UDC 621.884.6

May 1993

Compression rivets

DIN 7331

Hohlniete, zweiteilig

Supersedes Oktober 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 Scope and field of application

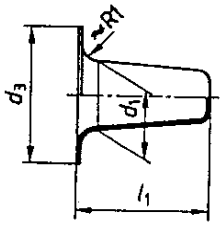
This standard specifies dimensions of, and technical delivery conditions for, steel and nonferrous metal compression rivets. Such rivets consist of two tubular parts, one of which is provided with a bore (rivet head) to receive the other (rivet body). In order to ensure proper assembly, body and head shall originate from the same manufacturer.

2 Dimensions

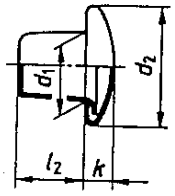
The shank end diameter cannot be specified; the body shall, however, be capable of being assembled manually with the associated head.

Type A, with flat head

Rivet body (AN)

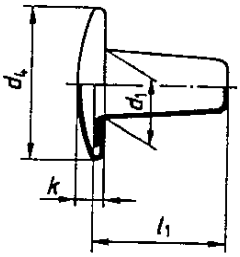


Rivet head (K)

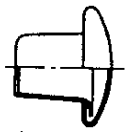


Type B, with truss head

Rivet body (BN)



Rivet head (K)



Dimensions as for type A head style.

Continued on pages 2 to 4

Table 1: Dimensions

d_1	Nominal size	2	3		4					5		6
	Limit deviations	± 0,1	± 0,15		± 0,20					± 0,25		
d_2	Nominal size	4	6	7	7	8	9	11	13	10	12	12
	Limit deviations	± 0,15	± 0,20					± 0,25				
d_3	Nominal size	4	6		8			10		11		12
	Limit deviations	± 0,15	± 0,20					± 0,25				
d_4	Nominal size	5	7		9			11		12		13
	Limit deviations	± 0,15	± 0,20					± 0,25				
k	≈	1	1,2		1,6					2		2,4
l_2	≈	2	3		4					5		6
l_1 ± 0,25	Type											
5	A											
	B											
6	A											
	B											
7	A											
	B											
8	A											
	B											
9	A											
	B											
10	A											
	B											
12	A											
	B											
15	A											
	B											
18	A											
	B											
22	A											
	B											

Commercial sizes are delineated by the continuous thick lines.

3 Technical delivery conditions

Table 2: Technical delivery conditions

Material[1]	Steel	Nonferrous metal
	St = USt 3	CuZn = CuZn37 F30
As specified in	DIN 1624	DIN 17 670 Part 1
Dimensional and geometrical tolerances[2]	As specified in DIN 101.	
Surface finish	ni = nickel-plated ms = brass-plated sw = black baked enamel Other baked enamel colours by agreement.	
Testing of mechanical properties	As specified in DIN 101.	
Acceptance inspection	As specified in DIN 101.	

1) Use of other materials shall be the subject of agreement.

2) For geometrical tolerances, the specifications of DIN 101 shall apply, unless otherwise specified in clause 2 of this standard.

4 Designation

Designation of a steel (St) compression rivet with flat head (A), with a shank diameter, d_1, of 4 mm, a head diameter, d_2, of 7 mm and a length, l_1, of 8 mm, provided with a black baked enamel finish:

Rivet DIN 7331 – A 4 x 7 x 8 – St – sw

When either the rivet body or the rivet head is ordered separately, the designation shall read as follows.

Designation of a steel (St) rivet body with flat head (AN), with a shank diameter, d_1, of 4 mm, a head diameter, d_3, of 8 mm, a length, l_1, of 8 mm, provided with a black baked enamel finish:

Rivet DIN 7331 – AN 4 x 8 x 8 – St – sw

Designation of a steel (St) rivet head (K) with a shank diameter, d_1, of 4 mm and a head diameter, d_2, of 7 mm, provided with a black baked enamel finish (sw):

Head DIN 7331 – K 4 x 7 – St – sw

The DIN 4000-9-3 tabular layout of article characteristics shall apply to rivets as covered in this standard.

5 Example of application

The grip lengths specified in table 3 are for guidance only.

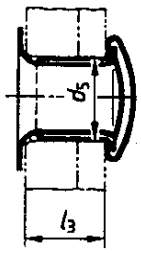


Table 3: Hole diameters and guideline values for grip length

d_1		2	3	4		5	6
d_3		4	6	8	10	11	12
		Approximate grip length, l_3[1])					
l_1	5	1,5 to 2,5	1,5 to 2,5				
	6	2,5 to 3,5	2,5 to 3,5	3,5 to 4,5			
	7		3,5 to 4,5	4,5 to 5,5			
	8		4,5 to 5,5	5,5 to 6,5			
	9			6,5 to 7,5	6,5 to 7,5	5 to 7	6 to 7
	10			7,5 to 8,5	7,5 to 8,5	6 to 8	7 to 8
	12			9 to 10	9 to 10	7 to 9	8 to 9
	15					9 to 11	9 to 11
	18					11 to 14	11 to 14
	22						14 to 17
d_5 $^{+0,1}_{0}$		2,2	3,3	4,3		5,4	6,4

1) Depending on the elasticity of the material of the components to be assembled, the grip lengths may vary.

Standards referred to

DIN 101 Rivets; technical delivery conditions

DIN 1624 Steel flat products; cold reduced mild unalloyed steel strip in widths not exceeding 650 mm; technical delivery conditions

DIN 4000 Part 9 Tabular layout of article characteristics for bolts, pins, rivets, split pins and keys

DIN 17 670 Part 1 Wrought copper and copper alloy plate, sheet and strip; properties

Previous editions

DIN 7331: 11.47, 06.53X, 10.75.

Amendments

The following amendments have been made to the October 1975 edition.

a) Values of mass are no longer specified.

b) Technical delivery specifications have been included.

c) The specifications for materials have been amended and symbols included.

d) The standard has been editorially revised.

International Patent Classification

F 16 B 019/04

F 16 B 019/08