

**IDEAL**  
**GAS SPRINGS**  
**PVT. LTD.**



**TUVNORD**



An ISO 9001-2000 Company



Car-Rear Dicky Opening



Car-Bonnet Lifting

## IDEAL - LIFT (NON-LOCKABLE)



Control Panel



Double Bed



Overhead Loft

**Ideal Gas Springs**, manufactures gas filled springs used for opening, lifting, closing, adjusting and positioning applications in varied fields. Ideal is the OEM supplier to the leading Indian and overseas manufacturers of automobiles, domestic furniture, industrial equipments, hospital furniture, passenger seats and chairs.

Ideal also offers the design services to the customers to develop an appropriate gas spring tuned to the specific application.

Ideal is a team of dynamic engineers having over 15 years experience in designing, developing and manufacturing of gas springs.

Ideal's motto is,

- Offer cost effective and reliable solutions to the customers
- Total customer satisfaction by producing quality goods
- Continuous improvement in the products by up gradation of technology.

**Ideal's dedicated team achieved ISO-9001-2000 certification in January 2007 for its quality systems.**

Ideal's plant is located at **Satara** - an industrial town 260 Km south of Mumbai. The production facility is equipped with the apt manufacturing, assembly, development and test set up that includes special purpose machines, presses, endurance and force testing machines.

### Advantages :

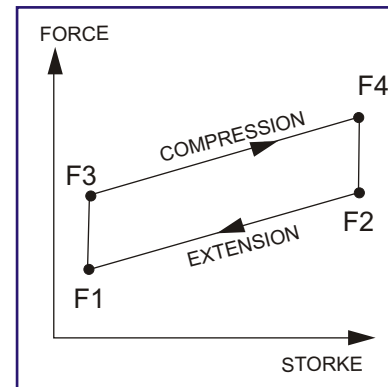
As compared to coil springs, gas spring has an extremely flat, nearly linear characteristic curve, which facilitates uniform comfortable adjustment or pivoting movement.

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.

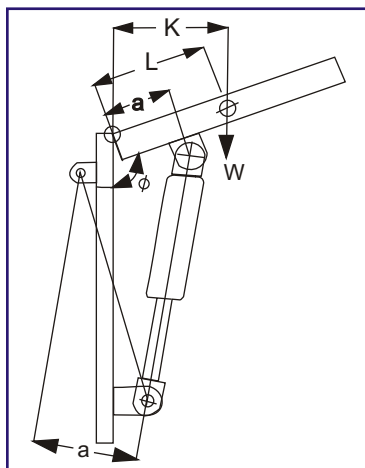
However, the extension speed & damping characteristics can be adjusted as per applications requirement.

### 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.



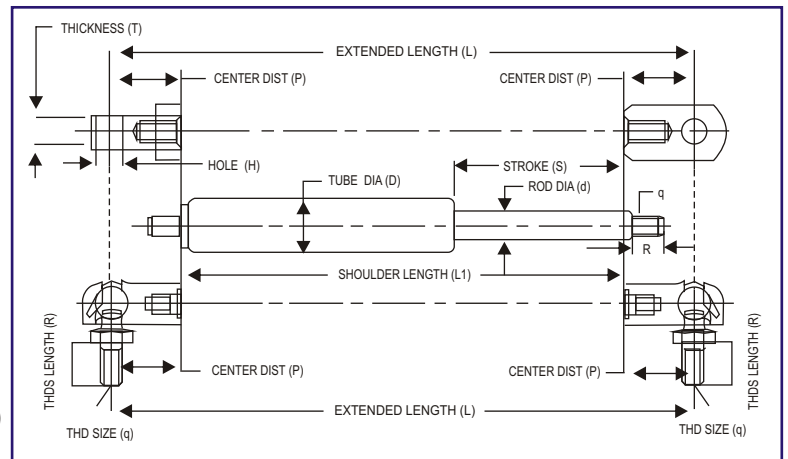
### Instructions for Design of Gas Spring



#### Calculations for Force F1 in Newton

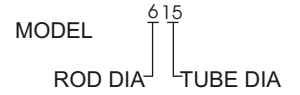
$$F1 = \frac{W \times K}{a \times n} \times 13 \text{ (N)}$$

- W = Weight of flap in Kg
- L = Distance of center of gravity from hinge in mm
- a = Effective lever arm of gas spring in mm, flap open
- 13 = Constant
- K = Effective lever arm of center of gravity flap open
- n = No of gas springs ( Normally n = 2)
- φ = Opening Angle



## Capacity Chart

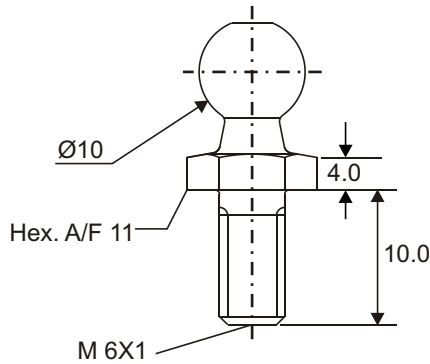
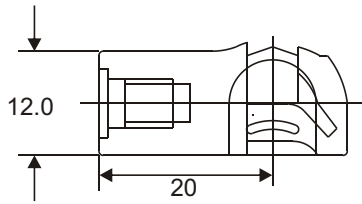
MODEL	EXT.LENGTH(mm)		STROKE(mm)		FORCE(N) (F1)		STANDARD STROKES
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	
615	86.0	360.0	25.0	140.0	50.0	300.0	60,94,140
818	91.0	725.0	25.0	300.0	50.0	500.0	60,94,140
1021	141.0	800.0	25.0	350.0	100.0	800.0	100,150,277
1028	210.0	820.0	25.0	350.0	100.0	800.0	100,150,200
1428	210.0	820.0	50.0	350.0	200.0	1750.0	100,250,300



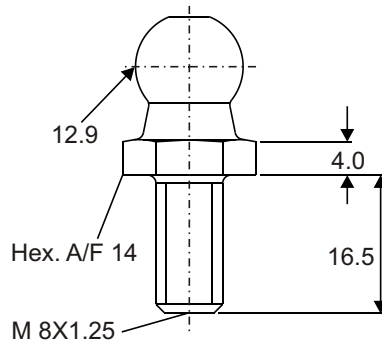
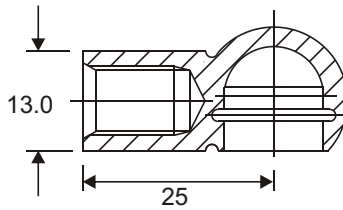
## End Fittings :

### Ball Joints

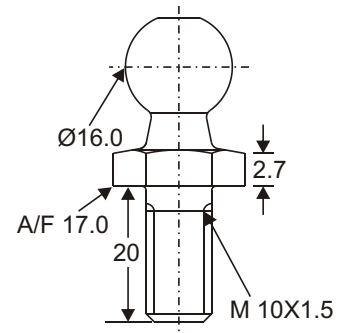
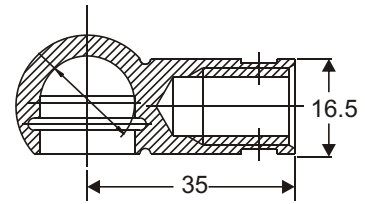
#### B-10



#### B-13

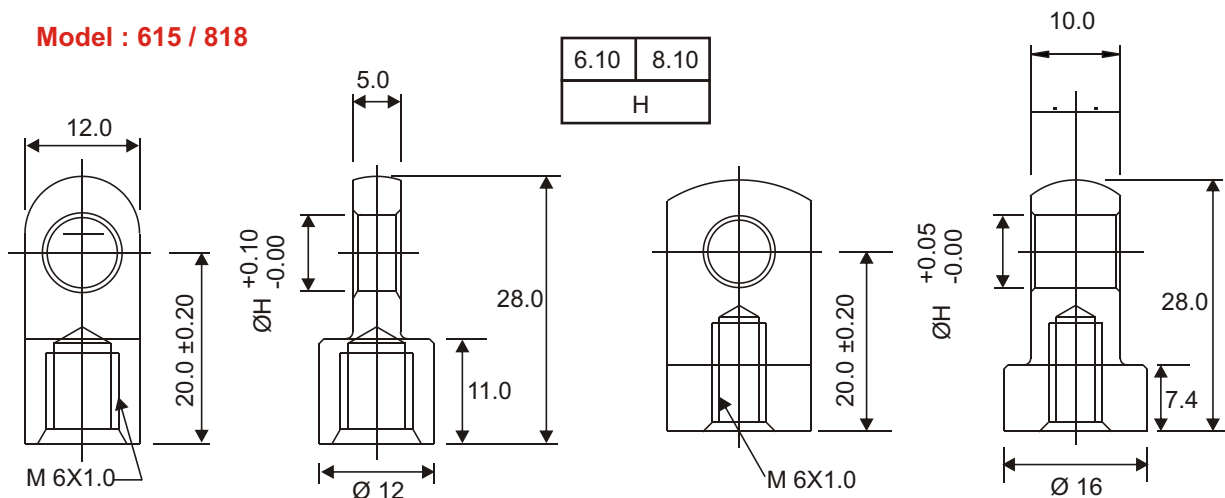


#### B-16



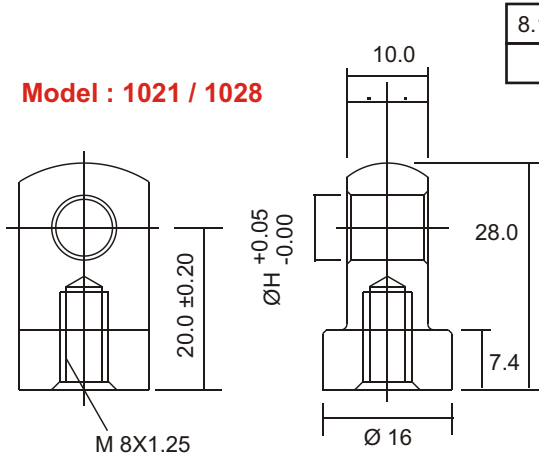
### Threaded Eyelets

#### Model : 615 / 818

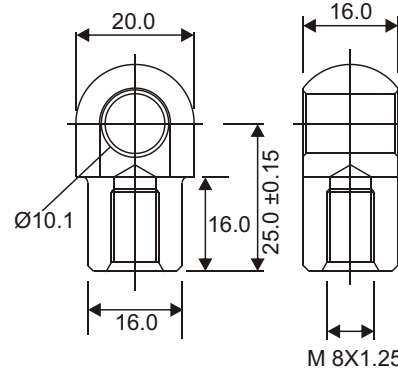


## Threaded Eyelets

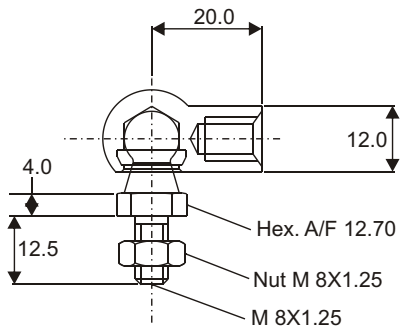
**Model : 1021 / 1028**



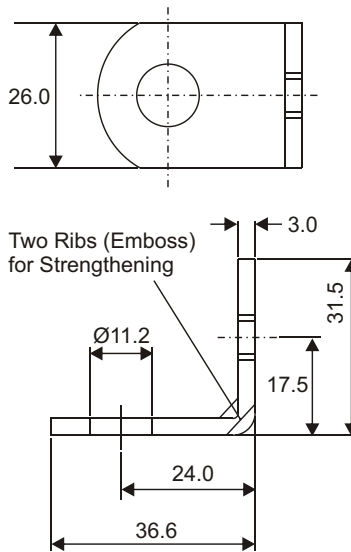
**Model : 1028 / 1428**



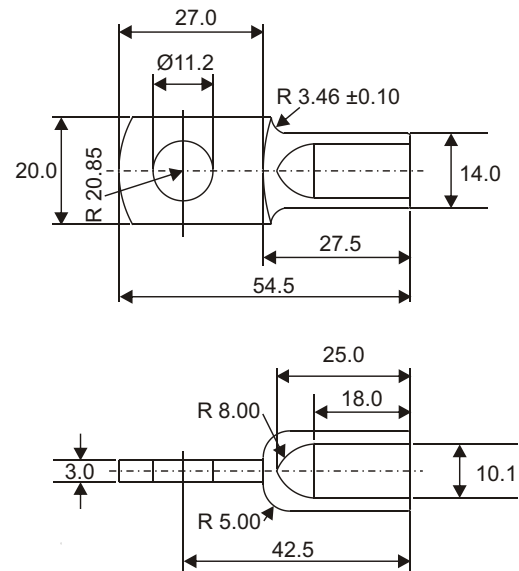
## B-10 Metallic Ball Joint



## L-Bracket



## End Bracket



## Fork

