



GALLOCK

WEDGE LOCK WASHERS

Complete Safety Under Heavy Vibrations



About Gala

Gala is Asia's largest manufacturer of Disc Springs.

Three decades of rich experience forms our backbone in keeping up-to-date with latest technology to design and manufacture high performance Disc springs & Anti Vibration Washers. We serve global OEMs in Power Equipments, Off-Highway Vehicles, Wind Turbines, Automotive etc. from our IATF 16949:2016 certified manufacturing facilities in India. We have office in Germany and warehouse & office in China.

Exports to Germany, Switzerland, Finland, Italy, Denmark, USA, Singapore, Taiwan, China etc. contributes 60%+ of our sales.

No.1 Exporter of Springs from India

Over **200 Million** Disc Springs &
Wedge lock Washers manufactured every year

Exports to **25** Countries

Cooperation with **7** Global Research Institutes

Associated with **6** Out of Top 10 Global Fastener Distributors

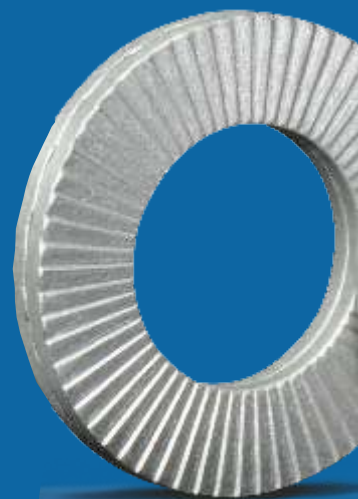
Products tested & approved by Global **OEMs**

ABB	BÖLLHOFF	BOSSARD	BUFAB
DRESSELHAUS		FABORY(GRAINGER)	
GANDINI	INDIAN RAILWAYS	JOHN DEERE	
PAAL	REYHER	SCHÄFER+PETERS	
SIEMENS	SCHNEIDER	WÜRTH	

Gallock Wedge Lock Washers

GALLOCK washers ensure the integrity of fastener thread systems by using tension rather than friction, which is the basis of most traditional fastening methods. This provides security to the threaded systems.

GALLOCK consists of two identical flat washers which have a set of cams on one side and a radial knurling on the other. These two washers are supplied glued together, in order to avoid any orientation mistake during assembly.



Gallock Wedge Lock Washers

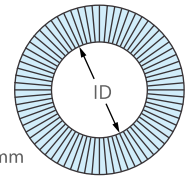
Dimension chart

Bolt size			ID [mm]	OD [mm]	Thickness t [mm]
Washer Size	Metric	UNC			
GL3	M3	#5	3.4	7.0	1.8
GL3.5	M3.5	#6	3.9	7.6	1.8
GL3.5 ED	M3.5	#6	3.9	9.0	1.8
GL4	M4	#8	4.4	7.6	1.8
GL4 ED	M4	#8	4.4	9.0	1.8
GL5	M5	#10	5.4	9.0	1.8
GL5 ED	M5	#10	5.4	10.8	1.8
GL6	M6		6.5	10.8	1.8
GL6 ED	M6		6.5	13.5	2.5
GL8	M8	5/16"	8.7	13.5	2.5
GL8 ED	M8	5/16"	8.7	16.6	2.5
GL10	M10		10.7	16.6	2.5
GL10 ED	M10		10.7	21.0	2.5
GL11	M11	7/16"	11.4	18.5	2.5
GL12	M12		13.0	19.5	2.5
GL12 ED	M12		13.0	25.4	3.4
GL14	M14	9/16"	15.2	23.0	3.4
GL14 ED	M14	9/16"	15.2	30.7	3.4
GL16	M16	5/8"	17.0	25.4	3.4
GL16 ED	M16	5/8"	17.0	30.7	3.4
GL18	M18		19.5	29.0	3.4
GL18 ED	M18		19.5	34.5	3.4
GL20	M20		21.4	30.7	3.4
GL20 ED	M20		21.4	39.0	3.4
GL22	M22	7/8"	23.4	34.5	3.4
GL22 ED	M22	7/8"	23.4	42.0	4.6
GL24	M24		25.3	39.0	3.4
GL24 ED	M24		25.3	48.5	4.6
GL27	M27		28.4	42.0	5.8
GL27 ED	M27		28.4	48.5	5.8
GL30	M30	1 1/8"	31.4	47.0	5.8
GL30 ED	M30	1 1/8"	31.4	58.5	6.6 #
GL33	M33	1 1/4"	34.4	48.5	5.8
GL33 ED	M33	1 1/4"	34.4	58.5	6.6 #
GL36	M36	1 3/8"	37.4	55.0	5.8
GL36 ED	M36	1 3/8"	37.4	63.0	6.6 #
GL36 RW	M36	1 3/8"	37.4	55.0	6.5 *
GL39	M39	1 1/2"	40.4	58.5	5.8
GL42	M42		43.2	63.0	5.8

GL3 – GL8
ID: ± 0.1 mm

GL10 – GL42
ID: ± 0.2 mm

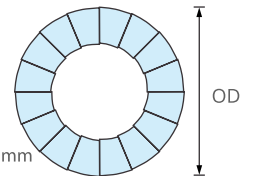
GL45 – GL52
ID: $+0.5/-0.0$ mm



GL3 – GL24
OD: ± 0.2 mm

GL27 – GL42
OD: ± 0.3 mm

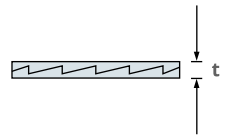
GL45 – GL52
OD: $+0.0/-2.0$ mm



GL3 – GL42
t: ± 0.25 mm

GL45 – GL52
t: ± 0.75 mm

* t: ± 0.3 mm
t: $+0.0/-0.5$ mm

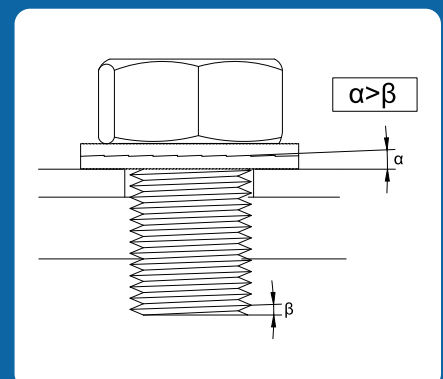


Materials : Steel, Spring Steel, Alloy Steel

Coatings : Zinc Flake Coatings

Working Principle

As shown in diagram, the angle of the cam α of the washer is larger than the angle of the thread β . When the fastener is tightened, the knurled surfaces grip both the bearing surface of the fastener and the material into which the screw is being fastened. The larger angle of the cam α compared to the smaller angle of the screw thread β will not allow the screw to loosen because of the tension caused by the cam lifting.



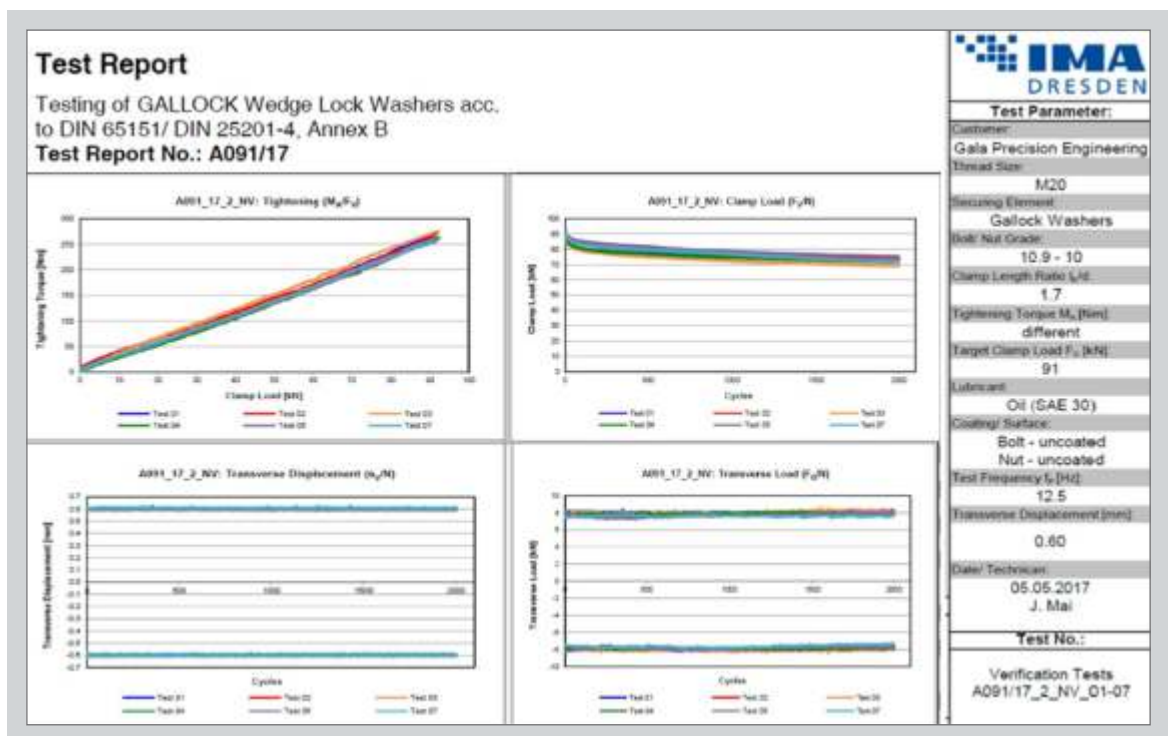
Vibration (Junker) test at IMA - Germany

The German Institute IMA Dresden carried out a vibration test with the Gallock washer, according to the Standard DIN 65151 (Junker Test) and certified that it is in conformity with the requirements of the Standard DIN 25201-4.

The test showed that the Gallock washers safely lock screws/bolt connections. The clamp force stays almost constant after 2000 cycles and just a minimal amount of tension dissipates at the beginning of the test due to the normal settlement of the fastened joint.

Vibration test with Gallock Wedge Lock Washer (Junker Test)

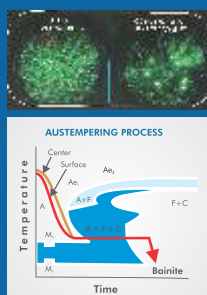
Performance of Gallock is at par or better than European Manufacturers.



Manufacturing Excellence



Tool Design & Development



Heat Treatment



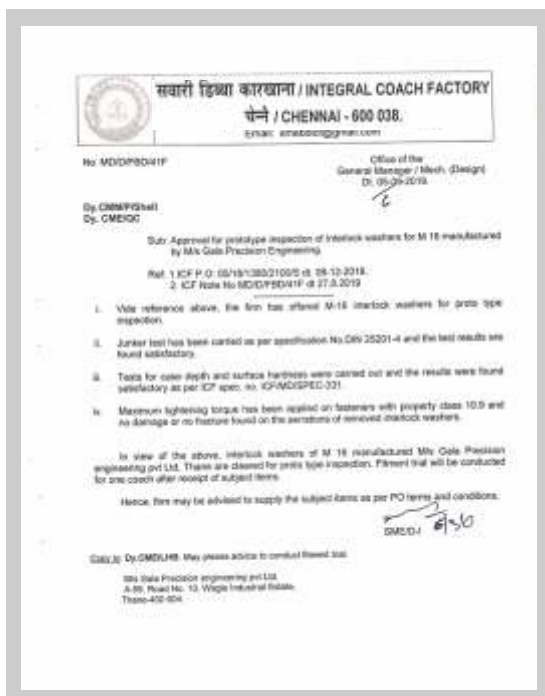
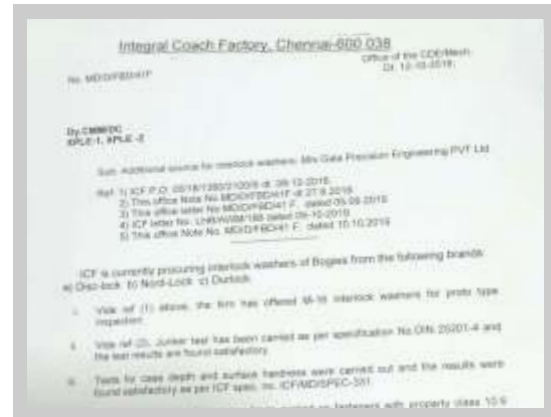
EDM Sparking Machine



Engraving Machine

Credentials

Gallock wedge lock washers have been successfully tested, validated and approved by Railway Coach & Locomotive manufacturers



Manufacturing Excellence



Glueing Automation



Contour Measuring Gauge



Junker Test Machine



IATF 16949:2016 Certified manufacturing facilities near Mumbai, India.

Other products offerings:



Disc Springs as per DIN 2093



Pins as per ISO 8752



Serrated Safety Washers



Studs



Springs Technology

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Corporate Office & Engineering Centre

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