CHAVESBAO
Lontana Group

C/ Bizkargi, 6 – POL. SARRIKOLA
48195 LARRABETZU (BISCAY)
Tel. 944 123 199 Fax. 944 117 132

Technical data sheet

Title	Spring washer
Standard	DIN7980

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

DIN7980 steel spring washers have a hardness of 44HRC to 51HRC.
This type of washer is recommended for use with cylindrical screws with right-handed thread.
The washers are also available in A2 and A4 stainless steel. Steel washers may have different surface finishes: Black and hot Galvanised.

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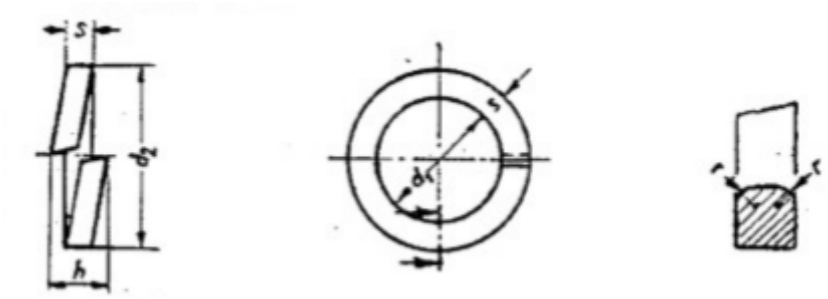
3.- Dimensions of washers



METRIC	d1	d2	h	s	r
3	3.1	5.6	2	1	0.2
3.5	3.6	6.1	2	1	0.2
4	4.1	7	2.4	1.2	0.2
5	5.1	8.8	3.2	1.6	0.2
6	6.1	9.9	3.2	1.6	0.3
8	8.1	12.7	4	2	0.5
10	10.2	16	5	2.5	0.8
12	12.2	18	5	2.5	0.8
14	14.2	21.1	6	3	1
16	16.2	24.4	7	3.5	1
18	18.2	26.4	7	3.5	1
20	20.2	30.6	9	4.5	1
22	22.5	32.9	9	4.5	1
24	24.5	35.9	10	5	1.6
27	27.5	38.9	10	5	1.6
30	30.5	44.1	12	6	1.6
33	33.5	47.1	12	6	1.6
36	36.5	52.2	14	7	1.6
42	42.5	60.2	16	8	2
48	49	67	16	8	2