

11090

SUPPORTS & STOPS

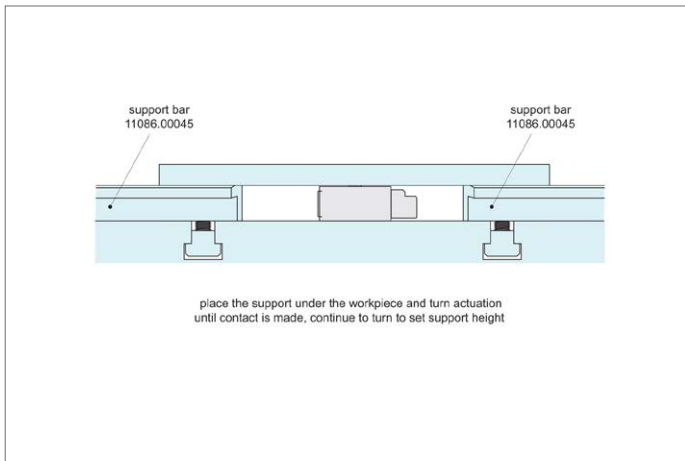
Tips

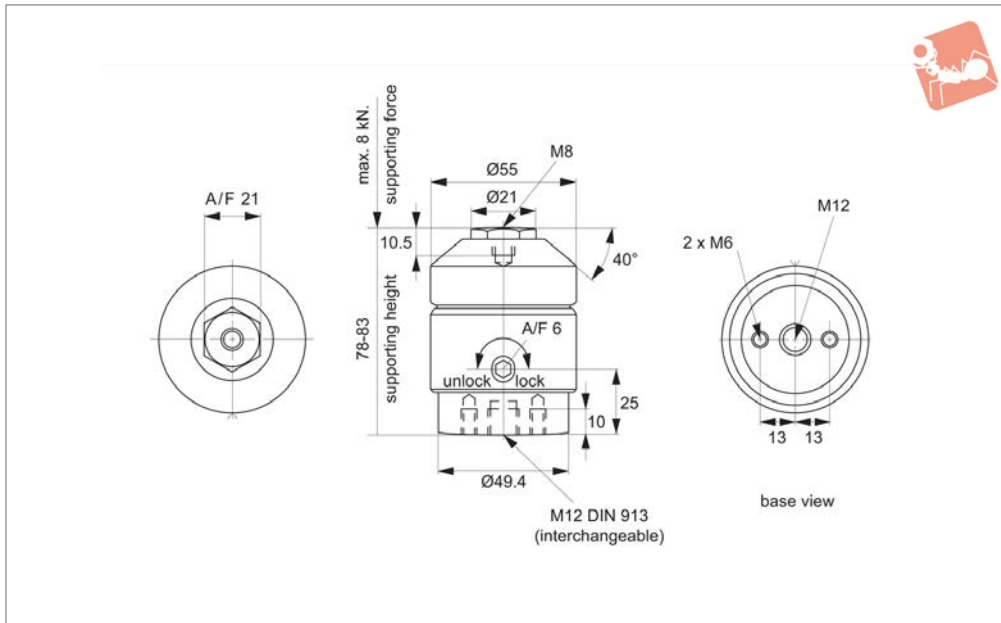
Eliminates workpiece chatter and vibration during machining.

Easy to actuate; locate and fix beneath workpiece, turn actuation handle and sprung loaded support will come into

contact with workpiece. Lock handle to set support.

| Order No. | Support height | w_1 | d_1 | l_1 | l_2 |
|-------------|----------------|-------|-------|-------|-------|
| 11090.W0060 | 28 | 45 | 6 | 56 | 20 |





12680

Material

Body: steel case-hardened, nitrided, blackened and ground.
Housing: aluminium, red anodised.

Technical Notes

Used to support over determined clamping points, whilst minimising deformation of component. It also reduces vibration during machining.
By tuning on the lock function (max. 180° at 15Nm), the clamping mechanism locks the support pin without moving. The support element has supported the workpiece and is locked in place.

Tips

Assembly:

Fix the support element (2x M6 thread) onto the device. Ensure the key activation is in required orientation.
Alternatively: Dismantle the M12 x 10 threaded pin and replace it by an M12x 30 threaded pin and assemble the support element with a spanner (A/F 21), e.g for T-slot mounting (no pin M12x 30 and T-nut 24000 M12x 14, grade 10, are parts of the standard supply volume. The support element can be recessed into a hole max. 16mm deep.

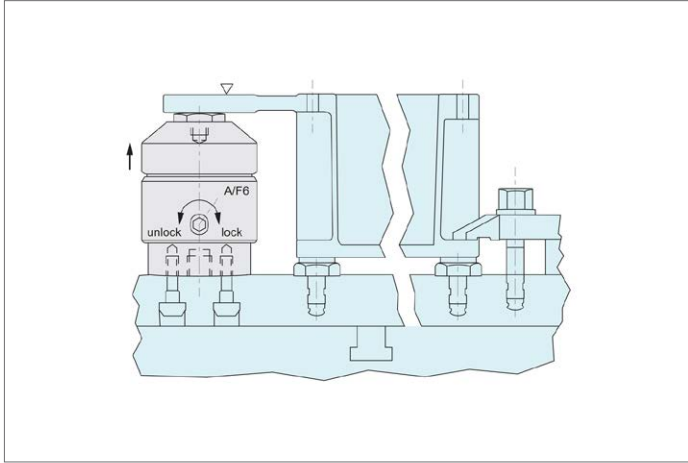
Operation:

By turning the clamping cam (A/F 6 internal hexagon) on the outer surface of the re protective sleeve, the support pin contacts the workpiece with a slight spring

load.

1. By turning on (15Nm) as far as possible (lock), total of 180°, the clamping mechanism locks the support pin without moving. The support element has been placed onto the workpiece and locked.
2. If turned in the opposite directions (unlock), the clamping is released. If turned back as far as possible, i.e. total of 180° the support pin moves to the end position.

| Order No. | Description | Stroke | Supporting force kN max. | Weight g |
|-------------|-----------------|--------|--------------------------------|-------------|
| 12680.W0400 | Support Element | 5 | 8 | 950 |



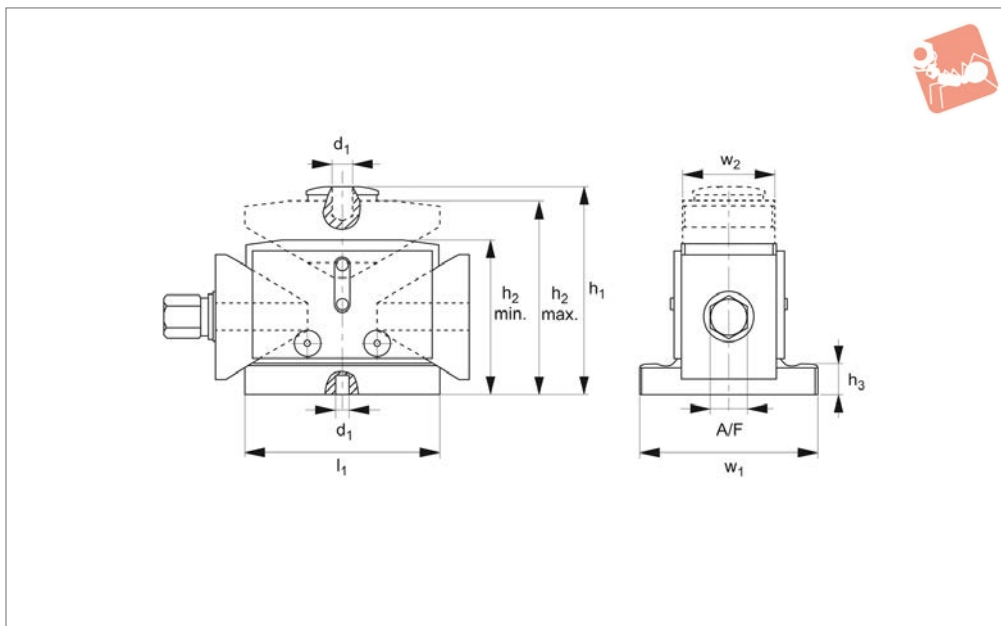


Wedge Blocks

heavy duty positioning



Supports & Stops



15500

SUPPORTS & STOPS

Material

Spheroidal graphite, cast iron.
Heat treated and burnished.
Contact surfaces precision machined.

Technical Notes

Centering hole $\varnothing 12\text{mm}$.
With loads up to 33% of the max. static

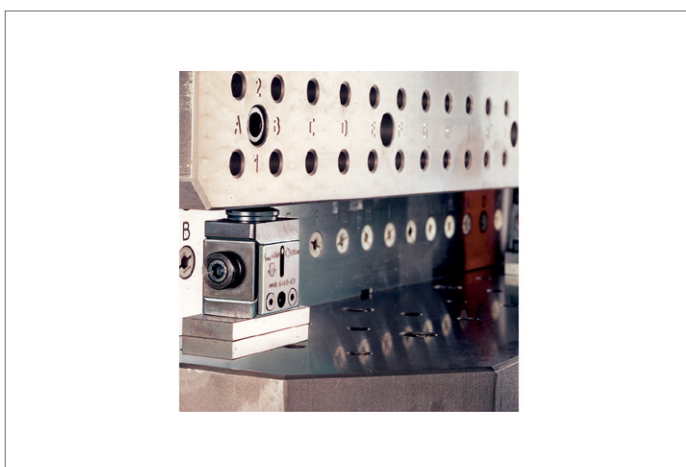
load, adjustment is easily made with a turn of screw. Allows fine adjustment to 0.1mm. See technical pages for the table of locating pad and support pad elements compatibility.

Tips

Particularly useful for precise positioning

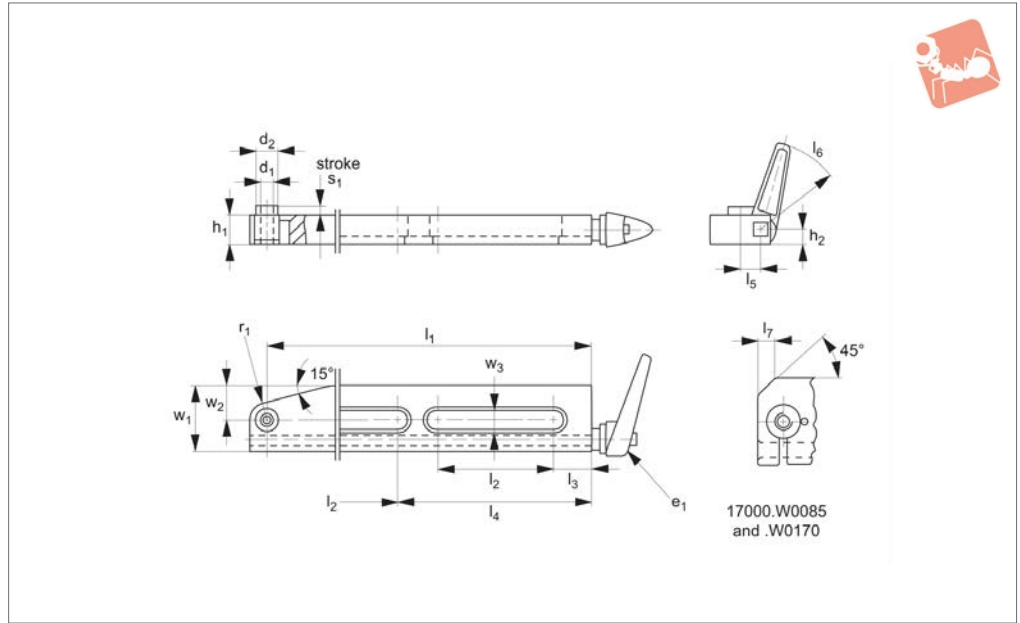
and machining of large components on heavy duty machines. If necessary, an additional $\varnothing 12\text{mm}$ locating hole in the base allows the wedge blocks to be located.

| Order No. | Size | w_1 | h_1 | h_2 min. | h_2 max. | d_1 | h_3 | l_1 | Static load kN max. | w_2 | A/F | Adj./ 360° | Weight g |
|-------------|------|-------|-------|------------|------------|-------|-------|-------|---------------------|-------|-----|------------|----------|
| 15500.W0006 | 63 | 63 | 80 | 50 | 68 | 12 | 7 | 63 | 40 | 40 | 13 | 0.86 | 1700 |
| 15500.W0012 | 125 | 115 | 135 | 100 | 125 | 12 | 20 | 125 | 100 | 60 | 24 | 1.16 | 8600 |
| 15500.W0016 | 190 | 145 | 200 | 170 | 190 | 12 | 20 | 175 | 250 | 80 | 36 | 2.02 | 23750 |





17000



Material

Support: steel, case-hardened and ground.
Grip: die-cast zinc.

Technical Notes

Used as support beneath workpieces to prevent chatter and vibration.

The supporting pin is applied with spring pressure to the workpiece and can be clamped in any desired position without the need to reach under the workpiece.

Tips

Additional support to a three-point fixed

support. Threaded studs or levelling pads can be screwed into the female thread to set the required height. Sizes .W0085 to W0170 have only one slot. 17000.W0450 is fitted with axial bearing clamping lever 74470.W0210.

| Order No. | w ₁ | h ₁ | h ₂ | d ₁ | d ₂ | Handle e ₁ | l ₁ | l ₂ | Weight g |
|-------------|----------------|----------------|----------------|----------------|----------------|-----------------------|----------------|----------------|----------|
| 17000.W0085 | 8.5 | 19.5 | 11.5 | M 8 | 13 | M 6x18 | 75 | 35 | 342 |
| 17000.W0150 | 13.0 | 24.0 | 14.0 | M10 | 20 | M 8x22 | 150 | 90 | 1159 |
| 17000.W0170 | 17.0 | 34.0 | 21.5 | M16 | 26 | M12x30 | 170 | 100 | 2534 |
| 17000.W0300 | 13.0 | 24.0 | 14.0 | M10 | 20 | M 8x22 | 300 | 100 | 2153 |
| 17000.W0450 | 25.0 | 40.0 | 25.0 | M20 | 32 | M10x25 | 387 | 110 | 7300 |

| Order No. | l ₃ | l ₄ | l ₅ | l ₆ | l ₇ | r ₁ | Load capacity kN max. | Stroke s ₁ | w ₂ | w ₃ |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------------|-----------------------|----------------|----------------|
| 17000.W0085 | 13 | - | 13 | 62 | 5 | - | 0.5 | 3 | 30 | 10 |
| 17000.W0150 | 20 | - | 17 | 74 | - | 15 | 2.5 | 6 | 50 | 25 |
| 17000.W0170 | 25 | - | 27 | 108 | 11 | - | 5.0 | 11 | 60 | 20 |
| 17000.W0300 | 30 | 160 | 17 | 74 | - | 15 | 2.5 | 6 | 50 | 25 |
| 17000.W0450 | 30 | 200 | 30 | 89 | - | 24 | 10.0 | 11 | 85 | 40 |

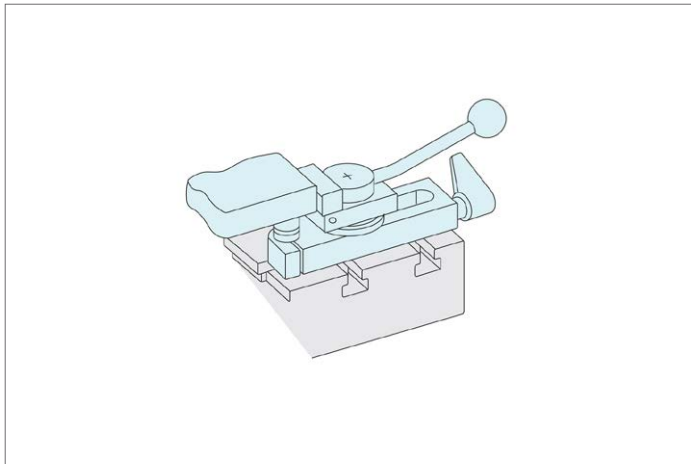


Workpiece Supports

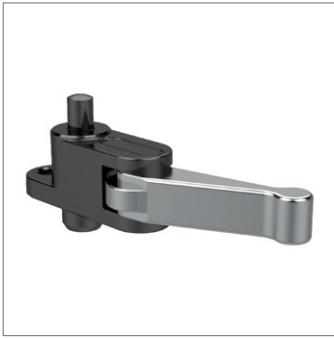
for support and to prevent workpiece chatter



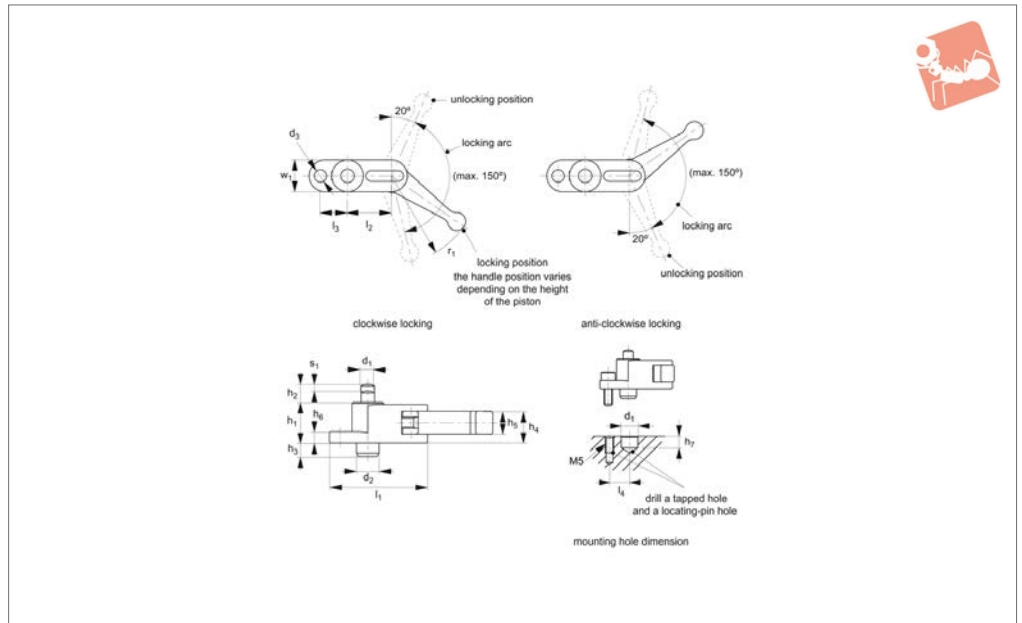
Supports & Stops



SUPPORTS & STOPS



17002



Material

Body and pin: steel (S45C), black oxide finish.

Piston: steel, black oxide finish, HRC 50-55. Cam handle: zinc die-cast, chrome plated.

Technical Notes

The built in disc spring prevent release.

| Order No. | w ₁ | h ₁ | h ₂ | d ₁ | d ₂ | d ₃ | d ₄ +0.3 -0 | h ₃ | h ₄ | h ₅ | Weight g |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|----------------|----------------|----------------|-------------|
| 17002.W0018 | 14 | 18 | 8 | 6 | 10 | 5.5 | 10 | 6.0 | 14.5 | 10 | 76 |
| 17002.W0118 | 14 | 18 | 8 | 6 | 10 | 5.5 | 10 | 6.0 | 14.5 | 10 | 76 |
| 17002.W0025 | 18 | 25 | 10 | 10 | 14 | 5.5 | 14 | 9.5 | 18.5 | 13 | 140 |
| 17002.W0125 | 18 | 25 | 10 | 10 | 14 | 5.5 | 14 | 9.5 | 18.5 | 13 | 140 |

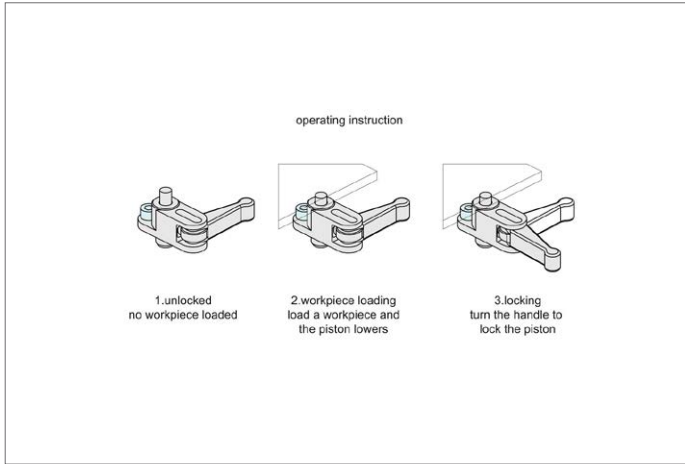
| Order No. | h ₆ | h ₇ | Handle load N max. | l ₁ | l ₂ | l ₃ | l ₄ | r ₁ | Locking direction | Locking mechanism | Piston spring force N | Stroke s ₁ | Support capacity N max. |
|-------------|----------------|----------------|--------------------------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------|--------------------------|--------------------------|-------------------------------|
| 17002.W0018 | 5 | 7.0 | 80 | 43.5 | 19.5 | 12 | 12 | 39 | Clockwise | Spiral cam, 4° | 1,5-3 | 3 | 200 |
| 17002.W0118 | 5 | 7.0 | 80 | 43.5 | 19.5 | 12 | 12 | 39 | Anticlockwise | Spiral cam, 4° | 1,5-3 | 3 | 200 |
| 17002.W0025 | 5 | 10.5 | 100 | 50.4 | 22.4 | 14 | 14 | 50 | Clockwise | Spiral cam, 4° | 1,8-3 | 4 | 400 |
| 17002.W0125 | 5 | 10.5 | 100 | 50.4 | 22.4 | 14 | 14 | 50 | Anticlockwise | Spiral cam, 4° | 1,8-3 | 4 | 400 |

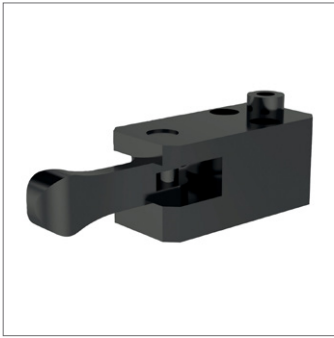


Compact Work Supports with cam handle

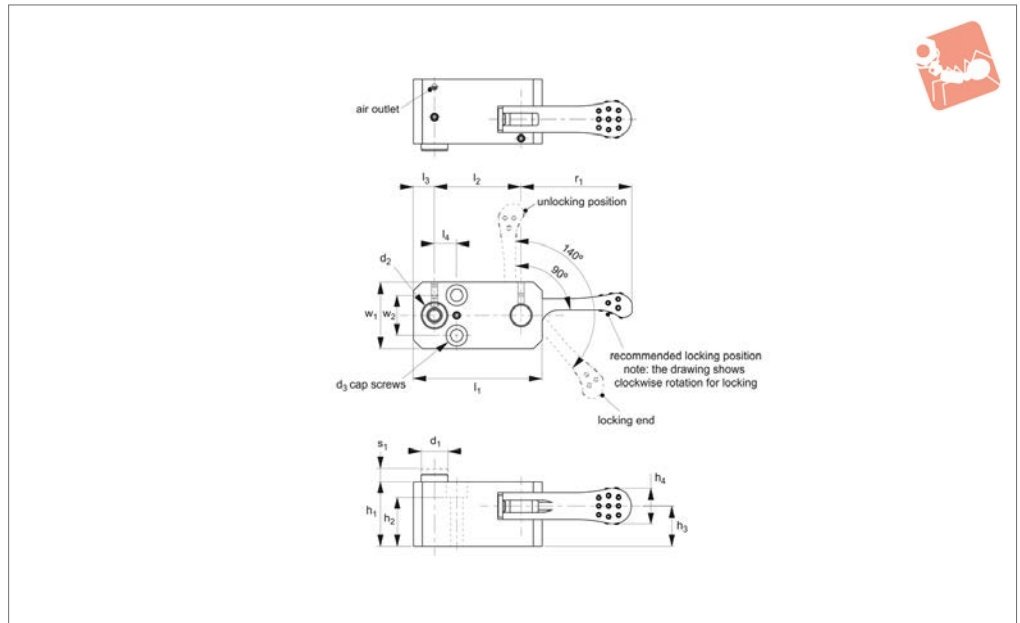


Supports & Stops





17003



Material

Body: steel (S45C), black oxide finish.
 Piston: steel (SK95), tempered and black oxide finish.
 Locking pin: steel (S45C), tempered and black oxide finish.
 Handle: steel (SCM440), tempered and black oxide finish.

Technical Notes

The built in disc spring prevent loosened locking.

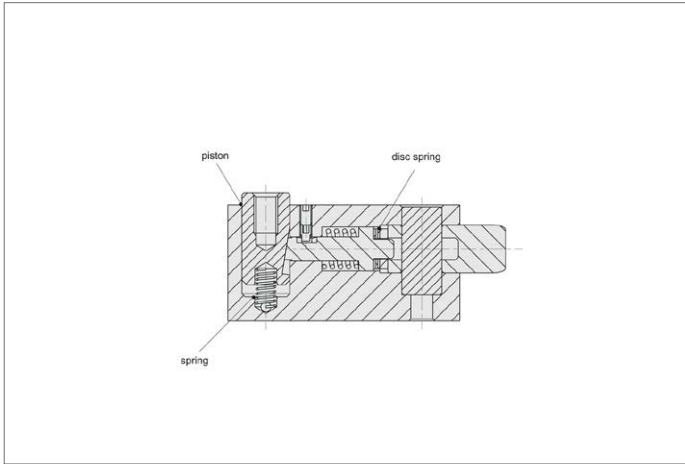
Tips

When you attach a support pad to the tapped hole through the shaft, lock the

shaft in place to prevent damage on installation. To change locking direction loosen set screw, remove retaining pin, invert handle and reassemble.

| Order No. | Capacity kN max. | w ₁ | h ₁ | h ₂ | d ₁ | d ₂ | d ₃ | h ₃ | h ₄ | l ₁ | Weight g |
|-------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|
| 17003.W0024 | 0.5 | 25 | 24 | 19 | 10 | M 5x8 | M 4 | 14 | 14 | 52 | 213 |
| 17003.W0029 | 0.7 | 30 | 29 | 22 | 12 | M 6x10 | M 5 | 18 | 16 | 58 | 335 |
| 17003.W0037 | 0.9 | 38 | 37 | 25 | 16 | M 8x15 | M 6 | 23 | 19 | 75 | 738 |
| 17003.W0042 | 1.2 | 45 | 42 | 30 | 19 | M10x15 | M 8 | 26 | 24 | 85 | 1110 |

| Order No. | l ₂ | l ₃ | l ₄ | r ₁ | Locking mechanism | Piston spring force N | Stroke s ₁ | w ₂ | Allowable handle load N |
|-------------|----------------|----------------|----------------|----------------|-------------------|-----------------------|-----------------------|----------------|-------------------------|
| 17003.W0024 | 36 | 8 | 8 | 40 | Spiral cam, 4° | 0-6 | 5 | 15 | 80 |
| 17003.W0029 | 39 | 9.5 | 10 | 50 | Spiral cam, 4° | 0-6 | 6 | 18 | 100 |
| 17003.W0037 | 51 | 12 | 12 | 63 | Spiral cam, 4° | 0-7 | 8 | 24 | 150 |
| 17003.W0042 | 56 | 14.5 | 15 | 80 | Spiral cam, 4° | 0-11 | 10 | 28 | 200 |

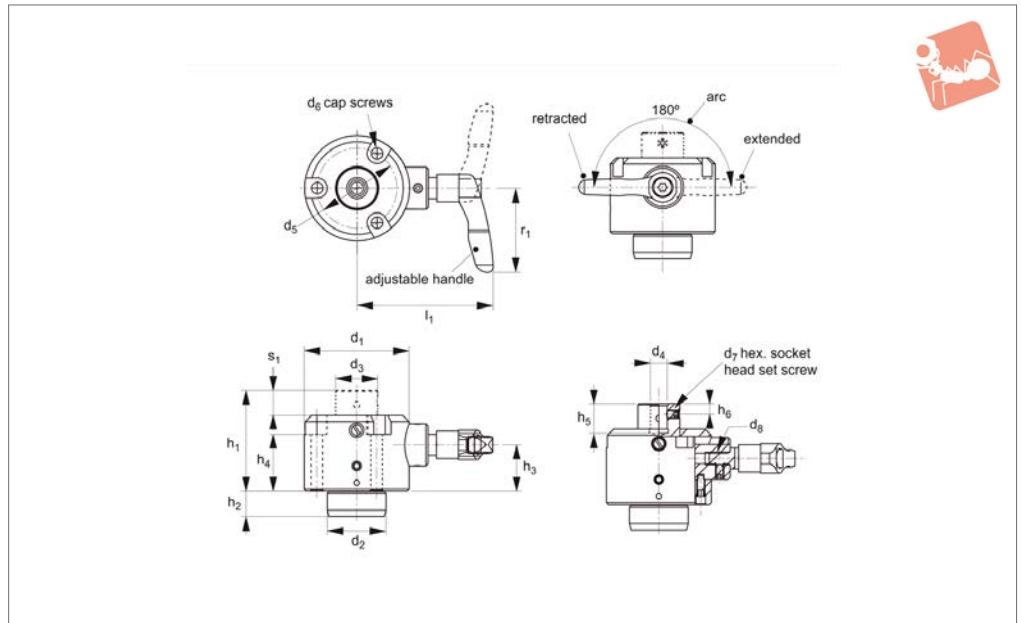




SUPPORTS & STOPS



17004.1



Material

Body and piston: steel (S45C), tempered and black oxide finish.
Crank shaft: steel (S45C), black oxide finish.

Technical Notes

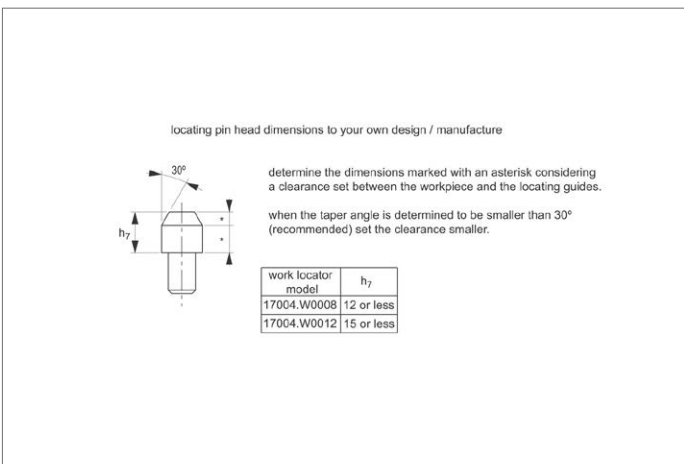
Can support heavy workpieces made from

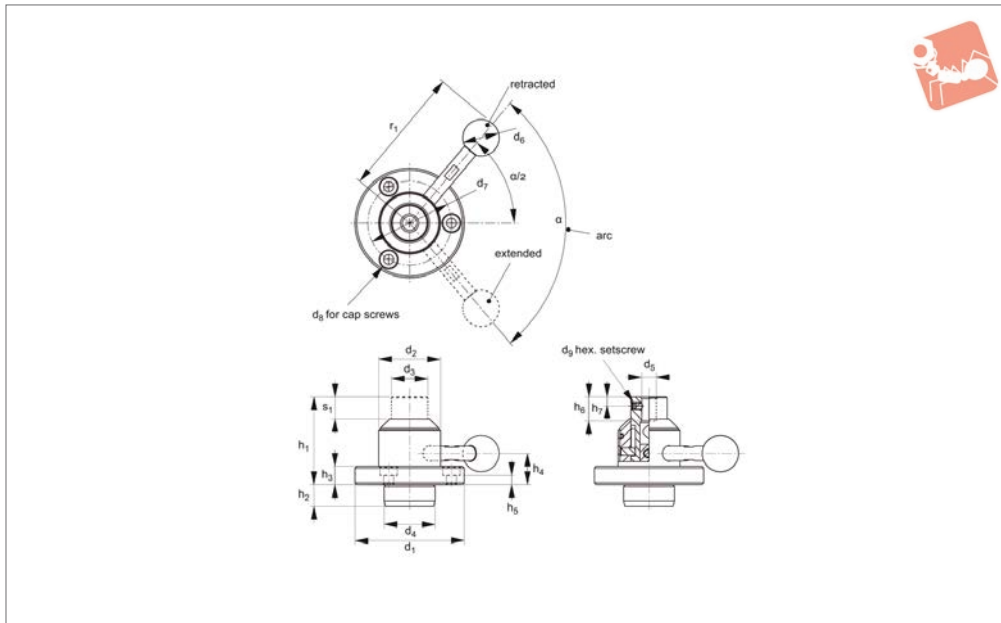
steel or cast iron. No tools needed. The handle position is freely adjustable. The handle can be easily changed to act in a clockwise or anti clockwise direction. Different locating pins can be mounted depending on workpiece's locating holes. The piston stays locked when it is fully

extended or retracted until the handle is operated again.

| Order No. | h_1 | h_2 | d_1 | d_2 tol. g6 | d_3 | d_4 tol. G7 | d_5 | d_6 | d_7 | d_8 | Weight g |
|-------------|-------|-------|-------|------------------|-------|------------------|-------|-------|-------|--------|-------------|
| 17004.W0008 | 48 | 12 | 50 | 28 | 20 | 8 | 38 | M 5 | M 4x5 | M 6x12 | 590 |
| 17004.W0012 | 61 | 14 | 65 | 42 | 30 | 12 | 52 | M 6 | M 5x8 | M 8x7 | 1310 |

| Order No. | h_3 | h_4 | h_5 | h_6 | l_1 | r_1 | Stroke s_1 | Allowable handle load N | Workpiece weight kg max. |
|-------------|-------|-------|-------|-------|-------|-------|--------------|----------------------------|--------------------------------|
| 17004.W0008 | 22 | 27 | 14 | 5 | 65.0 | 40 | 12 | 170 | 250 |
| 17004.W0012 | 26 | 31 | 16 | 6 | 87.5 | 65 | 15 | 210 | 300 |





17004.2

SUPPORTS & STOPS

Material

Body: steel (S45C), tempered and black oxide finish.

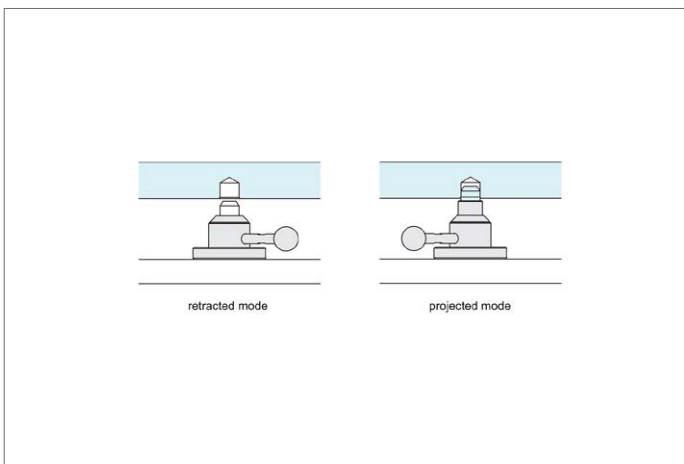
Piston: steel (SCM440), tempered and black oxide finish.

Handle: steel (S45C), black oxide finish.

Ball knob: ABS resin, black.

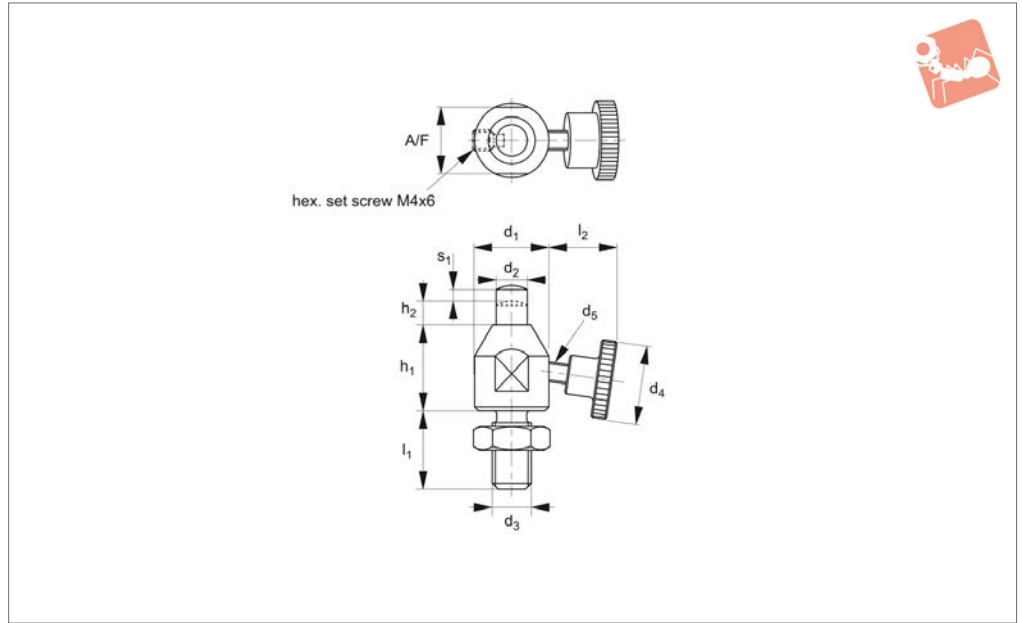
| Order No. | h_1 | h_2 | d_1 | d_2 | d_3 | d_4 tol. G6 | d_5 tol. G7 | d_6 | d_7 | d_8 | Weight g |
|-------------|-------|-------|-------|-------|-------|------------------|------------------|-------|-------|-------|-------------|
| 17004.W0108 | 48 | 12 | 60 | 34 | 20 | 28 | 8 | 20 | 46 | M 5 | 420 |
| 17004.W0112 | 61 | 14 | 80 | 48 | 30 | 42 | 12 | 25 | 63 | M 6 | 1040 |

| Order No. | d_9 | h_3 | h_4 | h_5 | h_6 | h_7 | r_1 | Stroke s_1 | Allowable handle load N | Workpiece weight kg max. | α |
|-------------|-------|-------|-------|-------|-------|-------|-------|--------------|----------------------------|-----------------------------|----------|
| 17004.W0108 | M 4x5 | 10 | 17 | 5 | 13 | 5 | 71 | 12 | 150 | 250 | 100° |
| 17004.W0112 | M 6x8 | 13 | 23 | 7 | 15 | 8 | 94 | 15 | 200 | 300 | 90° |





17005.1



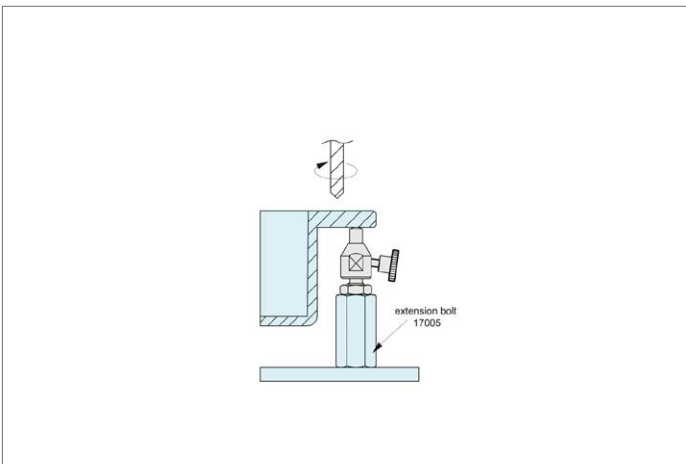
Material

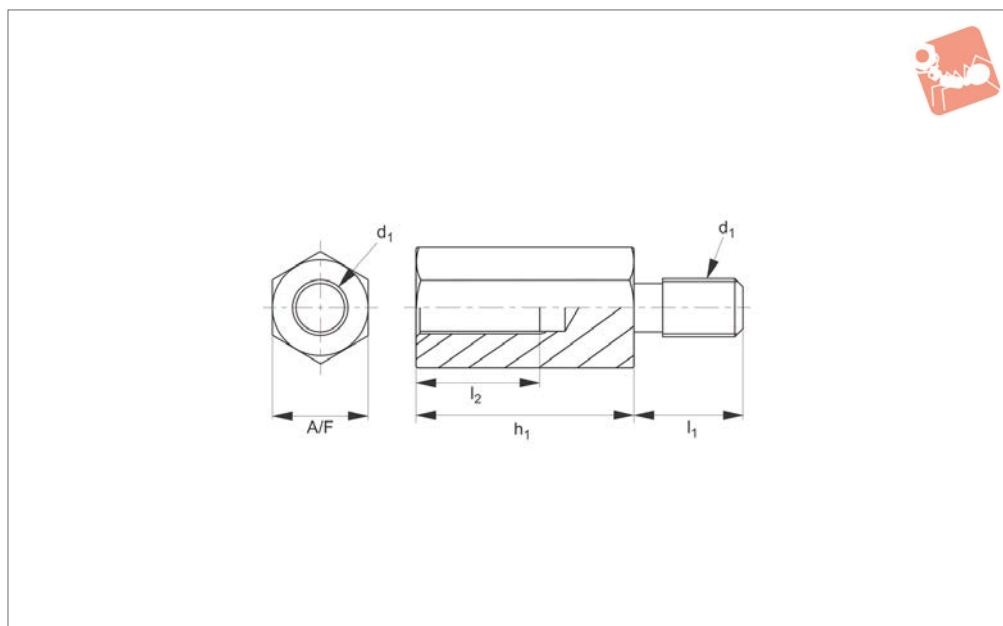
Body: steel (C45), black oxide finish.

Piston: steel (42CrMo), heat treated, black

oxide finish.

| Order No. | h_1 | h_2 | d_1 | d_2 | d_3 | d_4 | d_5 | l_1 | l_2 | Piston spring force N | Stroke s_1 | Support capacity kN | A/F | Weight g |
|-------------|-------|-------|-------|-------|----------|-------|--------|-------|-------|-----------------------|--------------|---------------------|-----|----------|
| 17005.W0018 | 18 | 5 | 15 | 6 | M 8x1,25 | 16 | M 4x16 | 16 | 13,2 | 1,5~3,0 | 3 | 0,2 | 13 | 36 |
| 17005.W0022 | 22 | 6 | 19 | 8 | M10x1,50 | 20 | M 5x20 | 20 | 16,3 | 1,8~3,0 | 4 | 0,3 | 17 | 72 |
| 17005.W0025 | 25 | 6 | 22 | 10 | M12x1,75 | 24 | M 6x25 | 24 | 22,3 | 1,8~3,0 | 4 | 0,4 | 19 | 150 |





17005.2

SUPPORTS & STOPS

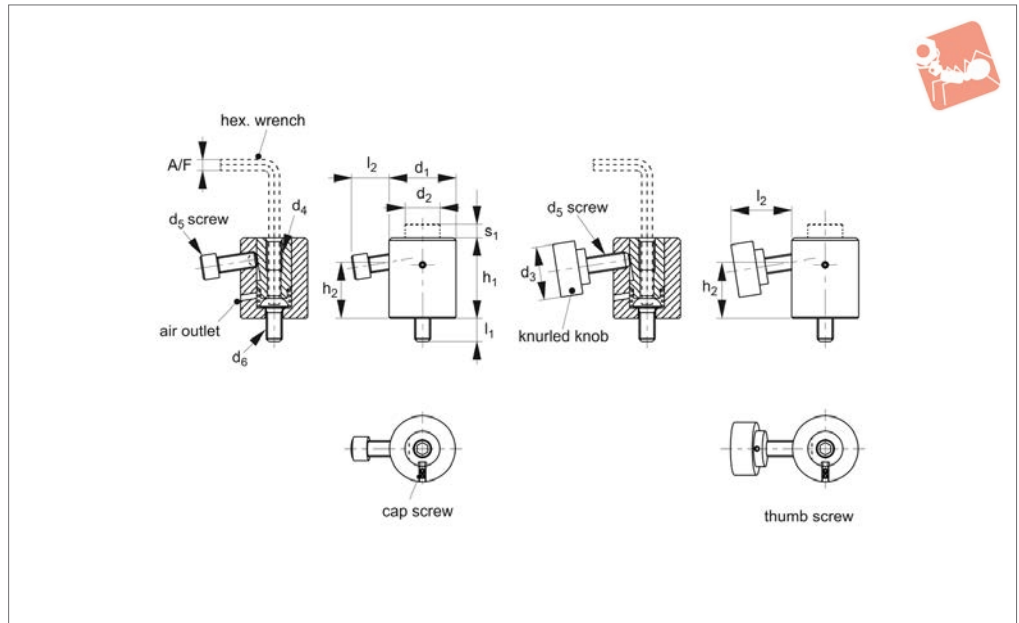
Material

Steel (C45), tempered and black oxide finish.

| Order No. | h_1 | d_1 | l_1 | l_2 | A/F | Weight g |
|-------------|-------|----------|-------|-------|-----|-------------|
| 17005.W0825 | 25 | M 8x1,25 | 13 | 16 | 13 | 25 |
| 17005.W0832 | 32 | M 8x1,25 | 13 | 16 | 13 | 35 |
| 17005.W0840 | 40 | M 8x1,25 | 13 | 16 | 13 | 45 |
| 17005.W1032 | 25 | M10x1,50 | 16 | 20 | 17 | 60 |
| 17005.W1050 | 32 | M10x1,50 | 16 | 20 | 17 | 95 |
| 17005.W1075 | 40 | M10x1,50 | 16 | 20 | 17 | 145 |
| 17005.W1232 | 25 | M12x1,75 | 18 | 20 | 22 | 95 |
| 17005.W1250 | 32 | M12x1,75 | 18 | 20 | 22 | 165 |
| 17005.W1275 | 40 | M12x1,75 | 18 | 20 | 22 | 250 |



17008



Material

Body: steel (C45), black oxide finish.

Piston: steel (C45), tempered, black oxide finish.

Technical Notes

The positive locking mechanism allows the

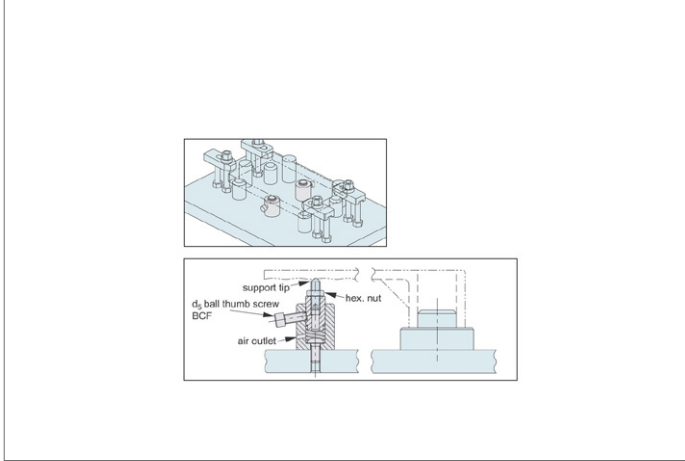
cap screw style to offer high support capacities.

Tips

When you attach a support tip to the tapped hole through the shaft, tighten the shaft and secure it to prevent damage.

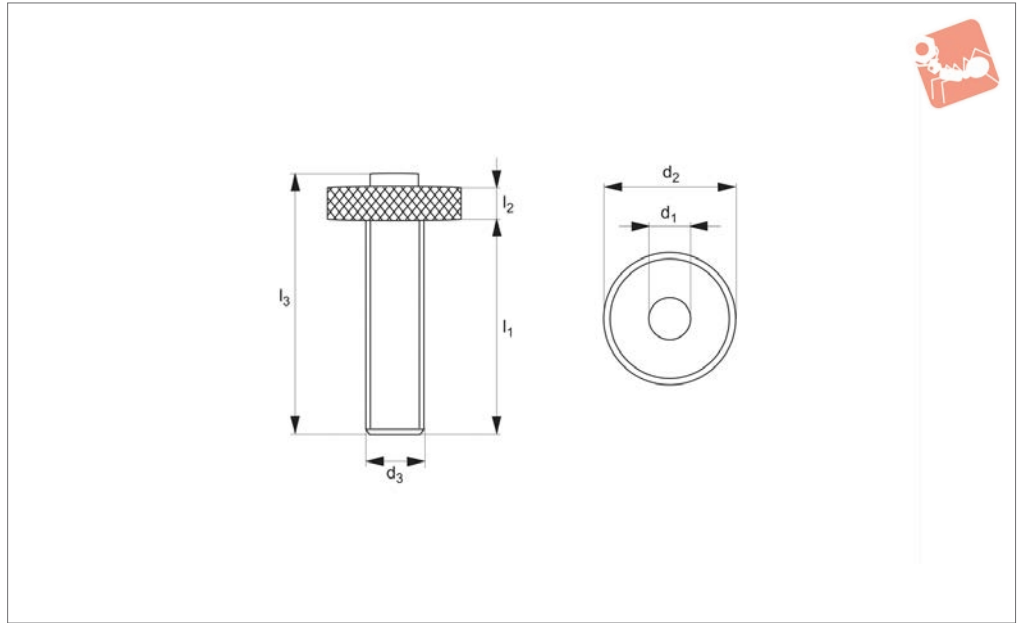
| Order No. | Type | h_1 | h_2 | d_1 | d_2 | d_3 | d_4 | Weight g |
|-------------|-------------|-------|-------|-------|-------|-------|--------|----------|
| 17008.W0033 | Cap screw | 33 | 22.0 | 28 | 14 | - | M 6x12 | 150 |
| 17008.W0042 | Cap screw | 42 | 28.5 | 35 | 19 | - | M 8x16 | 300 |
| 17008.W0050 | Cap screw | 50 | 34.0 | 42 | 22 | - | M10x20 | 540 |
| 17008.W0060 | Cap screw | 60 | 42.0 | 50 | 26 | - | M12x24 | 865 |
| 17008.W0070 | Cap screw | 70 | 47.0 | 60 | 33 | - | M16x32 | 1390 |
| 17008.W0233 | Thumb screw | 33 | 22.0 | 28 | 14 | 24 | M 6x12 | 185 |
| 17008.W0242 | Thumb screw | 42 | 28.5 | 35 | 19 | 30 | M 8x16 | 360 |
| 17008.W0250 | Thumb screw | 50 | 34.0 | 42 | 22 | 36 | M10x20 | 620 |
| 17008.W0260 | Thumb screw | 60 | 42.0 | 50 | 26 | 40 | M12x24 | 1020 |

| Order No. | d_5 | d_6 | l_1 | l_2 | Piston spring force N | Stroke s_1 | Support capacity kN max. | Torque to Nm max. | A/F |
|-------------|--------|-------|-------|-------|-----------------------|--------------|--------------------------|-------------------|-----|
| 17008.W0033 | M 6x16 | M 6 | 10 | 14.1 | 10~22 | 6 | 4.0 | 7.5 | 4 |
| 17008.W0042 | M 8x20 | M 8 | 15 | 18.8 | 10~27 | 10 | 6.0 | 14.0 | 5 |
| 17008.W0050 | M10x25 | M10 | 14 | 23.8 | 14~28 | 10 | 7.5 | 18.0 | 6 |
| 17008.W0060 | M12x30 | M12 | 17 | 28.5 | 15~30 | 10 | 9.0 | 22.0 | 8 |
| 17008.W0070 | M12x30 | M16 | 22 | 26.5 | 15~35 | 10 | 9.0 | 25.0 | 10 |
| 17008.W0233 | M 6 | M 6 | 10 | 22.7 | 10~22 | 6 | 0.6 | 1.0 | 4 |
| 17008.W0242 | M 8 | M 8 | 15 | 27.7 | 10~27 | 10 | 0.7 | 1.2 | 5 |
| 17008.W0250 | M10 | M10 | 14 | 31.8 | 14~28 | 10 | 0.7 | 1.5 | 6 |
| 17008.W0260 | M12 | M12 | 17 | 36.8 | 15~30 | 10 | 0.8 | 2.0 | 8 |





18420



SUPPORTS & STOPS

Material

Steel, heat-treated.

| Order No. | d_1 | d_2 | d_3 | l_1 | l_2 | l_3 | Weight g |
|-------------|-------|-------|-------|-------|-------|-------|-------------|
| 18420.W0001 | 12 | 28 | M12 | 46 | 8 | 58 | 70 |
| 18420.W0002 | 16 | 34 | M16 | 57 | 9 | 72 | 150 |