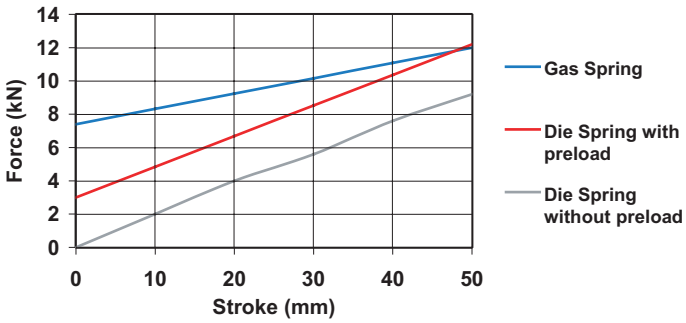
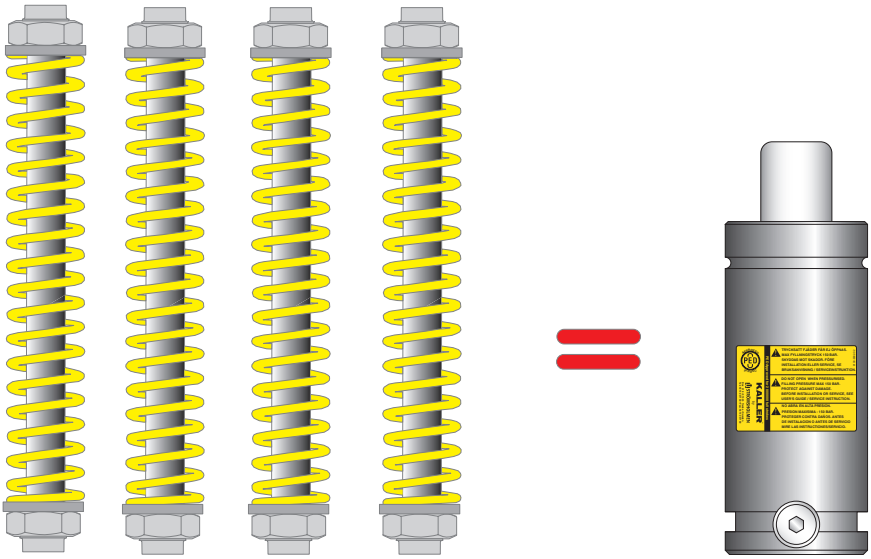
KALLER®

World Leader in Gas Powered Products

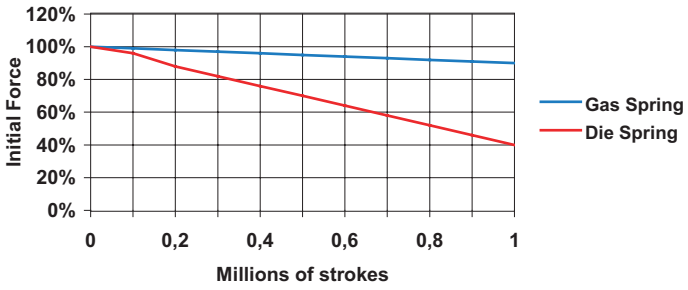
APPROVED PED 97/23/EC

Gas Spring vs Die Spring
Force Comparison Example





Gas Spring vs Die Spring
Service Lifetime Example



Nitrogen Gas Spring:

+ Extremely Strong and Compact
+ Fully Adjustable Initial Forces
+ Long Serviceable Lifetime

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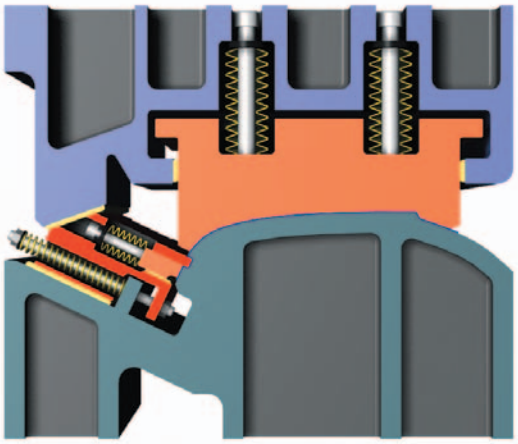
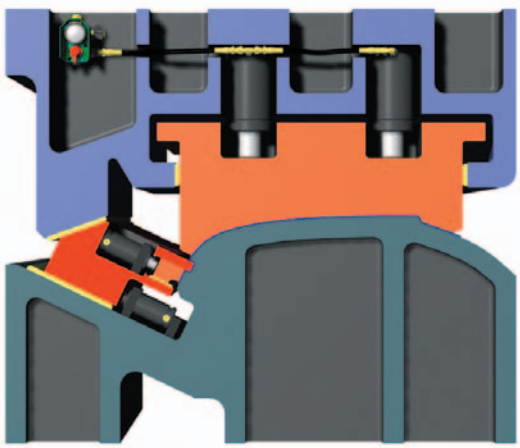
What are the benefits of using Nitrogen Gas Springs?

- Gas Springs provide much greater nominal forces than ordinary Die Springs.
- Gas Springs have much longer stroke lengths than ordinary Die Springs, the natural choice when deep draw forming.
- Gas Springs do not need to be preloaded like ordinary Die Springs.
- Gas Springs have a much longer service life than ordinary Die Springs.
- Gas Springs have an adjustable nominal force, unlike ordinary Die Springs.
- Gas Springs will not break and damage your tooling like ordinary Die Springs.
- Gas Springs can be hosed together to provide an even force distribution, unlike ordinary Die Springs.
- Gas Springs can be serviced and reused, unlike ordinary Die Springs.
- Gas Springs are self-guided, unlike ordinary Die Springs.



With Coil Springs & Spring Washer:

- **High force increase, larger space needed**
- **Non-adjustable force**
- **Secondary tool damage due to spring failure**
- **Pre-loading required**



With Gas Spring incl. Hose System:

+ **Low force increase, less space needed**
+ **Easy adjustable force by nitrogen pressure**
+ **No secondary tool damage due to spring failure**
+ **High initial force as standard**

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