BELLOWS 4½" x 2 ALUMINIUM


Ø Max
Ø110
3 M6
15
SPRINGRIDE 4"1/2x2
H
15
3 M6
Øe

Ø93
Rp 3/8

ASSEMBLED WITH 2x3 SCREWS Fhc/90 M6x100 LENGTH 12mm.
FASTENING TORQUE 5 Nm

Heights (mm) (H)			Stroke (mm)
Maximum	Minimum	Design	
150	65	100	85
Diameters (mm)			Weight (kg)
Ø MAX	Overall		
125	140		0.95

Rubber Bellow	Features	Part Numbers
Standard	-Rubber Only	SP1457
-40 to 70°C	-Assembled Bellows	**SP2441**
Butyl	-Rubber Only	SP1517
-25 to 90°C	-Assembled Bellows	**SP2474**
Epichlore	-Rubber Only	SP2179
-20 to 115°C	-Assembled Bellows	**SP2588**

VOLUME V (dm³) at 6 bar   LOAD (daN)
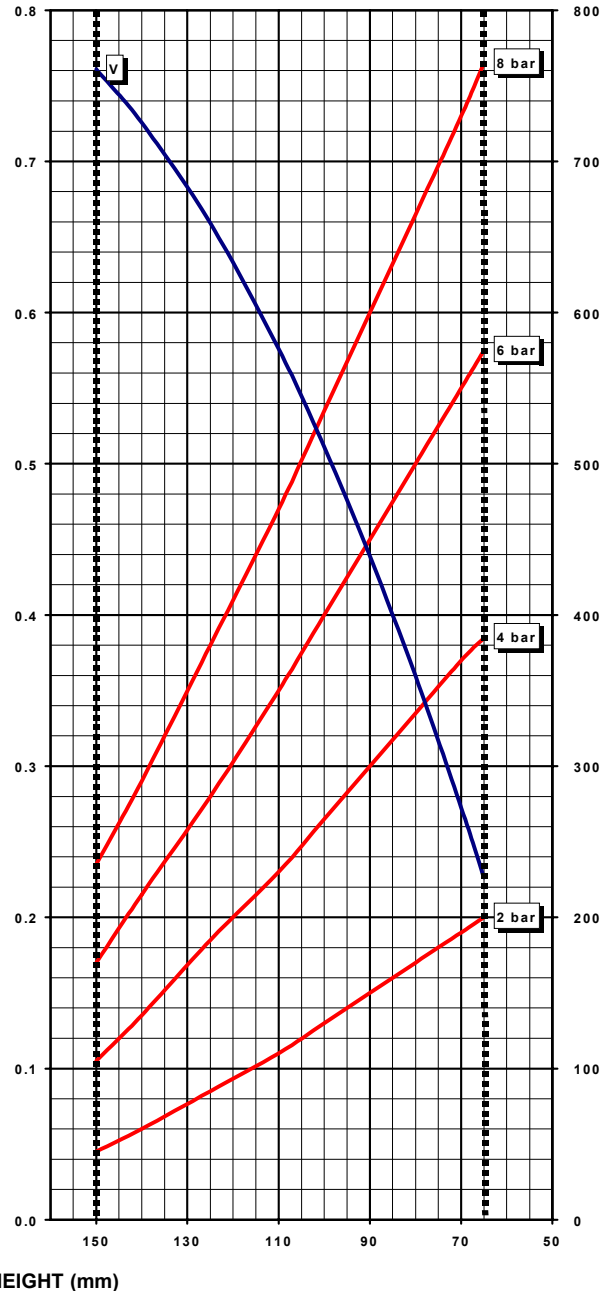
HEIGHT (mm)

- Indicative value of force required to reach minimum height at atmospheric pressure :   24 daN

- Maximum pressure :   8 bar

- The datas presented on this document are liable to evolution and don't constitute a commitment from DUN-LOP AIRSPRINGS (see page 5-7).

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FOR USE AS A PNEUMATIC ACTUATOR

CHARACTERISTICS IN STATIC CONDITION

HEIGHT (mm)	LOAD (daN)			
	Pressure 2 bar	Pressure 4 bar	Pressure 6 bar	Pressure 8 bar
65	200	385	575	765
80	170	335	500	665
90	150	300	450	600
100	130	265	400	535
120	95	200	305	410
140	60	135	215	290
150	45	105	170	235

ANGULAR CAPABILITY

Maximum (α)	For H between	
	H mini (mm)	H maxi (mm)
5°	75	130
10°	80	125
15°	90	120
20°	100	115

OUT OF ALIGNMENT

| Maximum (A) (mm)	For H between	
	H mini (mm)	H maxi (mm)
5	85	135
10	95	130
15	110	125
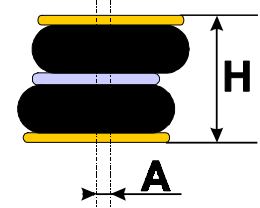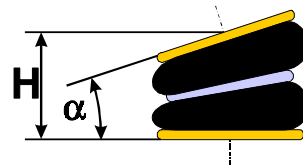
- **Airsprings must not be pressurised unless they are restricted by an outside frame or by a suitable load.**
- **Strokes must be limited by the direct use of bump stops or external stops.**
- **When stacking airsprings, special cares must be taken to ensure the airsprings are guided and fixed.**
- **An Airspring is a single acting air actuator and must not be used below atmospheric pressure.**
- **Please check the over-pressure in case of quick compression.**

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FOR USE AS AN ISOLATOR

DYNAMIC CHARACTERISTICS AT H= 130 mm *				
	Pressure 2 bar	Pressure 4 bar	Pressure 6 bar	Pressure 8 bar
LOAD (daN)	75	170	260	
VOLUME (dm³)	0.628	0.655	0.683	
STIFFNESS (daN/cm)	26.5	49.5	71.4	
NATURAL FREQUENCY (Hz)	2.94	2.71	2.62	
ISOLATION RATE at 10 Hz	90.6%	92.1%	92.6%	

* Recommanded height for better isolation.

- **Isolation rate is given by the formula :**

$$I = 1 - \frac{1}{\left(\dfrac{fe}{fn}\right)^2 - 1}$$
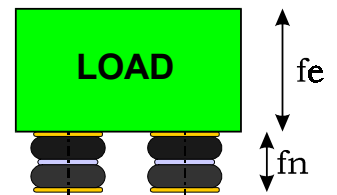
fe = Exciting frequency (Hz)
fn = Airspring natural frequency (Hz)