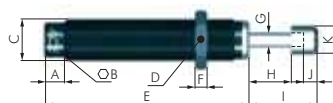
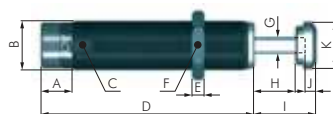


Industrial shock absorbers



TIP Through roller type diaphragm up to 2.5 million strokes possible!



Adjustable shock absorbers

Type MA

Materials: Shock absorber body and accessory: Steel burnished, piston rod: Hardened, stainless steel
Temperature range: 0°C to max. +66°C
Stroke speed: 0.3 to 3.6 m/s
Fixed limit stop: Integrated

Type	Max. energy consumption		Effective mass (me) adjustable	Spring force	Thread	Max. axial deviation*
	Per stroke (W3)	Per hour (W4)				
MA 30 EUM	3.5 Nm	5,650 Nm	0.23 to 15 kg	1 to 5 N	M 8 x 1	2°
MA 50 EUM	5.5 Nm	13,550 Nm	4.5 to 20 kg	3 to 6 N	M 10 x 1	2°
MA 35 EUM	4.0 Nm	6,000 Nm	5.9 to 57 kg	5 to 11 N	M 12 x 1	2°
MA 150 EUM	22.0 Nm	35,000 Nm	1.0 to 109 kg	3 to 5 N	M 14 x 1.5	5°
MA 225 EUM	25.0 Nm	45,000 Nm	2.3 to 226 kg	5 to 10 N	M 20 x 1.5	2°
MA 600 EUM	68.0 Nm	68,000 Nm	9.0 to 1,360 kg	10 to 30 N	M 25 x 1.5	2°
MA 900 EUM	100.0 Nm	90,000 Nm	14 to 2,040 kg	10 to 35 N	M 25 x 1.5	1°

* at higher axial deviation use side load adapters (type BV) (see page 505)

Main dimensions - adjustable shock absorbers

Type MA

Type	A	B	C	D	E	F	Ø G	H/stroke	I	J	Ø K
MA 30 EUM	4.1	M 8 x 1	---	48.0	3	SW 10	2.5	8.0	13.1	2.1	6.4
MA 50 EUM	5.1	M 10 x 1	---	50.0	4	SW 12	3.2	7.0	14.9	3	7.7
MA 35 EUM	5.0	M 12 x 1	---	66.0	5	SW 14	3.2	10.0	18.0	3	7.7
MA 150 EUM	7.5	M 14 x 1.5	SW 12	70.0	6	SW 17	4.8	12.5	22.5	4.7	12.0
MA 225 EUM	13.5	M 20 x 1.5	SW 18	88.0	8	SW 23	4.8	19.0	30.0	4.6	17.0
MA 600 EUM	16.5	M 25 x 1.5	SW 23	106.6	10	SW 30	6.3	25.4	36.4	4.6	23.0
MA 900 EUM	16.5	M 25 x 1.5	SW 23	138.0	10	SW 30	6.3	40.0	51.0	4.6	23.0

Self-adjusting shock absorbers

Type MC (5-75)

Materials: Shock absorber body and accessory: Steel burnished, piston rod hardened, stainless steel
Temperature range: 0°C to max. +65°C
Stroke speed: 0.15 to 5 m/s (0.15 to 1.8 m/s to MC 9 ...)
Fixed limit stop: Integrated

Type	Max. energy consumption		Effective mass (me)	Spring force	Thread	Max. axial deviation*
	Per stroke (W3)	Per hour (W4)				
MC 5 EUM1B	0.68 Nm	2,040 Nm	0.5 to 4.4 kg	1 to 5 N	M 5 x 0.5	2°
MC 5 EUM2B	0.68 Nm	2,040 Nm	3.8 to 10.8 kg	1 to 5 N	M 5 x 0.5	2°
MC 5 EUM3B	0.68 Nm	2,040 Nm	9.7 to 18.7 kg	1 to 5 N	M 5 x 0.5	2°
MC 9 EUM1B	1.0 Nm	2,000 Nm	0.6 to 3.2 kg	1.38 to 3.78 N	M 6 x 0.5	2°
MC 9 EUM2B	1.0 Nm	2,000 Nm	0.8 to 4.1 kg	1.38 to 3.78 N	M 6 x 0.5	2°
MC 30 EUM1	3.5 Nm	5,600 Nm	0.4 to 1.9 kg	0.9 to 4.45 N	M 8 x 1	2°
MC 30 EUM2	3.5 Nm	5,600 Nm	1.8 to 5.4 kg	0.9 to 4.45 N	M 8 x 1	2°
MC 30 EUM3	3.5 Nm	5,600 Nm	5.0 to 15 kg	0.9 to 4.45 N	M 8 x 1	2°
MC 25 EUM1	2.8 Nm	22,500 Nm	0.7 to 2.2 kg	3 to 6 N	M 10 x 1	2°
MC 25 EUM2	2.8 Nm	22,500 Nm	1.8 to 5.4 kg	3 to 6 N	M 10 x 1	2°
MC 25 EUMH	2.8 Nm	22,500 Nm	4.6 to 13.6 kg	3 to 6 N	M 10 x 1	2°
MC 75 EUM1	9.0 Nm	28,200 Nm	0.3 to 1.1 kg	4 to 9 N	M 12 x 1	2°
MC 75 EUM2	9.0 Nm	28,200 Nm	0.9 to 4.8 kg	4 to 9 N	M 12 x 1	2°
MC 75 EUM3	9.0 Nm	28,200 Nm	2.7 to 36.2 kg	4 to 9 N	M 12 x 1	2°

* at higher axial deviation use side load adapters (BV) (see page 505)

Main dimensions - small shock absorbers

Type MC (5-75)

Type	A	B	C	D	E	F	Ø G	H/stroke	I	J	Ø K
MC 5 EUM	2.5	---	M 5 x 0.5	SW 8	26.0	2.5	1.5	4.1	8.1	1	3.3
MC 9 EUM	2.5	---	M 6 x 0.5	SW 8	26.0	2.5	2.0	5.0	10.0	2	4.8
MC 30 EUM	4.1	---	M 8 x 1	SW 10	40.9	3.0	2.5	8.0	13.1	2	6.4
MC 25 EUM	5.0	SW 5	M 10 x 1	SW 12	43.0	4.0	3.2	6.6	14.6	3	7.6
MC 75 EUM	5.0	---	M 12 x 1	SW 14	52.0	5.0	3.2	10.0	18.0	3	7.6

Self-adjusting shock absorbers

Type MC (150-600)

Materials: Shock absorber body and accessory: Steel burnished, piston rod hardened, stainless steel, roller type diaphragm: Ethylene-propylene
Temperature range: 0°C to max. +65°C
Stroke speed: 0.08 to 6 m/s
Fixed limit stop: Integrated

Type	Max. energy consumption		Effective mass (me)	Spring force	Thread	Max. axial deviation*
	Per stroke (W3)	Per hour (W4)				
MC 150 EUM	20 Nm	34,000 Nm	0.9 to 10 kg	3 to 5 N	M 14 x 1.5	4°
MC 150 EUMH	20 Nm	34,000 Nm	8.6 to 86 kg	3 to 5 N	M 14 x 1.5	4°
MC 150 EUMH2	20 Nm	34,000 Nm	70.0 to 200 kg	3 to 5 N	M 14 x 1.5	4°
MC 225 EUM	41 Nm	45,000 Nm	2.3 to 25 kg	4 to 6 N	M 20 x 1.5	4°
MC 225 EUMH	41 Nm	45,000 Nm	23.0 to 230 kg	4 to 6 N	M 20 x 1.5	4°
MC 225 EUMH2	41 Nm	45,000 Nm	180.0 to 910 kg	4 to 6 N	M 20 x 1.5	4°
MC 600 EUM	136 Nm	68,000 Nm	9.0 to 136 kg	5 to 9 N	M 25 x 1.5	2°
MC 600 EUMH	136 Nm	68,000 Nm	113.0 to 1,130 kg	5 to 9 N	M 25 x 1.5	2°
MC 600 EUMH2	136 Nm	68,000 Nm	400.0 to 2,300 kg	5 to 9 N	M 25 x 1.5	2°

* at higher axial deviation use side load adapters (BV) (see page 505)

Exceeding W4: (max. energy absorbed per hour expressed in Nm/h) is possible when switched off temporarily or the shock absorber is cooled with the cylinder exhaust air (take note of the approved heating).

All data are considered to be unbinding reference values. We accept no liability for data selection that is not confirmed in writing. Pressure data refer, if not otherwise indicated, to liquids of Group II at +20°C.