

SIDDHI ENGINEERING CO.

SPECIAL ENGINEERING COMPONENTS

3/10, Guru Darshan, Jagdusha Nagar, Ghatkopar (W). Mumbai – 400 086. INDIA.

Telefax: 022-251 49450

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Sub: Introduction of our Organization for your requirement of Gas Springs / Gas Lifters / Gas Struts.

Dear Sir / Madam,

We are leading Manufacturers & Suppliers of Gas Springs / Gas Struts as per your requirement. We request you to kindly give us your requirement and it will be our pleasure to provide you with best offer and samples. Any quantity (less or more) is OK with us. Kindly give us this opportunity to work with your esteemed organization. Our products are completely traceable batch code wise and are guaranteed for a period 9 months to 16 months and are confidently used by various OEMs across India.

Following details will provide you more information on gas springs. We can assist you in selection & design for your existing application if you are not currently using gas springs for your products.

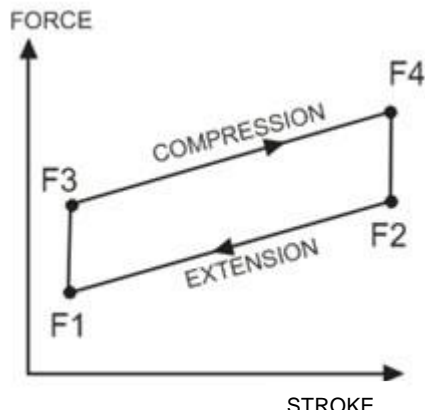
Gaurang P. Bavishi
Proprietor

DETAILS OF LIFTING (NON-LOCKABLE) GAS SPRINGS / GAS STRUTS / GAS LIFTERS:



ü Manufacturing of gas filled springs used for opening, lifting, closing, adjusting and positioning of doors / flaps / canopies.

ü Function:



The gas spring is a hydro-pneumatic adjusting element with pressure tube, piston rod, & end fittings. It contains high pressurized Nitrogen.

As compared to conventional coil springs, gas spring has an extremely flat, nearly linear characteristic curve which facilitates uniform comfortable adjustment or pivoting movement. Also, it has another advantage over mechanical springs is damping. When gas spring is installed piston rod facing downwards, during extension it first travels through gas portion & then through the oil portion. The oil dampens the movement & speed reduces considerably.

The high pressure nitrogen acts with equal pressure on surfaces having different cross-sectional area of piston. This produces a force in extension direction. The force depends upon the charging pressure.

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ü **Advantages:** As compared to coil springs, gas spring has an extremely flat, nearly linear characteristic curve, which facilitates uniform comfortable adjustment or pivoting movement.

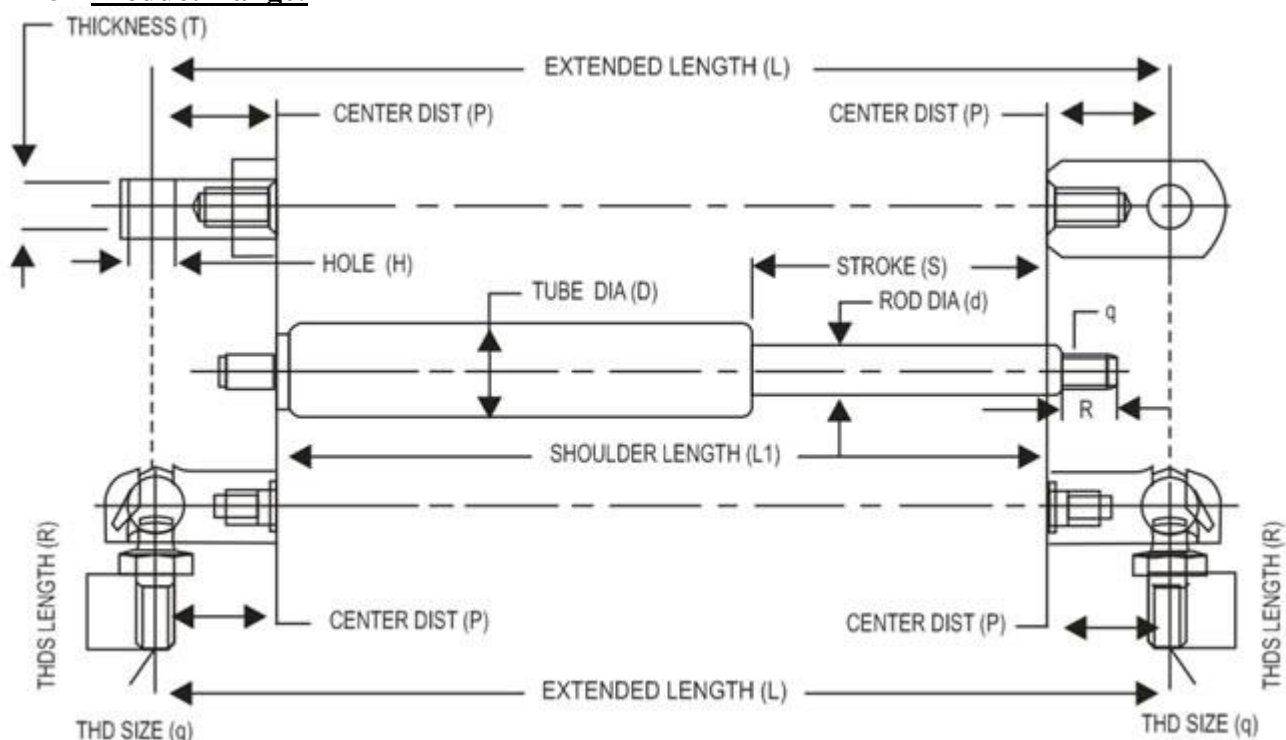
Also, its another advantage over mechanical spring, is damping. When gas spring is installed piston rod facing downwards, during extension it first travels through gas portion & then through oil portion. The oil dampens the movement & reduces the speed considerably.

However, the extension speed & damping characteristics can be adjusted as per applications requirement.

Other advantages & benefits are:

- Automatic & damped, force supported opening
- Secure holding in place
- Compact design
- Easy to mount
- Maintenance Free
- Modern Technology
- Fatigue Free
- Single person can lift heavy doors easily.

ü **Product Range:**



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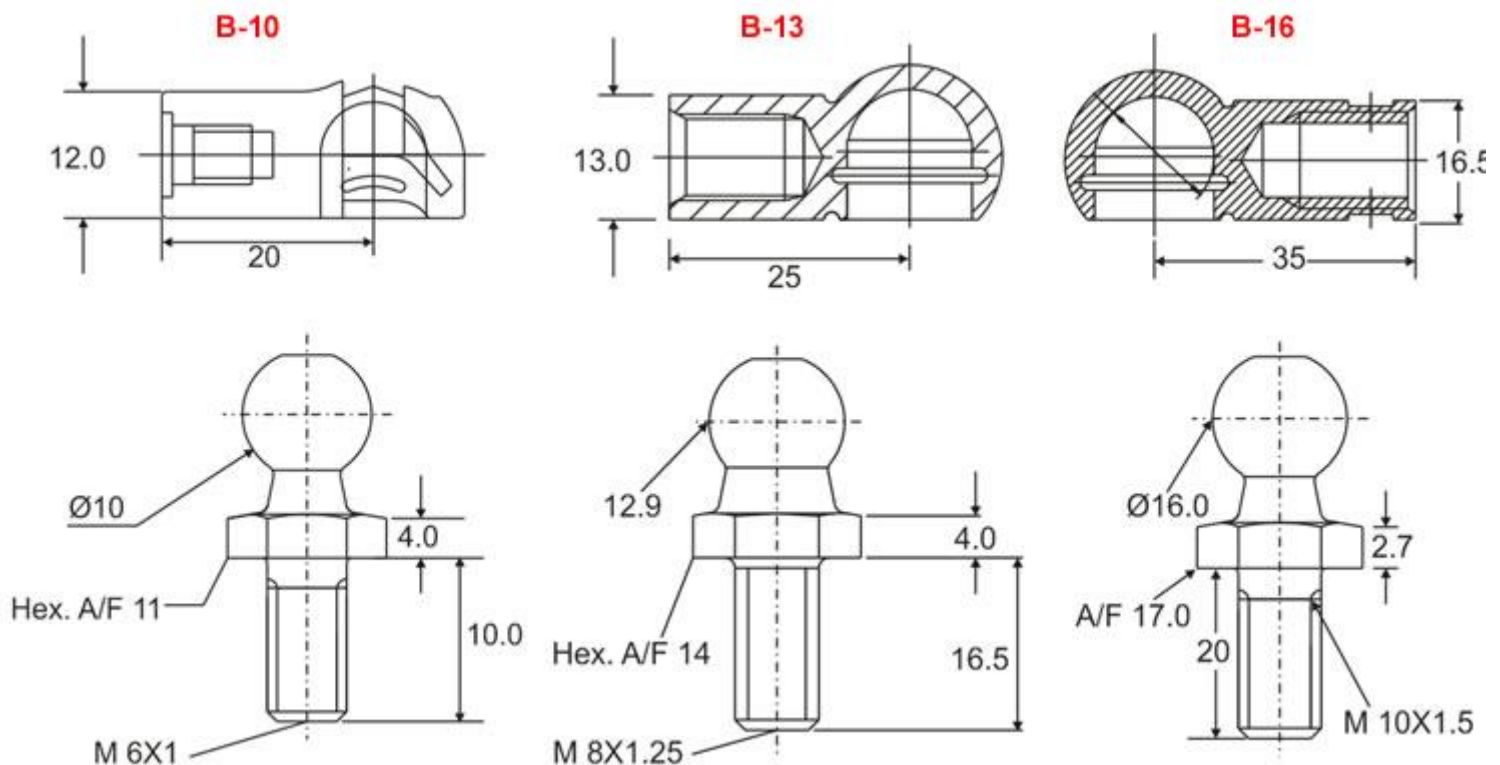
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MODEL *	EXT.LENGTH(mm)		STROKE(mm)		FORCE(N) (F1)		STANDARD STROKES
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	
615	86.0	360.0	25.0	140.0	50.0	300.0	60,94,140
818	91.0	725.0	25.0	300.0	50.0	500.0	60,94,140
1021	141.0	800.0	25.0	350.0	100.0	800.0	100,150,277
1028	210.0	820.0	25.0	350.0	100.0	800.0	100,150,200
1428	210.0	820.0	50.0	350.0	200.0	2000.0	100,250,300

*Model 615: 6 mm is Rod Diameter & 15 mm Tube Diameter and So on.

End Fittings :

Ball Joints



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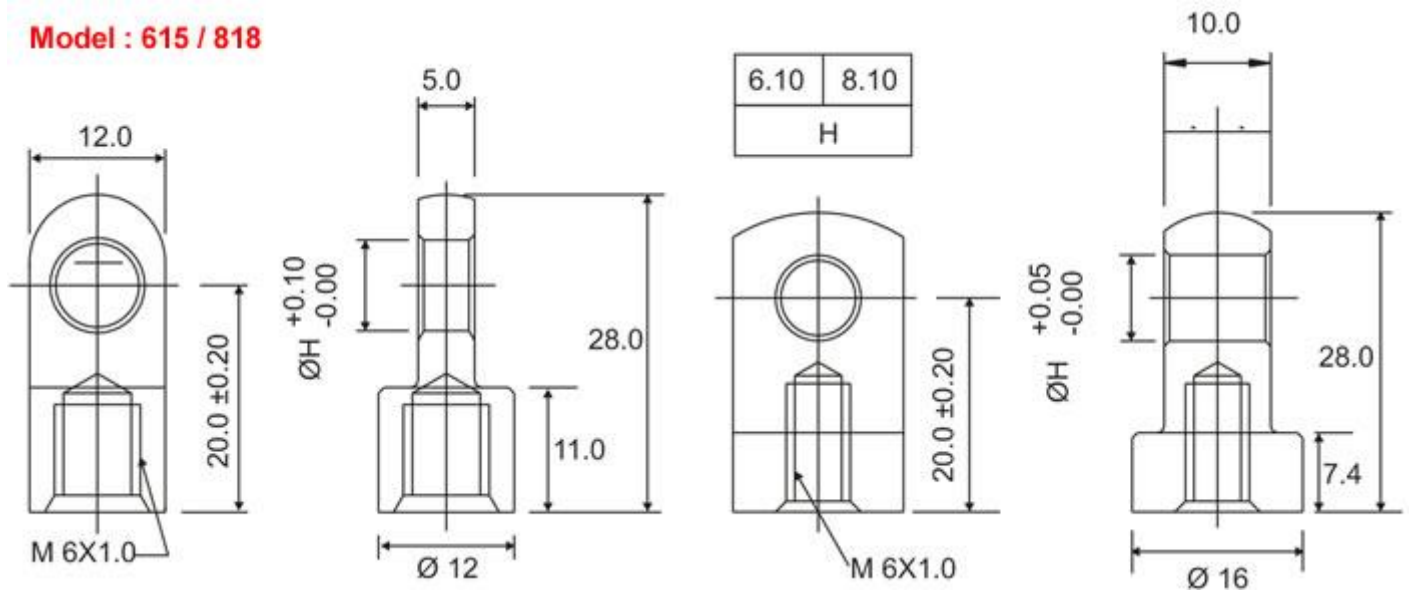
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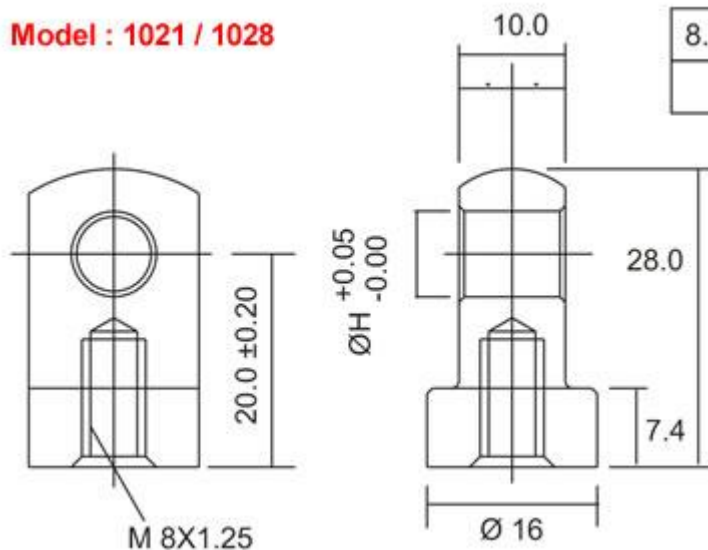
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Threaded Eyelets

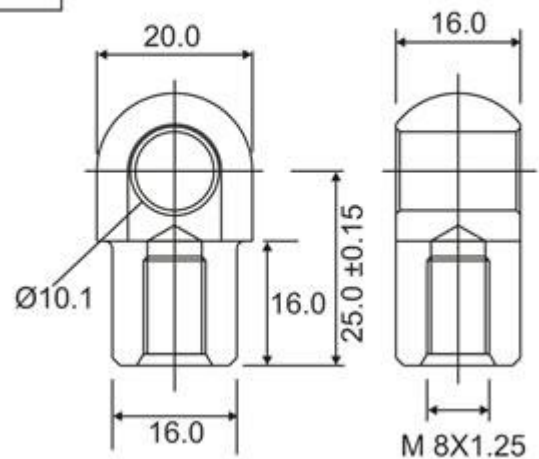
Model : 615 / 818



Model : 1021 / 1028



Model : 1028 / 1428



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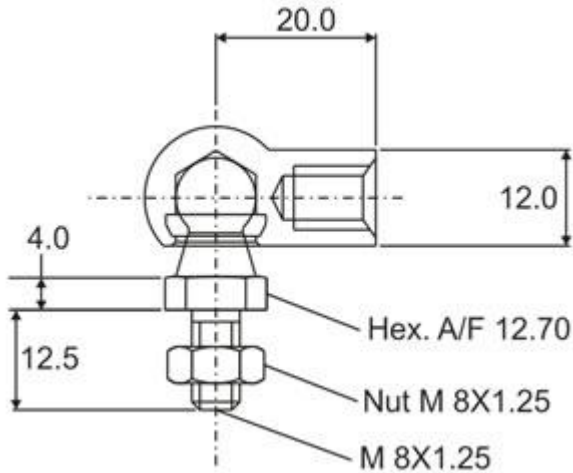
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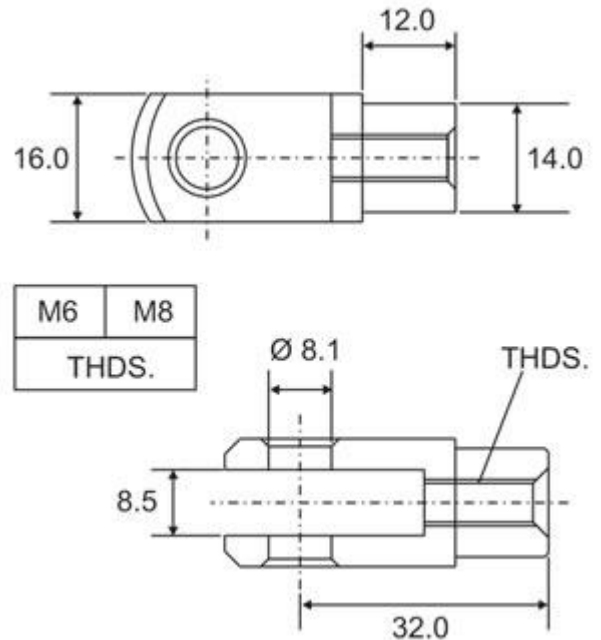
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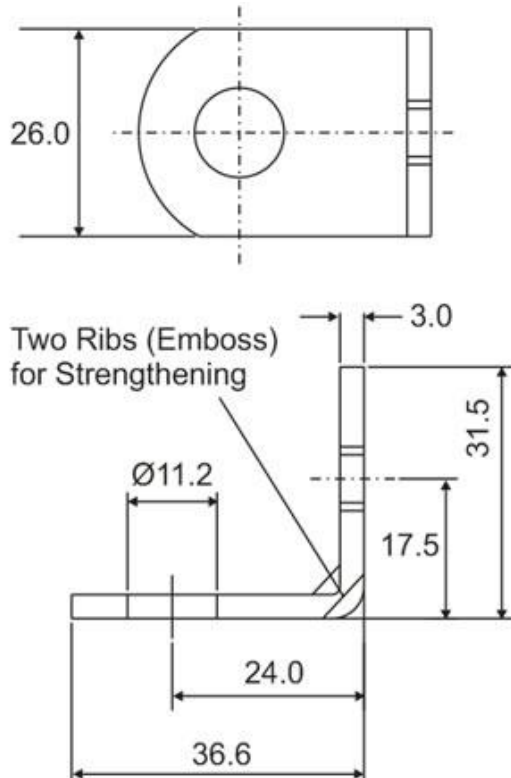
B-10 Metallic Ball Joint



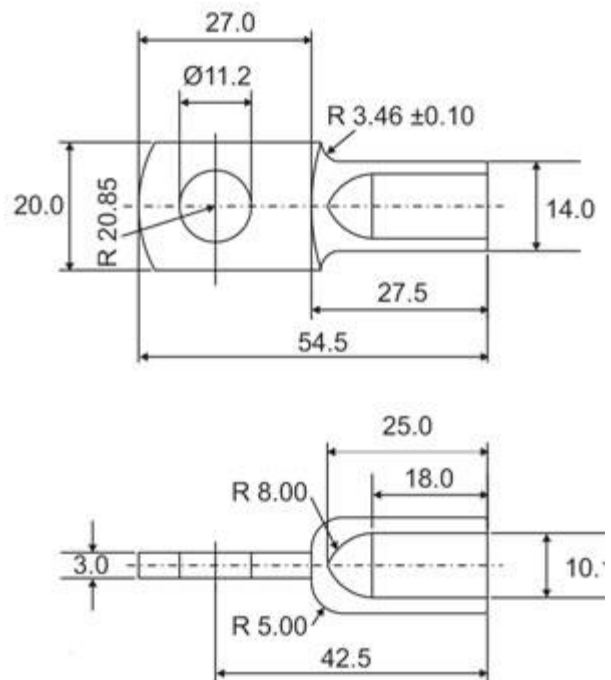
Fork



L-Bracket



End Bracket



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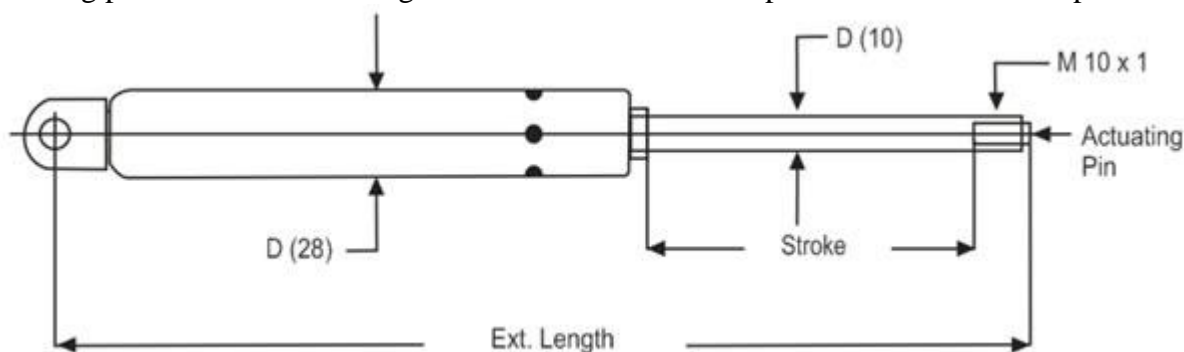
DETAILS OF BLOCKING (LOCKABLE) GAS SPRINGS / GAS STRUTS:



Function :

This type of gas spring can be locked at any intermediate position of the stroke.

It has a valve assembly internally, when one operates (presses) the actuating pin, it opens the valve simultaneously applies force on body then the piston rod starts going in & at a moment when force applied on actuating pin removed the valve gets closed which in turn stops the movement of the piston rod.



It basically has two versions - **A) Spring Blocking** & **B) Rigid Blocking**

A) Spring Blocking:

Here oil & gas are in mixed condition . It shows some deflection when force is applied without pressing the actuating pin. The deflection depends on the force applied.

B) Rigid Blocking :

Here oil & gas is separated by a separator & it shows very little or almost nil deflection when force applied with out pressing the actuating pin.

Advantages:

- Infinite Spring Or Rigid Locking Option
- Defined Dampened Movement
- Free Of Lash
- Simple & Convenient Release
- Easy Installation
- No Maintenance Needed

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Capacity Chart:

MODEL *	EXT.LENGTH(mm)		STROKE(mm)		FORCE(N) (F1)		STANDARD STROKES
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	
1028	177.0	650.0	25.0	250.0	200.0	850.0	45, 60, 120

Tips and Hints :

The gas spring is a hydro-pneumatic element having pressurized nitrogen gas.

To avoid mishandling following are the precautions one has to take

- Do not try to open the gas spring by any means.
- Do not heat the gas spring or do not put it into the fire directly.
- Please ensure its proper alignment to have maximum life of the gas spring.
- Do not scratch, dent, hammer the piston rod it deteriorates / reduces its life.
- Do not apply thinner or paint on piston rod.
- In any case do not try to refill the gas.

Services:

The operation of a gas spring looks very simple. However selecting a right gas spring could be quite complex with regard to its mounting points, forces and stroke lengths. Considering these aspects, a gas spring needs to be tuned to the specific application.

Our core strength is Applications Engineering. We offer full range of technical services to the customers to develop a perfectly matching gas spring for their application. The services include designing, installation recommendations, prototyping, and field trials.

Few Application Photographs:



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Various applications for different segments for both types of gas springs are as follows:

SEGMENT	APPLICATION
Automobile	Rear Hatch (Dickey), Bonnet
Furniture	Overhead lofts, Cabinets, Beds, Ventilators
Auto Bus Body Building	Luggage Compartment, Engine Flap, Roof Top Ventilators, Special Mobile Van
Textile Machines	Opening Machine Doors
Generator Canopies	Canopy Flap Opening
Control Panels	Doors of Various Control Panels
Machine Tool Covers	Doors of oil filtration units, EDM wire cut machine flap, Blood Analyser, Flaps of various machines
Hospital Furniture	Various Beds, Operation tables, bed side trolley, Lamps etc.
Garbage Chutes & Systems	Garbage chutes & Garbage handling collection of garbage from multi-storey building.
Counter Balancer	Various equipments like tapping machine arms, ENT microscope, Overhead hospital lamps, CNC Machine arms
Dairy Equipments	Flaps of Milk Chilling plants
Metro Rail Application	Control Panels
Construction Equipments	Lifting Doors of enclosed cabinets
Earth Moving Equipment	Doors & Canopies
Material Handling Equipments	For Standing Platform, For Handle

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