

# High Fatigue Coil Springs for Automotive & Off-Highway Applications



# About Gala

With more than 3 decades of experience in springs design, manufacturing and application engineering, we offer Springs for critical applications in engineering, power, automotive sectors and off-highway vehicles.

We have mastered processing variety of spring steel & stainless steel materials by understanding material behavior, requirement of Heat treatment processes based on material grade and intended application to achieve high fatigue life.

More than 50% of Raw Material is imported from Germany, Japan, Korea, Belgium etc. from OEM approved sources.

**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

Co-operation with **7** Global Research Institutes

**50+** Mechanical Engineers

**12** types of Surface Coatings

## Clientele

**CASE** STANADYNE **ABB** DELPHI-TVS **DANA**  
**VALEO** **BOSCH** JOHN-DEERE BREMBO BRAKES  
LUCAS-TVS ENDURANCE RANE-TRW SIEMENS

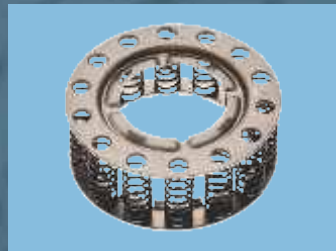
# Applications

## Compression & Damper springs for Transmission

Gala offers springs for 2 wheeler, 4 wheeler and off-highway vehicles

Oil Tempered [ OT ] material from OEM approved sources

Automatic precision grinding machine to achieve flatness upto 0.05 mm and parallelism upto 0.2 mm and perpendicularity upto 0.3 mm. Stringent process control results in springs with optimum load Vs deflection characteristics



## Compression & Injector Springs for fuel Injection

Capability to offer springs with index from 2.7

Capability to source and coil High Tensile Strength material

Shot peening process controlled with Magna - valve to ensure controllable shot flow for high fatigue life

In-house latest inspection and measuring facility for raw material to final product



# Applications

## Springs for Seating Systems

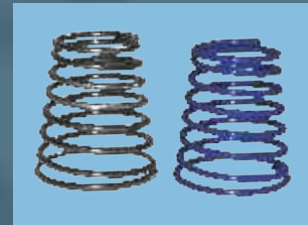


### Spiral Springs

We offer Spiral Springs used in seat recliners and Seat Height adjustment

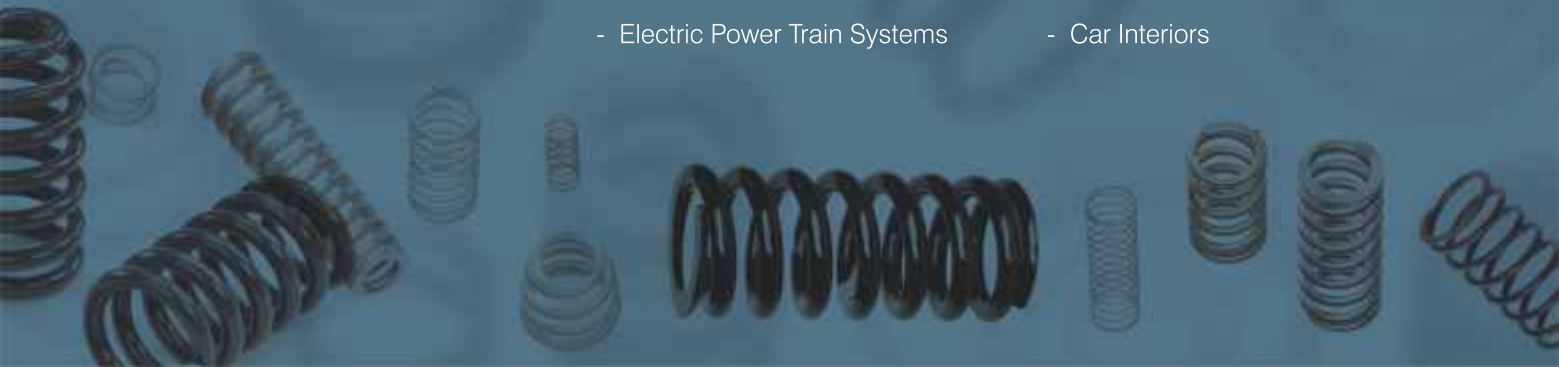
### Coil Springs

We offer Coil Springs used in seating systems of off-highway and commercial vehicles



### Other Applications

- Brakes
- Engines
- Compressors
- Electric Power Train Systems
- Auto Electrical
- Drive Control Systems
- Anti Vibration System
- Car Interiors



# Advanced Processes

## 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 7 mm
- Colour sorter and in-built camera for detection, length variation & control
- Software iQbestspeed for automatically detecting the ideal production speed and process safety of the springs to be produced
- High productivity upto 125 parts per minute





# Advanced Processes

## 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<sup>3</sup> of outgoing air

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



## Spring Grinding and Chamfering

Our 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

Servomotor is used in end grinding machine for downfeed arrangement of grinding wheel for precise grinding

Machine is equipped with environment friendly dust collection system

Online surface inspection is done after grinding



## Scrapping and Load Testing

Multi-station Automatic Scrapping (Presetting) & Load testing machine

Automatic sorting of springs with respect to Load at particular height



# Quality Assurance

We believe in quality that is in-built in our production processes.

From stringent testing like material test, micro structure and hardness test post heat treatment, dimensional accuracy, parallelism, flatness and fatigue test are a few test parameters checked at every stage. Data from raw material testing, online testing during production processes and sample testing is compiled and analyzed. Any deviations are corrected using cause-effect methods so that each outgoing product is of optimum quality.

- Micro Hardness Tester
- Online dimension Inspection
- Profile Projector
- Load Testing
- Fatigue Testing





## Infrastructure

### TS:16949 Certified Plants

- 1,50,000 sqft. plant buildings spread over 7 acres of land
- Office in Frankfurt
- Warehouse and office in Shanghai

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#### Gala Precision Engineering Pvt Ltd

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