

17100

SUPPORTS & STOPS

Material

Steel, case-hardened and precision ground in pairs.

Technical Notes

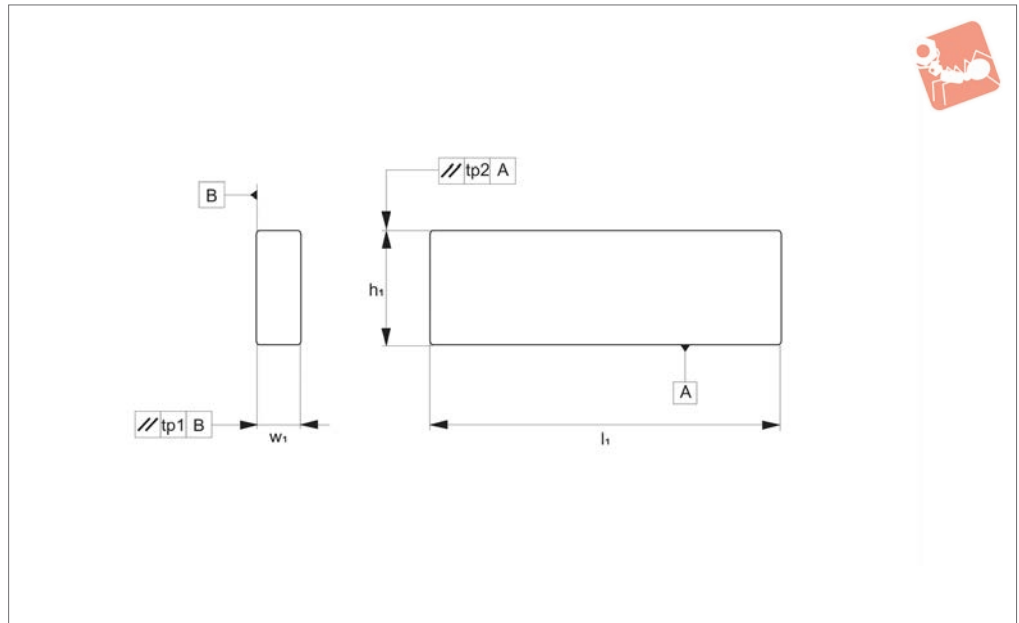
DIN6364 P. Tolerances:
 h_1 (height) pair tolerance $tp2 =$ to IT5.

w_1 (width) pair tolerance $tp1 =$ to IT5.
 Other dimensions to ISO 2768m.

Order No.	h_1	l_1	Pair tolerance $tp1$	w_1	Pair tolerance $tp2$	h_1	Standard tolerance h_1	Standard tolerance w_1	w_1	Weight/pair g
17100.W0008	8	63	0.004		0.006		$\pm 0,2$	$\pm 0,1$	2.5	20
17100.W0010	10	63	0.005		0.006		$\pm 0,2$	$\pm 0,1$	3.2	30
17100.W0012	12	63	0.005		0.008		$\pm 0,2$	$\pm 0,1$	4.0	45
17100.W0013	12	100	0.005		0.008		$\pm 0,2$	$\pm 0,1$	4.0	75
17100.W0016	16	63	0.005		0.008		$\pm 0,2$	$\pm 0,1$	5.0	80
17100.W0017	16	100	0.005		0.008		$\pm 0,2$	$\pm 0,1$	5.0	125
17100.W0020	20	63	0.006		0.009		$\pm 0,2$	$\pm 0,2$	6.3	125
17100.W0021	20	100	0.006		0.009		$\pm 0,2$	$\pm 0,2$	6.3	200
17100.W0025	25	100	0.006		0.009		$\pm 0,2$	$\pm 0,2$	8.0	315
17100.W0026	25	160	0.006		0.009		$\pm 0,2$	$\pm 0,2$	8.0	500
17100.W0032	32	100	0.006		0.011		$\pm 0,3$	$\pm 0,2$	10.0	500
17100.W0033	32	160	0.006		0.011		$\pm 0,3$	$\pm 0,2$	10.0	800
17100.W0040	40	100	0.008		0.011		$\pm 0,3$	$\pm 0,2$	12.0	750
17100.W0041	40	160	0.008		0.011		$\pm 0,3$	$\pm 0,2$	12.0	1200
17100.W0050	50	160	0.008		0.011		$\pm 0,3$	$\pm 0,2$	16.0	2000
17100.W0063	63	160	0.009		0.013		$\pm 0,3$	$\pm 0,2$	20.0	3170
17100.W0064	63	250	0.009		0.013		$\pm 0,3$	$\pm 0,2$	20.0	4950
17100.W0080	80	250	0.009		0.013		$\pm 0,3$	$\pm 0,2$	25.0	7900
17100.W0100	100	250	0.011		0.015		$\pm 0,3$	$\pm 0,3$	32.0	12680
17100.W0101	100	400	0.011		0.015		$\pm 0,3$	$\pm 0,3$	40.0	25300



17120



Material

Steel, case hardened and precision ground.
In wooden box with removable lid.

Tolerances:

h_1 (height) pair tolerance tp2 = to IT5.
 w_1 (width) pair tolerance tp1 = to IT5.
Other dimensions to ISO 2768m.

Technical Notes

Produced to DIN 6346S.

Order No.	Support height in 1 mm increments	1 pair $L = 250\text{mm}$ $h_1 \times w_1$	1 pair $l_2 = 100\text{mm}$ $h_1 \times w_1$	1 pair $l_2 = 160\text{mm}$ $h_1 \times w_1$	1 pair $l_2 = 63\text{mm}$ $h_1 \times w_1$	Wooden box $l_1 \times$ $h_1 \times w_1$	Weight g
17120.W0025	2,5-25		12x4,0 16x5,0 20x6,3 25x8,0		8x2,5 10x3,2 12x4,0 16x5,0 20x6,3	200x100x36	1300
17120.W0040	4,0-40		12x4,0 16x5,0 20x6,3 25x8,0	25x8,0 32x10,0 40x12,0		305x115x50	3800
17120.W0063	8,0-63		25x8,0 32x10,0 40x12,0	50x16,0 63x20,0		305x115x70	7400
17120.W0100	20,0-100	63x20 80x25 100x32				280x215x125	27100
17120.W0532	4,0-32		12x4,0 16x5,0 20x6,3 25x8,0 32x10,0			132x145x50	1500
17120.W0550	8,0-50			25x8,0 32x10,0 40x12,0 50x16,0		192x158x75	4900

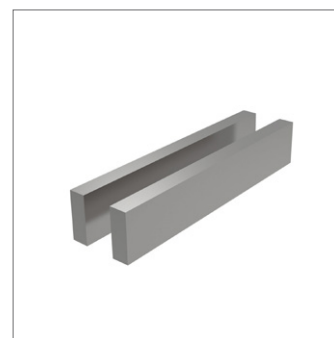
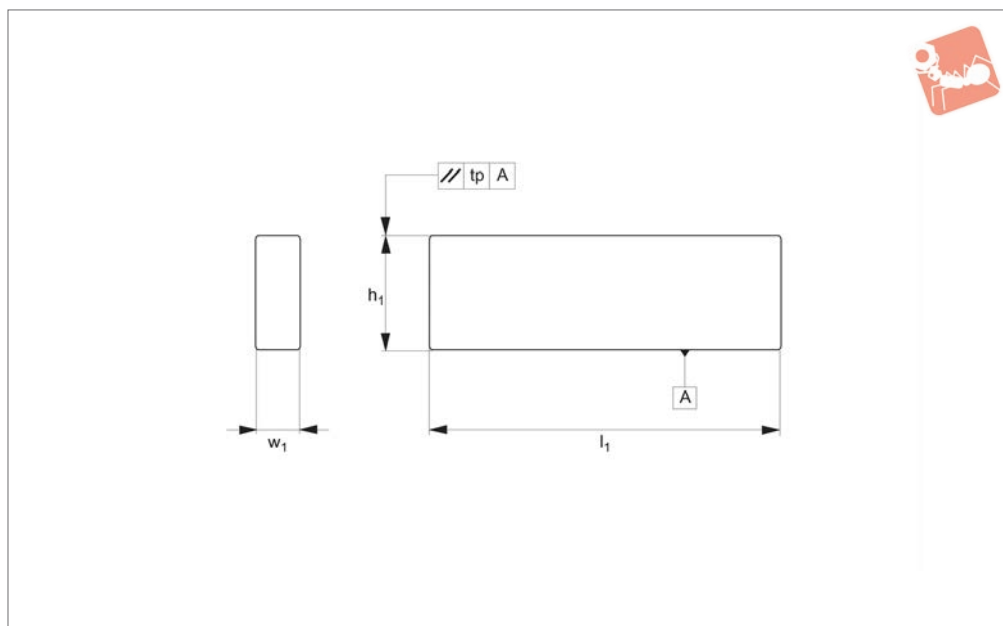


Parallel Supports - Pairs

high, standard and precision



Supports & Stops



17200

SUPPORTS & STOPS

Material

Steel, case-hardened and ground in pairs.

Technical Notes

Tolerances - high precision level:
 h_1 (height) pair tolerance $tp = 0,004\text{mm}$.
 h_1 (height) standard (single) $tp = \pm 0,004\text{mm}$.

Other dimensions to DIN ISO 2768m.

Tolerances - standard level:
 h_1 (height) pair tolerance $tp = \pm 0,01\text{mm}$.
 h_1 (height) standard (single) $tp = \text{ISO 2768m}$.

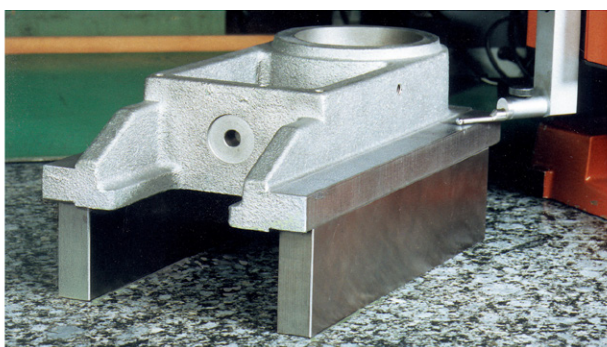
Tolerances - precision level:

h_1 (height) pair tolerance $tp = \pm 0,01\text{mm}$.
 h_1 (height) standard (single) $tp = \pm 0,01\text{mm}$.
 Other dimensions to DIN ISO 2768m.

Order No.	h_1 - Pair tolerance tp	h_1 - Standard tolerance tp	$h_1 \times w_1 \times l_1$	Precision level	Weight/pair g
17200.W0014	0.004	$\pm 0,004$	14x10x150	Super High	330
17200.W0016	0.004	$\pm 0,004$	16x10x150	Super High	380
17200.W0018	0.004	$\pm 0,004$	18x10x150	Super High	420
17200.W0020	0.004	$\pm 0,004$	20x10x150	Super High	470
17200.W0022	0.004	$\pm 0,004$	22x10x150	Super High	520
17200.W0024	0.004	$\pm 0,004$	24x10x150	Super High	570
17200.W0026	0.004	$\pm 0,004$	26x10x150	Super High	610
17200.W0028	0.004	$\pm 0,004$	28x10x150	Super High	660
17200.W0030	0.004	$\pm 0,004$	30x10x150	Super High	710
17200.W0032	0.004	$\pm 0,004$	32x10x150	Super High	750
17200.W0035	0.004	$\pm 0,004$	35x10x150	Super High	830
17200.W0040	0.004	$\pm 0,004$	40x10x150	Super High	940
17200.W0045	0.004	$\pm 0,004$	45x10x150	Super High	1060
17200.W0050	0.004	$\pm 0,004$	50x10x150	Super High	1180
17200.W0114	0.01	$\pm 0,01$	14x10x150	Precision	330
17200.W0116	0.01	$\pm 0,01$	16x10x150	Precision	380
17200.W0118	0.01	$\pm 0,01$	18x10x150	Precision	420
17200.W0120	0.01	$\pm 0,01$	20x10x150	Precision	470
17200.W0122	0.01	$\pm 0,01$	22x10x150	Precision	520
17200.W0124	0.01	$\pm 0,01$	24x10x150	Precision	570
17200.W0126	0.01	$\pm 0,01$	26x10x150	Precision	610
17200.W0128	0.01	$\pm 0,01$	28x10x150	Precision	660
17200.W0130	0.01	$\pm 0,01$	30x10x150	Precision	710
17200.W0132	0.01	$\pm 0,01$	32x10x150	Precision	750
17200.W0135	0.01	$\pm 0,01$	35x10x150	Precision	830
17200.W0140	0.01	$\pm 0,01$	40x10x150	Precision	940
17200.W0145	0.01	$\pm 0,01$	45x10x150	Precision	1060
17200.W0150	0.01	$\pm 0,01$	50x10x150	Precision	1180
17200.W0214	0.01	2768-m	14x10x150	Standard	330
17200.W0216	0.01	2768-m	16x10x150	Standard	380



Order No.	h_1 - Pair tolerance t_p	h_1 - Standard tolerance t_p	$h_1 \times w_1 \times l_1$	Precision level	Weight/pair g
17200.W0218	0.01	2768-m	18x10x150	Standard	420
17200.W0220	0.01	2768-m	20x10x150	Standard	470
17200.W0222	0.01	2768-m	22x10x150	Standard	520
17200.W0224	0.01	2768-m	24x10x150	Standard	570
17200.W0226	0.01	2768-m	26x10x150	Standard	610
17200.W0228	0.01	2768-m	28x10x150	Standard	660
17200.W0230	0.01	2768-m	30x10x150	Standard	710
17200.W0232	0.01	2768-m	32x10x150	Standard	750
17200.W0235	0.01	2768-m	35x10x150	Standard	830
17200.W0240	0.01	2768-m	40x10x150	Standard	940
17200.W0245	0.01	2768-m	45x10x150	Standard	1060
17200.W0250	0.01	2768-m	50x10x150	Standard	1180



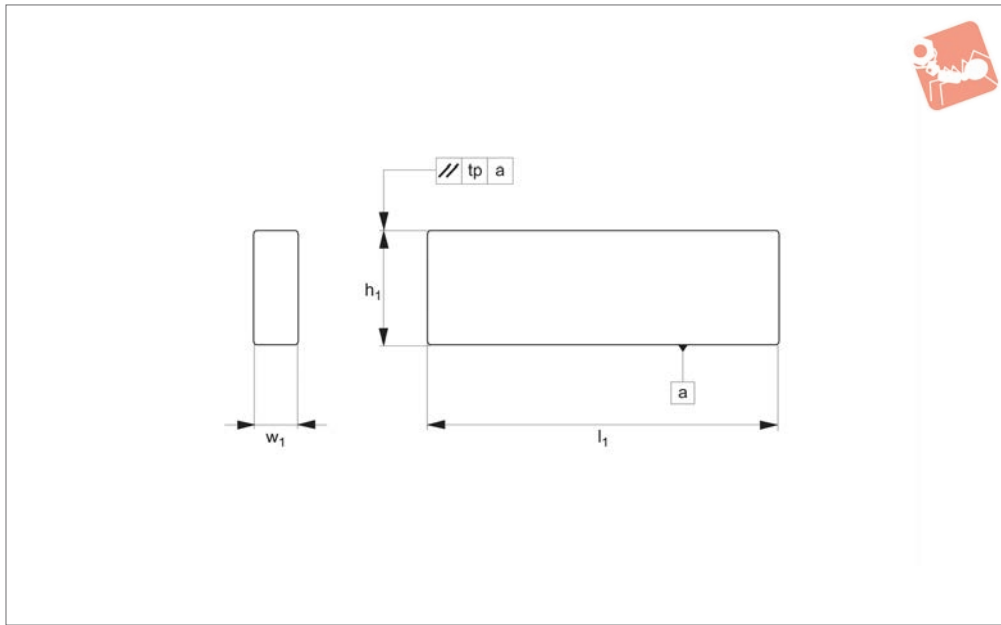


Parallel Support Pairs - Set

high precision - in wooden stand



Supports & Stops



17211

SUPPORTS & STOPS

Material

Steel, case-hardened and finely ground in pairs.

Technical Notes

Machined in parallel and square. Set incre-

ments are 1mm.

Super high precision version. For standard precision model, (see part no 17200 for full tolerances).

Tolerances:

h_1 (height) pair tolerance $tp =$ to IT5.

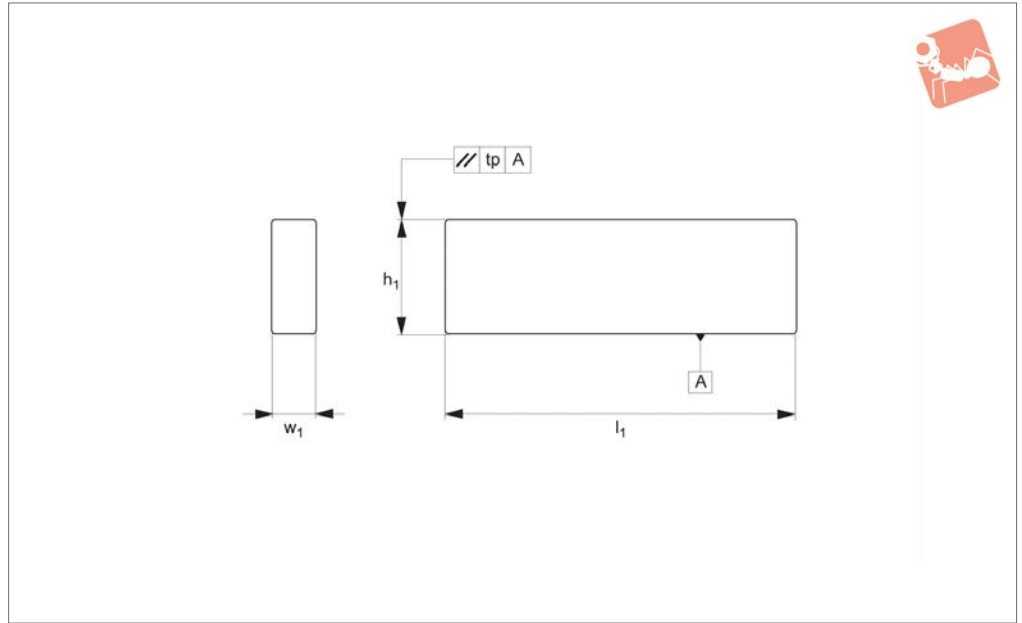
h_1 (height) and w_1 (width) standard (single) tolerance $\pm 0,01$ mm.

All other dimensions to DIN ISO 2768m.

Order No.	Contents (1 pair each) $w_1 \times h_1 \times l_1$	Support height in 1 mm increments	Tolerance h_1 and w_1 mm	Weight g
17211.W0001	2x5x100 2x10x100	2-24	$\pm 0,01$	2200
	2x15x100 2x20x100			
	3x6x100 3x11x100			
	3x16x100 3x21x100			
	4x7x100 4x12x100			
17211.W0002	8x11x125 8x16x125	8-42	$\pm 0,01$	14000
	8x21x125 8x26x125			
	8x31x125 8x36x125			
	10x13x125 10x18x125			
	10x23x125 10x28x125			
17211.W0003	8x11x150 8x16x150	8-42	$\pm 0,01$	17000
	8x21x150 8x26x150			
	8x31x150 8x36x150			
	10x13x150 10x18x150			
	10x23x150 10x28x150			



17212



Material

Steel, case hardened and finely ground in pairs.

Technical Notes

Machined in parallel and square. Set incre-

ments are 1mm.

Standard precision version (see part no. 17200 for full tolerances). For high precision model, see parts 17211.

Tolerances:

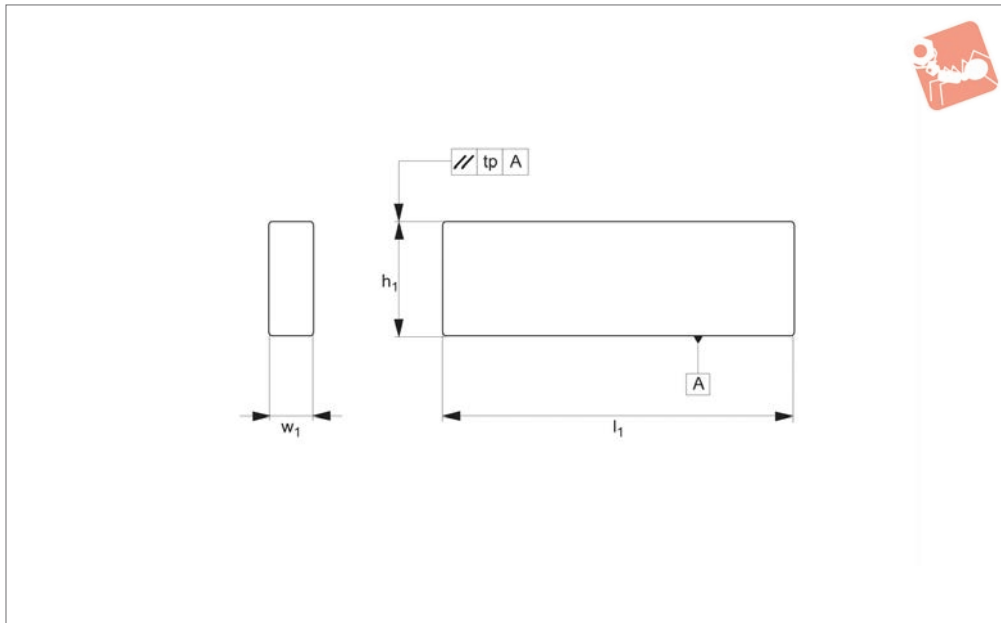
h_1 (height) pair tolerance $tp =$ to ITS.
 h_1 (height) and w_1 (width) standard (single) tolerance to DIN ISO 2768m.
 All other dimensions to DIN ISO 2768m.

Order No.	Contents (1 pair each) $w_1 \times h_1 \times l_1$	Support height in 1 mm increments	Weight g
17212.W0201	2x5x100 2x10x100	2-24	2200
	2x15x100 2x20x100		
	3x6x100 3x11x100		
	3x16x100 3x21x100		
	4x7x100 4x12x100		
17212.W0202	8x11x125 8x16x125	8-42	14000
	8x21x125 8x26x125		
	8x31x125 8x36x125		
	10x13x125 10x18x125		
	10x23x125 10x28x125		
17212.W0203	8x11x150 8x16x150	8-42	17000
	8x21x150 8x26x150		
	8x31x150 8x36x150		
	10x13x150 10x18x150		
	10x23x150 10x28x150		



Parallel Support Pairs - Set in wooden case

Supports & Stops



17220

SUPPORTS & STOPS

Material

Steel, ground and case-hardened.
In wooden box with removable lid.

Technical Notes

Dimensions w_1 and l_1 to ISO 2768 medium.
Tolerances - 17220.W0001 (super high precision).
 h_1 (height) pair tolerance $tp = 0,004\text{mm}$.
 h_1 (height) standard tolerance $tp = \pm 0,004\text{mm}$.

Other dimensions to DIN ISO 2768m.

Tolerances - 17220.W0000 (standard precision).
 h_1 (height) pair tolerance $tp = 0,010\text{mm}$.
 h_1 (height) standard tolerance $tp = \pm 0,004\text{mm}$.

Tips

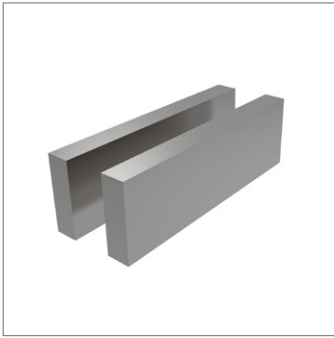
Indispensable for parallel support of components in vices and plates. Their high

degree of accuracy allows the combination of sizes.

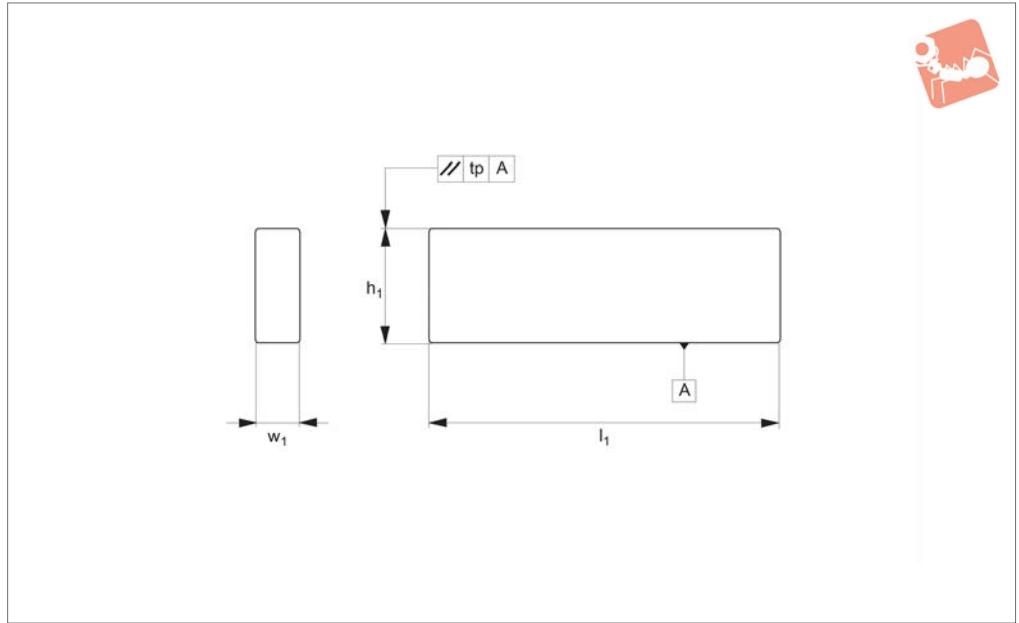
Part no. 17220.W0000 is exactly the same as 17220.W0001, but is a lower cost, and lower toleranced set.

Matched sets can be supplied on request for an extra charge.

Order No.	Contents (pairs) $h_1 \times w_1 \times l_1$	h_1 Standard tolerance	h_1 - Pair tolerance tp	Weight g
17220.W0001	14x10x150	$\pm 0,004$	$\pm 0,004$	10900
	16x10x150			
	18x10x150			
	20x10x150			
	22x10x150			
17220.W0000	as per 17220.W0001 but with lower tolerances	$\pm 0,2$ (to 30mm) $\pm 0,3$ (>30mm)	$\pm 0,010$	10600



17320



Material

Steel, case-hardened and finely ground in pairs.

Technical Notes

The thickness of these parallels matches the slot width on machine tables (tolerance H8).

range H8).

Tolerances:

h_1 (height) pair tolerance $tp = IT5$.

h_1 (height) standard (single) tolerance to DIN ISO 2768m.

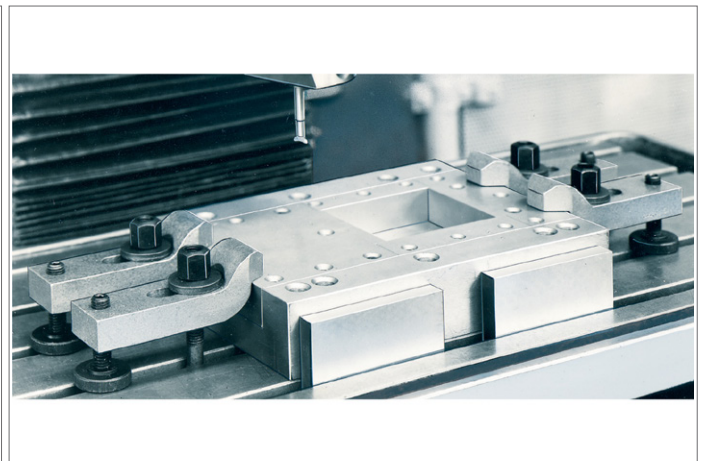
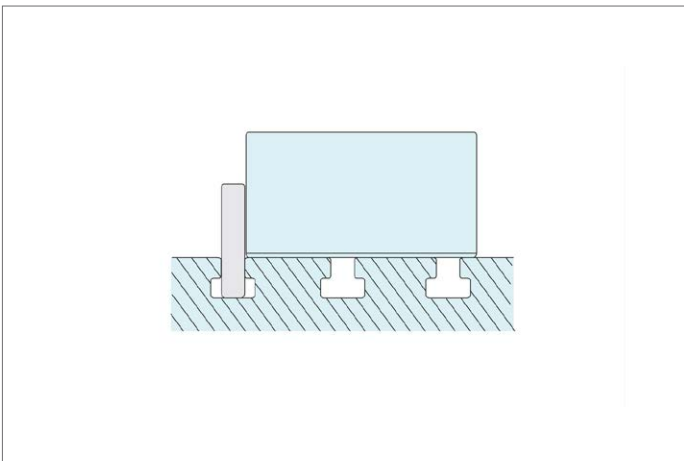
w_1 (width) standard (single) tolerance = h7

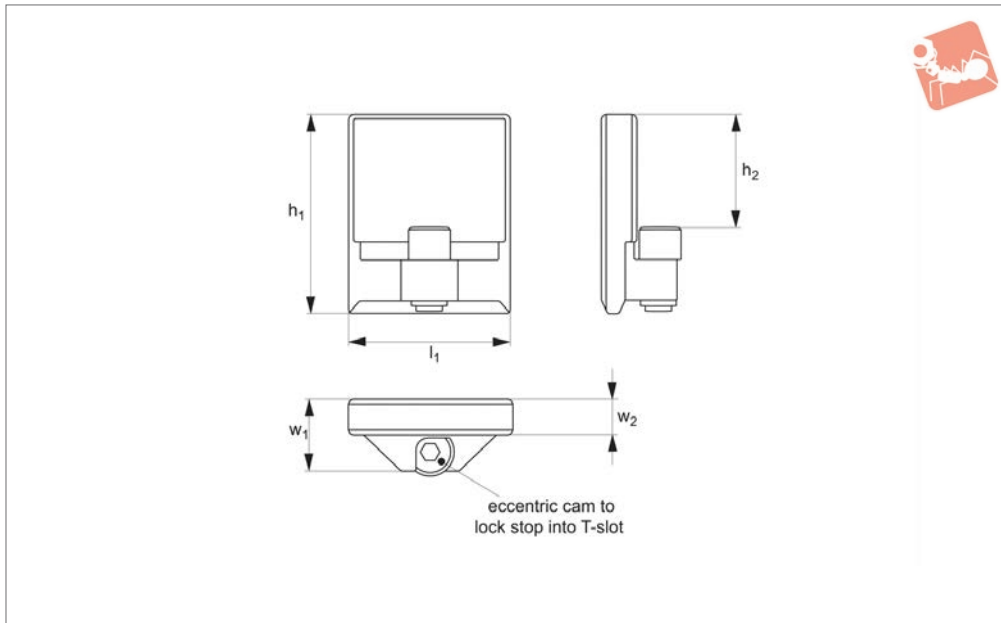
Other dimensions to DIN ISO 2768m.

Tips

Ideally used for stops on small and medium machines. They allow rapid alignment of the workpiece to the table.

Order No.	h_1	l_1	Pair tolerance h_1 tp	Standard tolerance DIN 7168m h_1	w_1	w_1 tol. h7	Weight/pair g
17320.W0008	25	100	0.009	$\pm 0,2$	8	-0.015	315
17320.W0010	32	100	0.011	$\pm 0,3$	10	-0.015	500
17320.W0012	40	100	0.011	$\pm 0,3$	12	-0.018	750
17320.W0014	50	100	0.011	$\pm 0,3$	14	-0.018	1100
17320.W0016	50	160	0.011	$\pm 0,3$	16	-0.018	2000
17320.W0018	63	160	0.013	$\pm 0,3$	18	-0.018	2850
17320.W0020	63	160	0.013	$\pm 0,3$	20	-0.021	3170
17320.W0022	80	160	0.013	$\pm 0,3$	22	-0.021	4400
17320.W0024	80	160	0.013	$\pm 0,3$	24	-0.021	4800
17320.W0028	100	160	0.015	$\pm 0,3$	28	-0.021	7000





17400

SUPPORTS & STOPS

Material

Steel, ground and hardened.

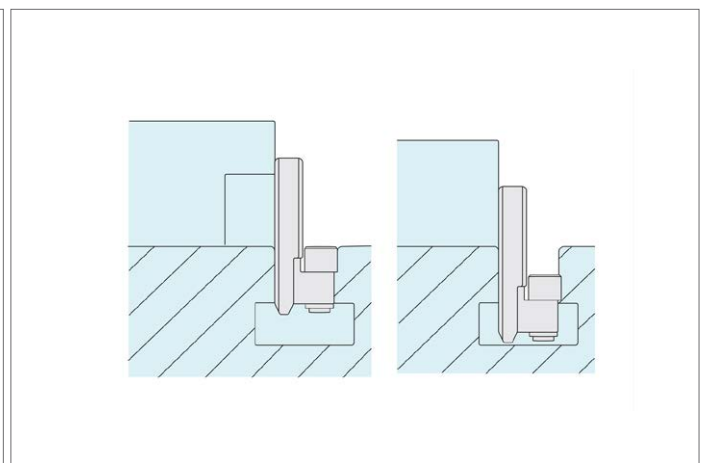
For machine T-slots from 12mm to 22mm.

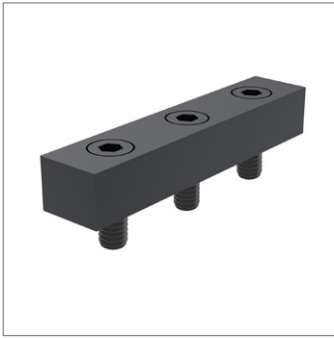
Position stop in machine slot, actuate the eccentric cam to lock in place.

Technical Notes

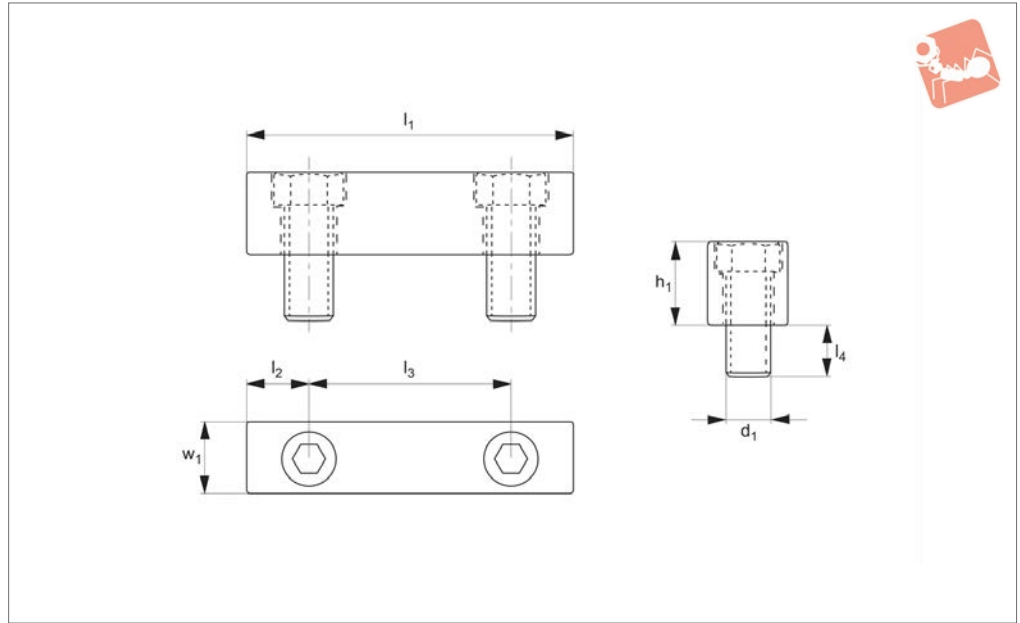
Compact, strong and easily removable.

Order No.	w_2	h_1	h_2	l_1	Slot size w_1
17400.W0020	6.0	33	17	25	12
17400.W0025	6.0	36	20	30	14
17400.W0030	8.0	40	20	30	16
17400.W0035	9.8	40	21	40	18
17400.W0045	12.0	55	27	50	22





17403



Material

Low carbon steel, precision ground square. Mounting screws included.

Technical Notes

The locating rails can be machined and are ideal for using with our machinable

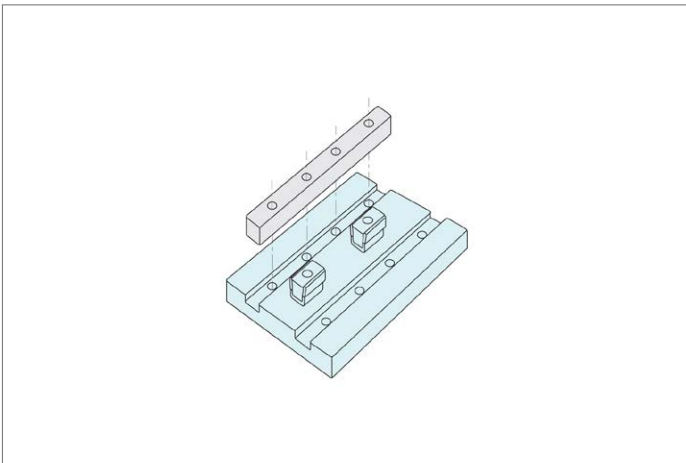
clamps.

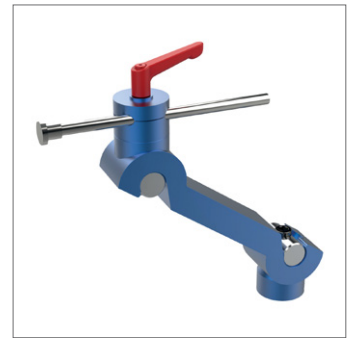
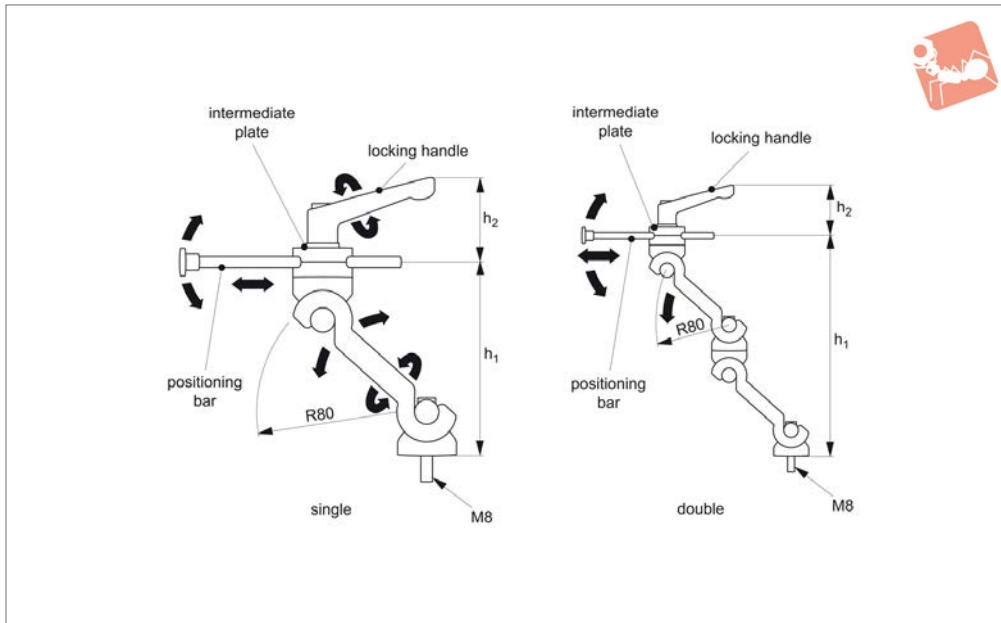
Important Notes

1. Mill a slot to locate the rail. Depth of slot will determine rail height.
2. Drill and tap the required holes.
3. For better rigidity the rail should be

pinned to the fixture plate with dowel pins.
4. If rails are to be machined to hold round pieces, the clamps should be mounted and both rail and clamps machined at the same time.

Order No.	w_1 +0.00 -0.01	d_1	h_1	l_1	l_2	l_3	l_4	No. of holes	Weight g
17403.W0200	15	M 6	12	50	15	20	11	2	68.0
17403.W0210	15	M 6	12	100	20	30	11	3	140.6
17403.W0220	15	M 6	12	150	30	30	11	4	208.7
17403.W0240	15	M 6	12	250	25	50	11	5	353.8
17403.W0260	24	M10	18	75	20	35	18	2	258.5
17403.W0280	24	M10	18	150	30	30	18	4	512.6
17403.W0300	24	M10	18	250	25	50	18	5	848.2





17405

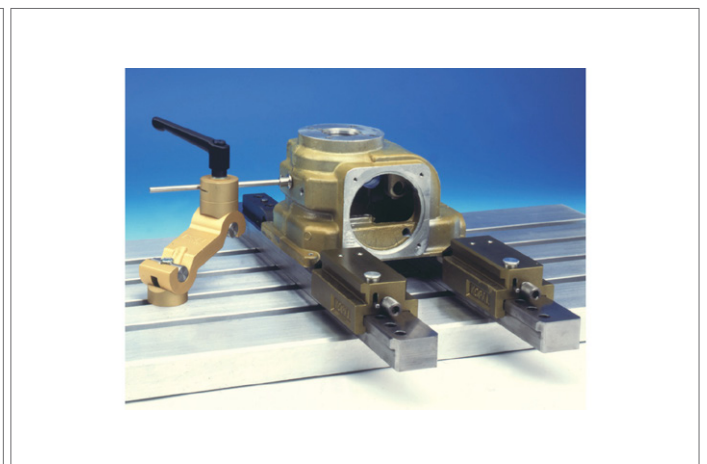
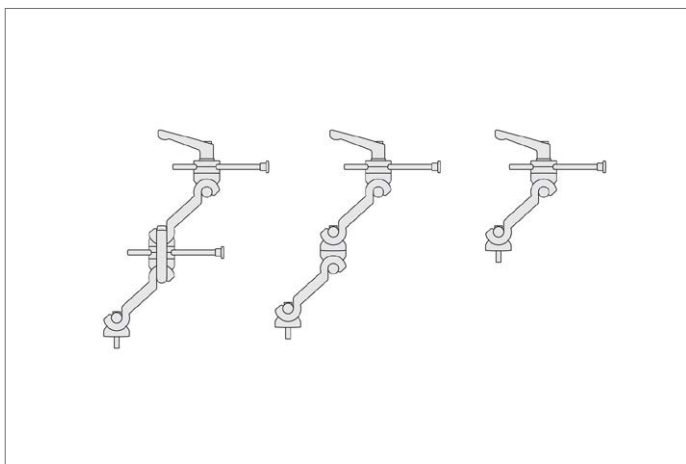
SUPPORTS & STOPS

Technical Notes

Three dimensional, fully adjustable end stops for milling machines, and vices.

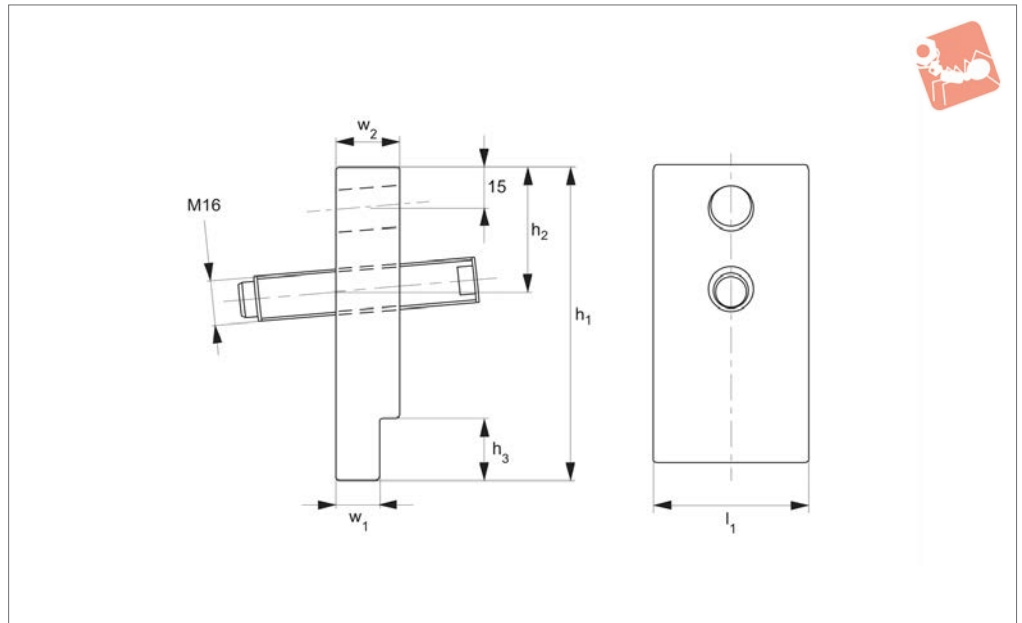
Can also be used as a support to minimise work-piece vibration.

Order No.	Bar dia.	Height adj. min. max.	h_1	h_2	Type
17405.W0420	6x150	0-150	145	60	Single
17405.W0430	6x150	0-300	300	60	Double
17405.W0710	-	-	-	-	Intermediate Plate
17405.W0720	-	-	-	-	Locking Handle





17420



Material

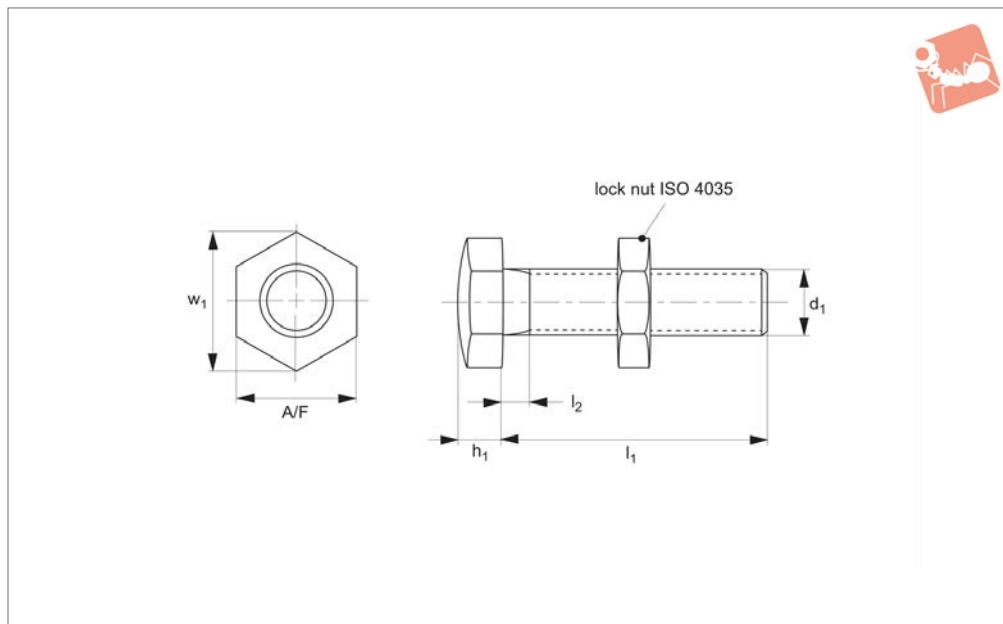
Steel, tempered, with two threaded holes M16, and adjustable set screw M16x80.

on slotted tables. The side stop slips into the T-slot and locks when the adjusting bolt comes into contact with the workpiece.

Technical Notes

Used to position long or heavy workpieces

Order No.	w ₂	h ₁	h ₂	h ₃	l ₁	Slot w ₁	Weight g
17420.W0018	20	100	40	20	50	18	805
17420.W0020	25	125	40	30	80	20	1880
17420.W0022	25	125	40	30	80	22	1920
17420.W0024	32	150	65	40	100	24	3515
17420.W0028	32	150	65	40	100	28	3645
17420.W0036	40	160	65	50	120	36	4870



18300

SUPPORTS & STOPS

Material

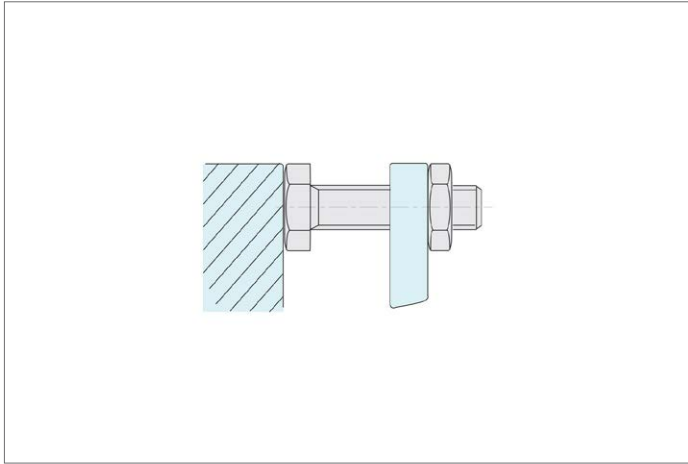
Bolt: steel, blackened and with a hardened head. Tensile strength 500N/mm².

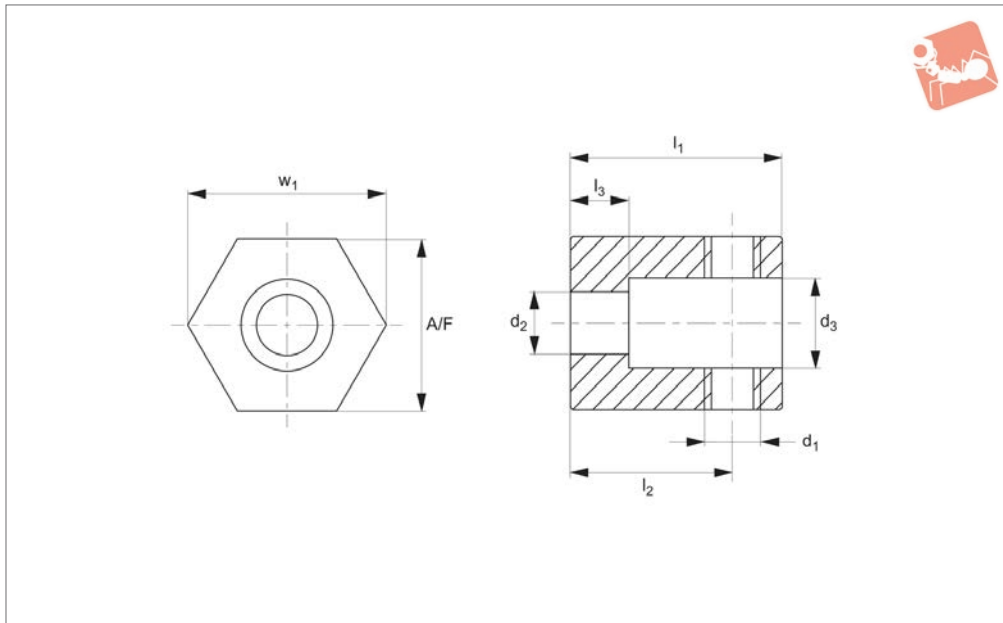
and rounded head which can be used as support or setting bolt as an end stop. These bolts are normally used together with a locknut.

Technical Notes

Setting bolts are produced with a hardened

Order No.	d ₁	l ₁	l ₂	h ₁	w ₁	A/F
18300.W0031	M 3	10	2	2.0	6.4	5.5
18300.W0032	M 3	20	2	2.0	6.4	5.5
18300.W0033	M 3	30	2	2.0	6.4	5.5
18300.W0041	M 4	10	2	2.8	8.1	7.0
18300.W0042	M 4	20	2	2.8	8.1	7.0
18300.W0043	M 4	30	2	2.8	8.1	7.0
18300.W0051	M 5	20	2	3.5	9.2	8.0
18300.W0052	M 5	30	2	3.5	9.2	8.0
18300.W0053	M 5	40	2	3.5	9.2	8.0
18300.W0061	M 6	30	3	4.0	11.5	10.0
18300.W0062	M 6	40	3	4.0	11.5	10.0
18300.W0063	M 6	50	3	4.0	11.5	10.0
18300.W0081	M 8	30	4	5.5	15.0	13.0
18300.W0082	M 8	40	4	5.5	15.0	13.0
18300.W0083	M 8	50	4	5.5	15.0	13.0
18300.W0101	M10	40	5	7.0	19.6	17.0
18300.W0102	M10	50	5	7.0	19.6	17.0
18300.W0103	M10	60	5	7.0	19.6	17.0
18300.W0104	M10	70	5	7.0	19.6	17.0
18300.W0121	M12	40	5	8.0	21.9	19.0
18300.W0122	M12	50	5	8.0	21.9	19.0
18300.W0123	M12	60	5	8.0	21.9	19.0
18300.W0124	M12	70	5	8.0	21.9	19.0
18300.W0161	M16	50	6	10.0	27.7	24.0
18300.W0162	M16	60	6	10.0	27.7	24.0
18300.W0163	M16	70	6	10.0	27.7	24.0
18300.W0164	M16	80	6	10.0	27.7	24.0





30400

SUPPORTS & STOPS

Material

Steel, heat-treated, blackened.

34500 and thrust pads no. 34520 - used as adjustable stops.

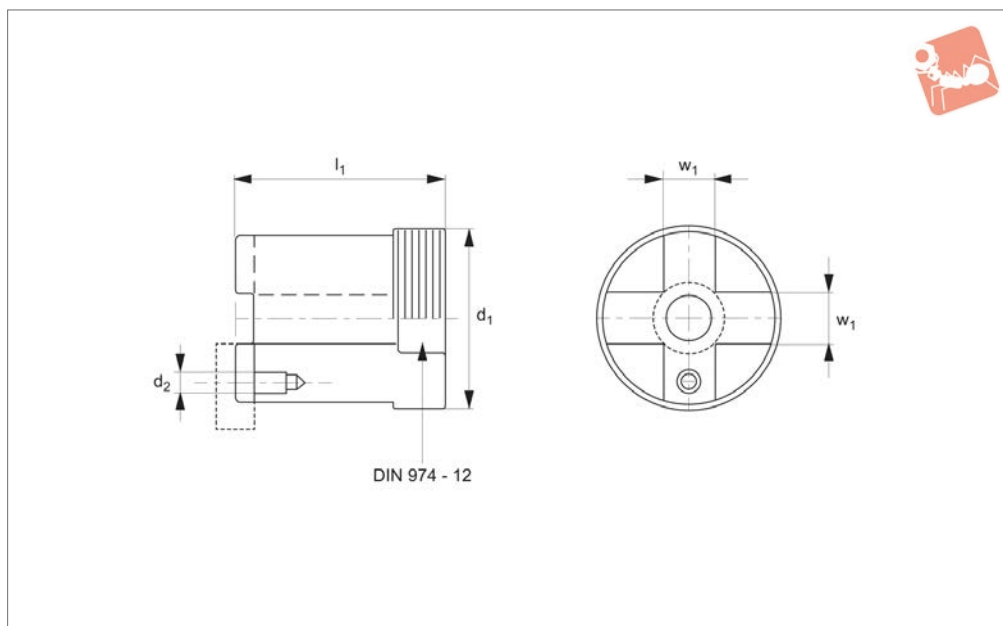
Technical Notes

Used in conjunction with grub screws no.

Order No.	w ₁	d ₁	d ₂	d ₃	l ₁	l ₂	l ₃	A/F	Weight g
30400.W0045	25.4	M 8	8.4	14	26	20	8	22	55
30400.W0145	40.0	M12	13.0	19	44	34	12	36	280



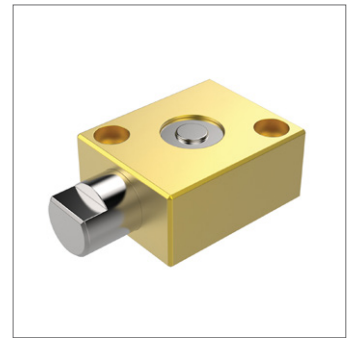
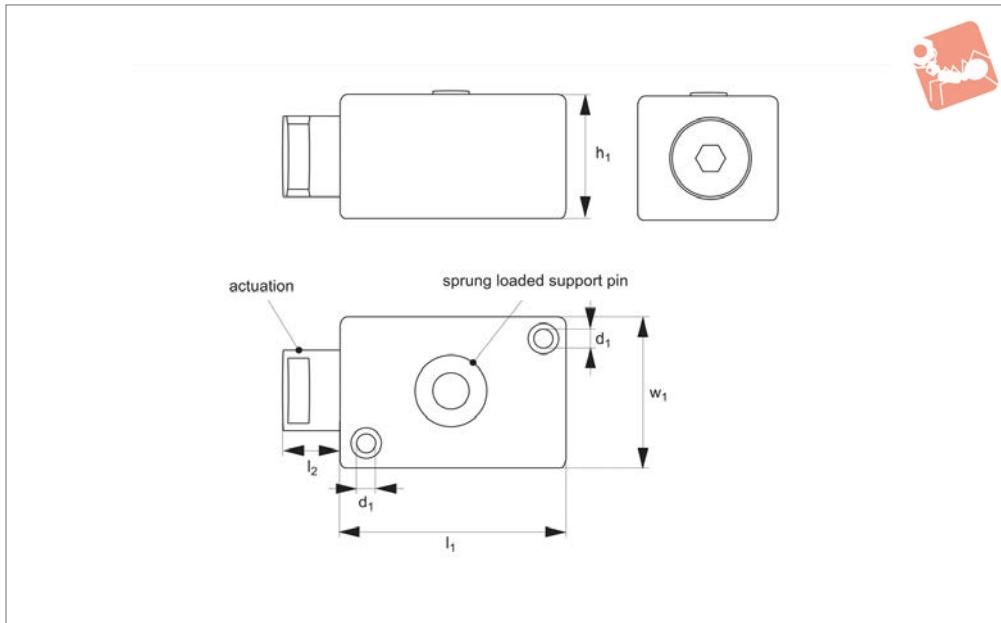
30420



Material

Steel, case-hardened and ground.

Order No.	w_1 tol. H7	d_1 ± 0.01	d_2	l_1	Weight g
30420.W0050	14	50	M 6	60	750



11090

SUPPORTS & STOPS

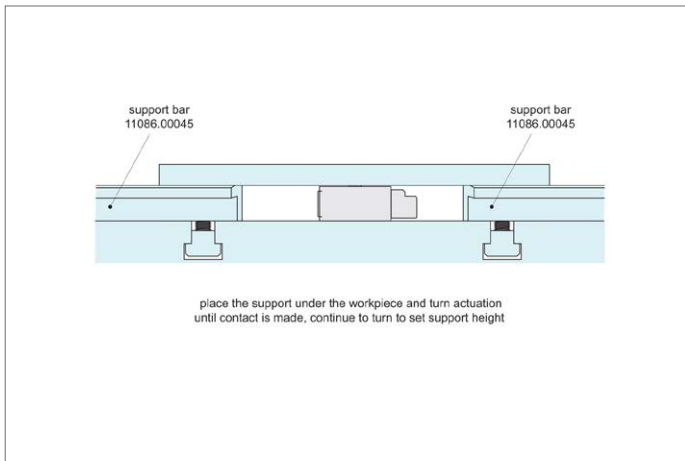
Tips

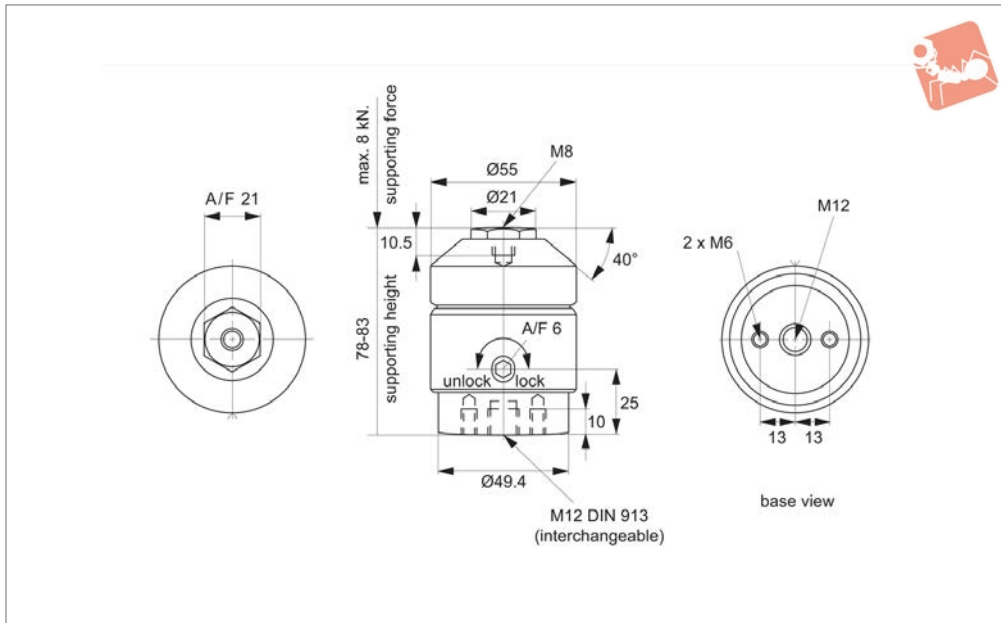
Eliminates workpiece chatter and vibration during machining.

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

SUPPORTS & STOPS

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.

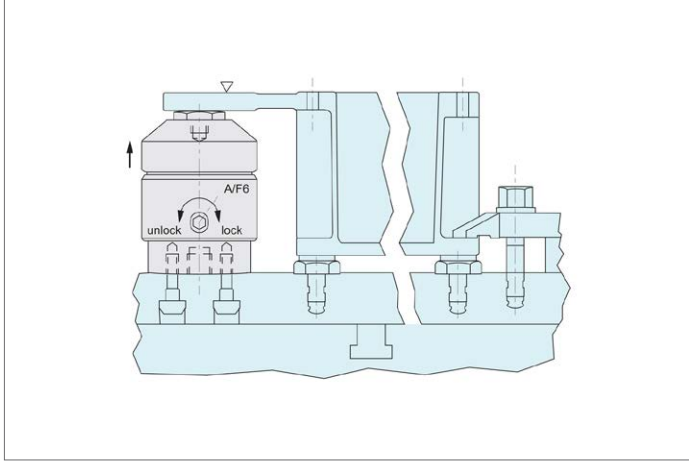
Operation:

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



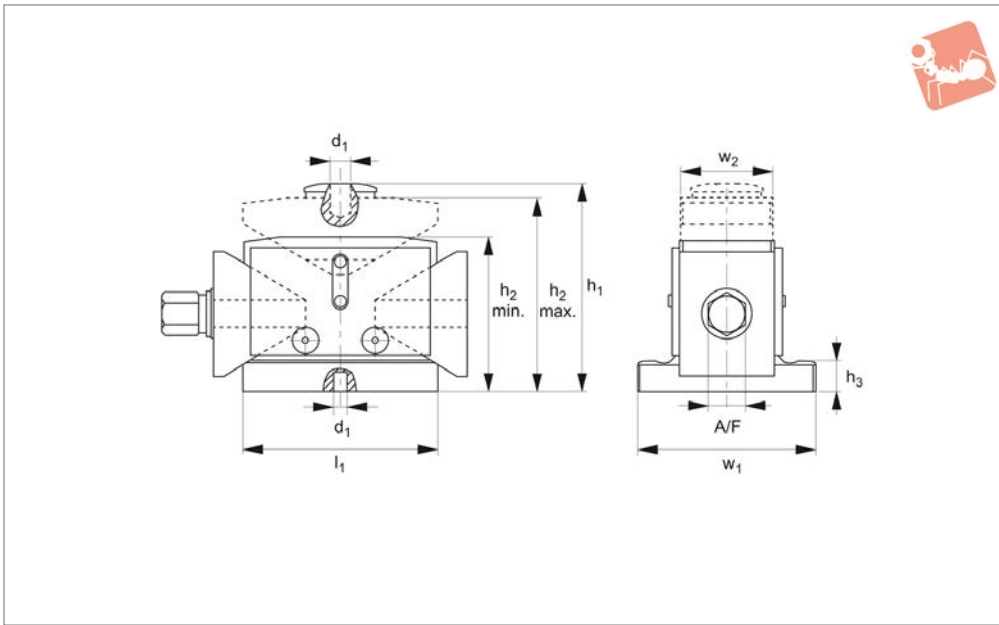


Wedge Blocks

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

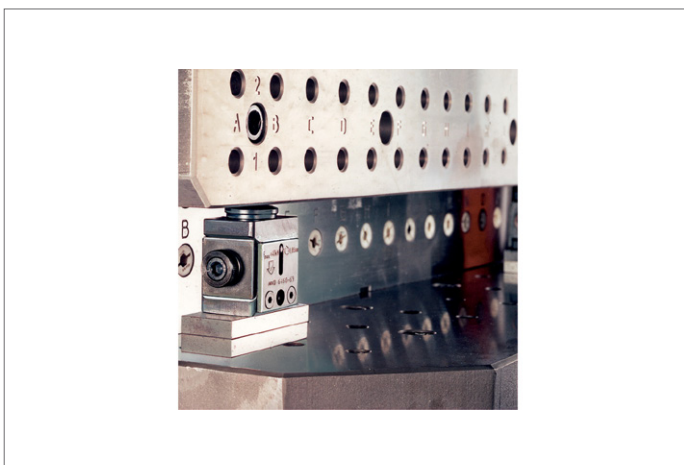
load, adjustment is easily made with a turn of screw. Allows fine adjustment to 0.1mm. See technical pages for the table of locating pad and support pad elements compatibility.

Tips

Particularly useful for precise positioning

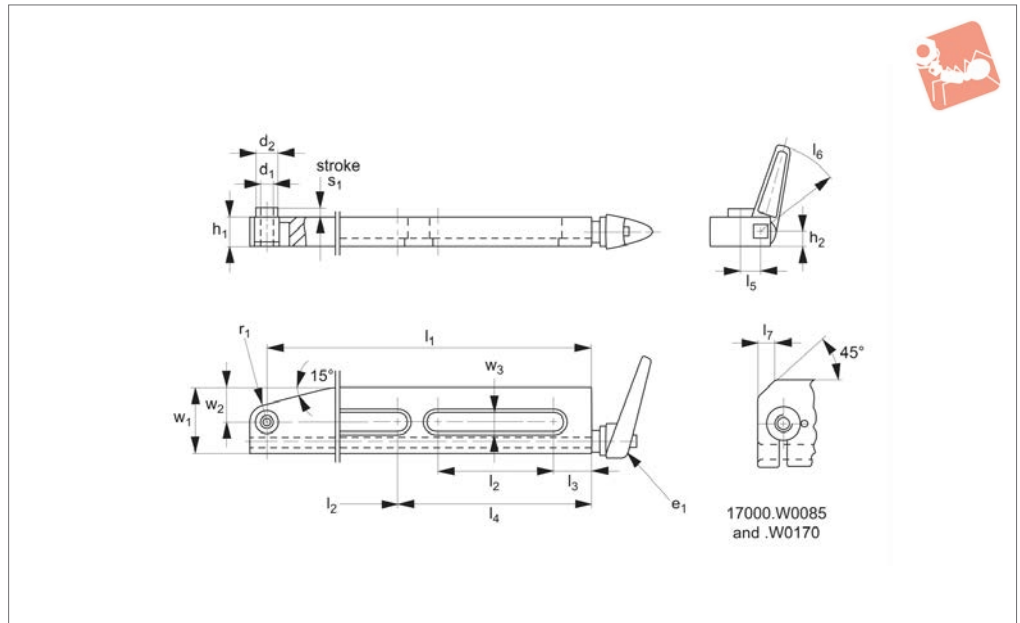
and machining of large components on heavy duty machines. If necessary, an additional $\varnothing 12\text{mm}$ locating hole in the base allows the wedge blocks to be located.

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

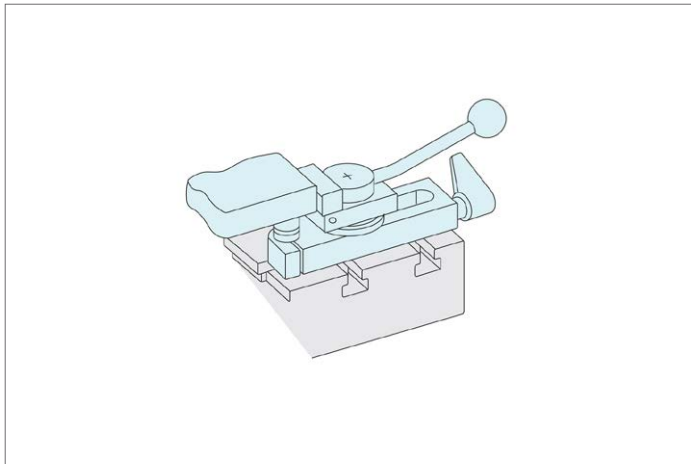


Workpiece Supports

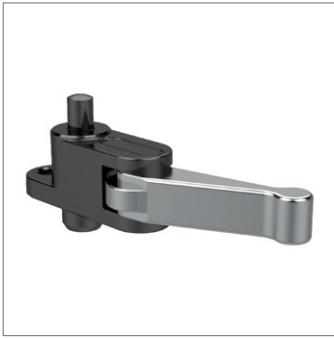
for support and to prevent workpiece chatter



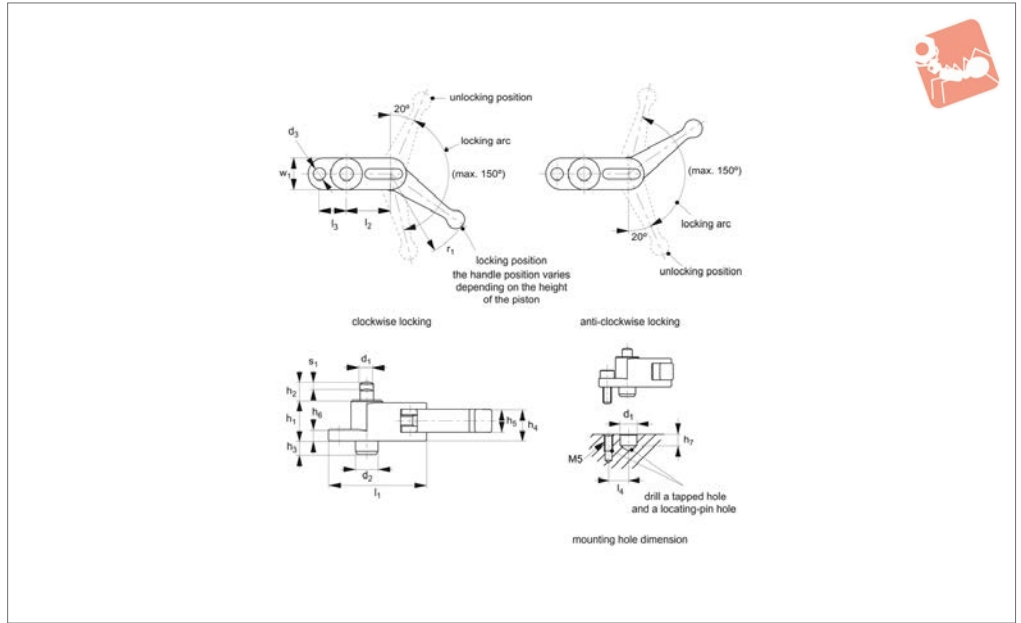
Supports & Stops



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

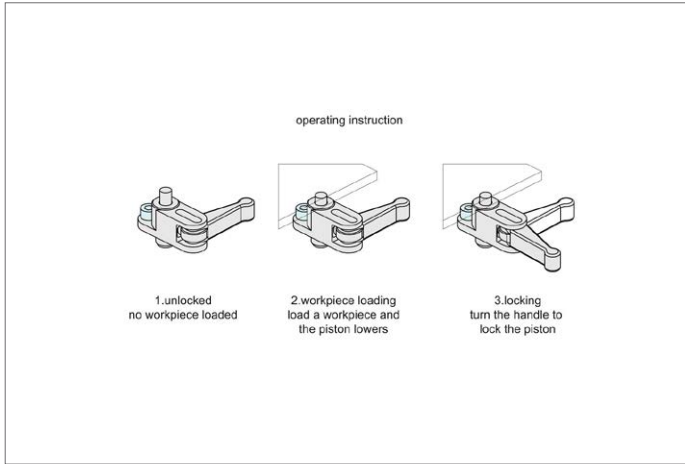
Order No.	h ₆	h ₇	Handle load N max.	l ₁	l ₂	l ₃	l ₄	r ₁	Locking direction	Locking mechanism	Piston spring force N	Stroke s ₁	Support capacity N max.
17002.W0018	5	7.0	80	43.5	19.5	12	12	39	Clockwise	Spiral cam, 4°	1,5-3	3	200
17002.W0118	5	7.0	80	43.5	19.5	12	12	39	Anticlockwise	Spiral cam, 4°	1,5-3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

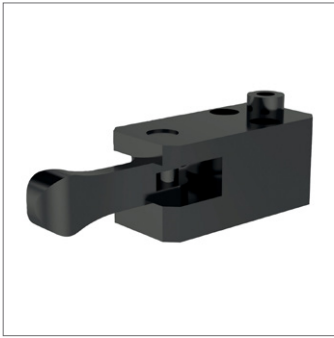


Compact Work Supports with cam handle

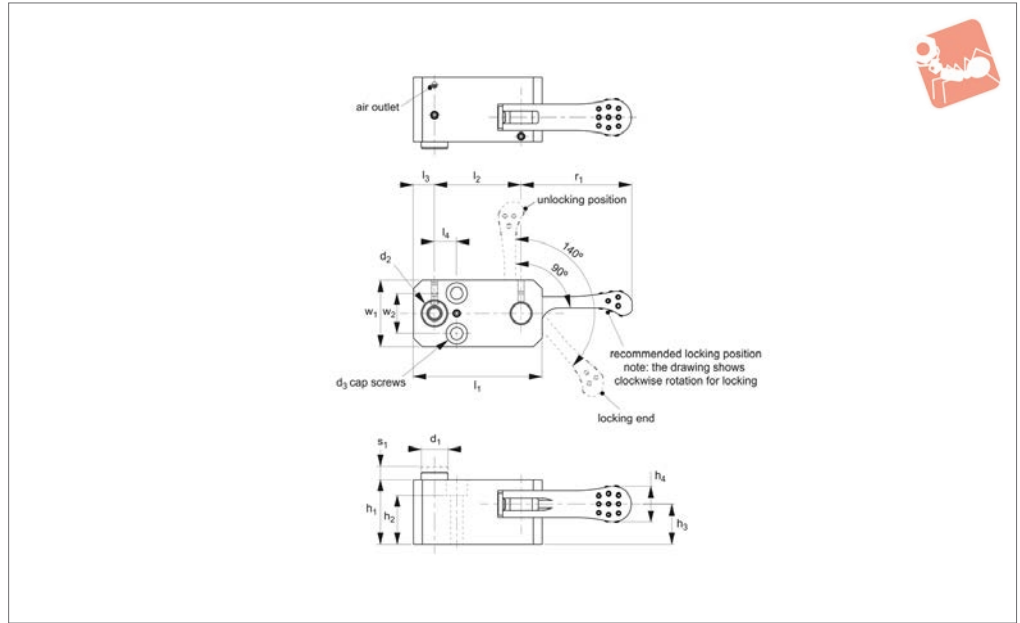


Supports & Stops





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.

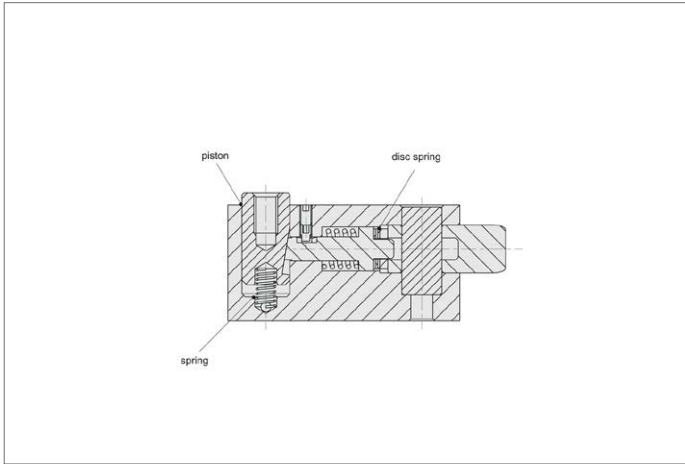
Tips

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.

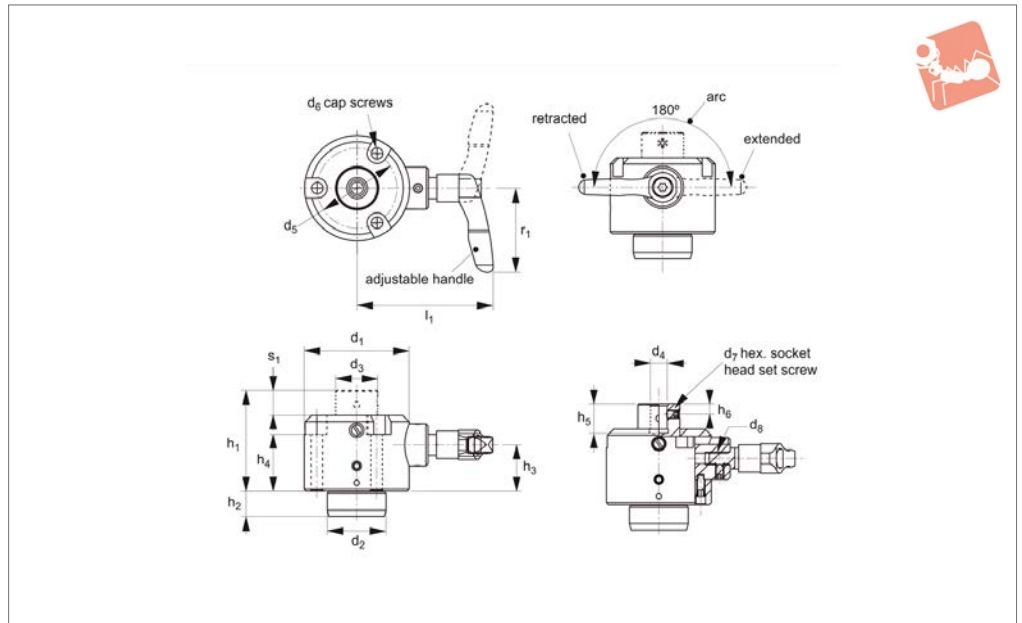
Order No.	Capacity kN max.	w ₁	h ₁	h ₂	d ₁	d ₂	d ₃	h ₃	h ₄	l ₁	Weight g
17003.W0024	0.5	25	24	19	10	M 5x8	M 4	14	14	52	213
17003.W0029	0.7	30	29	22	12	M 6x10	M 5	18	16	58	335
17003.W0037	0.9	38	37	25	16	M 8x15	M 6	23	19	75	738
17003.W0042	1.2	45	42	30	19	M10x15	M 8	26	24	85	1110

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





17004.1



Material

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

Technical Notes

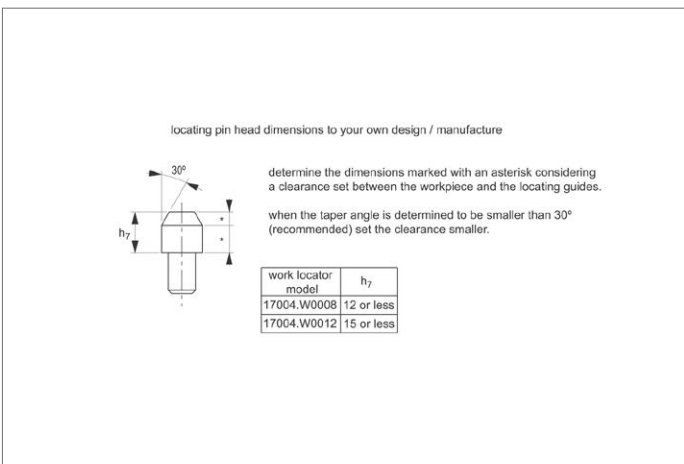
Can support heavy workpieces made from

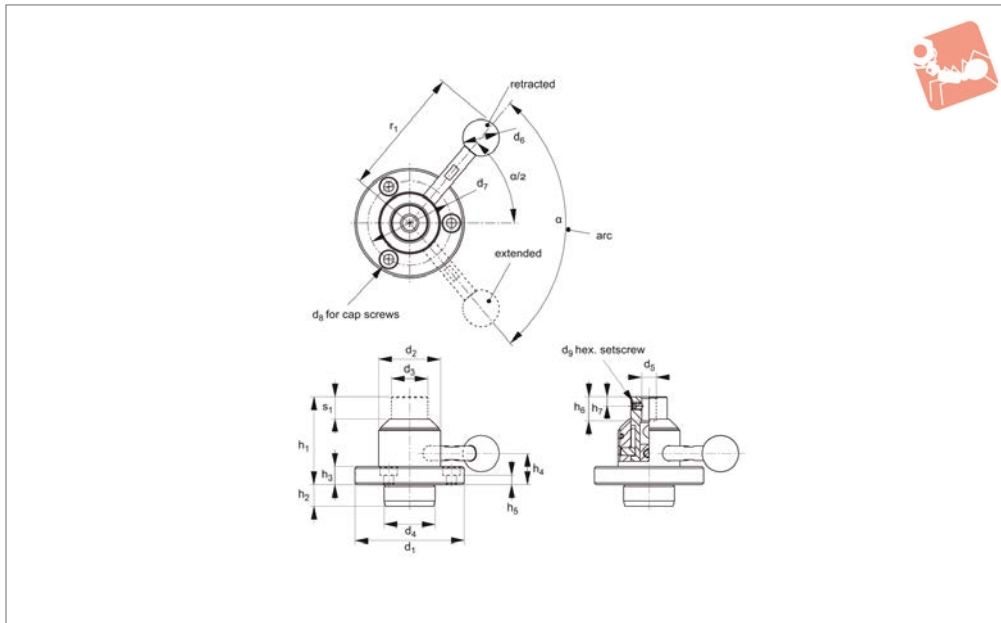
steel or cast iron. No tools needed. The handle position is freely adjustable. The handle can be easily changed to act in a clockwise or anti clockwise direction. Different locating pins can be mounted depending on workpiece's locating holes. The piston stays locked when it is fully

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.

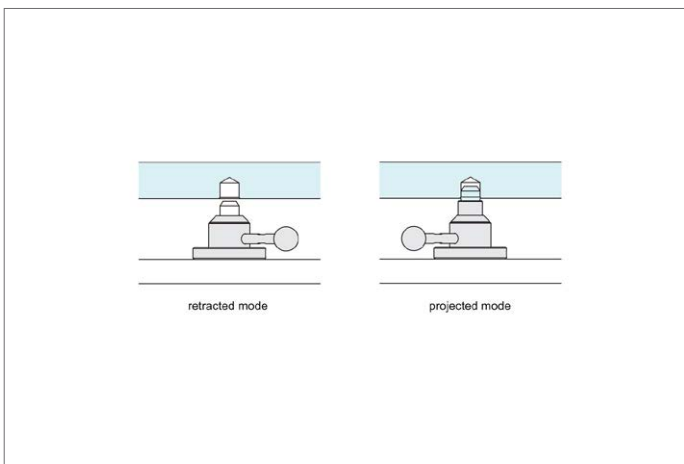
Piston: steel (SCM440), tempered and black oxide finish.

Handle: steel (S45C), black oxide finish.

Ball knob: ABS resin, black.

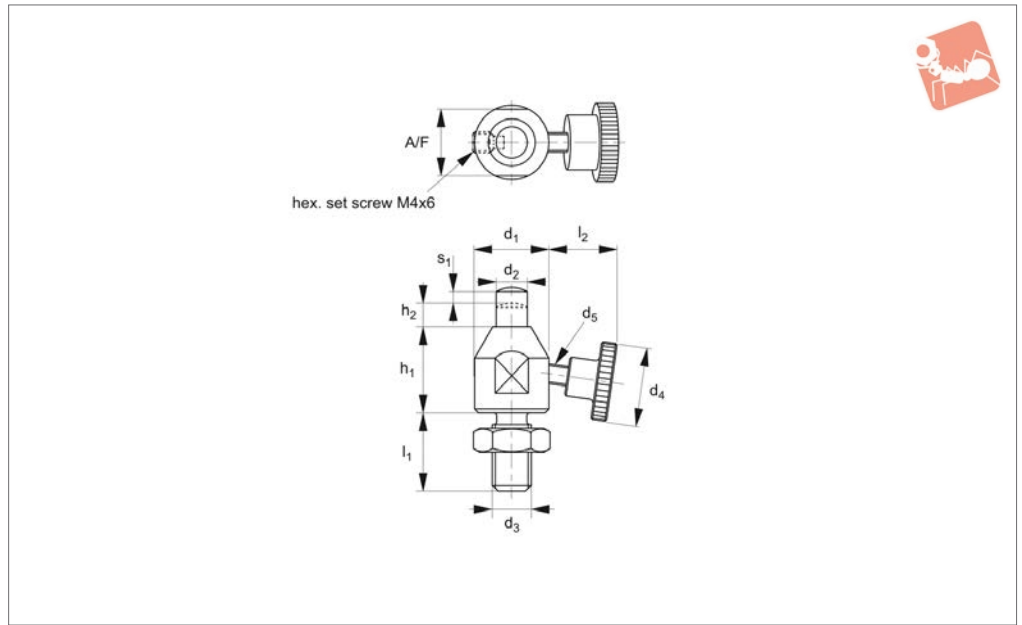
Order No.	h_1	h_2	d_1	d_2	d_3	d_4 tol. G6	d_5 tol. G7	d_6	d_7	d_8	Weight g
17004.W0108	48	12	60	34	20	28	8	20	46	M 5	420
17004.W0112	61	14	80	48	30	42	12	25	63	M 6	1040

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



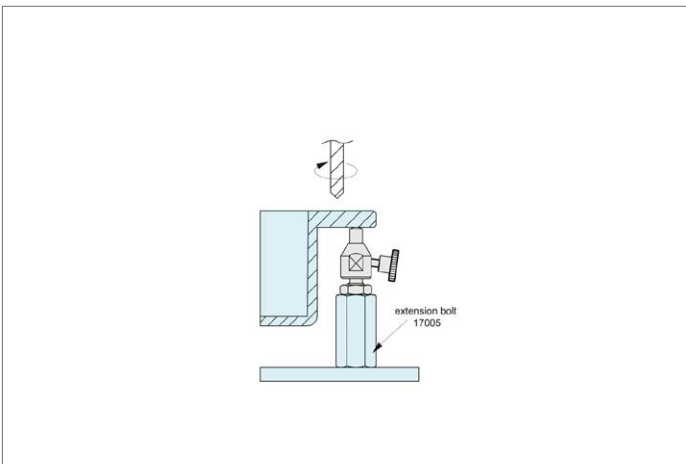
Material

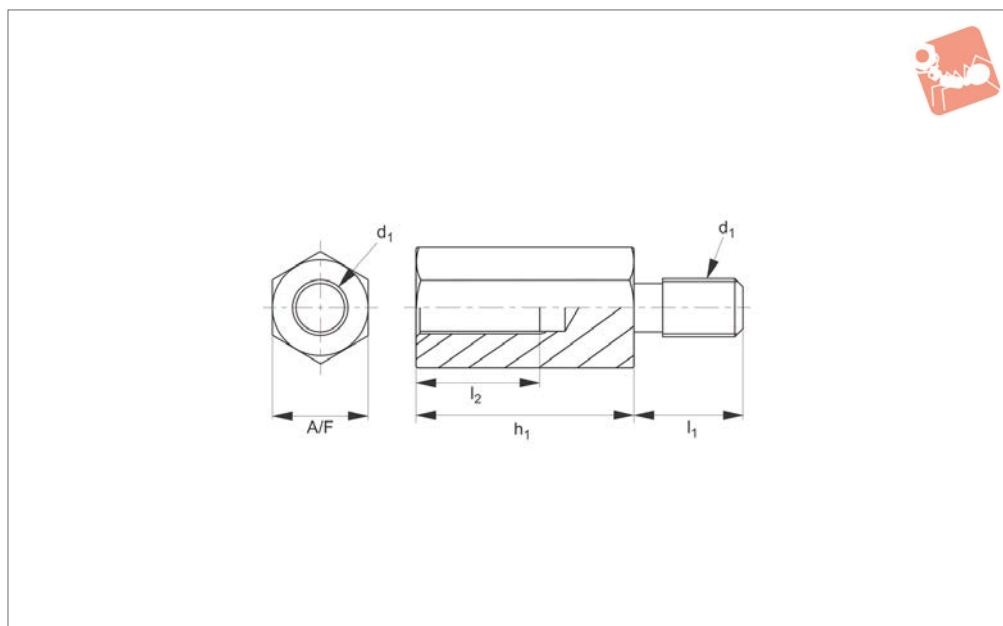
Body: steel (C45), black oxide finish.

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

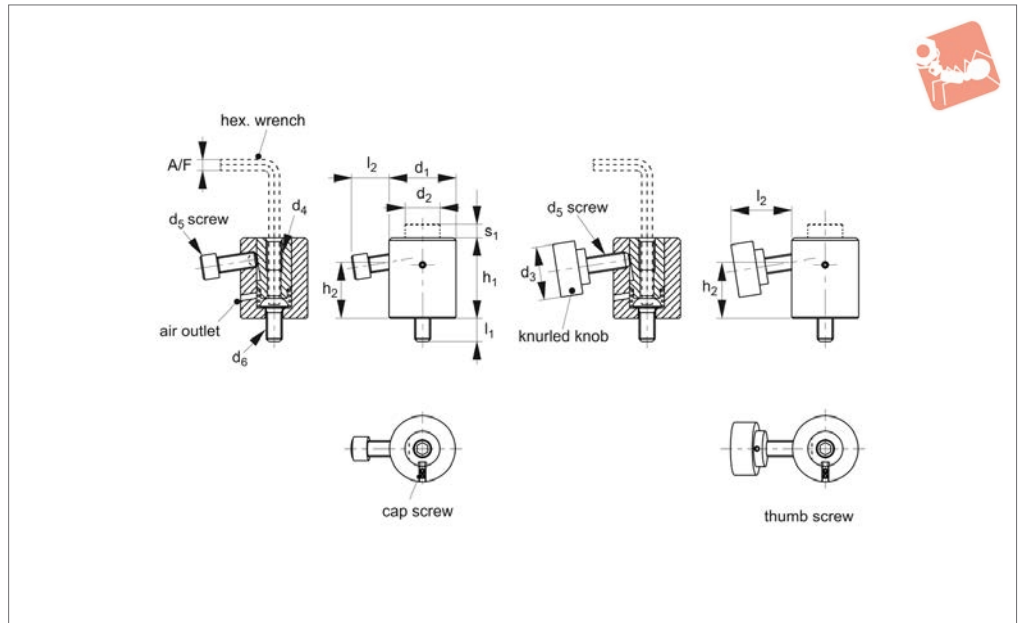
Material

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

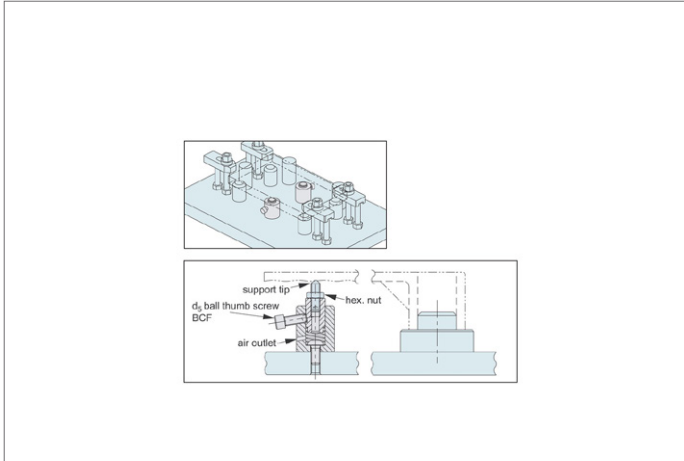
cap screw style to offer high support capacities.

Tips

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

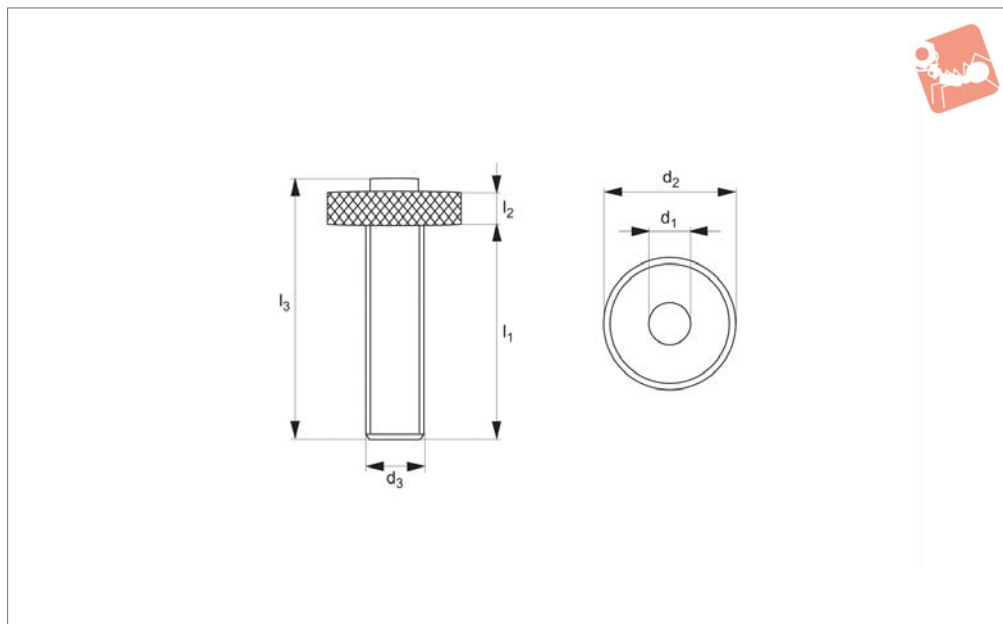
Order No.	Type	h_1	h_2	d_1	d_2	d_3	d_4	Weight g
17008.W0033	Cap screw	33	22.0	28	14	-	M 6x12	150
17008.W0042	Cap screw	42	28.5	35	19	-	M 8x16	300
17008.W0050	Cap screw	50	34.0	42	22	-	M10x20	540
17008.W0060	Cap screw	60	42.0	50	26	-	M12x24	865
17008.W0070	Cap screw	70	47.0	60	33	-	M16x32	1390
17008.W0233	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



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