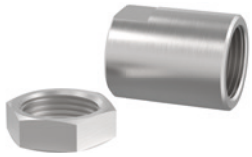
# POWERSTOP INDUSTRIAL SHOCK ABSORBER
## ACCESSORIES

### STOP SLEEVE | PAH



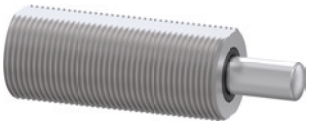
**Available for M4-M36**
It is advisable to use a stop sleeve for optimal damping stroke adjustment. In this process, the end stop and the damping stroke can be adjusted individually by screwing the sleeve on the shock absorber external thread using the additional lock nut.
It is advisable to start by setting the ideal utilization of the damper by reducing the damping stroke. The end stop can subsequently be set using the position of the damper in the mounting piece.
The stop sleeve works either with or without a steel and plastic head, but not in conjunction with the bellow. The stop sleeve, including the additional lock nut contained in the scope of delivery, is made of stainless steel.
**Certifications: LABS / REACH / RoHS**

### SENSOR STOP SLEEVE | PSH



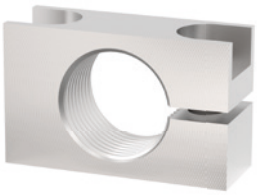
**Available for M8-M33 (with the exception of M16, M22 and M27)**
In addition to the stop sleeve features, the sensor stop sleeve features inductive sensor with highly compact integration for sensing the end position of the set damping stroke. Using the sensor stop sleeve requires the use of an industrial shock absorber with a steel or plastic head (excluding the bellow).
Inductive sensor, PNP (NC), 2 m PUR cable, IP67 degree of protection.
See separate data sheet for additional information.
**Certifications: LABS / REACH / RoHS**

### SIDE LOAD ADAPTER | PBV



**Available for M8-M36 for normal and long stroke**
If the industrial shock absorber is actuated with a higher angle of impact than the permissible misalignment of 2°, then a side load adapter must be provided. This increases the permissible angle of impact to 30°, which is especially advantageous for rotative applications.
The side load adapter can only be used in combination with an industrial shock absorber without a head. Here, the damper can alternatively be screwed on using the external thread of the side load adapter.
Consisting of a piston rod and housing made of stainless steel, the side load adapter is available in two protection configurations.
**Protection: no protection**
in a clean environment
**Protection: Wiper**
Against liquids and oil
**Protection: Felt ring**
Against dust and chips
**Certifications: LABS / REACH / RoHS**

## CLAMPING FLANGE SCREWED ON ORTHOGONALLY | PKS



**Available for M8-M36**

You can use a clamping flange made of nickel-plated steel to connect the shock absorber to the structure more easily. After being fully screwed in, the shock absorber is clamped tightly to the clamping flange by screwing at a right angle to the shock absorber and fastened to the structure, which makes the locknut unnecessary.

**Certifications: LABS / REACH / RoHS**

## CLAMPING FLANGE SCREWED PARALLEL | PKP

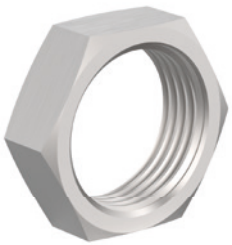


**Available for M8-M36**

You can use a clamping flange made of nickel-plated steel to connect the shock absorber to the structure more easily. After being fully screwed in, the shock absorber is clamped tightly to the clamping flange by screwing in the screwing direction of the shock absorber and fastened to the structure, which makes the locknut unnecessary.

**Certifications: LABS / REACH / RoHS**

## LOCKNUT | PVM



**Available for M4-M36**

A nut made of stainless steel is supplied for each industrial shock absorber. When installing in a drilled hole with no threading, an additional nut for attachment on both sides can be ordered at the same time.

**Certifications: LABS / REACH / RoHS**

## PRESSURE CHAMBER SEAL | PDD



**Available for M4-M36**

If the industrial shock absorber is being used within a pressure chamber, for instance in a pneumatic cylinder or a swivel unit, then a pressure chamber seal is required for sealing the outer contour of the shock absorber. For ideal sealing, the seal must make full-surface contact on both sides. The seal itself is made of NBR, which is applied to corrosion-protected galvanised steel for stabilization purposes.

**Certifications: LABS / REACH / RoHS**

# INDUSTRIAL SHOCK ABSORBERS POWERSTOP
## THREAD M45X1.5

## ▶ SERIES

PowerStop®

**HIGH ENERGY**



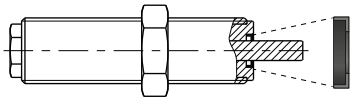
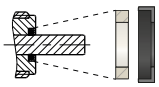
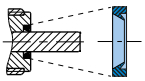
The powerful

- **Material** Stainless steel
- **Permitted temperature range** -10 ... +70 [°C]
- **Angle of Impact max.** 2 [°]
- **Lock nut tightening torque**
  - **High Energy** 100 [Nm]
- **Organic oil (biodegradable)** HEES
- **H1-certified** Yes
- **Certifications** LABS / REACH / RoHS
- **Max. absolute pressure**
  - **High Energy** 10 [bar]

## ▶ TECHNICAL DATA

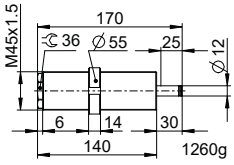
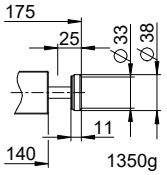
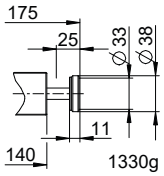
| Design | Series | Thread | Stroke variant | Stroke max. [mm] | Hardness degree | Impact velocity min. [m/s] | Impact velocity max. [m/s] | Energy absorption max. Continuous operation per stroke [J] | Energy absorption max. Continuous operation per hour [J/h] | Energy absorption max. Emergency stop operation per stroke [J] | Protection | Reset Force min. [N] | Reset Force max. [N] | Reset Time max. [s] | Head | Integrated Fix stop | Version |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HIGH ENERGY | P | HE | 45X15 | N | 25 | H-M-S | 0,2 | 1,2 | 650 | 170.000 | 1600 | D-F-A | 30 | 60 | 0,4 | E-S-K | - | -A |
| | | | | | | M | 0,8 | 2,2 | 650 | 170.000 | 1500 | | 30 | 60 | 0,4 | | - | |
| | | | | | | S | 1,8 | 3,5 | 600 | 150.000 | 1400 | | 30 | 60 | 0,4 | | - | |
| HIGH ENERGY | P | HE | 45X15 | L | 50 | H-M-S | 0,2 | 1,2 | 1200 | 220.00 | 2800 | D-F-A | 50 | 130 | 0,8 | E-S-K | - | -A |
| | | | | | | M | 0,8 | 2,2 | 1200 | 220.000 | 2800 | | 50 | 130 | 0,8 | | - | |
| | | | | | | S | 1,8 | 3,5 | 1000 | 200.000 | 2600 | | 50 | 130 | 0,8 | | - | |

## ▶ PROTECTION

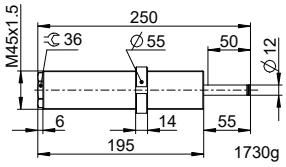
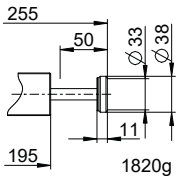
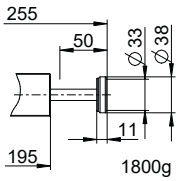
| no protection | Felt ring | Wiper (NBR) |
|---|---|---|
| D -A | F -A | A -A |
|  |  |  |
| in a clean environment | against dust, chips, ... | against liquid, oil, ... |

## ▶ TECHNICAL DRAWINGS

HIGH ENERGY

| Long piston rod no head | with steel head | with plastic head |
|---|---|---|
| N E -A | N S -A | N K -A |
|  |  |  |

HIGH ENERGY

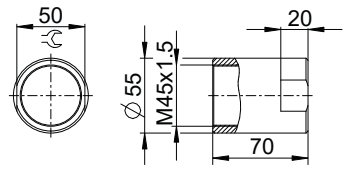
| Long piston rod no head | with steel head | with plastic head |
|---|---|---|
| L E -A | L S -A | L K -A |
|  |  |  |

# INDUSTRIAL SHOCK ABSORBERS POWERSTOP
## THREAD M45X1.5

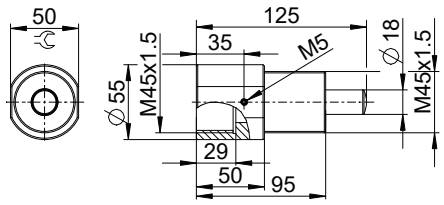
### ► ACCESSORIES

| Pos. | Order no. | Accessories | Remarks |
|---|---|---|---|
| 1 | **PAH45X15-A** | Stop sleeve | Including 1x PVM45X15-A. Industrial shock absorber with bellow excluded. |
| 2 | **PBV45X15ND-A** | Side load adapter standard stroke<br>Protection: no protection | Impact angle max. 30°. Can only be used in combination with industrial shock absorber without protection and without the Short piston rod no head variant. Lock nut PVM45X15-A suitable for external thread of the side load adapter. |
| 3 | **PBV45X15LD-A** | Side load adapter long stroke<br>Protection: no protection | Impact angle max. 30°. Can only be used in combination with industrial shock absorber without protection and without the Short piston rod no head variant. Lock nut PVM45X15-A suitable for external thread of the side load adapter. |
| 4 | **PKS45X15-A** | Clamping flange orthogonal screwed | Tightening torque of the screws max. 45 Nm. |
| 5 | **PVM45X15-A** | Stainless steel locknut | Included with the industrial shock absorber. |

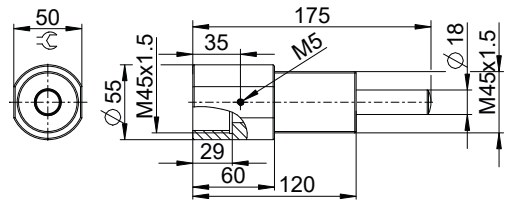
1



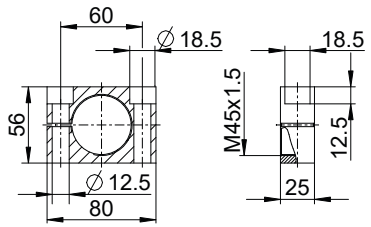

2



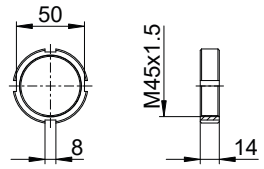

3




4




5



## ▶ CLASSIFICATION

P HE 45X15 L H A K -A

**Design**

P Industrial shock absorbers PowerStop

**Series**

ME Mini Energy

SE Standard Energy

HE High Energy

AE Adjustable Energy

**Thread**

45 Thread nominal diameter

X

15 Thread pitch (factor 10)

**Stroke variant**

N Standard stroke

L Long stroke

**Hardness degree**

H Hard (0.1 - 1.2 m/s; Adjustable Energy: 0.1 - 5 m/s)

M Medium (0.8 - 2.2 m/s)

S Soft (1.8 - 3.5 m/s)

W Supersoft (3 - 5 m/s)

**Protection**

D no protection

F Felt ring

A Wiper (NBR)

B Bellow (TPE)

**Head**

D Short piston rod no head

E Long piston rod no head

S with steel head

K with plastic head

**Version**

-A Versioning from a to z