

Calculation and dimensioning

In order to warrant the optimum function of the safety shock absorber, it must be correctly dimensioned and calculated. Therefore the parameters below have to be known and to take into consideration for the calculation:

- 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]
- impacts at creep speed [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):
 W_s [Nm/stroke]
 max. side load angle [°]
- ⚠ The calculation and selection of the correct ACE safety shock absorber for your application should be referred to ACE for approval and assignment of a unique identification number.
- ⚠ To correctly calculate the safety shock absorber it must be the only emergency braking system.

The correct dimensioning of the safety shock absorber 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

Installation information and initial start-up

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.

WARNING

- ⚠ Please check that the customer specific inner tube ID number at the end of the shock absorber description and number on the delivery note match exactly. The application data on the safety shock absorbers label, such as moving masses and the max. impact velocity, must be matched with the technical calculation by ACE. This check is important to make sure that the damper is correctly calculated for the application. Otherwise damage to the machine or safety shock absorbers can occur due to overload.

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 may not be exceeded.

Safety shock absorbers may not be transferred from one application place to another if the application characteristics are not identical. Contact ACE if in any doubt.

Life expectancy: Self-compensating version: max. 1000 cycles.
 Optimised version: max. 5 cycles.

Emergency stop application: After an emergency impact has occurred, the safety shock absorber must be checked for the proper rod return, the seal tightness and the fastening of mounting elements.

No damage may occur to the piston rod, outer body, or to the connections.

Regular start up: Safety shock absorbers may be operated with the complete stroke in creep speed at 1/10 of the maximum impact velocity.

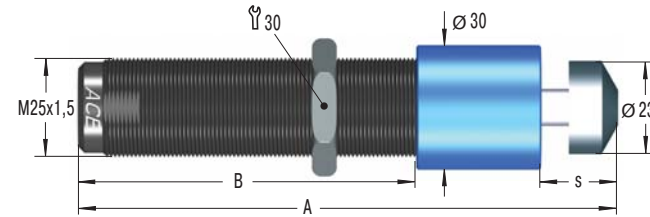
Inspection: An inspection should be carried out not less than every THREE MONTHS.

WARNING

- ⚠ 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 function.
 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.
- ⚠ Shock absorber can break away on impact.
 The assembly has to be dimensioned in a way that the maximum forces can be absorbed.
- ⚠ Check the following points after hitting the safety shock absorber in an emergency: complete rod return, seal tightness and screw connection of mounting elements.

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.

Issue 8.2010 Specifications subject to change

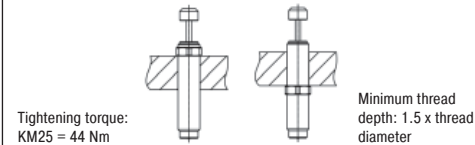


Dimensions

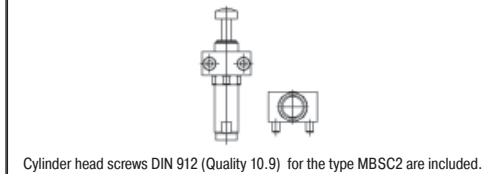
Type	s (stroke)	A max	B
Part Number			
SCS650EU	23	140	86

Mounting Options

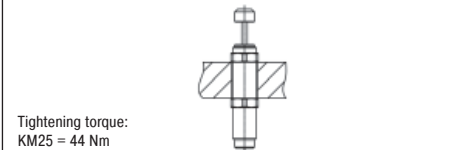
Screwing in the shock absorbers into a tapped hole with an additional locknut



Usage of the mounting blocks MBSC2



Mounting the shock absorbers in the tapped hole with two locknuts



Stud centres MB25SC2 = 36 mm
 Tightening torque:
 KM25 = 44 Nm
 Cylinder head screws M8 = 25 Nm

EU Marking

Starting with the production date September 2010 (Code IB or 10244) all safety 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 world wide standard and the guarantee for liability.

Issue 8.2010 Specifications subject to change