

Technical data sheet

Title	Flat washer
Standard	EN14399-6

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

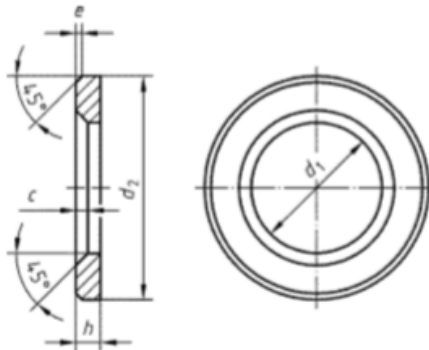
EN14399-6 washers are flat washers with chamfer and hardened.

They are used in large series fastener assemblies of high strength hexagonal head structural bolts and nuts with thread sizes from M12 to M36.

These steel washers have a minimum hardness of 300HV and a maximum of 370HV.

These washers may have different surface finishes: Plain, Zinc coated and Hot galvanised.

3.- Dimensions of washers



METRIC	d1	d2	h	e	c
12	13	24	3	0.5	1.6
14	15	28	3	0.5	1.6
16	17	30	4	0.75	1.6
18	19	34	4	0.75	2.0
20	21	37	4	0.75	2.0
22	23	39	4	0.75	2.0
24	25	44	4	0.75	2.0
27	28	50	5	1	2.5
30	31	56	5	1	2.5
36	37	66	6	1.25	2.5