
International Standard



6898

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Open front mechanical power presses — Capacity ratings and dimensions

Presses mécaniques à bâti en col de cygne — Capacités et dimensions

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Descriptors : machine tools, presses, dimensions, ratings, power.

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6898 was developed by Technical Committee ISO/TC 39, *Machine tools*, and was circulated to the member bodies in November 1982.

It has been approved by the member bodies of the following countries :

Belgium	Germany, F.R.	Mexico
Brazil	Hungary	South Africa, Rep. of
China	India	Spain
Czechoslovakia	Italy	Sweden
Egypt, Arab Rep. of	Korea, Dem. P. Rep. of	Switzerland
France	Korea, Rep. of	United Kingdom

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Japan
Poland

Open front mechanical power presses — Capacity ratings and dimensions

1 Scope and field of application

This International Standard specifies capacity ratings and dimensions for open front mechanical presses with or without a passage through the frame and with or without a slope, in the range from 100 to 2 500 kN inclusive.

A choice of two values is given for some dimensions : these are designated series 1 and series 2. To minimize the variety of dimensions as far as possible it is intended that all the values for a given press should be selected from one of the series. However, in order to meet special requirements it is permitted to select the values for shut height only from either series 1 or series 2.

This International Standard provides for alternative types of bed, one with a round opening and the other a rectangular opening. The bed with the round opening has T-slots provided so that it can be used without a bedplate if required.

Two types of bedplate are specified as type 1 and type 2. Details are also given for the bedplug for beds with round holes and for the bedplate ring for bedplates of type 2.

2 References

ISO 273, *Fasteners — Clearance holes for bolts and screws.*

ISO/R 286, *ISO system of limits and fits — Part 1 : General, tolerances and deviations.*

ISO 299, *Machine tool tables — T-slots and corresponding bolts.*

ISO 6899, *Acceptance conditions of open front mechanical power presses — Testing of the accuracy.*

3 Dimensions

NOTE — a) and b) are alternative standards.

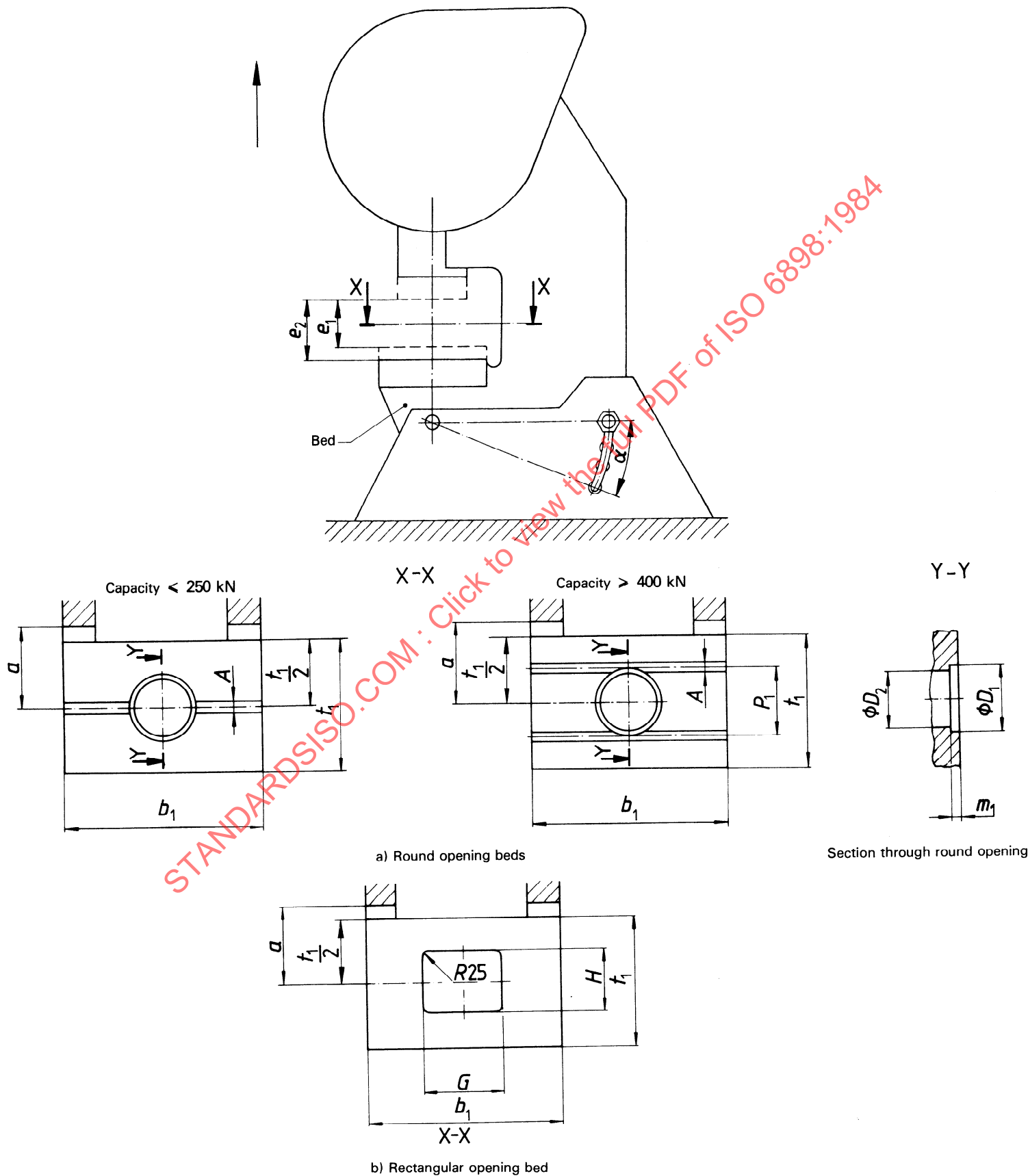


Figure 1 — Layout of press and alternative beds

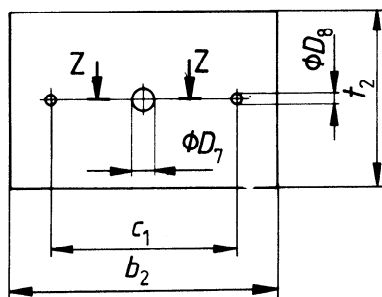


Figure 2 — Slide

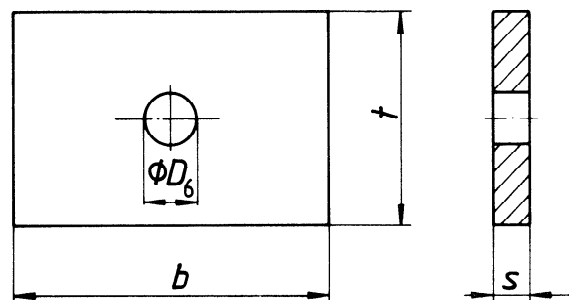
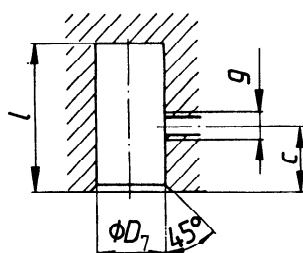


Figure 3 — Bedplates type 1
(for beds with round holes)



Stem hole

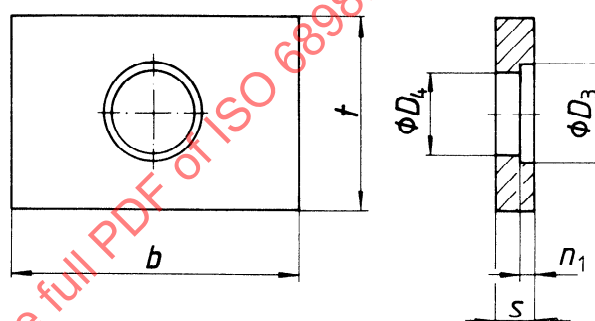
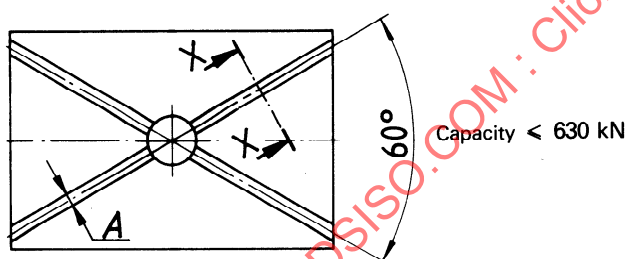
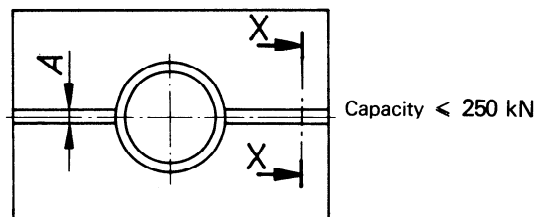


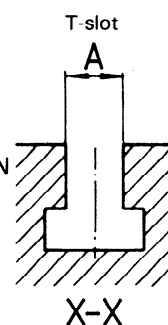
Figure 4 — Bedplates type 2
(for beds with rectangular holes)



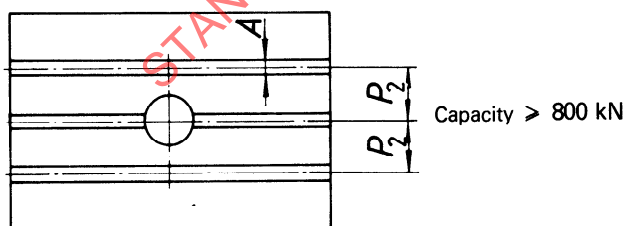
Capacity < 630 kN



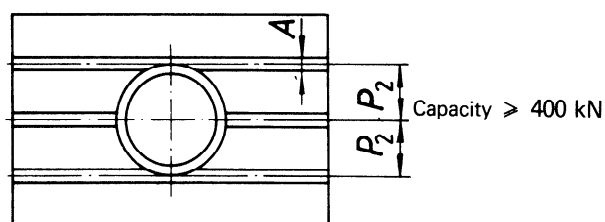
Capacity < 250 kN



X-X



Capacity > 800 kN



Capacity > 400 kN

a) T-slots in bedplates type 1

b) T-slots in bedplates type 2

Figure 5 — T-slots for bedplates

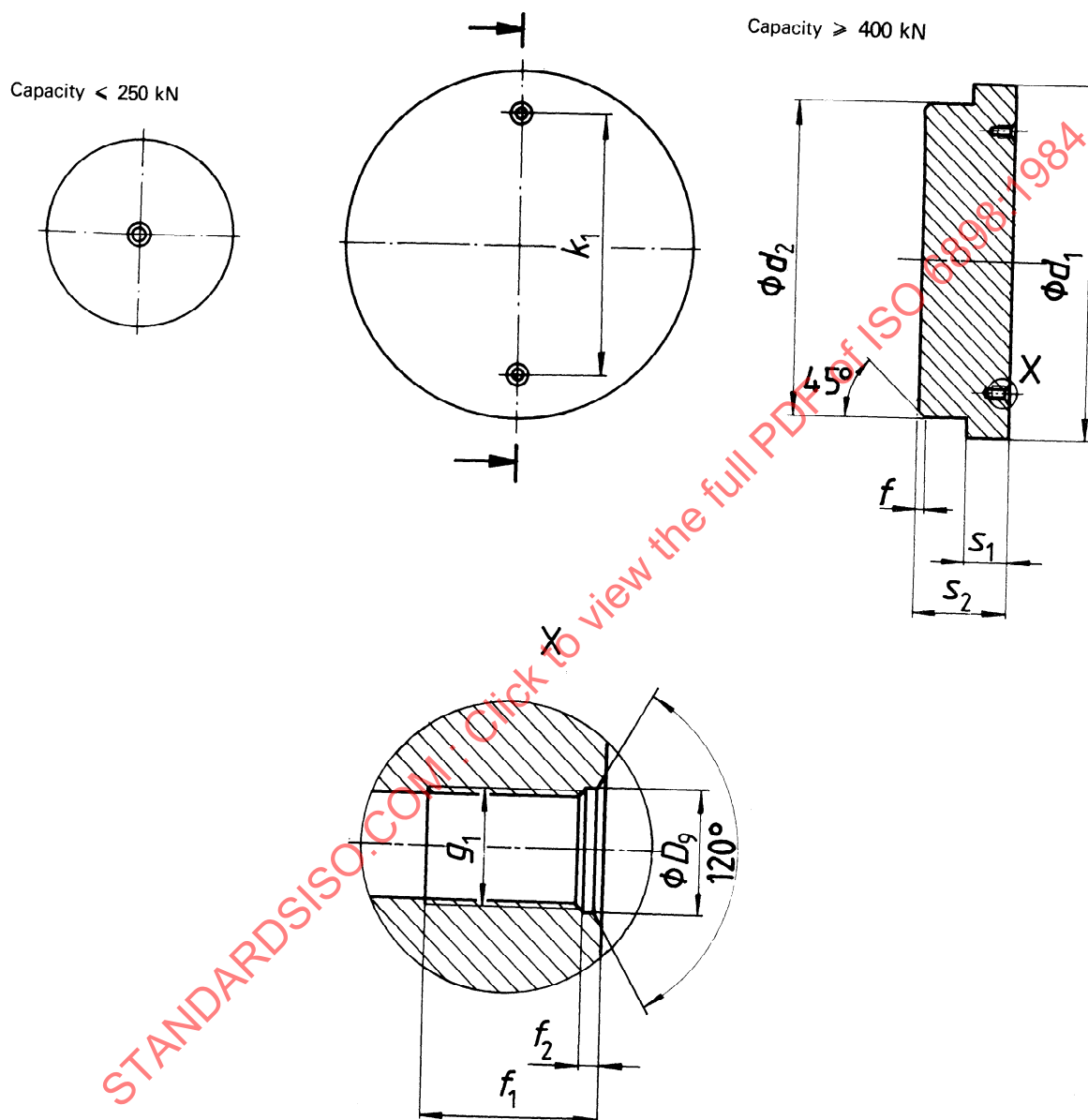


Figure 6 — Bedplug for beds with round holes

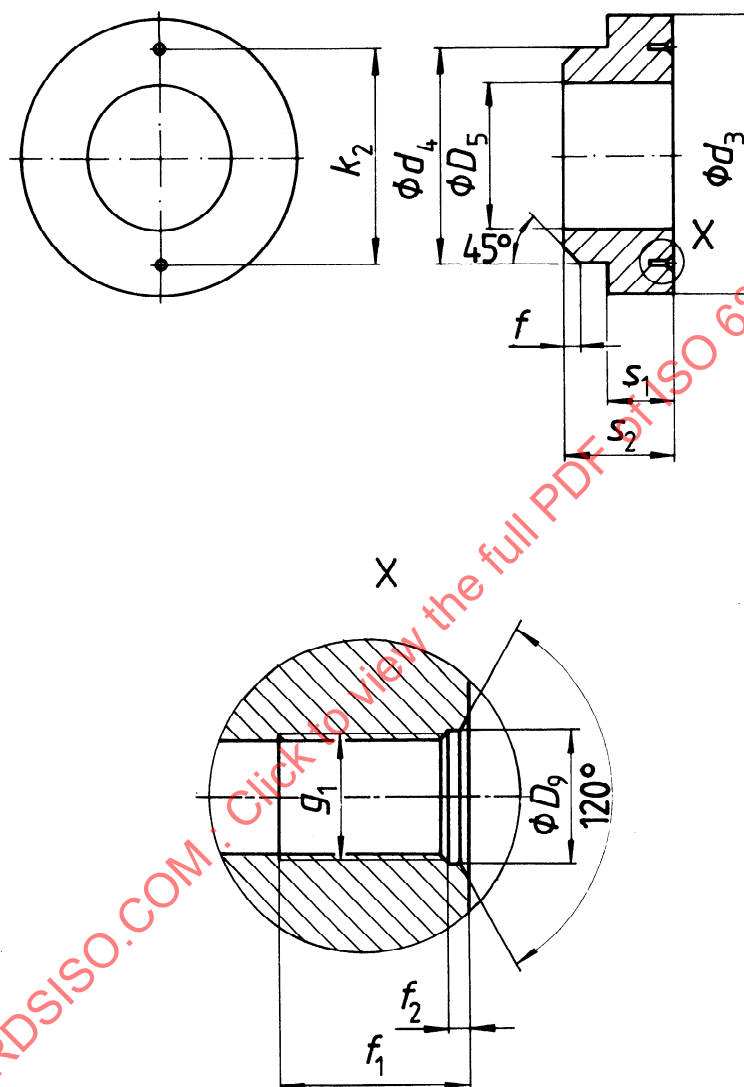


Figure 7 — Bedplate ring for bedplates type 2

Dimensions in millimetres

All sizes within brackets are non-preferred.

Capacities in kilonewtons

Pressure in megapascals and (bar)

Nominal capacity		Note referring	100	160	250	400	630	(800)	1 000	(1 250)	1 600	(2 000)	2 500
General data	Throat depth												
	$a_{\min}$ series 1		165	180	210	235	260	285	310	340	370	405	440
	series 2		—	—	—	290	325	355	385	425	465	505	545
	Shut height												
	e_1 series 1	1	160	180	200	225	250	275	300	325	355	390	425
	series 2		200	225	250	280	315	345	375	410	450	490	530
	Bed to slide distance												
	e_2 series 1	2	225	250	275	305	335	365	395	425	460	500	550
	series 2		265	295	325	360	400	435	470	510	555	600	655
	Slide adjustment												
	series 1		40	45	50	56	63	71	80	90	100	112	125
	series 2		—	—	—	80	85	90	100	112	125	140	160
	Stroke length												
series 1 max.		63	71	80	90	100	112	125	140	160	180	200	
min.		12			16			20			25		
series 2 max.		—			125	140	160	180	200	224	250	280	
min.		—			16			20			25		
Direct drive													
series 1	3	2	2	2	2,5	2,5	3	3	—				
series 2		—			3	3	4	4	—				
Gearred drive													
series 1	3	—			4	4	4	4	6	6	6	6	
series 2		—			6	6	6	6	9	9	9	9	
Nominal air pressure	4	0,5 (5)											
Bed	Surface												
	b_1 series 1		450	500	560	630	710	780	850	925	1 000	1 090	1 180
	t_1		315	355	400	450	500	550	600	655	710	780	850
	b_1 series 2		—			800	900	980	1 060	1 155	1 250	1 375	1 500
	t_1		—			560	630	690	750	825	900	980	1 060
	Round opening												
	D_1 tol. H11	5	180	200	225	250	280	305	335	365	400	435	475
	D_2		160	180	200	225	250	275	300	325	355	390	425
	Shoulder depth												
	m_1	6	36			45			56				
	Rectangular opening												
	G		225	250	280	315	355	390	425	460	500	550	600
	H		160	180	200	225	250	275	300	325	355	390	425
T-slots													
width A	7	18			22					28			
pitch P_1	8	—			200		250			320		400	
Maximum angle of inclination		30						25					
α°													

Nominal capacity			Note referring	100	160	250	400	630	(800)	1 000	(1 250)	1 600	(2 000)	2 500
Slide	Surface b_2 l_2 b_2 l_2 series 1 series 2		280	315	355	400	450	490	530	580	630	690	750	
			180	200	225	250	280	305	335	365	400	435	475	
			—			500	560	615	670	735	800	875	950	
			—			315	355	390	425	465	500	550	600	
	Stem hole D_7 tol. H7 l c	5	40				50				65			
			75				85				105			
			40										45	
	Clamping bolt g_2		M20										M24	
	Attaching holes D_8 c_1 series 1 series 2		18			22					28			
			235	265	300	335	375	410	450	490	530	580	630	
—			425	475	515	560	615	670	735	800				
Bedplate	Surface b t b t series 1 series 2		440	490	550	620	700	770	840	905	980	1 070	1 160	
			305	345	390	440	490	540	590	645	700	770	840	
			—			790	890	970	1 050	1 135	1 230	1 355	1 480	
			—			550	620	680	740	815	890	970	1 050	
	Through hole D_6 D_3 tol. H11 D_4	9 5 10 10	90	95	100	106	112	118	125	132	140	150	160	
			180	200	225	250	280	305	335	365	400	435	475	
			160	180	200	225	250	275	300	325	355	390	425	
	Shoulder depth n_1	10 6	36			45				56				
	Thickness s		65	70	75	80	85	90	95	100	105	110	125	
	T-slots width A pitch P_2 pitch P_2	7 9 10	18			22					28			
			—			125					160		200	
			—			100		125			160		200	
	Bedplug	d_1 tol. d9 d_2 g_1 D_9 k_1 f f_1 f_2 s_1 s_2	5	180	200	225	250	280	305	335	365	400	435	475
158				178	198	223	248	273	298	323	353	388	423	
M10				M12					M16					
10,5				13					17					
—				180	200	215	235	255	280	305	335			
2				3										
6			15			18							24	
			1,5			2								
			36			45					56			
			63	68	73	78	83	88	93	98	103	108	123	