

## MC33-LT to MC64-LT

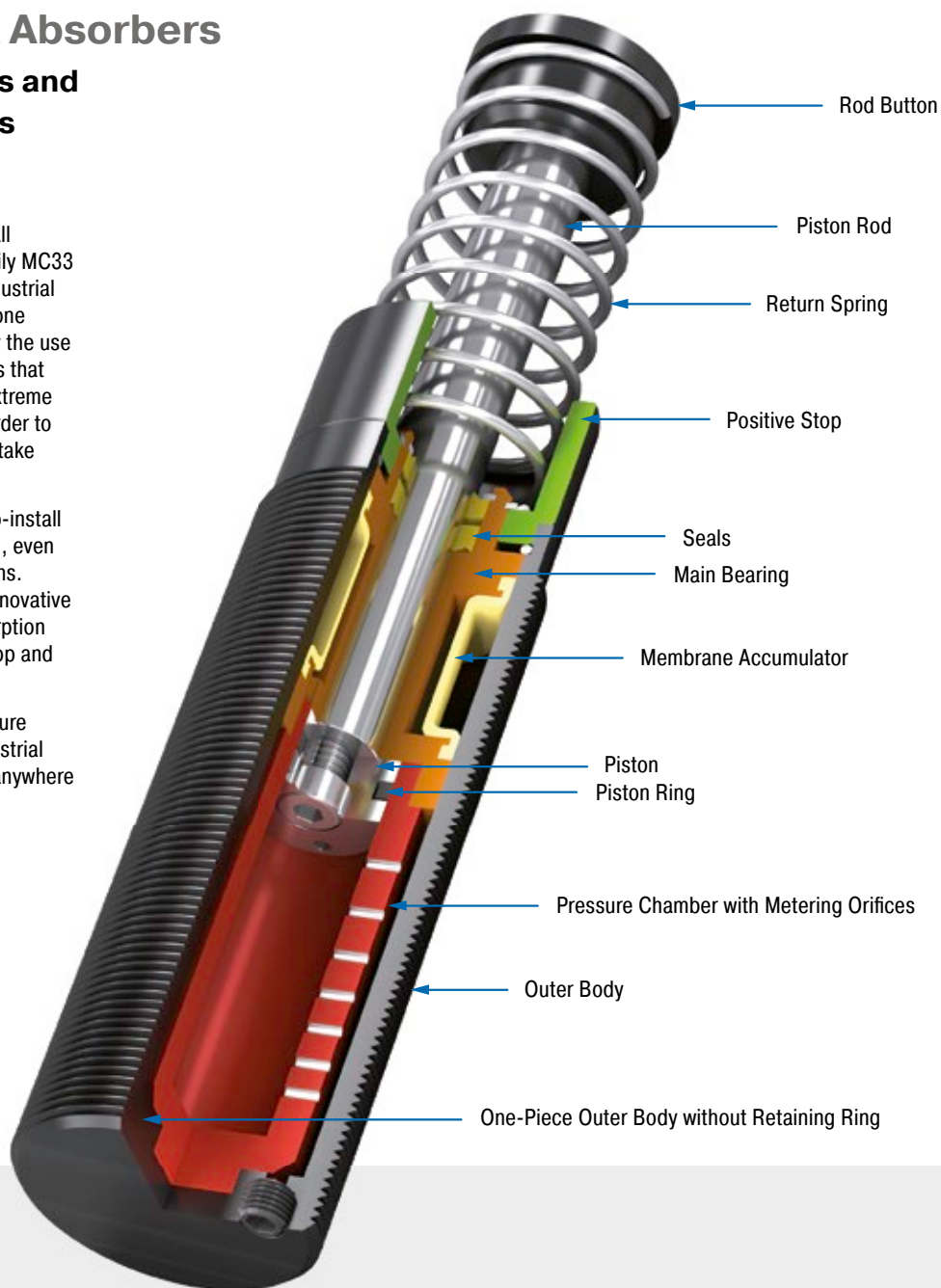
### Industrial Shock Absorbers

#### Extreme temperatures and high cycle frequencies

Further possibilities of use: Just like all MAGNUM types from the product family MC33 to MC64, the LT (low temperature) industrial shock absorbers are also made from one solid piece. They are characterised by the use of special seals and fluids. This means that these versions can even be used at extreme temperatures of  $-50\text{ }^{\circ}\text{C}$  to  $+66\text{ }^{\circ}\text{C}$  in order to safely and reliably damp masses and take away 100 % kinetic energy.

There is no reason why these ready-to-install machine elements should not be used, even under the most unfavourable conditions. Additional benefits are their robust, innovative sealing technology, high energy absorption in a compact design, fixed positive stop and a wide damping range.

Designed for use in extreme temperature ranges, these self-compensating industrial shock absorbers are suitable almost anywhere in plant and mechanical engineering.



#### Technical Data

**Energy capacity:** 155 Nm/Cycle to 5,100 Nm/Cycle

**Impact velocity range:** 0.15 m/s to 5 m/s.  
Other speeds on request.

**Operating temperature range:**  $-50\text{ }^{\circ}\text{C}$  to  $+66\text{ }^{\circ}\text{C}$

**Mounting:** In any position

**Positive stop:** Integrated

**Material:** Outer body: Nitride hardened steel; Piston rod: Hard chrome plated steel; Rod end button: Hardened steel and corrosion-resistant coating; Return spring: Zinc plated or plastic-

coated steel; Accessories: Steel with black oxide finish or nitride hardened

**Damping medium:** Low temperature hydraulic oil

**Application field:** Linear slides, Swivel units, Turntables, Machines and plants

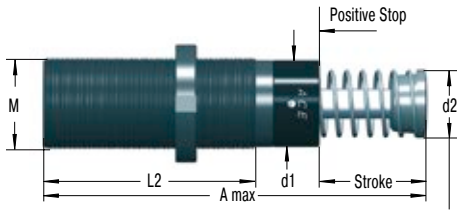
**Note:** A noise reduction of 3 to 7 dB is possible when using the special impact button (PP).

**Safety instructions:** External materials in the surrounding area can attack the seal components and lead to a shorter service life. Please contact ACE for appropriate solution sugges-

tions. Do not paint the shock absorbers due to heat emission.

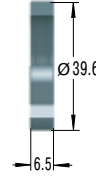
**On request:** Nickel-plated, increased corrosion protection, mounting inside air cylinders or other special options are available on request. Adjustable HT and LT shock absorbers.

### MC33EUM-LT

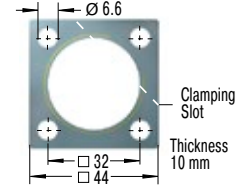


Note: 150 mm stroke model does not include stop collar and positive stop is provided by the rod button (Ø 60 mm)

### NM33 Locking Ring



### QF33 Square Flange



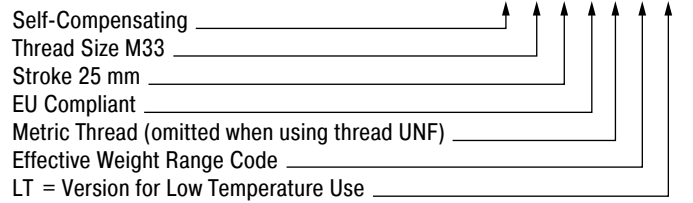
Torque max.: 11 Nm  
Clamping torque: > 90 Nm  
Install with 4 machine screws

The calculation and selection of the most suitable damper should be carried out or be approved by ACE.

### Complete details required when ordering

- Load to be decelerated: m (kg)
- Impact velocity: v (m/s)
- Propelling force: F (N)
- Operating cycles per hour: c (/hr)
- Number of absorbers in parallel: n
- Ambient temperature: °C

### Ordering Example



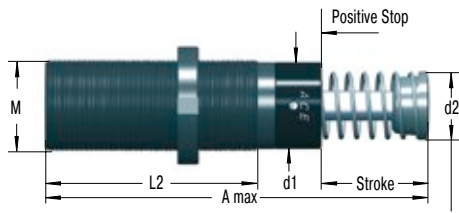
Dimensions							
TYPES	Stroke mm	A max. mm	d1 mm	d2 mm	L2 mm	M	
MC3325EUM-LT	23.2	138	30	25	83	M33x1.5	
MC3350EUM-LT	48.6	189	30	25	108	M33x1.5	

Performance								
TYPES	Max. Energy Capacity		Effective Weight			<sup>2</sup> Return time s	<sup>3</sup> Side Load Angle max. °	Weight kg
	W <sub>3</sub> Nm/cycle	W <sub>4</sub> Nm/h	<sup>1</sup> me min. kg	<sup>1</sup> me max. kg	Hardness			
MC3325EUM-0-LT	155	75,000	3	11	-0	0.08	4	0.45
MC3325EUM-1-LT	155	75,000	9	40	-1	0.08	4	0.45
MC3325EUM-2-LT	155	75,000	30	120	-2	0.08	4	0.45
MC3325EUM-3-LT	155	75,000	100	420	-3	0.08	4	0.45
MC3325EUM-4-LT	155	75,000	350	1,420	-4	0.08	4	0.45
MC3350EUM-0-LT	310	85,000	5	22	-0	0.16	3	0.54
MC3350EUM-1-LT	310	85,000	18	70	-1	0.16	3	0.54
MC3350EUM-2-LT	310	85,000	60	250	-2	0.16	3	0.54
MC3350EUM-3-LT	310	85,000	240	840	-3	0.16	3	0.54
MC3350EUM-4-LT	310	85,000	710	2,830	-4	0.16	3	0.54

<sup>1</sup> The effective weight range limits can be raised or lowered to special order.  
<sup>2</sup> at -50 °C  
<sup>3</sup> For applications with higher side load angles consider using the side load adaptor (BV) pages 74 to 77.

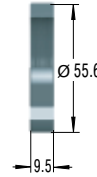
Self-Compensating

MC45EUM-LT

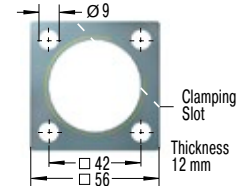


Note: 150 mm stroke model does not include stop collar and positive stop is provided by the rod button (Ø 60 mm)

NM45 Locking Ring



QF45 Square Flange



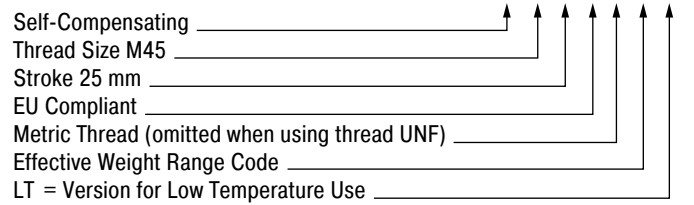
Torque max.: 27 Nm  
Clamping torque: > 200 Nm  
Install with 4 machine screws

The calculation and selection of the most suitable damper should be carried out or be approved by ACE.

Complete details required when ordering

- Load to be decelerated: m (kg)
- Impact velocity: v (m/s)
- Propelling force: F (N)
- Operating cycles per hour: c (/hr)
- Number of absorbers in parallel: n
- Ambient temperature: °C

Ordering Example



Dimensions

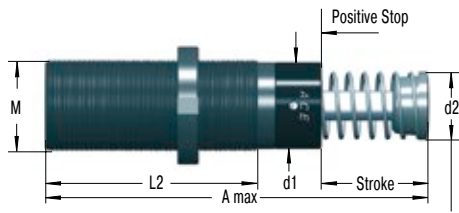
TYPES	Stroke mm	A max. mm	d1 mm	d2 mm	L2 mm	M
MC4525EUM-LT	23.1	145	42	35	95	M45x1.5
MC4550EUM-LT	48.5	195	42	35	120	M45x1.5
MC4575EUM-LT	73.9	246	42	35	145	M45x1.5

Performance

TYPES	Max. Energy Capacity		Effective Weight			Hardness	Return time s	Side Load Angle max. °	Weight kg
	W <sub>3</sub> Nm/cycle	W <sub>4</sub> Nm/h	<sup>1</sup> me min. kg	<sup>1</sup> me max. kg					
MC4525EUM-0-LT	340	107,000	7	27	-0	0.08	4	1.13	
MC4525EUM-1-LT	340	107,000	20	90	-1	0.08	4	1.13	
MC4525EUM-2-LT	340	107,000	80	310	-2	0.08	4	1.13	
MC4525EUM-3-LT	340	107,000	260	1,050	-3	0.08	4	1.13	
MC4525EUM-4-LT	340	107,000	890	3,540	-4	0.08	4	1.13	
MC4550EUM-0-LT	680	112,000	13	54	-0	0.16	3	1.36	
MC4550EUM-1-LT	680	112,000	45	180	-1	0.16	3	1.36	
MC4550EUM-2-LT	680	112,000	150	620	-2	0.16	3	1.36	
MC4550EUM-3-LT	680	112,000	520	2,090	-3	0.16	3	1.36	
MC4550EUM-4-LT	680	112,000	1,800	7,100	-4	0.16	3	1.36	
MC4575EUM-0-LT	1,020	146,000	20	80	-0	0.24	2	1.59	
MC4575EUM-1-LT	1,020	146,000	20	80	-1	0.24	2	1.59	
MC4575EUM-2-LT	1,020	146,000	70	270	-2	0.24	2	1.59	
MC4575EUM-3-LT	1,020	146,000	230	930	-3	0.24	2	1.59	
MC4575EUM-4-LT	1,020	146,000	2,650	10,600	-4	0.24	2	1.59	

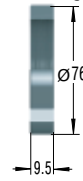
<sup>1</sup> The effective weight range limits can be raised or lowered to special order.  
<sup>2</sup> at -50 °C  
<sup>3</sup> For applications with higher side load angles consider using the side load adaptor (BV) pages 74 to 77.

### MC64EUM-LT

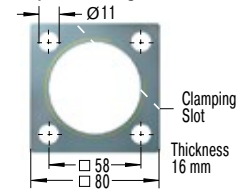


Note: 150 mm stroke model does not include stop collar and positive stop is provided by the rod button (Ø 60 mm)

### NM64 Locking Ring



### QF64 Square Flange



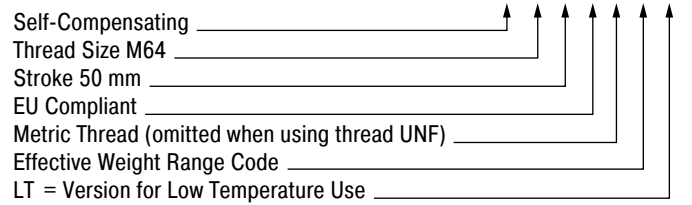
Torque max.: 50 Nm  
Clamping torque: > 210 Nm  
Install with 4 machine screws

The calculation and selection of the most suitable damper should be carried out or be approved by ACE.

### Complete details required when ordering

- Load to be decelerated: m (kg)
- Impact velocity: v (m/s)
- Propelling force: F (N)
- Operating cycles per hour: c (/hr)
- Number of absorbers in parallel: n
- Ambient temperature: °C

### Ordering Example



### Dimensions

TYPES	Stroke mm	A max. mm	d1 mm	d2 mm	L2 mm	M
MC6450EUM-LT	48.6	225	60	48	140	M64x2
MC64100EUM-LT	99.4	326	60	48	191	M64x2
MC64150EUM-LT	150	450	60	48	241	M64x2

### Performance

TYPES	Max. Energy Capacity		Effective Weight			Return time s	Side Load Angle max. °	Weight kg
	W <sub>3</sub> Nm/cycle	W <sub>4</sub> Nm/h	<sup>1</sup> me min. kg	<sup>1</sup> me max. kg	Hardness			
MC6450EUM-0-LT	1,700	146,000	35	140	-0	0.24	4	2.9
MC6450EUM-1-LT	1,700	146,000	140	540	-1	0.24	4	2.9
MC6450EUM-2-LT	1,700	146,000	460	1,850	-2	0.24	4	2.9
MC6450EUM-3-LT	1,700	146,000	1,600	6,300	-3	0.24	4	2.9
MC6450EUM-4-LT	1,700	146,000	5,300	21,200	-4	0.24	4	2.9
MC64100EUM-0-LT	3,400	192,000	70	280	-0	0.68	3	3.7
MC64100EUM-1-LT	3,400	192,000	270	1,100	-1	0.68	3	3.7
MC64100EUM-2-LT	3,400	192,000	930	3,700	-2	0.68	3	3.7
MC64100EUM-3-LT	3,400	192,000	3,150	12,600	-3	0.68	3	3.7
MC64100EUM-4-LT	3,400	192,000	10,600	42,500	-4	0.68	3	3.7
MC64150EUM-0-LT	5,100	248,000	100	460	-0	0.96	2	5.1
MC64150EUM-1-LT	5,100	248,000	410	1,640	-1	0.96	2	5.1
MC64150EUM-2-LT	5,100	248,000	1,390	5,600	-2	0.96	2	5.1
MC64150EUM-3-LT	5,100	248,000	4,700	18,800	-3	0.96	2	5.1
MC64150EUM-4-LT	5,100	248,000	16,000	63,700	-4	0.96	2	5.1

<sup>1</sup> The effective weight range limits can be raised or lowered to special order.

<sup>2</sup> at -50 °C

<sup>3</sup> For applications with higher side load angles consider using the side load adaptor (BV) pages 74 to 77.