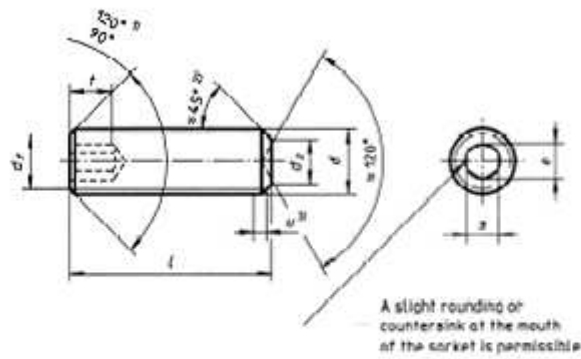


## Hexagon socket set screws with cup point



Permissible alternative form of socket

NOTE - For broached sockets which are at the maximum limit of size, the overcut resulting from drilling shall not exceed 20 % of the length of any flat of the socket.

1) The 120° angle is required for short-length screws of nominal length  $l$ , situated above the dotted stepped line in table 1.

2) The 45° angle applies only to the portion of the point situated below the root diameter of the thread.

3) Incomplete thread  $u \leq 2P$ .

Table 1

Dimensions in millimetres

Thread (d)	M1,6	M2	M2,5	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24			
<i>p</i> <sup>1)</sup>	0,35	0,4	0,45	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2,5	3			
<i>d<sub>1</sub></i>	max.	0,80	1,00	1,20	1,40	2,00	2,50	3,00	5,0	6,0	8,00	10,00	14,00	16,00		
	min.	0,55	0,75	0,95	1,15	1,75	2,25	2,75	4,7	5,7	7,64	9,64	13,57	15,57		
<i>d<sub>2</sub></i>	≈ Minor thread diameter															
<i>e</i>	min. <sup>2)</sup>	0,603	1,003	1,427	1,73	2,3	2,87	3,44	4,58	5,72	6,86	8,16	11,43	13,72		
	nom.	0,7	0,9	1,3	1,5	2	2,5	3	4	5	6	6	10	12		
<i>r</i> <sup>3)</sup>	max.	0,724	0,902	1,295	1,545	2,045	2,560	3,071	4,084	5,084	6,095	8,115	10,115	12,142		
	min.	0,711	0,889	1,270	1,520	2,020	2,520	3,020	4,020	5,020	6,020	8,025	10,025	12,032		
<i>l</i>	min. <sup>4)</sup>	0,7	0,8	1,2	1,2	1,5	2	2	3	4	4,8	6,4	8	10		
	<sup>5)</sup>	1,5	1,7	2	2	2,5	3	3,5	5	6	0	10	12	15		
nom.	<i>l</i> min.	max.	Approximate mass, in kilograms per 1 000 pieces ( $\rho = 7,85 \text{ kg/dm}^3$ ) (for information only)													
2	1,8	2,2	0,019	0,029	0,05											
2,5	2,3	2,7	0,025	0,037	0,063	0,079										
3	2,6	3,2	0,029	0,044	0,075	0,1	0,155									
4	3,76	4,24	0,037	0,059	0,1	0,14	0,23	0,3								
5	4,76	5,24	0,046	0,074	0,125	0,18	0,305	0,42	0,505							
6	5,76	6,24	0,054	0,089	0,15	0,22	0,38	0,54	0,74	1,25						
8	7,71	8,29	0,07	0,110	0,190	0,3	0,53	0,70	1,09	1,80	2,71					
10	9,71	10,29		0,148	0,249	0,38	0,68	1,02	1,44	2,51	3,72	5,3				
12	11,66	12,36			0,269	0,46	0,83	1,26	1,79	3,14	4,72	6,7	10,6			
16	15,05	16,35				0,62	1,13	1,74	2,48	4,4	6,73	9,5	15,7	22,9		
20	19,59	20,42					1,42	2,22	3,19	5,66	8,72	12,3	20,9	31,1	40,2	
25	24,58	25,42						2,82	4,07	7,24	11,2	15,0	27,4	41,4	55,2	
30	29,58	30,47							4,94	8,81	13,7	19,3	33,9	51,7	70,3	
35	34,5	35,5								10,4	16,2	22,7	40,4	62	85,3	
40	39,5	40,5								12	18,7	26,2	46,9	72,3	100	
45	44,5	45,5									21,2	29,7	53,3	82,6	116	
50	49,5	50,5									23,6	33,2	59,8	92,6	130	
55	54,4	55,6										36,6	66,3	103	145	
60	59,4	60,6											40,1	72,8	114	160

NOTE — Commercial lengths are shown between the stepped, continuous, bold lines.

1) *P* = pitch of the thread  
2)  $e_{\text{min}} = 1,14 e_{\text{nom}}$ , except for sizes M1,6, M2 and M2,5  
3) *r* shall be gauged by attribute methods, see annex A for gauges.  
4) For screws with nominal lengths above the dotted stepped line.  
5) For screws with nominal lengths below the dotted stepped line.

Table 2

Material	Steel	Stainless steel	Non-ferrous metal	
<b>General requirements</b>	International Standard	ISO 8992		
<b>Thread</b>	Tolerances	5g6g for class 45H; 6g for other classes		
	International Standards	ISO 261, ISO 965-2, ISO 965-3		
<b>Mechanical properties</b>	Property class	45H	A1, A2	...
	International Standards	ISO 898-5	ISO 3506	ISO 8839
<b>Tolerances</b>	Product grade	A		
	International Standard	ISO 4759-1		
<b>Finish</b>	Black oxide (thermal or chemical)	Plain	Plain	
	Requirements for electroplating are given in ISO 4042. If different electroplating requirements are desired or if requirements are needed for other finishes, they should be negotiated between customer and supplier. Limits for surface discontinuities are given in ISO 6157-1 and ISO 6157-3.			
<b>Acceptability</b>	For acceptance procedure, see ISO 3269.			

