

### Mounting instructions

Prior to installation and use, check if the identification number on the shock absorber or on the package corresponds to the number on the delivery sheet. Industrial shock absorbers are maintenance-free and ready-to-fit.

**Operating temperature range:** 0 °C to 66 °C

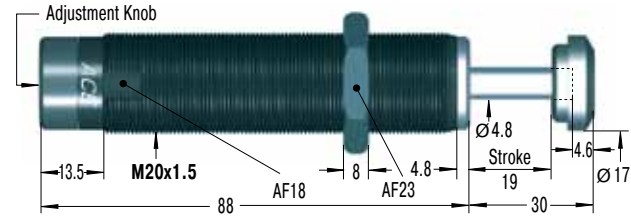
**Mounting:** In any position, but always so that the complete stroke can be used. The shock absorber is to be mounted so that the forces can be guided centrally via the piston rod.

The maximum permissible side load of 2° should not be exceeded. An existing side load leads generally to a reduced lifetime. When exceeding the maximum permissible side load, a side load adaptor should be used.

the shock absorber's adjustment and locked again afterwards. A corresponding hexagon wrench is included. The shock absorber is preset to 5 upon delivery.

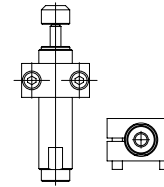
### Disposal of packaging

Dispose of packaging in an environmentally safe manner. The recycling of packaging saves raw materials and lowers the amount of waste. The used packaging materials do not contain illegal substances.

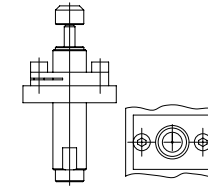


### Mounting Options

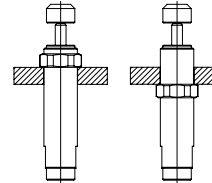
#### Usage of the clamp mount MB



#### Usage of the rectangular flange RF



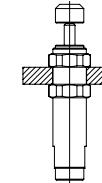
#### Screwing in the shock absorbers into a tapped hole with an additional locknut



Tightening torque:  
KM20 = 27-30 Nm

Minimum thread depth:  
1.5 x thread diameter

#### Mounting the shock absorbers in the tapped hole with two locknuts



Tightening torque:  
KM20 = 27-30 Nm

### WARNING

- Thermal effect:** The values given in the capacity chart  $W_d$  and  $m_e$  (see operating and installation instructions or main catalogue) are valid for room temperature. Different values apply for higher temperatures.
- Moving masses** can lead to injuries or bodily harm when installing the shock absorber. Secure moving masses against accidental movement.
- The shock absorbers may be unsuitable for the application and show insufficient damping performance. Check for proper suitability of shock absorber.
- When operating outside the allowed temperature range, the shock absorber may lose its functionality. Permissible temperature range must be adhered to. Do not paint the shock absorber due to heat radiation.
- Ambient fluids, gases and dirt particles may affect or damage the sealing system and lead to failure of the shock absorber. Piston rods and sealing systems must be protected against foreign substances.
- Damage to the piston rod surface may destroy the sealing system. Do not grease, oil, etc. the piston rod and protect it from dirt particles.
- The piston rod can be torn out of the shock absorber. Do not put tensile stress on the piston rod.
- The shock absorber can tear off upon impact. The mount must be calculated so that the maximum operating reaction forces can be accepted with sufficient safety. The maximum reaction forces given in the calculation report may deviate from the actual reaction forces since these are based on theoretical values.
- A setting of the dampers to the respective application is mandatory. A wrong setting of the damping could lead to an increased machine load and a premature failure of the shock absorbers.

### Initial Start-Up and Adjustment

After mounting the shock absorber, the equipment must be cycled several times, and the adjuster is turned until the optimum adjustment is reached. A hard impact at the beginning of stroke means: adjustment too hard.

Turn the adjuster clockwise (according to model towards 9, i. e. plus). A hard impact at the end of stroke means: adjustment too soft. Turn the adjuster counter-clockwise (towards 0, i. e. minus).

For models MA225EUM, MA600EUM und MA900EUM, the adjuster is secured with a setscrew. This must be loosened prior to

### Accessories

When using accessories and mounting elements, please consider the separate mounting instructions for accessories.

### EU Marking

Starting with the production date September 2010 (Code IB or 10244) all shock absorbers are to be marked with an additional EU letter code in the identification number. The EU marking refers to the adherence to the required norms, laws, and guidelines of the EU. Only products marked with EU ensure the worldwide standard and the guarantee of liability.