

Square taper washers

for use with channel sections

DIN

434

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Supersedes February 1990 edition.

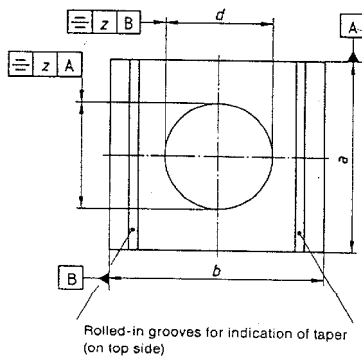
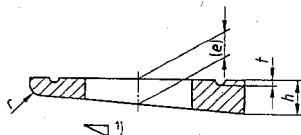
In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

1 Scope and field of application

Washers as specified in this standard are intended for use in structural bolting of channel sections using bolts up to property class 5.6.

2 Dimensions



¹⁾ Washers with an $(8 \pm 0,5)\%$ taper shall be identified by two rolled-in grooves; those with $(5 \pm 0,5)\%$ taper need not have grooves, but the letter A shall be added to the designation.

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Table 1.

Nominal size ³⁾	For thread size	<i>d</i>		<i>a</i>			<i>b</i>			<i>e</i> ^{1),2)} Aux. dim. *)	<i>h</i>			<i>r</i>	<i>t</i>	<i>z</i>	Approximate mass (7,85 kg/dm ³), per 1000 units, in kg
		min. = nominal size	max.	Nominal size	min.	max.	Nominal size	min.	max.		Nominal size	min.	max.				
9	M8	9	9,36	22	20	24	22	21,35	22,65	2,9	3,8	3,2	4,4	1,6	0,5	1,68	9,57
11	M10	11	11,43	22	20	24	22	21,35	22,65	2,9	3,8	3,2	4,4	1,6	0,5	1,68	8,85
14	M12	14	14,43	26	24	28	30	29,35	30,65	3,7	4,9	3,9	5,9	2	0,7	1,68	18,2
18	M16	18	18,43	32	29,5	34,5	36	35,2	36,8	4,45	5,9	4,9	6,9	2,4	0,8	2	31,4
22	M20	22	22,52	40	37,5	42,5	44	43,2	44,8	5,25	7	6	8	2,8	0,9	2	56,9
24	M22	24	24,52	44	41,5	46,5	50	49,2	50,8	6	8	7	9	3,2	1	2	82,3
26	M24	26	26,52	56	53	59	56	55,05	56,95	6,26	8,5	7,3	9,7	3,2	1	3,8	128
26 A ²⁾	M24	26	26,52	56	53	59	56	55,05	56,95	6	7,4	6,2	8,6	3,7	1	3,8	123
30	M27	30	30,52	56	53	59	56	55,05	56,95	6,26	8,5	7,3	9,7	3,2	1	3,8	119
30 A ²⁾	M27	30	30,52	56	53	59	56	55,05	56,95	6	7,4	6,2	8,6	3,7	1	3,8	114

1) $e = h$ (nominal size) - 0,04 b (nominal size) for washers with a $(8 \pm 0,5)\%$ taper.

2) $e = h$ (nominal size) - 0,025 b (nominal size) for washers with a $(5 \pm 0,5)\%$ taper.

3) Nominal size is equal to d_{\min} .

*) = auxiliary dimension.

3 Technical delivery conditions

3.1 Material

Washers shall be made of steel, the steel grade being at the manufacturer's discretion. The hardness shall be 100 to 250 HV 10.

3.2 Surface finish

Washers shall have a bright surface finish, be free from burr, and be hot-dip galvanized as specified in DIN 267 Part 10. DIN 267 Part 9 shall apply with regard to electroplating.

3.3 Acceptance inspection

Acceptance inspection shall be undertaken on the lines of DIN 267 Part 5. The acceptable quality level (AQL) for the major characteristics shall be as specified in table 2.

Table 2.

Major characteristic	AQL value
Hole diameter	1,5
Coaxiality	1,5
Taper angle	1,5

4 Designation

Designation of a nominal size 14 washer for use with channel sections:

Washer DIN 434 - 14

Designation of a nominal size 26 washer with 5% taper (A) for use with channel sections:

Washer DIN 434 - 26 A

Standards referred to

- DIN 267 Part 5 Fasteners; technical delivery conditions; acceptance inspection
DIN 267 Part 9 Fasteners; technical delivery conditions; electroplated fasteners
DIN 267 Part 10 Fasteners; technical delivery conditions; hot-dip galvanized components

Previous editions

DIN 434 and DIN 435: 05.43, 02.61; DIN 434: 11.21, 04.24, 10.36, 11.70, 02.90.

Amendments

The following amendments have been made to the November 1970 and February 1990 editions.

- a) Letter A has been introduced to identify washers with a 5% taper.
- b) Limits of size are now specified.
- c) The washer hardness is now specified.
- d) Washers are now to be electroplated as specified in DIN 267 Part 9.
- e) Washers are now to be hot-dip galvanized as specified in DIN 267 Part 10.
- f) Square taper washers are now to be subjected to acceptance inspection as specified in DIN 267 Part 5.
- g) The standard has been editorially revised.

International Patent Classification

E 04 B 1/38

F 16 B 43/00