Calculation and dimensioning

In order to guarantee the long life time of the shock absorber it must be correctly calculated and dimensioned. For the following parameters must be considered:

- moving mass [kg]
- impact velocity of moving mass onto the shock absorber [m/s]
- additional acting propelling force, motor power or propelling torque [N, kW, Nm]
- number of parallel acting shock absorbers [n]
- number of strokes or cycles per hour [1/h]

Operating temperature range: -12 °C to 85 °C

Adjustment: After mounting the shock absorber, the equipment should be adjusted several times using the adjustment screw until the optimum deceleration is achieved. A hard impact at the beginning of stroke means: adjustment too hard. Turn the adjuster clockwise towards 9. A hard impact at the end of stroke means: adjustment too soft. Turn the adjuster counter-clockwise towards 0. The adjustment screw at the bottom is blocked via a locknut. Prior to adjusting the shock absorber, loosen the locknut and re-lock it at the end of the adjustment process. The shock absorber is preset to 5 upon delivery.

WARNING

The shock absorbers have to be dimensioned in such a way that the calculated values do not exceed the maximum values of the individual capacity chart (see main catalogue):

\[ W_\text{max} = \text{effective weight [N]} \]

To correctly calculate the shock absorber it must be the only active brake system in place. Additional deceleration systems, such as pneumatic cushioning, must be rendered ineffective and not allowed to interfere with the shock absorber deceleration.

The correct dimensioning of shock absorbers can be made with the ACE online calculation program at www.ace-ace.com. Alternatively the filled out online form may be sent to us via E-Mail. Or call our free of charge calculation service: +49-2173-9226-20

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 3” may not be exceeded. An existing side load leads generally to a reduced lifetime. When exceeding the maximum permissible side load, a side load adaptor must be used.

WARNING

Thermal effect: The values given in the capacity chart \( W_\text{max} \) and \( \text{me} \) (see main catalogue) are valid for room temperature. Different values apply for higher temperatures.

Disposal of packaging: Dispose 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.

WARNING

Positive Stop: Install mechanical stop 2.5 mm to 3 mm before the end of stroke.