

# Industrial Gas Springs Inc.

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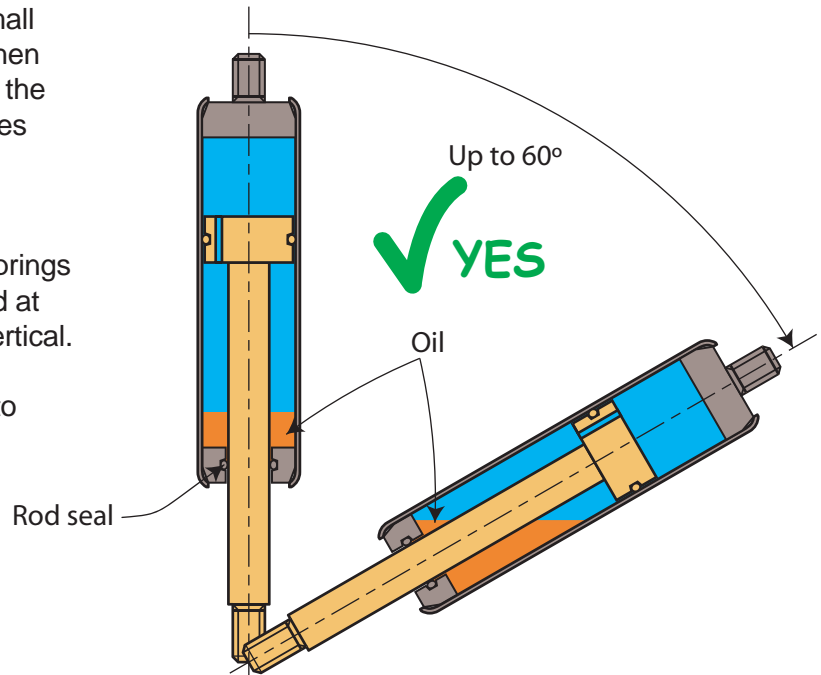
## How do standard gas springs work ?

### Why should springs be used rod down ?

In order to keep the rod seal lubricated, a small amount of oil is used in every gas spring. When used rod down, the oil is kept in contact with the rod seal which improves the sealing properties and ensure the seal itself will never dry.

For this reason, one of the basic recommendations when incorporating gas springs in your design, is to make sure they are used at an angle of less than 60 degrees from the vertical.

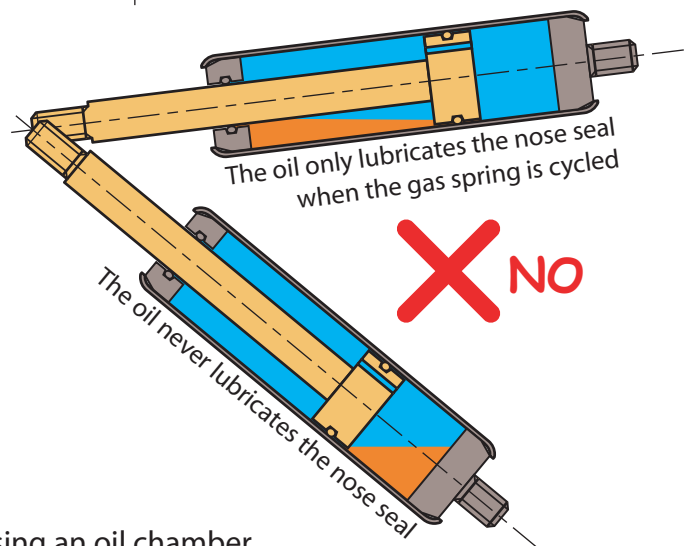
The oil used in the gas spring is also useful to obtain a high damping effect on the last few millimeters of the stroke.



When a standard gas spring is used in an almost horizontal position, the oil lubricates a tiny part of the nose seal. While this may not be a problem on applications which are cycled regularly, when the gas spring is not cycled for a long time, the nose seal dries and allow the gas to escape.

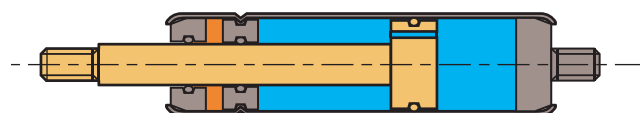
When the gas spring is used with the rod up, the piston is almost never in contact with the oil, which means that regardless of usage, the nose seal will eventually dry and the gas spring loose all its force.

Also, in this position the gas spring may provide damping at the beginning of the extension or at the end of the compression.



Using an oil chamber

When there is no alternative solution and the gas spring can only be used either rod up or near horizontal, we specify an oil chamber or a fully damped gas spring.



While these solutions are not as economical as standard gas springs, they will ensure your gas springs will last almost as long as standard gas springs used with the rod facing down.

Fulled damped spring using a floating piston

