

# Technical data sheet

<b>Title</b>	Flat washer
<b>Standard</b>	NF E 25 514

## 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.

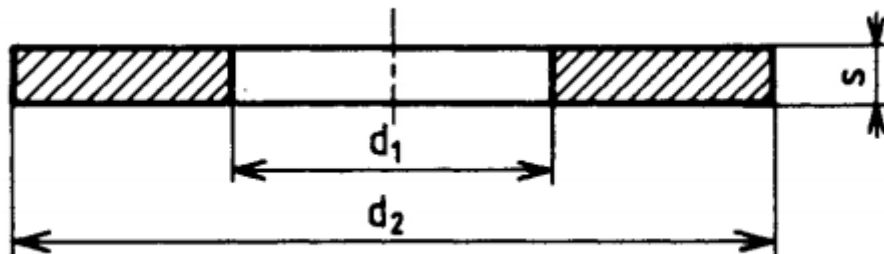
## 2- Application and classes of washers

NF E25 514 stainless steel flat washers are class A washers.

There are three series for this washer standard: Series Z, series M and series L.

These washers are made of stainless Steel (A2 or A4) and have a minimum hardness of 150HV

### 3.- Dimensions of washers



METRIC	$d_1$	$s$	$d_2$ Z	$d_2$ M	$d_2$ L
3	3.2	0.8	6	8	12
4	4.3	0.8	8	10	14
5	5.3	1	10	12	16
6	6.4	1.2	12	14	18
7	7.4	1.5	14	16	20
8	8.4	1.5	16	18	22
10	10.5	2	20	22	27
12	13	2.5	24	27	32
14	15	2.5	27	30	36
16	17	3	30	32	40
18	19	3	32	36	45
20	21	3	36	40	50
22	23	3	40	45	55
24	25	4	45	50	60
27	28	4	48	55	65
30	31	4	52	60	70