



TRADITION AND TECHNOLOGY  
THAT TRANSCENDS WORLDWIDE

# HS Power Spring Mexico SA de CV

COMPANY PRESENTATION



HS Power Spring México S.A. de C.V.

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EMPRESA CONJUNTA DE  
HAYAMIZU Y SUNCALL

**HS Power Spring Mexico** combines materials technology, the expertise and tradition in manufacturing spiral springs from its founders, along with the highly skilled Mexican workforce, in order to supply its customers in the Americas with products of unparalleled performance and quality. HSPS has adopted Suncall's materials and Hayamizu's machiner technology to manufacture in Mexico the most cost-efficient retractors of the highest performance and the best quality.



### Hayamizu Hatsujo Co. Ltd.



Hayamizu Hatsujo was founded in Takaoka, Japan in 1946 and has made an impact ever since as a leader in the manufacture and sales of spiral springs for automotive use, precision equipment and in recent years, for white goods as well. With a penetration of 45% in the Japanese market, Hayamizu occupies the 1st place nationwide in SBR manufacture and sales, and the second place worldwide, with a penetration of 12% in the market. It should be noted that all the machinery used in Hayamizu's production is designed in its premises and manufactured with its own technology.

### Suncall Corporation



Suncall was founded in 1943 in Kyoto, Japan. It started as a steel wire manufacturer for the production of springs for aircraft engine valves. Suncall stands out for its cutting-edge technology in metal malleability, including the most advanced lamination techniques, heat treatment and metal die design. In addition to its materials expertise, Suncall is also a leader in the areas of high-precision and electronic component manufacturing, digital telecommunications and automation. Suncall is defined as an integrated manufacturer, covering everything from high precision materials to processed products manufacture.



**HS Power Spring Mexico S.A. of C.V.** was created in November 2014, from the merger of Hayamizu Hatsujo and Suncall, two traditionally Japanese companies and both leaders in the areas of auto parts, as well as in the manufacture of materials for the automotive industry. Thus, HS Power Spring Mexico (HSPS) obtains its name by the initials of its founders.

By combining Suncall's materials technologies and Hayamizu's spiral springs manufacturing technologies, HSPS acquires a competitive advantage that allows it to specialize and excel in the manufacture and sales of Seat Belt Retractors, better known as SBR.



# Technology

**Spiral springs** are the basis of seat belt retractors (SBR). There are two types of spiral springs: direct contact and non-contact springs. The contact spring is also referred to as spring or spiral spring and the principle of its operation is based on the torque generated by applying a force to any of the laminated material surfaces that composes it. Upon receiving this force, the metal tends to coil and naturally stores a large amount of energy in a limited space, which results into tension force. This energy storage property is what allows spiral springs to play an important role in multiple uses, such as those listed below.



**The materials** most commonly used in spiral springs are steel sheet and flattened wire. In order for a spiral spring to be used in the manufacture of seat belt retractors, it is necessary to ensure that the force and tension characteristics of the spring remain constant, even under different environmental conditions or different stress levels. It is also necessary to ensure that the spring is of the highest durability, and it is precisely in these fields that HS Power Spring Mexico's SBR manufacturing technology stands out.

## Spiral Springs Use



### 1 FORCE BALANCERS

They serve to reduce or "balance" the weight driving force, for example for opening and closing windows.

### 2 SPIRAL SPRINGS

Serve to help start small combustion engines.

### 3 CONNECTION CABLE REELS

They are used to wind and store the connection cable in household electric appliances, such as vacuum cleaners.

### 4 CONSTANT FORCE SPRINGS

Help the expulsion or storage of cupholders or holders in vehicles.

### 5 SEAT BELT RETRACTORS

Regulate the length of the belt, automatically adjusting it to the passenger's body, to allow the locking mechanism to fulfill its task of protecting the user when operating in case of emergency.



# SBR Manufacturing Process

Although the SBR manufacturing process consists of few steps, in order to obtain the required characteristics in the product, it is essential to have a high degree of specialization and accuracy in each of the process stages.



**1**  
**SLITTING**  
Cutting raw material for lamination



**2**  
**EDGE TREATMENT**  
Elimination of burrs, edges and dimension adjustment



**3**  
**SEGMENTATION**  
Longitudinal segmentation and endpoint heat treatment



**4**  
**PRIMARY AND SECONDARY WINDINGS**  
Force induction in order to create tension



**5**  
**ASSEMBLY AND INSPECTION**  
Assembly and quality inspection for storage and shipping.

# Goals, Mission and Values

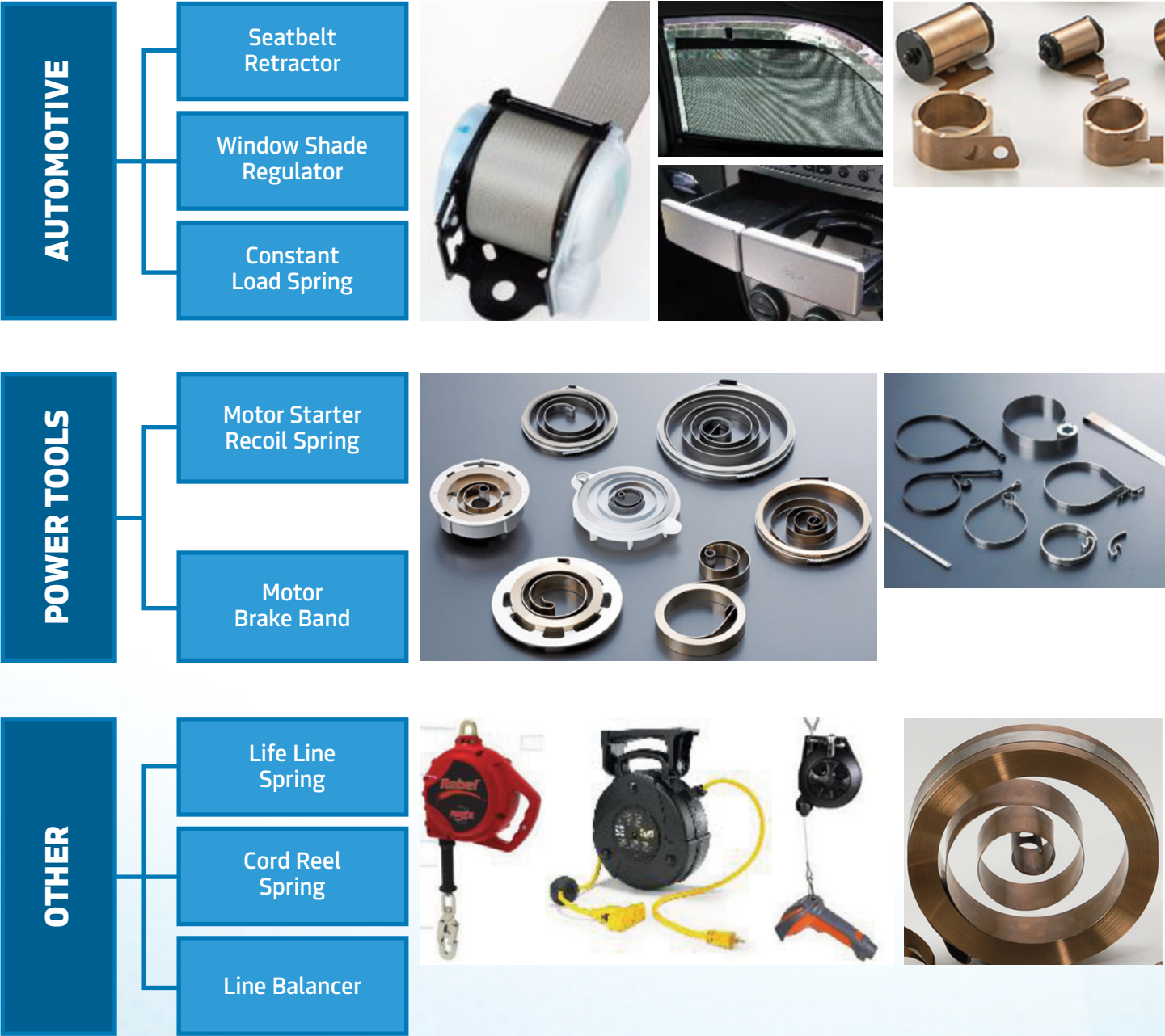
The goal of HS Power Spring Mexico is to implement an integrated production process, from materials to finished products, that contributes to the community and society, through the use of a unique technology.  
The mission of HSPS is to perform a work that contributes to the safety of people and society.

HSPS is based on the following human values:

- **RESPONSIBILITY** at work.
- **COMMITMENT** to the company.
- **RESPECT** for people and their way of thinking.
- **LOYALTY** to principles, values and policies.
- **DISCIPLINE** on behavior and compliance with policies.



# Target Products and Applications





# CERTIFICATIONS

A company committed  
to quality and  
the environment



ISO 9001: 2015



IATF 16949: 2016



ISO 14001: 2015

**HSPS**

A JOINT VENTURE OF  
HAYAMIZU AND SUNCALL

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