                | 90                                           |
| K0282.320 | F    | 20 | 50 | M20   | 34,5 | 35   | 40     | 41                | 165                                          |
| Order No. | Form | B  | D1 | D2    | D3   | H    | Ball-Ø | SW                | Load rating<br>max. kN<br>(static load only) |
| K0282.908 | M    | 8  | 13 | M8    | 7,7  | 13,3 | 10     | 11                | 10                                           |
| K0282.910 | M    | 10 | 20 | M10   | 12   | 18   | 16     | 17                | 25                                           |
| K0282.912 | M    | 12 | 20 | M12   | 12   | 18   | 16     | 17                | 25                                           |
| Order No. | Form | D1 | D2 | D3    | H    | T    | Ball-Ø | Receiving<br>hole | Load rating<br>max. kN<br>(static load only) |
| K0282.403 | G    | 12 | M3 | 7,2   | 11   | 3,5  | 10     | Ø 12 H7X6 min.    | 10*                                          |
| K0282.404 | G    | 18 | M4 | 10,5  | 17   | 4,4  | 16     | Ø 18 H7X8 min.    | 25*                                          |
| K0282.405 | G    | 28 | M5 | 20    | 25   | 6,3  | 25     | Ø 28 H7X13 min.   | 90*                                          |
| Order No. | Form | D1 | D2 | D3    | H    | T    | Ball-Ø | Receiving<br>hole | Load rating<br>max. kN<br>(static load only) |
| K0282.503 | H    | 12 | M3 | 7,9   | 11   | 3    | 10     | Ø 12 H7X6 min.    | 10*                                          |
| K0282.504 | H    | 18 | M4 | 12,7  | 17   | 4    | 16     | Ø 18 H7X8 min.    | 25*                                          |
| K0282.505 | H    | 28 | M5 | 19,05 | 25   | 6    | 25     | Ø 28 H7X13 min.   | 90*                                          |
| Order No. | Form | D1 | D2 | D3    | H    | T    | Ball-Ø | Receiving<br>hole | Load rating<br>max. kN<br>(static load only) |
| K0282.603 | J    | 12 | M3 | 7,2   | 11   | 3,5  | 10     | Ø 12 H7X6 min.    | 10*                                          |
| K0282.604 | J    | 18 | M4 | 10,5  | 17   | 4,4  | 16     | Ø 18 H7X8 min.    | 25*                                          |
| K0282.605 | J    | 28 | M5 | 20    | 25   | 6,3  | 25     | Ø 28 H7X13 min.   | 90*                                          |
| Order No. | Form | D1 | D2 | D3    | H    | T    | Ball-Ø | Receiving<br>hole | Load rating<br>max. kN<br>(static load only) |
| K0282.803 | K    | 12 | M3 | 7,9   | 11   | 3    | 10     | Ø 12 H7X6 min.    | 10*                                          |
| K0282.804 | K    | 18 | M4 | 12,7  | 17   | 4    | 16     | Ø 18 H7X8 min.    | 25*                                          |
| K0282.805 | K    | 28 | M5 | 19,05 | 25   | 6    | 25     | Ø 28 H7X13 min.   | 90*                                          |

## Self-aligning pads

adjustable



**Material:**  
Steel or stainless steel.

**Version:**  
Steel version:  
Housing tempered and manganese phosphated.  
Nut black oxidised.

Stainless steel version:  
Housing tempered and electropolished.  
Nut bright.

**Sample order:**  
K0287.316

**Note:**  
Ball secured against rotation.

### KIPP Form C, flattened ball, flat face

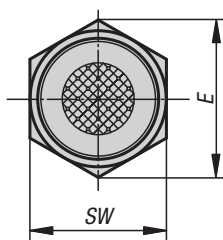
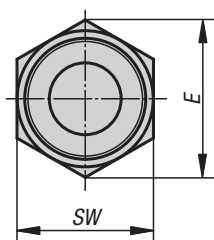
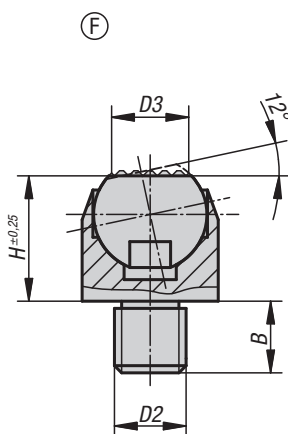
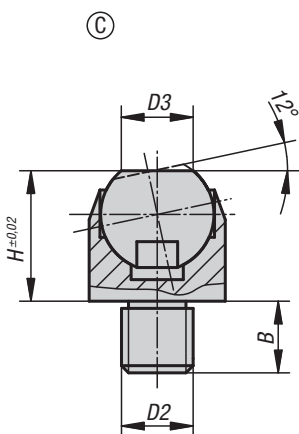
| Order No.  | Form | Main material   | B  | D2  | D3   | H    | L    | E    | SW | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|------------|------|-----------------|----|-----|------|------|------|------|----|--------|----------------------------------------------|
| K0287.108  | C    | steel           | 25 | M8  | 5,8  | 11,6 | 36,6 | 14,5 | 13 | 8,5    | 8                                            |
| K0287.110  | C    | steel           | 30 | M10 | 8,6  | 15,7 | 45,7 | 19   | 17 | 12     | 8                                            |
| K0287.112  | C    | steel           | 35 | M12 | 8,6  | 15,7 | 50,7 | 19   | 17 | 12     | 15                                           |
| K0287.116  | C    | steel           | 40 | M16 | 10,5 | 20,7 | 60,7 | 27   | 24 | 16     | 25                                           |
| K0287.120  | C    | steel           | 50 | M20 | 20   | 27,3 | 77,3 | 33   | 30 | 25     | 90                                           |
| K0287.1081 | C    | stainless steel | 25 | M8  | 5,8  | 11,6 | 36,6 | 14,5 | 13 | 8,5    | 8                                            |
| K0287.1101 | C    | stainless steel | 30 | M10 | 8,6  | 15,7 | 45,7 | 19   | 17 | 12     | 8                                            |
| K0287.1121 | C    | stainless steel | 35 | M12 | 8,6  | 15,7 | 50,7 | 19   | 17 | 12     | 15                                           |
| K0287.1161 | C    | stainless steel | 40 | M16 | 10,5 | 20,7 | 60,7 | 27   | 24 | 16     | 25                                           |
| K0287.1201 | C    | stainless steel | 50 | M20 | 20   | 27,3 | 77,3 | 33   | 30 | 25     | 90                                           |

### KIPP Form F, flattened ball, diamond grip

| Order No.  | Form | Main material   | B  | D2  | D3   | H    | L    | E    | SW | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|------------|------|-----------------|----|-----|------|------|------|------|----|--------|----------------------------------------------|
| K0287.308  | F    | steel           | 25 | M8  | 5,8  | 11,6 | 36,6 | 14,5 | 13 | 8,5    | 8                                            |
| K0287.310  | F    | steel           | 30 | M10 | 8,6  | 15,7 | 45,7 | 19   | 17 | 12     | 8                                            |
| K0287.312  | F    | steel           | 35 | M12 | 8,6  | 15,7 | 50,7 | 19   | 17 | 12     | 15                                           |
| K0287.316  | F    | steel           | 40 | M16 | 10,5 | 20,7 | 60,7 | 27   | 24 | 16     | 25                                           |
| K0287.320  | F    | steel           | 50 | M20 | 20   | 27,3 | 77,3 | 33   | 30 | 25     | 90                                           |
| K0287.3081 | F    | stainless steel | 25 | M8  | 5,8  | 11,6 | 36,6 | 14,5 | 13 | 8,5    | 8                                            |
| K0287.3101 | F    | stainless steel | 30 | M10 | 8,6  | 15,7 | 45,7 | 19   | 17 | 12     | 8                                            |
| K0287.3121 | F    | stainless steel | 35 | M12 | 8,6  | 15,7 | 50,7 | 19   | 17 | 12     | 15                                           |
| K0287.3161 | F    | stainless steel | 40 | M16 | 10,5 | 20,7 | 60,7 | 27   | 24 | 16     | 25                                           |
| K0287.3201 | F    | stainless steel | 50 | M20 | 20   | 27,3 | 77,3 | 33   | 30 | 25     | 90                                           |

## Self-aligning pads

swivel angle 12°



### Material:

Body carbon steel.

Ball, ball-bearing steel 1.3505.

### Version:

Body tempered.

Ball hardened (50 - 55 HRC).

### Sample order:

K0302.106

### Note:

Self-aligning pads serve as stops, supports and thrust pads in fixture construction.

Ball secured against rotation.

### Drawing reference:

Form C: male thread, smooth flattened ball

Form F: male thread, serrated flattened ball

## KIPP Self-aligning pads swivel angle 12°

| Order No.<br>Form C | Order No.<br>Form F | B  | D2  | D3  | H  | E    | SW | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|---------------------|---------------------|----|-----|-----|----|------|----|--------|----------------------------------------------|
| K0302.106           | K0302.306           | 7  | M6  | 6,7 | 13 | 14,5 | 13 | 10     | 10                                           |
| K0302.108           | K0302.308           | 8  | M8  | 6,7 | 13 | 14,5 | 13 | 10     | 10                                           |
| K0302.110           | K0302.310           | 10 | M10 | 10  | 18 | 21,9 | 19 | 16     | 25                                           |
| K0302.112           | K0302.312           | 12 | M12 | 10  | 18 | 21,9 | 19 | 16     | 25                                           |
| K0302.116           | K0302.316           | 16 | M16 | 20  | 27 | 33   | 30 | 24     | 90                                           |
| K0302.120           | K0302.320           | 20 | M20 | 20  | 27 | 33   | 30 | 24     | 90                                           |

## Self-aligning pads

swivel angle 14° and 20°



### Material:

Body steel.  
Ball rust and acid resistant steel.  
Form M with carbide insert.

### Version:

Body black oxidised.  
Ball bright.

### Sample order:

K0283.108

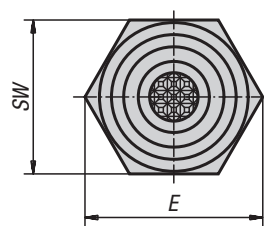
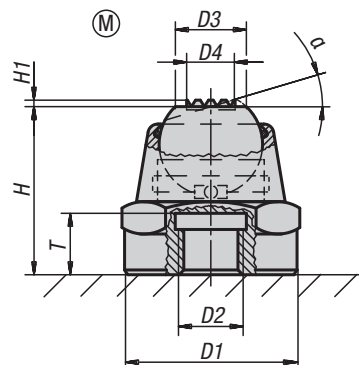
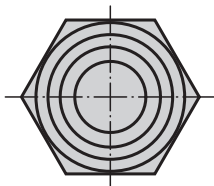
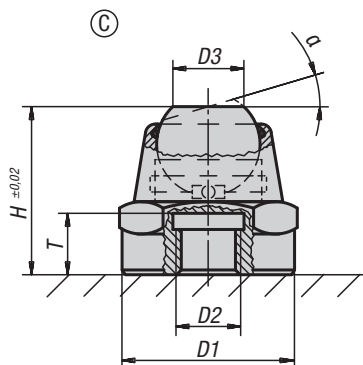
### Note:

Self-aligning pads are used to support and clamp unmachined and machined workpieces. They also serve as stops, supports and thrust pads in fixture and toolmaking.  
Grub screws or threaded studs can be screwed and glued into thread D3 making a self-aligning pad with external thread.

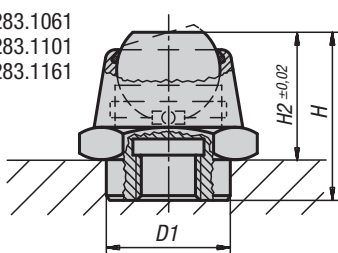
Ball secured against rotation.

### Advantages:

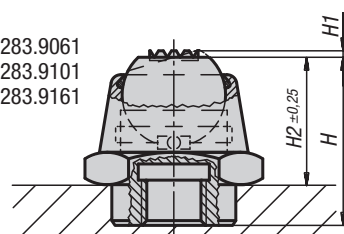
- Self-aligning pads can be swiveled.
- High load forces can be absorbed.
- The built-in o-ring keeps dirt and foreign particles out, which in turn guarantees reliable operation.



K0283.1061  
K0283.1101  
K0283.1161



K0283.9061  
K0283.9101  
K0283.9161



# Self-aligning pads

swivel angle 14° and 20°



## KIPP Form C, flattened ball, flat face

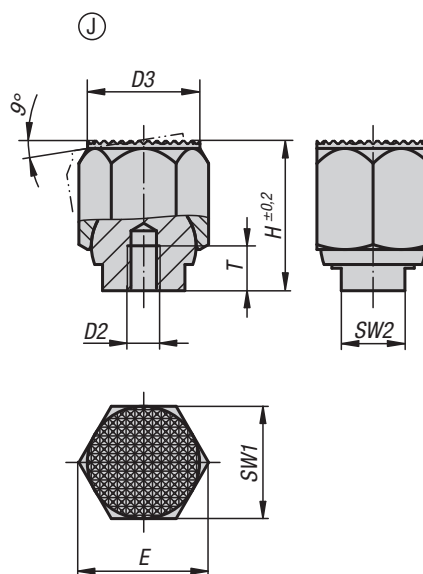
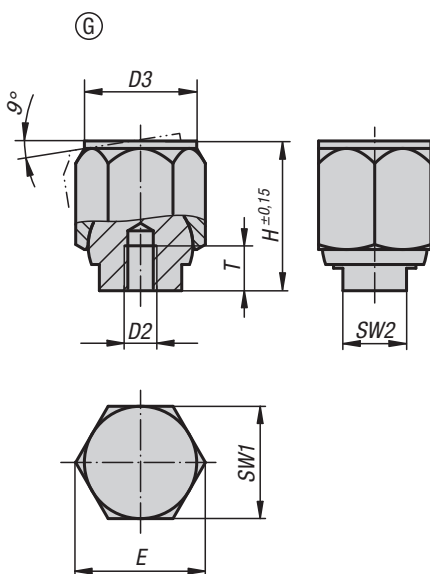
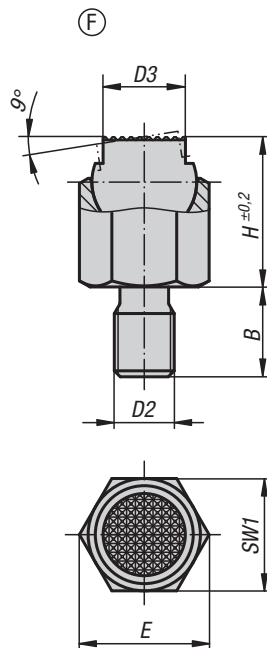
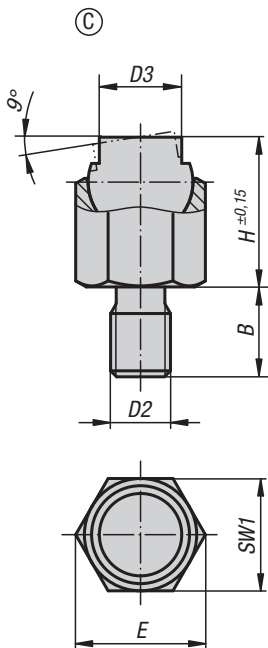
| Order No.  | Form | $\alpha$ | D1 | D2  | D3 | H    | H2   | T  | E    | SW | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|------------|------|----------|----|-----|----|------|------|----|------|----|--------|----------------------------------------------|
| K0283.1061 | C    | 14°      | 12 | M6  | 7  | 17,5 | 12,5 | 6  | 19,6 | 17 | 10     | 14                                           |
| K0283.106  | C    | 14°      | 16 | M6  | 7  | 17,5 | -    | 6  | 19,6 | 17 | 10     | 14                                           |
| K0283.108  | C    | 20°      | 22 | M8  | 11 | 26   | -    | 9  | 27,7 | 24 | 16     | 34                                           |
| K0283.1101 | C    | 20°      | 18 | M10 | 11 | 26   | 20   | 9  | 27,7 | 24 | 16     | 34                                           |
| K0283.110  | C    | 20°      | 22 | M10 | 11 | 26   | -    | 9  | 27,7 | 24 | 16     | 34                                           |
| K0283.112  | C    | 20°      | 22 | M12 | 11 | 26   | -    | 9  | 27,7 | 24 | 16     | 34                                           |
| K0283.1161 | C    | 20°      | 26 | M16 | 18 | 40   | 30   | 15 | 41,6 | 36 | 25     | 90                                           |
| K0283.116  | C    | 20°      | 34 | M16 | 18 | 40   | -    | 15 | 41,6 | 36 | 25     | 90                                           |
| K0283.120  | C    | 20°      | 34 | M20 | 18 | 40   | -    | 15 | 41,6 | 36 | 25     | 90                                           |

## KIPP Form M, flattened ball, carbide steel diamond grip

| Order No.  | Form | $\alpha$ | D1 | D2  | D3 | D4  | H    | H1  | H2   | E    | T  | Ball-Ø | SW | Load rating<br>max. kN<br>(static load only) |
|------------|------|----------|----|-----|----|-----|------|-----|------|------|----|--------|----|----------------------------------------------|
| K0283.9061 | M    | 14°      | 12 | M6  | 7  | 5   | 17,5 | 0,6 | 12,5 | 19,6 | 6  | 10     | 17 | 14                                           |
| K0283.906  | M    | 14°      | 16 | M6  | 7  | 5   | 17,5 | 0,6 | -    | 19,6 | 6  | 10     | 17 | 14                                           |
| K0283.908  | M    | 20°      | 22 | M8  | 11 | 7,5 | 26   | 0,8 | -    | 27,7 | 9  | 16     | 24 | 34                                           |
| K0283.9101 | M    | 20°      | 18 | M10 | 11 | 7,5 | 26   | 0,8 | 20   | 27,7 | 9  | 16     | 24 | 34                                           |
| K0283.910  | M    | 20°      | 22 | M10 | 11 | 7,5 | 26   | 0,8 | -    | 27,7 | 9  | 16     | 24 | 34                                           |
| K0283.912  | M    | 20°      | 22 | M12 | 11 | 7,5 | 26   | 0,8 | 0,8  | 27,7 | 9  | 16     | 24 | 34                                           |
| K0283.9161 | M    | 20°      | 26 | M16 | 18 | 13  | 40   | 0,9 | 30   | 41,6 | 15 | 25     | 36 | 90                                           |
| K0283.916  | M    | 20°      | 34 | M16 | 18 | 13  | 40   | 0,9 | 0,9  | 41,6 | 15 | 25     | 36 | 90                                           |
| K0283.920  | M    | 20°      | 34 | M20 | 18 | 13  | 40   | 0,9 | -    | 41,6 | 15 | 25     | 36 | 90                                           |

## Self-aligning pads

self-righting



### Material:

Form C and F:

Ball steel, ball seat high-carbon steel.

Form G and J:

Ball high-carbon steel, ball seat steel.

### Version:

Form C and F:

Ball hardened and black oxidised, ball seat phosphated.

Form G and J:

Ball phosphated, ball seat hardened and black oxidised.

### Sample order:

K1164.106

### Note:

The self-aligning pads serve as stops, rests and thrust pads in fixture construction.

The seating face returns to the start position when the load is removed.

Ball secured against rotation.

### Drawing reference:

Form C: male thread, flattened ball, smooth

Form F: male thread, flattened ball, diamond grip

Form G: press fit, flattened ball, smooth

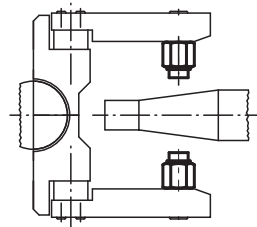
Form J: press fit, flattened ball, diamond grip

## Self-aligning pads

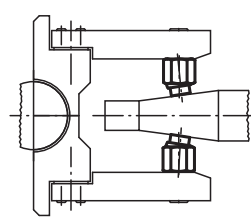
self-righting



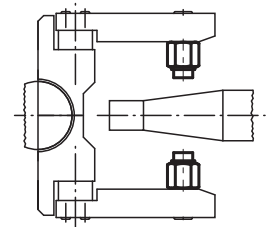
1. bring gripper into position

zero-point position of  
self-aligning pads

2. grip workpiece

self-aligning pads adapt  
to workpiece contour

3. open gripper

self-aligning pads swivel  
back automatically

## KIPP Self-aligning pads, self-righting

| Order No. | Form | B  | D2  | D3  | H  | E    | SW1 | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|-----------|------|----|-----|-----|----|------|-----|--------|----------------------------------------------|
| K1164.106 | C    | 9  | M6  | 7   | 13 | 11,5 | 10  | 9      | 8                                            |
| K1164.108 | C    | 12 | M8  | 9,5 | 18 | 15   | 13  | 12     | 16                                           |
| K1164.110 | C    | 15 | M10 | 14  | 25 | 21,9 | 19  | 17     | 32                                           |
| K1164.112 | C    | 18 | M12 | 20  | 36 | 31,2 | 27  | 25     | 64                                           |
| K1164.116 | C    | 24 | M16 | 22  | 40 | 34,6 | 30  | 28     | 90                                           |

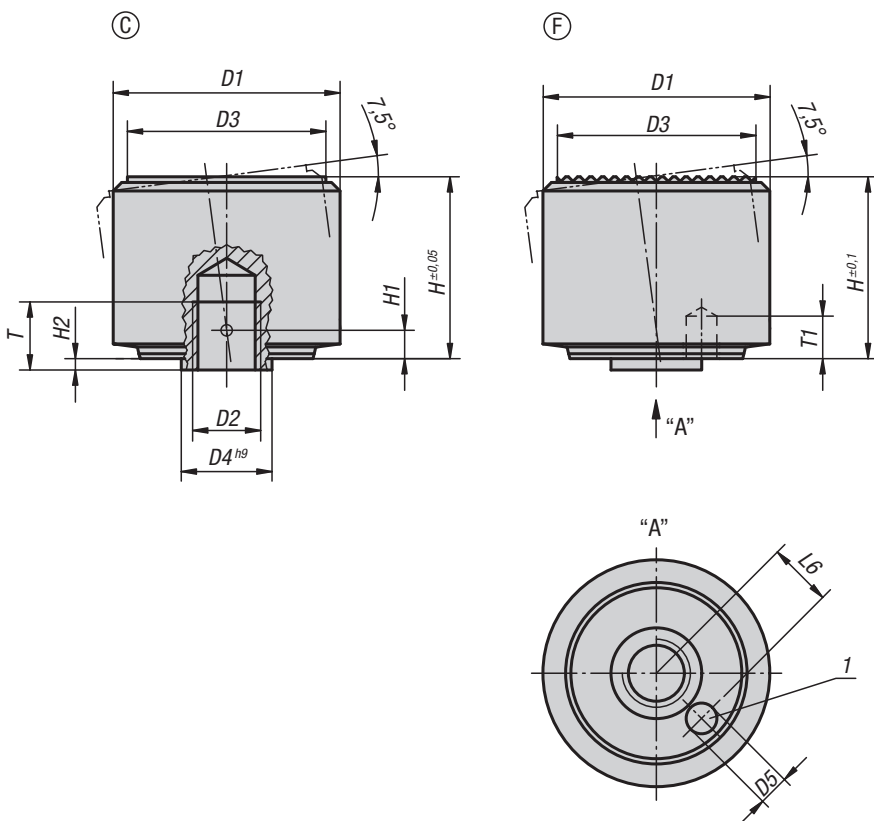
| Order No. | Form | B  | D2  | D3  | H  | E    | SW1 | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|-----------|------|----|-----|-----|----|------|-----|--------|----------------------------------------------|
| K1164.306 | F    | 9  | M6  | 7   | 13 | 11,5 | 10  | 9      | 8                                            |
| K1164.308 | F    | 12 | M8  | 9,5 | 18 | 15   | 13  | 12     | 16                                           |
| K1164.310 | F    | 15 | M10 | 14  | 25 | 21,9 | 19  | 17     | 32                                           |
| K1164.312 | F    | 18 | M12 | 20  | 36 | 31,2 | 27  | 25     | 64                                           |
| K1164.316 | F    | 24 | M16 | 22  | 40 | 34,6 | 30  | 28     | 90                                           |

| Order No. | Form | D2 | D3 | H  | E    | T  | SW1 | SW2 | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|-----------|------|----|----|----|------|----|-----|-----|--------|----------------------------------------------|
| K1164.403 | G    | M3 | 9  | 13 | 11,5 | 5  | 10  | 6   | 9      | 8                                            |
| K1164.404 | G    | M4 | 12 | 18 | 15   | 6  | 13  | 8   | 12     | 16                                           |
| K1164.405 | G    | M5 | 18 | 25 | 21,9 | 8  | 19  | 10  | 17     | 32                                           |
| K1164.406 | G    | M6 | 26 | 36 | 31,2 | 10 | 27  | 16  | 25     | 64                                           |
| K1164.408 | G    | M8 | 30 | 40 | 34,6 | 12 | 30  | 17  | 28     | 90                                           |

| Order No. | Form | D2 | D3 | H  | E    | T  | SW1 | SW2 | Ball-Ø | Load rating<br>max. kN<br>(static load only) |
|-----------|------|----|----|----|------|----|-----|-----|--------|----------------------------------------------|
| K1164.603 | J    | M3 | 9  | 13 | 11,5 | 5  | 10  | 6   | 9      | 8                                            |
| K1164.604 | J    | M4 | 12 | 18 | 15   | 6  | 13  | 8   | 12     | 16                                           |
| K1164.605 | J    | M5 | 18 | 25 | 21,9 | 8  | 19  | 10  | 17     | 32                                           |
| K1164.606 | J    | M6 | 26 | 36 | 31,2 | 10 | 27  | 16  | 25     | 64                                           |
| K1164.608 | J    | M8 | 30 | 40 | 34,6 | 12 | 30  | 17  | 28     | 90                                           |

## Self-aligning pads

self-righting



**Material:**  
Carbon steel.

**Version:**  
Hardened, black oxidised.

**Sample order:**  
K0286.105

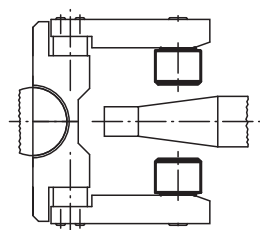
**Note:**  
Self-aligning pads are used to support and clamp unmachined and machined workpieces. They also serve as stops, supports and thrust pads in fixtures and toolmaking.

**Advantages:**  
– The built-in O-ring prevents dirt and foreign particles from entering.  
– The clamping surface swivels back automatically after clamping.  
– High load rating and small size.

**Drawing reference:**  
Form C: smooth face  
Form F: serrated face

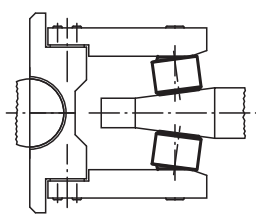
1) Hole for pin as a rotation lock

1. bring gripper into position



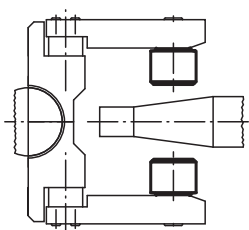
zero-point position of self-aligning pads

2. grip workpiece



self-aligning pads adapt to workpiece contour

3. open gripper



self-aligning pads swivel back automatically

### KIPP Self-aligning pads self-righting

| Order No. | Form | D1 | D2  | D3 | D4 | D5  | H    | H1  | H2  | T  | T1 | L6   | Load rating<br>max. kN<br>(static load only) |
|-----------|------|----|-----|----|----|-----|------|-----|-----|----|----|------|----------------------------------------------|
| K0286.105 | C    | 18 | M5  | 15 | 7  | 1,8 | 14   | 2,1 | 0,8 | 5  | 3  | 4,6  | 30                                           |
| K0286.106 | C    | 22 | M6  | 18 | 8  | 2,8 | 16,5 | 2,5 | 1   | 6  | 4  | 5,6  | 50                                           |
| K0286.108 | C    | 28 | M8  | 23 | 11 | 3,3 | 21,5 | 3,4 | 1,3 | 8  | 5  | 7,5  | 90                                           |
| K0286.110 | C    | 34 | M10 | 29 | 13 | 4,4 | 27   | 4,2 | 1,6 | 10 | 6  | 9,2  | 140                                          |
| K0286.112 | C    | 40 | M12 | 35 | 16 | 5,4 | 32   | 5   | 2   | 12 | 8  | 11,3 | 220                                          |
| K0286.305 | F    | 18 | M5  | 15 | 7  | 1,8 | 14   | 2,1 | 0,8 | 5  | 3  | 4,6  | 30                                           |
| K0286.306 | F    | 22 | M6  | 18 | 8  | 2,8 | 16,5 | 2,5 | 1   | 6  | 4  | 5,6  | 50                                           |
| K0286.308 | F    | 28 | M8  | 23 | 11 | 3,3 | 21,5 | 3,4 | 1,3 | 8  | 5  | 7,5  | 90                                           |
| K0286.310 | F    | 34 | M10 | 29 | 13 | 4,4 | 27   | 4,2 | 1,6 | 10 | 6  | 9,2  | 140                                          |
| K0286.312 | F    | 40 | M12 | 35 | 16 | 5,4 | 32   | 5   | 2   | 12 | 8  | 11,3 | 220                                          |



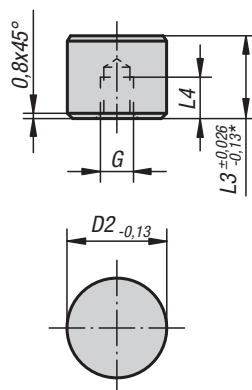
A large rectangular area filled with a light gray grid pattern, intended for taking notes.



# Grippers and inserts round

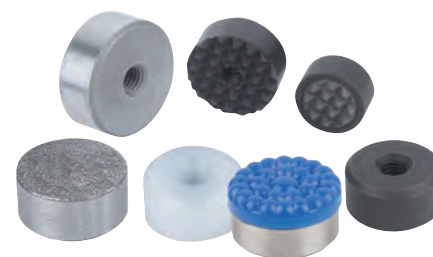
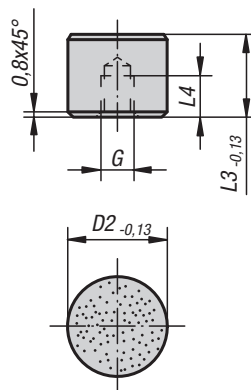


Form C, E, K



\* Applies to Form K

Form O  
stainless steel insert  
diamond impregnated



## Material:

Form C, F, M tool steel  
Form E, O, P stainless steel  
Form K POM

## Version:

Form C hardened and black oxidised.  
Form E hardened, bright.  
Form K white.  
Form O with diamond impregnated surface comparable to 100 grade abrasive grit.  
Form P with polyurethane surface, hardness Shore 60.  
Form F, hardened and black oxidised.  
Form M with carbide serrations, black oxidised.

## Sample order:

K0385.2510

## Note:

Grippers and inserts are ideal for use in clamping arms, gripping systems, clamping fixtures, clamping jaws and self-aligning pads. The use of grippers allows the transfer of very high torque values and above average grip, even with hard materials and surface irregularities.

Form O: The abrasive diamond surface is bonded firmly to the base. It is ideally suited to supporting smooth or slippery applications with a minimum of clamping pressure. This allows the diamond particles to get a firm grip on a very small area with minimum damage to the surface.

The diamond surface offers excellent wear resistance.

Form P: The polyurethane surface is vulcanised firmly to the ball. It is abrasion-resistant and does not discolour. It offers optimum protection against damage to delicate surfaces. The pearl-like surface gives a firm grip and allows air to escape so as to prevent any suction effect between the contact surface and the self-aligning pads.

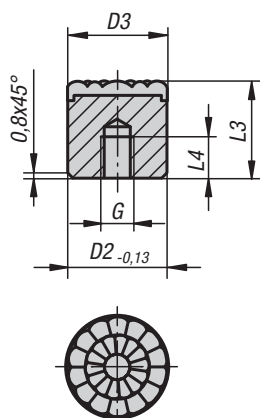
Grippers and inserts can be fitted in the following self-aligning pads:

Order No. K0285.117X022 up to K0285.936X036

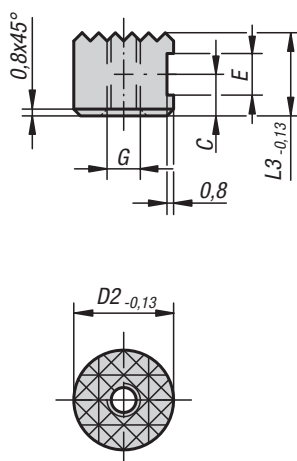
Order No. K0289.110X015 up to K0289.924X100

Order No. K0291.120X030 up to K0291.924X080

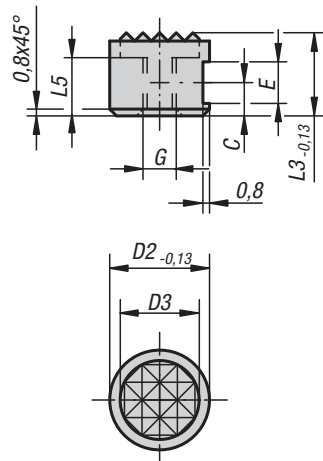
Form P  
stainless steel insert,  
PUR surface

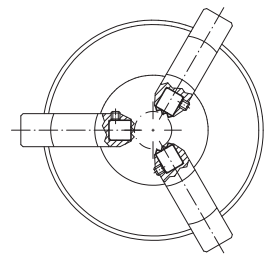


Form F  
diamond grip insert



Form M  
carbide steel  
diamond grip insert





## KIPP Round inserts Form C, E, K, O

| Order No.<br>Form C | Order No.<br>Form E | Order No.<br>Form K | Order No.<br>Form O | D2 | L3 | L4  | G  |
|---------------------|---------------------|---------------------|---------------------|----|----|-----|----|
| K0385.10108         | K0385.10102         | K0385.10109         | K0385.10105         | 10 | 10 | 5   | M5 |
| K0385.10128         | K0385.10122         | K0385.10129         | K0385.10125         | 10 | 12 | 6,4 | M5 |
| K0385.12108         | K0385.12102         | K0385.12109         | K0385.12105         | 12 | 10 | 5   | M5 |
| K0385.12128         | K0385.12122         | K0385.12129         | K0385.12125         | 12 | 12 | 6,4 | M5 |
| K0385.16108         | K0385.16102         | K0385.16109         | K0385.16105         | 16 | 10 | 5   | M6 |
| K0385.16128         | K0385.16122         | K0385.16129         | K0385.16125         | 16 | 12 | 6,4 | M6 |
| K0385.20108         | K0385.20102         | K0385.20109         | K0385.20105         | 20 | 10 | 5   | M6 |
| K0385.20128         | K0385.20122         | K0385.20129         | K0385.20125         | 20 | 12 | 6,4 | M6 |
| K0385.25108         | K0385.25102         | K0385.25109         | K0385.25105         | 25 | 10 | 5   | M6 |
| K0385.25128         | K0385.25122         | K0385.25129         | K0385.25125         | 25 | 12 | 6,4 | M6 |

## KIPP Round inserts Form P

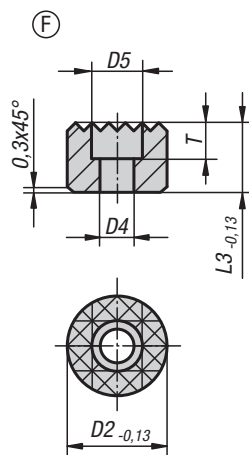
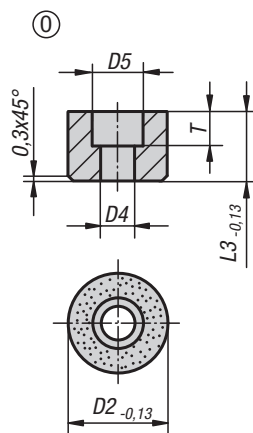
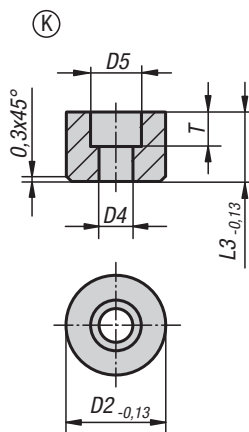
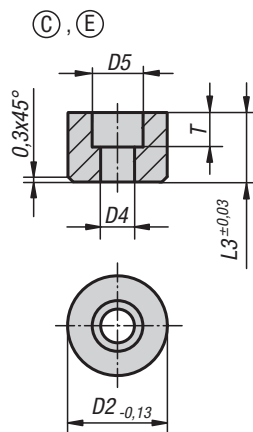
| Order No.   | Form | D2 | D3 | L3 | L4 | G  |
|-------------|------|----|----|----|----|----|
| K0385.08126 | P    | 8  | 8  | 12 | 6  | M4 |
| K0385.10126 | P    | 10 | 10 | 12 | 6  | M5 |
| K0385.12126 | P    | 12 | 13 | 12 | 6  | M5 |
| K0385.16126 | P    | 16 | 16 | 12 | 6  | M6 |
| K0385.20126 | P    | 20 | 21 | 12 | 6  | M6 |
| K0385.25126 | P    | 25 | 27 | 12 | 6  | M6 |

## KIPP Grippers Form F, M

| Order No.<br>Form F | Order No.<br>Form M | D2 | D3    | L3 | L5 | C   | E    | G  |
|---------------------|---------------------|----|-------|----|----|-----|------|----|
| K0385.1010          | K0385.10107         | 10 | -7,9  | 10 | -6 | 4,5 | 4,75 | M5 |
| K0385.1210          | K0385.12107         | 12 | -9,5  | 10 | -6 | 4,5 | 4,75 | M5 |
| K0385.1212          | K0385.12127         | 12 | -9,5  | 12 | -7 | 6   | 4,75 | M5 |
| K0385.1610          | K0385.16107         | 16 | -12,7 | 10 | -6 | 4,5 | 4,75 | M6 |
| K0385.2010          | K0385.20107         | 20 | -15,9 | 10 | -6 | 4,5 | 4,75 | M6 |
| K0385.2510          | K0385.25107         | 25 | -19   | 10 | -6 | 4,5 | 4,75 | M6 |

## Grippers and inserts

round, with counterbore



### Material:

Form C, F tool steel  
Form E, O stainless steel  
Form K POM

### Version:

Form C, F hardened and black oxidised.  
Form E, hardened, bright.  
Form K white.  
Form O with diamond impregnated surface comparable to 100 grade abrasive grit.

### Sample order:

K0385.110108

### Note:

Grippers and inserts are ideal for use in clamping arms, gripping systems, clamping fixtures, clamping jaws and self-aligning pads. The use of grippers allows the transfer of very high torque values and above average grip, even with hard materials and surface irregularities.

Form O: The abrasive diamond surface is bonded firmly to the base. It is ideally suited to supporting smooth or slippery applications with a minimum of clamping pressure. This allows the diamond particles to get a firm grip on a very small area with minimum damage to the surface.

The diamond surface offers excellent wear resistance.

# Grippers and inserts

round, with counterbore



## KIPP Round inserts

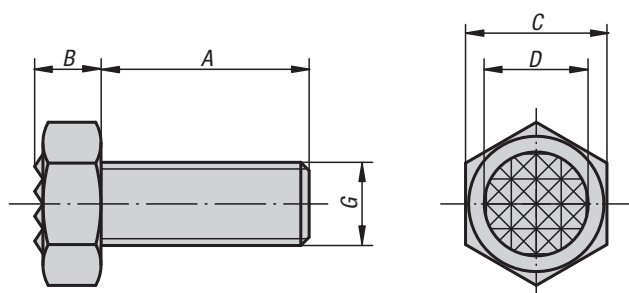
| Order No.<br>Form C | Order No.<br>Form E | Order No.<br>Form K | Order No.<br>Form O | D2 | D4  | D5 | L3 | T   |
|---------------------|---------------------|---------------------|---------------------|----|-----|----|----|-----|
| K0385.110108        | K0385.110102        | K0385.110109        | K0385.110105        | 10 | 3,4 | 6  | 10 | 5   |
| K0385.110128        | K0385.110122        | K0385.110129        | K0385.110125        | 10 | 3,4 | 6  | 12 | 5   |
| K0385.112108        | K0385.112102        | K0385.112109        | K0385.112105        | 12 | 4,5 | 9  | 10 | 5,6 |
| K0385.112128        | K0385.112122        | K0385.112129        | K0385.112125        | 12 | 4,5 | 9  | 12 | 5,6 |
| K0385.116108        | K0385.116102        | K0385.116109        | K0385.116105        | 16 | 5,5 | 11 | 10 | 6,6 |
| K0385.116128        | K0385.116122        | K0385.116129        | K0385.116125        | 16 | 5,5 | 11 | 12 | 6,6 |
| K0385.120108        | K0385.120102        | K0385.120109        | K0385.120105        | 20 | 6,6 | 11 | 10 | 7,6 |
| K0385.120128        | K0385.120122        | K0385.120129        | K0385.120125        | 20 | 6,6 | 11 | 12 | 7,6 |
| K0385.125108        | K0385.125102        | K0385.125109        | K0385.125105        | 25 | 6,6 | 11 | 10 | 7,6 |
| K0385.125128        | K0385.125122        | K0385.125129        | K0385.125125        | 25 | 6,6 | 11 | 12 | 7,6 |

## KIPP Round grippers

| Order No.<br>Form F | D2 | D4  | D5 | L3 | T   |
|---------------------|----|-----|----|----|-----|
| K0385.11210         | 12 | 4,5 | 8  | 10 | 5,6 |
| K0385.11212         | 12 | 4,5 | 8  | 12 | 5,6 |
| K0385.11610         | 16 | 4,5 | 8  | 10 | 5,6 |
| K0385.11612         | 16 | 4,5 | 8  | 12 | 5,6 |
| K0385.12010         | 20 | 5,5 | 10 | 10 | 6,6 |
| K0385.12012         | 20 | 5,5 | 10 | 12 | 6,6 |
| K0385.12510         | 25 | 6,6 | 11 | 10 | 7,6 |
| K0385.12512         | 25 | 6,6 | 11 | 12 | 7,6 |

# Gripper screws

hexagonal


**Material:**

Hex head screw, grade 10.9.  
Serrations carbide, hardness 72-74 HRC.

**Version:**

Black oxidised.

**Sample order:**

K0386.1710

**Note:**

The serrated carbide tips are soldered in.

## KIPP Grippers hexagonal

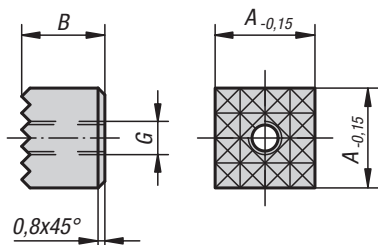
| Order No.   | A  | B    | C  | D    | G   | Serration  |
|-------------|----|------|----|------|-----|------------|
| K0386.1006  | 25 | 5    | 10 | 7,9  | M6  | extra fine |
| K0386.1308  | 25 | 6,4  | 13 | 9,5  | M8  | fine       |
| K0386.1710  | 25 | 8,3  | 17 | 12,7 | M10 | fine       |
| K0386.17102 | 40 | 8,3  | 17 | 12,7 | M10 | fine       |
| K0386.1912  | 25 | 8,7  | 19 | 15,9 | M12 | fine       |
| K0386.19122 | 40 | 8,7  | 19 | 15,9 | M12 | fine       |
| K0386.2416  | 35 | 11   | 24 | 19   | M16 | fine       |
| K0386.24162 | 50 | 11   | 24 | 19   | M16 | fine       |
| K0386.3020  | 40 | 13,7 | 30 | 25,4 | M20 | extra fine |
| K0386.30202 | 60 | 13,7 | 30 | 25,4 | M20 | extra fine |

# Gripper pads

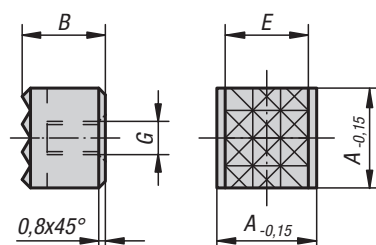
square



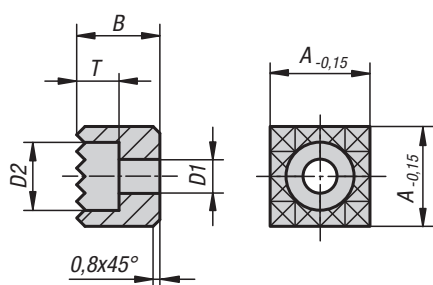
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**Material:**

Hardened tool steel or carbide.

**Version:**

Black oxidised.

**Sample order:**

K0387.2506

**Note:**

Grippers and inserts are ideal for use in clamping arms, gripping systems, clamping fixtures, clamping jaws and self-aligning pads.

Grippers transfer very high torque values, even with hard materials and surface irregularities. Grippers guarantee above average holding forces at high cutting forces.

The serrated carbide tips are soldered in.

**Drawing reference:**

Form A: tool steel

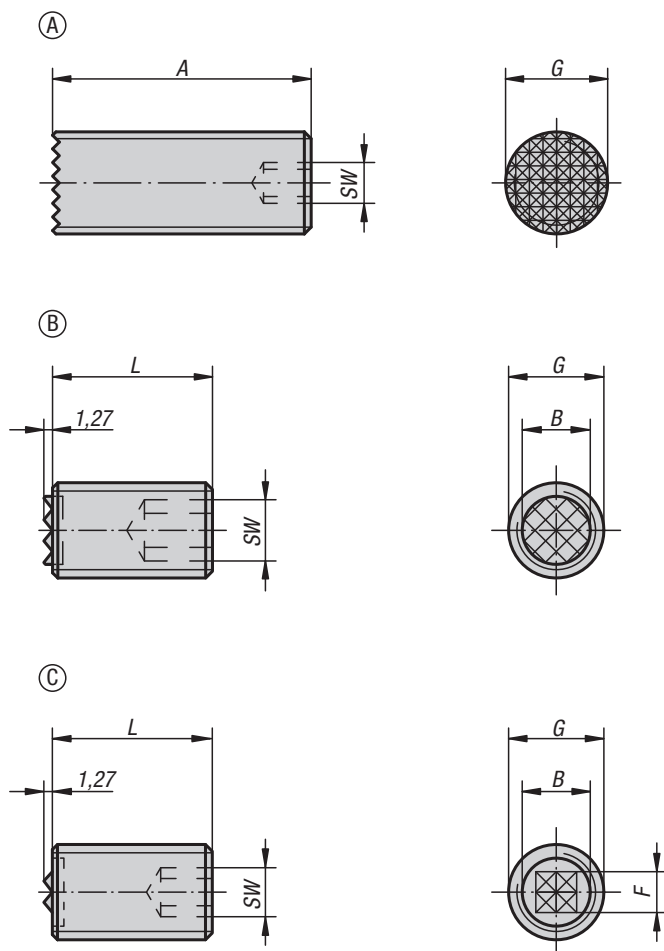
Form B: tool steel, carbide diamond grip

Form C: tool steel

## KIPP Gripper pads, square

| Order No.     | Form | A  | B  | D1  | D2 | E    | G  | T   | Serration  |
|---------------|------|----|----|-----|----|------|----|-----|------------|
| K0387.101205  | A    | 10 | 12 | -   | -  | -    | M5 | -   | extra fine |
| K0387.121205  | A    | 12 | 12 | -   | -  | -    | M5 | -   | fine       |
| K0387.2005    | A    | 20 | 10 | -   | -  | -    | M5 | -   | fine       |
| K0387.2506    | A    | 25 | 10 | -   | -  | -    | M6 | -   | fine       |
| K0387.1005    | A    | 10 | 10 | -   | -  | -    | M5 | -   | extra fine |
| K0387.1606    | A    | 16 | 10 | -   | -  | -    | M6 | -   | fine       |
| K0387.161206  | A    | 16 | 12 | -   | -  | -    | M6 | -   | fine       |
| K0387.251206  | A    | 25 | 12 | -   | -  | -    | M6 | -   | fine       |
| K0387.201205  | A    | 20 | 12 | -   | -  | -    | M5 | -   | fine       |
| K0387.1205    | A    | 12 | 10 | -   | -  | -    | M5 | -   | fine       |
| K0387.12057   | B    | 12 | 10 | -   | -  | 10,3 | M5 | -   | fine       |
| K0387.2012058 | C    | 20 | 12 | 5,5 | 10 | -    | -  | 6,6 | fine       |
| K0387.1210048 | C    | 12 | 10 | 4,5 | 8  | -    | -  | 5,6 | fine       |
| K0387.1610048 | C    | 16 | 10 | 4,5 | 8  | -    | -  | 5,6 | fine       |
| K0387.2010058 | C    | 20 | 10 | 5,5 | 10 | -    | -  | 6,6 | fine       |
| K0387.1212048 | C    | 12 | 12 | 4,5 | 8  | -    | -  | 5,6 | fine       |
| K0387.2510068 | C    | 25 | 10 | 6,6 | 11 | -    | -  | 7,6 | fine       |
| K0387.2512068 | C    | 25 | 12 | 6,6 | 11 | -    | -  | 7,6 | fine       |
| K0387.1612048 | C    | 16 | 12 | 4,5 | 8  | -    | -  | 5,6 | fine       |

## Gripper studs



**Material:**  
Hardened tool steel or carbide.

**Version:**  
Black oxidised.

**Sample order:**  
K0388.5012

**Note:**  
The full thread on the grippers allows exact adjustment to the clamping application.  
The carbide tips are soldered in.

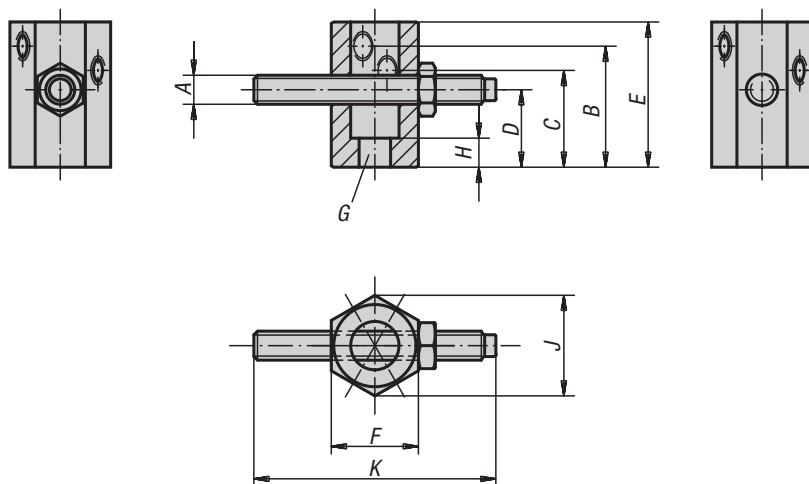
**Drawing reference:**  
Form A: tool steel  
Form B: tool steel, carbide diamond grip  
Form C: 4-point carbide insert



### KIPP Gripper studs

| Order No.   | Form | A  | L  | B    | G   | F   | SW |
|-------------|------|----|----|------|-----|-----|----|
| K0388.4010  | A    | 40 | -  | -    | M10 | -   | 3  |
| K0388.4012  | A    | 40 | -  | -    | M12 | -   | 5  |
| K0388.4016  | A    | 40 | -  | -    | M16 | -   | 6  |
| K0388.4020  | A    | 40 | -  | -    | M20 | -   | 8  |
| K0388.2510  | B    | -  | 25 | 6,4  | M10 | -   | 5  |
| K0388.5010  | B    | -  | 50 | 6,4  | M10 | -   | 5  |
| K0388.2512  | B    | -  | 25 | 7,9  | M12 | -   | 6  |
| K0388.5012  | B    | -  | 50 | 7,9  | M12 | -   | 6  |
| K0388.2516  | B    | -  | 25 | 11,2 | M16 | -   | 8  |
| K0388.5016  | B    | -  | 50 | 11,2 | M16 | -   | 8  |
| K0388.2520  | B    | -  | 25 | 12,7 | M20 | -   | 10 |
| K0388.5020  | B    | -  | 50 | 12,7 | M20 | -   | 10 |
| K0388.25124 | C    | -  | 25 | 7,9  | M12 | 6,5 | 6  |
| K0388.50124 | C    | -  | 50 | 7,9  | M12 | 6,5 | 6  |
| K0388.25164 | C    | -  | 25 | 11,2 | M16 | 8   | 8  |
| K0388.50164 | C    | -  | 50 | 11,2 | M16 | 8   | 8  |
| K0388.25204 | C    | -  | 25 | 12,7 | M20 | 8   | 10 |
| K0388.50204 | C    | -  | 50 | 12,7 | M20 | 8   | 10 |

## Adjustable stops



### Material:

Body and set screw carbon steel.

### Version:

Body black oxidised.

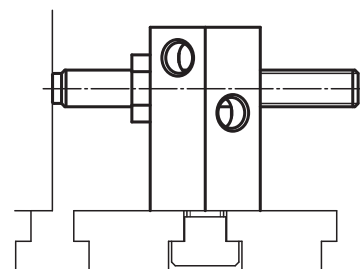
Set screw tempered and black oxidised.

### Sample order:

K0813.16063

### Note:

The adjustable stops have three tapped holes to accept the set screws.

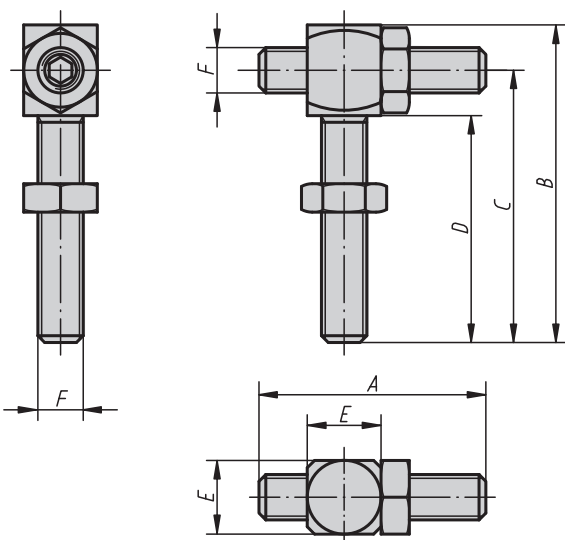


### KIPP Adjustable stops

| Order No.   | A   | B  | C  | D  | E  | F  | G<br>hole for<br>DIN 912 cap screw | H  | J    | K   |
|-------------|-----|----|----|----|----|----|------------------------------------|----|------|-----|
| K0813.08032 | M8  | 32 | 25 | 20 | 40 | 21 | M8                                 | 7  | 24,3 | 50  |
| K0813.12050 | M12 | 50 | 40 | 32 | 60 | 36 | M12                                | 12 | 41,6 | 100 |
| K0813.16063 | M16 | 63 | 50 | 40 | 80 | 46 | M16                                | 16 | 53,1 | 100 |

## Screw stop

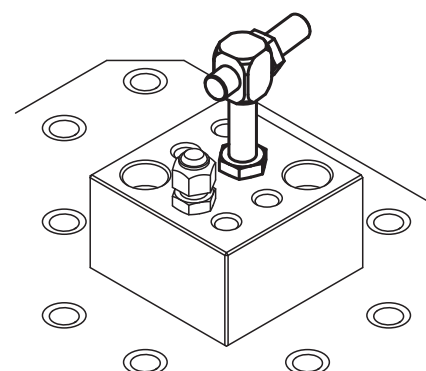
adjustable



**Material:**  
Carbon steel, tempered.

**Version:**  
Black oxidised.

**Sample order:**  
K0820.10



### KIPP Screw stop adjustable

| Order No. | A  | B   | C  | D  | E  | F   |
|-----------|----|-----|----|----|----|-----|
| K0820.06  | 30 | 44  | 37 | 30 | 10 | M6  |
| K0820.08  | 40 | 56  | 48 | 40 | 13 | M8  |
| K0820.10  | 50 | 70  | 60 | 50 | 17 | M10 |
| K0820.12  | 60 | 84  | 72 | 60 | 19 | M12 |
| K0820.16  | 80 | 112 | 96 | 80 | 24 | M16 |

## 5D workpiece stops

**Material:**

Clamping joint high-tensile aluminium.  
Hinge pin, support plate and stop bar, steel.

**Version:**

Clamping joint anodised blue and black.  
Hinge pins, support plate and stop bar black oxidised.

**Sample order:**

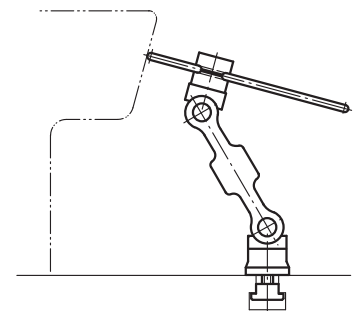
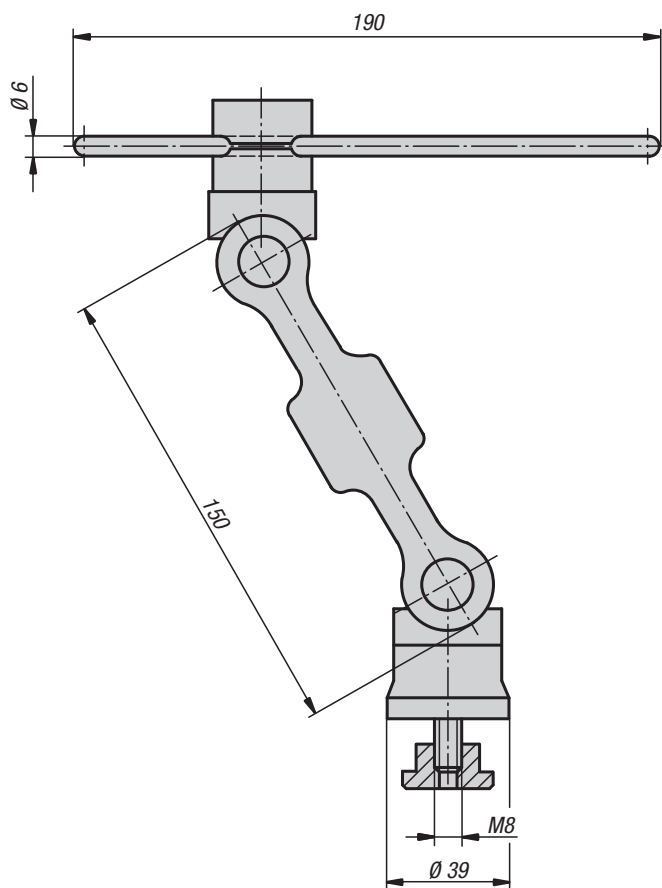
K1234.15012

**Note:**

The 5D-swivelling stop serves, among other things, as a versatile instrument for positioning on machining tools or for assembly work. It is infinitely adjustable, quickly and flexibly in 5 axes.  
Supplied complete with M8x12 T-slot nut and hex key.

**On request:**

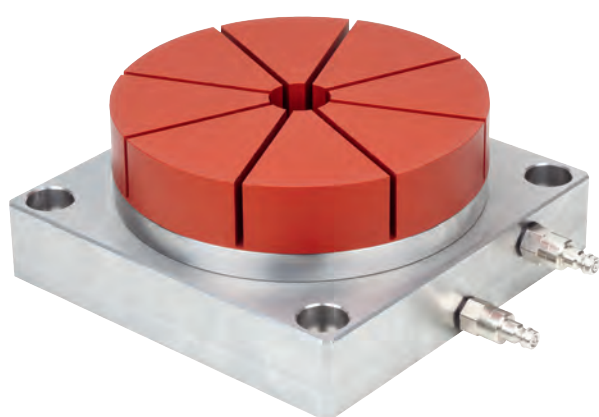
Connecting element for combining several 5D-swivelling stops.

**KIPP 5D workpiece stops**

| Order No.   | Size |
|-------------|------|
| K1234.15012 | 150  |



## Form holding systems



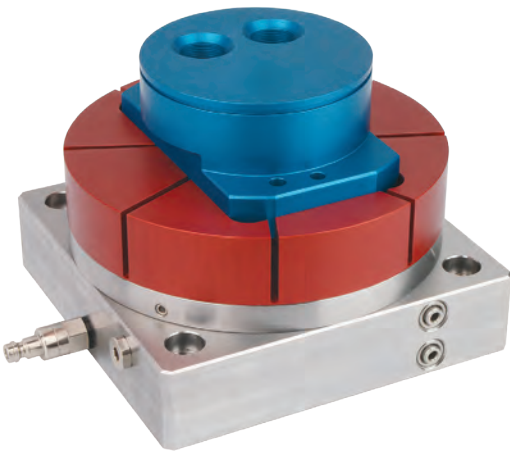


## The clamping system for prototypes, samples and small to medium production series.

The machinable collet system consists of a base element with a flange plate and the machinable collet. To clamp a wide variety of workpieces only the collet needs to be exchanged, the base element with flange plate remain the same. Standard aluminium collet blanks are used for clamping workpieces. The contour of the workpiece to be clamped is machined into this collet blank.

Both external and internal contours can be clamped with the machinable collet system. Different collets for internal and external clamping are available for this purpose.

The integrated spring package generates a clamping force of 5.8 kN. The clamping force can be raised to 43.5 kN by pneumatic post-clamping.



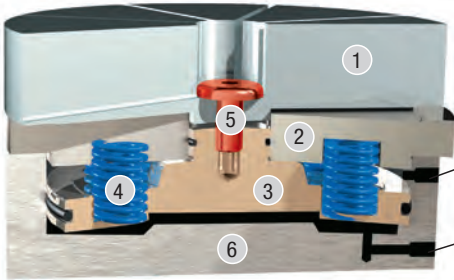
## Machinable collets for workpieces that couldn't otherwise be clamped

- whether geometrical or free-form: you have full control of the most difficult workpiece contours
- can be set up on grid plates, T-slot plates and your own fixtures
- clamping range of 25 - 140 mm and workpiece weights up to 25 kg
- clamps rough parts, machined parts, round and irregular-shaped parts
- low clamping depth of 1 mm can be achieved
- designed for external and internal clamping
- repeat accuracy of < 0.01 mm

## Machinable collet clamping and holding force

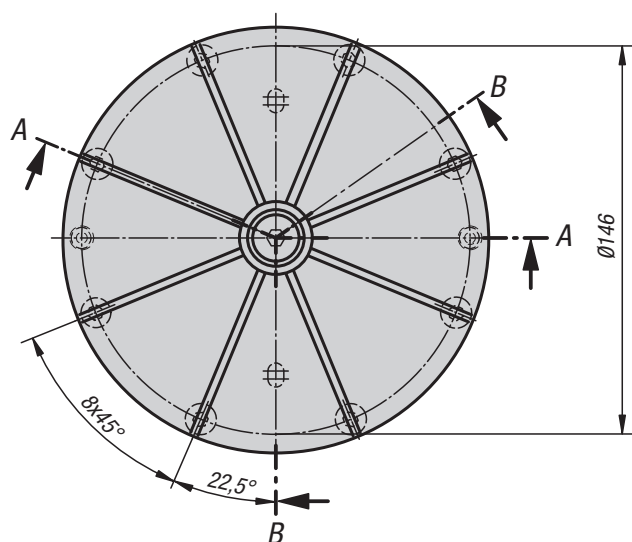
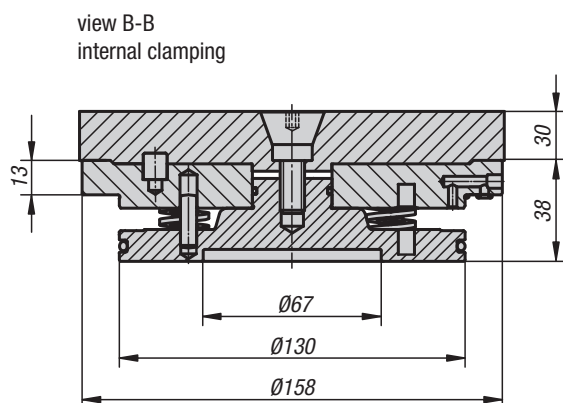
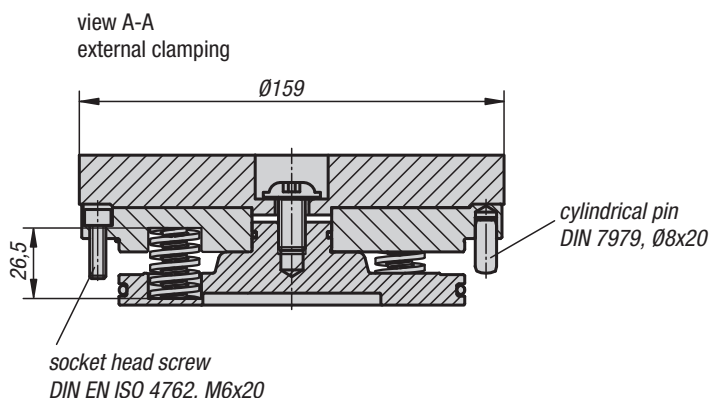
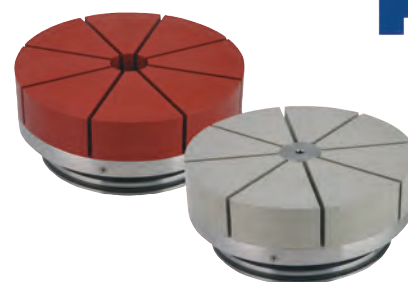
| spring release pressure | spring clamping force | spring retaining force | post-clamping pressure | post-clamping force | post-clamping retaining force |
|-------------------------|-----------------------|------------------------|------------------------|---------------------|-------------------------------|
| 6 bar                   | 5.81 kN               | 2.8 kN                 | 6 bar                  | 13.39 kN            | 10.39 kN                      |
| 6 bar                   | 5.81 kN               | 2.8 kN                 | 12 bar                 | 20.93 kN            | 17.93 kN                      |
| 6 bar                   | 5.81 kN               | 2.8 kN                 | 30 bar                 | 43.55 kN            | 40.55 kN                      |

## Machinable collet - system construction

| pos. | description                                          |  | piece |  |
|------|------------------------------------------------------|--|-------|--------------------------------------------------------------------------------------|
| 1    | collet                                               |  | 1     |                                                                                      |
| 2    | flange plate                                         |  | 1     |                                                                                      |
| 3    | piston                                               |  | 1     |                                                                                      |
| 4    | spring package                                       |  | 8     |                                                                                      |
| 5    | screw / tension cone                                 |  | 2     |                                                                                      |
| 6    | base element                                         |  | 1     |                                                                                      |
| P1   | Release collet with compressed air pistol connection |  |       |                                                                                      |
| P2   | Post-clamp with compressed air pistol connection     |  |       |                                                                                      |

## Machinable collet system

for self-installation



### Material:

Flange plate, pistons and body steel.  
Seals NBR.  
Screws DIN EN ISO 4762 grade 8.8.  
Collet aluminium.

### Version:

Flange plate, piston and body rust-resistant, bright.  
Screws electro zinc-plated.  
Collet red or clear anodised.

### Sample order:

K0500.116030

### Note:

The machinable collet system is suitable for mounting on fixtures and clamping systems. Collets for external and internal clamping can be mounted on the flange plate. The contour of the workpiece to be clamped is machined into the collet. Free-form and asymmetrical contours can be clamped.

The integrated spring package generates a clamping force of 5.8 kN. The clamping force can be raised to 43.5 kN by pneumatic post-clamping. The clamp is released by blowing compressed air onto the lower piston surface pushing the piston upwards and releasing the clamping force on the collet. Clamping travel 0.2 mm. Repeat accuracy < 0.01 mm.

Installation dimensions on request.

### Accessories:

Collet for external or internal clamping K0502

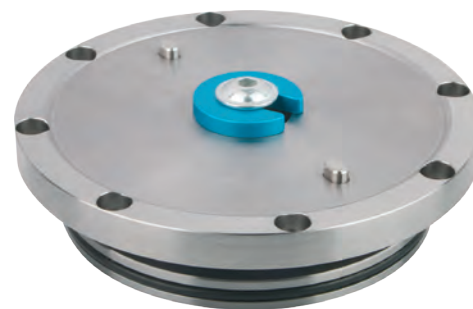


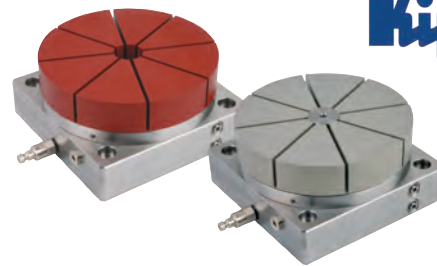
Illustration without collet with transport lock

### KIPP Machinable collet system for self-installation

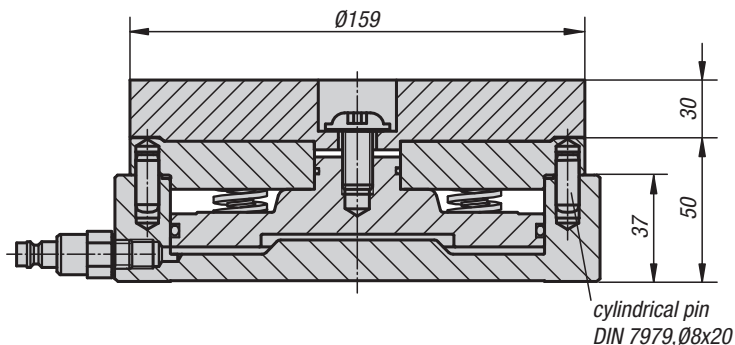
| Order No.    | Version           | Clamping range<br>min. - max. | Milling depth<br>min./max. | Workpiece weight<br>max. (kg) |
|--------------|-------------------|-------------------------------|----------------------------|-------------------------------|
| K0500.116030 | external clamping | Ø 30 - Ø 140                  | 1-20                       | 25                            |
| K0500.216030 | internal clamping | Ø 30 - Ø 140                  | 1-20                       | 25                            |

## Machinable collet system

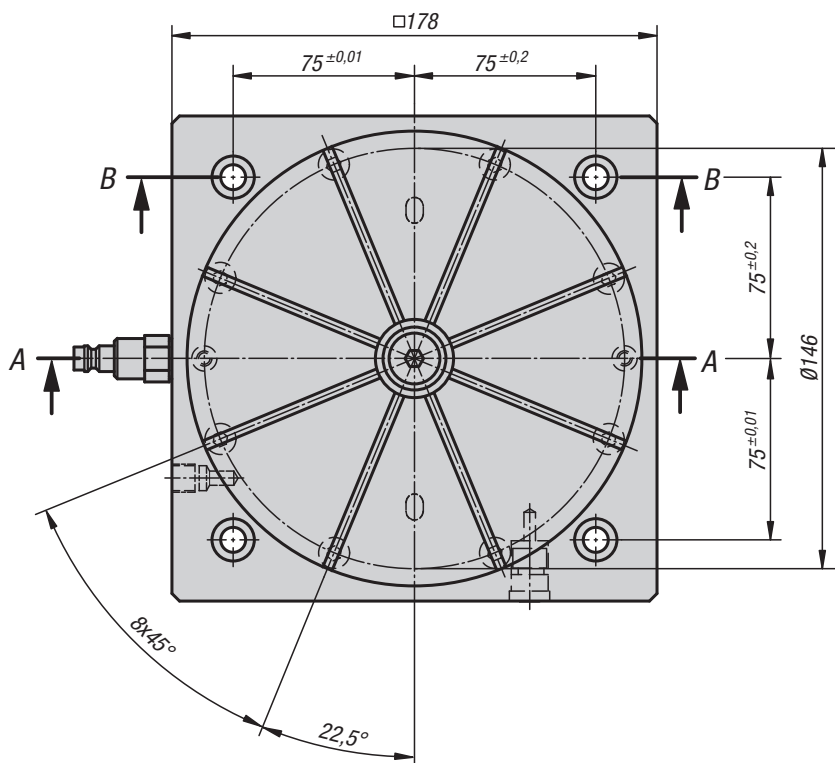
for grid plates



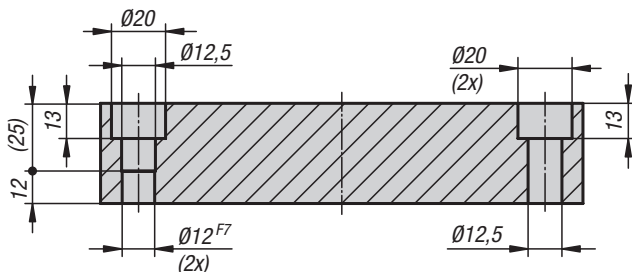
view A-A



cylindrical pin  
DIN 7979, Ø8x20



view B-B  
(base only)



### Material:

Flange plate, pistons and body steel.  
Seals NBR.  
Screws DIN EN ISO 4762 grade 8.8.  
Collet aluminium.

### Version:

Flange plate, piston and body rust-resistant, bright.  
Screws electro zinc-plated.  
Collet red or clear anodised.

### Sample order:

K0501.11603050

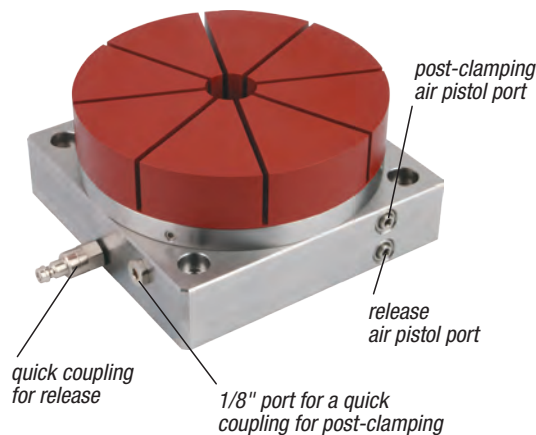
### Note:

Machinable collet system with base plate for mounting on 50mm pitch grid plates. The flange plate can be used for external or internal clamping collets. The contour of the workpiece to be clamped is machined into the collet. Free-form and asymmetrical contours can be clamped.

The integrated spring package generates a clamping force of 5.8 kN. The clamping force can be raised to 43.5 kN by pneumatic post-clamping. The clamp is released by blowing compressed air onto the lower piston surface pushing the piston upwards and releasing the clamping force on the collet. Clamping travel 0.2 mm. Repeat accuracy < 0.01 mm.

### Accessories:

Collet for external or internal clamping K0502

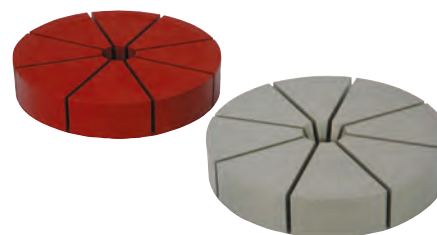


## KIPP Machinable collet system for grid plates

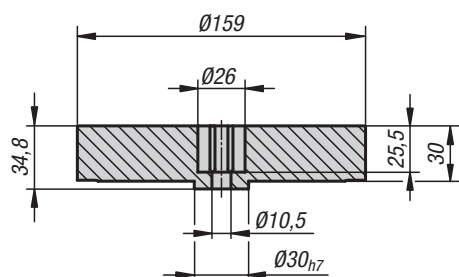
| Order No.      | Version           | Clamping range<br>min. - max. | Milling depth<br>min./max. | Workpiece weight<br>max. (kg) | Suitable<br>shoulder screw |
|----------------|-------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|
| K0501.11603050 | external clamping | Ø 30 - Ø 140                  | 1-20                       | 25                            | K0815.12055                |
| K0501.21603050 | internal clamping | Ø 30 - Ø 140                  | 1-20                       | 25                            | K0815.12055                |

## Collets

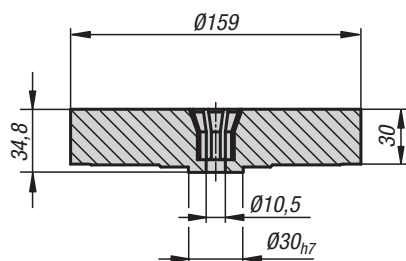
for external or internal clamping



external clamping



internal clamping



### Material, version:

High-strength aluminium, red (external clamping) or clear (internal clamping), anodised.

### Sample order:

K0502.116030

### Note:

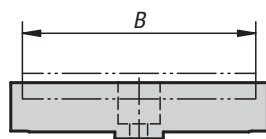
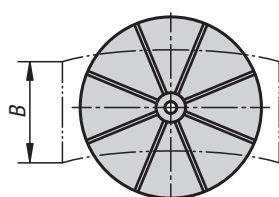
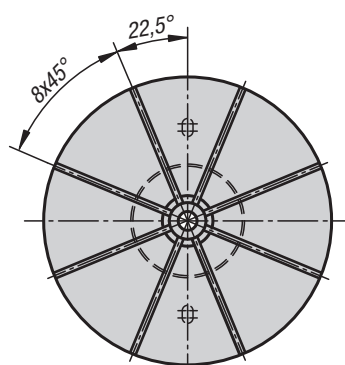
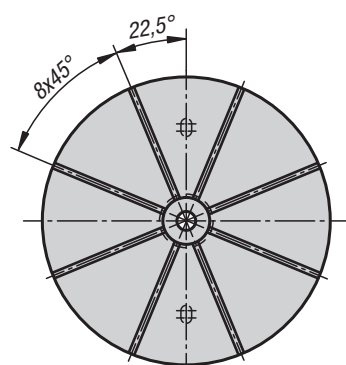
Collet for clamping external or internal contours. The contour of the workpiece to be clamped is machined into the collet. Free-form and asymmetrical contours can be clamped.

Clamping travel 0.2 mm.

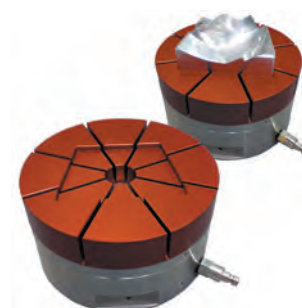
Tension cone K0502.1024 is required for internal clamping collets.

### Accessories:

Tension cone K0502.1024



The workpiece width "B" should be maximum 90% of the collet diameter.  
In special cases the workpiece may also project over the collet.



external clamping



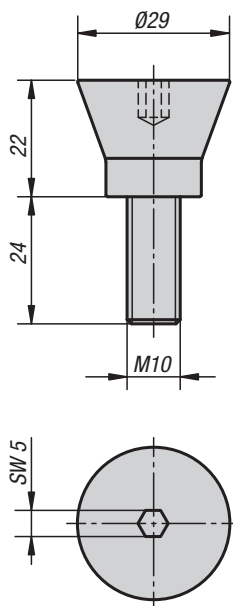
internal clamping

## KIPP Collets for external or internal clamping

| Order No.    | Version           | Clamping range<br>min. - max. | Milling depth<br>min./max. | Workpiece weight<br>max. (kg) |
|--------------|-------------------|-------------------------------|----------------------------|-------------------------------|
| K0502.116030 | external clamping | Ø 30 - Ø 140                  | 1-20                       | 25                            |
| K0502.216030 | internal clamping | Ø 30 - Ø 140                  | 1-20                       | 25                            |

# Tension cone

for internal clamping collet



**Material:**  
Carbon steel.

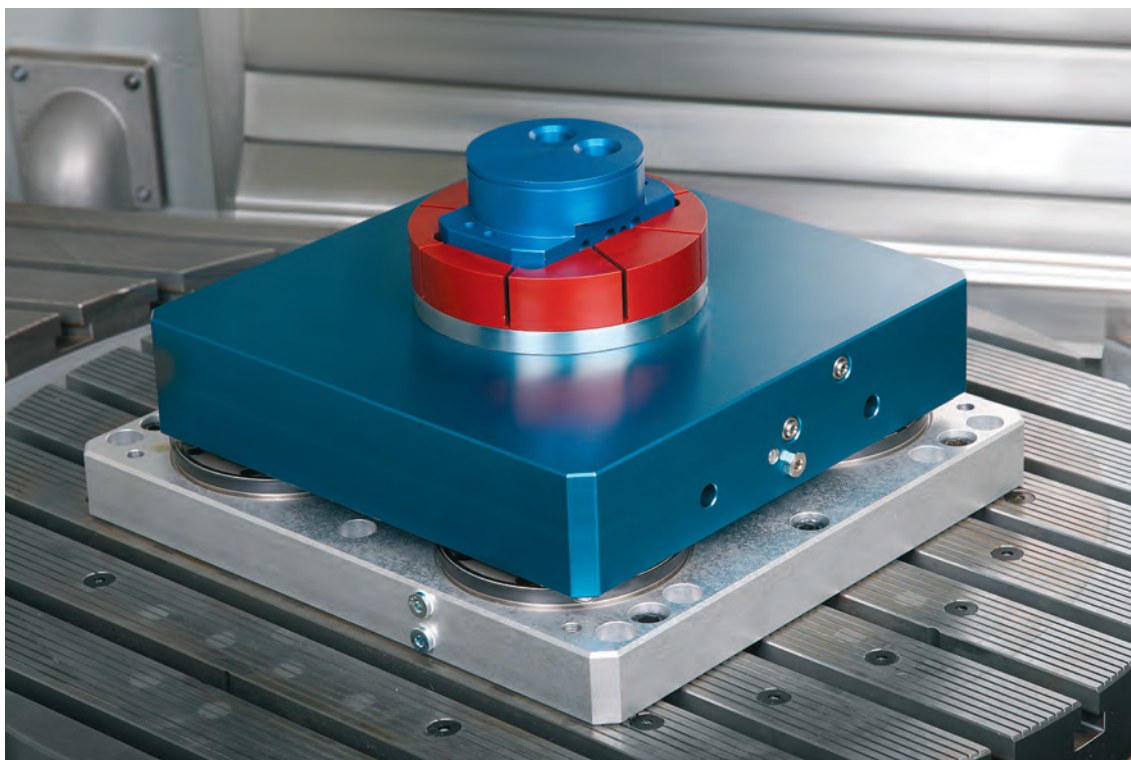
**Version:**  
Bright.

**Sample order:**  
K0502.1024

**Accessories:**  
Collet for internal clamping K0502.216030

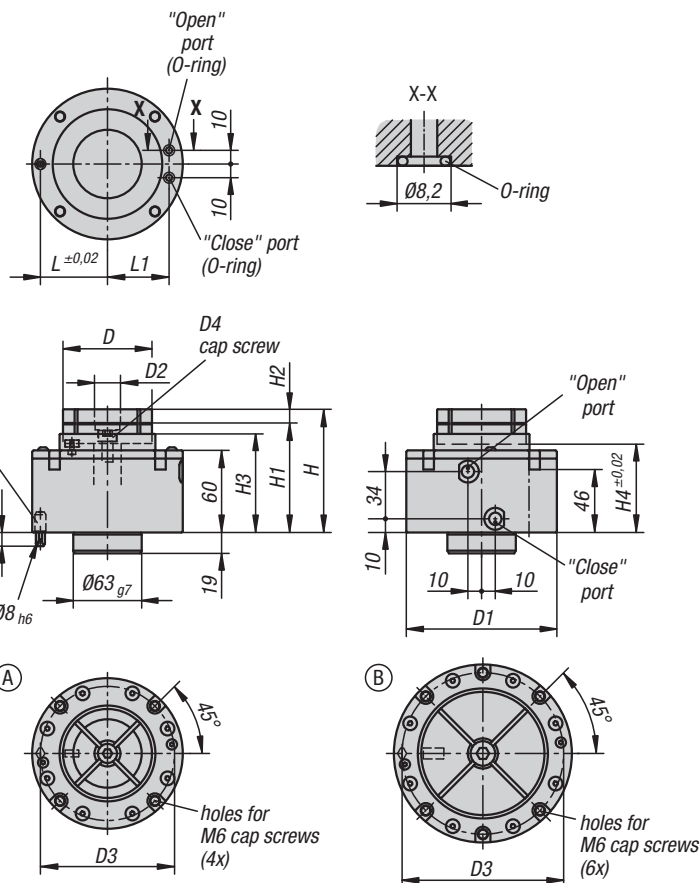
## KIPP Tension cone for internal clamping collet

| Order No.  | Suitable for   |
|------------|----------------|
| K0502.1024 | mandrel collet |

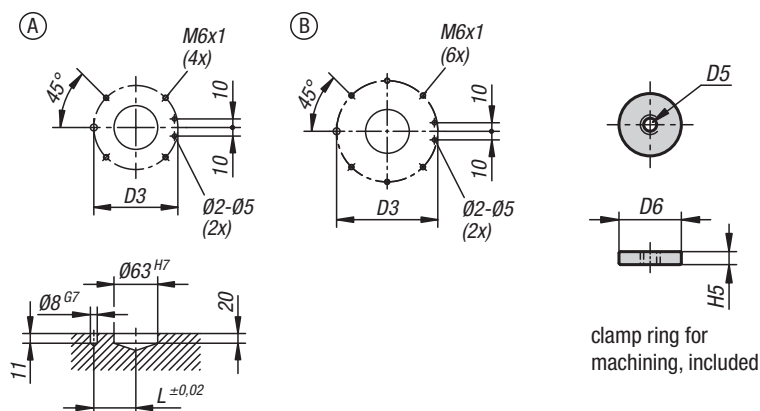


# Machinable collets

pneumatic



installation dimensions



## Material:

Chuck high-carbon steel, nickel-plated.

Collet high-strength aluminium, blue anodised.

## Sample order:

K1392.1065090

## Note:

The pneumatic collet system consists of a chuck and a machinable collet.

The chuck can be screwed onto fixtures according to the mounting dimensions.

## Clamping procedure:

The collet is opened by applying compressed air to the „open“ port.

The collet is closed (for clamping) by applying compressed air to the „close“ port.

The pneumatic connections can be screwed on either from below or from the side. If the air is connected from below, the side ports must be closed.

## Machining the collet for external clamping:

The negative form of the workpiece to be clamped is machined into the collet. Free-form and asymmetrical contours are possible.

Different workpieces can be clamped quickly and securely by simply exchanging the collet.

The collet can be milled down to height H2. This enables multiple workpiece contours to be machined into one collet.

Repeat accuracy for workpiece:  $\pm 0.03$

Repeat accuracy after replacing the collet  $\pm 0.02$

The collet radial clamping travel is 0.15 mm per clamping segment.

To prevent damage the collet should not be tightened without a workpiece or clamping ring in place.

The operating air pressure should lay between 0.45 - 0.55 MPa.

The clamping forces indicated are based on 0.5 MPa.

## Accessories:

Clamping ring for machining the contour.

O-ring.

Locating pin.

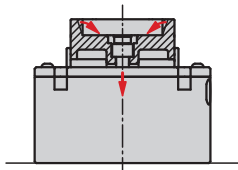
Clamping screw for collet.

## KIPP Machinable collets, pneumatic

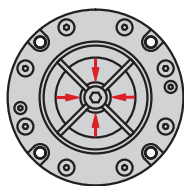
| Order No.     | Form | D  | D1  | D2 | D3  | D4  | D5 | D6 | H   | H1 | H2 | H3 | H4 | H5 | L  | L1 | Operating pressure MPa | Clamping force N | Order No. Collet |
|---------------|------|----|-----|----|-----|-----|----|----|-----|----|----|----|----|----|----|----|------------------------|------------------|------------------|
| K1392.1065090 | A    | 65 | 110 | 19 | 98  | M8  | M4 | 18 | 90  | 80 | 10 | 72 | 65 | 4  | 49 | 45 | 0,5                    | 4000             | K0934.065025     |
| K1392.1090100 | B    | 90 | 130 | 23 | 118 | M10 | M5 | 22 | 100 | 85 | 15 | 74 | 66 | 6  | 59 | 55 | 0,5                    | 6000             | K0934.090034     |

# Machinable collets

pneumatic

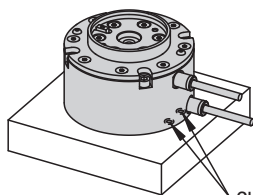


Applying compressed air draws the cylinder down.  
The 4 clamping segments move inwards and  
clamp the workpiece.



## Using the side ports:

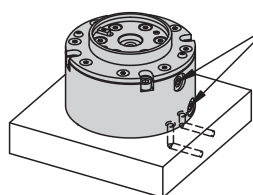
- Seal the lower ports with the O-rings provided.
- Check that no air escaping from here.



Check that the  
lower ports are sealed.

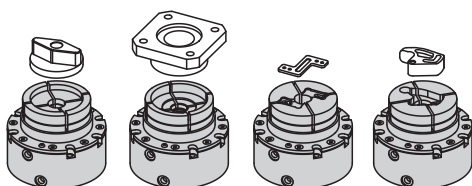
## Using the lower ports:

- Fit the O-rings provided into the lower ports.
- The side ports must be closed.



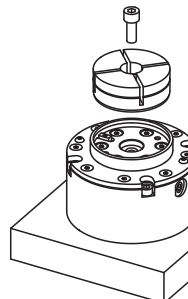
Seal the air connections  
and check them for tightness.

Different workpiece shapes can be machined into the collets.



## Mounting the collet:

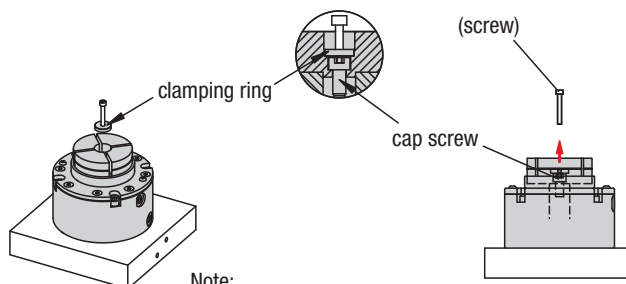
When mounting the collet, make sure that air is connected to ,  
the "open" connection.  
The cylinder and fastening screw are loose.



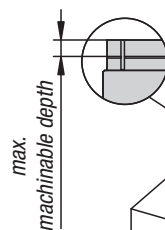
Note:  
Connect air to  
the "open" port

## Machine the collet:

Insert the clamping ring into the collet.  
(A screw can be used as an insertion aid)



Note:  
Position the clamping ring over  
the fastening screw of the collet.

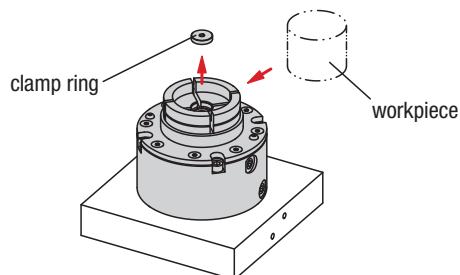


Clamp the collet  
over the "close" port.

Machine the collet to suit to the workpiece shape.

## Clamp the workpiece:

After machining the collet, remove the clamping ring.  
Insert the workpiece and apply air to the "close" port to clamp it.



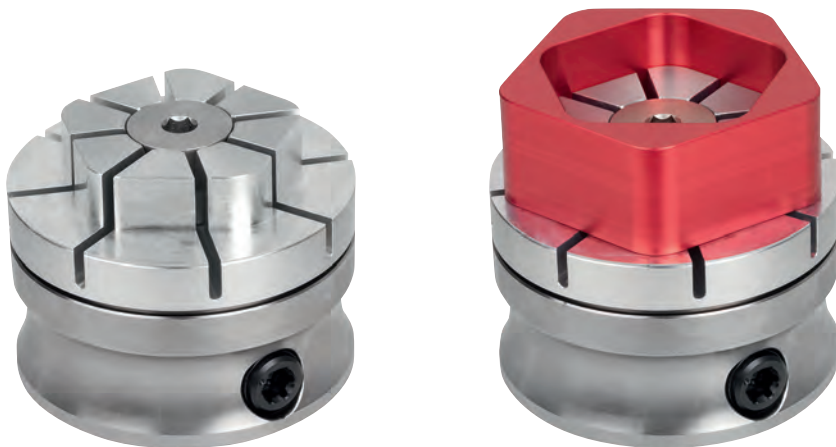
# Application examples for collets

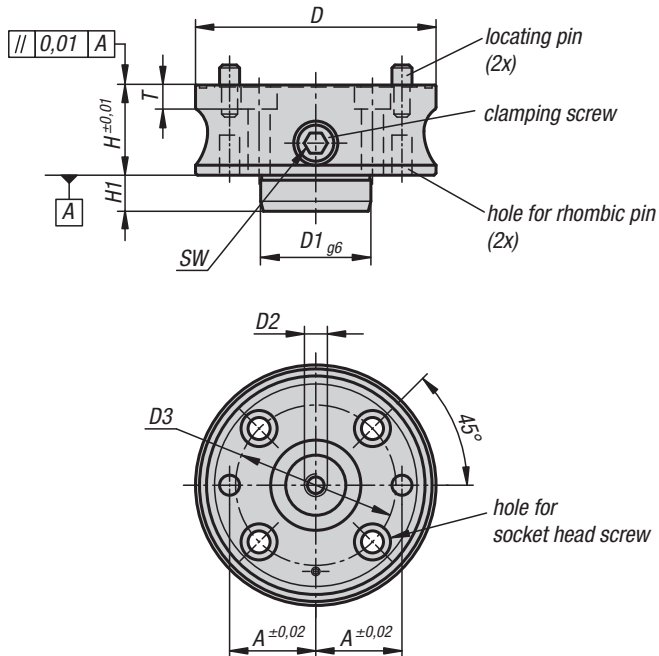


## External clamping



## Internal clamping





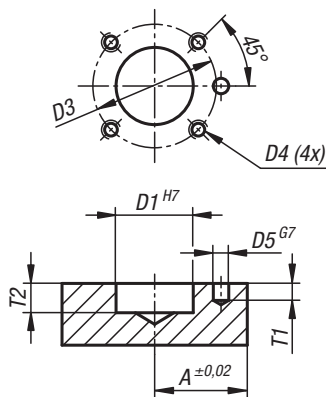
**Material:**  
Carbon steel.

**Version:**  
nickel-plated.

**Sample order:**  
K1183.065

**Note:**  
With this adaptor, collets for internal and external clamping can be mounted.  
The workpiece is clamped by tightening the screw on the side.  
A dowel pin is used to secure the adaptor against rotation.  
The collet is positioned on the adaptor with 2 dowel pins.

## installation dimensions

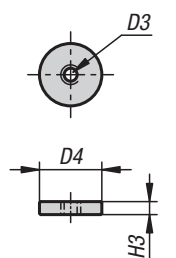
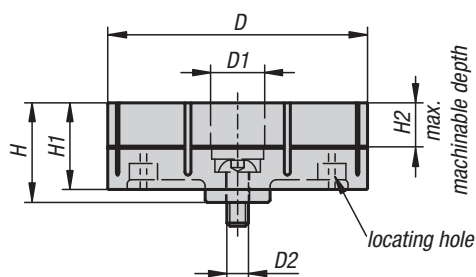
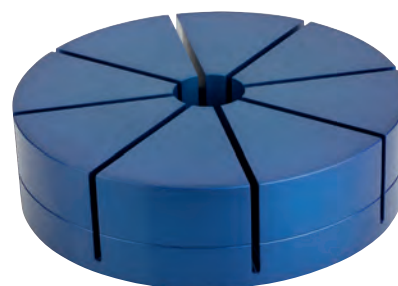


## KIPP Adapter for collets

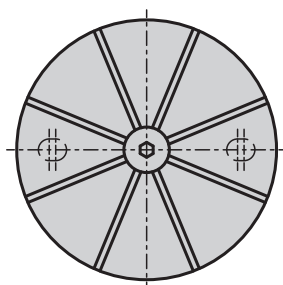
| Order No.        | A  | D   | D1 | D2  | D3  | D4       | D5 | H  | H1 | SW | T  | T1 | T2 | for<br>screws | Tightening<br>torque<br>max. Nm | F1<br>kN | F2<br>kN |
|------------------|----|-----|----|-----|-----|----------|----|----|----|----|----|----|----|---------------|---------------------------------|----------|----------|
| <b>K1183.065</b> | 22 | 65  | 28 | M8  | 42  | M6x1     | 6  | 35 | 12 | 8  | 8  | 6  | 13 | M6            | 15                              | 4,5      | 4,5      |
| <b>K1183.090</b> | 30 | 90  | 42 | M10 | 60  | M8x1,25  | 8  | 40 | 14 | 8  | 10 | 8  | 15 | M8            | 25                              | 7        | 7        |
| <b>K1183.120</b> | 43 | 120 | 55 | M10 | 80  | M10x1,5  | 10 | 45 | 18 | 10 | 12 | 11 | 19 | M10           | 40                              | 10       | 10       |
| <b>K1183.160</b> | 60 | 160 | 63 | M12 | 110 | M12x1,75 | 12 | 50 | 24 | 10 | 14 | 13 | 25 | M12           | 40                              | 12       | 10       |

## Collets

for external clamping



clamp ring for machining, included



### Material:

High-strength aluminium alloy

### Version:

blue anodised.

### Sample order:

K1184.1065

### Note:

Collets for clamping external contours.

The contour of the workpiece to be held is machined into the collet. Free-form and asymmetrical contours can be held.

The collet mechanism enables a secure clamping of the workpiece.

Clamping travel per collet segment (8x) max. 0.15 mm.

Workpiece repeat accuracy:  $\pm 0.03$ .

Collet repeat accuracy:  $\pm 0.02$ .

Matching adaptor K1183.

### KIPP Collets for external clamping

| Order No.  | D   | D1 | D2  | D3 | D4 | H  | H1 | H2 | H3 |
|------------|-----|----|-----|----|----|----|----|----|----|
| K1184.1065 | 65  | 21 | M8  | M5 | 20 | 29 | 25 | 10 | 4  |
| K1184.1090 | 90  | 25 | M10 | M6 | 24 | 40 | 35 | 15 | 5  |
| K1184.1120 | 120 | 25 | M10 | M6 | 24 | 46 | 40 | 20 | 5  |
| K1184.1160 | 160 | 29 | M12 | M8 | 28 | 52 | 45 | 25 | 6  |

# Collets

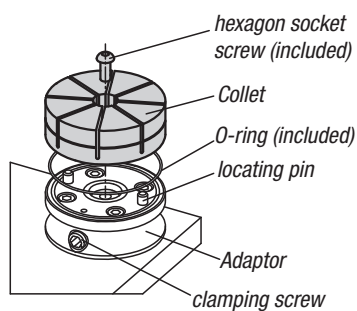
## for external clamping

### 1. Mounting collet:

- Insert an O-ring into the groove on the top face of the clamp base.
- Set a collet on the base making sure the locating pins fit into the locating holes on the underside of the collet. Secure the collet using a buttonhead hex socket screw.

#### Note:

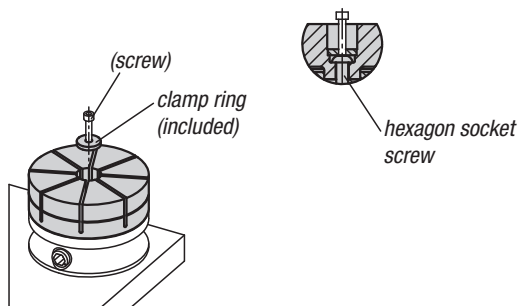
Before mounting the collet, ensure the cam cylinder is fully loosened by turning the tightening screw clockwise until it stops.



### 2. Machining collet:

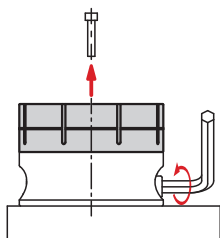
#### 2.1

Place the clamp ring in the centre of the collet. (Use a screw as an insertion aid)



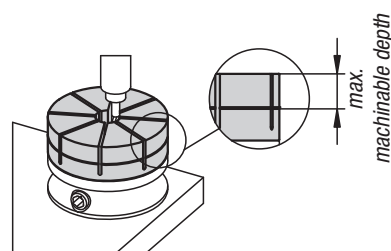
#### 2.2

Tighten the cam cylinder to clamp the clamp ring (recommended torque: 15Nm).  
Remove the screw from the clamp ring before machining.



#### 2.3

Machine the contour of the part that is to be held into the collet.

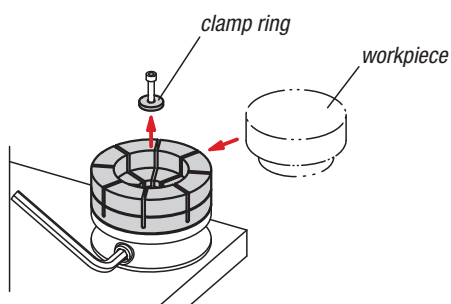


#### Note:

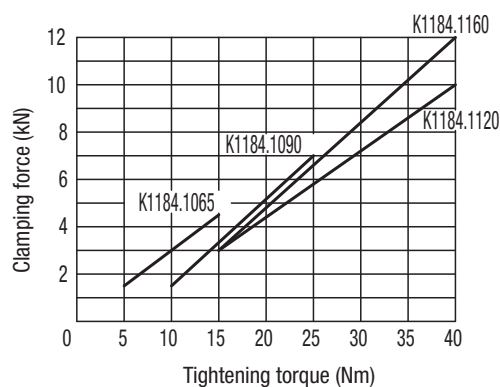
Do not machine the contour deeper than the permitted depth.

### 3. Mounting workpiece:

- Loosen the cam cylinder and remove the clamp ring.
- Place the workpiece in the contour and re-tighten the cam cylinder.



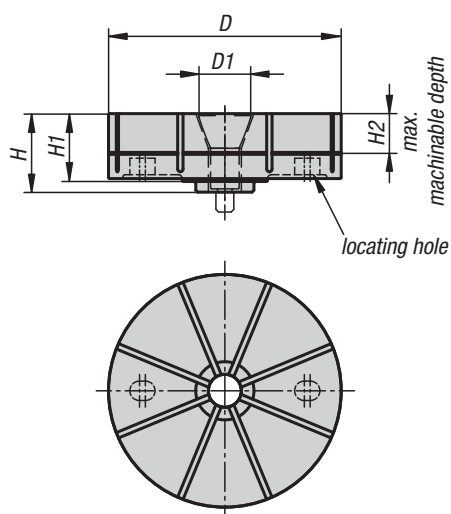
### Performance curve



To avoid damaging the collet do not tighten the clamp without a workpiece or clamp ring.  
Observe the maximum tightening torque in the table.

## Collets

for internal clamping



### KIPP Collets for internal clamping

| Order No.  | D   | D1   | H    | H1 | H2 |
|------------|-----|------|------|----|----|
| K1184.2065 | 65  | 22,5 | 28,5 | 25 | 10 |
| K1184.2090 | 90  | 27   | 34,5 | 30 | 15 |
| K1184.2120 | 120 | 29   | 40,5 | 35 | 20 |
| K1184.2160 | 160 | 33   | 46,5 | 40 | 25 |



**Material:**  
High-strength aluminium alloy

**Version:**  
natural tone anodised

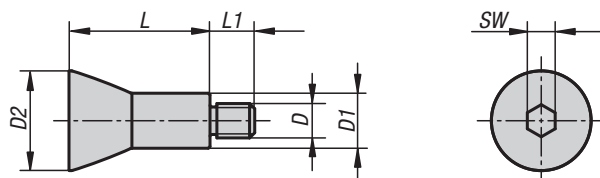
**Sample order:**  
K1184.2065

**Note:**  
Collets for clamping internal contours.  
The contour of the workpiece to be held is machined into the collet. Free-form and asymmetrical contours can be held.  
The collet mechanism enables a secure clamping of the workpiece.  
Clamping travel per collet segment (8x) max. 0.15 mm.  
Workpiece repeat accuracy:  $\pm 0.03$ .  
Collet repeat accuracy:  $\pm 0.02$ .  
The traction cone K1185 is required when using the collet for internal clamping.  
Matching adaptor K1183.

# K1185

## Traction cone

for internal clamping collet



**Material:**  
Carbon steel.

**Version:**  
hardened and nickel-plated.

**Sample order:**  
K1185.0829

**Note:**  
The traction cone is required for the collet for internal clamping.

### KIPP Traction cone for internal clamping collet

| Order No.  | D   | D1   | D2   | L  | L1 | SW |
|------------|-----|------|------|----|----|----|
| K1185.0829 | M8  | 13,2 | 22,5 | 29 | 10 | 6  |
| K1185.1035 | M10 | 16   | 27   | 35 | 11 | 8  |
| K1185.1041 | M10 | 16   | 29   | 41 | 13 | 8  |
| K1185.1247 | M12 | 18   | 33   | 47 | 14 | 10 |

# Collets

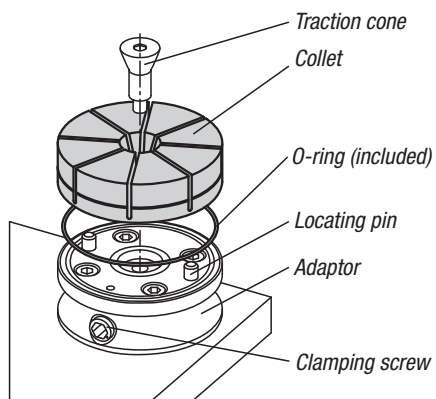
for internal clamping

## 1. Mounting collet:

- Insert an O-ring into the groove on the top face of the clamp base.
- Set a collet on the base making sure the locating pins fit into the locating holes on the underside of the collet.
- Secure the collet using a tapered screw.

### Note:

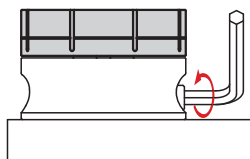
Before mounting the collet, ensure the cam cylinder is fully loosened by turning the tightening screw clockwise until it stops.



## 2. Machining collet:

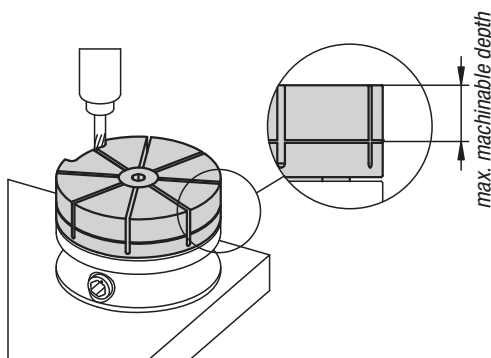
### 2.1

Fully loosen the cam cylinder and measure the OD of the collet. Tighten the cam cylinder until the collet OD has expanded by 0.15 mm.



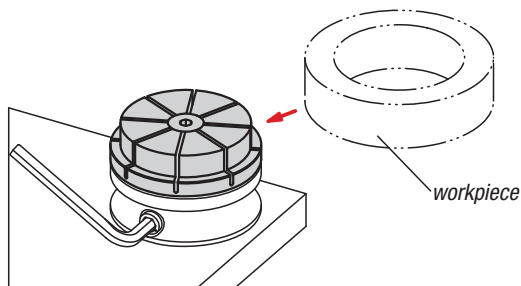
### 2.2

Machine the contour of the part that is to be held into the collet.

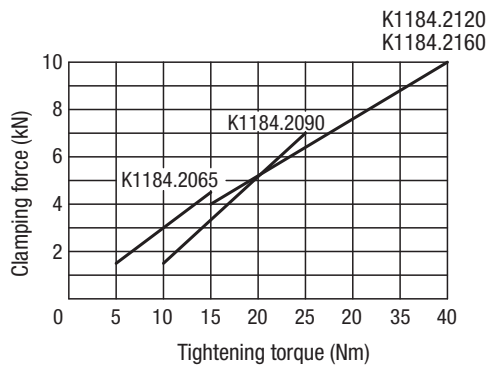


## 3. Mounting workpiece:

- Loosen the cam cylinder and remove the clamp ring.
- Place the workpiece in the contour and re-tighten the cam cylinder.



## Performance curve



To avoid damaging the collet do not tighten the clamp without a workpiece or clamp ring. Observe the maximum tightening torque in the table.

## Clamping collets machinable

**Material:**

Housing and clamping ring carbon steel 1.0503.

Locating pins carbon steel 1.7220.

Collet aluminium 3.4365.

**Version:**

Housing, locating pins and clamping ring black oxidised.

Collet blue anodised.

**Sample order:**

K0934.065057

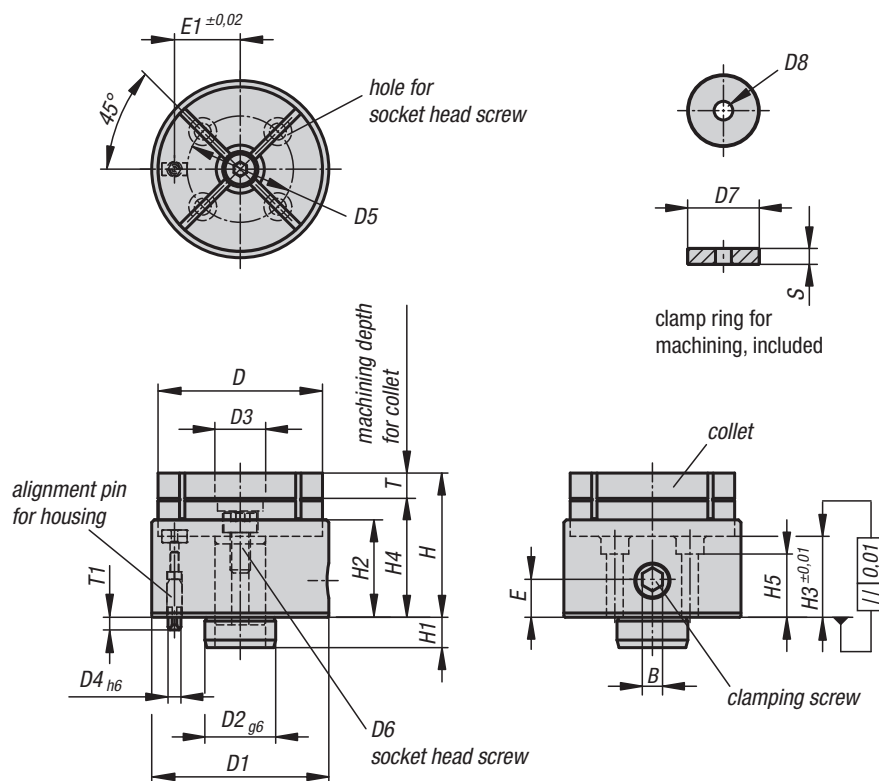
**Note:**

Do not tighten the clamping screw without the clamping ring or a workpiece in the collet.

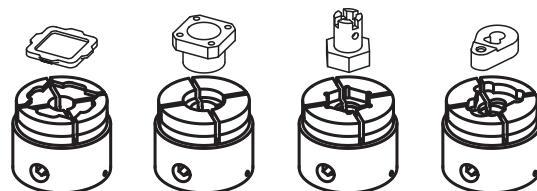
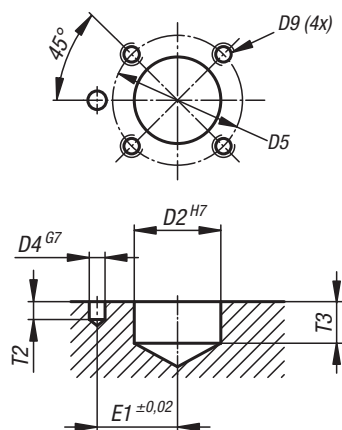
Tighten the clamping screw on the side to clamp the workpiece around its circumference.

The collet can be machined to suit the contour of the workpiece.

Ideal clamping element for machining workpieces on machining centres, milling centres, 5-axis machines, etc.



mounting hole pattern



## KIPP Clamping collets machinable

| Order No.    | B  | D  | D1 | D2 | D3 | D4 | D5 | D6     | D7 | D8 | D9 | E  | E1 | H    | H1 | H2 | H3   | H4 | H5 | T  | T1 | T2 | T3 | S | Clamping force N | Tightening torque max. Nm | Order No. Collet |
|--------------|----|----|----|----|----|----|----|--------|----|----|----|----|----|------|----|----|------|----|----|----|----|----|----|---|------------------|---------------------------|------------------|
| K0934.065057 | 8  | 65 | 70 | 28 | 19 | 6  | 42 | M8x15  | 18 | M4 | M6 | 15 | 26 | 59,5 | 12 | 39 | 34,5 | 47 | 25 | 10 | 5  | 6  | 13 | 4 | 4000             | 60                        | K0934.065025     |
| K0934.090072 | 10 | 90 | 95 | 42 | 23 | 8  | 60 | M10x20 | 22 | M5 | M8 | 17 | 36 | 72,5 | 14 | 46 | 38,5 | 57 | 28 | 15 | 7  | 8  | 15 | 6 | 6000             | 100                       | K0934.090034     |

## Mounting plates

for clamping collets



### Material:

Carbon steel 1.7262.

### Version:

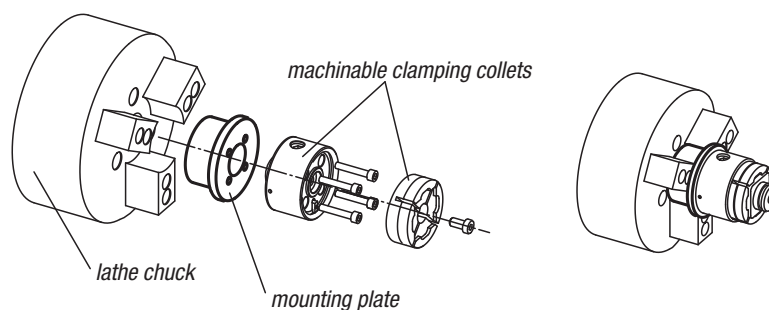
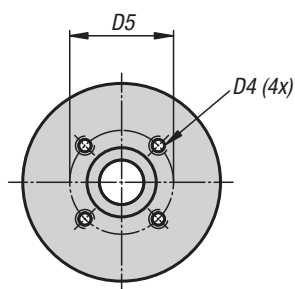
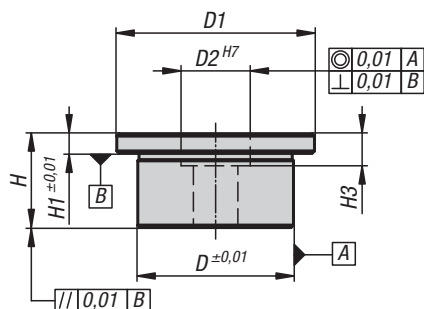
Black oxidised and case-hardened.

### Sample order:

K0934.065038

### Note:

Suitable for clamping collets  
K0934.065057 and K0934.090072.

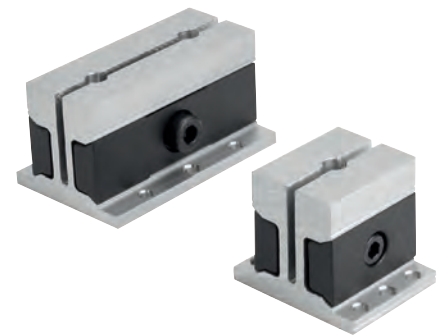


Mounting plate for holding the collet in a lathe chuck

### KIPP Mounting plates for clamping collets

| Order No.    | D  | D1  | D2 | D4    | D5 | H  | H1 | H3 |
|--------------|----|-----|----|-------|----|----|----|----|
| K0934.065038 | 63 | 80  | 28 | M6x12 | 42 | 38 | 8  | 13 |
| K0934.090043 | 80 | 100 | 42 | M8x16 | 60 | 43 | 8  | 15 |

# Machinable jaws rectangular



## Material:

Body EN AC-51400.  
Wedges high-carbon steel.

## Version:

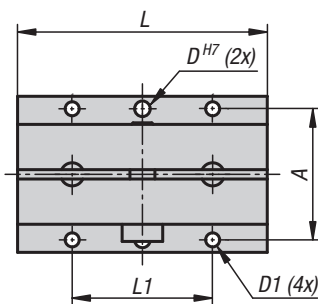
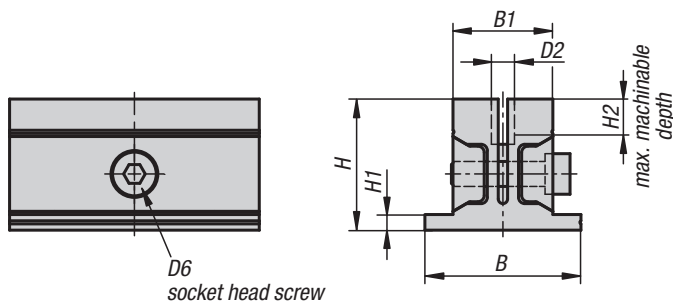
Body natural colour anodised.  
Wedges black oxidised.

## Sample order:

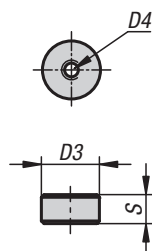
K1169.32040

## Note:

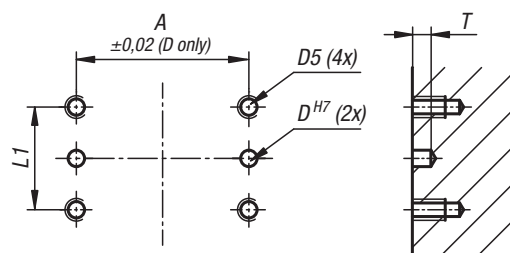
The lateral clamping screw tightens the jaws and clamps the workpiece on the circumference.  
The simple and compact design allows 2 workpieces to be clamped.  
The clamping travel is max. 0.5 mm.  
The jaws must be pre-tensioned before machining the contour, the supplied clamping ring is used for this purpose.



clamp ring for machining, included



installation dimensions



## KIPP Machinable jaws, rectangular

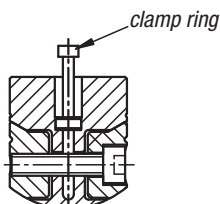
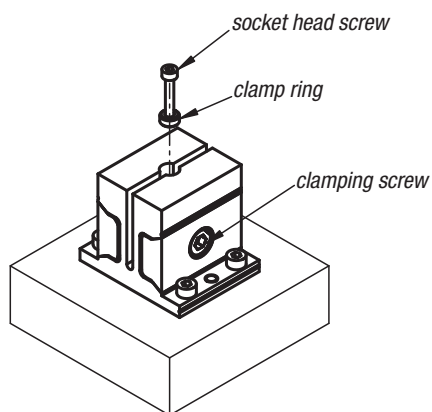
| Order No.   | A  | B  | B1 | D | D1  | D2   | D3 | D4     | D5     | D6  | H  | H1 | H2 | L   | L1 | S   | T | Clamping force N | Tightening torque Nm |
|-------------|----|----|----|---|-----|------|----|--------|--------|-----|----|----|----|-----|----|-----|---|------------------|----------------------|
| K1169.32040 | 42 | 50 | 32 | 5 | 4,5 | 7,4  | 7  | M3x0,5 | M4x0,7 | M6  | 42 | 5  | 10 | 40  | 25 | 3,5 | 5 | 2500             | 7,5                  |
| K1169.32080 | 42 | 50 | 32 | 5 | 4,5 | 7,7  | 7  | M3x0,5 | M4x0,7 | M8  | 42 | 5  | 10 | 80  | 45 | 3,5 | 5 | 2500             | 14                   |
| K1169.50050 | 62 | 72 | 50 | 6 | 5,5 | 11,4 | 11 | M3x0,5 | M5x0,8 | M10 | 63 | 7  | 15 | 50  | 30 | 5,5 | 8 | 5500             | 26                   |
| K1169.50100 | 62 | 72 | 50 | 6 | 5,5 | 11,4 | 11 | M3x0,5 | M5x0,8 | M12 | 63 | 7  | 15 | 100 | 58 | 5,5 | 8 | 5500             | 46                   |

# Machinable jaws rectangular

## Machining the jaws:

### 1. Inserting the clamp ring:

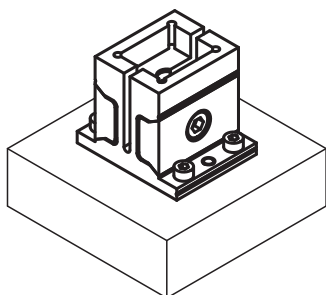
Insert the clamp ring into the bore in the centre of and between the jaws.  
Tighten the clamp screw to hold the clamp ring in place.  
(Use a cap screw to aid inserting the clamp ring)



Note:  
The clamp ring must be placed at the bottom of the bore.

### 2. Machine the jaws:

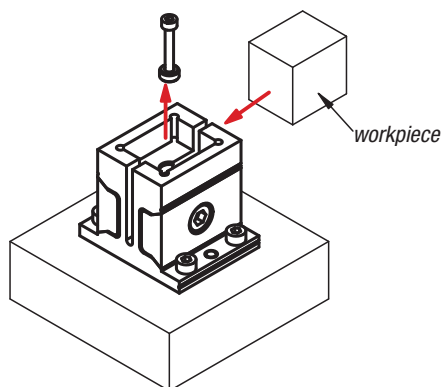
Remove the cap screw from the clamp ring.  
Machine the contour of the workpiece to be held into the jaws.



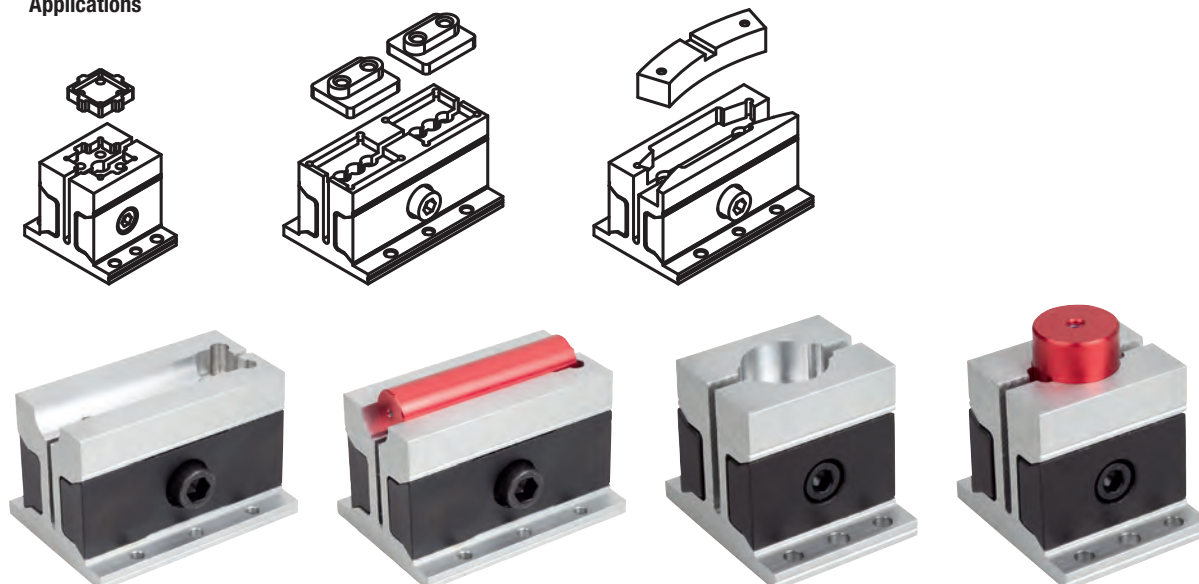
Note:  
The contour should not be deeper than the max. permitted depth.

### 3. Mounting the workpiece:

Loosen the clamp screw and remove the clamp ring.  
Place the workpiece into the contour and tighten the clamp screw.

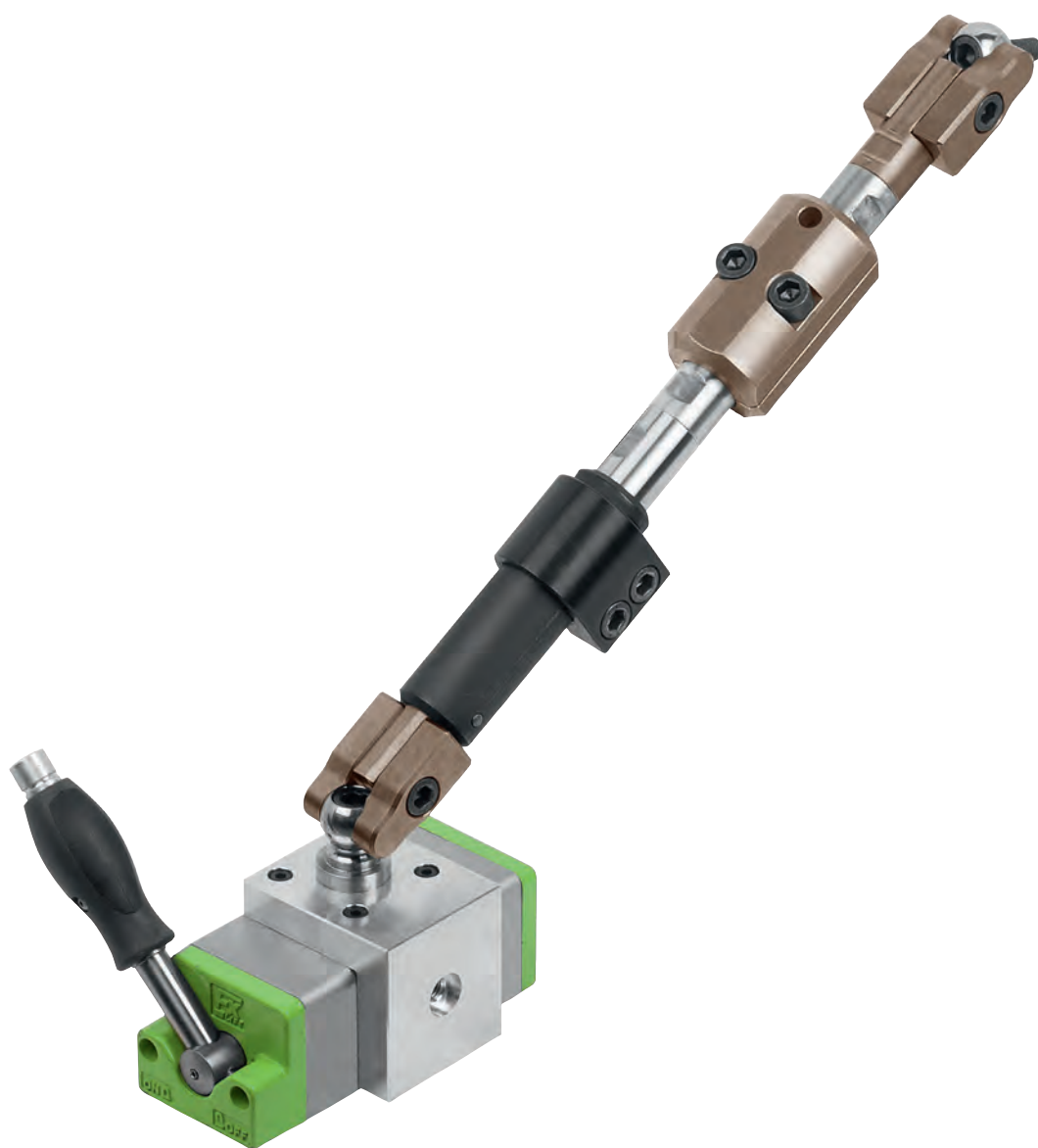


## Applications





## Workpiece stabiliser

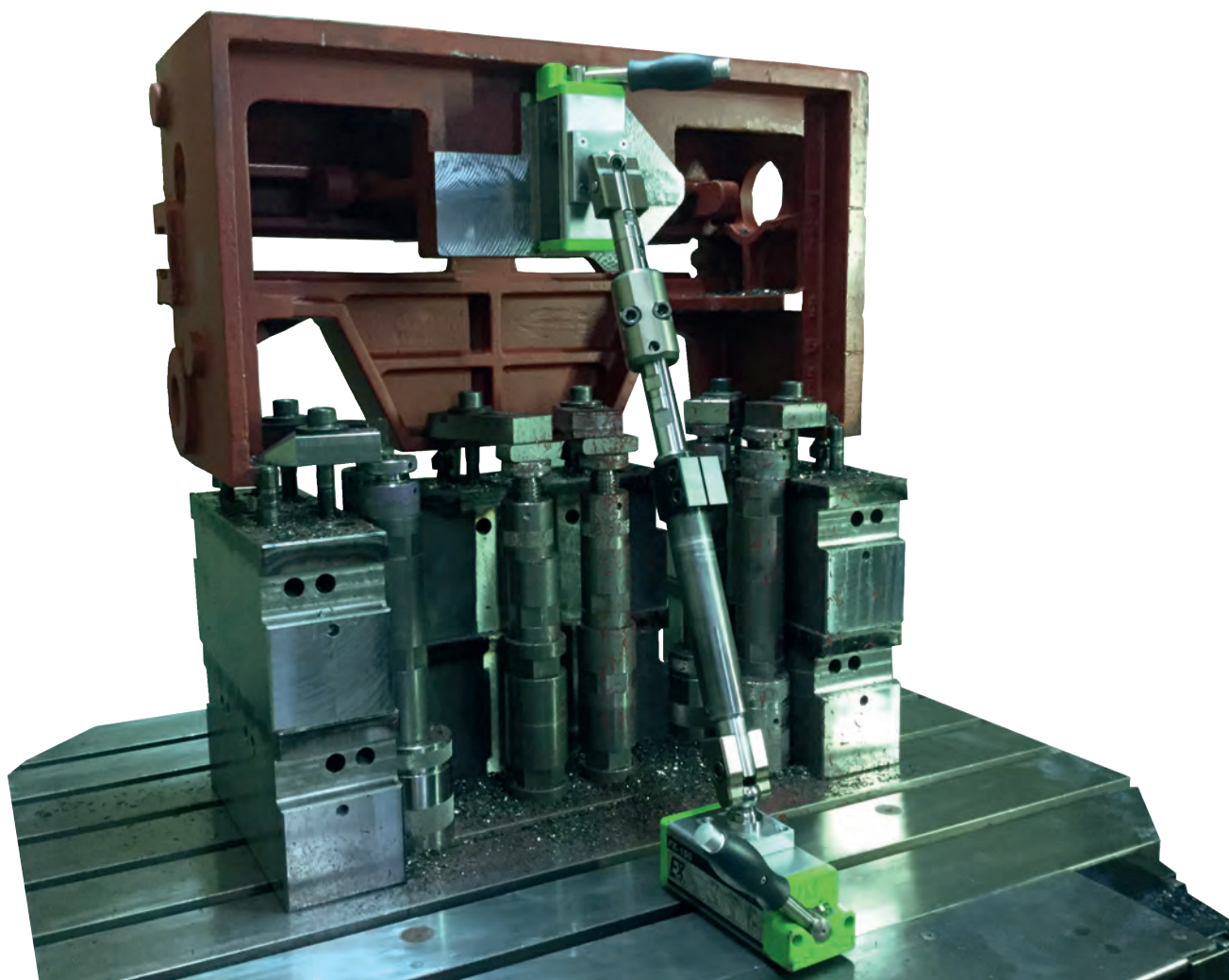


# Technical information Workpiece stabiliser



The workpiece stabiliser has been developed specifically for minimising vibrations and oscillations when machining sensitive and thin-walled workpieces.

This system is extremely flexible thanks to its different methods of fixing to the workpiece and the machine table.





- 1 Fastening set for T-slots
- 2 Magnet
- 3 Fastening set for zero-point interface
- 4 Workpiece stabiliser
- 5 Fine adjustment
- 6 Clamp strap
- 7 Clamping ball with cup

# Workpiece stabiliser set

with case


**Material:**

Case plastic.

See corresponding product group for contents.

**Version:**

black.

**Sample order:**

K1296.925

**Note:**

Objects sized between 355 and 980 mm can be set up using this stabiliser set.

It is basic equipment for supporting workpieces.

The individual parts are safely stored in a plastic case.

The length of the workpiece stabiliser is infinitely adjustable.

With the locking mechanism, the shaft can be securely locked against tension and compression.

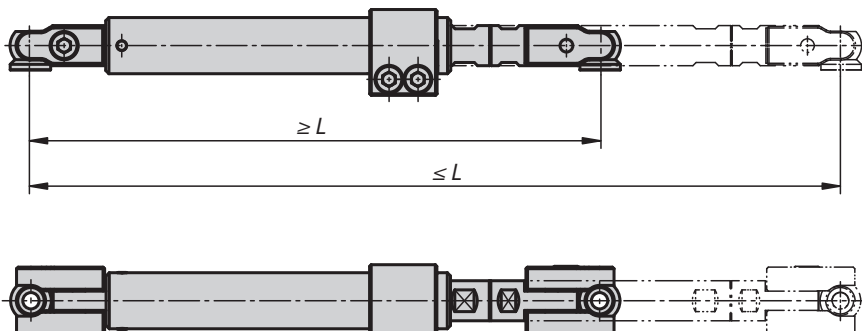
**Supplied with:**

- Case
- Workpiece stabiliser, K1170.355505
- Extension shaft L75, K1186.1625075
- Extension shaft L100, K1186.1625100
- Extension shaft L150, K1186.1625150
- Precision adjustment, K1187.25120150
- Fastening set for T-slots, 14 mm T-slot set, K1189.2514
- 18 mm T-slot block with M10, K0378.18.005
- 22 mm T-slot block with M10, K0378.22.005
- Clamping ball with cup M12, K1193.3251240
- Clamping ball with cup M16, K1193.3251640

**KIPP Workpiece stabiliser set with case**

| Order No. | Item                     | Version 1 |
|-----------|--------------------------|-----------|
| K1296.925 | workpiece stabiliser set | with case |

## Workpiece stabiliser



**Material:**  
Steel.

**Version:**  
Black oxidised.

**Sample order:**  
K1170.255305

**Note:**

The length of the workpiece stabiliser is infinitely adjustable. With the locking mechanism, the shaft can be securely locked against tension and compression. Supplied with 2 fastening sets and clamping ball with seating cup.

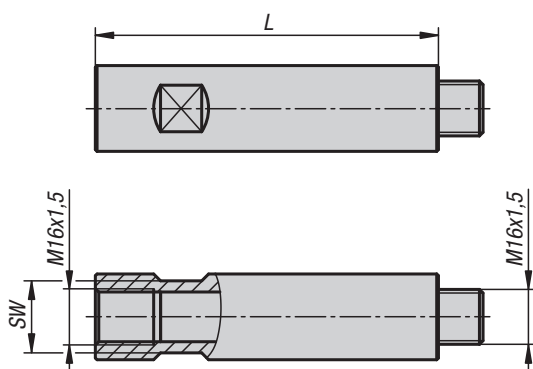
### KIPP Workpiece stabiliser

| Order No.    | L<br>min. | L<br>max. | weight<br>kg |
|--------------|-----------|-----------|--------------|
| K1170.255305 | 255       | 305       | 1,9          |
| K1170.355505 | 355       | 505       | 2,5          |

# K1186

## Extension shafts

for workpiece stabiliser



**Material:**  
Steel.

**Sample order:**  
K1186.1625075

**Note:**

The extension shafts extend the adjustment range. They are mounted with the clamping ball between the workpiece stabiliser and the fastening set.

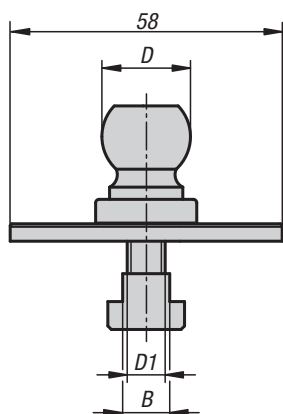
### KIPP Extension shafts for workpiece stabiliser

| Order No.     | L   | SW | weight<br>kg |
|---------------|-----|----|--------------|
| K1186.1625075 | 75  | 21 | 0,233        |
| K1186.1625100 | 100 | 21 | 0,293        |
| K1186.1625150 | 150 | 21 | 0,416        |
| K1186.1625250 | 250 | 21 | 0,697        |
| K1186.1625500 | 500 | 21 | 1,3          |



## Fastening set

for T-slot tables



### KIPP Fastening set for T-slot tables

| Order No.  | Version 1  | B  | D1  | D    |
|------------|------------|----|-----|------|
| K1189.2512 | for T-slot | 12 | M10 | 25,4 |
| K1189.2514 | for T-slot | 14 | M10 | 25,4 |
| K1189.2518 | for T-slot | 18 | M10 | 25,4 |
| K1189.2520 | for T-slot | 20 | M10 | 25,4 |
| K1189.2522 | for T-slot | 22 | M10 | 25,4 |
| K1189.2524 | for T-slot | 24 | M10 | 25,4 |



**Material:**  
Steel.

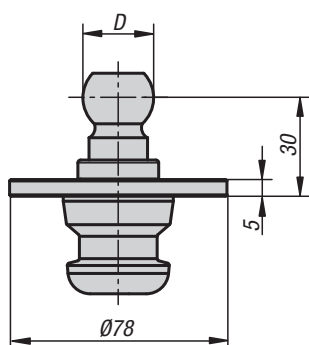
**Sample order:**  
K1189.2512

**Note:**  
These fastening sets are for adapting to machine tables with T-slots.



## Fastening set

workpiece stabiliser



**Material:**  
Steel.

**Sample order:**  
K1190.2540

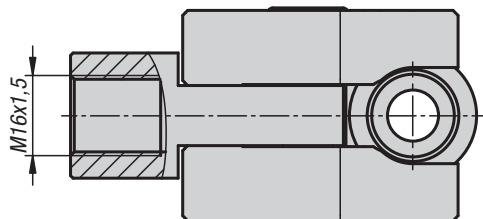
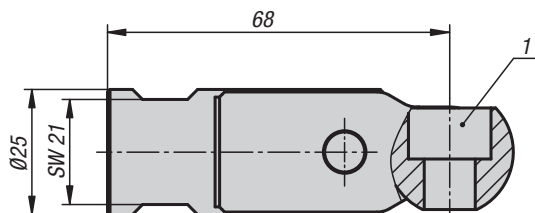
**Note:**  
The fastening set is suitable for adaption to UNI lock clamping systems.

### KIPP Fastening set for workpiece stabiliser

| Order No.  | D    |
|------------|------|
| K1190.2540 | 25,4 |

## Fastening set with clamping ball

for workpiece stabiliser



**Material:**  
Steel.

**Sample order:**  
K1191.2525

**Note:**  
This fastening set is used to connect the stabiliser to the workpiece. It is supplied with ball and seating cup.

**Drawing reference:**  
1) for DIN 912 M10 cap screw

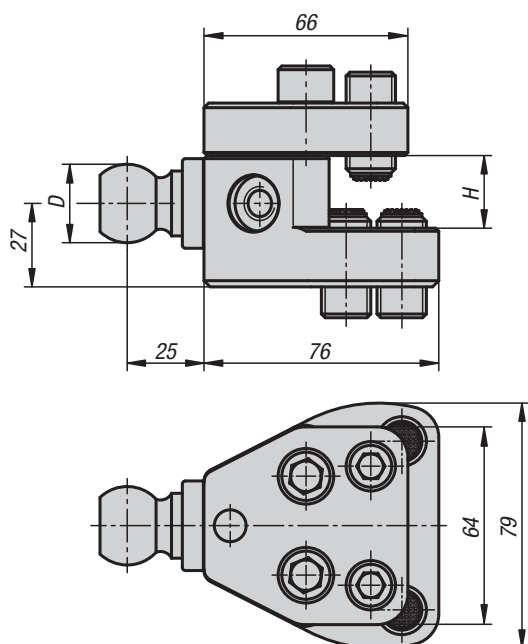
### KIPP Fastening set with clamping ball for workpiece stabiliser

| Order No.  | Dimensions  |
|------------|-------------|
| K1191.2525 | see drawing |

# K1192

## Claw clamp

for workpiece stabiliser



**Material:**  
Steel.

**Sample order:**  
K1192.258076

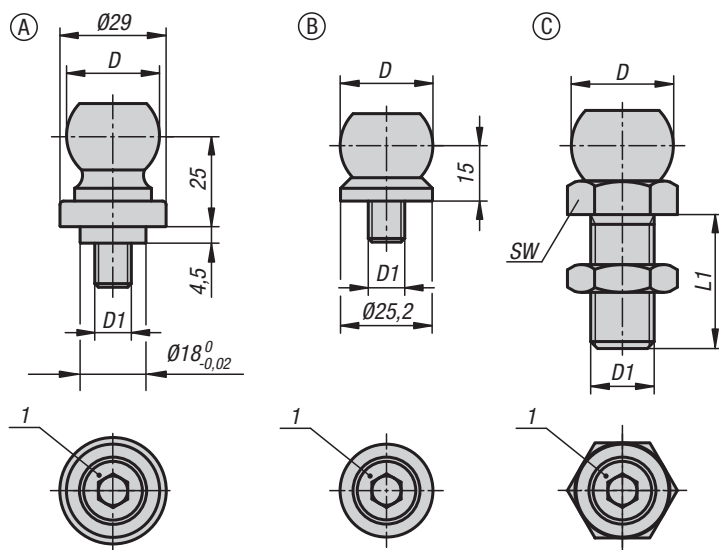
**Note:**  
This claw clamp is used to connect the stabiliser to the workpiece. The clamping ball can be attached to several faces of the claw clamp enabling flexible adjustment.

### KIPP Clamp strap for workpiece stabiliser

| Order No.    | D    | H<br>clamping range |
|--------------|------|---------------------|
| K1192.258076 | 25,4 | 0-45                |

## Clamping balls with cup

for workpiece stabiliser



**Material:**  
Steel.

**Version:**  
DIN EN ISO 4017 hex head bolt , grade 8.8, black.  
DIN EN ISO 4762 cap screws, grade 8.8, black.  
Ball, bright.

**Sample order:**  
K1193.125

**Note:**  
The clamping balls with cup enable flexible connections between the workpiece and the workpiece stabiliser. The clamping balls provide a high degree of freedom on the workpiece.

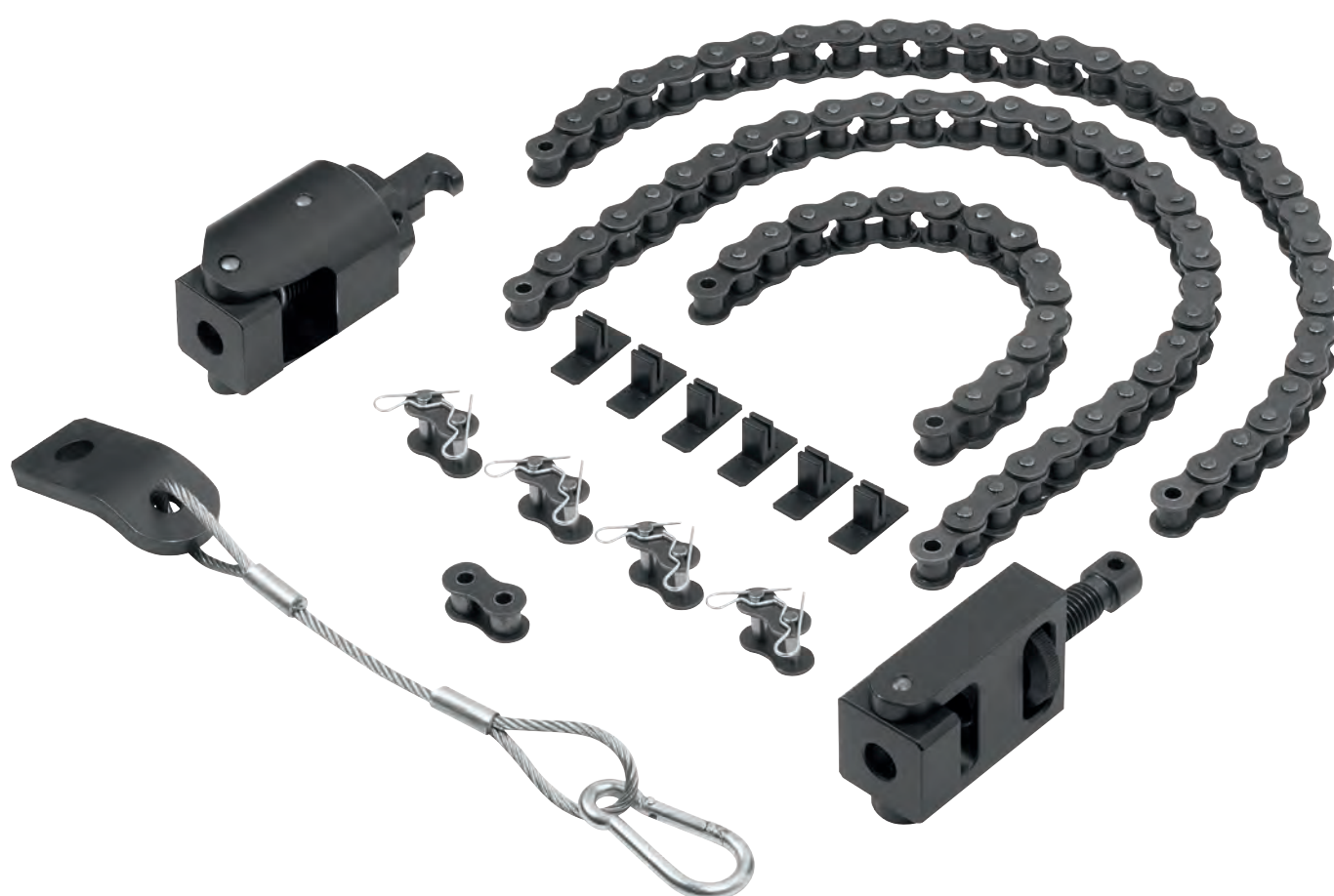
**Drawing reference:**  
1) DIN EN ISO 4762 M10 cap screw

### KIPP Clamping balls with cup for workpiece stabiliser

| Order No.     | Form | D    | D1  | L1 | SW |
|---------------|------|------|-----|----|----|
| K1193.125     | A    | 25,4 | M10 | -  | -  |
| K1193.225     | B    | 25,4 | M10 | -  | -  |
| K1193.3251240 | C    | 25,4 | M12 | 40 | 19 |
| K1193.3251640 | C    | 25,4 | M16 | 40 | 24 |
| K1193.3252050 | C    | 25,4 | M20 | 50 | 30 |
| K1193.3252450 | C    | 25,4 | M24 | 50 | 36 |



## Chain clamp



# Chain clamp

**Note:**

Chain clamps are used mainly in machine and plant construction. Chain clamps enable cylindrical, complicated and large to very large workpieces to be clamped securely and effectively in the quickest and easiest way.

Suitable for cylindrical workpieces, valve bodies, pistons etc.

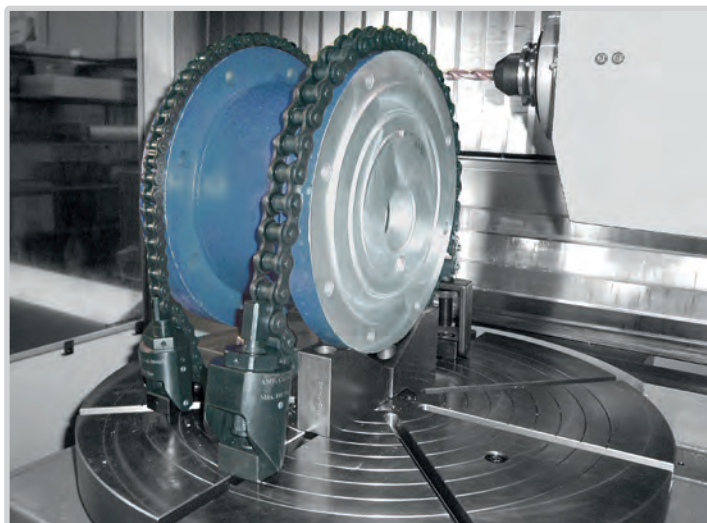
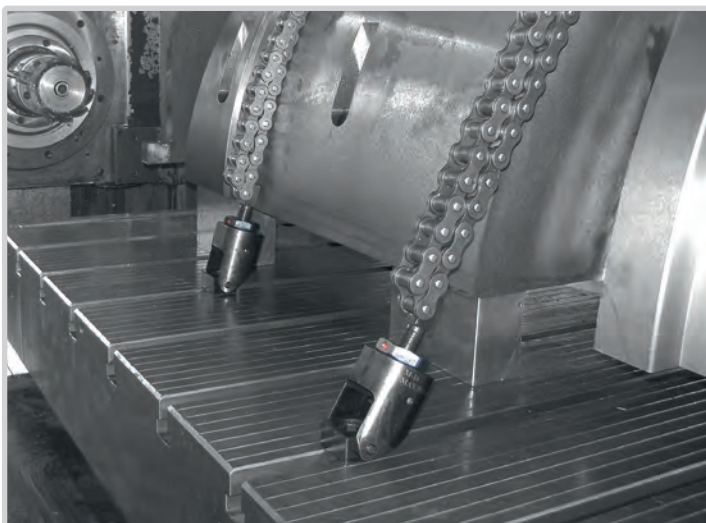
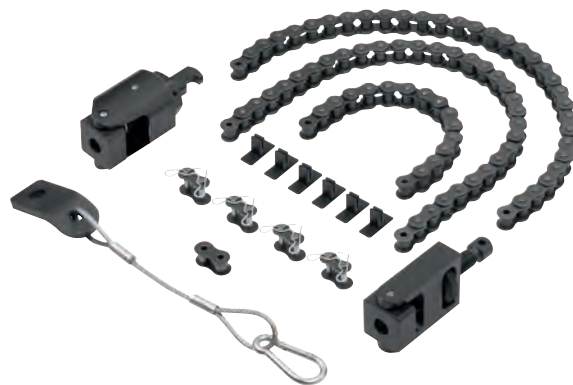
The workpiece surface can be protected by attaching the plastic elements.

**Application:**

The knurled nut on the clamping bracket can be used to preset the chain length and the clamping force. The required torque is set on the clamping hook.

**Attention:**

- The opening angle of the chain should not exceed 30°.
- Maximum permitted tightening torques.



## Application example

