**Industrial Shock Absorbers MA45**

**Mounting Instructions**

Please note: The instruction manual can be downloaded at www.ace-ace.com

---

**Calculation and dimensioning**

In order to guarantee the long life time of the shock absorber it must be correctly calculated and dimensioned. For that 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]

**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):
  - Ws [Nm/stroke]
  - W [Nm/h]
  - effective weight me [kg]

- 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 deacceleration.

- 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):
  - Ws [Nm/stroke]
  - W [Nm/h]
  - effective weight me [kg]

- 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 deacceleration.

---

**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.

---

**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 (see main catalogue) 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.

**Operating temperature range:** -12 °C to 70 °C

**Adjustment:** The scale displays a setting range between 0 to 9. The adjustment can be made via an adjustment screw at the bottom or at the adjusting ring on the stop collar. Both adjustment options are connected and show identical values on the scale. The equipment should be adjusted several times after mounting the shock absorber, using either the stop collar or the adjustment screw until the optimum deacceleration (no hard impact at either the beginning or the end of stroke) is achieved. Hard impact at the beginning of stroke, turn scale towards 9. Hard impact at the end of stroke, turn scale towards 0.

The shock absorber is always preset to 5 upon delivery.