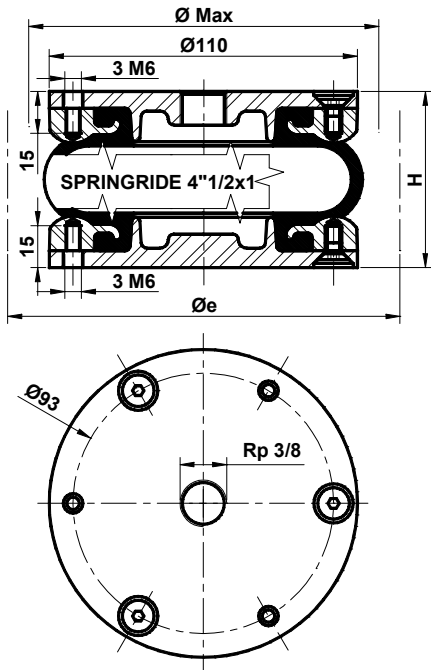


BELLOWS 4 1/2" x 1 ALUMINIUM

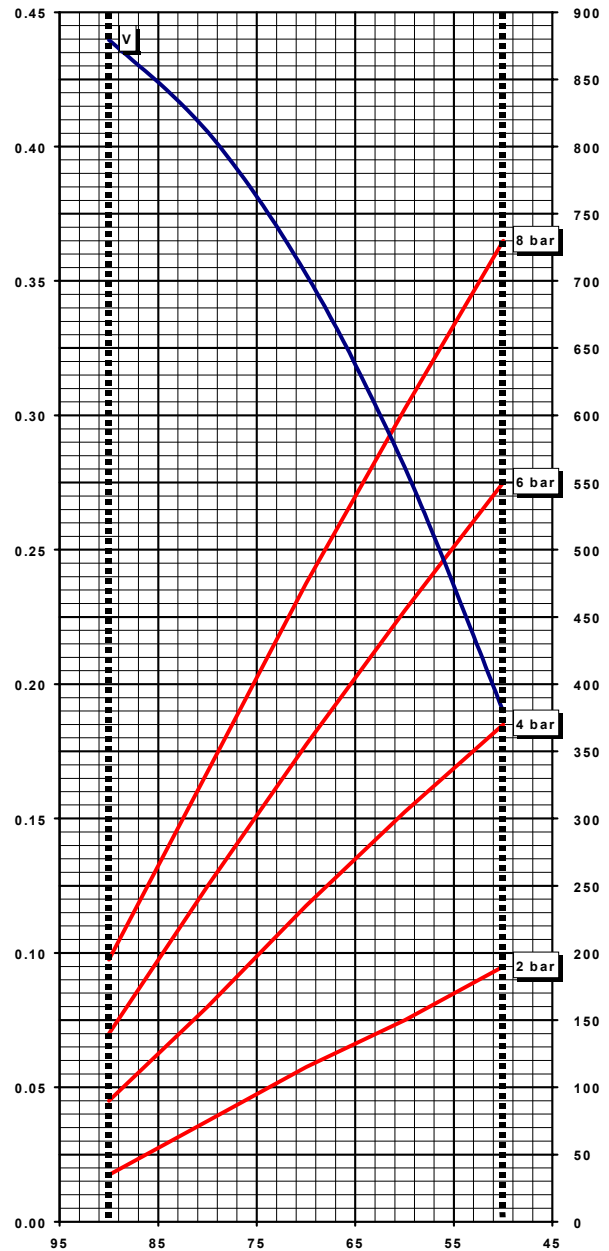


ASSEMBLED WITH 2x3 SCREWS Fhc/90 M6x100 LENGTH 12mm.
FASTENING TORQUE 5 Nm

Heights (mm) (H)			Stroke (mm)
Maximum	Minimum	Design	
90	50	70	40
Diameters (mm)			Weight (kg)
\varnothing MAX	Overall		
125	140		0.75

Rubber Bellow	Features	Part Numbers
Standard	-Rubber Only	SP2008
-40 to 70°C	-Assembled Bellows	SP2334
Butyl	-Rubber Only	SP2009
-25 to 90°C	-Assembled Bellows	SP2372
Epichlore	-Rubber Only	SP2580
-20 to 115°C	-Assembled Bellows	SP2581

VOLUME V (dm³) at 6 bar LOAD (daN)



HEIGHT (mm)

- Indicative value of force required to reach minimum height at atmospheric pressure : 12 daN

- Maximum pressure : 8 bar

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

BELLOWS 4½" x 1 ALUMINIUM

FOR USE AS A PNEUMATIC ACTUATOR

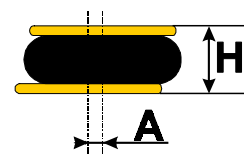
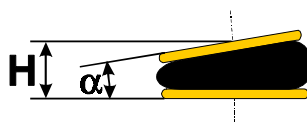
CHARACTERISTICS IN STATIC CONDITION				
HEIGHT (mm)	LOAD (daN)			
	Pressure 2 bar	Pressure 4 bar	Pressure 6 bar	Pressure 8 bar
50	190	370	550	730
60	150	305	455	605
70	115	235	355	475
80	75	160	250	335
90	35	90	140	195

ANGULAR CAPABILITY

Maximum (α)	For H between	
	H mini (mm)	H maxi (mm)
5°	60	75

OUT OF ALIGNMENT

Maximum (A)	For H between	
	H mini (mm)	H maxi (mm)
5	60	80



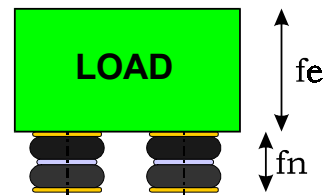
- Airsprings must not be pressurised unless they are restricted by an outside frame or by a suitable load.
- Strokes must be limited by the direct use of bump stops or external stops.
- When stacking airsprings, special cares must be taken to ensure the airsprings are guided and fixed.
- An Airspring is a single acting air actuator and must not be used below atmospheric pressure.
- Please check the over-pressure in case of quick compression.
- The datas presented on this document are liable to evolution and don't constitute a commitment from DUNLOP AIRSPRINGS (see page 5-7).

FOR USE AS AN ISOLATOR

DYNAMIC CHARACTERISTICS AT H= 72 mm *				
	Pressure 2 bar	Pressure 4 bar	Pressure 6 bar	Pressure 8 bar
LOAD (daN)	105	220	335	
VOLUME (dm³)	0.316	0.340	0.365	
STIFFNESS (daN/cm)	74.9	131.8	184.9	
NATURAL FREQUENCY (Hz)	4.21	3.87	3.71	
ISOLATION RATE at 10 Hz	78.4%	82.4%	84.0%	

- Isolation rate is given by the formula :

$$I = 1 - \frac{1}{\left(\frac{f_e}{f_n}\right)^2 - 1}$$



fe = Exciting frequency (Hz)
fn = Airspring natural frequency (Hz)

* Recommended height for better isolation.