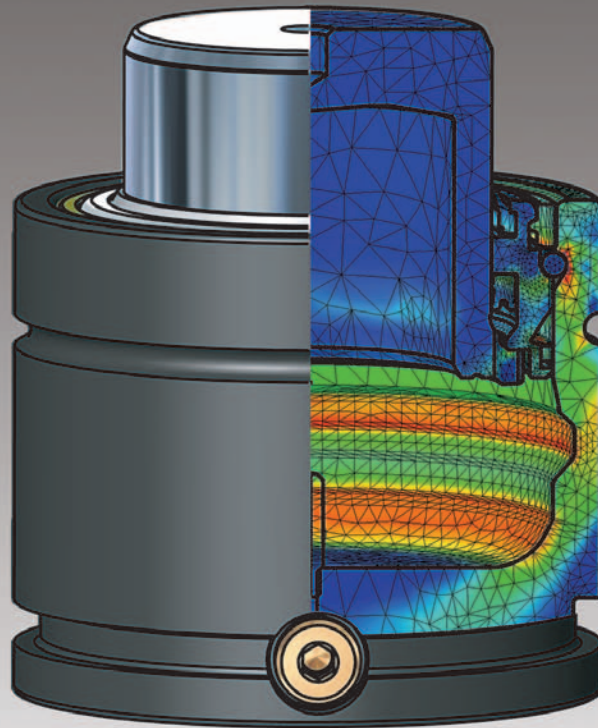


# KALLER<sup>®</sup>



Unique  
Safety  
Features

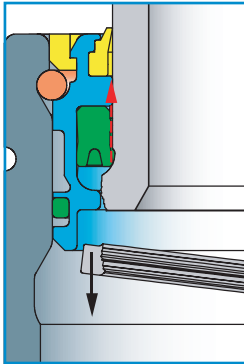


## The Safer Choice

At KALLER, safety has always been a top priority. Below is what we do to help you provide a safer working environment.

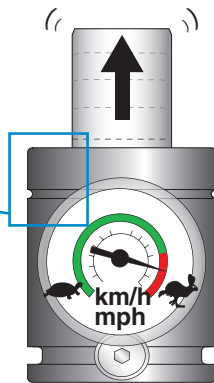
### KALLER Safety Features

#### Excessive Return Speed Protection System

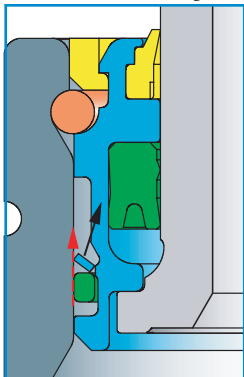


Designed for controlled gas venting through piston rods with integral safety stops and specially designed guides.

#### Excessive Return Speed

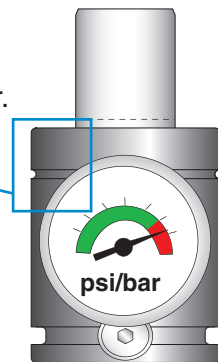


#### Over-Pressure Protection System

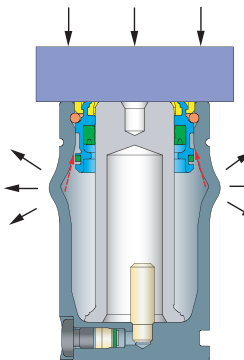


KALLER Over-Pressure Protection System is designed to vent excessive gas pressure in a controlled manner.

#### Over-Pressure Condition

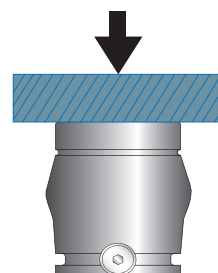


#### Over-Stroke Protection System



KALLER has developed a unique System. The cylinder wall is designed to deform in a predefined way, venting the internal gas pressure in a controlled manner.

#### Over-Stroke Condition



Related Patents:  
US 6,086,059, EP 1 053 410, SE 520 224, EP 1 366 308

### Advice to Gas Spring Buyers

Safety should always be a top priority. Therefore, we believe gas springs for metal forming tools should (unless the maximum allowable pressure PS is less than or equal to 0.5 bar) be ordered with the following **safety requirements**:

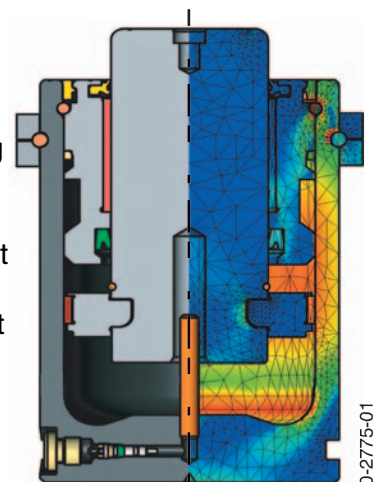
- 1) **Piston rods with an integral safety stop.**
- 2) **Designed, produced and tested according to Pressure Equipment Directive, PED 97/23/EC for a minimum of 2'000'000 full cycles\*:**
  - **at highest allowed charging pressure**
  - **at highest allowed running temperature**
  - **for all specified mounting methods\*\***

**\*\*Including top mount, Type C Flange Mounts, according to ISO 11901-2**

Please Note: Unless the maximum pressure is less than or equal to 0.5 bar, all gas springs produced, sold, installed and/or used within the EU should be designed, produced and tested in accordance with PED 97/23/EC.

### Pressure Vessel Approval

KALLER Gas Springs are designed, produced and tested according to PED 97/23/EC for 2'000'000 full cycles\* at the highest allowed charging pressure, the highest allowed running temperature, and for all specified mounting methods.



\*Unless other value stated on the spring.

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