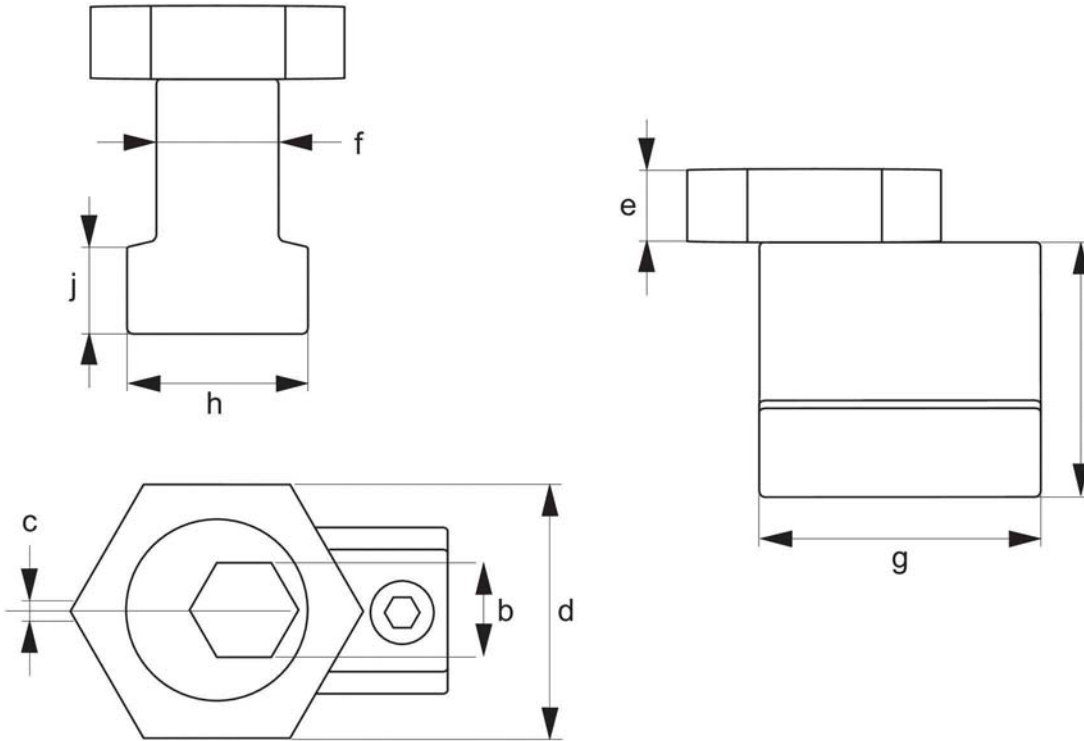
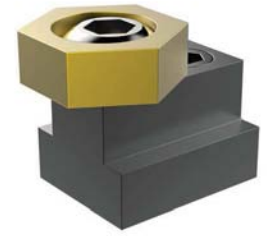


T-Slot Clamps



12150



Material

Body: heat treated steel.
 Clamp: brass.
 Packed in pairs.

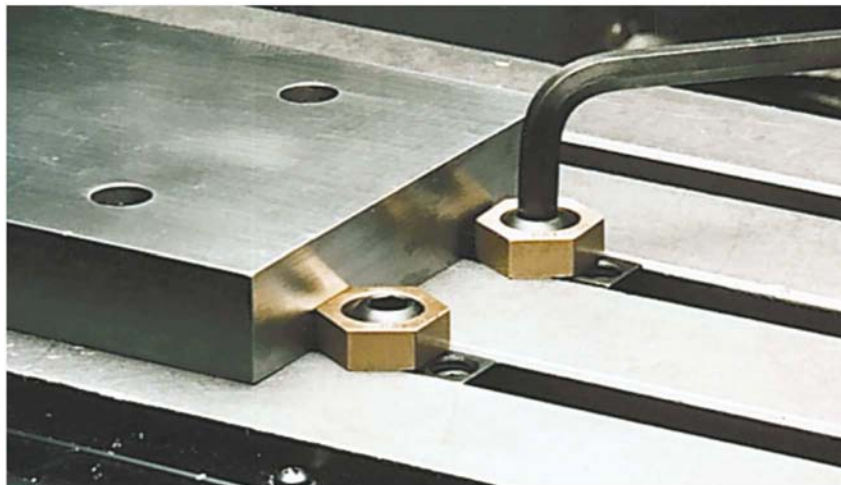
Technical Notes

For use in T-slots of machine tables.

Tips

For replacement clamping screws see 12112.
 Hex. key not included.

Order No.	Slot size	Cam screw	b	c	d	e	f	g	h	i	j	Clamp s /pack	Torque Nm.	Holdin g force kN.
12150.W0008	8	M 6x1,00	5	1,01	15,86	4,75	8	23,2	12,7	9,5	4,6	2	8,5	3,5
12150.W0010	10	M 6x1,00	5	1,01	15,86	4,75	10	23,2	14,2	14,2	4,3	2	8,5	3,5
12150.W0012	12	M 8x1,25	5	1,01	20,62	4,75	12	27,9	15,9	15,9	6,4	2	11,3	3,3
12150.W0014	14	M10x1,50	7	1,52	20,62	6,35	14	30,5	22,4	22,2	8,5	2	28,0	8,9
12150.W0016	16	M12x1,75	8	2,03	25,40	9,53	16	30,9	25,4	22,2	9,2	2	61,0	13,3
12150.W0018	18	M12x1,75	8	2,03	25,40	9,53	18	34,7	28,6	28,6	10,5	2	61,0	13,3
12150.W0020	20	M16x2,00	12	2,54	30,15	12,70	20	39,2	31,8	31,8	12,6	2	135,0	26,7
12150.W0022	22	M16x2,00	12	2,54	30,15	12,70	22	44,3	34,9	34,9	12,5	2	135,0	26,7

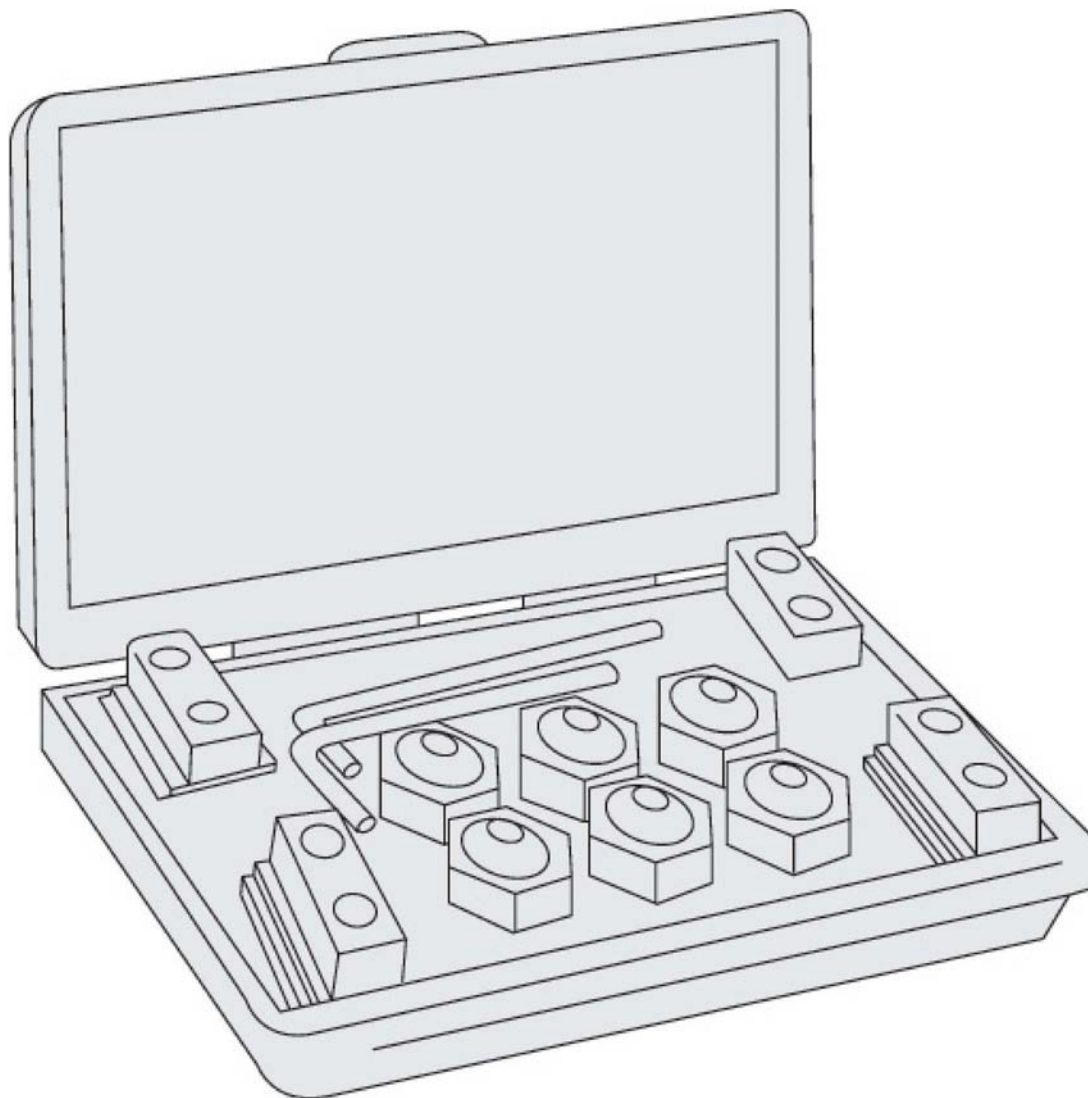


Standard Eccentric Clamps Kits

clamps no. 12150, for T- slots



12170



Material

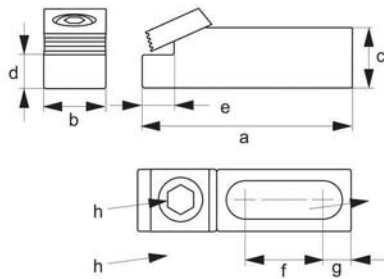
Clamping kits comprising no.12150 clamps. Please see no. 12150 for dimensions.

Order no.	T-slot size	Contents
12170.W0008	8	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys
12170.W0010	10	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys
12170.W0012	12	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys
12170.W0014	14	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys
12170.W0016	16	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys
12170.W0018	18	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys
12170.W0020	20	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys
12170.W0022	22	6 Clamps (no.12150), 4 T-nuts, 2 Hex Keys

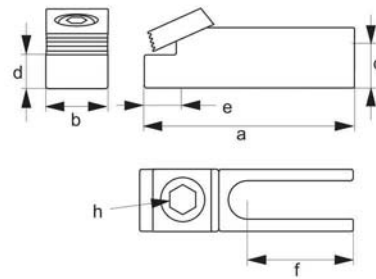
T-Slot Clamps



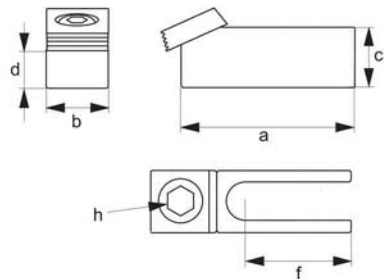
12180



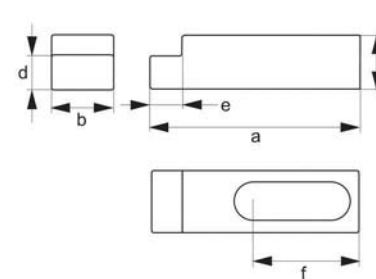
12180.W0011 & W0012



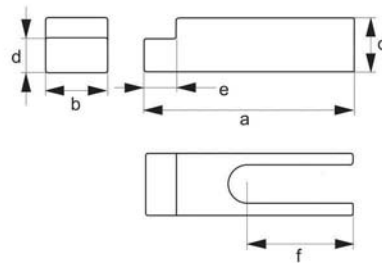
12180.W0035



12180.W0041



12180.W0111 and W0112



12180.W0135



Material

Heat treated steel, blackened.

Technical Notes

Ideal for clamping low profile plates. The clamps produce a downwards and forwards clamping force.

Tips

The clamp height can be further reduced by up to dimension "x", via grounding.

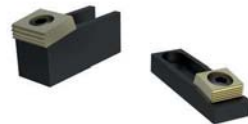
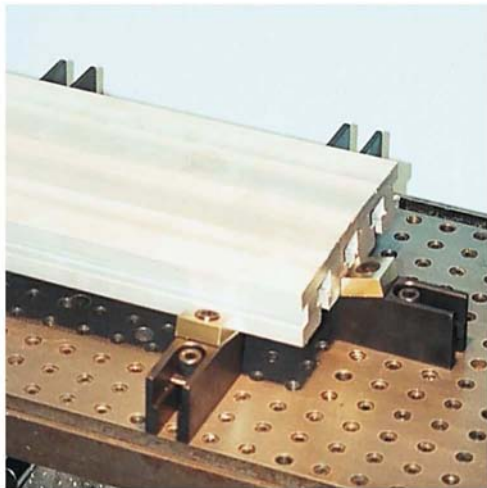
Sold in pairs.

Order No.	Type	a	b	c	d +0.0 -0.013	e	f	g	h Cam screw	Mountin g screw	Slot
12180.W0011	Clamp	63,5	19,1	15,8	11,68	8,0	21,1	13,5	M10	M 8	Closed
12180.W0012	Clamp	95,3	28,5	15,8	12,19	9,4	42,7	12,7	M12	M12	Closed
12180.W0035	Clamp	107,0	38,1	41,2	35,0	9,4	46,2	-	M16	M16	Open
12180.W0041	Clamp	96,5	38,1	41,2	-	-	46,2	-	M16	M16	Open
12180.W0111	Stop	63,5	19,1	19,1	11,68	8,0	28,2	13,5	-	M 8	Closed
12180.W0112	Stop	95,3	28,5	22,1	12,19	9,4	42,7	12,7	-	M12	Closed
12180.W0135	Stop	107,0	38,1	50,8	35,0	9,4	46,2	-	-	M16	Open

T-Slot Clamps



12180



Material

Heat treated steel, blackened.

Technical Notes

Ideal for clamping low profile plates. The clamps produce a downwards and forwards clamping force.

Tips

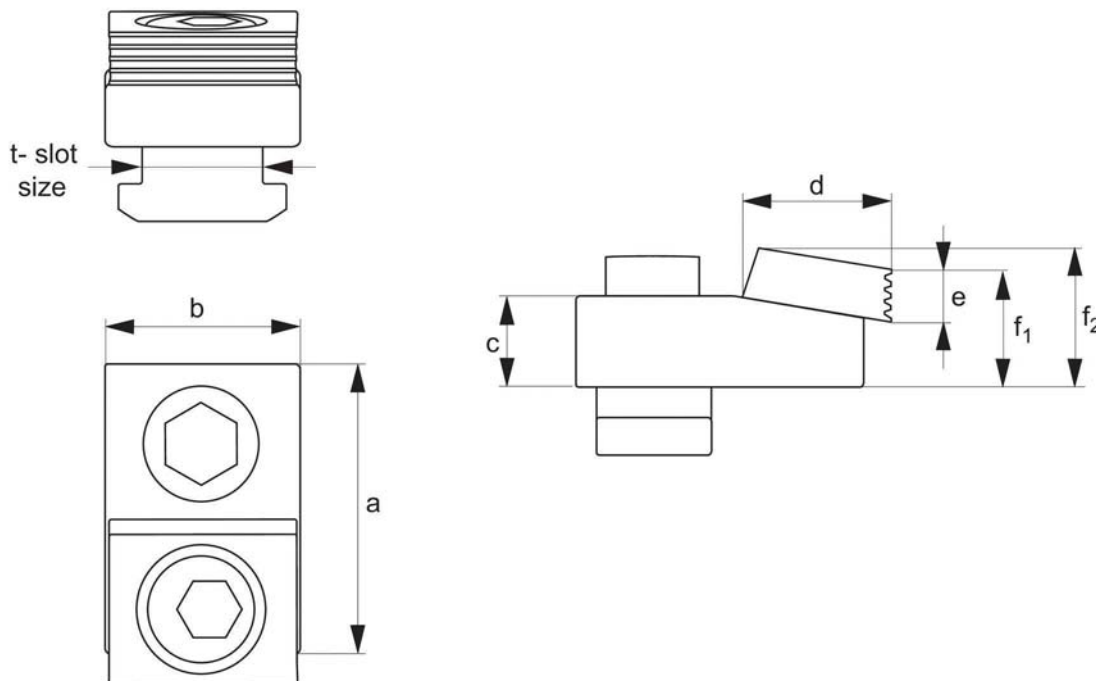
The clamp height can be further reduced by up to dimension "x", via grounding.

Sold in pairs.

T-Slot Toe Clamps



12191



Material

Hardened steel face.

Technical Notes

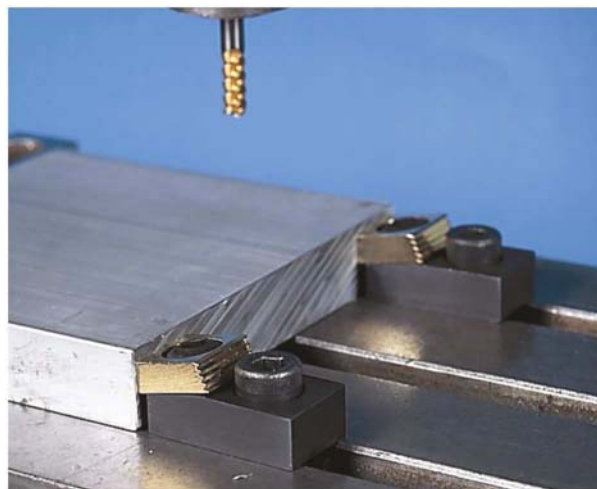
Designed to be used in the T-slots of machine tables.

The clamp has both a smooth face (for machined workpieces) and a serrated face (for rougher work). Provides a positive downhold action whilst maintaining a low profile.

Tips

Torque screw for T-slot to 150 Nm.

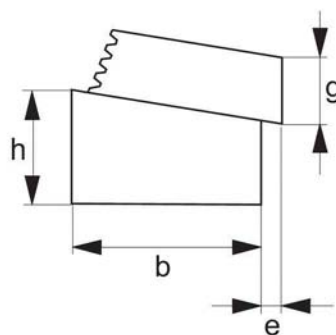
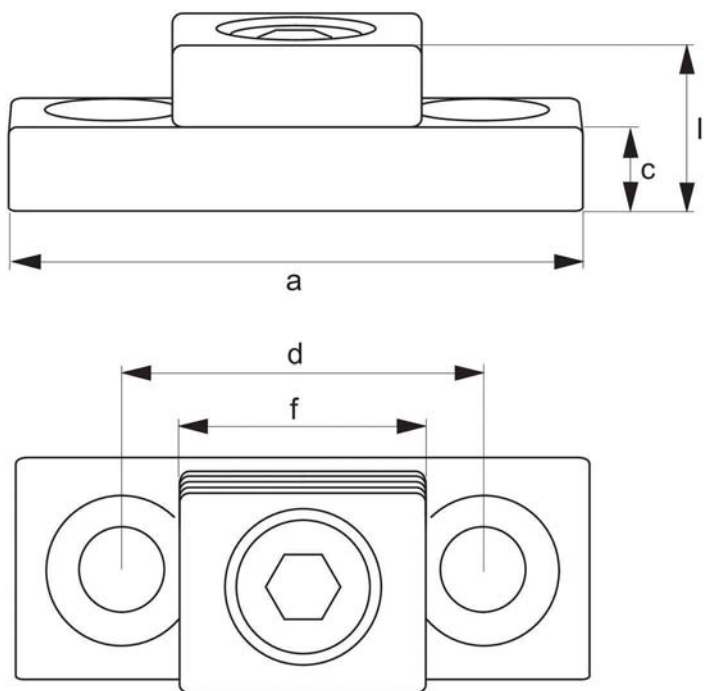
Order No.	T-slot size	a	b	c	d	e	f ₁	f ₂	Torque Nm.	Holding force kN.
12191.W0014	14	50	28,5	15,7	25,4	9,6	25,4	22,2	88	17,8
12191.W0016	16	50	28,5	15,7	25,4	9,6	25,4	22,2	88	17,8
12191.W0018	18	50	28,5	15,7	25,4	9,6	25,4	22,2	88	17,8



Compact Toe Clamps



12193



Material

Hardened steel clamping face.
Body mild steel, blackened.

Technical Notes

The clamp has both a smooth face (for machined workpieces) and a serrated face (for rougher work). Provides a positive downhold action whilst maintaining a low profile.

Tips

The height of the clamp can be varied by milling the slot deeper into the fixture.

Important Notes

"e" - the distance between the front of the clamp base and the workpiece. Drill and tap the centreline of "b" for mounting holes.
For replacement cam screws see part 12112.

Order No.	a	b	c	d	e	f	g	h	i	Stroke	Torque Nm.	Holding force kN.	Cam screw	Screw thread	Mounting Screw
12193.W0110	43,2	19,0	12,7	25,4	2,3	19,0	6,4	15,75	21,5	1,6	28	8,9	50368	M 8	M 8
12193.W0112	54,0	25,4	11,4	33,5	2,8	25,4	9,7	15,75	24,4	2,0	88	17,8	50372	M 10	M10
12193.W0116	75,0	38,1	25,2	50,8	3,3	38,1	12,7	31,75	43,2	2,5	135	26,7	50374	M 12	M12

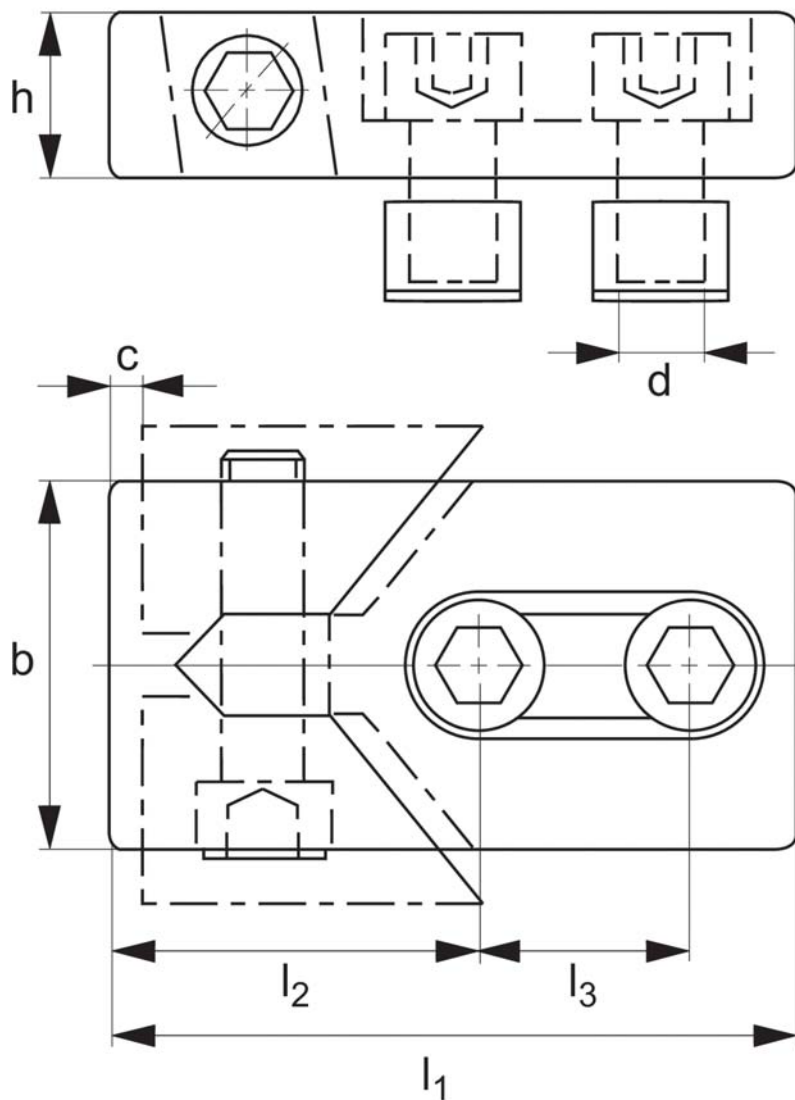


Clamping Jaws - Low Height

down hold action



12200



Material

Heat treated steel, blackened.

Technical Notes

Ideal for clamping low profile plates. Actuated on one side via suitable hexagon key (provided).

Tips

Clamping action is forwards and downwards into the workpiece.

Sold in pairs.

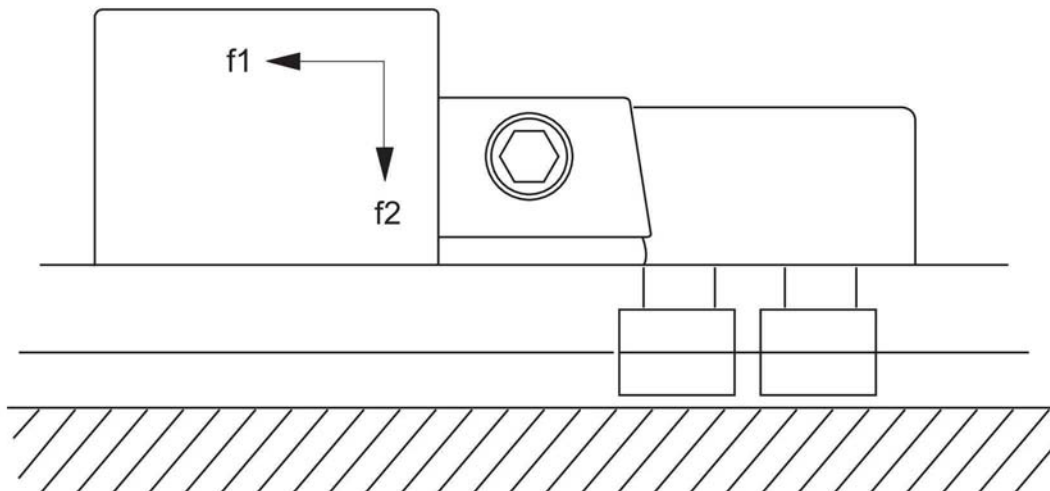
Order No.	T-slot	b	c stroke	d	h	l ₁	l ₂	l ₃	f ₁ kN.	f ₂ kN.	⚖️ g/pair
12200.W0012	12	40	3	M10	20	80	39	26	16	0,6	1150
12200.W0014	14	40	3	M12	20	80	39	26	22	0,9	1250
12200.W0016	16	40	3	M12	20	80	39	26	22	0,9	1330
12200.W0017	16	50	4	M14	25	100	46	34	32	1,2	2340
12200.W0018	18	50	4	M16	25	100	46	34	36	1,4	2540
12200.W0020	20	50	4	M16	25	100	46	34	36	1,4	2660
12200.W0022	22	78	5	M20	30	140	65	50	36	1,4	5980
12200.W0024	24	78	5	M20	30	140	65	50	36	1,4	6330
12200.W0028	28	78	5	M24	30	140	65	50	40	1,6	7060
12200.W0030	30	78	5	M24	30	140	65	50	40	1,6	7580

Clamping Jaws - Low Height

down hold action



12200



Material

Heat treated steel, blackened.

Technical Notes

Ideal for clamping low profile plates. Actuated on one side via suitable hexagon key (provided).

Tips

Clamping action is forwards and downwards into the workpiece.

Sold in pairs.

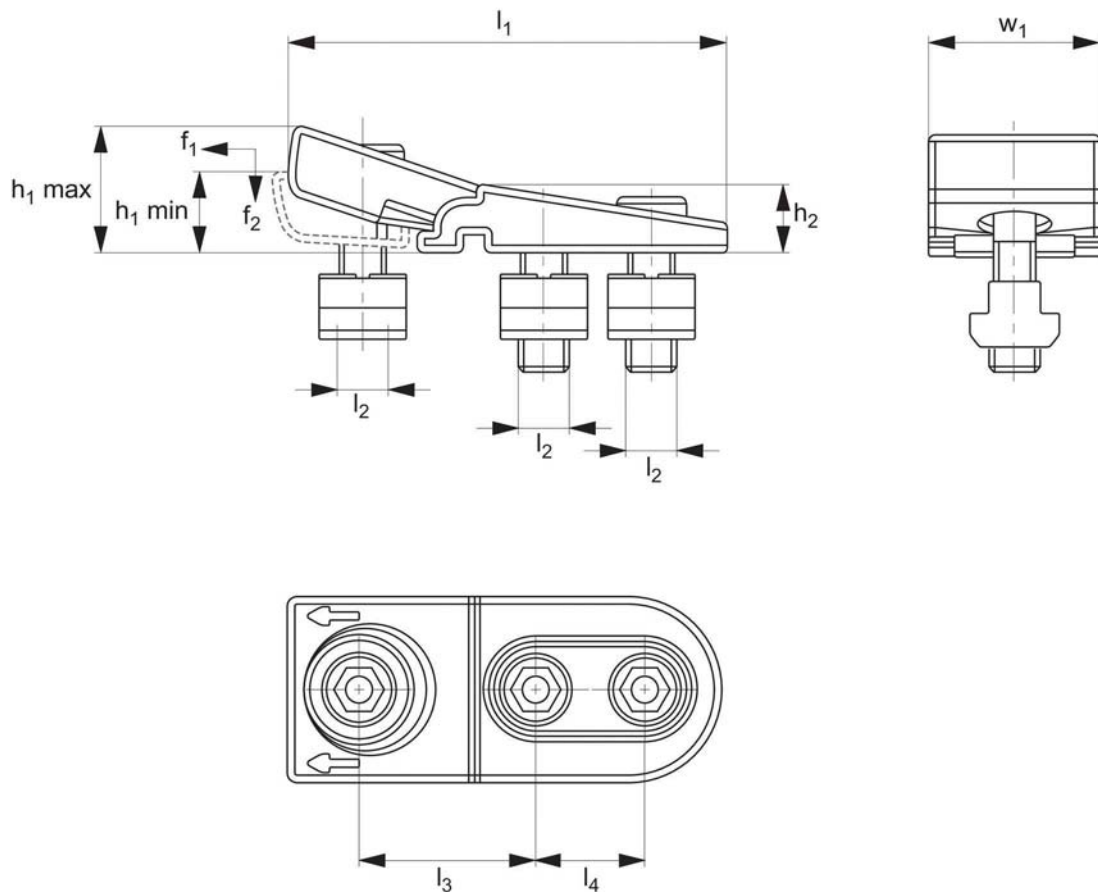


Flat Clamp

with mounting



12205



Material

Steel, tempered and burnished.

Technical Notes

Lateral clamping of work pieces for contours without interference. Possesses a synergistic combination of highly-effective solid lubricants. Heat resistant and does not wash out. Can be used for horizontal and vertical applications.

Tips

For clamping of very thin work pieces.

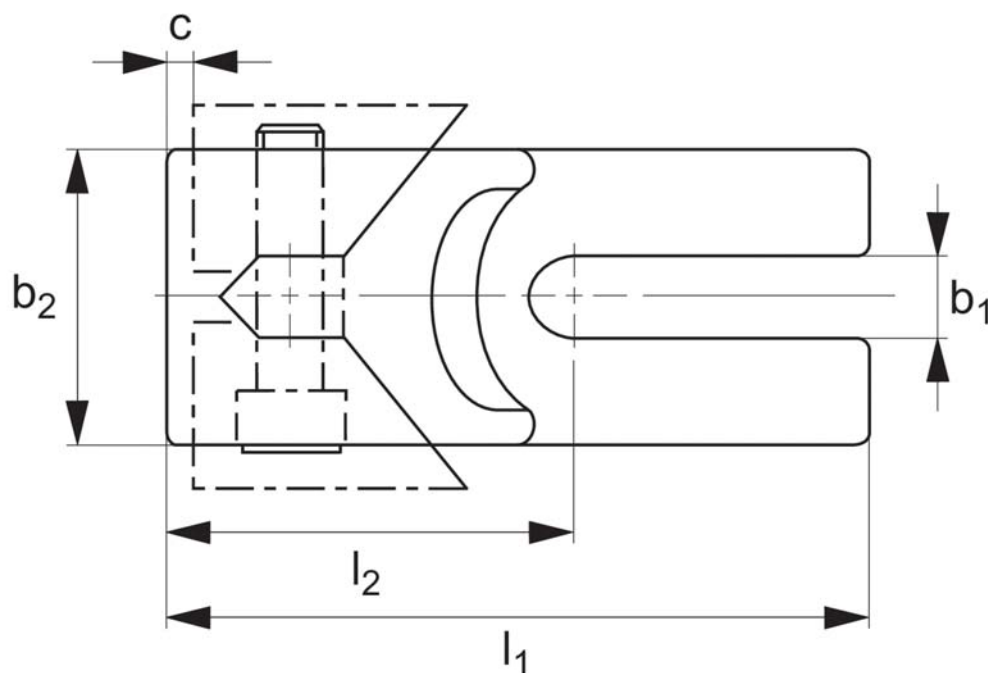
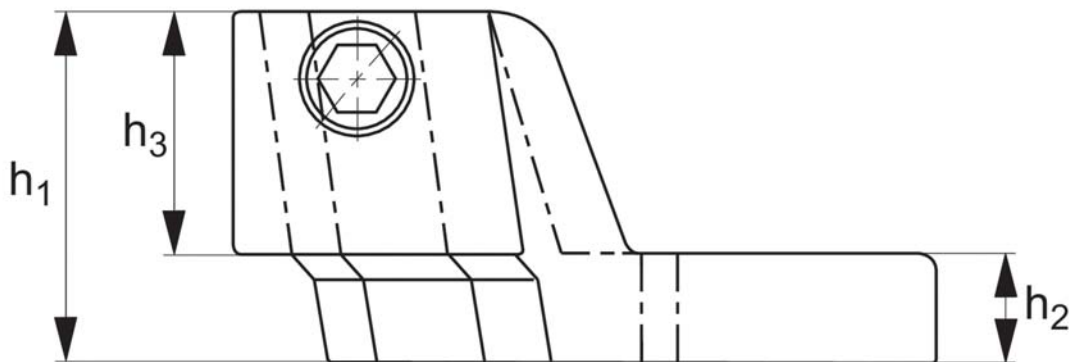
Order No.	Size	Nut	$h_1 \text{ min.}$	$h_1 \text{ max.}$	l_1	h_2	l_2	l_3	l_4	w_1	$f_1 \text{ kN.}$	$f_2 \text{ kN.}$	$\frac{1}{g}$
12205.W0014	M12 x 14	14	16	25	110	16	M12	45 - 48	26	44	15	7,5	579
12205.W0016	M12 x 16	16	16	25	110	16	M12	45 - 48	26	44	15	7,5	600
12205.W0018	M16 x 18	18	19	30	130	19	M16	50 - 54	33	56	20	10,0	1011
12205.W0020	M16 x 20	20	19	30	130	19	M16	50 - 54	33	56	20	10,0	1055
12205.W0022	M20 x 22	22	22	36	152	22	M20	58 - 63	41	62	30	15,0	1670
12205.W0024	M20 x 24	24	22	36	152	22	M20	58 - 63	41	62	30	15,0	1705
12205.W0028	M20 x 28	28	22	36	152	22	M20	58 - 63	41	62	30	15,0	1807

Clamping Jaws - Standard

down hold action



12300



Material

Body: cast iron.

Jaws: hardened carbon steel.

Technical Notes

For mounting of each clamp to work table, two clamping bolts no. 21000, washers no. 25000 and fixture nuts no. 24300 should be ordered separately, see.


Relevant hexagon key provided.

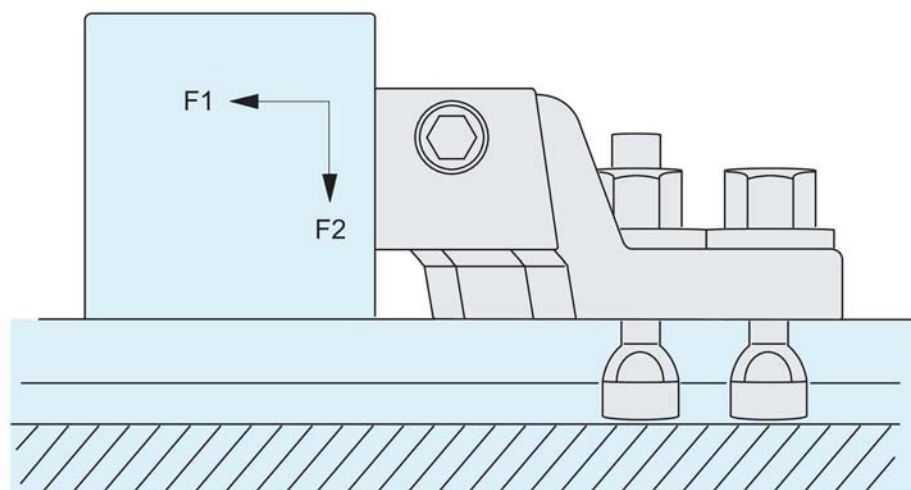
Tips

Can be actuated from left hand side only.

Sold in pairs.

For table of clamping forces, see below.

Order No.	T-slot	b_1	b_2	c stroke	h_1	h_2	h_3	l_1	 g/pair
12300.W0012	10,12 & 14	13	40	3	50	20	30	115	1590
12300.W0018	16,18 & 20	19	50	4	60	25	35	150	2940
12300.W0030	22-36	31	80	5	75	30	45	205	7900



Clamping Jaws - Standard

down hold action



12300



Material

Body: cast iron.

Jaws: hardened carbon steel.

Technical Notes

For mounting of each clamp to work table, two clamping bolts no. 21000, washers no. 25000 and fixture nuts no. 24300 should be ordered separately, see. Relevant hexagon key provided.

Tips

Can be actuated from left hand side only.

Sold in pairs.

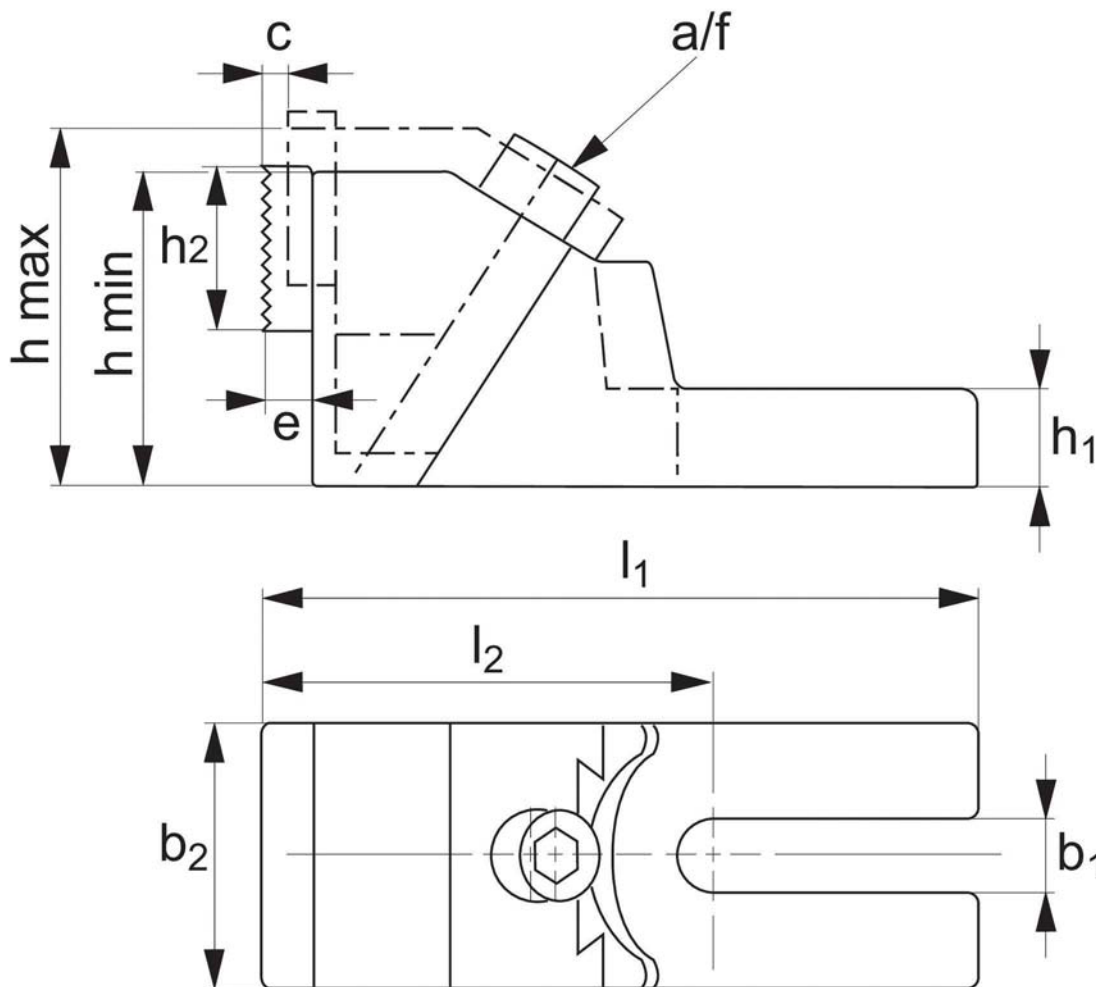
For table of clamping forces, see below.

Clamping Jaws - Extra Strong

down hold action



12320



Material

Body: malleable cast iron.
Jaws: hardened steel.

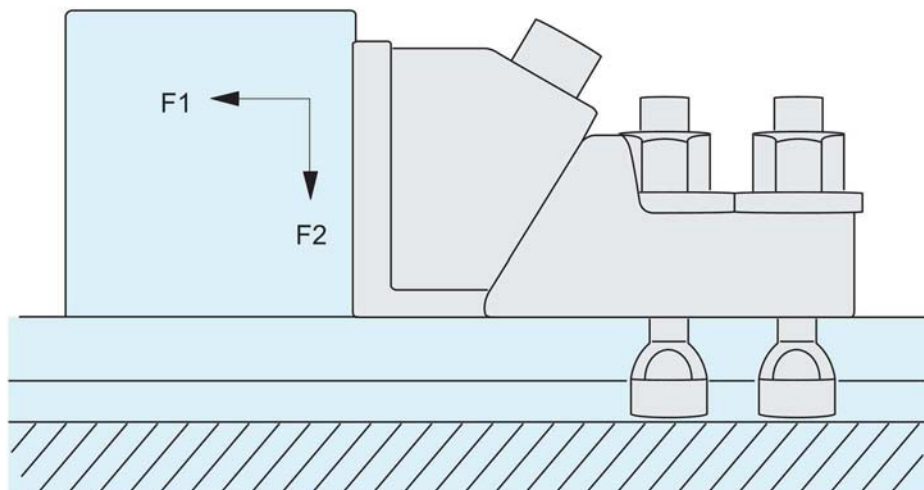
Technical Notes

Jaw plates reversible (ribbed/smooth). Clamping action is forwards and downwards into the workpiece. For table of clamping forces see below.

Tips

Extremely powerful clamps for use where high clamping forces are required. Due to the high clamping forces we recommend the use of 2 clamping bolts, no. 21000 for each clamp.

Order No.	T-slot	b ₁	b ₂	c stroke	e	h min.	h max.	h ₁	h ₂	l ₁	l ₂	a/f	g
12320.W0014	12-18	19	65	8	12	85	99	38	40	179,0	112,5	14	4037
12320.W0024	20-30	26	75	11	12	100	118	45	40	226,5	138,5	14	6688
12320.W0036	32-42	38	90	15	12	120	145	56	40	265,0	158,0	17	11031

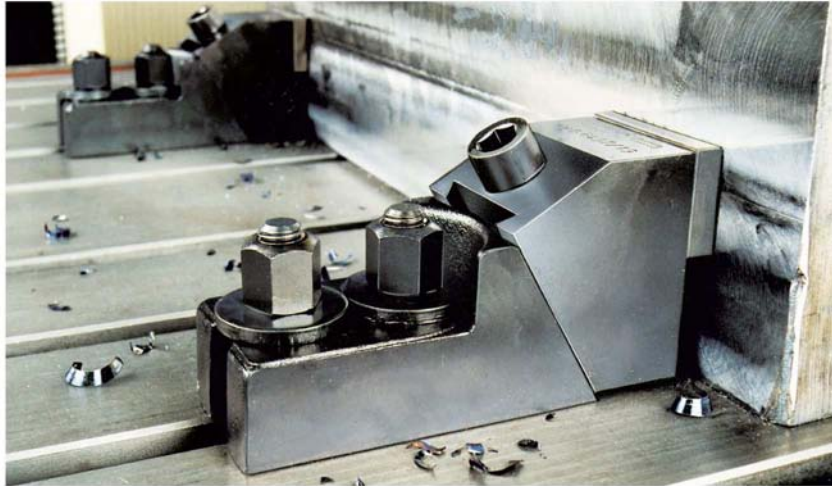


Clamping Jaws - Extra Strong

down hold action



12320



Material

Body: malleable cast iron.
Jaws: hardened steel.

Technical Notes

Jaw plates reversible (ribbed/smooth). Clamping action is forwards and downwards into the workpiece.

For table of clamping forces see below.

Tips

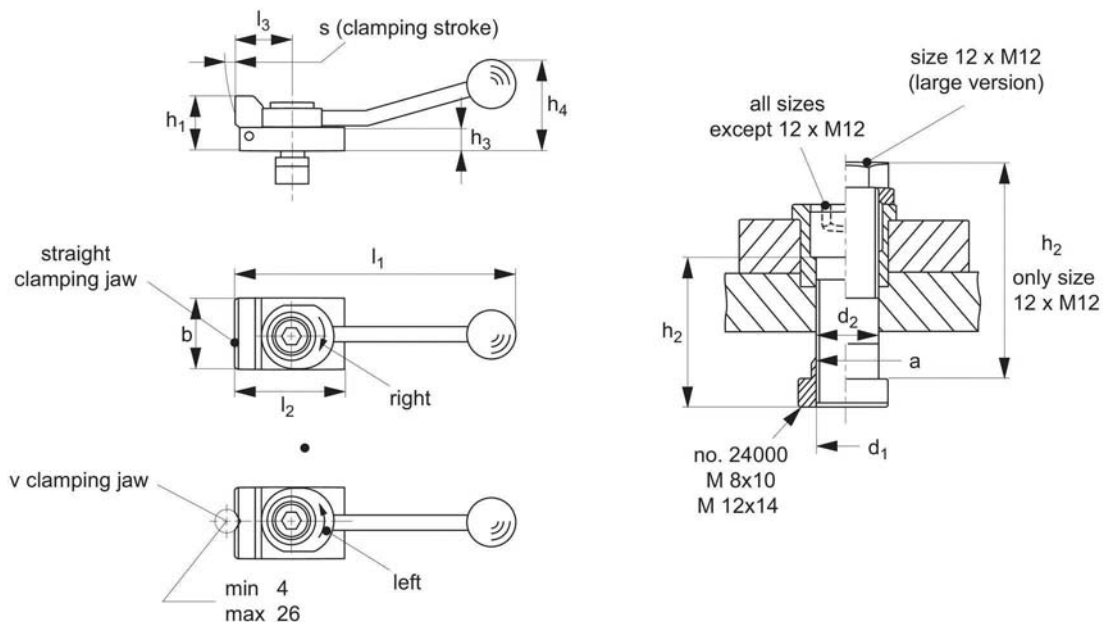
Extremely powerful clamps for use where high clamping forces are required. Due to the high clamping forces we recommend the use of 2 clamping bolts, no. 21000 for each clamp.

Down Hold Clamps

with cranked clamping lever



12400



Material

Case-hardened steel, blackened.

Technical Notes

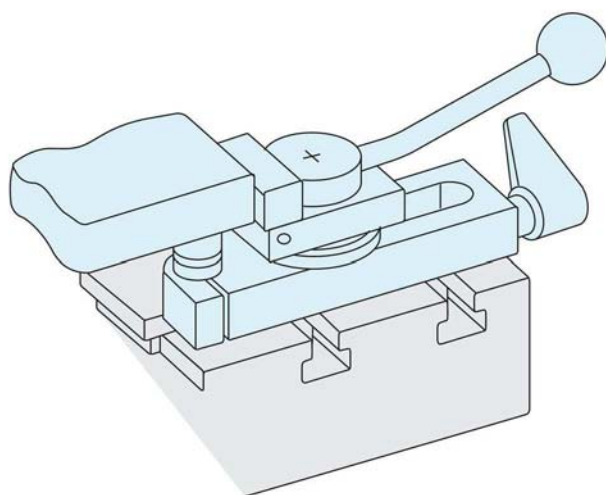
For quick clamping from the side. The clamps give forwards and downwards clamping forces.

Tips

Can bridge T-slots when used with holding plate no. 12410. The clamps low profile enables full-face machining. Often used in conjunction with cylindrical stops and bedding supports.

Supplied with standard T-nut. Clamps can be used in other T-slot sizes by selecting T-nuts no. 24000 as required, e.g. M 8x12, M 8x14, M12x16, M12x18.

Order No.	Type	a T-slot size	d ₁	d ₂	b	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	l ₃	s stroke	Clamp. force horizontal kN. max.	△ g
12400.W0101	Straight Jaw, Clamps Right	10	M 8	8,4	32	20	30	8	40	132	50	32	3	3,5	262
12400.W0321	Straight Jaw, Clamps Right	12	M12	12,5	48	38	60	16	62	190	72	40	4	7,0	870
12400.W0341	Straight Jaw, Clamps Right	14	M12	12,5	48	38	40	16	62	190	72	40	4	7,0	845
12400.W0105	Straight Jaw, Clamps Left	10	M 8	8,4	32	20	30	8	40	132	50	32	3	3,5	262
12400.W0325	Straight Jaw, Clamps Left	12	M12	12,5	48	38	60	16	62	190	72	40	4	7,0	868
12400.W0345	Straight Jaw, Clamps Left	14	M12	12,5	48	38	40	16	62	190	72	40	4	7,0	847
12400.W0102	V-Jaw, Clamps Right	10	M 8	8,4	32	20	30	8	40	132	50	32	3	3,5	263
12400.W0322	V-Jaw, Clamps Right	12	M12	12,5	48	38	60	16	62	190	72	40	4	7,0	893
12400.W0342	V-Jaw, Clamps Right	14	M12	12,5	48	38	40	16	62	190	72	40	4	7,0	838
12400.W0106	V-Jaw, Clamps Left	10	M 8	8,4	32	20	30	8	40	132	50	32	3	3,5	264
12400.W0326	V-Jaw, Clamps Left	12	M12	12,5	48	38	60	16	62	190	72	40	4	7,0	900
12400.W0346	V-Jaw, Clamps Left	14	M12	12,5	48	38	40	16	62	190	72	40	4	7,0	841



Down Hold Clamps

with cranked clamping lever



12400



Material

Case-hardened steel, blackened.

Technical Notes

For quick clamping from the side.
The clamps give forwards and downwards clamping forces.

Tips

Can bridge T-slots when used with holding plate no. 12410. The clamps low profile enables full-face machining. Often used in conjunction with cylindrical stops and bedding supports.

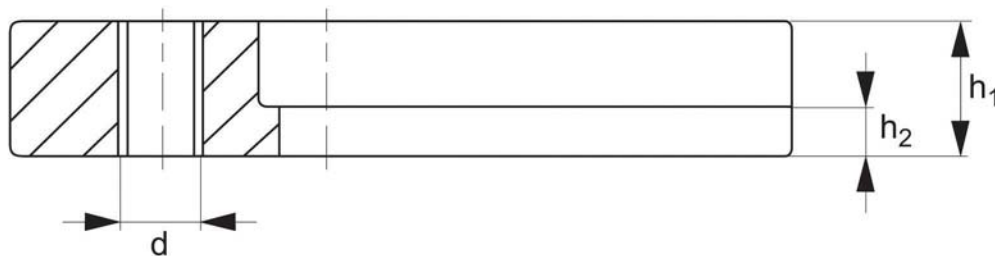
Supplied with standard T-nut.
Clamps can be used in other T-slot sizes by selecting T-nuts no. 24000 as required, e.g. M 8x12, M 8x14, M12x16, M12x18.

Holding Plates

for down hold clamps nos. 12400 & 12420



12410



Material

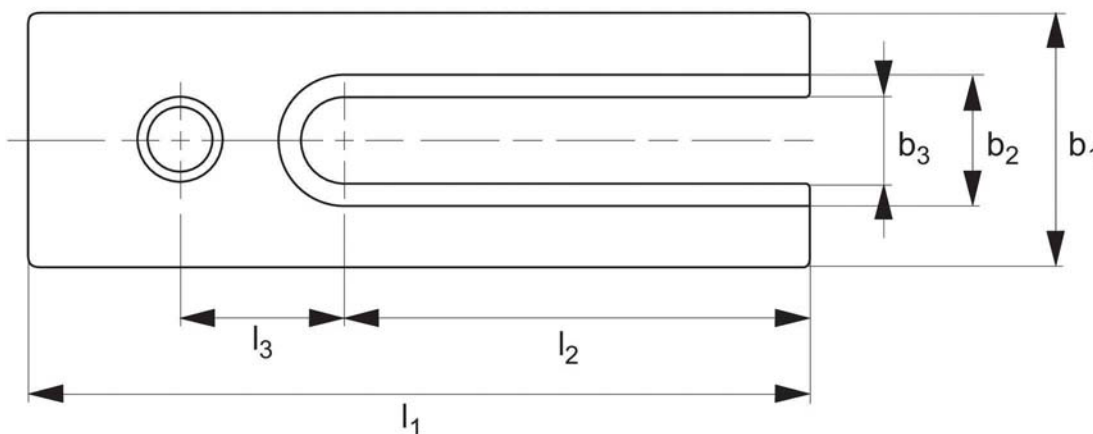
Heat treated steel, blackened


Technical Notes

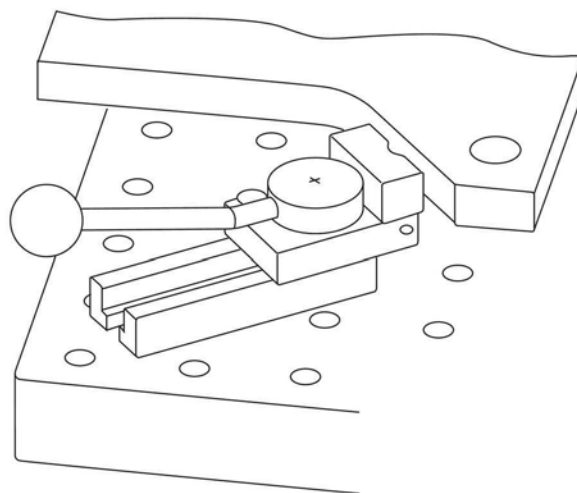
For use with clamps nos. 12400 and 12420.

Tips

Allows down hold clamps to be placed in any desired position, across T-slots etc.



Order No.	b_1	b_2	b_3	d	h_1 -0,4	h_2	l_1	l_2	l_3	 g
12410.W0730	30	15	9	M 8	15	6,5	100	63	20	246
12410.W0740	40	20	13	M12	20	7,5	120	72	25	515
12410.W0760	60	26	17	M16	30	13,0	140	80	30	1456
12410.W0770	80	32	21	M20	40	18,0	200	110	50	3900
12410.W0780	90	38	25	M24	50	24,0	220	130	55	5850



Down Hold Clamps

with set screw - small footprint



12420



Material

Case-hardened and ground steel, blackened.

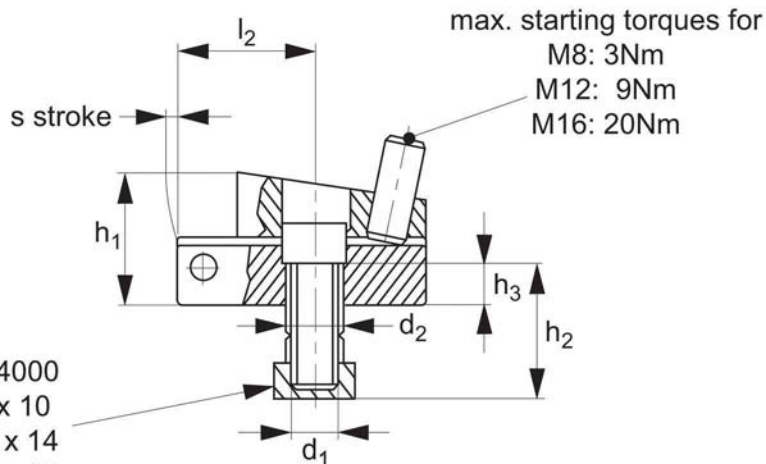
Technical Notes

Actuate by self-aligning screw on top, rear of the clamp. Extremely high clamping forces, as the clamp pivots forwards and downwards to securely hold the workpiece. **T-nuts no. 24000 allow the clamps to be used in a variety of T slot sizes, see.**

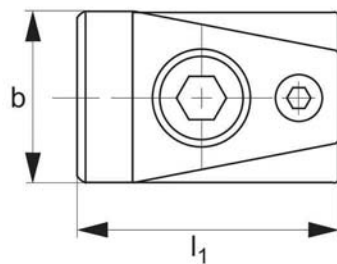
Tips

Do not over torque clamping screw, as can result in stripping of thread. For recommended torques - please see table.

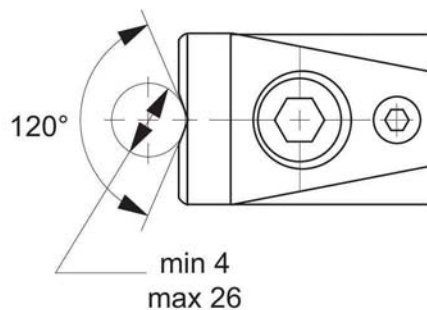
May be used with holding plate no. 12410.



no.24000
M8 x 10
M12 x 14
M16 x 18



straight jaw



v-jaw

Order No.	Type	T-slot size	d ₁	d ₂	b	h ₁	h ₂	h ₃	l ₁	l ₂	Clamping stroke	Clamping force horizontal kN. max.	Torque Max. Nm.	Weight g
12420.W0501	Straight Jaw	10	M 8	8,4	32	24	20	8	52	28,0	3	7,0	3	276
12420.W0521	Straight Jaw	14	M12	12,5	48	37	30	11	72	39,5	4	15,0	9	831
12420.W0541	Straight Jaw	18	M16	16,5	68	47	35	13	86	41,0	7	21,5	20	1749
12420.W0502	V-Jaw	10	M 8	8,4	32	24	20	8	52	28,0	3	7,0	3	266
12420.W0522	V-Jaw	14	M12	12,5	48	37	30	11	72	39,5	4	15,0	9	833
12420.W0542	V-Jaw	18	M16	16,5	68	47	35	13	86	41,0	7	21,5	20	1730

