



Ningbo Winson Machinery Products., Ltd. Specialize in custom developing & manufacturing various of nitrogen filled gas springs & hydraulic shock dampers for World customers.

Our Main Partner is Ningbo Cosp Pneumatic & Hydraulic Components, Yangzhou Uli Gas Spring Technology Co., Ltd.

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Winson Gas Spring



WINSON
PNEUMATIC & HYDRAULIC STRUTS



Winson

Pneumatic & Hydraulic

Gas Springs & Shock Dampers

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sales@gasspringscn.com
WhatsApp +8613780014913

引领科技 倡导未来 *TECHNOLOGY SHAPES FUTURE*

Our Factory

Professional & Standard Production Line



Our Products

Compress Gas Spring 01

Compression gas spring also named lift gas spring or gas strut, it's free type gas spring, it is the most widely used gas springs.

Lockable Gas Spring 02

Also named as adjustable gas spring, it's incorporates a mechanism to enable the rod to be locked at any point in its travel.

Traction Gas Spring 03

Also named tension gas spring, the original state of compression, by tensile force outward expansion.

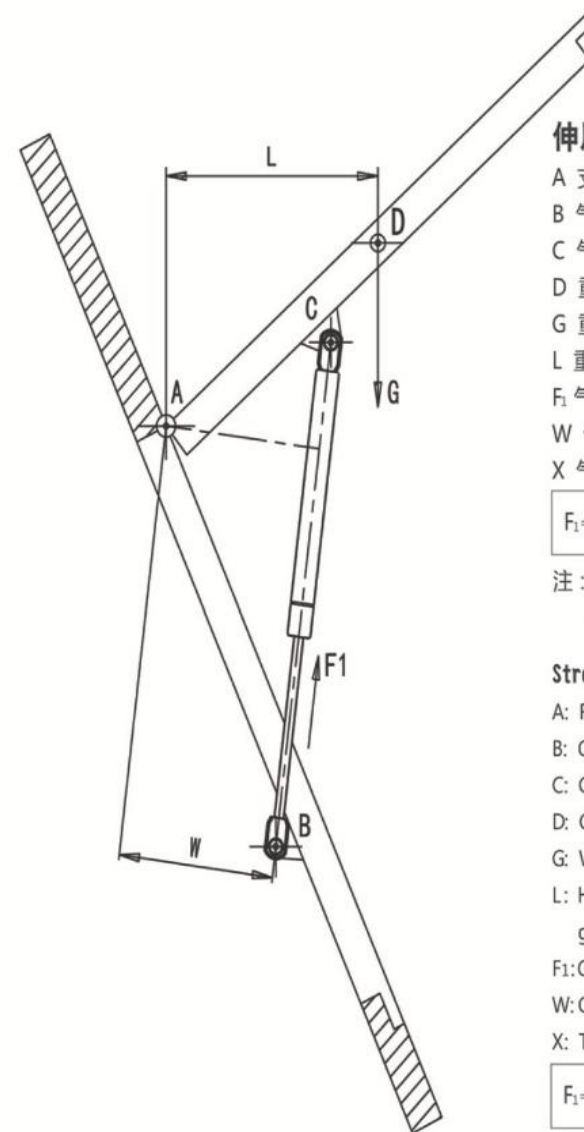
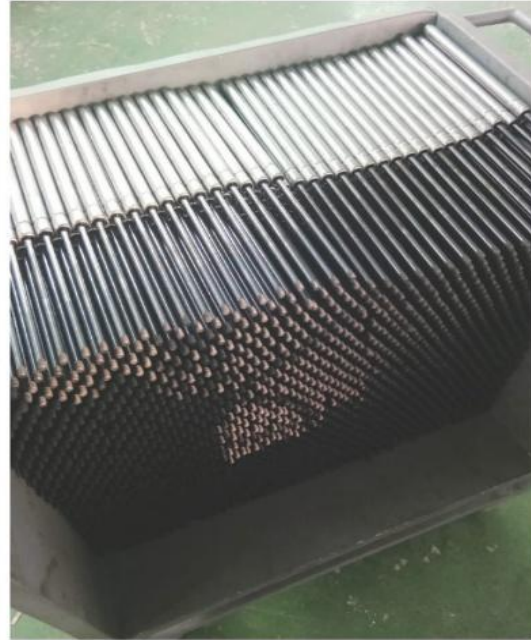
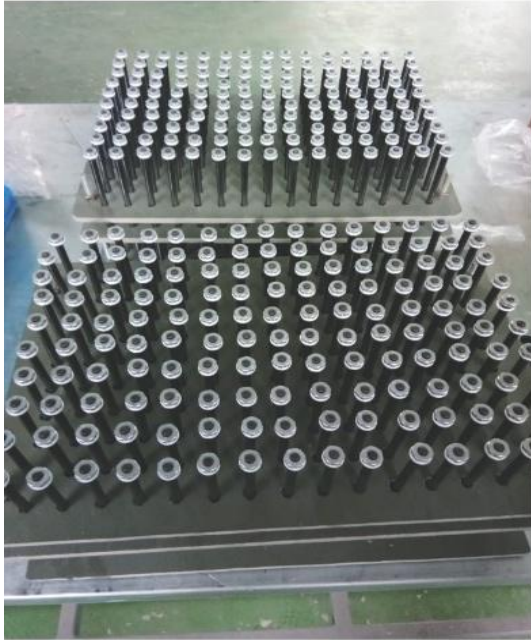
Hydraulic Damper 04

It is filled with hydraulic oil, which mainly plays the role of shock damping and slowing down.

Special Gas Spring 05

Such as free stop type, three section type, double direction type, compression terminal self-locking / pop-out type gas springs

Stretching Force Calculation



伸展力 (弹力) 计算方法

- A 支点 (铰链)
- B 气弹簧安装支点
- C 气弹簧安装支点
- D 重心
- G 重量
- L 重心到支点的水平距离
- F₁ 气弹簧的伸展力 (举力)
- W 气弹簧力臂距离
- X 气弹簧数量

$$F_1 = \frac{G \cdot L}{W \cdot X} * 1.1 \sim 1.15 \text{ (安全系数)}$$

注：气弹簧安装时活塞杆端朝下，
一般使用温度范围为-25℃~60℃

Stretching force (elastic) calculation method

- A: Fulcrum (hinge)
- B: Gas spring installation fulcrum
- C: Gas spring installation fulcrum
- D: Gravity center
- G: Weight
- L: Horizontal distance from the center of gravity to the fulcrum
- F₁: Gas spring stretching force (lift force)
- W: Gas spring arm distance
- X: The number of the gas spring

$$F_1 = \frac{G \cdot L}{W \cdot X} * 1.1 \sim 1.15 \text{ (Safety factor)}$$

Note: When installing gas spring, the piston rod downwards, the general usage temperature range of -25 °C - 60 °C

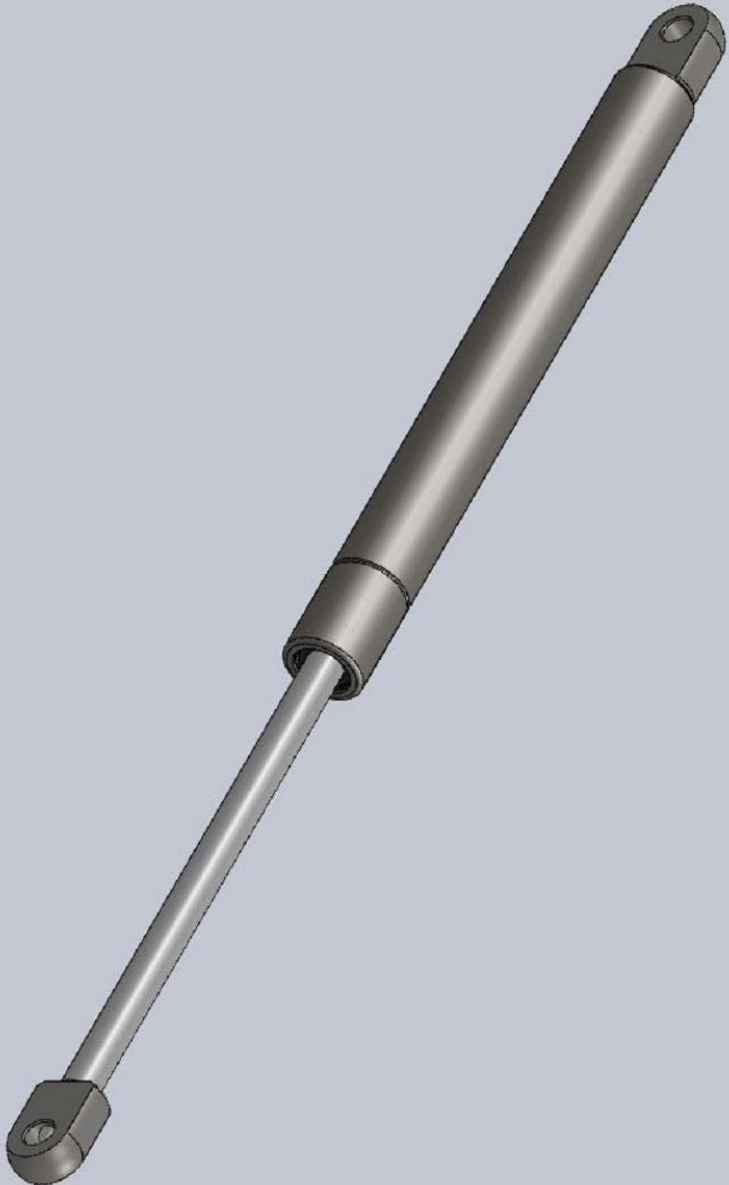
Compression Gas Spring

Free type gas spring, most normal gas spring widely use in all industries.

It is mainly for lift or support lid, cover, door or others to open or close. only has two positions of the shortest and the longest ,unable to stop during the travel. In the automotive, textile machinery, printing equipment, office equipment, construction machinery and other industries most widely used.

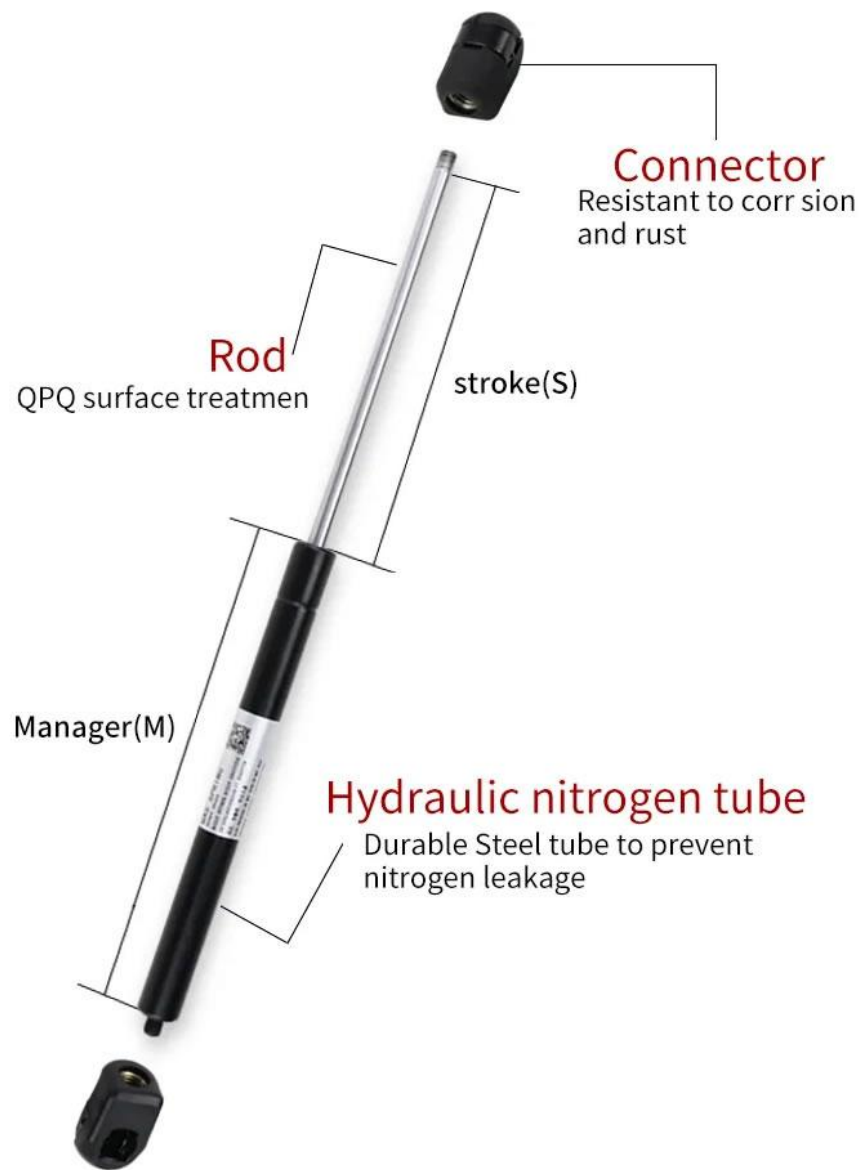
Compression Gas Spring

Compression Gas Spring



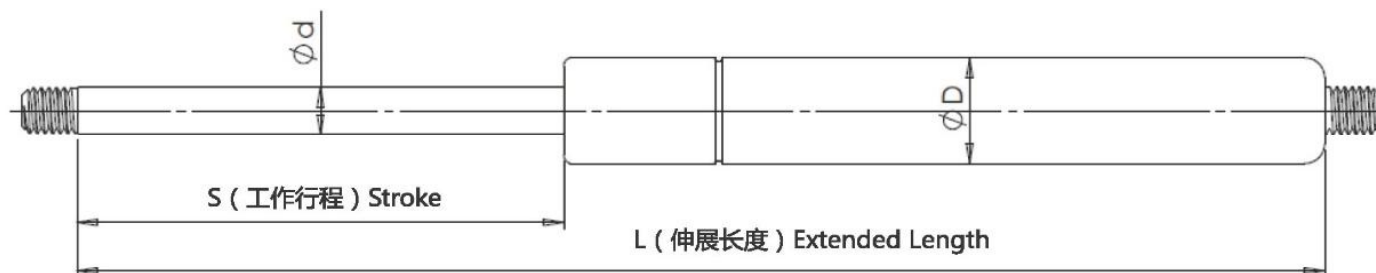
Specification

型号 Type	杆径 d	管径 D	伸展力值 F ₁	工作行程 S
YQ6-15	6mm	15mm	30~400N	10~200mm
YQ8-18	8mm	18mm	50~700N	10~400mm
YQ10-22	10mm	22mm	100~1150N	10~450mm
YQ12-25	12mm	25mm	200~1500N	10~500mm
YQ14-28	14mm	28mm	300~3000N	30~750mm
YQ16-32	16mm	32mm	500~3000N	50~800mm
YQ20-40	20mm	40mm	800~6000N	100~1000 mm



Note: The size and pressure marked here are products we can produce, not off-the-shelf stock products, we only produce according to customer's order.

If the gas spring you need is not on the list, please contact us to ask if it can be customized or developed!



Lockable Gas Spring



Lockable Gas Spring

Lock gas spring is for adjust height and degree, generally use for seat & table / desks.

It's incorporates a mechanism to enable the rod to be locked at any point in its travel. This mechanism is actuated by a plunger that protrudes from the rod.

When this plunger is depressed the rod is free to operate as normal. When the plunger is released, which may be at any point in the stroke, the rod is locked in that position..

Lockable Gas Spring

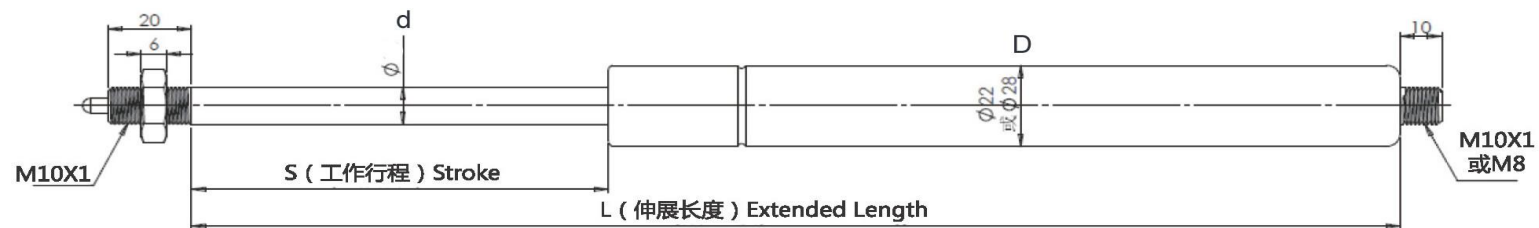
Specification

Adjustable

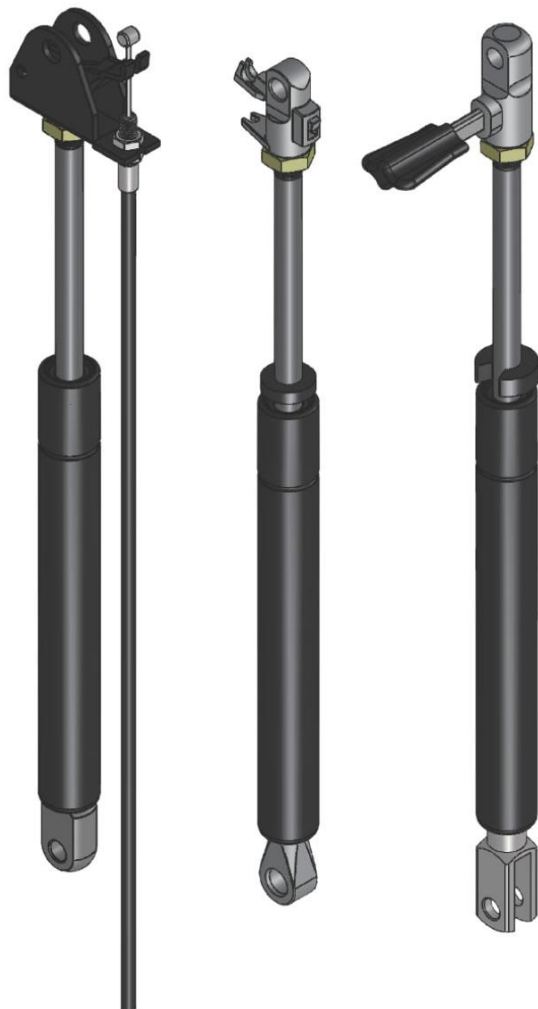
With Many Controlling Mechanism



系列	杆径 d	管径 D	伸展力值 F ₁	工作行程 S
KQ10-22	KQ10-22	22mm	50~800N	1~500mm
KQ10-26	KQ10-26	26mm	50~1000N	1~500mm
KQ10-28	KQ10-28	28mm	50~1000N	1~500mm



Specification



KQ10-22系列

规格型号	工作行程 S	伸展长度 L (最小)		伸展力值 F ₁
		弹性锁定 Elastic locking	刚性锁定 Rigid locking	
KQ10-22-S-L-F1N	10~100mm	2S+55mm	2S+S/3+45mm	50~800N
	101~200mm			50~700N
	201~300mm			50~600N
	301~400mm			50~300N
	401~500mm			50~200N
例: KQ10-22-100-235-150N	100mm	235mm	/	300N

KQ10-28系列

规格型号	工作行程 S	伸展长度 L (最小)		伸展力值 F ₁
		弹性锁定 Elastic locking	刚性锁定 Rigid locking	
KQ10-28-S-L-F1N	10~100mm	2S+55mm	2S+S/3+45mm	60~1000N
	101~200mm			60~800N
	201~300mm			60~600N
	301~400mm			50~300N
	401~500mm			50~200N
例: KQ10-28-100-280-150N	100mm	/	280mm	300N

Lockable gas spring is also called the controllable gas spring.

According to its lock medium is different, can be divided into elastic locking and rigid locking two kinds big. Elastic locking medium for gas, and rigid locking of medium is liquid, because of the liquid incompressibility, gas spring lock after get a relatively high locking force value, displacement can be ignored, so vividly called rigid targets.

Because of the different structure, rigid locking gas spring can make the drawing direction, rigid locking compression direction and a variety of ways, such as two-way rigid locking. In order to meet the requirements of the use of different working conditions.

Traction Gas Spring

End Locking Gas Spring



Traction gas spring is not standard gas spring, all need to be customs.

The original state of compression, by tensile force outward expansion.

Before pulled, the piston rod end is at the shortest position to cylinder, the gas spring is shortest, when we pull gas spring, the piston rod end become longer and run to the longest position. Traction gas spring is also has the types of freedom & self-locking, and others.

Traction Gas Spring

Specification



Size (d/D)	Stroke Range (A)	Force Range	K-Factor	Extended Length (B)	Materials
6/18	30 – 300 mm	100-600 N	1.55	2 X Stroke + 85 mm	Steel / Stainless
8/22	30 – 400 mm	200-1000 N	1.6	2 X Stroke + 85 mm	Steel / Stainless
10/28	30 – 500 mm	300-1500 N	1.6	2 X Stroke + 100 mm	Steel / Stainless
14/40	50 – 500 mm	500-3500 N	1.7	2 X Stroke + 100 mm	Steel / Stainless



Terminal Locking Gas Spring



Terminal Locking Gas Spring

Compression terminal self-locking/Pop out type Gas Spring is a special gas spring

Which is based on the compression type gas spring with a locking device, so that the locking device at the travel terminal can slide into the stop sleeve and lock, and then continue to compress downward (about 10mm), so that the locking button turns to slide toward the notch of the stop sleeve, and the gas spring can extend out by itself, realizing the self-locking at the travel terminal. The self-extension effect is pressed again.

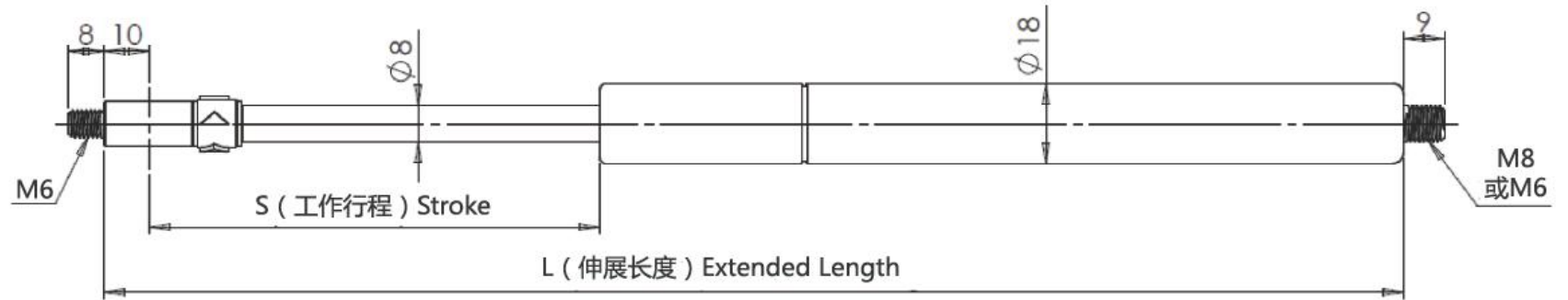
Terminal Locking Gas Spring

Specification

Terminal self-locking gas spring is a special gas spring which we designed and use for special application scenarios.

We have a strong ability to develop new product, but it's need a proper quantity to support the job.

ZQ8-18 SPEC



规格型号	工作行程 S	伸展长度 L(最小)	伸展力值 F ₁
ZQ8-18-S-L-F1N	1~500mm	2S+75mm	50~300N
例: ZQ8-18-100-235-150N	100mm	275mm	150N



Stainless Steel Gas Springs

sales@gasspringscn.com
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Size (d/D)	Stroke Range (A)	Length (L)	Force Range	Materials
4/12	10–100 mm	60-300 mm	20-200 N	SS304 / SS316
6/15	40-110 mm	150-300 mm	30-300 N	SS304 / SS316
8/18	40-250 mm	150-600 mm	30-500 N	SS304 / SS316
10/22	60–400 mm	200-900 mm	50-1000 N	SS304 / SS316



We custom produce stainless steel gas spring from SS304 & SS316, if you need specs not in the list, please contact us to check.

Special Gas Springs

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We also custom produce free stop type, three section type, double direction type, or any other special gas spring would also be developed.



Double Direction Gas Spring

Hydraulic Shock Damper

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WhatsApp +8613780014913



Hydraulic damper

Hydraulic Damper is widely using in the automotive, fitness equipment and medical equipment, which is characterized by resistance to change with the speed of operation. it's has visible buffering function to the connected systems.

Dampers are mainly used as a buffer role, it's biggest feature is the force of gas spring changed by travel speed change. when the action point which guided by outside force to the gas spring with a fast movement, the gas spring's resistance will increase. and when the point of movement is very slow, virtually almost no resistance.

Hydraulic Shock Damper

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We custom hydraulic shock damper with standard sizes of cylinder & piston pole, we need to check drawing then to see if need customer provide sample to test then can develop.

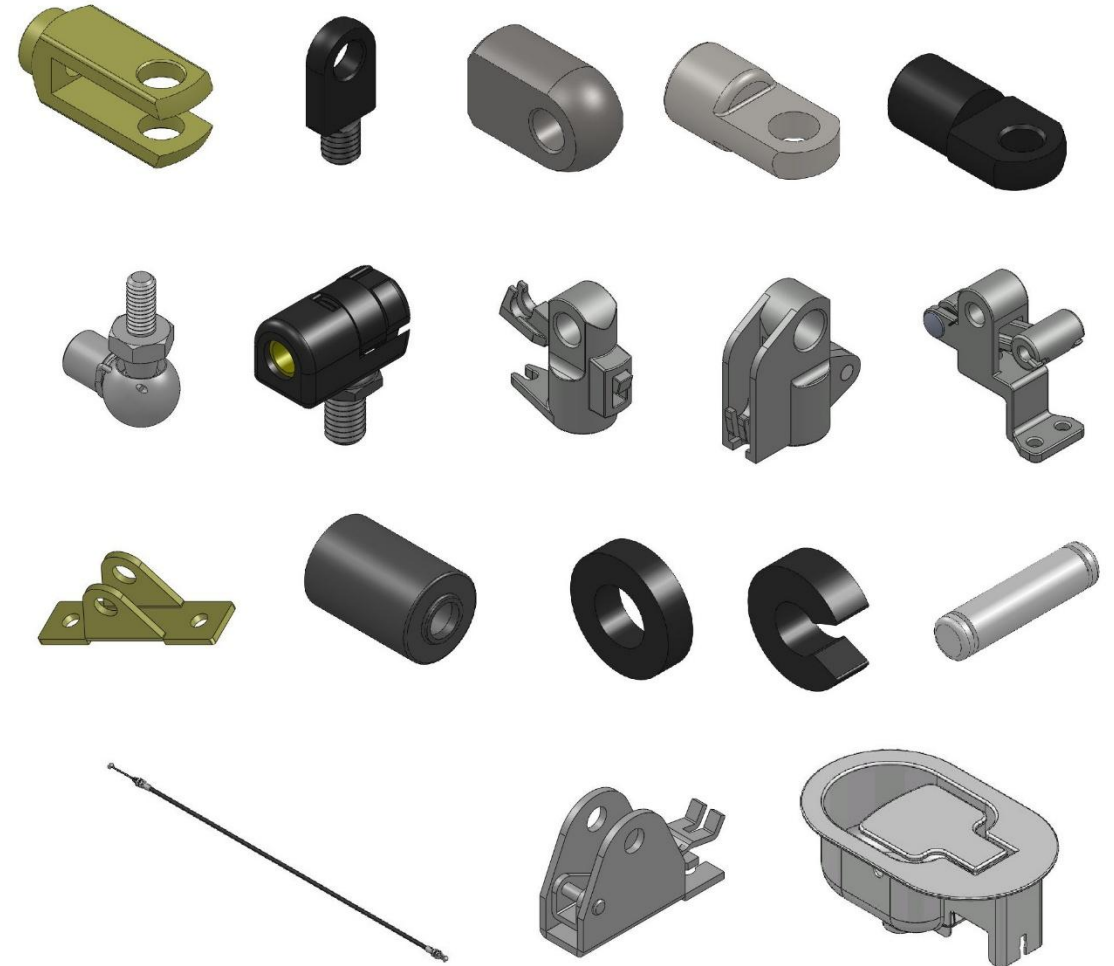


Gas Spring Fittings

Here not shows the all end connectors, we can find all other connectors on the market.



ACCESSORIES



Production Process & Inspection

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01 Cutting



02 Reaming



03 O-Ring assembly



04 Riveting



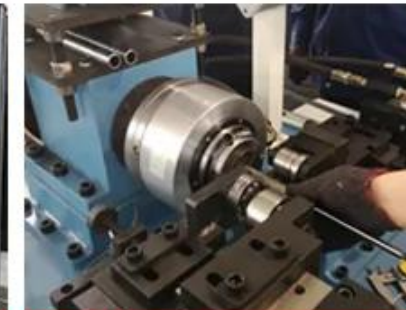
05 Tail plug welding



06 Piston rod assembly



07 Press the oil seal



08 Edge sealing groove pressing



09 Nitrogen filling



High & Low Temperatures Test



Salt Spraying Test



10 Polishing

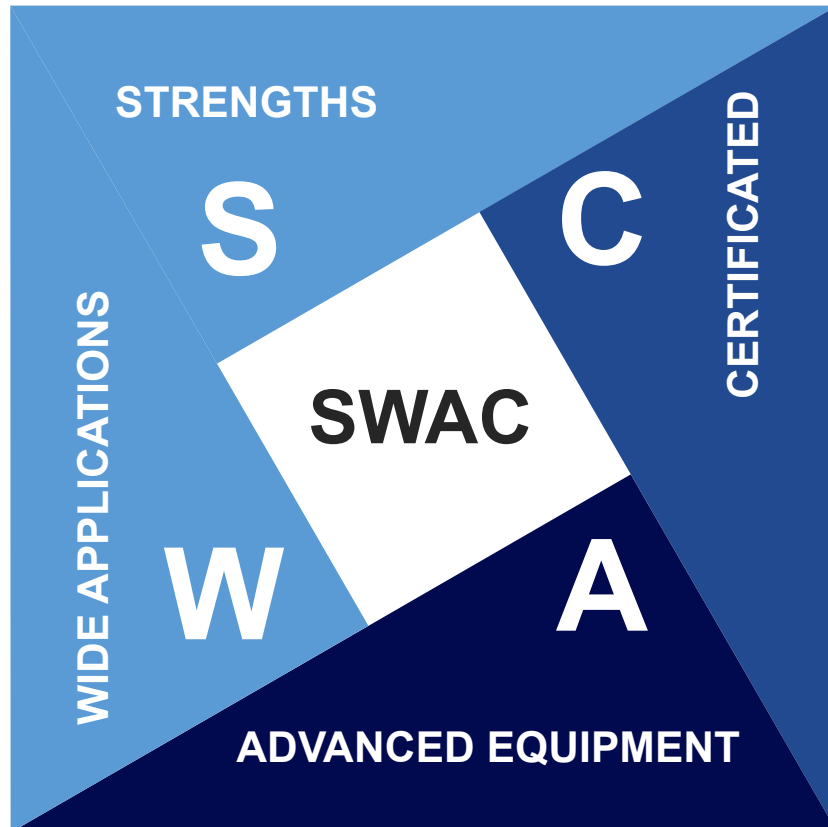


11 Painting



12 Packing

Our Advantages



Strong Technology

The company has strong experienced team of technical force, professional and technical personnel and advanced management philosophy.

Advanced Equipment

Into the advanced testing equipment, each product before leaving the factory are strictly tested to ensure that the hands of customers are qualified products

Cetificated

Passed a number of certifications: ISO-9001 & TS16949 Quality Management system certification, SGS third party quality testing, TUV certification.

Wide Applications

Product specifications complete, widely covered areas, passenger cars, trucks, luxury cars, industrial equipment (need to shock, apply pressure to adjust the height of the equipment)

GAS SPRING DESIGNED TO MATCH YOUR EXACT REQUIREMENT

50,000 to 100,000 life cycle rating

Hydraulic support rod bearing 3-300kg



CERTIFICATION





Contact

Ningbo Winson Machinery Products Co., Ltd.

Add: (14-16),No.26,Building 4,Oriental Business Center,
Yinzhou,Ningbo,Zhejiang,China 315100

Tel:+86 13780014913 Fax:+86 0574 28900031

Email: sales@gasspringscn.com

www.gasspringscn.com

Wechat



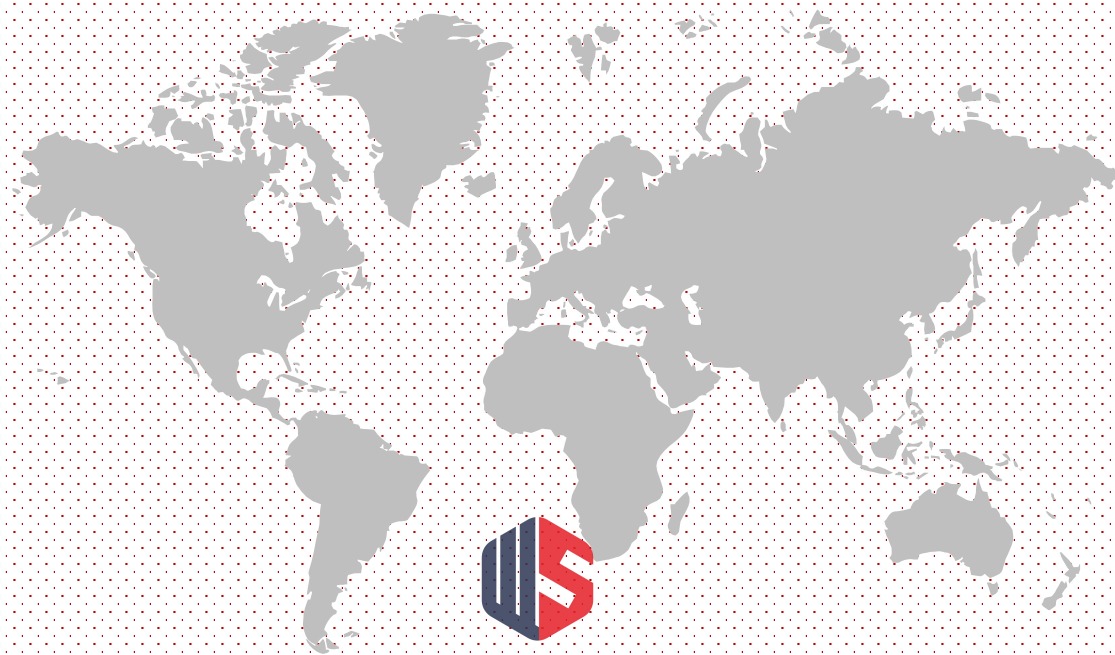
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RELATIONSHIP BASE ON "FRIEND & MUTUAL BENEFIT"**



COOPERATION



WINSON
MACHINERY PRODUCTS

THANK YOU

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Yangzhou Uli Gas Spring Technology Co., Ltd