

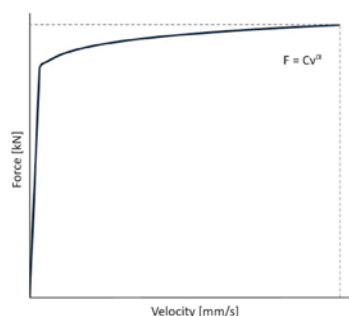


FLUID VISCOUS DAMPER MC - MCL

The Fluid Viscous Damper (FVD) MC - MCL type is a velocity dependent device that dissipates energy under impulsive loads and can allow slow displacements with low reaction force or restrict them.

FLUID VISCOUS DAMPER MCL TYPE

The MC - MCL type fluid viscous damper (FVD) is a velocity dependent device whose behavior depends on speed according to the following law:



$$F = Cv^\alpha$$

Where

F is the force

C is the damping constant

v is the velocity

α is a value between 0.08 and 0.5.^(a)

The behaviour of MC - MCL type is symmetrical with respect to the intermediate position in both reaction and displacement. This functionality is due to a piston inside a steel jacket that divides two chambers containing hydraulic fluid connected via a valve.

Two spherical hinges connect it to the structure, allowing rotation around any axis.

The device acts like a connecting rod, transmitting forces only along its axis, and can be equipped with an additional valve (MCL type) to allow minimal reaction during slow movements. The stroke depends on long-term effects, temperature, and seismic activity.

^(a) The applicable range of the value depends on the velocity.

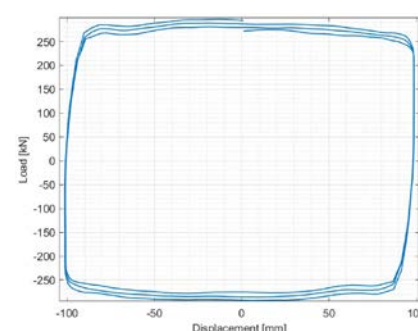
KEY TO LABEL

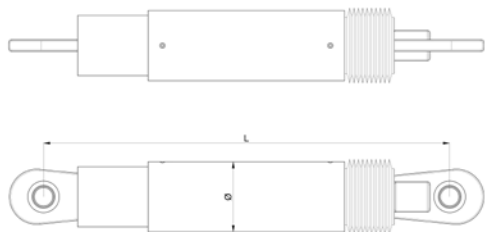
MCL 1000/200

MCL with 1000 kN of axial load and stroke of ± 100 mm

		DISPOSITIVE TYPE	YEAR	JOB	F_d [kN]	s_d [mm]
		DISPOSITIVE CODE	ORDER	SERIAL NUMBER	RANK	

 MC - MCL devices are CE marked according to EN 15129





KEY LABEL

- F** axial load
d maximum displacement ($\pm$)
L distance pin-to-pin
Ø diameter of the cylinder

ID	F [kN]	d [mm]	L [mm]	Ø [mm]
MCL 75/200	75	100	700	115
MCL 100/140	100	70	950	120
MCL 100/200	100	100	1000	120
MCL 100/300	100	150	1200	120
MCL 150/120	150	60	620	130
MCL 150/200	150	100	720	130
MCL 180/200	180	100	950	160
MCL 200/120	200	60	700	160
MCL 200/200	200	100	780	160
MCL 200/360	200	180	940	160
MCL 240/160	240	80	740	170
MCL 250/160	250	80	700	170
MCL 250/200	250	100	740	170
MCL 250/350	250	175	900	170
MCL 260/140	260	70	950	160
MCL 280/140	280	70	730	170
MCL 300/140	300	70	750	170
MCL 300/300	300	150	910	170
MCL 300/400	300	200	1000	170
MCL 330/100	330	50	730	180
MCL 400/200	400	100	850	110
MCL 500/50	500	25	785	192
MCL 500/200	500	100	850	192
MCL 500/350	500	175	1125	210
MCL 500/550	500	275	2040	210
MCL 600/200	600	100	610	200
MCL 670/300	670	150	1220	250
MCL 700/240	700	120	800	200
MCL 800/220	800	110	900	230
MCL 1000/200	1000	100	1600	250
MCL 1000/550	1000	275	2240	270
MCL 1100/600	1100	300	2300	270
MCL 1260/500	1260	250	2000	330
MCL 1500/360	1500	180	1600	330
MCL 1500/500	1500	250	1800	350
MCL 1700/1900	1700	950	5480	280
MCL 2000/200	2000	100	2300	420
MCL 2000/300	2000	150	2800	420
MCL 2000/900	2000	450	3500	430
MCL 2500/1600	2500	800	4600	430

The dimensions listed in the table refer to an α value range between 0.08 and 0.17. The devices can be designed with different characteristics.

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