

## Hexagon head bolts with shank

### Masses

Supplement 1  
to  
DIN 931

Sechskantschrauben mit Schaft; Gewichte

*In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.*

This supplement provides information additional to DIN 931 Parts 1 and 2,  
but includes no additional standard specifications.

The values of mass given in the table for hexagon head bolts conforming to DIN 931 Parts 1 and 2 shall be regarded as guidance values.

Thread size	M 1,6	M 2	M 2,5	M 3	M 3,5	M 4	M 5	M 6	M 7	M 8
Length <i>l</i>	Mass (7,85 kg/dm <sup>3</sup> ) for 1000 units, in kg, approximately									
12	0,24									
14	0,27									
16	0,3	0,5	0,85							
18		0,55	0,92							
20		0,6	1	1,29						
22			1,08	1,43						
25			1,17	1,57	2,25	3,12	4,86			
28				1,71	2,48	3,32	5,25			
30				1,85	2,7	3,61	5,64	8,06	12,7	
35					2,92	4,04	6,42	9,13	13,6	18,2
40						4,53	7,2	10,2	15,1	20,3
45							7,98	11,3	16,6	22,2
50							8,76	12,3	18,1	24,2
55								13,4	19,5	25,8
60								14,4	21	27,8
65									22,5	29,8
70									24	31,8
75										33,7
80										35,7

Continued on pages 2 and 3

Thread size	M 10	M 12	M 14	M 16	M 18	M 20	M 22	M 24	M 27	M 30
Length <i>l</i>	Mass (7,85 kg/dm <sup>3</sup> ) for 1000 units, in kg, approximately									
40	35									
45	38	53,6								
50	41,1	58,1	82							
55	43,8	62,6	88,1	115						
60	46,9	67	94,1	123						
65	50	70,3	98,8	131	171	219				
70	53,1	74,7	105	139	181	231	281			
75	56,2	79,1	111	147	191	243	296			
80	59,3	83,6	117	155	200	255	311	392		
85	62,4	88,1	123	163	210	267	326	410		
90	65,5	92,4	127	171	220	279	341	428	557	712
95	68,6	96,8	133	179	230	291	356	446	580	739
100	71,7	101	139	186	240	303	370	464	603	767
110		109	151	202	260	327	400	500	650	823
120		118	164	218	280	351	430	535	695	880
130			174	230	296	374	450	560	720	920
140			185	246	316	398	480	595	765	975
150				262	336	422	510	630	810	1030
160				278	356	446	540	665	855	1085
170					376	470	570	700	900	1140
180					396	494	600	735	945	1200
190						519	630	770	990	1250
200						544	660	805	1030	1310
220							720	870	1130	1420
240								935	1220	1530
260									1310	1640
280										1750
300										1860

The values of mass specified for screws with the previous widths across flats 17, 19, 22 and 32 mm shall apply for sizes M 10, M 12, M 14 and M 22.

Thread size	M 33	M 36	M 39	M 42	M 45	M 48	M 52	M 56	M 60	M 64
Length <i>l</i>	Mass (7,85 kg/dm <sup>3</sup> ) for 1000 units, in kg, approximately									
100	951									
110	1020	1240								
120	1090	1320	1510							
130	1150	1390	1580	1980	2350					
140	1220	1470	1660	2090	2480	2860				
150	1290	1550	1740	2200	2600	3010	3610			
160	1350	1630	1830	2310	2730	3160	3770	4550		
170	1410	1710	1920	2410	2850	3300	3930	4740	5460	
180	1480	1790	2010	2520	2980	3440	4100	4930	5690	6 680
190	1540	1870	2100	2630	3100	3580	4270	5110	5920	6 920
200	1610	1950	2200	2740	3220	3720	4430	5300	6140	7 160
220	1750	2110	2410	2960	3470	4010	4760	5660	6580	7 600
240	1880	2270	2600	3180	3720	4290	5110	6030	7020	8 100
260	2020	2430	2800	3400	3980	4570	5450	6410	7460	8 600
280	2150	2590	3010	3520	4240	4850	5800	6800	7900	9 100
300	2290	2750	3210	3640	4500	5130	6140	7190	8350	9 600
320						5410	6480	7580	8800	10 100
340						5690	6820	7970	9250	10 600
360								8350	9700	11 100

Thread size	M 68	M 72 × 6	M 76 × 6	M 80 × 6	M 90 × 6	M 100 × 6	M 110 × 6	M 125 × 6	M 140 × 6	M 160 × 6
Length <i>l</i>	Mass (7,85 kg/dm <sup>3</sup> ) for 1000 units, in kg, approximately									
190	7 860									
200	8 120	9 360								
220	8 620	9 900	11 300	12 600						
240	9 190	10 500	12 000	13 300	17 600					
260	9 760	11 100	12 600	14 100	18 500	24 200				
280	10 300	11 700	13 100	14 900	19 500	25 300	31 000			
300	10 900	12 400	13 900	15 600	20 500	26 500	32 500			
320	11 500	13 000	14 700	16 400	21 500	27 700	34 000	45 800		
340	12 000	13 700	15 400	17 200	22 500	28 900	35 400	47 700	61 700	
360	12 600	14 300	16 100	18 000	23 500	30 100	36 800	49 600	64 000	
380	13 200	15 000	16 900	18 800	24 500	31 300	38 200	51 500	66 400	92 100
400		15 600	17 600	19 600	25 500	32 500	39 600	53 500	68 800	95 300
420			18 400	20 400	26 500	33 800	41 000	55 400	71 200	98 400
440				21 200	27 500	35 000	42 500	57 300	73 600	101 500
460				22 000	28 500	36 200	44 000	59 200	76 000	104 700
480					29 500	37 400	45 500	61 100	78 400	107 900
500					30 500	38 600	47 000	63 000	80 800	111 100

**International Patent Classification**

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