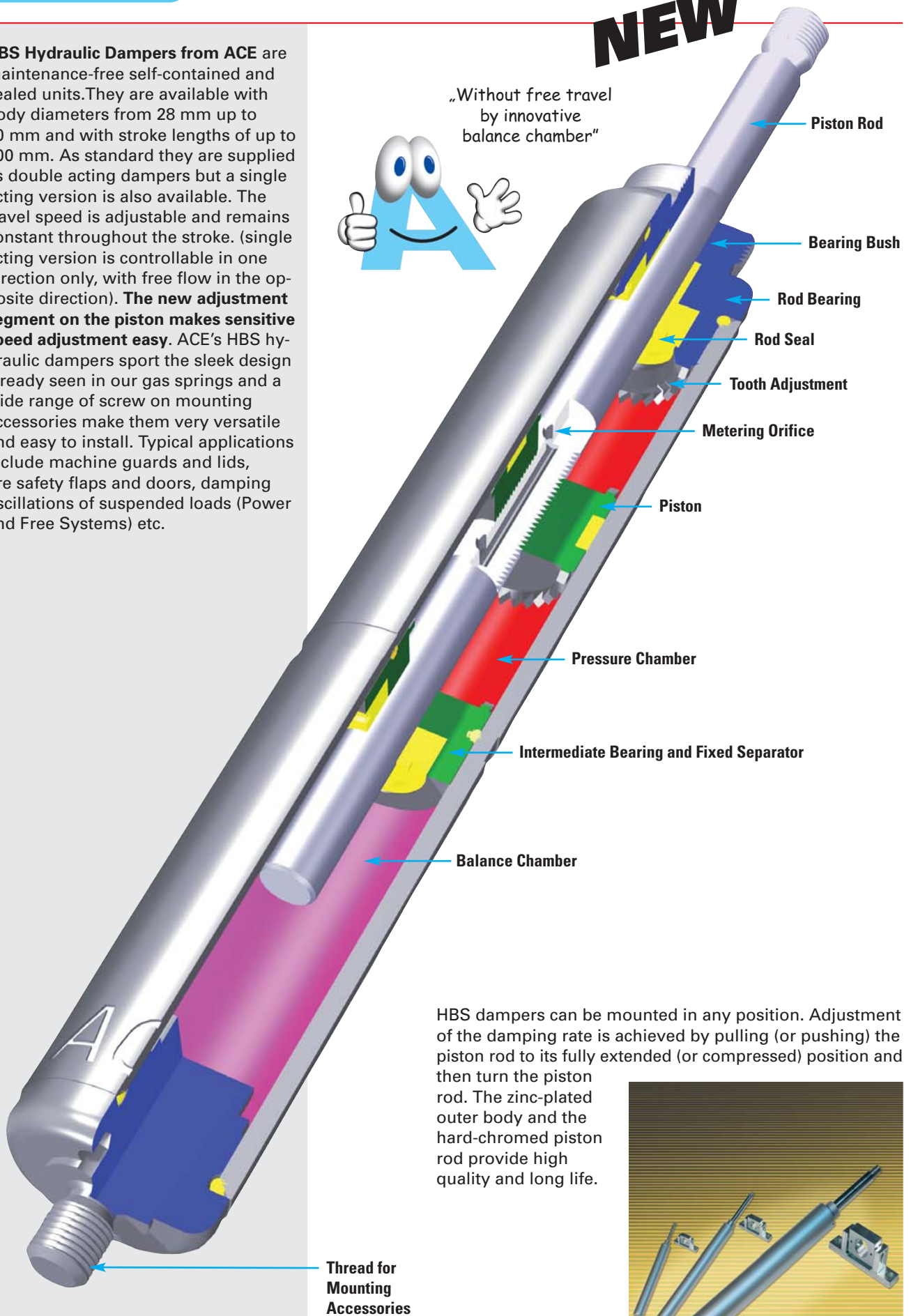


HBS Hydraulic Dampers from ACE are maintenance-free self-contained and sealed units. They are available with body diameters from 28 mm up to 70 mm and with stroke lengths of up to 800 mm. As standard they are supplied as double acting dampers but a single acting version is also available. The travel 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

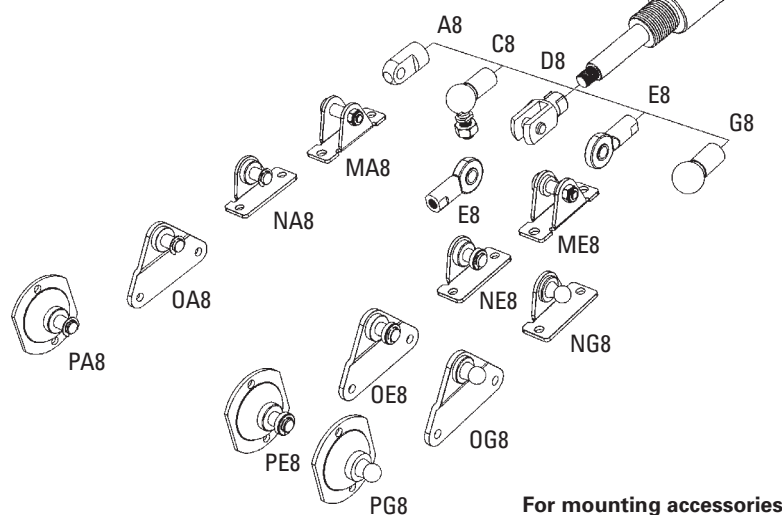
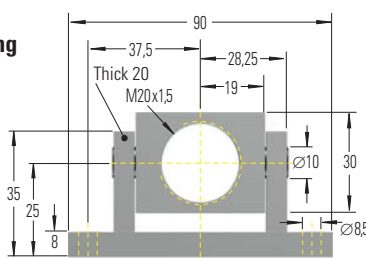
Type (Hydraulic Damper) \_\_\_\_\_  
 Body  $\varnothing$  (28 mm) \_\_\_\_\_  
 Stroke (150 mm) \_\_\_\_\_  
 Piston Rod End Fitting D8 \_\_\_\_\_  
 Body End Fitting D8 \_\_\_\_\_  
 Damping Direction (M = out stroke only) \_\_\_\_\_

**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.

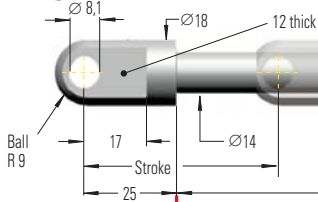
# NEW

### End Fitting

### Standard Dimensions

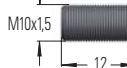
### End Fitting

A10



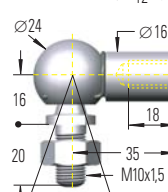
Eye A10

B10



Stud Thread B10

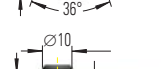
C10



Angle Ball Joint C10

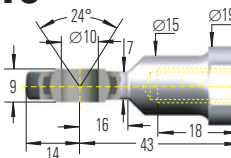
(Max. permitted force 1800 N)

D10



Clevis Fork D10

E10



Swivel Eye E10

### Dimensions

Type	Stroke mm	L extended	max. Compression Force N	max. Extension 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) \_\_\_\_\_

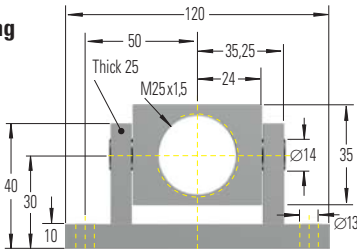
### Damping Options

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.

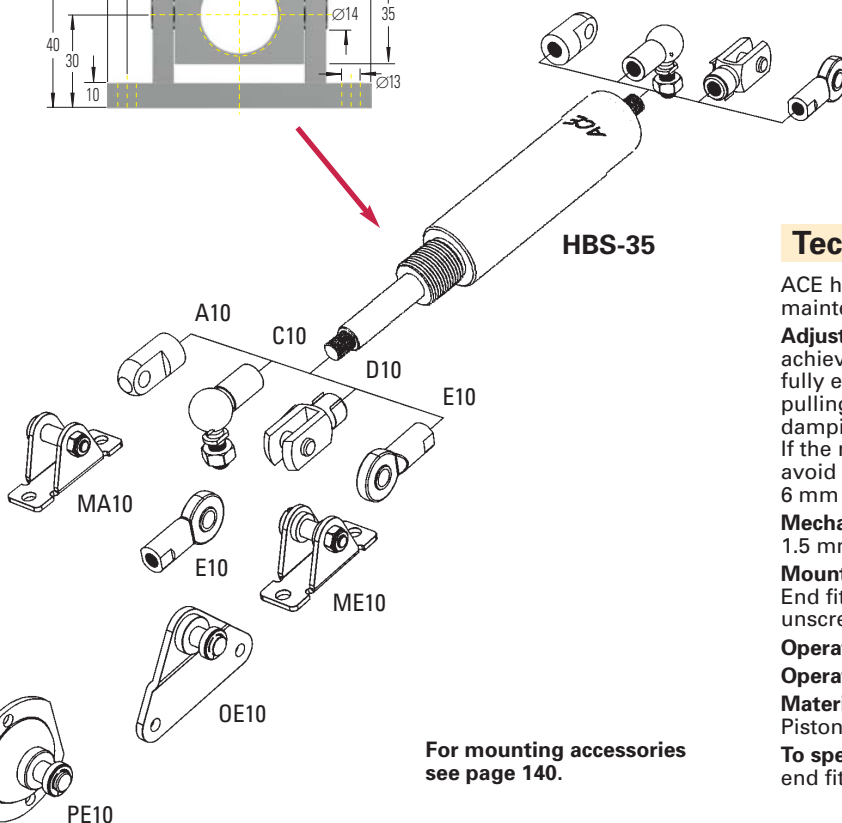
**Mounting position:** Can be mounted in any position. End fittings must be positively secured to prevent unscrewing.

**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.

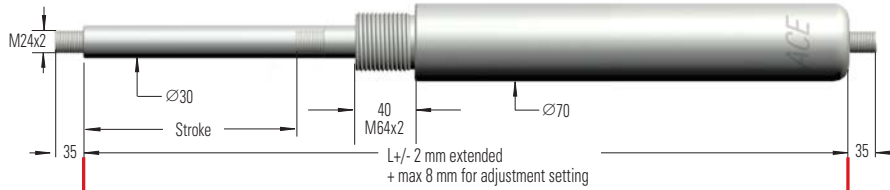
# NEW

End Fitting

Standard Dimensions

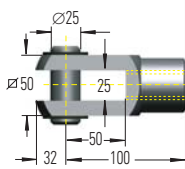
End Fitting

**B24**



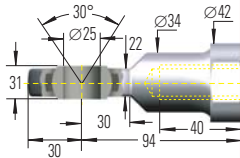
Stud Thread **B24**

**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

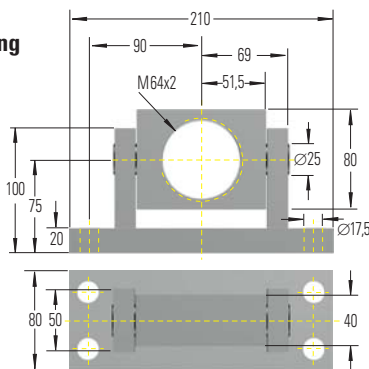
### Ordering Example

Type (Hydraulic Damper) \_\_\_\_\_  
 Body  $\phi$  (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  
 $\phi$  80, L = Stroke + 50

HBS-70

### 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.

For mounting accessories see page 141.

