

Technical data sheet

Title	Plate washer
Standard	DIN2093 A-B

1.- Functions of washers.

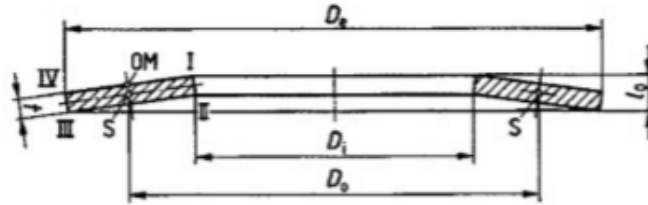
The main functions of washers are:

- 1.- To protect contact surfaces against scratches or wear that may be caused by screws or nuts by rubbing.
- 2.- To distribute the tightening force evenly to obtain local pressures that are close to the average pressure.
- 3.- To move the tightening force to different areas of the head of the screw or nut. Oversized or torn holes.
- 4.- To reduce the risks of loosening due to increase in the friction coefficient on the screw or nut (serrated or ribbed washers)
- 5.- To secure a possible loss of tightening torque due to deformation of the parts (elastic washers)
- 6.- To compensate for the lack of parallelism of the parts or uneven surfaces.
- 7.- Watertightness between the head or screw or nut and the part to be tightened (polyamide coated washer).
- 8.- Fastening of cables to the electrical connections.

2- Application and classes of washers

DIN2093 washers are made from spring steel with a hardness of 42 to 52 HRC, with Black finish. DIN2093 washers may be A-shaped or B-shaped.

3.- Dimensions of washers



TYPE A

MEASUREMENT	De	Di	t	lo	s
10	10	5.2	0.5	0.75	0.19
12.5	12.5	6.2	0.7	1	0.23
14	14	7.2	0.8	1.1	0.23
16	16	8.2	0.9	1.25	0.26
18	18	9.2	1	1.4	0.3
20	20	10.2	1.1	1.55	0.34
22.5	22.5	11.2	1.25	1.75	0.38
25	25	12.2	1.5	2.05	0.41
28	28	14.2	1.5	2.15	0.49
31.5	31.5	16.3	1.75	2.45	0.53
35.5	35.5	18.3	2	2.8	0.6
40	40	20.4	2.25	3.15	0.68
45	45	22.4	2.5	3.5	0.75
50	50	25.4	3	4.1	0.83
56	56	28.5	3	4.3	0.98
63	63	31	3.5	4.9	1.05
71	71	36	4	5.6	1.2
80	80	41	5	6.7	1.28
90	90	46	5	7	1.5
125	125	64	8	10.6	1.95

TYPE B

MEASUREMENT	De	Di	t	lo	s
8	8	4.2	0.3	0.55	0.19
10	10	5.2	0.4	0.7	0.23
12.5	12.5	6.2	0.5	0.85	0.26
14	14	7.2	0.5	0.9	0.3
16	16	8.2	0.6	1.05	0.34
18	18	9.2	0.7	1.2	0.38
20	20	10.2	0.8	1.35	0.41
22.5	22.5	11.2	0.8	1.45	0.49
25	25	12.2	0.9	1.6	0.53
28	28	14.2	1	1.8	0.6
31.5	31.5	16.3	1.25	2.15	0.68
35.5	35.5	18.3	1.25	2.25	0.75
40	40	20.4	1.5	2.65	0.86
45	45	22.4	1.75	3.05	0.98
50	50	25.4	2	3.4	1.05
56	56	28.5	2	3.6	1.2
63	63	31	2.5	4.25	1.31
71	71	36	2.5	4.5	1.5
80	80	41	3	5.3	1.73
90	90	46	3.5	6	1.88
100	100	51	3.5	6.3	2.1