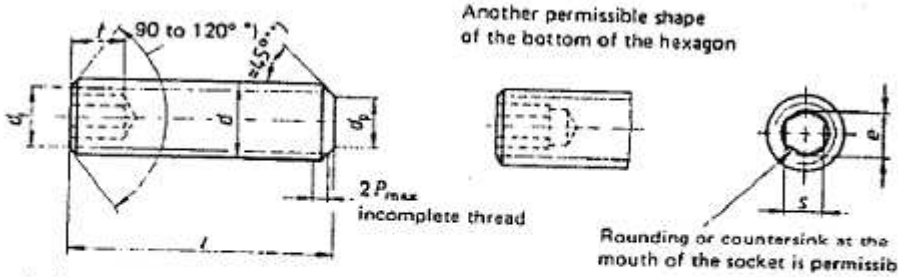
DIN913

Hexagon socket set screws with flat point

ISO 4026 modified

2 Dimensions and designation



Designation of a hexagon socket set screw with thread size d = M 6, nominal size l = 12 mm and strength category 45H:

Set screw DIN 913 – M 6 X 12 – 45H

Set screws up to M 2,5 may also be ordered in product grade F according to DIN 267 Part 6. In this case the letter F shall be added to the designation, e.g. Set screw DIN 913 – M 2 X 4 – 45H – F.

If set screws in other strength categories (hardness categories) according to DIN ISO 898 Part 5 are required, the corresponding symbol must be indicated in the designation, e.g. Set screw DIN 913 – M 6 X 12 – 22H.

Thread size d			M 1,4	M 1,6	(M 1,8)	M 2	M 2,5	M 3	M 4	M 5	M 6
P ¹)			0,3	0,35	0,35	0,4	0,45	0,5	0,7	0,8	1
d_f			Lower limit of minor thread diameter								
d_p		max.	0,7	0,8	0,9	1	1,5	2	2,5	3,5	4
		min.	0,45	0,55	0,65	0,75	1,25	1,75	2,25	3,2	3,7
e		min. ²)	0,803	0,803	0,803	1,003	1,427	1,73	2,30	2,87	3,44
s		Nominal size	0,7	0,7	0,7	0,9	1,3	1,5	2	2,5	3
		min.	0,711	0,711	0,711	0,889	1,27	1,52	2,02	2,52	3,02
		max.	0,724	0,724	0,724	0,902	1,295	1,545	2,045	2,56	3,08
t		min. ³)	0,6	0,7	0,8	0,8	1,2	1,2	1,5	2	2
		⁴)	1,4	1,5	1,6	1,7	2	2	2,5	3	3,5
Nominal size	l min.	l max.	Weight (7,85 kg/dm³) kg per 1000 pieces ≈								
2	1,80	2,20									
2,5	2,30	2,70	0,018	0,023	0,030						
3	2,80	3,20	0,022	0,029	0,036	0,044	0,075	0,100			
(3,5)	3,26	3,74									
4	3,76	4,24	0,029	0,037	0,048	0,059	0,100	0,140	0,220		
5	4,76	5,24	0,036	0,046	0,060	0,074	0,125	0,180	0,300	0,440	
6	5,76	6,24	0,043	0,056	0,072	0,089	0,150	0,220	0,380	0,560	0,760
8	7,71	8,29				0,119	0,199	0,310	0,530	0,800	1,11
10	9,71	10,29				0,148	0,249	0,400	0,680	1,04	1,46
12	11,65	12,35						0,490	0,830	1,28	1,81
(14)	13,65	14,35									
16	15,65	16,35						0,670	1,13	1,76	2,51
(18)	17,65	18,35									
20	19,58	20,42						0,850	1,43	2,24	3,21
(22)	21,58	22,42									
25	24,58	25,42								2,84	4,09
(28)	27,58	28,42									
30	29,58	30,42									4,97
35	34,5	35,5									5,85

For ¹) to ⁴) see page 3

Thread size d		M 8	M 10	M 12	(M 14)	M 16	(M 18)	M 20	(M 22)	M 24
P 1)		1,25	1,5	1,75	2	2	2,5	2,5	2,5	3
d_t	≈	Lower limit of minor thread diameter								
d_p	max.	5,5	7	8,5	10	12	13	15	17	18
	min.	5,2	6,64	8,14	9,64	11,57	12,57	14,57	16,57	17,57
e	min. 2)	4,58	5,72	6,86	6,86	9,15	11,43	11,43	13,72	13,72
s	Nominal size	4	5	6	6	8	10	10	12	12
	min.	4,02	5,02	6,02	6,02	8,025	10,025	10,025	12,032	12,032
	max.	4,095	5,095	6,095	6,095	8,115	10,115	10,115	12,142	12,142
t	3) min.	3	4	4,8	5,6	6,4	7,2	8	9	10
	4)	5	6	8	9	10	11	12	13,5	15
l Nominal size	min.	max.	Weight (7,85 kg/dm³) kg per 1000 pieces ≈							
6	5,76	6,24								
8	7,71	8,29	1,89							
10	9,71	10,29	2,52	3,78						
12	11,65	12,35	3,15	4,78						
(14)	13,65	14,35								
16	15,65	16,35	4,41	6,78	9,60					
(18)	17,65	18,35								
20	19,58	20,42	5,67	8,76	12,4		21,5		32,3	
(22)	21,58	22,42								
25	24,58	25,42	7,26	11,2	16,0		28,0		42,6	57,0
(28)	27,58	28,42								
30	29,58	30,42	8,85	13,7	19,6		34,6		52,9	72,0
35	34,5	35,5	10,4	16,2	23,2		41,1		63,2	87,0
40	39,5	40,5	12,0	18,7	26,8		47,7		73,5	102
45	44,5	45,5							83,8	117
50	49,5	50,5							94,1	132
55	54,4	55,6								147
60	59,4	60,6								162

1) P = Pitch of the thread (normal thread)

2) $e_{min} = 1{,}14\,s_{min}$; except for sizes M 1,4 to M 2,5

3) Minimum depth of key engagement for set screws with nominal sizes l above the dotted stepped line.

4) Minimum depth of key engagement for set screws with nominal sizes l below the dotted stepped line.

The commercial sizes are marked with the weight.

Bracketed thread sizes d and bracketed nominal sizes l should be avoided wherever possible.

Note: In ISO 4026 the range of the commercial nominal sizes l is in some cases defined somewhat differently. In ISO 4026 weights are not indicated. The sizes listed in the above table marked with the weight are those customary in Germany and are generally in stock.

In the case of short-length set screws penetration of the bottom of the hexagon is not permissible.

Material		Steel	Stainless steel	Non-ferrous metal
General requirements		according to DIN 267 Part 1		
Thread	Tolerance	5g 6g for strength category 45H 6g for all the other strength categories and materials		
	Standard	DIN 13 Part 12 and Part 15		
Mechanical properties	Strength category	45H	up to M 20: A2-70 A4, C3 over M 20: A2-50	....[2]
	Standard	DIN ISO 898 Part 5	DIN 267 Part 11[1]	DIN 267 Part 18
Permissible dimensional deviations and deviations of form	Product grade	A [3]		
	Standard	DIN ISO 4759 Part 1		
Surface		black oxide (thermal or chemical)	plain	plain
		For the peak-to-valley heights of the surfaces DIN 267 Part 2 (April 1968 edition), subclause 2.1 applies. Requirements for electroplated surface protection according to DIN 267 Part 9		
Acceptance test		For the acceptance test DIN 267 Part 5 applies		

1) In ISO 4026 ISO Standard 3506 is referred to. This standard is included in DIN 267 Part 11.
2) Standard DIN 267 Part 18 comprises a selection of non-ferrous metals (light and heavy metals) for fasteners. The first edition was published in 1980. A choice of materials for set screws could still not be made.
3) See clause 2