

UDC 621.882.245.1.091.6

December 1986

Slotted countersunk (flat) head wood screws

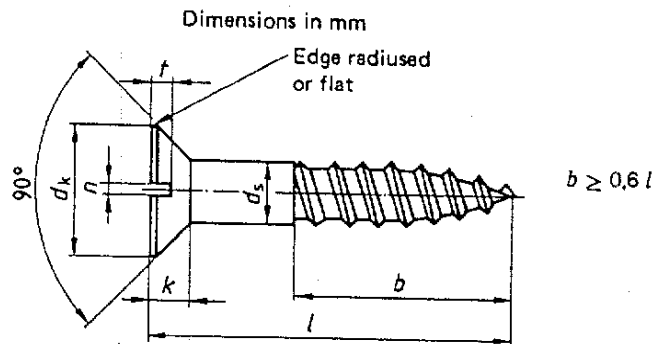
DIN
97

Senk-Holzschrauben mit Schlitz

Supersedes March 1975 edition.

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.

1 Dimensions



Thread size	(1,6)	2	2,5	3	3,5	4	4,5	5	(5,5)	6	(7)	8	(10)
d_s max. = nominal size	1,6	2	2,5	3	3,5	4	4,5	5	5,5	6	7	8	10
min.	1,2	1,6	2,1	2,6	3,02	3,52	4,02	4,52	5,02	5,52	6,42	7,42	9,42
Nominal size	3	3,8	4,7	5,6	6,5	7,5	8,3	9,2	10,2	11	12,5	14,5	18
d_k max.	3,3	4,18	5,08	5,98	6,95	7,95	8,75	9,65	10,75	11,55	13,05	15,05	18,55
min.	2,7	3,43	4,33	5,23	6,05	7,05	7,85	8,75	9,65	10,45	11,95	13,95	17,45
k max.	0,96	1,2	1,5	1,65	1,93	2,2	2,35	2,5	2,75	3	3,5	4	5
Nominal size	0,4	0,5	0,6	0,8	0,8	1	1	1,2	1,2	1,6	2	2	2,5
n max.	0,6	0,7	0,8	1	1	1,2	1,2	1,51	1,51	1,91	2,31	2,31	2,81
min.	0,46	0,56	0,66	0,86	0,86	1,06	1,06	1,26	1,26	1,66	2,06	2,06	2,56
t max.	0,45	0,6	0,7	0,85	1	1,1	1,2	1,3	1,4	1,6	1,9	2,1	2,6
min.	0,32	0,4	0,5	0,6	0,7	0,8	0,9	1	1,1	1,2	1,4	1,6	2

l			Mass (7,85 kg/dm ³), in kg per 1000 units, approximately											
Nominal size	min.	max.												
8	7,25	8,75	0,216	0,312										
10	9,25	10,75	0,259	0,372	0,604	0,789								
12	11,1	12,9	0,302	0,432	0,696	0,914	1,18							
(14)	13,1	14,9												
16	15,1	16,9	0,387	0,552	0,881	1,17	1,49	1,85	2,31					
(18)	17,1	18,9												
20	19	21	0,484	0,672	1,06	1,43	1,79	2,22	2,78					
25	24	26		0,822	1,30	1,73	2,17	2,71	3,37	4,12				
30	29	31		0,972	1,54	2,04	2,55	3,19	4,00	4,96				
35	33,75	36,25				1,77	2,35	2,94	3,68	4,55	6,63			
40	38,75	41,25				2,01	2,66	3,32	4,17	5,14	7,46		13,4	
45	43,75	46,25					2,98	3,66	4,65	5,73	8,29		15,0	
50	48,75	51,25					3,29	4,05	5,14	6,32	9,12		16,5	
60	58,5	61,5					3,91	4,81	6,11	7,54	10,8		19,6	
70	68,5	71,5								8,72	12,5		22,7	
80	78,5	81,5							9,90		14,3		25,7	

Lengths above 80 mm shall be graded in 10 mm steps.

Bracketed sizes shall be avoided if possible.

Wood screws are normally manufactured in sizes for which mass values have been specified. These values are for guidance only.

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2 Technical delivery conditions

Material	Steel	Stainless steel
General requirements	As specified in DIN 267 Part 1.	
Details of screw thread and thread end	As specified in DIN 7998.	
Material	St = steel (grade at the manufacturer's discretion)	CuZn = copper-zinc alloy. Al = aluminium alloy. (grade at the manufacturer's discretion)
	Other materials are subject to agreement.	
Limit deviations, geometrical tolerances	Product grade C as specified in ISO 4759 Part 1 ¹⁾ (previously type g).	
Surface finish	As processed. DIN 267 Part 9 shall apply with regard to electroplating (a different type of electroplating being subject to agreement).	
Acceptance inspection	As specified in DIN 267 Part 5.	
¹⁾ ISO 4759 Part 1 applies only for screws with ISO metric screw thread. However, the permissible deviations and the geometrical tolerances specified in ISO 4759 Part 1 have analogously been adopted for wood screws.		

3 Designation

Designation of an M4 slotted countersunk (flat) head wood screw of nominal length $l = 20$ mm, made of steel (St):
 Wood screw DIN 97 – 4 × 20 – St

The DIN 4000 – 2 – 1 tabular layout of article characteristics shall apply to screws conforming to this standard.

Note. Until the March 1975 edition of this standard, thread sizes 1,4, 1,7, 2,4 and 2,7 were also included. In that edition, however, the use of these sizes for new designs was prohibited. In view of existing documentation these sizes may still be ordered; the dimensional specifications given in that edition shall then apply.

Standards referred to

DIN 267 Part 1	Fasteners; technical delivery conditions; general requirements
DIN 267 Part 5	Fasteners; technical delivery conditions; acceptance inspection (modified version of ISO 3269, 1984 edition)
DIN 267 Part 9	Fasteners; technical delivery conditions; electroplated components
DIN 4000 Part 2	Tabular layouts of article characteristics for bolts, studs and nuts
DIN 7998	Threads and thread ends for wood screws
ISO 4759 Part 1	Tolerances for fasteners; bolts, screws and nuts with thread diameters between 1,6 mm (inclusive) and 150 mm (inclusive) and product grades A, B and C

Previous editions

DIN 97: 09.19, 08.24, 12.43, 10.53, 03.75.

Amendments

The following amendments have been made in comparison with the March 1975 edition.

- Nominal lengths 90 mm and 100 mm have been deleted in order to bring this standard into line with the other standards on wood screws.
- Type g has been replaced by product grade C.
- The content of the standard has been revised.

International Patent Classification

F 16 B 23/00

F 16 B 25/00