

## What Gas Strut do I need?

To be able to select a gas strut for your application there is usually only two things you need to know. **1. THE LENGTH OF THE STRUT (mm)** and **2. HOW MUCH PRESSURE (N)** that it needs to be gassed up to.

### Replacement

If you are replacing an existing gas strut that has worn out or been damaged and has already been designed for the application you will have the required length. Markings on the strut may provide information about the Newton (N) force. With this information we can supply a replacement to suit your needs. If the markings do not indicate the required pressure you can use the information below to help with the calculation.

### New Application

To calculate the gas strut you need for a new application can seem like a difficult task. There are a number of formulas listed on the internet, however most are complicated taking into account a number of variables. Of course these are all relevant but to start with the basics we have some simple guidelines.

To mount gas struts on a door that hangs vertical in the closed position and will open to 90° to the frame (or horizontal) we offer the following:

**1. MEASURE THE DROP OF THE DOOR**, i.e. dimension from the hinge point to the edge of the door where you would lift from. To establish the length of strut required we select a size approximately half the drop length of the door.

**2. CALCULATE THE PRESSURE REQUIRED TO LIFT THE DOOR.** Determine the position on the door that the strut will be mounted. A distance from the hinge point that is less than the stroke of the strut is needed. For example, a 535mm strut has 220mm stroke (see gas strut tables on website). Therefore we need a mounting point on the door 200-210mm from the hinge. (Always factor in a safety component of 5-10% in mm). At this mount point the strut will have the weight resistance which needs to be counter acted by the pressure in the strut.

To calculate this resistance we move the door to 90° and at the designated mount point measure the weight in kg (you can use bathroom scales with a stick or pole between them and the mounting point). Allow the weight of the door through the pole to show a reading on the scales in Kg. For example a reading of 45Kg would equate to a 450N amount of resistance required to support the door. Of course if you are going to use 2 x struts on the door you can halve the amount of pressure in each strut. Also we would add a safety factor of pressure for things like variance in temperature. For the 45kg mentioned we would recommend 2 x 250N struts.

Now we have the two main things required for the selection of a gas strut. Other considerations are the mounting methods available. Brackets can be long, short, straight or angled. These will affect the dynamics of the way the door operates with the struts. However the basic guidelines above are enough to select a strut.

We recommend looking at our Series 8 range of gas struts as they cover most common applications and are stocked in 8 lengths with various pressures.

**For more information or additional help in working with Gas struts contact us on 02 4967 1688 or visit us in-store:**

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Mayfield West, NSW**

