

Complete range of High Fatigue Springs for Automotive & Off-Highway Applications



Your Partner for High Fatigue Springs

No.1 Exporter of Springs from India

TS 16949 Certified Manufacturing facilities
with offices in Germany and China

Exports to 25 Countries

300+ Global Customers

Plant audited & approved by
Global OEMs & Automotive Tier 1 companies

Co-operation with 7 Global Research Institutes

About Gala

Three decades of experience forms our backbone in keeping up-to-date with latest technology to design & manufacture high performance Disc springs, Strip springs & Coil springs. We offer customized springs solutions with choices of sizes, load deflection characteristics, selection of materials and desired fatigue life.

Our engineers have developed high level of expertise over the entire manufacturing cycle of springs. With the design capability combined with application engineering excellence, Gala has become preferred partner for OEMs in Automotive, Off- Highway, Power Equipment, Nuclear Power, Railway, Wind Turbines etc.

World class manufacturing facilities are situated near Mumbai, India with latest coiling Machines from Wafios, Wirecut machines from Charmilles for tool manufacturing, shot peening machines from Wheelabrator with Magna valve. In-house Heat treatment options selected based on material & application of springs, In-house fatigue, torque testing facilities, etc ensure we meet or exceed customers' technical specifications.

Automotive & Off Highway Applications



Springs for Powertrain & Transmission

Gala offers Elastic washers, Cusion Springs, Slotted Disc Springs, Conical springs & springs for Dual Mass Flywheel for transmission of 2 & 4 wheeler, Commercial & Off-Highway vehicles

We also offer Damper & Pressure springs with critical Index and E1 & E2 parameters

Springs for Fuel Injection

We offer high fatigue strip springs for Fuel injection systems meeting stringent requirements of Flatness, Parallelism, Surface finish, Wear resistance, etc

We also manufacture Injector & other coil springs for fuel injection with minimum spring index of 2.7. These springs are from different materials including 17/7 PH, music wire, Inconel with High Tensile requirement



Automotive & Off Highway Applications



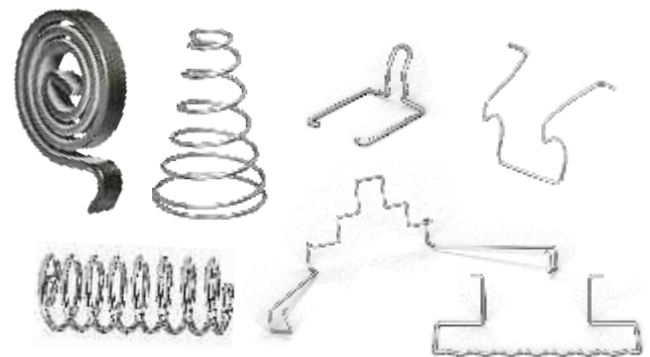
Springs for Brakes

Coil & Strip springs like Pad spring, Shoe clamping spring, Pad bearing plate, etc with high fatigue life either from Spring steel or stainless steel for Caliper Disc & Drum brakes of 2 & 4 wheelers. Also for air disc brake of commercial vehicles

Springs for Seating

For seating systems of Passenger cars, HCV ,LCV , Tractors and Off Highway Vehicles

- Spiral springs for seat reclining systems
- Channel / Buckle & Wave washers for safety belt system
- Conical springs for seats



Springs for Engines

Valve springs play an important role in controlling the breathing in internal combustion engines.

Based on engine design, stress levels & expected fatigue life Gala offers springs from variety of raw materials including material from super clean & shaved rods. Springs offered with progressive spring rate curve

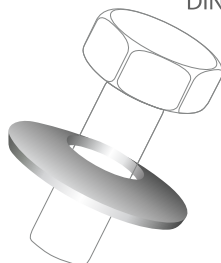


Fastening Applications

DIN 2093



DIN 6796



Wedge lock Washer



Slotted Spring Pins
ISO 8752



Serrated Washer



Anti Vibration Washers & Pins

Gala offers one stop solution to global Fastener distributors for

- Disc springs as per DIN 2093 & customized from outside diameter 8 mm to 500 mm and thickness from 0.4 to 28 mm
- Belleville washers as per DIN 6796
- Serrated washers from M3 to M36 – Medium & Heavy Duty series
- Gallock-Wedge lock washers for high vibration applications
- Slotted Pins as per ISO 8752

Raw Materials

Spring Steel - C 60, C 75 S, 50CrV4 / 51CrV4. Stainless Steel AISI 301 (1.4310), 304 & 316

Special Materials like 17/7 PH, INCONEL X750, INCONEL 718, H11, H13, etc

Coatings

Phosphating	Nitriding	Mechanical Zn Plating (Cr 6 free)	Zinc Silicate
Blackodising	Deltatone	Geomet	Powder & Epoxy coating

Processes & Technology



Coiling

- CNC Wafios Machines from Germany
- Fully automated line with in-built SPCC software
- Minimum Spring index 2.7
- Suitable for coiling of Wire Diameters from 0.5 to 8 mm
- Colour sorter and in-built camera
- Software iQ best speed for automatically detecting the ideal production speed and process safety of the springs to be produced

Shot Peening

Wheelabrator shot peening machine with **Magna valve** ensures optimum flow of shots & consistent shot peening with residual stress induction level upto -600 MPA resulting in high fatigue life

Cartridge type dust extraction system with secondary filter ensures emission level of less than 2 mg/Nm^3 of outgoing air

Variable speed drive for wheel and belt ensures optimum control over the process





Spring Grinding & Chamfering

Technologically advanced CNC grinding and chamfering machine gives precise grinding with respect to parallelism, flatness and perpendicularity of the ground surface

High speed machines with automatic conveyor & auto loading system saves time and increases productivity

Scragging & Load Testing

Multi-station automatic scragging (presetting) & load testing machines with automatic sorting of springs with respect to load at a particular height. Based on customer specific requirement or application demand, Gala also offers springs with worm setting process



Fatigue & Torque Testing

In-house fatigue testing to test 6 springs at a time with load deflection characteristics for each cycle

Quality Assurance

Complete automated inspection & testing facilities for raw material incoming, in process & finished products





IATF 16949 & ISO 9001 Certified manufacturing facilities near Mumbai, India



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