

Cross recessed countersunk head wood screws

DIN 7997

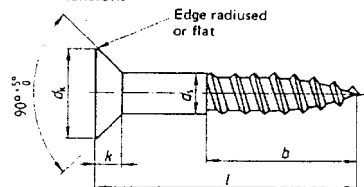
Senk-Holzschrauben mit Kreuzschlitz

Superseries 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.

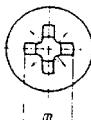
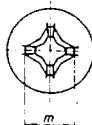
Dimensions in mm

1 Dimensions



Cross recess type H

Cross recess type Z

 $b \geq 0.6 l$

Thread size		(2)	2,5	3	3,5	4	4,5	5	(5,5)	6	(7)	(8)	
d_k	max. = nominal dimension d_2	2	2,5	3	3,5	4	4,5	5	5,5	6	7	8	
	min	1,6	2,1	2,6	3,02	3,52	4,02	4,52	5,02	5,52	6,42	7,42	
d_k	Nominal dimension		3,8	4,7	5,6	6,5	7,5	8,3	9,2	10,2	11	12,5	14
	max		4,18	5,08	5,98	6,95	7,95	8,75	9,65	10,75	11,55	13,05	15,05
	min		3,42	4,32	5,22	6,05	7,05	7,85	8,75	9,65	10,45	11,95	13,95
k	max	1,2	1,5	1,65	1,93	2,2	2,35	2,5	2,75	3	3,5	4	
Cross recess	No.		1		2			3			4		
	type H	m	2,7	2,9	3,9	4,4	4,6	4,8	6,2	6,6	6,8	8,7	
		penetration depth	min	1,25	1,5	1,4	1,9	2,1	2,29	2,31	2,8	2,95	3,9
	type Z	m	2,8	3	4	4,2	4,4	5	6,1	6,3	7	8,5	
		penetration depth	min	1,48	1,76	1,6	1,85	2,05	2,64	2,46	2,72	3,38	3,86
		max	1,73	2,01	2,06	2,31	2,51	3,1	2,92	3,18	3,84	4,32	
Nominal dimension		l		Mass (7,85 kg/dm ³), in kg per 1000 units \approx									
	min	max											
10	9,25	10,75	0,37	0,6	0,79								
12	11,1	12,9	0,43	0,7	0,91	1,18							
(14)	13,1	14,9											
16	15,1	16,9	0,55	0,88	1,17	1,49	1,85	2,31					
(18)	17,1	18,9											
20	19	21	0,67	1,06	1,43	1,79	2,22	2,78		4,12			
25	24	26		1,3	1,73	2,17	2,71	3,37		4,96			
30	29	31		1,54	2,04	2,55	3,19	4		5,8			
35	37,75	36,25		1,77	2,35	2,94	3,68	4,55		6,63			
40	38,75	41,25		2,01	2,66	3,22	4,17	5,14		7,46			
45	43,75	46,25			2,98	3,66	4,65	5,73		8,29			
50	48,75	51,25				4,05	5,14	6,32		9,12			
60	58,5	61,5				4,81	6,11	7,54		10,8			
70	68,5	71,5						8,72		12,5			
80	78,5	81,5						9,9		14,3			

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

Bracketed sizes should be avoided as far as possible.

The wood screws are, as a general rule, manufactured in the sizes for which the mass has been given (for guidance only).

Continued on pages 2 and 3

2 Technical delivery conditions

Material	Steel	Non-ferrous metals
General requirements	In accordance with DIN 267 Part 1.	
Threads and thread ends	In accordance with DIN 7998.	
Cross recesses	In accordance with DIN 7962.	
Material	St = steel (Grade at the manufacturer's discretion)	CuZn (previously Ms) = copper-zinc alloy; Al-Leg. = aluminium alloy. (Grade at manufacturer's discretion.)
	Other materials are subject to agreement.	
Permissible dimensional deviations and deviations of form	Product grade C (previously design g) in accordance with ISO 4759 Part 1 ¹⁾ .	
Surface finish	As processed. DIN 267 Part 9 shall apply to electroplating. Other types of surface protection shall be subject to agreement.	
Acceptance inspection	In accordance with DIN 267 Part 5.	
¹⁾ ISO 4759 Part 1 applies at present only to screws with ISO metric screw thread. The permissible deviations specified in the above standard have been adopted correspondingly for wood screws. The geometrical tolerances specified in ISO 4759 Part 1 have also been adopted for wood screws, as appropriate.		

3 Designation

Designation of a cross recessed countersunk head wood screw with thread size 4, length l (nominal dimension) = 20 mm, in steel (St) with type H cross recess¹⁾:

Wood screw DIN 7997 - 4 x 20 - St - H

Tabular layout of article characteristics DIN 4000 - 2 - 1 shall apply for screws in accordance with this standard.

Note. In previous editions of this standard, thread sizes 2,4 and 2,7 were included. In the March 1975 edition of this standard, these sizes were excluded from use in new designs. Because of the continued presence of existing drawings and documents, these sizes may temporarily continue to be ordered with a type H cross recess in accordance with this standard. The specifications of the above-mentioned edition of the standard shall be applicable to the dimensions of these screws.

¹⁾ Should symbol H or Z be absent in the designation, e.g. on existing documents based on previous editions of this standard, then cross recess type H shall be applicable. In future, the symbol identifying the cross recess type shall always be specified for new designs and in purchase order documents.

Standards referred to

DIN 267 Part 1	Fasteners; technical delivery conditions; general requirements
DIN 267 Part 2	Fasteners; technical delivery conditions; finish and dimensional accuracy
DIN 267 Part 5	Fasteners; technical delivery conditions; acceptance inspection
DIN 267 Part 9	Fasteners; technical delivery conditions; electroplated components
DIN 4000 Part 2	Tabular layouts of article characteristics applying to bolts and nuts
DIN 7962	Cross recesses for screws; modified version of ISO 4757
DIN 7998	Threads and thread ends for wood screws
ISO 4759 Part 1	Fasteners; tolerances for bolts, screws and nuts with thread diameters from 1,6 to 150 mm and product grades A, B and C

Previous editions

DIN 7997: 09.53, 08.59, 03.75

Amendments

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

- Cross recess type Z has been adopted for the first time.
- The designation of the screws has been amended.
- Design g has been replaced by product grade C.
- The standard has been complemented and editorially revised.

Explanatory notes

In harmony with other standards on cross recessed head screws, a second type of cross recess (Pozidriv) has been adopted in the present standard along with the previous cross recess (Phillips cross recess) as specified in DIN 7962 Part 1, August 1959 edition; this new type has gained wide acceptance in the market. This adoption necessitates a corresponding distinction in the designations of the wood screws. Therefore the cross recesses shall in future be designated as follows:

cross recess type H (for Phillips), and
cross recess type Z (for Pozidriv).

The names Phillips and Pozidriv will not appear in the designations, because they are proprietary brand names (see DIN 7962 in this respect). This complementing of the designation will not necessitate any amendment to existing documents. If symbol H or Z for the cross recess type is absent in the designation, then it shall be assumed that the previous type of cross recess is intended (now known as cross recess H).

No alterations likely to adversely affect interchangeability have been made in the present revised edition of the standard, as compared with the March 1975 edition. The content of the standard has been harmonized editorially with the contents of other standards on cross recessed head screws. A report on the overall situation with regard to the standards on cross recessed head screws appeared in the *DIN-Mitteilungen* (DIN Bulletin) 61, 1982, No.8. Attention is drawn to this report.

International Patent Classification

F 16 B 25-00