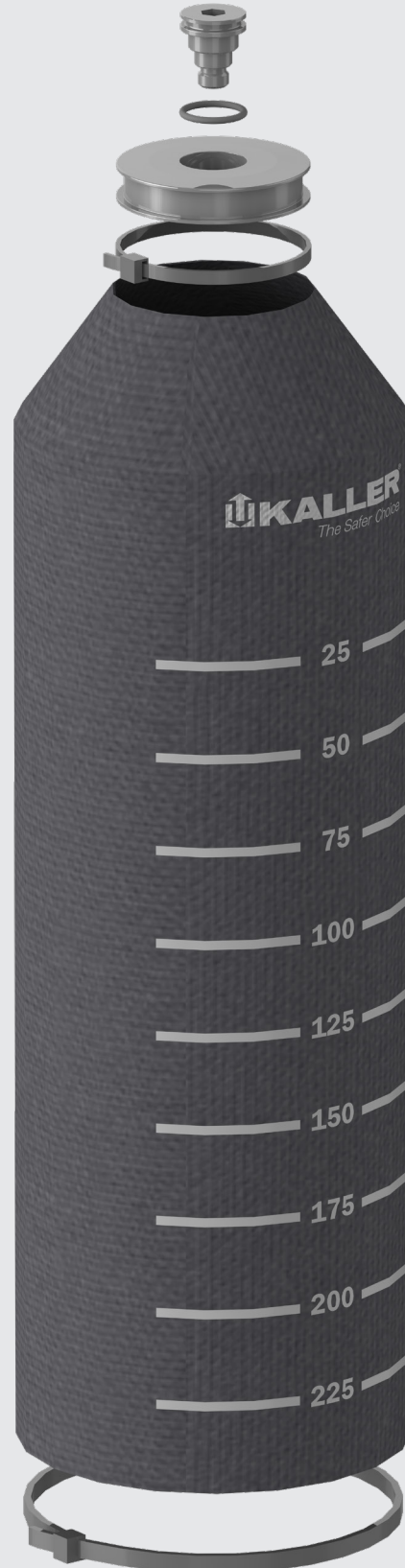


# Heavy Duty Protection HDP series



# Heavy Duty Protection

Although gas springs are designed primarily for sheet metal forming, over the years they have been installed in other applications as well. In many of these applications the environment is very dusty – resulting in lower performance and a shorter lifespan of the gas springs. Fortunately, there is a simple solution: the KALLER Heavy Duty Protection covers.

**Heavy Duty Protection** covers are designed to significantly prolong the lifetime of the gas springs – regardless of how contaminated the application environment is.

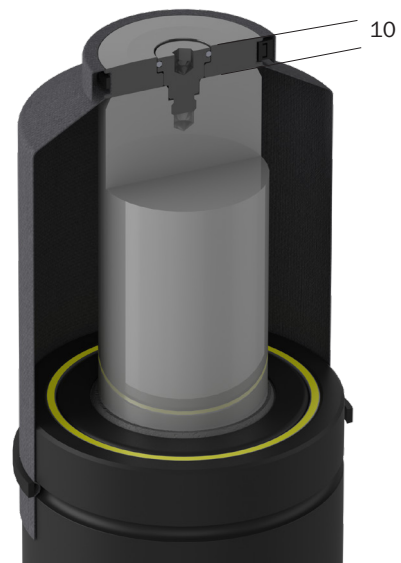


## FEATURES AND BENEFITS

- With a compact and inventive design, based on our experience from existing applications, KALLER HDP doubles the lifetime of the gas spring
- KALLER HDP is the first piston rod cover in the world without open breathing holes
- HDP fits all standard gas springs, without any modification
- HDP fits all mounting options
- HDP adds only 10 mm additional length
- HDP is available for gas springs with threaded piston rod and tube sizes Ø 95 mm, Ø 120 mm and Ø 150 mm

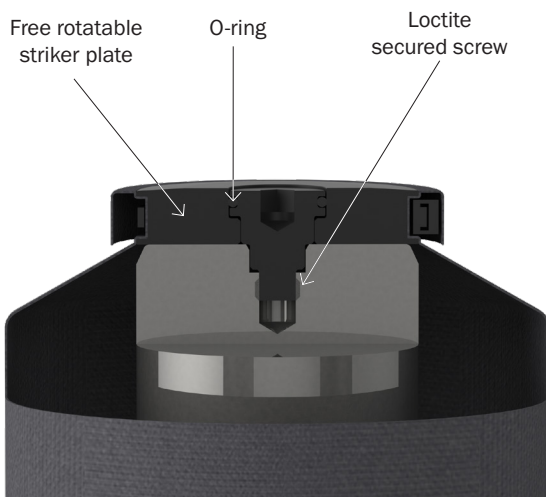
## TECHNICAL PERFORMANCE

Operating temperature 0 – 80 C°  
Temperature resistance -35 – 200 C°  
SPM according to the gas spring



## ASSEMBLY

The HDP cover is attached to the piston rod by using the threaded hole on the piston rod. Please follow the steps described in the user guide when assembling, and remember to use Loctite to secure the joint. (We recommend using Loctite 2700, which can be ordered from [www.loctite.com](http://www.loctite.com))



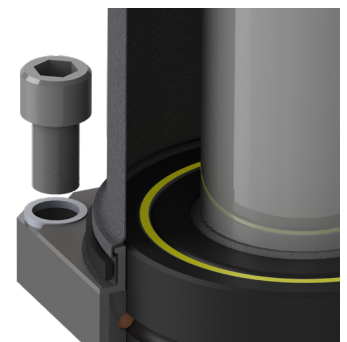
The HDP cover can be assembled to the gas spring directly, using a cable tie to tighten the fabric against the tube's C-groove, or to the flange adapter.

For attaching a nylon cable tie, we recommended using a hand gun. It can be ordered locally from [www.tnb.com](http://www.tnb.com) or from KALLER:



**Order No. 506441**

The flange adapter must be assembled at the top of the flange with the flange assembly screws. Once the adapter is in place, the HDP cover is attached with the supplied cable tie, in a similar way as for the tube.



## MODELS AND DIMENSIONS

As of today, our HDP Heavy Duty Protection fabric covers are produced to fit a maximum stroke length of 250 mm for the tube sizes Ø 95 mm, Ø 120 mm and Ø 150 mm, and is available for the following models.

### Order numbers for HDP fabric cover. Tube size Ø 95 mm.

Stroke length	Gas spring models	Order No:
226-250	TU 3000 KF2 / KF2-A 1500 LCF 3000	HDP-1-95
201-225		HDP-1-95-225
176-200		HDP-1-95-200
151-175		HDP-1-95-175
126-150		HDP-1-95-150
101-125		HDP-1-95-125
76-100		HDP-1-95-100
51-75		HDP-1-95-075
26-50		HDP-1-95-050
10-25		HDP-1-95-025

Stroke length	Gas spring models	Order No:
226-250	TX 4200 X 4200 XG 4200	HDP-2-95
201-225		HDP-2-95-225
176-200		HDP-2-95-200
151-175		HDP-2-95-175
126-150		HDP-2-95-150
101-125		HDP-2-95-125
76-100		HDP-2-95-100
51-75		HDP-2-95-075
26-50		HDP-2-95-050
10-25		HDP-2-95-025

### Order numbers for HDP fabric cover. Tube size Ø 120 mm.

Stroke length	Gas spring models	Order No:
226-250	TU 5000 KF2 / KF2-A 3000 LCF 5000	HDP-1-120
201-225		HDP-1-120-225
176-200		HDP-1-120-200
151-175		HDP-1-120-175
126-150		HDP-1-120-150
101-125		HDP-1-120-125
76-100		HDP-1-120-100
51-75		HDP-1-120-075
26-50		HDP-1-120-050
10-25		HDP-1-120-025

Stroke length	Gas spring models	Order No:
226-250	TX 6600 X 6600 XG 6600	HDP-2-120
201-225		HDP-2-120-225
176-200		HDP-2-120-200
151-175		HDP-2-120-175
126-150		HDP-2-120-150
101-125		HDP-2-120-125
76-100		HDP-2-120-100
51-75		HDP-2-120-075
26-50		HDP-2-120-050
10-25		HDP-2-120-025

### Order numbers for HDP fabric cover. Tube size Ø 150 mm.

Stroke length	Gas spring models	Order No:
226-250	TU 7500 LCF 5000	HDP-1-150
201-225		HDP-1-150-225
176-200		HDP-1-150-200
151-175		HDP-1-150-175
126-150		HDP-1-150-150
101-125		HDP-1-150-125
76-100		HDP-1-150-100
51-75		HDP-1-150-075
26-50		HDP-1-150-050
10-25		HDP-1-150-025

Stroke length	Gas spring models	Order No:
226-250	TX 9500 X 9500	HDP-2-150
201-225		HDP-2-150-225
176-200		HDP-2-150-200
151-175		HDP-2-150-175
126-150		HDP-2-150-150
101-125		HDP-2-150-125
76-100		HDP-2-150-100
51-75		HDP-2-150-075
26-50		HDP-2-150-050
10-25		HDP-2-150-025

Stroke length	Gas spring models	Order No:
226-250	KF2 / KF2-A 5000	HDP-3-150
201-225		HDP-3-150-225
176-200		HDP-3-150-200
151-175		HDP-3-150-175
126-150		HDP-3-150-150
101-125		HDP-3-150-125
76-100		HDP-3-150-100
51-75		HDP-3-150-075
26-50		HDP-3-150-050
10-25		HDP-3-150-025

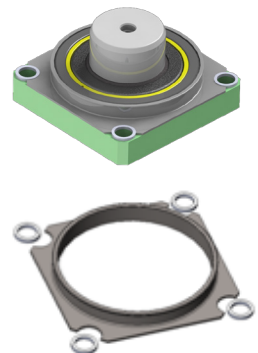
## HOW TO ORDER

As an example, to order a customized HDP for KF2-A 1500-80-85, order the HDP-1-95-100.

HDP-1      -95      -100  
Model      Tube size      Max. stroke length

If the gas spring is flange assembled, an additional item – called a flange adapter HDPF – must be used. The flange adapter must be assembled at the top of the flange with the flange assembly screws. Make sure to use the right flange adapter model for the tube size, according to the table below.

Tube size	Order No:
Ø 95	HDPF-95
Ø 120	HDPF-120
Ø 150	HDPF-150



## WELCOME TO KALLER. THE SAFER CHOICE.

Welcome to KALLER, the world-leading brand for gas springs and gas hydraulic systems for stamping dies – as well as gas hydraulic suspension systems for heavy duty off-road vehicles.

With innovation as our driving force, we have developed and refined the nitrogen gas spring technology since 1983.

Constantly solving problems and increasing our customers' productivity. When providing innovative solutions for the safer working environment, we do so with Training, Safety and Reliability as our top priority. That's why KALLER is not only the world-leading gas spring provider, it's why we're The Safer Choice.



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Email info@kaller.com

[kaller.com](http://kaller.com)



### **KALLER Training Program**

**TRAINING.** Without doubt the KALLER Training Program is the best and most creative way to fully understand and appreciate the importance of the safety and reliability features.



### **KALLER Safety App**

**SAFETY.** Fake or KALLER original? With the KALLER Safety App you can identify and verify your specific KALLER gas springs.



### **Overstroke Protection System**

**SAFETY.** When a gas spring is overstroked, this helps reduce the risk of tool damage or injury.



### **Overload Protection System**

**SAFETY.** Jammed cam or tool part being forced by gas springs? This will help reducing such risks.



### **Overpressure Protection System**

**SAFETY.** Vents the spring if the internal gas pressure exceeds the maximum allowable limit to prevent accidents.



### **PED approved for 2 million strokes**

**RELIABILITY.** Our 2 million stroke PED approval ensures safer component cycle life.



### **Flex Guide™ System**

**RELIABILITY.** Prolongs service life, allows more strokes per minute, and offers greater tolerance to lateral tool movements.



### **Dual Seal™ Link Systems**

**RELIABILITY.** Fewer production interruptions due to leakage caused by vibration. Simplified installation thanks to the non-rotation feature.