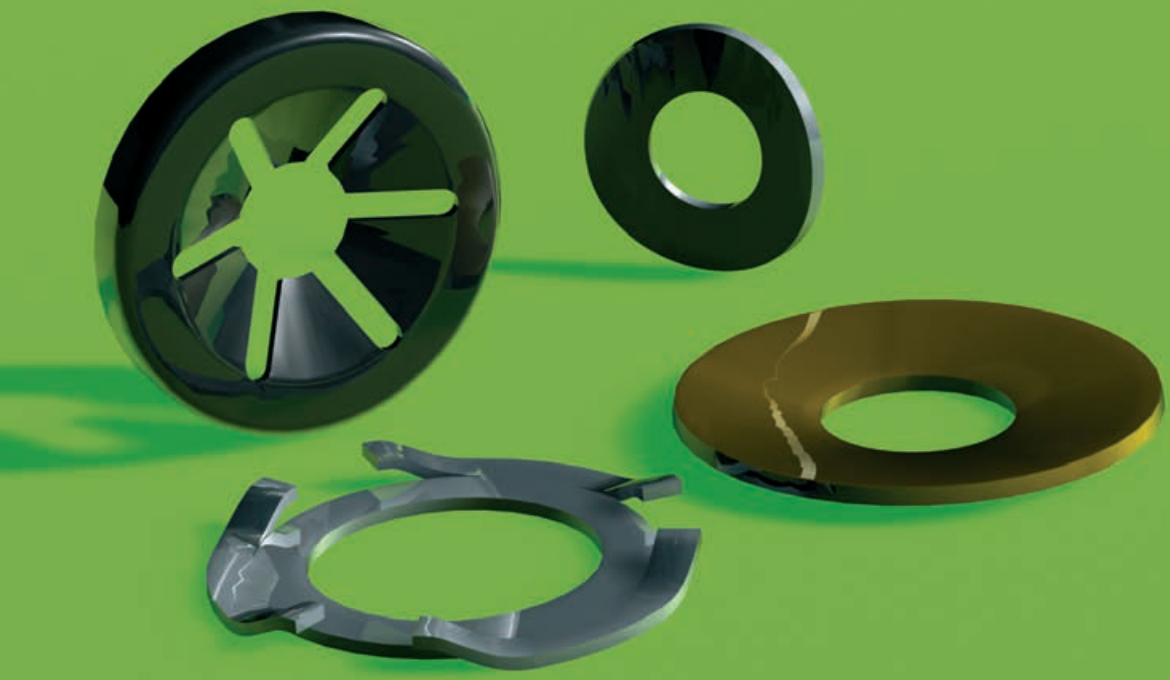
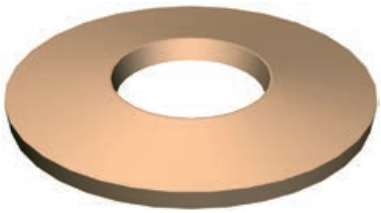
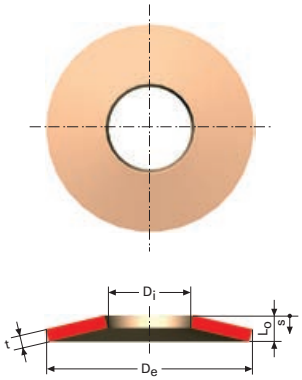
SPRING WASHERS



TENSIONING WASHER

DSW, DSW-S





Heavy duty lock washer
Compliant with DIN 6796, our tensioning washers are robustly dimensioned and designed for use in medium or high load screw joints. The high spring force affords effective protection against relaxation and creep when joints are exposed to high stresses and movements resulting from thermal expansion or contraction. In such instances, tensioning washers replace conventional lock washers.

Tensioning washers can be stacked in series and/or parallel. Series stacking increases the available deflection of the spring stack and parallel stacking increases the force. The desired installation is as near flat as possible.

Bespoke range
If required, untreated spring washers can also be supplied direct from the factory. Spring washers in custom sizes and special materials, e.g. stainless, acid proof, phospor bronze, Alloy 718 or Alloy 90, can be produced upon request.

Stainless steel range
New range of tensioning spring washers according to DIN 6796. We are using material EN 1.4568 (X 7 CrNiAl 17-7 / SS 2388) instead of regular stainless spring steel in order to:

- Achieve better fatigue properties
- Retain spring properties for a longer time
- Resist high operating temperature (up to 350 °C)

Our range consists of 6 dimensions, detailed information on page 130.

All dimensions are in mm

D_i = Inner diameter, tolerance H14
D_e = Outer diameter, tolerance h14
t = Material thickness
h_{max} = max free height in delivery condition
h_{min} = min dimension after setting test acc to DIN 267-26

Min residual spring force = after load with the contact force and release through a travel of 20 µm

Contact force = forces for the setting test, acc to DIN267-26

Standard steel range
Material: EN 10132-4
Finish: Mechanically galvanised and yellow chromated
Working temperature: max 120 °C

Stainless steel range
Material: EN 1.4568 (X 7 CrNiAl 17-7 / SS 2388)
Working temperature: max 350 °C

1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

TENSIONING WASHER

DSW, DSW-S

Standard range (EN 10132-4)

Size	Di	De	t	h max	h min	Min residual spring force	Contact force	Cat.no
M2	2,2	5	0,4	0,6	0,5	-	920	4664
M2,5	2,7	6	0,5	0,72	0,6	-	1540	4665
M3	3,2	7	0,6	0,85	0,7	-	2350	4666
M4	4,3	9	1	1,3	1,1	1400	4400	4668
M5	5,3	11	1,2	1,55	1,3	2300	7200	4669
M6	6,4	14	1,5	2	1,7	4200	10200	4670
M8	8,4	18	2	2,6	2,2	7700	18600	4672
M10	10,5	23	2,5	3,2	2,8	12400	29600	4673
M12	13	29	3	3,95	3,4	18000	43000	4674
M16	17	39	4	5,25	4,6	34000	80900	4675
M18	19	42	4,5	5,8	5,1	57000	102000	4676
M20	21	45	5	6,4	5,6	73000	130000	4677
M24	25	56	6	7,75	6,8	122000	188000	4678
M27	28	60	6,5	8,35	7,3	161000	246000	4679
M30	31	70	7	9,2	8	196000	300000	4680

Stainless steel range (EN 1.4568)

Size	Di	De	t	h max	h min	Min residual spring force	Contact force	Cat.no
M4	4,3	9	1	1,3	1,1	1400	4400	S4668
M5	5,3	11	1,2	1,55	1,3	2300	7200	S4669
M6	6,4	14	1,5	2	1,7	4200	10200	S4670
M8	8,4	18	2	2,6	2,2	7700	18600	S4672
M10	10,5	23	2,5	3,2	2,8	12400	29600	S4673
M12	13	29	3	3,95	3,1	18000	43000	S4674