

UDC 621.882.42 : 621.882.2.082.8

December 1990

Plain washers for tapping screw and washer assemblies

DIN
6903

Scheiben für Kombi-Blechschaubren

Supersedes December 1972 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

Washers as specified in this standard are intended for use with DIN 6901 tapping screw and washer assemblies.

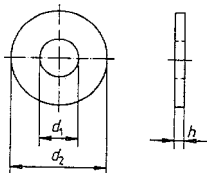
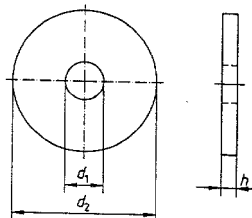
2 Dimensions**Type A****Type B**

Table 1.

Nom- inal size	Clearance hole diameter, d_1		Outside diameter, d_2				Thickness, h						Approximate mass (7,85 kg/dm ³), per 1000 units, in kg		For thread size
	min. = nom- inal size	max.	Type A		Type B		Type A			Type B			Type A	Type B	
			max. = nom- inal size	min.	max. = nom- inal size	min.	Nom- inal size	max.	min.	Nom- inal size	max.	min.			
2,5	2,5	2,6	7	6,78	9	8,78	1	1,06	0,94	1	1,06	0,94	0,26	0,46	ST 2,9
3	3	3,1	8	7,78	11	10,73	1	1,06	0,94	1	1,06	0,94	0,34	0,69	ST 3,5
3,3	3,3	3,42	9	8,78	12	11,73	1	1,06	0,94	1	1,06	0,94	0,43	0,82	ST 3,9
3,55	3,55	3,67	9	8,78	12	11,73	1	1,06	0,94	1	1,06	0,94	0,42	0,81	ST 4,2
4	4	4,12	10	9,78	15	14,73	1	1,06	0,94	1,6	1,68	1,52	0,52	2,06	ST 4,8
4,7	4,7	4,82	12	11,73	15	14,73	1,6	1,68	1,52	1,6	1,68	1,52	1,20	2,00	ST 5,5
5,4	5,4	5,52	14	13,73	18	17,73	1,6	1,68	1,52	1,6	1,68	1,52	1,65	2,91	ST 6,3
7,15	7,15	7,3	16	15,73	24	23,67	1,6	1,68	1,52	2	2,09	1,91	2,02	6,47	ST 8

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3 Technical delivery conditions

Table 2.

Mechanical properties ¹⁾	Material	Steel: St 2 K 60. Minimum hardness 180 HV 10.
	As specified in	DIN 1624.
Geometrical tolerances	Product grade	F
	As specified in	DIN 522.
Surface condition		Bright DIN 267 Part 9 shall apply with regard to electroplating and DIN 522 (product grade A), with regard to surface roughness.
Acceptance inspection		DIN 522 shall apply with regard to acceptance inspection.
¹⁾ The specifications for mechanical properties of washers relate to their as delivered condition and may change as the assembly is subjected to heat treatment. The C content of the steel shall not exceed 0,1%.		

4 Designation

Designation of a type A washer of nominal size 4,7 and a minimum hardness of 180 HV 10¹⁾:

Washer DIN 6903 – A 4,7 – 180 HV

The DIN 4000-3-1 tabular layout of article characteristics shall apply for washers as covered in this standard.

The specifications of this standard relevant to the CAD standard parts file have been summarized in DIN V 4001 Part 15.

Standards referred to

DIN 267 Part 9	Fasteners; technical delivery conditions; electroplated parts
DIN 522	Metal washers; 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 3	Tabular layouts of article characteristics for washers
DIN V 4001 Part 15	CAD standard parts file; specification for geometry and parameters; plain and curved washers
DIN 6901	Tapping screw and washer assemblies

Previous editions

DIN 6903: 09.66, 12.72.

Amendments

The following amendments have been made to the December 1972 edition.

- Nominal size 2,5 has been included for size ST 2,9 assemblies.
- Limits of size are now included.
- For d_s for nominal size 4,7 (type A), a value of 12 mm has been specified instead of 12,5 mm.
- For d_s for nominal size 7,15, a value of 16 mm (instead of 14 mm) has been specified for type A and 24 mm (instead of 21 mm), for type B.
- A different material has been specified.
- The geometrical tolerances shall be those specified for product grade F instead of grade A (cf. DIN 522).
- The designation has been amended.
- The standard has been editorially revised.

International Patent Classification

F 16 B 43/00

¹⁾ A hardness of 180 HV 10 shall also be used where no material or only 'St' is specified in existing documentation.