

热线:400-008-3858



ASCOT  
敏硕科技

专业弹簧制造商

PROFESSIONAL MANUFACTURER OF SPRINGS



上海敏硕机电科技有限公司  
Shanghai Mascot Industrial Co., Ltd





## 公司简介

### COMPANY PROFILE

敏硕科技是一家中外合资具有研发、生产、销售综合实力于一体的各类精密弹簧、密封产品、制冷配件及单向阀系列等精密五金产品专业制造商。公司拥有四个分厂（江苏、上海、浙江、美国）及天津分公司，二万多平方米的标准厂房。公司创始人及研发技术骨干拥有欧美同行业丰富的管理及领先的技术经验。公司现有员工598名，其中专业工程技术人员、管理人员268名，各种设备1000多台，形成了从产品研发、生产、销售到售后服务务的完整现代化企业管理

体系。公司通过IATF16949:2016质量体系等一系列技术认证，获得多项国家实用新型及发明专利。公司始终秉承“客户第一，质量至上”为宗旨，为客户提供全方位综合性弹簧、密封、制冷五金产品解决方案。我们承诺，无论您在何时何地，我们都将为您提供特殊需求的定制服务，专业、优质、安心、快捷、高效是我们十年如一日的服务宗旨。多年来，我们以诚信经营，踏实做产品，持续受到国内外客户的认可，业务遍布全球各地。

Mascot industrial group is a Sino foreign joint venture with comprehensive strength of R & D, production and sales. We are a professional manufacturer of all kinds of precision springs and seal ring, refrigeration accessories and check valve series and other precision hardware products. We have four branches (Jiangsu, Shanghai, Zhejiang, Dallas) and Tianjin Branch, more than 20000 square meters of standard workshop. As well as, We have 598 employees, including 268 professional engineering and technical personnel and management personnel, and more than 1000 sets of various equipment. The founder and R & D technical backbone of the company have rich management and technical experience in the same industry in Europe and America. It has formed a complete modern enterprise management system with product development, production, sales to after-sales service. The company has passed a series of quality technology certification such as IATF 16949:2016 quality system, and obtained a number of national utility model and invention patents. The company always adheres to the tenet of "customer first, quality first" to provide customers with comprehensive spring, seal ring, refrigeration hardware products solutions. We promise that no matter when and where you are, we will provide you with customized services with special needs. Our ten-year service tenet is professional, high-quality, reassuring, fast and efficient. Over the years, We focus on making good products for our customers. We are recognized by plenty of customers, and also our business all over the world.

### 弹簧事业部

#### Spring division

拥有各式压拉扭弹簧机160台和CNC弹簧机60台及检测设备20套；能精密制造各种标准和非标准压簧、拉簧、扭簧、高温弹簧（600°）&低温弹簧（-260°）、碟形弹簧（外径范围：3mm~900mm，厚度范围：0.08~60mm）、波形弹簧（外径范围：1mm~500mm，厚度范围：0.1~10mm）、热卷弹簧（材料直径16~80mm）、冷卷弹簧（材料直径：0.2mm~20mm）、发条、恒力弹簧（厚度范围：0.1mm~10mm）、密封弹簧（外径范围：2mm~500mm；厚度范围：0.1~10mm）螺旋叶片弹簧、阻尼器、气杆、悬架弹簧、涡卷弹簧、模具弹簧、卡簧、蛇形弹簧、异型弹簧、螺旋弹簧加工件、弹簧垫圈、孔用弹性挡圈、轴用弹性挡圈、止动环、缓冲器等精密五金。通过严格的疲劳测试实验，我们的弹簧最高耐疲劳1亿次以上。

**常用材料：**各类碳素钢、合金钢材料、琴钢线、Hastelloy哈氏合金、Elgiloy、SAE6150、SAE9254、50CrV4、60Si2CrA、62Si2MnA、SK4、SK5、CK55、CK67、CK70、CK75、65Mn、SUS301、SUS304、SUS316、SUS631、17-7、InconelX-718、InconelX-750、GH145等。

**表面处理：**发蓝、发黑、磷化、电镀、电泳和喷塑、喷漆、达克罗、焦美特等。

We have all kinds of press-pull torsion spring machine 160 sets and CNC spring machine 60 sets and 20 sets of testing equipment; Precision manufacturing various standard and non-standard high temperature spring (600 °) & low temperature spring (- 260 °) and compression spring, tension spring, torsion spring, disc springs (Outer diameter range: 1mm~500mm, thickness range: 0.1~10mm), spiral leaf spring, damper, gas pole, suspension spring, hot coil spring, constant force spring (thickness range: 0.1~10mm), Seal Spring (Outer diameter

range:2mm~500mm,thickness range:0.1~10mm), vortex coil spring, die spring, snap ring, serpentine spring, shaped spring, screw, spring washer, hole, Axis with elastic retaining ring, stop ring, buffer and other precision hardware. Through rigorous fatigue testing experiments, our spring can withstand more than 100 million times of maximum fatigue.

**Common materials:** all kinds of carbon steel, alloy steel, piano steel wire, Hastelloy Hastelloy, Elgiloy, sae6150, sae9254, 50CrV4, 60si2cra, 62si2mna, SK4, SK5, ck55, ck67, ck70, ck75, 65Mn, SUS301, SUS304, SUS316, sus631, 17-7, inconelx-718, inconelx-750, gh145, etc.

**Surface treatment:** bluing, blackening, phosphating, electroplating, electrophoresis and plastic spraying, painting, Dacromet, jiaomeite, etc.

## 密封事业部 Seal Division

面对客户多元化需求,立足公司自有的先进弹簧的制造经验,公司于2016.6成立密封事业部,专门攻克了多家500强企业需要国产化但多年并不成功国产的泛塞封项目,帮助客户节省了大批成本。经过多年的发展,公司密封事业部现能精密制造各种弹簧储能圈,孔用泛塞封,轴用泛塞封,端面内向泛塞封,旋转泛塞封,PTFE翻唇骨架油封、翻唇式油封、格来圈、斯特封、尘封、AQ封、高压旋转油封、挡圈、导向环等各种非标定制密封产品。

本司氟塑密封件,均采用优质PTFE树脂生产,全都具备极低的摩擦阻力、无爬行现象、自润滑性能好、在缺乏润滑的情况下仍可正常工作等出色的优点。材料的化学性能和物理性能非常稳定,耐腐蚀性能优异、不粘性突出。工作温度范围达-60℃~+250℃。同时,具有极佳的动态和静态密封特点,耐磨性好、使用寿命长。产品应用范围广泛,尤其是在高压、高温、高速的工况下,以及强酸、强碱、强腐蚀的环境中,仍能保持良好的密封性能。

Facing the diversified needs of customers and based on the company's own manufacturing experience of advanced springs, We established a seal ring business department in June 2016, which has specially conquered the pan plug sealing projects that many top 500 enterprises need to be localized but have not been successfully localized for many years, we helped them save a large number of costs. After years of development, our seal division is now able to manufacture various kinds of non-standard customized sealing products, such as spring energy storage ring, hole pan plug seal, shaft pan plug seal, end face inward pan plug seal, rotary pan plug seal, PTFE lip framework oil seal, lip type oil seal, grid ring, stern seal, dust seal, AQ seal, high pressure rotary oil seal, retaining ring, guide ring, etc.

Our fluoroplastic seals are all made of high-quality PTFE resin. They all have excellent advantages such as extremely low friction resistance, no crawling phenomenon, good self-lubricating performance, and can still work normally in the absence of lubrication. The chemical and physical properties of the material are very stable, with excellent corrosion resistance and outstanding non stickiness. The working temperature ranges from - 60 ℃ to +250 ℃. At the same time, it has excellent dynamic and static sealing characteristics, good wear resistance and long service life. Products are widely used, especially in high pressure, high temperature, high speed conditions, as well as strong acid, strong alkali, strong corrosion environment, still can maintain good sealing performance.

## 五金制冷事业部 Hardware Refrigeration Division

拥有各类先进的精密五金制冷加工设备,主导产品包括过滤器(干燥过滤器,吸气过滤器)单向阀,空调阀,黄铜及紫铜等制冷配件系类产品和精密五金系列配件。

We have all kinds of advanced precision hardware refrigeration processing equipment, leading products include filter (dry filter, suction filter) check valve, air conditioning valve, brass and copper and other refrigeration accessories series products and precision hardware series accessories.





## 发展历程

### DEVELOPMENT HISTORY

**2005**

成立上海工厂  
Set up Shanghai factory

**2009**

成立浙江工厂  
Set up zhejiang factory

**2012**

成立天津办事处  
Set up Tianjin office

**2017**

成立美国工厂  
Set up USA factory

**2019**

成立苏州工厂  
Set up Suzhou factory





## 企业文化 COMPANY CULTURE

### 核心价值观 Our Value

专业·创新·责任·共赢

Professional·Innovation·Responsibility·win-win

### 我们的精神 Our Spirit

责任提升品质, 专业成就价值, 创新开启未来, 文化引领团队。

Better quality by responsibility, Higher value by profession,

Brighter future by innovation, Stronger team by company culture.

### 我们的责任 Our Responsibility

依靠不断创新的技术, 为顾客创造超越期望的价值, 回报员工与社会。

Depend on constantly innovated technology to create value for customer which is beyond his expectation to the staff and society.

### 我们的目标 Our Target

致力于成为国际化的弹簧供应商!

Aim to be a global spring supplier.

### 我们的风格 Our style

纪律严明·严谨高效·平和自信

Disciplined·Efficient·Confident

### 我们的使命 Our Mission

秉承创新的技术为顾客创造价值!

To create value for customers by innovative technologies.

### 我们的信念 Our Faith

秉承专业 成就价值·励精图治 共赢未来

Value Creation·Win-win Future

### 我们的愿景 Our Vision

成为顾客信赖的伙伴!

To be a reliable partner of our customers!



## 车间面貌

### WORKSHOP APPEARANCE

全面实施ISO9001-ISO/T16949质量管理，按照中华人民共和国铁道部行业标准实施，配置先进设备，热卷弹簧从材料直径 $\phi 16-80\text{mm}$ 全自动碾尖—全自动材料回温—数控卷簧—氮气炉保温—红外线控制温度全自动淬火炉等—整套生产线。冷卷弹簧从线径 $\phi 0.2-20\text{mm}$ 生产线齐全，是一家国内先进设备企业之一。

Fully implement iso9001-iso / t16949 quality management, implement in accordance with the industrial standards of the Ministry of Railways of the people's Republic of China, configure advanced equipment, and change the material diameter of hot coil spring  $\phi 16-80\text{mm}$  full-automatic tip grinding - full-automatic material return temperature - CNC coil spring - nitrogen furnace insulation - infrared temperature controlled full-automatic quenching furnace, etc. - a complete set of production lines. Cold coil spring from wire diameter  $\phi$  With complete production lines of  $0.2-20\text{mm}$ , it is one of the domestic advanced equipment enterprises.





## Certificate of Registration

This certificate has been awarded to

**Mascot Technology (Jiangsu) Co., Ltd.**

No.161, Fada Road, Loudong Street, Taicang City, Suzhou City, Jiangsu Province, China

In recognition of the organization's Quality Management System which complies with

**IATF 16949:2016**

The scope of activities covered by this certificate is defined below

**Please refer to the Appendix**

Certificate Number 114875/A/0001/SM/En			
Date of Issue of Certification Cycle	Issue Number	Certificate Expiry Date	Certification Cycle
04 June 2021	1	03 June 2024	1
Revision Date	Revision Number	Original Certificate Issue Date	Scheme Number
04 June 2021	0	04 June 2021	0403456

For detailed explanation for the data fields above, refer to <http://www.urs-holdings.com/logos-and-regulations>

Issued by



On behalf of the Schemes Manager



It must be noted as to the authority of this certificate, please do not hesitate to contact the Head Office of the Group in Hong Kong or visit [www.urs-holdings.com](http://www.urs-holdings.com). URS is a member of United Register of Systems (URS) Limited, a member of United Register of Systems (URS) Limited, a member of United Register of Systems (URS) Limited, a member of United Register of Systems (URS) Limited.

## 质量证书 CERTIFICATE OF REGISTRATION



## Appendix to Certificate

**Manufacture of Metal Spring and Seal Ring (Excludes Product Design under Clause 8.3)**

Remote Location:

Shanghai Mascot Electromechanical Technology Co., Ltd.  
No.58, Lianxing Road, Anting Town, Jiading District, Shanghai City, China  
Supporting Function: Customer Service, Sales, Contract Review

Certificate Number 114875/A/0001/SM/En			
Date of Issue of Certification Cycle	Issue Number	Certificate Expiry Date	Certification Cycle
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## 检测设备 EQUIPMENT

公司现有弹簧拉压试验机从10N到300万N各种规格配制齐全，弹簧疲劳试验机200N到20万N，成套元素、金相分析仪，不同规格的探伤设备，材料扭转抗试验机 etc 检测设备完善。

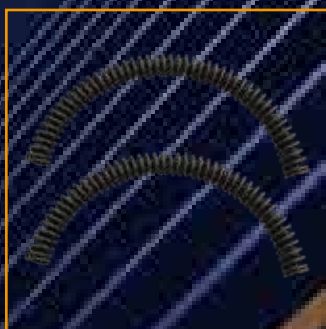
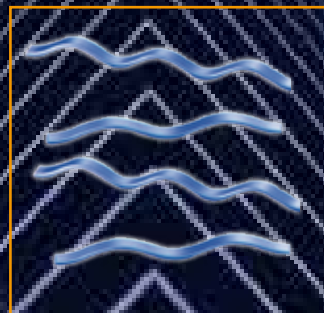
At present, the company has spring tension and compression testing machines ranging from 10N to 3 million N, with complete preparation of various specifications, and spring fatigue testing machines ranging from 200N to 200000 N, Complete sets of elements, metallographic analyzers, flaw detection equipment of different specifications, material torsion resistance testing machine and other testing equipment are perfect.





# 产品服务 PRODUCT SERVICE







## 产品服务 PRODUCT SERVICE

## 精密弹簧 PRECISION SPRING



精密弹簧又名小弹簧，因为这种精密弹簧线径很小，线径0.01-5mm。敏硕的精密弹簧生产线，采用当前世界上最先进的自动化设备组合成。

Precision spring is also known as small spring, because the wire diameter of this precision spring is very small, with a wire diameter of 0.01-5mm. Minshuo's precision spring production line is composed of the most advanced automatic equipment in the world.

**常用材料** 各类碳素钢、合金钢材料、琴钢线、Hastelloy 哈氏合金、Elgiloy、SAE6150、SAE9254、50CrV4、60Si2CrA、62Si2MnA、SK4、SK5、CK55、CK67、CK70、CK75、65Mn、SUS301、SUS304、SUS316、SUS631、17-7、InconelX-718、InconelX-750、GH145 等。

**加工范围** 线径 0.01mm-5mm，力值根据客户要求

**表面处理** 发蓝、发黑、磷化、电镀、电泳和喷塑、喷漆、达克罗、焦美特等。

**应用行业** 国防、海洋、航天、电子、机械、电气、钟表等领域。

**Common materials:** carbon steel, alloy steel, piano steel wire, Hastelloy Hastelloy, Elgiloy, sae6150, sae9254, 50CrV4, 60si2cra, 62si2mna, SK4, SK5, ck55, ck67, ck70, ck75, 65Mn, SUS301, SUS304, SUS316, sus631, 17-7, inconelx-718, inconelx-750, gh145, etc.

**The processing range:** 0.01mm-5mm, and the force value is according to the customer's requirements

**Surface treatment methods** include bluing, blackening, phosphating, electroplating, electrophoresis and plastic spraying, painting, Dacromet, jomett, etc.

**Application Industry:** national defense, marine, aerospace, electronics, machinery, electrical, clocks and watches and other fields.

**精密弹簧**  
**PRECISION SPRING**

**产品服务**  
**PRODUCT SERVICE**





**产品服务**  
PRODUCT SERVICE

**精密弹簧**  
PRECISION SPRING



## 产品服务 PRODUCT SERVICE

## 热卷弹簧 HOT WOUND COILED SPRING



热卷弹簧又名大弹簧，生产过程采用热卷工艺。用弹性材料制成的零件在外力作用下发生形变，除去外力后又恢复原状。亦作“弹簧”。一般用弹簧钢制成。热卷弹簧形状为右旋和左旋，圆柱形拉（压）力弹簧，扭簧，以及锥形、中凸形、中凹形大弹簧等。

Hot coil spring, also known as large spring, adopts hot coil technology in the production process. The parts made of elastic materials deform under the action of external force, and return to the original state after removing the external force. Also known as "spring". Generally made of spring steel. Hot coil springs are right-handed and left-handed, cylindrical tension (compression) spring, torsion spring, conical, medium convex and medium concave large springs, etc.

**常用材料** 合金弹簧钢：60Si2MnA、50CrVA、4Cr13、60Si2CrA 等

**加工范围** 线径 16mm-80mm，力值根据客户要求

**表面处理** 电镀、喷塑、喷漆、达克罗、焦美特等 ...

**应用行业** 国防、海洋、航天、铁路、核电、风电、火电、工程机械、矿山机械、建筑机械、电梯等。

**Common materials:** alloy spring steel: 60Si2MnA, 50CrVA, 4Cr13, 60Si2CrA, etc

**The processing range:** 16mm-80mm, and the force value is according to the customer's requirements

**Surface treatment methods:** electroplating, plastic spraying, painting, Dacromet, Jiaomeite, etc

**Application industries:** national defense, marine, aerospace, railway, nuclear power, wind power, thermal power, engineering machinery, mining machinery, construction machinery, elevator, etc.

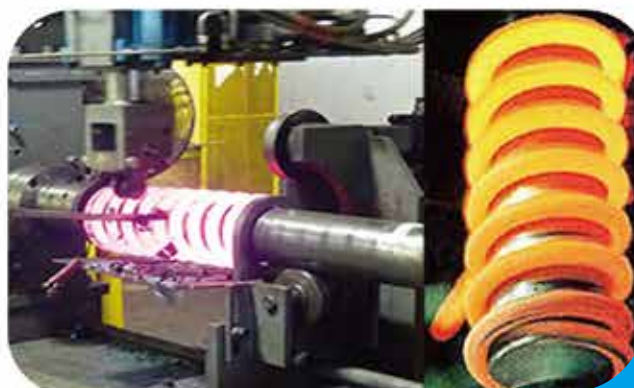




## 热卷弹簧

### HOT WOUND COILED SPRING

## 产品服务 PRODUCT SERVICE



**产品服务**  
PRODUCT SERVICE

**泛塞封弹簧**  
SEAL SPRING





密封弹簧  
SEALING RING

产品服务  
PRODUCT SERVICE



**产品服务**  
PRODUCT SERVICE

**机械/机车弹簧**  
MECHANICAL/MOTOR SPRING





## 离合器/液力变矩器弹簧

CLUTCH/HYDRAULIC TORQUE CONVERTER SPRING

## 产品服务 PRODUCT SERVICE



## 产品服务 PRODUCT SERVICE

## 波形弹簧及绕制挡圈 WAVE SPRING & WINDINGRING



### 波形弹簧的种类：单层波形弹簧和多层波形弹簧

单层波形弹簧分为单层圆环型波形弹簧；单层开口型波形弹簧；单层搭口型波形弹簧；单层圆线波形弹簧。  
 多层波形弹簧分为多层串联式波形弹簧（又分成平端面型和波端面型）；多层叠峰式波形弹簧。

### Types of wave springs: single wave spring and multi-layer wave spring

The single wave spring is divided into single layer ring type wave spring; Single layer open wave spring; Single layer joint type wave spring; Single layer circular wire wave spring. The multi-layer wave spring is divided into multi-layer series wave spring (also divided into flat end type and wave end type); Multi layer stacked wave spring.

### 绕制型挡圈

是用扁丝通过卷绕而加工的挡圈，没有突耳影响装配，易于安装与拆卸。分为定位卡圈和波圈。

### Retaining ring

It is a retaining ring made of flat wire by winding. It has no lug to affect the assembly and is easy to install and disassemble. It is divided into positioning ring and wave ring.

**常用材料** 碳钢：65Mn: ASTM (1074, 1095)-A684; AISI 1070 Carbon Steel; 不锈钢：SUS 304; 17-7-PH/C, SUS631; SUS 302; 高温合金钢：Inconel X-750; GH145; Inconel X-718

**加工范围** 丝宽 0.1mm~20mm, 丝厚 0.1~6mm, 外径 1mm~500mm, 力值根据客户要求

**表面处理** 发蓝、发黑、磷化、电镀、电泳和喷塑、达克罗、焦美特等 ...

**应用温度范围** 根据材料的不同，可在常温 -800℃ 之间使用。

**应用行业** 电机、轴承、球阀、泄压阀、安全阀、离合器、旋转接头、汽车离合器用分离轴承、齿轮传动和机械密封；重型机械、压缩机、机床和石油机械；液压传动、轴承预压预紧装置、园林工具等场合。

**Common materials:** carbon steel: 65Mn: ASTM (1074, 1095) - a684; AISI 1070 Carbon Steel; Stainless steel: SUS 304; 17-7-PH/C, SUS631; SUS 302; High temperature alloy steel: Inconel X-750; GH145; Inconel X-718

**Processing range:** wire width 0.1 mm ~ 20 mm, wire thickness 0.1 ~ 6 mm, outer diameter 1 mm ~ 500 mm, force value according to customer requirements

**Surface treatment methods:** bluing, blackening, phosphating, electroplating, electrophoresis and spray, Dacromet, jiaomeite, etc

**The application temperature range** is - 800 ℃ according to different materials ° C.

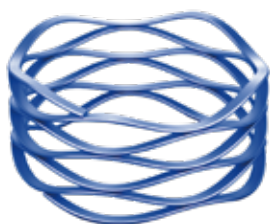
**Applications:** motor, bearing, ball valve, pressure relief valve, safety valve, clutch, rotary joint, release bearing for automobile clutch, gear transmission and mechanical seal; Heavy machinery, compressors, machine tools and petroleum machinery; Hydraulic transmission, bearing preloading device, garden tools and other occasions.



## 波形弹簧及绕制挡圈

## WAVE SPRING & WINDING RING

## 产品服务 PRODUCT SERVICE



## 产品服务

### PRODUCT SERVICE

## 涡卷弹簧及恒力弹簧

### POWER AND CONSTANT FORCE SPRING

发条弹簧的种类：恒力弹簧、涡卷弹簧、碳刷弹簧、塔形弹簧

用 SUS301 不锈钢和 62Si2MnA、SK4、SK5 碳钢等原材料，厚度 0.10mm-10.0mm，层数为 1-3 层的各种收线类发条、恒力发条、游丝发条，恒力弹簧、涡卷弹簧，发条、定时器发条、升降发条、回卷发条、油锯发条、伸宿发条、玩具发条 卷尺发条、平衡器（机）发条、健身器发条、不锈钢发条、统机走闹条、机械发条、电风扇升降发条、玩具发条、汽车安全带发条、发动机启动发条、电线拉线发条、耳机收线发条、电刷发条、自动售货机发条音乐发条、电话线发条、电熨斗发条、电饭煲发条、吸尘器发条等。

主要应用于各种汽车、电子电器，马达、玩具、仪器仪表器、电力机械、环保除尘设备、起动机械设备、压缩机等工业领域。

Types of spring: constant force spring, scroll spring, carbon brush spring, tower spring

Common materials: SUS301 stainless steel, 62Si2MnA, SK4, SK5 carbon steel and other raw materials, thickness 0.10mm-10.0mm, with layers of 1-3 layers, various types of winding, constant force and wandering wire, Constant force spring, scroll spring, hairpin, timer hair strip, lifting strip, rewind strip, oil saw hair strip, extended hair strip, toy hair tape, balancer (machine) hair strip, fitness machine hair strip, noRusty steel hair strip, unified machine running noise strip, mechanical hair strip, electric fan lifting hair strip, toy hair strip, automobile Belt hair, engine start, wire and cable, headset, brush Note, music, telephone line, iron, rice cooker, etc Dust cleaner hair, etc. It is mainly used in various automobiles, electronic appliances, motors, toys, instruments, electric machinery, etc Environmental protection dust removal equipment, starting machinery equipment, compressors and other industrial fields.





## 涡卷弹簧及恒力弹簧

POWER AND CONSTANT FORCE SPRING

## 产品服务 PRODUCT SERVICE



## 产品服务 PRODUCT SERVICE

## 模具弹簧 DIE SPRING

敏硕梯形 / 矩形模具弹簧主要用于冲压模具、汽车模具、铸造模具、陶瓷模具、精密模具、塑料模具、五金模具、注塑模具等模具加工企业或使用模具公司以及结构精密的机械设备等。它还可作为离合器、制动器、农业机械和航空装置使用。在高应力和重负荷的工作环境中，他们是模具弹簧或重负荷压缩弹簧的理想选择。它具有安装体积小、弹性好、刚度大、精密度高、制作材料呈矩形及表面分色喷涂（镀），外表美观等特点。

MASCOT trapezoidal / rectangular die spring is mainly used in stamping mold, automobile mold, casting mold, ceramic mold, precision mold, plastic mold, hardware mold, injection mold, mold processing enterprises or using mold companies, as well as mechanical equipment with precision structure. It can also be used as clutch, brake, agricultural machinery and aviation devices. They are ideal for die springs or heavy-duty compression springs in high stress and heavy-duty working environments. It has the characteristics of small installation volume, good elasticity, large rigidity, high precision, rectangular material, color separation spraying (plating) on the surface, and beautiful appearance.

### 敏硕模具弹簧目前标准化产品主要参照：

The standardized products of MASCOT die spring mainly refer to the followings:

#### 日标 JIS (6 种色彩：银色、黄色、蓝色、红色、绿色、茶色)

JIS (7 colors: silver, yellow, blue, red, green, Tan)



#### 美标 US (4 种色彩：蓝色、红色、金色、绿色)

US (4 colors: blue, red, gold and green)



#### 国际标准 ISO (4 种色彩：绿色、蓝色、红色、黄色)

ISO (4 colors: green, blue, red, yellow)





## 模具弹簧 DIE SPRING

## 产品服务 PRODUCT SERVICE



JIS 日标



JIS 日标



INCH 美标



INCH 美标



ISO 国际标准



ISO 国际标准



## 产品服务

### PRODUCT SERVICE

## 碟形弹簧

### DISC SPRING

敏硕采用欧美的钢材生产各类标准和非标的减震碟形弹簧、防松碟形弹簧垫圈、盘簧、碟形垫圈、碟形弹簧、膜片弹簧、开槽型碟形弹簧、V型碟形弹簧、弹簧垫圈、贝勒维尔弹簧垫圈 (Belleville washer)。从原材料源头上已经保证了产品的优质性，再加上我们独特的热处理工艺，使我们生产的各类减震弹簧都能达到 200 万次以上的疲劳寿命。

按用途分类：高温碟簧（最高耐 1000 摄氏度）、低温碟簧（最低抗零下 200 摄氏度）、常温碟簧；法兰预警碟簧、阀门预警碟簧、无磁预紧碟簧、缓冲拉伸碟簧、震动防松碟簧、液压用碟簧、风力发电碟簧、特种设备碟簧等。）

按标准分类 DIN2093 碟形弹簧、DIN9250 防松垫圈、DIN6796 碟形垫圈、美标 20813 高扭矩碟形垫圈、美标 693F 碟形垫圈碟簧。常用材料有：SAE6150、SAE9254、50CrV4、60Si2CrA、CK55、CK67、CK70、CK75、17/7Ph、SUS301、SUS304、INCONEL718、INCONEL750 和各种防腐、耐高（低）温不锈钢材料。

表面处理：发蓝、发黑、磷化、电镀、电泳和喷塑、达克罗、焦美特。

外径范围：3mm-900mm

厚度范围：0.08mm-60mm

MASCOT use European and American steel to produce all kinds of standard and non-standard damping disc springs, locking disc spring washer, disc spring, disc washer, disc spring, diaphragm spring, slotted disc spring, V disc spring, spring washer and Belleville washer. The high quality of the products has been guaranteed from the source of raw materials. With our unique heat treatment process, the fatigue life of all kinds of shock absorption springs can reach more than 2 million times.

Classification by purpose: high temperature disc spring (maximum resistance to 1000 °C), low temperature disc spring (200 °C below minimum resistance), normal temperature disc spring; flange warning disc spring, valve warning disc spring, magnetic free pre tightening disc spring, buffer tensile disc spring, vibration and anti loose disc spring, hydraulic disc spring, wind power dish spring, special equipment disc spring, etc.)

According to the standard classification: din2093 disc spring, din9250 lock washer, din6796 disc washer, American Standard 20813 high torque disc washer, American Standard 693f disc washer disc spring.

Commonly used materials are: SAE6150, SAE9254, 50CRV4, 60SI2CRA, CK55, CK67, CK70, CK75, 17 / 7PH, SUS301, SUS304, INCONEL718, INCONEL750 and various anti-corrosion and high (low) temperature resistant stainless steel materials.

Surface treatment: bluing, blackening, phosphating, electroplating, electrophoresis and plastic spraying, Dacromet, jiaomeite.

Outer diameter range:  $\Phi$  3mm-900mm

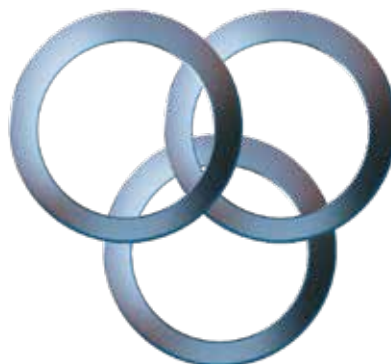
Thickness range: 0.08mm-60mm





碟形弹簧  
DISC SPRING

产品服务  
PRODUCT SERVICE



## 产品服务

### PRODUCT SERVICE

## 气弹簧、阻尼器、缓冲器

### DIE SPRING

气弹簧：又称支撑杆、调角器、气压棒、阻尼器、气杆、气动杆、氮气弹簧、气压杆等。敏硕现有产品可以提供所有种类的气弹簧，包括自由型气弹簧、自锁型气弹簧、随意停气弹簧、阻尼器、座椅用气弹簧、牵引式气弹簧（拉式气弹簧）等，公司具有自主研发能力，能够满足用户的各种需求，客户只要提供联结形式，安装距离及使用气弹簧所支撑物的重量及支撑位置即可。产品广泛应用于汽车、机械、医疗、家具、建筑、冷柜冷机等行业。

Gas spring: also known as support rod, angle adjuster, air rod, damper, air rod, pneumatic rod, nitrogen spring, gas rod, etc. Mascot's existing products can provide all kinds of gas springs, including free gas spring, self-locking gas spring, random stop gas spring, damper, seat gas spring, traction gas spring (pull gas spring), etc. Mascot has independent research and development ability and can meet various needs of users. As long as customers provide connection form, The installation distance and the weight and support position of the support supported by the gas spring. The products are widely used in automobile, machinery, medical treatment, furniture, construction, freezer, refrigerator and other industries.

载荷范围：4N-5000N

行程范围：7mm-1100mm

气缸 / 活塞杆直径范围：3/6-22/45

最大疲劳寿命：200000 次

材质：普通碳钢以及不锈钢等

表面处理：渗碳、镀锌等

连接部件范围：客户标准或企业标准

Load range: 4n-5000n

Travel range: 7mm-1100mm

Cylinder / piston rod diameter range: 3 / 6-22 / 45

Maximum fatigue life: 200000 times

Material: ordinary carbon steel and stainless steel, etc

Surface treatment: carburizing, galvanizing, etc

Scope of connecting parts: customer standard or enterprise standard





## 气弹簧、阻尼器、缓冲器 DIE SPRING

## 产品服务 PRODUCT SERVICE

支撑气弹簧

Support gas spring



压缩阻尼器

Compression damper



尾门气弹簧

Tailgate gas spring



锁定气弹簧

Locking gas spring



双缸锁气弹簧

Double-cylinder lock gas spring



拉伸阻尼器

Traction damper



拉伸气弹簧

Traction gas spring



拉槽气弹簧

Pull groove/Dynamic gas spring



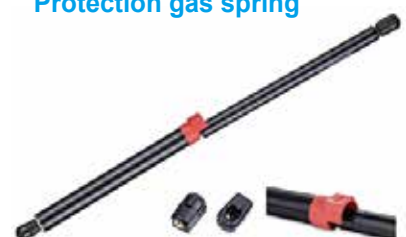
机械气弹簧

Mechanical gas spring



护套气弹簧

Protection gas spring



后开启锁定气弹簧

Back-lockable gas spring



不锈钢气弹簧

Stainless steel gas spring



## 产品服务

### PRODUCT SERVICE

## 蛇形弹簧

### SERPENTINE SPRING

蛇形弹簧 (Serpentine Spring) 又名联轴器弹簧。在机械传动系统中, 这种弹簧担负着传递扭矩和缓冲的作用, 该结构通常由两根带有若干个齿的半轴和一个或数个联轴器弹簧组成联轴器弹簧的扭矩范围在  $26\text{N} \cdot \text{M} \sim 800000\text{N} \cdot \text{M}$  之间, 两半轴允许相对径向位移量在  $0.5\text{mm} \sim 3\text{mm}$  之间, 轴向位移量在  $4\text{mm} \sim 20\text{mm}$  之间, 角位移量是  $1^\circ \sim 15'$ 。蛇形弹簧以组 (1 圈为 1 组, 有 1 片为 1 组, 2 片为 1 组, 4 片为 1 组和 6 片为 1 组等) 供货。使用材质主要是 50CrVA; 60Si2MnA; 60Si2CrVA; SAE6150; SAE9254。蛇形弹簧最常见的产品型号为 JS 系列蛇形弹簧, 主要适用于 JS 系列蛇形弹簧联轴器 (JB/T8869-2000)。

Serpentine spring is also known as coupling spring. In the mechanical transmission system, this spring is responsible for transmitting torque and buffering. The structure is usually composed of two half shafts with several teeth and one or more coupling springs. The torque range of the coupling spring is  $26\text{N} \cdot \text{m} \sim 800000\text{N} \cdot \text{m}$ , the allowable relative radial displacement of the two half shafts is  $0.5\text{mm} \sim 3\text{mm}$ , the axial displacement is  $4\text{mm} \sim 20\text{mm}$ , and the angular displacement is  $1^\circ \sim 15'$ . Serpentine springs are supplied in groups (one coil is one group, one piece is one group, two pieces are one group, four pieces are one group and six pieces are one group, etc.). The main material used is 50CrVA; 60Si2MnA; 60Si2CrVA; SAE6150; Sae9254. The most common product model of serpentine spring is JS series serpentine spring, which is mainly applicable to JS series serpentine spring coupling (JB / t8869-2000)

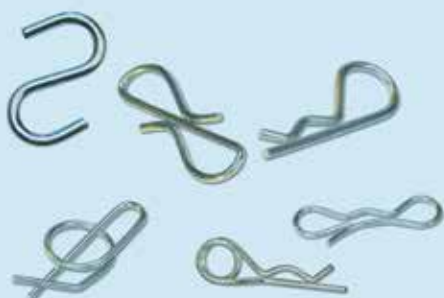
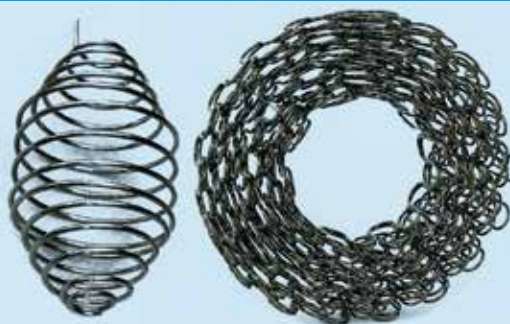
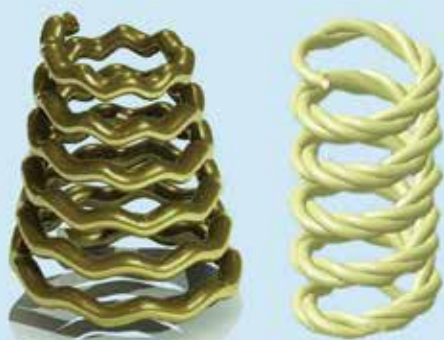
规格	公称 扭矩 Tn(N · M)	上厚* 下厚	宽*高度*外径 (MM)
JS101	45	2.4*1.0	6*45*62
JS102	140	2.6*1.4	6*45*73
JS103	224	2.1*1.2	6*45*75
JS104	400	3.0*1.8	6*55*90
JS105	630	4.0*2.3	8*58*105
JS106	900	3.8*2.0	10*64*121
JS107	1800	4.5*2.6	10*90*142
JS108	3150	4.8*2.6	12*90*159
JS109	5600	5.3*2.7	15*110*188
JS110	8000	5.3*2.7	15*110*206
JS111	12500	7.0*4.0	19*135*235
JS112	18000	6.6*4.4	19*135*279
JS113	25000	6.6*4.4	19*135*311
JS114	35500	6.9*4.1	25*165*369
JS115	50000	6.9*4.1	25*165*407
JS116	63000	8.0*5.0	30*200*450
JS117	90000	9.0*6.0	30*200*492
JS118	125000	9.0*6.0	35*210*560
JS119	160000	9.0*6.0	35*220*608
JS120	224000	10.7*7.3	40*260*703
JS121	315000	11.0*7.0	40*300*700
JS122	400000		
JS123	500000	12*8.6	48*940*236
JS124	630000		
JS125	800000		
JS126		12.6*16.0	54*533*1350





**异形弹簧/板弹簧**  
**WIRE FORMING/LEAF SPRING**

**产品服务**  
**PRODUCT SERVICE**



**产品服务**  
PRODUCT SERVICE

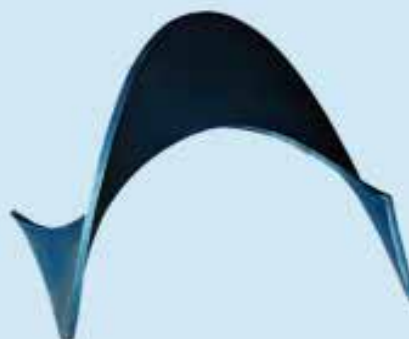
**卡箍/弹性垫圈**  
HOSE CLAMP/SPRING RING





## 螺旋叶片弹簧 SPIRAL LEAF BLADE SPRING

## 产品服务 PRODUCT SERVICE



**产品服务**  
**PRODUCT SERVICE**

**弹簧蓄能密封圈(泛塞封)**  
**SPRING ENERGIZED SEAL/VARISEAL**






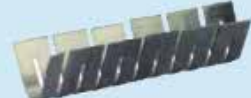


## 特殊弹簧蓄能圈


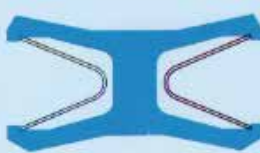



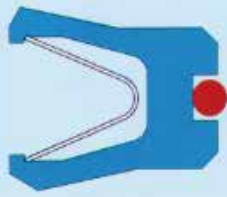

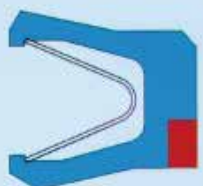
### SPRING ENERGIZED SEAL/VARISEAL

## 产品服务 PRODUCT SERVICE

### 弹簧类型 Spring type

O-type	S-type	N-type	V-type
			

### 产品类型 Product type

	<b>双唇泛塞封</b> Double lip pan plug seal 特点：形成压力缓冲，有更好的密封效果 Form pressure buffer, which has better effect		<b>双向泛塞封</b> Two way flooding seal 特点：适用于直线双向密封 Suitable for linear two-way sealing
	<b>防尘泛塞封</b> Dust proof flood plug seal 特点：带防尘唇泛塞封 Pan plug seal with dust lip		<b>高压泛塞封</b> High pressure flooding seal 特点：密封唇更短，提供高压力和滑动密封效果 The sealing lip is shorter, providing high pressure and sliding sealing effect
	<b>旋转泛塞封</b> Rotary plug seal 特点：在旋转的情况下有很好的密封效果 It has a good sealing effect when rotating		<b>端面泛塞封</b> End face flooding seal 特点：非常好的高压静密封效果 Very good high pressure static sealing effect
	<b>深沟泛塞封</b> Deep trench flooding seal 特点：适用于沟槽较深的情况 It is suitable for deep trenches		<b>防挤出泛塞封</b> Anti extrusion flooding seal 特点：密封圈设有挡圈，有着更好的防挤出性能 The sealing ring is provided with a retaining ring, which has better anti extrusion performance



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