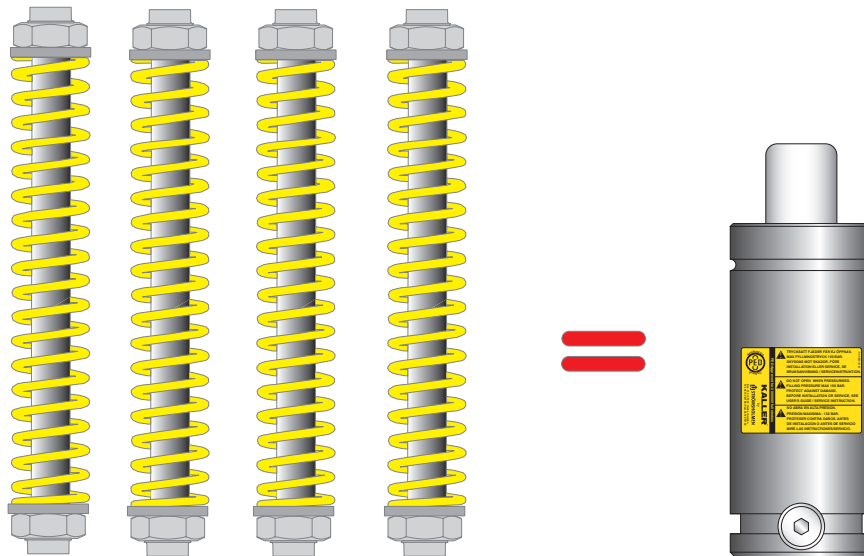
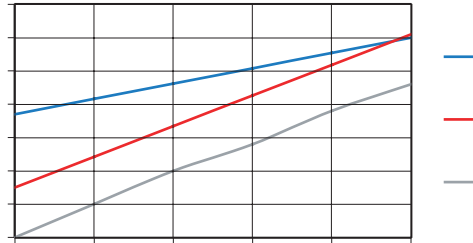
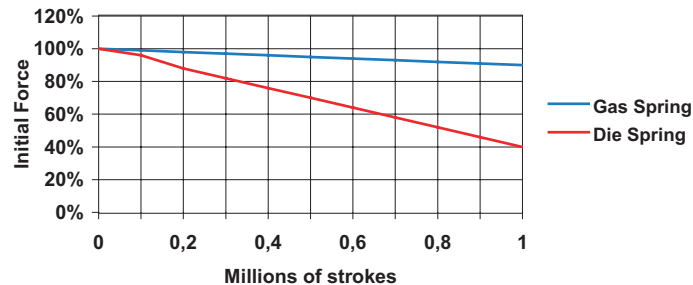


KALLER®

World Leader in Gas Powered Products



**Gas Spring vs Die Spring
Service Lifetime Example**

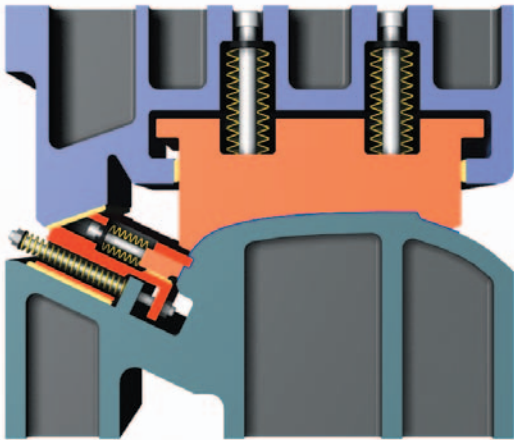


Nitrogen Gas Spring:

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

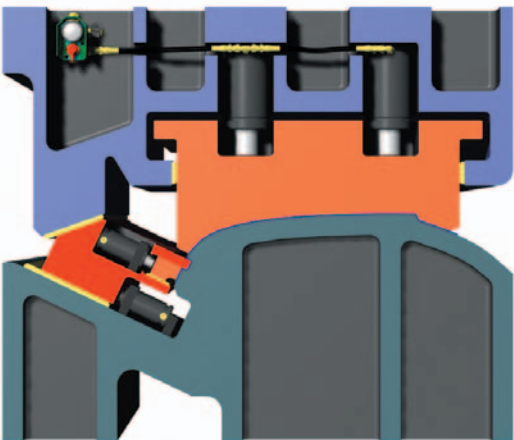
What are the benefits of using Nitrogen Gas Springs?

- 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