

Technical data sheet

Title	Flat washer
Standard	DIN9021

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

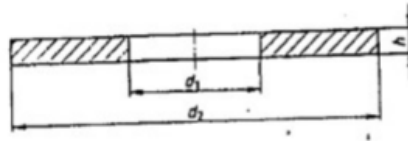
DIN9021 washers are grade A and C washers, with an outer diameter size approximately three times the measurement of the thread.

Product class C has a hardness of 140HV.

DIN9021 washers are designed to be used with hexagonal screws.

The washers are available in A2 and A4 stainless steel. The steel washers are 140HV. These washers may have different surface finishes: Plain, Zinc coated, Bichromated and Hot galvanised.

3.- Dimensions of washers



METRIC	d1	d2	h
3	3.2	9	0.8
4	4.3	12	1
5	5.3	15	1.2
6	6.4	18	1.6
7	7.4	22	2
8	8.4	24	2
10	10.5	30	2.5
12	13	37	3
14	15	44	3
16	17	50	3
18	20	56	4
20	22	60	4
24	26	72	5
30	33	92	6
36	39	110	8