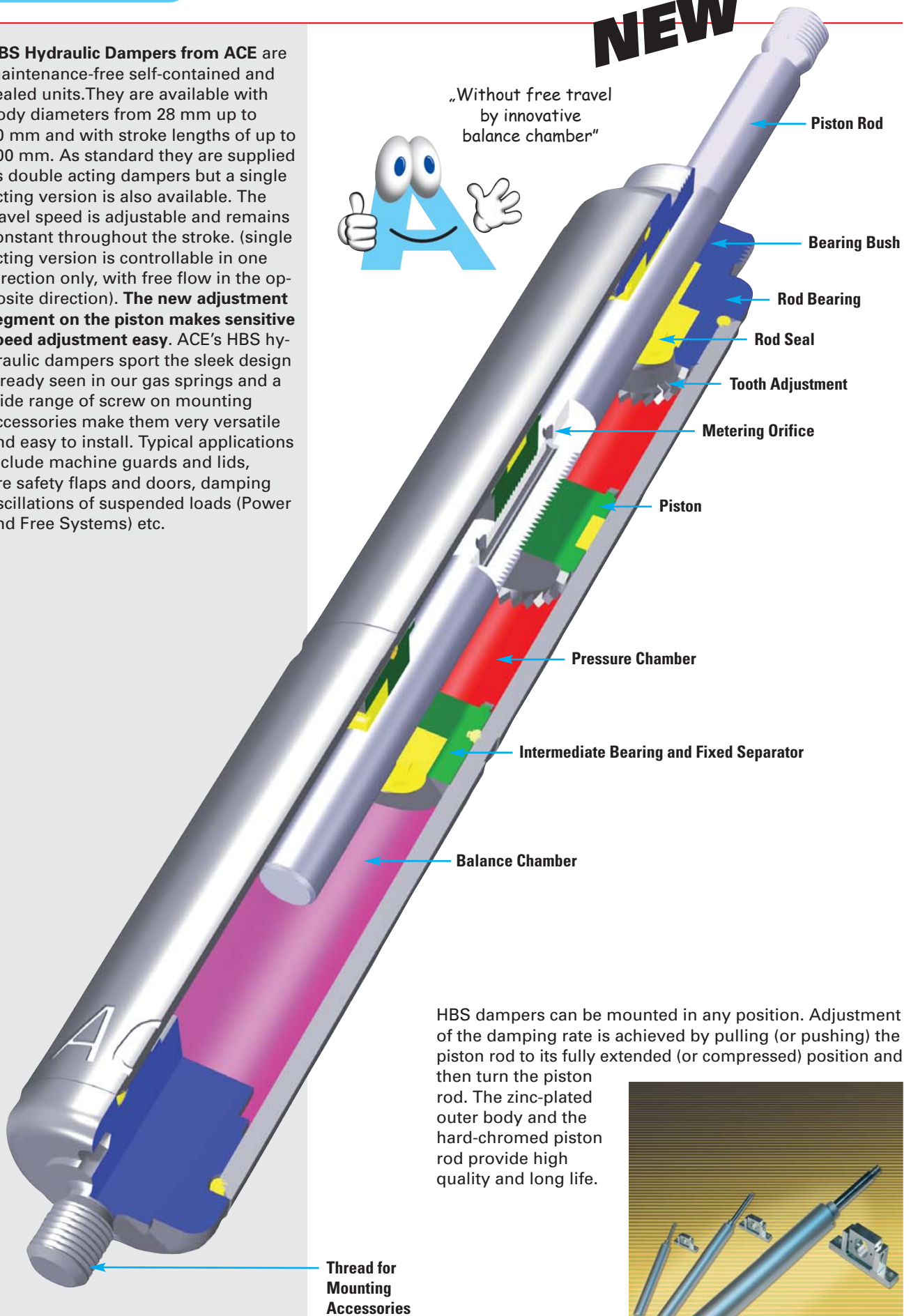


HBS Hydraulic Dampers from ACE are maintenance-free self-contained and sealed units. They are available with body diameters from 28 mm up to 70 mm and with stroke lengths of up to 800 mm. As standard they are supplied as double acting dampers but a single acting version is also available. The travel speed is adjustable and remains constant throughout the stroke. (single acting version is controllable in one direction only, with free flow in the opposite direction). **The new adjustment segment on the piston makes sensitive speed adjustment easy.** ACE's HBS hydraulic dampers sport the sleek design already seen in our gas springs and 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.

NEW

„Without free travel by innovative balance chamber“



HBS dampers can be mounted in any position. Adjustment of the damping rate is achieved by pulling (or pushing) the piston rod to its fully extended (or compressed) position and then turn the piston rod. The zinc-plated outer body and the hard-chromed piston rod provide high quality and long life.



NEW

End Fitting

Standard Dimensions

End Fitting

Dimensions

Type	Stroke mm	L extended	max. Compression Force N	max. Extension Force N (with MBS)
HBS-28-50	50	295	3000	3000
HBS-28-100	100	445	1550	3000
HBS-28-150	150	595	900	3000
HBS-28-200	200	745	600	3000
HBS-28-250	250	895	440	3000
HBS-28-300	300	1045	330	3000
HBS-28-350	350	1195	260	2500
HBS-28-400	400	1345	200	2000

Ordering Example

HBS-28-150-DD-M

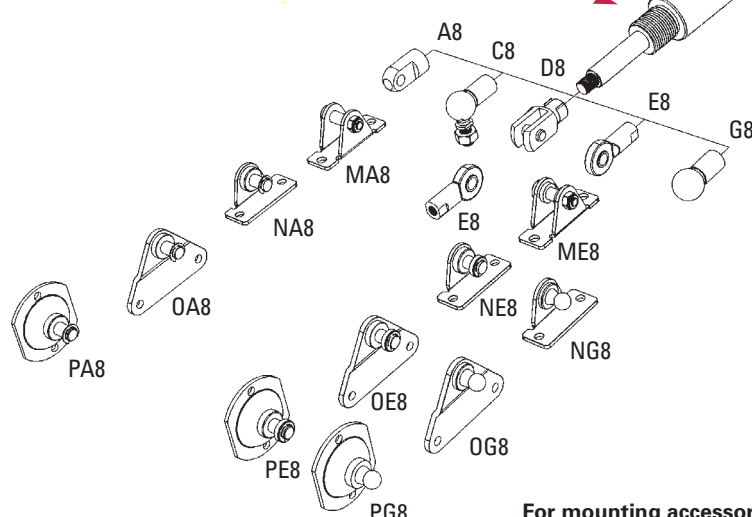
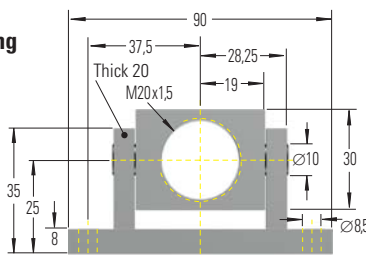
Type (Hydraulic Damper) _____
 Body ϕ (28 mm) _____
 Stroke (150 mm) _____
 Piston Rod End Fitting D8 _____
 Body End Fitting D8 _____
 Damping Direction (M = out stroke only) _____

Damping Options
 M = Damping on out stroke only P = Damping in both directions
 N = Damping on in 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 140.

MBS-28

Swivel Mounting Block



For mounting accessories see page 140.

Technical Data

ACE hydraulic dampers are self-contained and maintenance free.

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.

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

Mounting position: Can be mounted in any position. End fittings must be positively secured to prevent unscrewing.

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

Operating fluid: Hydraulic oil.

Material: Body and end fittings: zinc plated steel. Piston rod: hard chrome plated.

To special order: Special length, alternative seals and end fittings.

Issue 4, 2006 Specifications subject to change

NEW

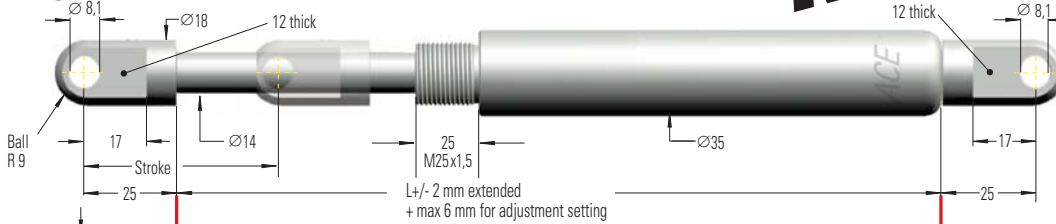
End Fitting

Standard Dimensions

End Fitting

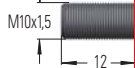
A10

Eye A10



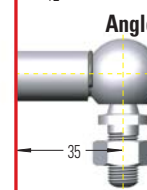
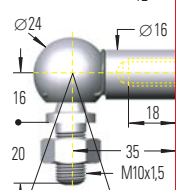
B10

Stud Thread B10



C10

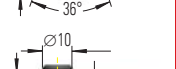
Angle Ball Joint C10



(Max. permitted force 1800 N)

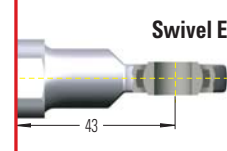
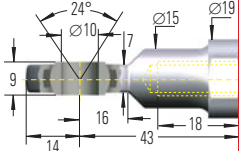
D10

Clevis Fork D10



E10

Swivel Eye E10



Dimensions

Type	Stroke mm	L extended	max. Compression Force N	max. Compression Force N (with MBS)
HBS-35-100	100	485	10000	10000
HBS-35-150	150	635	7500	10000
HBS-35-200	200	785	5150	10000
HBS-35-300	300	1085	2850	10000
HBS-35-400	400	1385	1800	10000
HBS-35-500	500	1685	1240	10000
HBS-35-600	600	1985	910	8600
HBS-35-700	700	2285	690	6500
HBS-35-800	800	2585	540	5100

Ordering Example

HBS-35-300-EE-N

Type (Hydraulic Damper) _____
 Body ø (35 mm) _____
 Stroke (300 mm) _____
 Piston Rod End Fitting E10 _____
 Body End Fitting E10 _____
 Damping Direction (N = in stroke only) _____

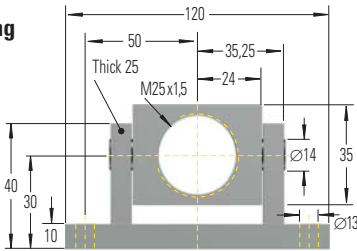
Damping Options

M = Damping on out stroke only P = Damping in both directions
 N = Damping on in 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 140.

MBS-35

Swivel Mounting Block



HBS-35

Technical Data

ACE hydraulic dampers are self-contained and maintenance free.

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.

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

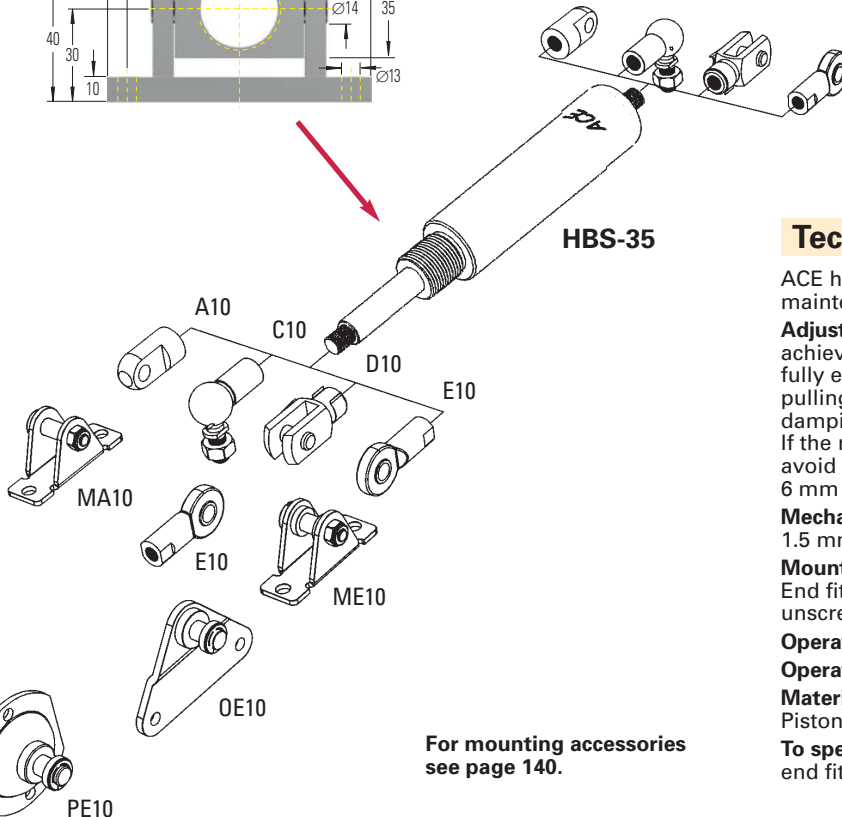
Mounting position: Can be mounted in any position. End fittings must be positively secured to prevent unscrewing.

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

Operating fluid: Hydraulic oil.

Material: Body and end fittings: zinc plated steel. Piston rod: hard chrome plated.

To special order: Special length, alternative seals and end fittings.



For mounting accessories see page 140.

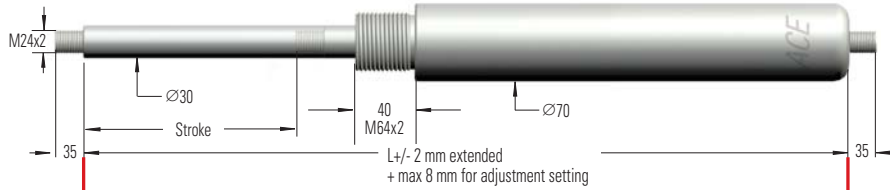
NEW

End Fitting

Standard Dimensions

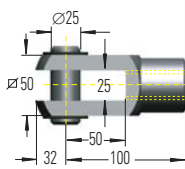
End Fitting

B24



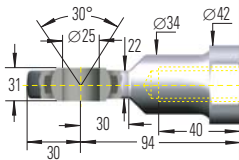
Stud Thread **B24**

D24



Clevis Fork **D24**

E24



Swivel Eye **E24**

Dimensions

Type	Stroke mm	L extended	max. Compression Force N	max. Extension Force N (with MBS)
HBS-70-100	100	561	40000	40000
HBS-70-200	200	861	40000	40000
HBS-70-300	300	1161	40000	40000
HBS-70-400	400	1461	30300	40000
HBS-70-500	500	1761	21600	40000
HBS-70-600	600	2061	16200	40000
HBS-70-700	700	2361	12600	40000
HBS-70-800	800	2661	10100	40000

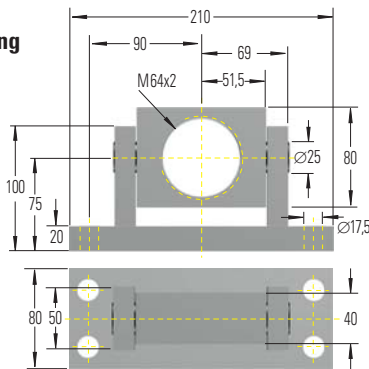
Ordering Example

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

HBS-70-300-EE-N

MBS-70

Swivel Mounting Block



Damping Options

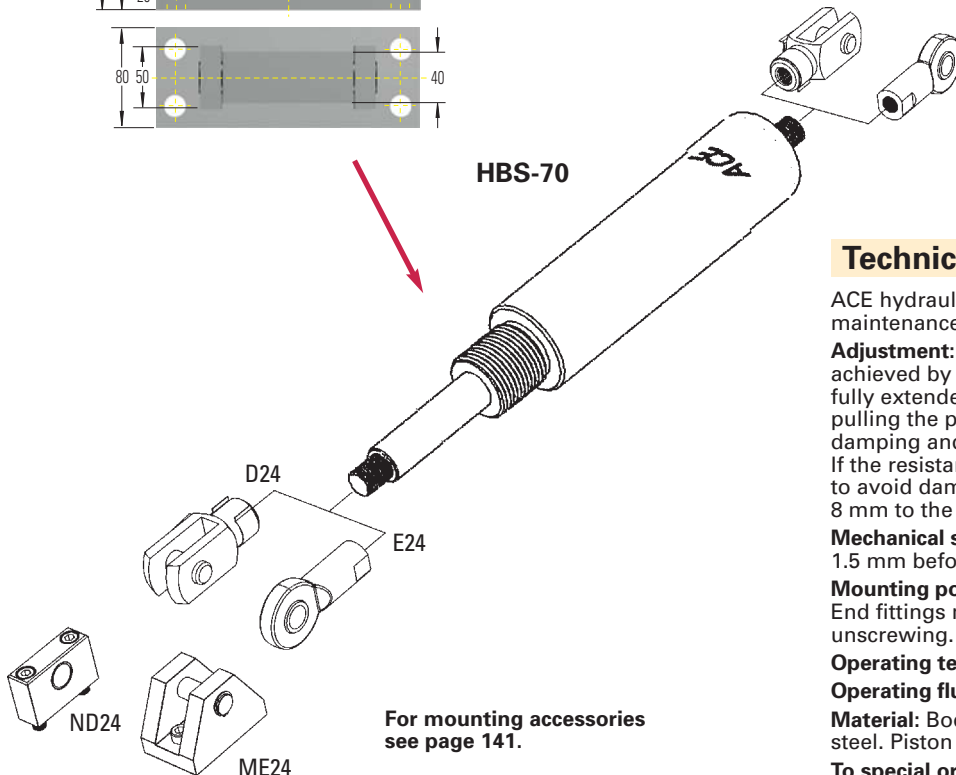
- M = Damping on out stroke only
- P = Damping in both directions
- N = Damping on in stroke only
- X = Special model suffix

The end fittings are interchangeable and must be positively secured by the customer to prevent unscrewing (i.e. Loctite).
For mounting accessories see page 141.

W24-70

Rod Shroud
 ϕ 80, L = Stroke + 50

HBS-70



For mounting accessories see page 141.

Technical Data

ACE hydraulic dampers are self-contained and maintenance free.

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.

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

Mounting position: Can be mounted in any position. End fittings must be positively secured to prevent unscrewing.

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

Operating fluid: Hydraulic oil.

Material: Body: black coated. End fittings: zinc plated steel. Piston rod: hard chrome plated.

To special order: Special length, alternative seals and end fittings.