

# Heavy Duty Protection HDP series



# Heavy Duty Protection

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

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.



## FEATURES AND BENEFITS

- Significantly increases the lifetime of the gas spring in highly contaminated environments
- The first piston rod cover in the world without open breathing holes
- Fits most standard gas springs (see tables below)
- Fits most mounting options
- Adds 10 mm additional length
- Available for gas springs with threaded piston rod and cylinder sizes Ø 45 mm, Ø 50 mm, Ø 63 mm, Ø 75 mm, Ø 95 mm, Ø 120 mm, Ø 150 mm, and Ø 195 mm.



## TECHNICAL PERFORMANCE

Operating temperature 0 – 80 C°  
 Temperature resistance –35 – 150 C°  
 SPM according to the gas spring

## MODELS AND DIMENSIONS

The HDP Heavy Duty Protection fabric covers are produced to fit a stroke length between 10 - 250 mm, and are available for the gas spring models found in the tables below.

**\*Note:** If the gas spring is flange assembled, an additional item called a flange adapter HDPF must be used. See details on the next page.

## HOW TO ORDER

To identify the correct HDP model and Order Number (Order No:) for your gas spring you can refer the tables below. As an example, to order a HDP for KF2-A 1500-80-85, order the HDP-1-95.

HDP-1      -95  
 Model      Cylinder size

### Cylinder size Ø 45 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	X 750 TX 750 XG 750 XF 750	HDP-1-45

### Cylinder size Ø 50 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	TU 750 LCF 750	HDP-1-50
Stroke length (mm)	For gas spring models	Order No:
10-250	X 1000 TX 1000 XG 1000 XF 1000	HDP-2-50

### Cylinder size Ø 63 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	X 1500 TX 1500 XG 1500 XF 1500	HDP-1-63

### Cylinder size Ø 75 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	TU 1500 LCF 1500	HDP-1-75
Stroke length (mm)	For gas spring models	Order No:
10-250	TX 2400	HDP-2-75
Stroke length (mm)	For gas spring models	Order No:
10-250	X 2400 XG 2400 XF 2400	HDP-3-75

### Cylinder size Ø 95 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	TU 3000 LCF 3000 KF2/KF2-A 1500 KP 1500	HDP-1-95
Stroke length (mm)	For gas spring models	Order No:
10-250	X 4200 TX 4200 XG 4200	HDP-2-95

### Cylinder size Ø 120 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	TU 5000 LCF 5000 KF2/ KF2-A 3000 KP 3000	HDP-1-120
Stroke length (mm)	For gas spring models	Order No:
10-250	X 6600 TX 6600 XG 6600	HDP-2-120

### Cylinder size Ø 150 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	TU 7500 LCF 7500	HDP-1-150
Stroke length (mm)	For gas spring models	Order No:
10-250	X 9500 TX 9500	HDP-2-150
Stroke length (mm)	For gas spring models	Order No:
10-250	KF2 / KF2-A 5000 KP 5000	HDP-3-150

### Cylinder size Ø 195 mm

Stroke length (mm)	For gas spring models	Order No:
10-250	TU 10000 KF2/ KF2-A 7500	HDP-1-195
Stroke length (mm)	For gas spring models	Order No:
10-250	X 20000 TX 20000	HDP-2-195

### FLANGE ADAPTER

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 cylinder size, according to the table below.

**\*Note:** The Flange Adapter can only be combined with the flanges in the table below.



Cylinder size (mm)	For Flange	Order No:
Ø 45	FCS 500	HDPF-45
Ø 50	FCS 750	HDPF-50
Ø 63	<b>FCSX 1500</b>	HDPF-63
Ø 75	FCS 1500	HDPF-75
Ø 95	FCS 3000	HDPF-95
Ø 120	FCS 5000	HDPF-120
Ø 150	FCS 7500	HDPF-150
Ø 195	FCS 10000	HDPF-195

### ACCESSORIES

If you require, you can order a cable tie tightening tool for metal cable ties as an accessory.

Item	Order No:
Cable Tie Tightening Tool	1031124

### SPARE PARTS

The items listed in the table below are available as spare parts for the HDP and can be ordered individually if needed. For more details on identifying the correct spare part for you, please refer the *HDP User Manual* found on KALLER.com.

Spare Part	Order No:
M6 Shoulder Screw	1034847
M8 Short Shoulder Screw	1034848
M8 Long Shoulder Screw	1034849
M16 Screw	1034850
Metal Cable ties (10 pieces)	1032103

### ASSEMBLY INSTRUCTIONS

For full assembly instructions please refer to our *HDP User Manual* which can be found on our website at [www.kaller.com](http://www.kaller.com).

## WELCOME TO KALLER®, THE SAFER CHOICE.

KALLER® is 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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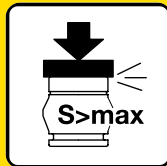
### KALLER® Training Program

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.



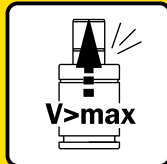
### KALLER® Safety App

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.