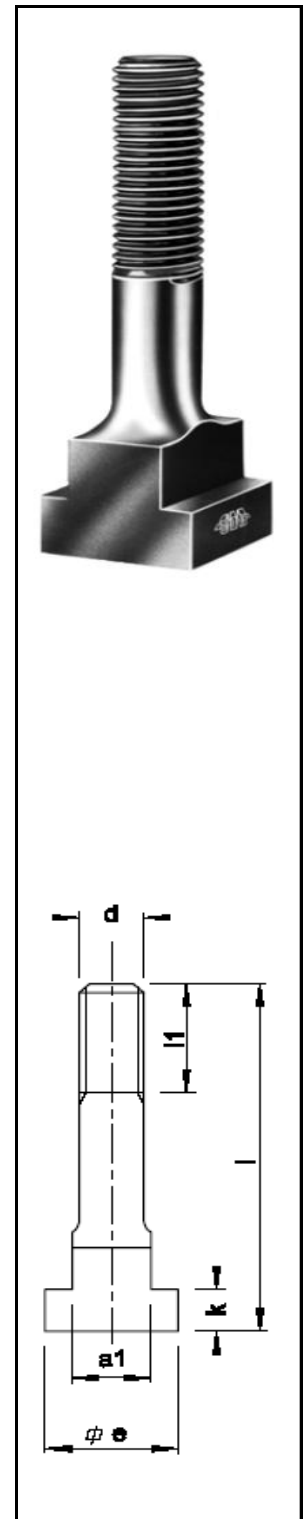


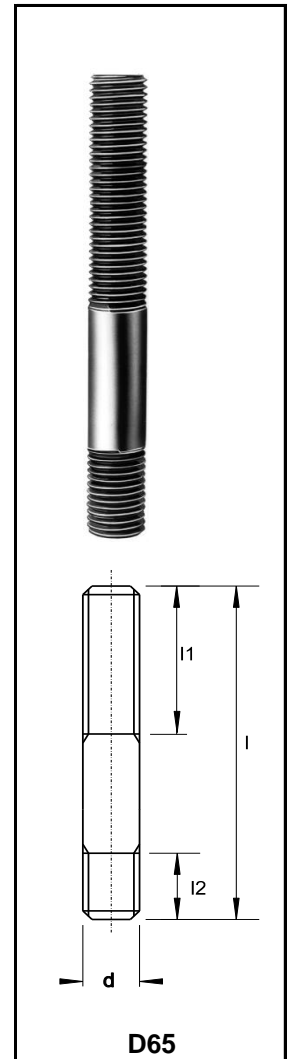
D60 T-Bolts are manufactured out of chrome-moybdenum steel, refined to a quality of 12.9. This assures high tensile strength and a maximum absorption of vibrations during clamping, resulting in a longer tool life. The T-foot is precision made to protect the machine table slots. The precision thread ISO 6g eliminates problems in assembling the nut and assures a long life of the bolt.

D	d	l	a	l1	a1	e	k	D	d	l	a	l1	a1	e	k
60	08	32	a8	16				60	16	63	a18	32			
60	08	40	a8	25				60	16	80	a18	50			
60	08	50	a8	28	7.7	13	6	60	16	100	a18	56	17.7	28	10
60	08	63	a8	32				60	16	125	a18	63			
60	08	80	a8	36				60	16	160	a18	71			
60	08	100	a8	40				60	16	200	a18	80			
60	10	40	a10	20				60	20	80	a20	40			
60	10	50	a10	32				60	20	100	a20	63			
60	10	63	a10	36	9.7	15	6	60	20	125	a20	71	19.7	32	12
60	10	80	a10	40				60	20	160	a20	80			
60	10	100	a10	45				60	20	200	a20	90			
60	10	125	a10	50				60	20	250	a20	100			
60	12	50	a12	25				60	20	80	a22	40			
60	12	63	a12	40				60	20	100	a22	63			
60	12	80	a12	45	11.7	18	7	60	20	125	a22	71	21.7	35	14
60	12	100	a12	50				60	20	160	a22	80			
60	12	125	a12	56				60	20	200	a22	90			
60	12	160	a12	63				60	20	250	a22	100			
60	12	50	a14	25				60	24	100	a28	50			
60	12	63	a14	40				60	24	125	a28	80			
60	12	80	a14	45	13.7	22	8	60	24	160	a28	90	27.7	44	18
60	12	100	a14	50				60	24	200	a28	100			
60	12	125	a14	56				60	24	250	a28	110			
60	12	160	a14	63				60	30	125	a36	63	35.6	54	22
60	16	63	a16	32				60	30	160	a36	100			
60	16	80	a16	50											
60	16	100	a16	56	15.7	25	9								
60	16	125	a16	63											
60	16	160	a16	71											
60	16	200	a16	80											



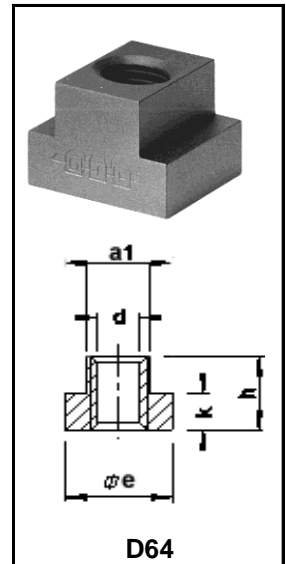
D65 Studs are made of chrome-molydenum steel, refined to 12.9 and able to withstand high tension forces and assuring maximum absorption of vibrations and safe clamping. These studs can be used to lengthen bolts D60 or as T-bolts in combination with T-nuts D64, Thread precision ISO 6g

D	d	l	l1	l2	D	d	l	l1	l2	D	d	l	l1	l2
65	08	50	28		65	16	80	45		65	24	125	80	
65	08	63	32	12	65	16	100	56		65	24	160	90	
65	08	80	36		65	16	125	63		65	24	200	100	
65	08	100	40		65	16	160	71		65	24	250	110	
					65	16	200	80	20	65	24	320	125	36
					65	16	250	90		65	24	400	140	
65	10	50	28		65	16	320	100		65	24	500	160	
65	10	63	36		65	16	400	110		65	24	630	180	
65	10	80	40	14	65	16	500	125		65	24	800	215	
65	10	100	45							65	24	1000	235	
65	10	125	50		65	20	100	63						
					65	20	125	71		65	30	200	110	
65	12	63	40		65	20	160	80		65	30	250	125	
65	12	80	45		65	20	200	90		65	30	320	140	
65	12	100	50		65	20	250	100	28	65	30	400	160	44
65	12	125	56	16	65	20	320	110		65	30	500	180	
65	12	160	63		65	20	400	125		65	30	630	200	
65	12	200	71		65	20	500	140		65	30	800	224	
65	12	250	80		65	20	630	160		65	30	1000	250	



D64 T-Nuts made of alloyed steel with high tensile strength are not hardened for reasons of security. Excellent finishing prevents damage of the slot in the machine table. Thread quality ISO 6H.

D	d	a	h	a1	e	k	D	d	a	h	a1	e	k
64	08	a10	10	9.7	15	6	64	16	a20	20	19.7	32	12
64	10	a12	12	11.7	18	7	64	20	a22	28	21.7	35	14
64	12	a14	16	13.7	22	8	64	20	a24	32	23.7	40	16
64	12	a16	16	15.7	25	9	64	24	a28	36	27.7	44	18
64	16	a18	20	17.7	28	10	64	30	a32	44	35.6	54	22



D	d	s	h
61	08	13	12
61	10	17	15
61	12	19	18
61	16	24	24
61	20	30	30
61	24	36	36
61	30	46	45

D61

D61 - D62 -D81 - D82 nuts are made of high quality carburised steel. By special manufacturing methods the external surfaces are hardened, whereas the thread (ISO 6H) is unhardened.

D	d	s	h
81	08	13	8
81	10	17	10
81	12	19	12
81	16	24	16
81	20	30	20
81	24	36	24
81	30	46	30

D81

D	d	s	h
62	08	13	24
62	10	17	30
62	12	19	36
62	16	24	48
62	20	30	60
62	24	36	72
62	30	46	90

D62

D	d	s	h
82	08	13	24
82	10	17	30
82	12	19	36
82	16	24	48
82	20	30	60
82	24	36	72
82	30	46	90

D82

D	M	d	h
63	08	20	5
63	10	25	6
63	12	30	8
63	16	40	10
63	20	50	12
63	24	60	14
63	30	70	18

D63

D63 and D93 Washers of carburised steel are surface hardened. The equal roundings of nuts and washers assure a vertical position of T-bolts in all cases.

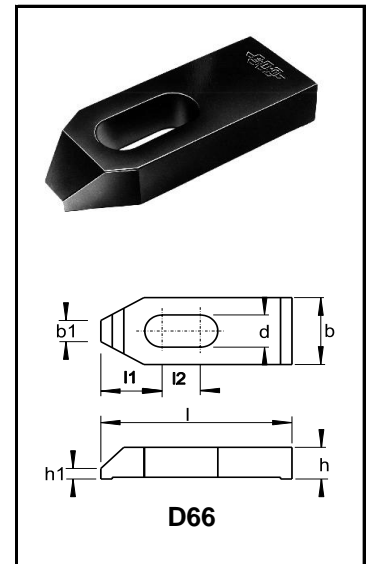
D	M	d	h
93	08	20	5
93	10	25	6
93	12	30	8
93	16	40	10
93	20	50	12
93	24	60	14
93	30	70	18

D93

DIF-Clamps are manufactured of manganese-vanadium alloyed tool steel. A special heat treatment makes them very resistant to deformation and wear. Clamping is based on elasticity so that DIF clamps remain undeformed during use and their life time is unlimited; this makes them the cheapest clamps that exists.

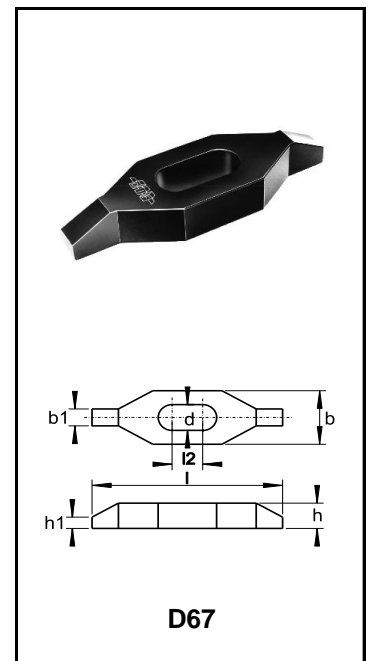
D66 Clamps are designed for clamping situations where the T-bolt can be situated near the workpiece. The ground clamping faces are located on the ends by relieving the center part of the bottom.

D	M	l	d	l1	l2	b	b1	h	h1
66	08	63	9	20	12	20	8	12	4
66	10	63	11	20	12	25	8	12	4
66	12	80	14	25	16	30	10	15	5
66	16	100	18	32	20	40	12	20	6
66	20	125	22	42	25	50	16	25	8
66	24	160	26	50	35	70	25	30	10
66	30	200	32	62	42	80	35	40	12



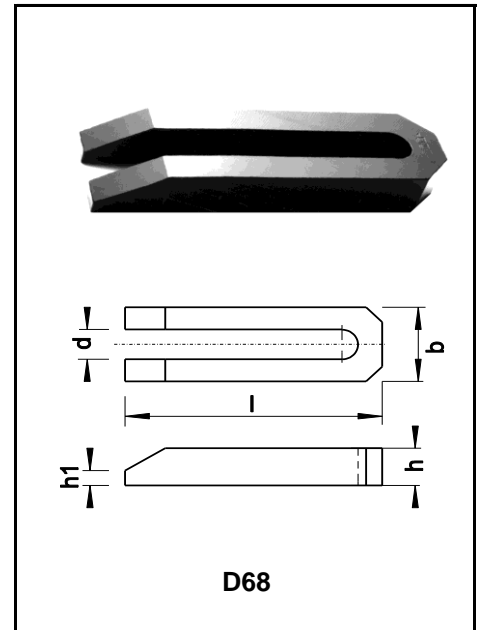
D67 Clamps are longer than D66 and may be used at both ends. the whole bottom-face is ground and the ends are narrowed to realise exact location of the clamping points.

D	M	l	d	l2	b	b1	h	h1
67	08	80	9	12	20	8	12	5
67	10	80	11	12	25	8	12	5
67	12	100	14	16	30	10	15	6
67	16	125	18	20	40	12	20	8
67	20	160	22	25	50	16	25	10
67	24	200	26	35	70	25	30	12
67	30	250	32	42	80	35	40	14



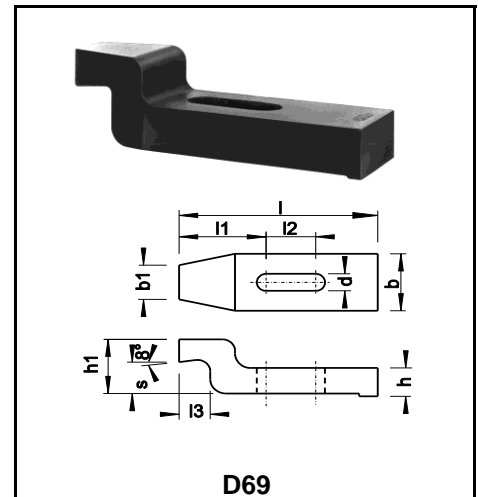
D68 U-clamps are suitable for longer distances from bolt to clamping point and/or for bigger clamping forces. Without risk of deformation. The whole bottom face is ground.

D	M	l	d	b	h	h1
68	08	80	9	25	12	5
68	10	100	11	30	15	5
68	12	125	14	35	20	6
68	12	160	14	40	20	6
68	16	160	18	50	25	8
68	16	200	18	50	30	8
68	20	200	22	60	30	8
68	20	250	22	60	40	10
68	20	320	22	60	40	10
68	24	250	26	70	40	10
68	24	320	26	70	45	12
68	24	400	26	70	50	15
68	30	320	32	80	50	15
68	30	400	32	80	60	18



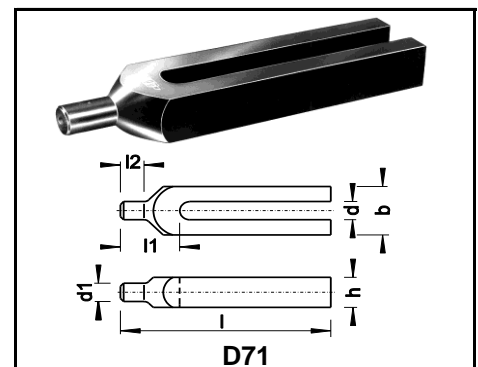
D69 Clamps specially designed for clamping moulds and dies. The division of forces is favoured by the relieved and rounded clamping finger and by the short suspending face at the opposite end.

D	M	l	d	l1	l2	l3	b	b1	h	h1	s
69	10	100	11	44	20	15	30	18	15	30	18
69	12	125	14	56	26	20	40	24	20	40	24
69	16	160	18	68	32	25	50	28	25	50	30
69	20	200	22	85	45	30	60	32	30	60	35
69	24	250	26	100	54	32	75	43	40	75	24
69	30	320	32	120	66	40	90	50	45	90	50



D71 Clamps suitable for clamping in holes, grooves and cavities of the workpiece.

D	M	l	d	l1	l2	b	h	d1
71	10	125	11	35	15	30	20	11
71	12	160	14	45	20	40	20	14
71	16	200	18	55	25	50	30	18
71	20	250	22	65	30	60	40	22
71	24	250	28	80	35	70	40	28
71	30	320	32	85	40	80	50	32





Supporting is more than setting the right height. It also means the absorption of clamping forces and vibrations caused and leading them to the machine table.

DIF supporting tools are outstanding by their solid design, their accuracy, their wide scale of applications and their long life.

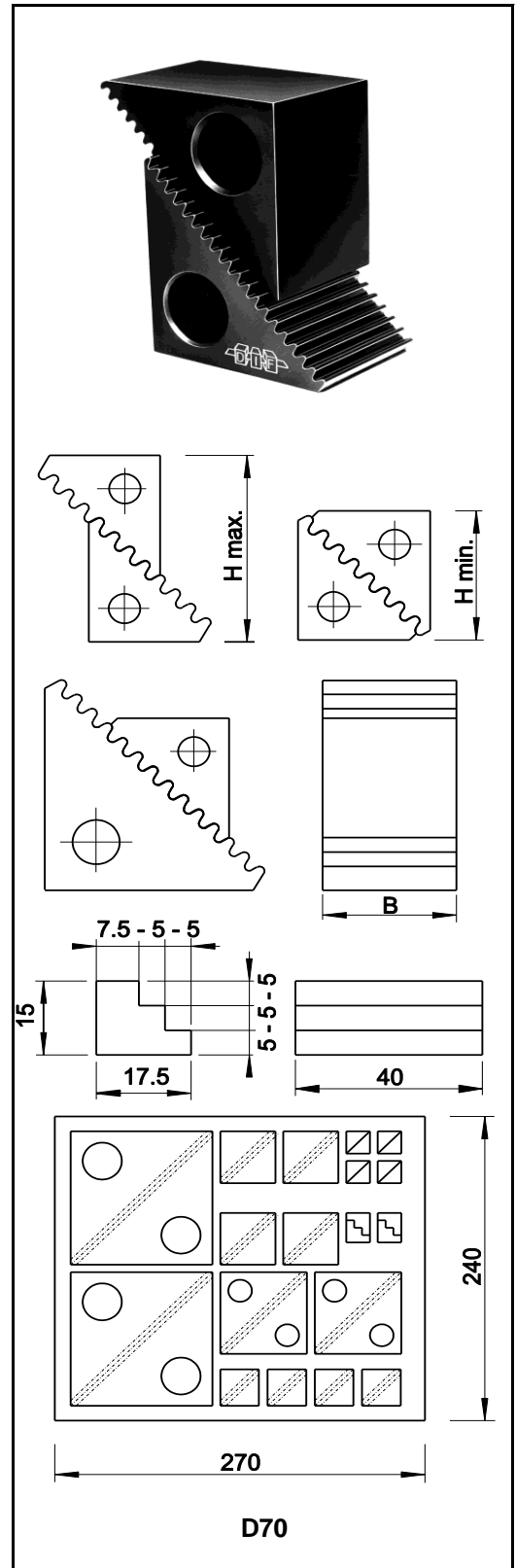
Depending upon the application, choice can be made from step- or toothblocks or continuously adjustable jacks, of which some can be mounted on the machine table.

D70 Toothblocks are made of alloyed tool steel, provided with an exclusive DIF tooth profile under 45° and hardened. The blocks are used by two equal or different pieces, because tooth profile and width of all blocks are equal. Vertical displacement is 2.8 mm per tooth. Inversion of one block gives a displacement of 1.4 mm.

D70.15 Stepblock are used single for clamping heights from 5 upto 17.5 mm in steps of 2.5 mm.

D70.00 is an assortment set of toothblocks and stepblocks in a solid, closable wooden case.

D	H min	H max	B	D70.00
70	15	15	17,5	4x
70	17	17	20	4x
70	25	25	33	4x
70	40	40	55	4x
70	63	63	90	2x
70	100	100	38	2x

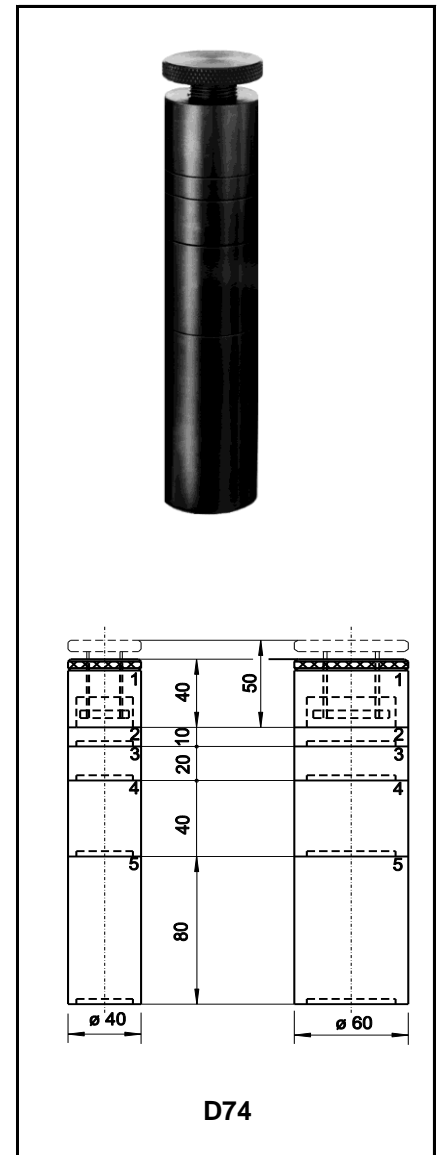


D74 adjustable packing blockes are manufactured from highly carburised steel. The outer surface is hardened. They consist of 5 pilable parts, the upper one being an adjustable jack. The height of the whole combination is 40 to 200 mm. The spindle thread is non-hardened.

Can only be ordered as a complete set,

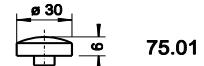
D	H min	H max
D74.40	40	200
D74.60	40	200

40-50	mm	1	120-130	mm	1+5
50-60	mm	1+2	130-140	mm	1+2+5
60-70	mm	1+3	140-150	mm	1+3+5
70-80	mm	1+2+3	150-160	mm	1+2+3+5
80-90	mm	1+4	160-170	mm	1+4+5
90-100	mm	1+2+4	170-180	mm	1+2+4+5
100-110	mm	1+3+4	180-190	mm	1+3+4+5
110-120	mm	1+2+3+4	190-200	mm	1+2+3+4+5

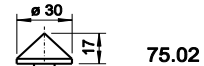


D75 Jacks can support workpieces weighing several tons with full stability and safety. The pivot has a trapezoidal thread T30x6. The adjustable height can be secured. Turning out the pivot too far is prevented. The knurled head has a bore to accommodate the **inserts D75.01, D75.02 and D75.03**.

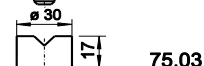
All jacks can be attached on a **baseplate D75.04**, which can be fixed on the machine table by means of a bolt M12, M16 or M20.



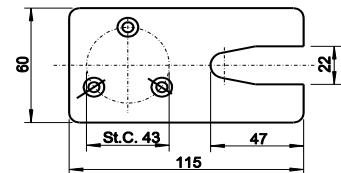
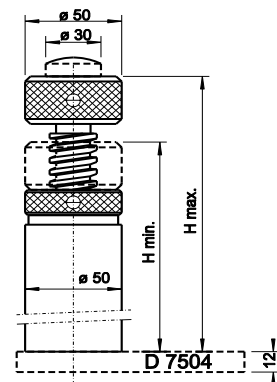
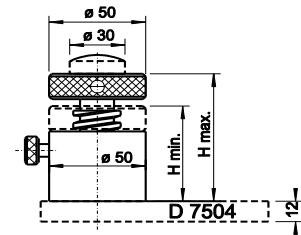
75.01



75.02



75.03

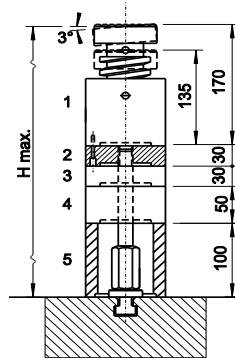


D	H min	H max	F max (t)
75	50	70	4
75	70	100	6
75	100	150	8
<hr/>			
75	150	200	10
75	200	300	10
75	300	500	10

The jack D79 for heavy loads can be fastened on the machine table (see drawing). The self-adjusting head is carbonized and hardened. In the fixed position heights of 3 meter of more are available for safe clamping. The jack D79.60 can be used on more machines with different slots by changing the disk with thread (M16-M30). All disks with thread and blocks have to be ordered separately.

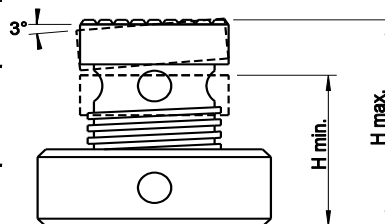
D	H	F max (t)
D79.60	min. 135 max. 3000	40

- pos 1: D79.60
- pos 2: D79.16 d = M16
D79.20 d = M20
D79.24 d = M24
D79.30 d = M30
- pos 3: D79.00.30
- pos 4: D79.00.50
- pos 5: D79.00.100



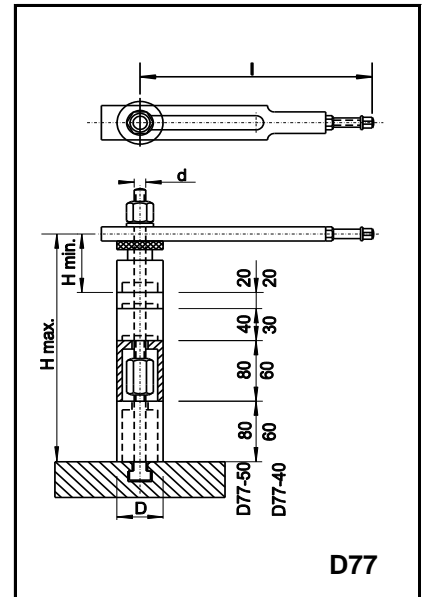
D80 Jacks for horizontal positioning of heavy workpieces.

D	H	F max (t)
80	min. 115 max. 145	100 75

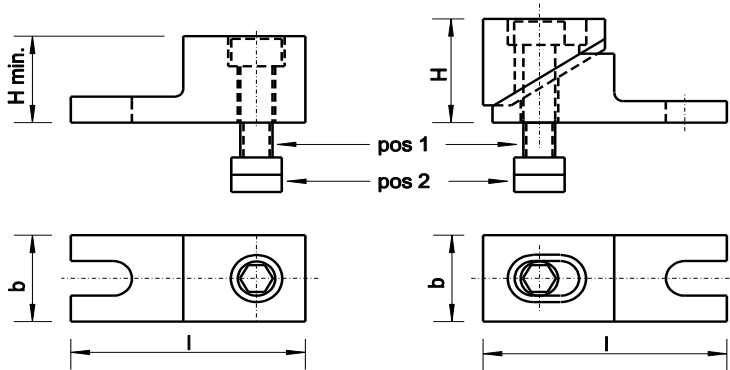


D77 Adjustable Stop for accurate positioning of identical, succeeding pieces. Continuously adjustable horizontally and vertically. Adapting to DIF bolts, nuts and washers: D77.40 to M10 and M12; D77.50 to M16 and M20.

D	H min	H max	I min	I max	d
77.40	54	225	80	225	M10-M12
77.50	55	300	90	225	M10-M12



D78 Set of lateral clamps for clamping pieces of which the top face should be entirely free. The set consists of a fixed part and a clamping part. During clamping the piece is pressed down on the machine table.



D	M	a	H-min	H max	b	l	pos 1	pos 2
78	12	a14	40	45	40	95	M12 x 60	64.12 a14
78	12	a16	40	45	40	95	M12 x 70	64.12 a16
78	16	a18	50	55	45	110	M16 x 70	64.16 a18
78	16	a20	50	55	45	110	M16 x 80	64.16 a20
78	20	a22	60	65	50	130	M20 x 90	64.20 a22
78	20	a24	60	65	50	130	M20 x 90	64.20 a24
78	24	a28	70	75	70	160	M24 x 100	64.24 a28

