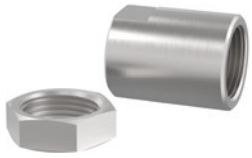
POWERSTOP INDUSTRIAL SHOCK ABSORBER
ACCESSORIES

STOP SLEEVE | PAH

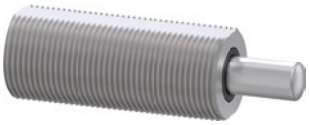


Available for M4-M36
It is advisable to use a stop sleeve for optimal damping stroke adjustment. In this process, the end stop and the damping stroke can be adjusted individually by screwing the sleeve on the shock absorber external thread using the additional lock nut.
It is advisable to start by setting 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

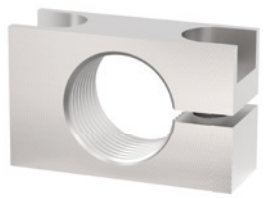
Available for M8-M33 (with the exception of M16, M22 and M27)
In addition to the stop sleeve features, the sensor stop sleeve features inductive sensor with highly compact integration for sensing the end position of the set damping stroke. Using the sensor stop sleeve requires the use of an industrial 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

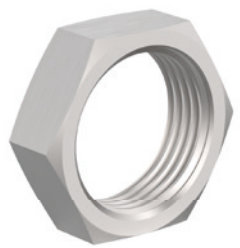
CLAMPING FLANGE SCREWED PARALLEL | PKP

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 M33X1.5

▶ SERIES

PowerStop®

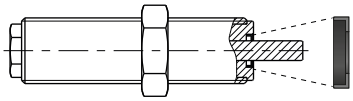
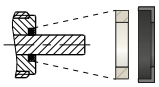
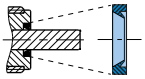
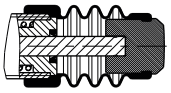
STANDARD ENERGY	HIGH ENERGY	ADJUSTABLE ENERGY
The economical	The powerful	The Adjustable

▶ **Material**	Stainless steel	▶ **Organic oil (biodegradable)**	HEES
▶ **Permitted temperature range**	-10 ... +70 [°C]	▶ **H1-certified**	Yes
▶ **Angle of Impact max.**	2 [°]	▶ **Certifications**	LABS / REACH / RoHS
▶ **Max. force at fixed stop**	30 [kN]		
▶ **Lock nut tightening torque**		▶ **Max. absolute pressure**	
- **Standard energy**	60 [Nm]	- **Standard energy**	1 [bar]
- **High Energy**	80 [Nm]	- **High Energy**	10 [bar]
- **Adjustable Energy**	80 [Nm]	- **Adjustable Energy**	10 [bar]

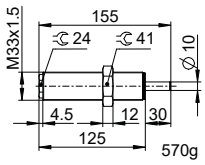
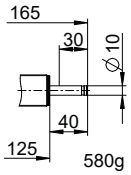
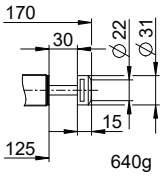
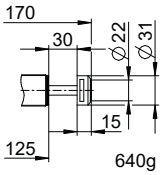
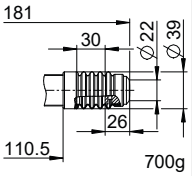
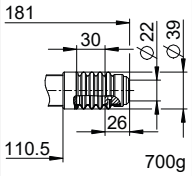
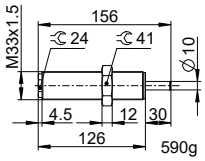
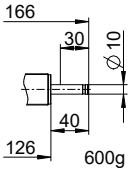
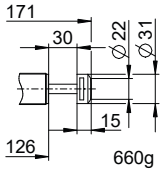
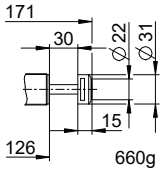
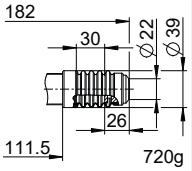
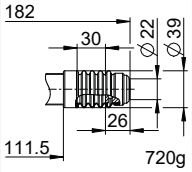
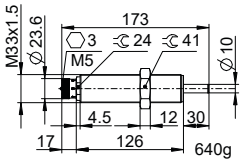
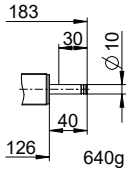
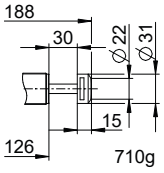
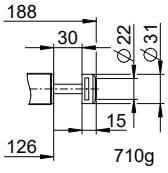
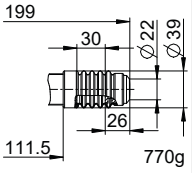
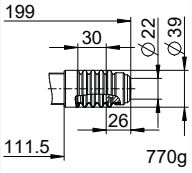
▶ TECHNICAL DATA

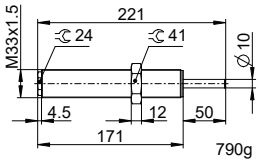
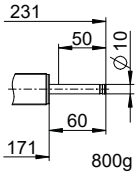
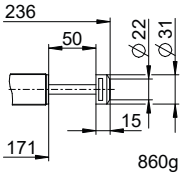
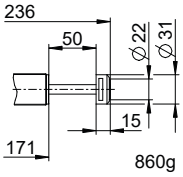
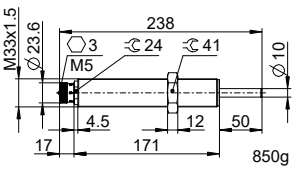
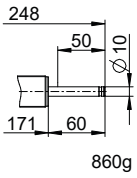
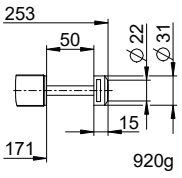
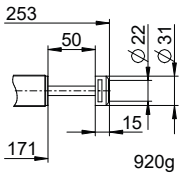
	Design	Series	Thread	Stroke variant	Stroke max. [mm]	Hardness degree	Impact velocity min. [m/s]	Impact velocity max. [m/s]	Energy absorption max. Continuous operation per stroke [J]	Energy absorption max. Continuous operation per hour [J/h]	Energy absorption max. Emergency stop operation per stroke [J]	Protection	Reset Force min. [N]	Reset Force max. [N]	Reset Time max. [s]	Head	Integrated Fix stop	Version
STANDARD ENERGY	P	SE	33X15	N	30	H	0,1	1,2	185	140.000	185	D	15	35	0,4	D	x	-A
						M	0,8	2,2	185	140.000	185	F	15	35	0,4	E	-	
						S	1,8	3,5	185	140.000	185	A	15	35	0,4	S	x	
						W	3,0	5,0	185	140.000	185	B	15	230	0,4	K	x	
HIGH ENERGY	P	HE	33X15	N	30	H	0,1	1,2	400	140.000	800	D	40	65	0,4	D	x	-A
						M	0,8	2,2	360	140.000	650	F	40	65	0,4	E	-	
						S	1,8	3,5	320	140.000	500	A	40	65	0,4	S	x	
						W	3,0	5,0	280	140.000	350	B	40	260	0,4	K	x	
ADJUSTABLE ENERGY	P	AE	33X15	N	30	H	0,1	5,0	400	140.000	400	D	40	65	0,4	D	x	-A
												F	40	65	0,4	E	-	
												A	40	65	0,4	S	x	
												B	40	260	0,4	K	x	
HIGH ENERGY	P	HE	33X15	L	50	H	0,1	1,2	400	140.000	800	D	40	65	0,8	D	x	-A
						M	0,8	2,2	360	140.000	650	F	40	65	0,8	E	-	
						S	1,8	3,5	320	140.000	500	A	40	65	0,8	S	x	
						W	3,0	5,0	280	140.000	350		40	65	0,8	K	x	
ADJUSTABLE ENERGY	P	AE	33X15	L	50	H	0,1	5,0	400	140.000	400	D	40	65	0,8	D	x	-A
												F	40	65	0,8	E	-	
												A	40	65	0,8	S	x	
													40	65	0,8	K	x	

▶ PROTECTION

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

▶ TECHNICAL DRAWINGS

	Short piston rod no head	Long piston rod no head	with steel head	with plastic head	with bellow and steel head	with bellow and plastic head
	N D -A	N E -A	N S -A	N K -A	N B S -A	N B K -A
STANDARD ENERGY						
HIGH ENERGY						
ADJUSTABLE ENERGY						

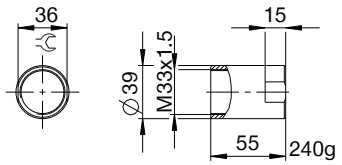
	Short piston rod no head	Long piston rod no head	with steel head	with plastic head
	L D -A	L E -A	L S -A	L K -A
HIGH ENERGY				
ADJUSTABLE ENERGY				

INDUSTRIAL SHOCK ABSORBERS POWERSTOP
THREAD M33X1.5

► ACCESSORIES

Pos.	Order no.	Accessories	Remarks
1	**PAH33X15-A**	Stop sleeve	Including 1x PVM33X15-A. Industrial shock absorber with bellow excluded.
2	**PSH33X15-B**	Sensor stop sleeve	Including 1x PVM33x15-A. Sensing only possible via industrial shock absorbers with steel or plastic head. Industrial shock absorber with bellow excluded. Inductive sensor, PNP (NC), 2 m PUR cable, IP67 degree of protection. See separate data sheet for additional information.
3	**PBV33X15ND-A**	Side load adapter standard stroke 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 PVM42X15-A suitable for external thread of the side load adapter.
4	**PBV33X15NF-A**	Side load adapter standard stroke Protection: felt ring (felt)	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 PVM42X15-A suitable for external thread of the side load adapter.
5	**PBV33X15NA-A**	Side load adapter standard stroke Protection: wiper (NBR)	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 PVM42X15-A suitable for external thread of the side load adapter.
6	**PBV33X15LD-A**	Side load adapter long stroke 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 PVM42X15-A suitable for external thread of the side load adapter.
7	**PBV33X15LF-A**	Side load adapter long stroke Protection: felt ring (felt)	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 PVM42X15-A suitable for external thread of the side load adapter.
8	**PBV33X15LA-A**	Side load adapter long stroke Protection: wiper (NBR)	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 PVM42X15-A suitable for external thread of the side load adapter.
9	**PKS33X15-A**	Clamping flange orthogonal screwed	Tightening torque of the screws max. 45 Nm.
10	**PKP33X15-A**	Clamping flange screwed in parallel	Tightening torque of the screws max. 22 Nm.
11	**PVM33X15-A**	Stainless steel locknut	Included with the industrial shock absorber.
12	**PDD33X15-A**	Pressure chamber seal	Recommended fixation with PVM33X15-A. Seal must be in full contact on both sides.

1



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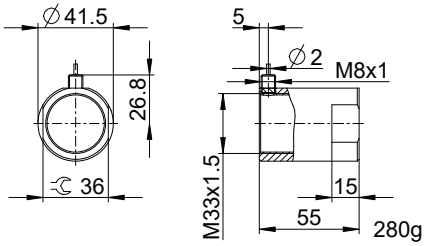

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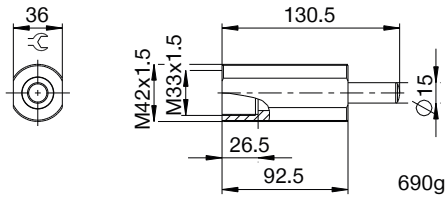

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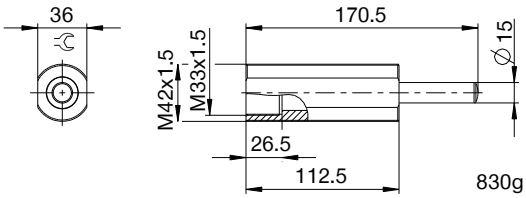

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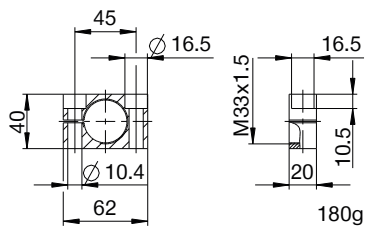

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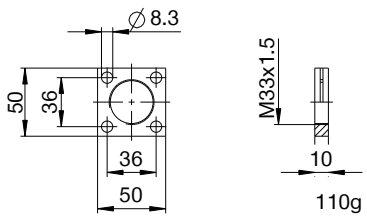

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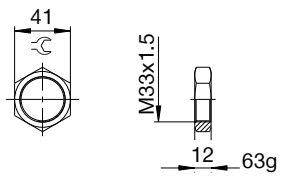

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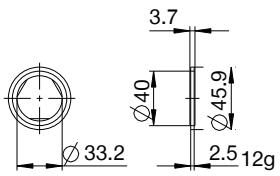

▶ CLASSIFICATION

P HE 33X15 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

33 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