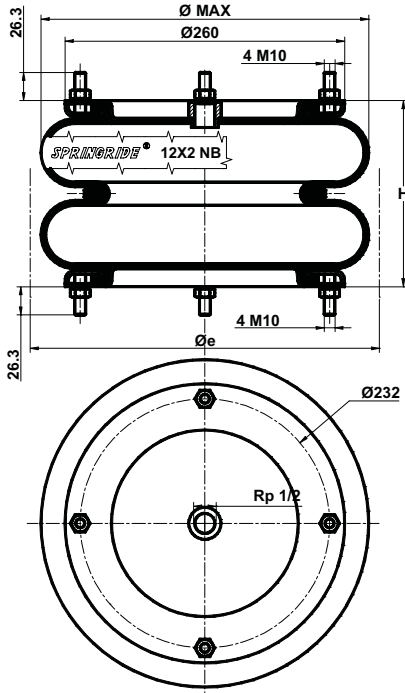


# BELLOWS 12" x 2 NB



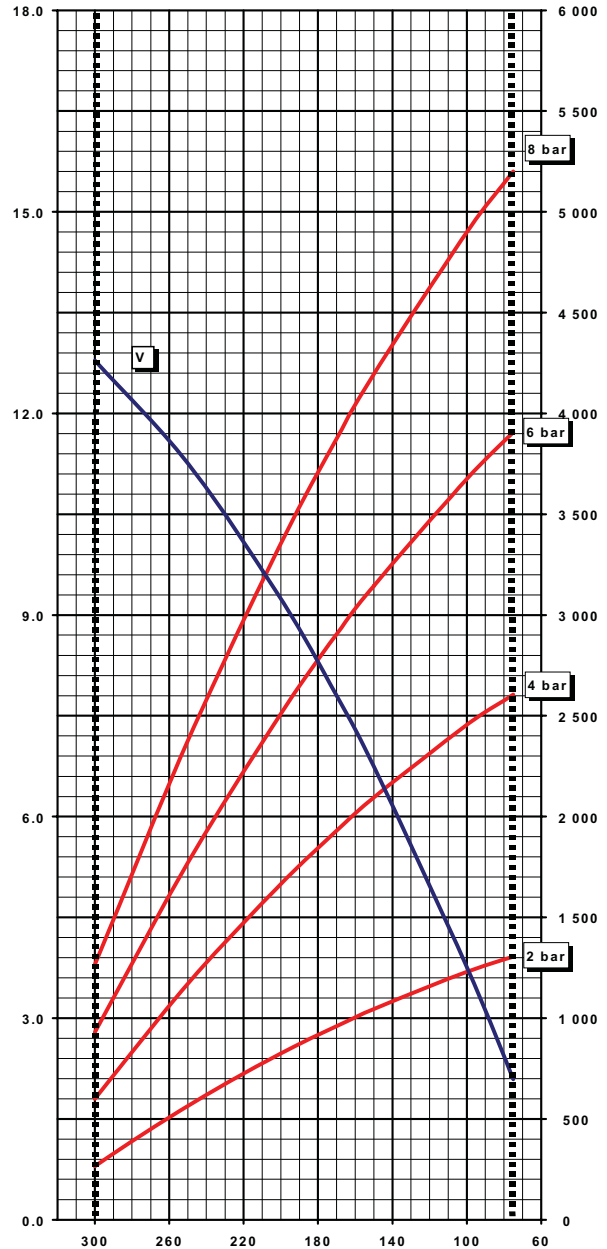
ASSEMBLED WITH 8 NUTS H<sub>u</sub>10 AND 8 WASHERS GROWER WZ10.  
FASTENING TORQUE 25 Nm

| Heights (mm) (H) |         |        | Stroke (mm) |
|------------------|---------|--------|-------------|
| Maximum          | Minimum | Design |             |
| 300              | 75      | 170    | 225         |
| Diameters (mm)   |         |        | Weight (kg) |
| Ø MAX            | Overall |        |             |
| 325              | 350     |        | 6.2         |

| Rubber Bellow    | Features           | Part Numbers |
|------------------|--------------------|--------------|
| <b>Standard</b>  | -Rubber Only       | SP256NB      |
| -40 to 70°C      | -Assembled Bellows | SP1541NB     |
| <b>Epichlore</b> | -Rubber Only       | SP2231NB     |
| -20 to 115°C     | -Assembled Bellows | SP2593NB     |

VOLUME V (dm<sup>3</sup>) at 6 bar

LOAD (daN)



HEIGHT (mm)

- Indicative value of force required to reach minimum height at atmospheric pressure : 10 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 12" x 2 NB**

**FOR USE AS A PNEUMATIC ACTUATOR**

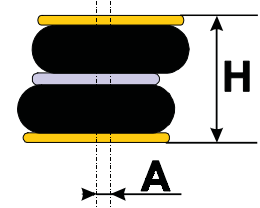
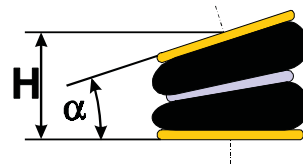
| CHARACTERISTICS IN STATIC CONDITION |                |                |                |                |
|-------------------------------------|----------------|----------------|----------------|----------------|
| HEIGHT (mm)                         | LOAD (daN)     |                |                |                |
|                                     | Pressure 2 bar | Pressure 4 bar | Pressure 6 bar | Pressure 8 bar |
| 75                                  | 1305           | 2605           | 3905           | 5200           |
| 100                                 | 1230           | 2455           | 3675           | 4900           |
| 150                                 | 1045           | 2095           | 3145           | 4195           |
| 170                                 | 960            | 1930           | 2905           | 3875           |
| 200                                 | 825            | 1665           | 2510           | 3355           |
| 250                                 | 565            | 1170           | 1770           | 2375           |
| 300                                 | 265            | 600            | 930            | 1265           |

**ANGULAR CAPABILITY**

| Maximum (α) | For H between |             |
|-------------|---------------|-------------|
|             | H mini (mm)   | H maxi (mm) |
| 10°         | 100           | 255         |
| 15°         | 110           | 245         |
| 20°         | 115           | 235         |
| 25°         | 160           | 225         |

**OUT OF ALIGNMENT**

| Maximum (A) | For H between |             |
|-------------|---------------|-------------|
|             | H mini (mm)   | H maxi (mm) |
| 10          | 105           | 270         |
| 20          | 130           | 260         |
| 30          | 150           | 245         |
| 40          | 175           | 230         |



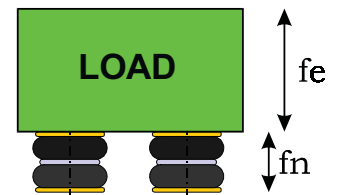
- Airsprings must not be pressurised unless they are restricted by an outside frame or by a suitable load.
- Strokes must be limited by the direct use of bump stops or external stops.
- When stacking airsprings, special cares must be taken to ensure the airsprings are guided and fixed.
- An Airspring 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= 220 mm * |                |                |                |                |
|--|----------------|----------------|----------------|----------------|
|  | Pressure 2 bar | Pressure 4 bar | Pressure 6 bar | Pressure 8 bar |
| LOAD (daN)                             | 725            | 1475           | 2225           |                |
| VOLUME (dm³)                           | 9.43           | 9.77           | 10.11          |                |
| STIFFNESS (daN/cm)                     | 109            | 194            | 277            |                |
| NATURAL FREQUENCY (Hz)                 | 1.93           | 1.81           | 1.76           |                |
| ISOLATION RATE at 10 Hz                | 96.1%          | 96.6%          | 96.8%          |                |

- 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.