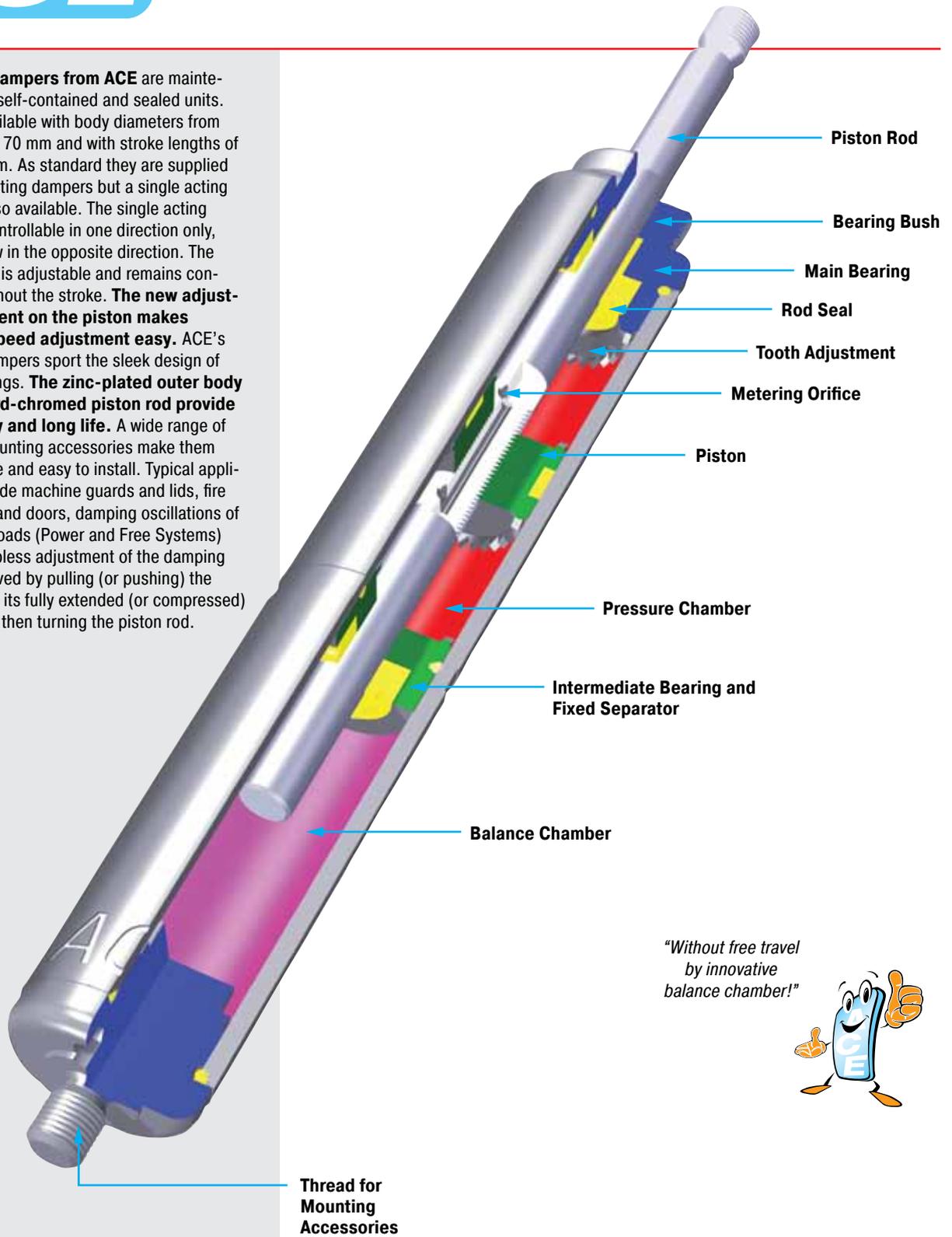


Hydraulic dampers from ACE are maintenance-free, self-contained and sealed units. They are available with body diameters from 28 mm up to 70 mm and with stroke lengths of up to 800 mm. As standard they are supplied as double acting dampers but a single acting version is also available. The single acting version is controllable in one direction only, with free flow in the opposite direction. The travel speed is adjustable and remains constant throughout the stroke. **The new adjustment segment on the piston makes sensitive speed adjustment easy.** ACE's hydraulic dampers sport the sleek design of our gas springs. **The zinc-plated outer body and the hard-chromed piston rod provide high quality and long life.** A wide range of screw on mounting accessories make them very versatile and easy to install. Typical applications include machine guards and lids, fire safety flaps and doors, damping oscillations of suspended loads (Power and Free Systems) etc. The stepless adjustment of the damping rate is achieved by pulling (or pushing) the piston rod to its fully extended (or compressed) position and then turning the piston rod.



*"Without free travel
by innovative
balance chamber!"*



Operating fluid: Hydraulic oil

Note: If unit has not moved for some time the seals may dry, causing an increased breakaway force on the initial cycle.

Mounting: In any position. End fittings must be positively secured to prevent unscrewing.

Operating temperature range: -20 °C to 80 °C

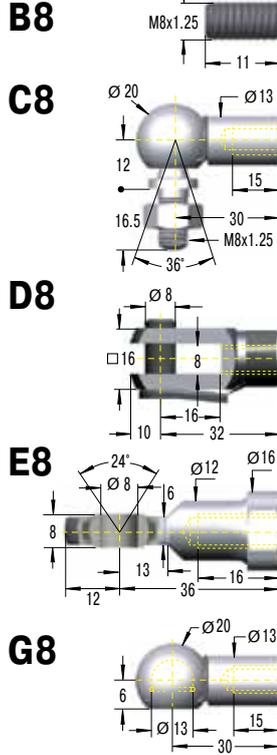
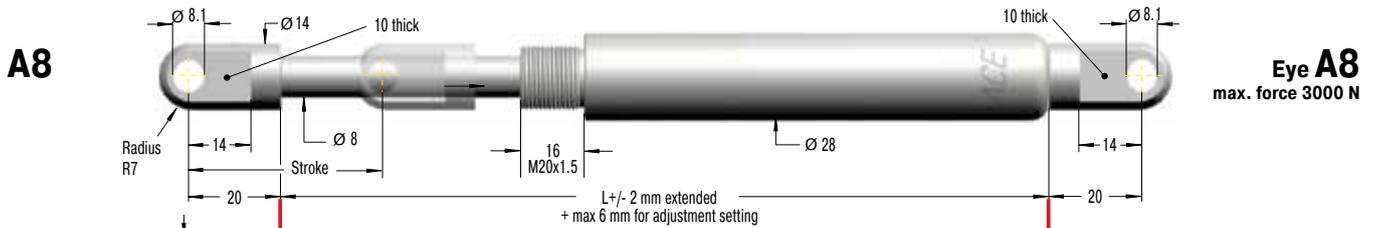
On request: Special lengths, alternative seals and end fittings.



End Fitting

Standard Dimensions

End Fitting



Dimensions					
Type	Stroke mm	L extended	¹ Max. Compression Force N	¹ Max. Compression Force with MBS N	
HBS-28-50	50	295	3 000	3 000	
HBS-28-100	100	445	1 550	3 000	
HBS-28-150	150	595	900	3 000	
HBS-28-200	200	745	600	3 000	
HBS-28-250	250	895	440	3 000	
HBS-28-300	300	1 045	330	3 000	
HBS-28-350	350	1 195	260	2 500	
HBS-28-400	400	1 345	200	2 000	

¹ Max. extension force for all stroke lengths 3000 N.

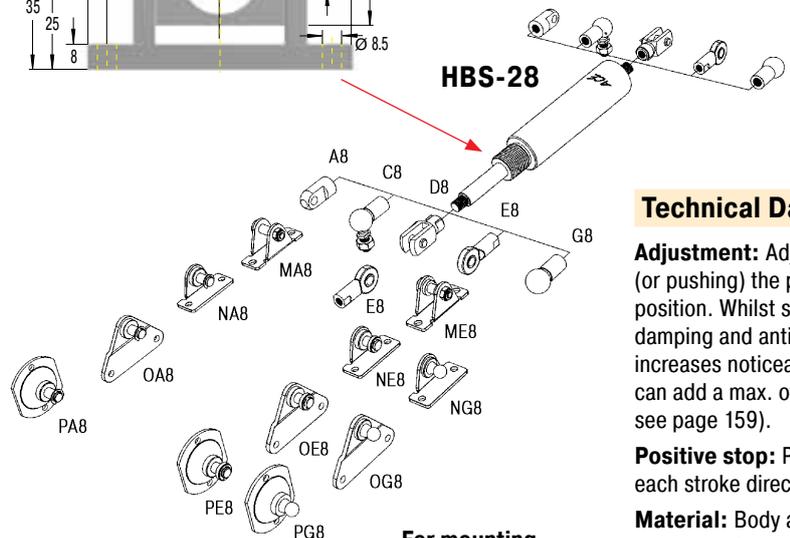
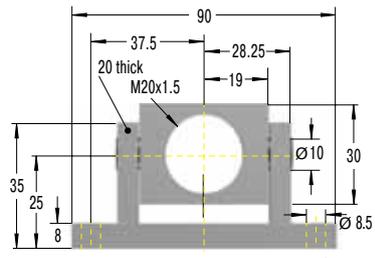
Ordering Example HBS-28-150-DD-M

Type (Hydraulic Damper) _____
 Body Ø (28 mm) _____
 Stroke (150 mm) _____
 Piston Rod End Fitting D8 _____
 Body End Fitting D8 _____
 Damping Direction (M = out stroke only) _____

- Damping Options**
- P = Damping in both directions
 - N = Damping on in stroke only
 - M = Damping on out stroke only
 - X = Special model suffix

The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite). For mounting accessories see page 200.

Swivel Mounting Block MBS-28



For mounting accessories see page 200.

Technical Data

Adjustment: Adjustment of the damping rate is achieved by pulling (or pushing) the piston rod to its fully extended (or compressed) position. Whilst still pulling the piston rod turn it clockwise to increase damping and anti-clockwise to decrease damping. If the resistance increases noticeably, stop adjusting to avoid damage. The adjustment can add a max. of 6 mm to the L dim. shown (adjustment instruction see page 159).

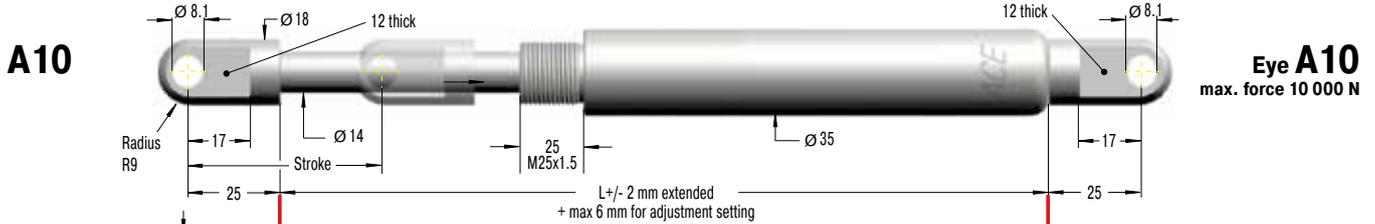
Positive stop: Provide mechanical stops 1 to 1.5 mm before end of each stroke direction.

Material: Body and end fittings: Zinc plated steel. Piston rod: Hard chrome plated.

End Fitting

Standard Dimensions

End Fitting



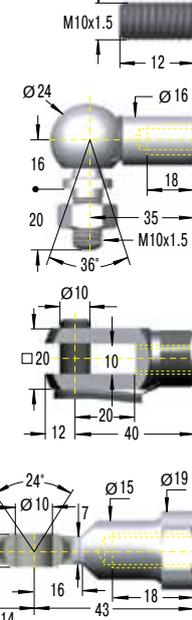
B10

C10

D10

E10

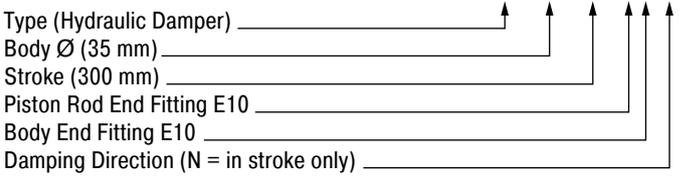
Swivel Mounting Block MBS-35



Dimensions				
Type	Stroke mm	L extended	¹ Max. Compression Force N	¹ Max. Compression Force with MBS N
HBS-35-100	100	485	10 000	10 000
HBS-35-150	150	635	7 500	10 000
HBS-35-200	200	785	5 150	10 000
HBS-35-300	300	1 085	2 850	10 000
HBS-35-400	400	1 385	1 800	10 000
HBS-35-500	500	1 685	1 240	10 000
HBS-35-600	600	1 985	910	8 600
HBS-35-700	700	2 285	690	6 500
HBS-35-800	800	2 585	540	5 100

¹ Max. extension force for all stroke lengths 10 000 N.

Ordering Example



Damping Options

- P = Damping in both directions
- N = Damping on in stroke only
- M = Damping on out stroke only
- X = Special model suffix

The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite). For mounting accessories see page 200.

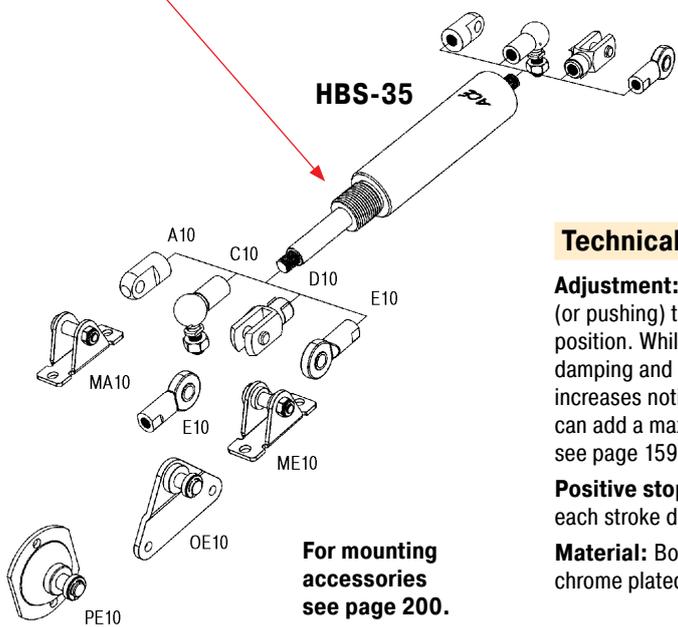
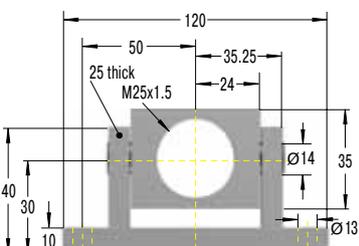
Stud Thread B10

Angle Ball Joint C10 max. force 1800 N

Clevis Fork D10 max. force 10 000 N

Swivel Eye E10 max. force 10 000 N

Rod Shroud no retrofit Ø 40, L = Stroke + 50



For mounting accessories see page 200.

Technical Data

Adjustment: Adjustment of the damping rate is achieved by pulling (or pushing) the piston rod to its fully extended (or compressed) position. Whilst still pulling the piston rod turn it clockwise to increase damping and anti-clockwise to decrease damping. If the resistance increases noticeably, stop adjusting to avoid damage. The adjustment can add a max. of 6 mm to the L dim. shown (adjustment instruction see page 159).

Positive stop: Provide mechanical stops 1 to 1.5 mm before end of each stroke direction.

Material: Body and end fittings: Zinc plated steel. Piston rod: Hard chrome plated.

Issue 6.2011 Specifications subject to change

End Fitting

Standard Dimensions

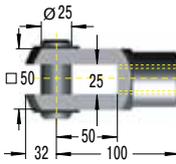
End Fitting

B24



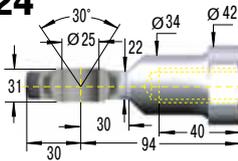
Stud Thread **B24**

D24



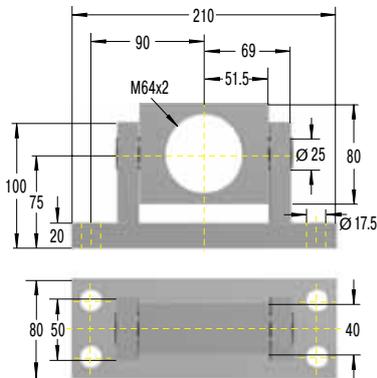
Clevis Fork **D24**
max. force 50 000 N

E24



Swivel Eye **E24**
max. force 50 000 N

Swivel Mounting Block
MBS-70



Dimensions

Type	Stroke mm	L extended	¹ Max. Compression Force N	¹ Max. Compression Force with MBS N
HBS-70-100	100	561	40 000	40 000
HBS-70-200	200	861	40 000	40 000
HBS-70-300	300	1 161	40 000	40 000
HBS-70-400	400	1 461	30 300	40 000
HBS-70-500	500	1 761	21 600	40 000
HBS-70-600	600	2 061	16 200	40 000
HBS-70-700	700	2 361	12 600	40 000
HBS-70-800	800	2 661	10 100	40 000

¹ Max. extension force for all stroke lengths 40 000 N.

Ordering Example

HBS-70-300-EE-N

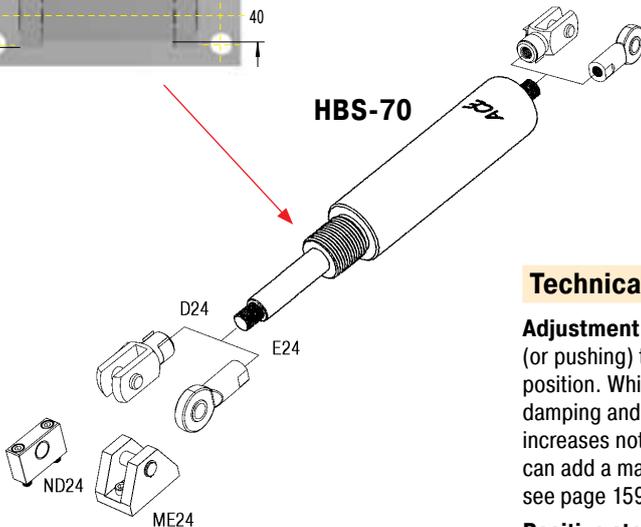
Type (Hydraulic Damper) _____
 Body Ø (70 mm) _____
 Stroke (300 mm) _____
 Piston Rod End Fitting E24 _____
 Body End Fitting E24 _____
 Damping Direction (N = in stroke only) _____

Damping Options

- P = Damping in both directions
- N = Damping on in stroke only
- M = Damping on out stroke only
- X = Special model suffix

The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite). For mounting accessories see page 201.

Rod Shroud **W24-70**
Ø 80, L = Stroke + 130



For mounting accessories see page 201.

Technical Data

Adjustment: Adjustment of the damping rate is achieved by pulling (or pushing) the piston rod to its fully extended (or compressed) position. Whilst still pulling the piston rod turn it clockwise to increase damping and anti-clockwise to decrease damping. If the resistance increases noticeably, stop adjusting to avoid damage. The adjustment can add a max. of 8 mm to the L dim. shown (adjustment instruction see page 159).

Positive stop: Provide mechanical stops 5 to 6 mm before end of each stroke direction.

Material: Body: Black powder coated steel or zinc plated steel. Piston rod: Hard chrome plated. End fittings: Zinc plated steel.