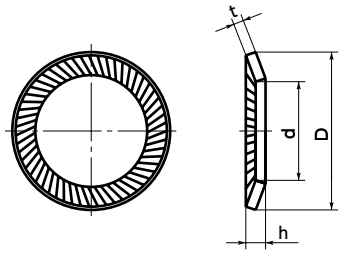


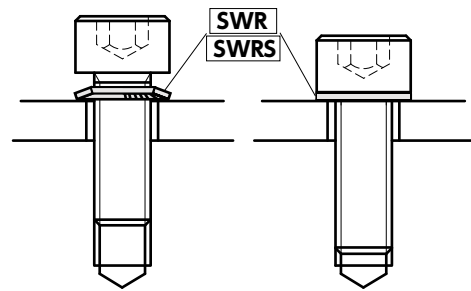
# SWR/SWRS Ribbed Lock Washers

SUS Stainless steel Vibration resistant treatment



● Installation Method

- Before Tightening
- After Tightening



- Ribs on both sides of the washer hook onto the bolt bearing surface and intended attachment section to prevent looseness due to vibration.
- Washers for losing prevention. For connecting locations that cannot use other means such as adhesives.
- More effective for losing prevention than standard spring washers.

● Application

Vibration Resistant

● Material/Finish

	SWR	SWRS
Main Body	Spring Steel(Hardness: 380 - 450 HV) Ferroferric Oxide Film (Black)	Stainless steel

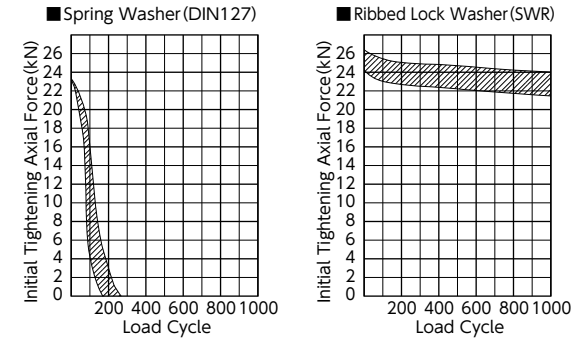


⚠️ Precautions for Use

Ribs may not hook into some connecting locations, depending on their material. Confirm in advance that the ribs will hook.

● Vibration test comparison

Test Hexagon Screws : DIN933 - 8.8-M10 - 35, Vibration : 15Hz, Amplitude : 0.5mm



SWR Made of Steel · Ferroferric Oxide Film

Unit : mm

Part Number	Nominal	d	D	t	h	Mass (g)	Qty per pack
SWR-2	2	2.2 <sup>+0.3</sup> <sub>0</sub>	4 <sup>0</sup> <sub>-0.3</sub>	0.35	0.6	0.02	10
SWR-2.5	2.5	2.7 <sup>+0.3</sup> <sub>0</sub>	4.8 <sup>0</sup> <sub>-0.3</sub>	0.45	0.9	0.04	10
SWR-3	3	3.2 <sup>+0.3</sup> <sub>0</sub>	5.5 <sup>0</sup> <sub>-0.3</sub>	0.45	0.9	0.05	20
SWR-4	4	4.3 <sup>+0.3</sup> <sub>0</sub>	7 <sup>0</sup> <sub>-0.36</sub>	0.5	1	0.08	20
SWR-5	5	5.3 <sup>+0.3</sup> <sub>0</sub>	9 <sup>0</sup> <sub>-0.36</sub>	0.6	1.1	0.14	20
SWR-6	6	6.4 <sup>+0.36</sup> <sub>0</sub>	10 <sup>0</sup> <sub>-0.36</sub>	0.7	1.2	0.23	20
SWR-8	8	8.4 <sup>+0.36</sup> <sub>0</sub>	13 <sup>0</sup> <sub>-0.43</sub>	0.8	1.4	0.43	10
SWR-10	10	10.5 <sup>+0.43</sup> <sub>0</sub>	16 <sup>0</sup> <sub>-0.43</sub>	1	1.6	0.82	10
SWR-12	12	13 <sup>+0.43</sup> <sub>0</sub>	18 <sup>0</sup> <sub>-0.43</sub>	1.1	1.7	0.89	10
SWR-16	16	17 <sup>+0.43</sup> <sub>0</sub>	24 <sup>0</sup> <sub>-0.52</sub>	1.3	2.1	2	10
SWR-20	20	21 <sup>+0.52</sup> <sub>0</sub>	30 <sup>0</sup> <sub>-0.62</sub>	1.5	2.4	3.4	5

● When purchasing less volume than one full bag, a separate handling fee is charged. For details, see the Sold Separately Service.

SWRS Made of Stainless Steel

Unit : mm

Part Number	Nominal	d	D	t	h	Mass (g)	Qty per pack
SWRS-1.6	1.6	1.7 <sup>+0.3</sup> <sub>0</sub>	3.2 <sup>0</sup> <sub>-0.3</sub>	0.5	0.75	0.02	10
SWRS-2	2	2.2 <sup>+0.3</sup> <sub>0</sub>	4 <sup>0</sup> <sub>-0.3</sub>	0.5	0.75	0.03	20
SWRS-2.5	2.5	2.7 <sup>+0.3</sup> <sub>0</sub>	4.8 <sup>0</sup> <sub>-0.3</sub>	0.5	0.95	0.04	20
SWRS-3	3	3.2 <sup>+0.3</sup> <sub>0</sub>	5.5 <sup>0</sup> <sub>-0.3</sub>	0.5	0.95	0.05	20
SWRS-4	4	4.3 <sup>+0.3</sup> <sub>0</sub>	7 <sup>0</sup> <sub>-0.36</sub>	0.7	1.2	0.08	20
SWRS-5	5	5.3 <sup>+0.3</sup> <sub>0</sub>	9 <sup>0</sup> <sub>-0.36</sub>	0.7	1.2	0.14	10
SWRS-6	6	6.4 <sup>+0.36</sup> <sub>0</sub>	10 <sup>0</sup> <sub>-0.36</sub>	0.7	1.2	0.23	10
SWRS-8	8	8.4 <sup>+0.36</sup> <sub>0</sub>	13 <sup>0</sup> <sub>-0.43</sub>	1	1.6	0.43	10
SWRS-10	10	10.5 <sup>+0.43</sup> <sub>0</sub>	16 <sup>0</sup> <sub>-0.43</sub>	1	1.6	0.82	5
SWRS-12	12	13 <sup>+0.43</sup> <sub>0</sub>	18 <sup>0</sup> <sub>-0.43</sub>	1.3	1.85	0.89	5
SWRS-16	16	17 <sup>+0.43</sup> <sub>0</sub>	24 <sup>0</sup> <sub>-0.52</sub>	1.5	2.3	2	5
SWRS-20	20	21 <sup>+0.52</sup> <sub>0</sub>	30 <sup>0</sup> <sub>-0.62</sub>	1.8	2.8	3.4	5

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● Part number specification

**SWR-10**



Individual Sales → P.0000	Cleanroom Wash & Packaging → P.0000	Screw Length Adjustment → P.0000	Vibration Resistant → P.0000	Modification process for captive use → P.0000
Available / Add'l charge	S.S. only / Add'l charge	Not Available	Not Available	Not Available