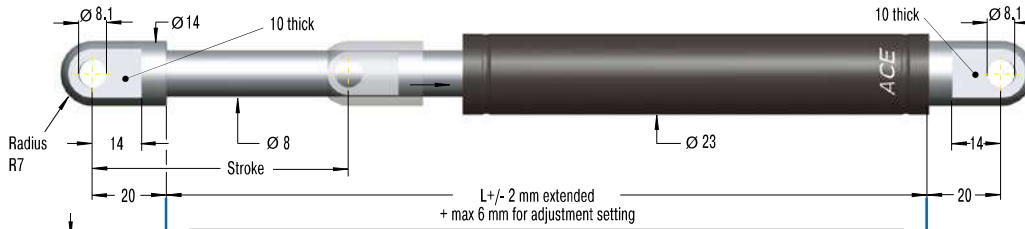
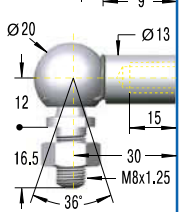
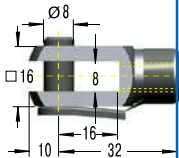


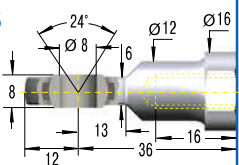
Adjustable, Compression and extension force 30 N to 1,800 N

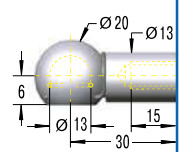
**End Fitting**
**Standard Dimensions**
**End Fitting**
**A8**

**Eye A8**  
max. force 3,000 N

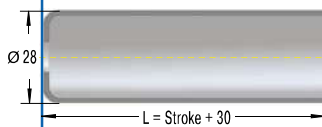
**B8**

**Stud Thread B8**
**C8**

**Angle Ball Joint C8**  
max. force 1,200 N

**D8**

**Clevis Fork D8**  
max. force 3,000 N

**E8**

**Swivel Eye E8**  
max. force 3,000 N

**G8**

**Ball Socket G8**  
max. force 1,200 N

**Rod Shroud W8-22**

**Performance and Dimensions**

TYPES	Stroke mm	L extended mm	<sup>1</sup> Compression force max. N
HB-22-50	50	150	1,800
HB-22-100	100	250	1,800
HB-22-150	150	350	1,800
HB-22-200	200	450	1,000
HB-22-250	250	550	1,000

<sup>1</sup> Max. extension force for all stroke lengths 1,800 N.

**Ordering Example**

Type (Hydraulic Damper) \_\_\_\_\_ **HB-22-150-DD-M**  
 Body Ø (23 mm) \_\_\_\_\_  
 Stroke (150 mm) \_\_\_\_\_  
 Piston Rod End Fitting D8 \_\_\_\_\_  
 Body End Fitting D8 \_\_\_\_\_  
 Damping Direction (M = out stroke only) \_\_\_\_\_

**Model Type Prefix**

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

**Mounting accessories see from page 200.**

**Technical Data**

**Compression and extension force:** 30 N to 1,800 N

**Free travel:** Construction of the damper results in a free travel of approx. 20 % of stroke.

**Separator piston:** Extension force 50 N; dimension L = 2.38 x stroke + 55 mm. Part number: add suffix -T.

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

**Adjustment:** Achieved by turning the piston rod in its fully extended or fully compressed position.

Clockwise rotation = increase of the damping

Anti-clockwise rotation = decrease of the damping

Damping force adjustable before installation. Adjustment can add a max. of 6 mm to the L dimension.

**Positive stop:** External positive stops 1 mm to 1.5 mm before the end of stroke provided by the customer.

**Material:** Outer body: coated steel; Piston rod: steel with wear-resistant coating; End fittings: zinc plated steel

**Mounting:** in any position

**Note:** Increased break-away force if unit has not moved for some time.

**End fittings:** They are interchangeable and if necessary must be positively secured by the customer to prevent unscrewing.

