



SHOCK TRANSMITTER UNIT ROD

The Shock Transmitter Unit (STU) ROD type is a temporary fluid dynamic restraint system that allows slow displacements with low reaction force and acts as a fixed constraint under impulsive loads.

SHOCK TRANSMITTER UNIT ROD TYPE

The Shock Transmitter Unit (ROD type) is a temporary fluid dynamic restraint system that allows slow displacements with a low reaction force and acts as a fixed constraint under impulsive loads. Its behaviour 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. For slow movements, the fluid's viscous properties allow displacement; for impulsive loads, the valve between the chambers obstructs the flow, blocking the piston. Two spherical hinges connect it to the structure, allowing rotation around any axis. This results in a constraint similar to a fixed one with minimal deformation (few millimeters) or an elastic behaviour, depending on the project's requirements. The device behaves like a connecting rod, transmitting forces only along its axis. The stroke depends on slow actions such as temperature, shrinkage, creep, or any other relative displacement affecting the connected parts, including displacement caused by fluid compressibility during dynamic actions.

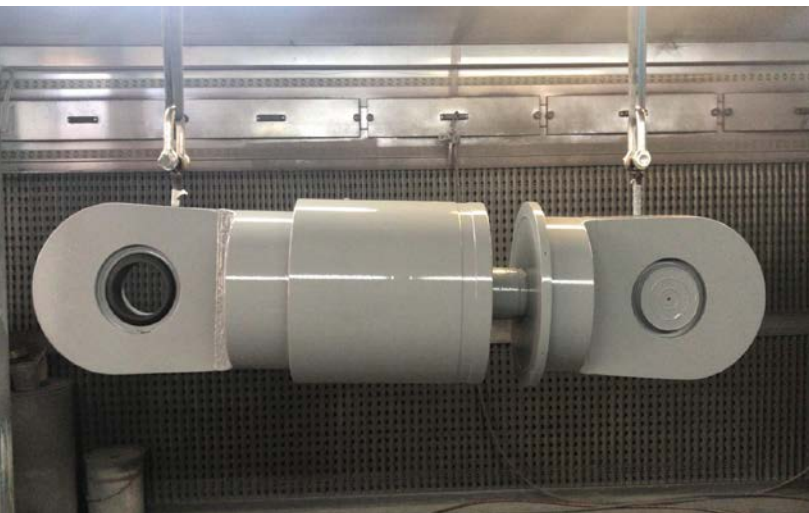
KEY TO LABEL

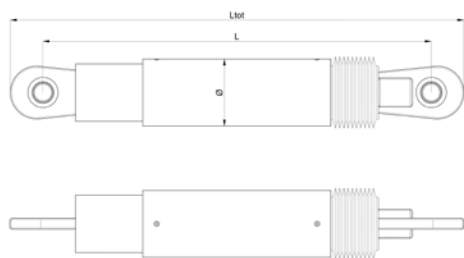
ROD 1000/200

ROD 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	

 ROD 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
L_{TOT} total length

ID	F [kN]	d [mm]	L [mm]	Ø [mm]	L _{TOT} [mm]
ROD 100/50	100	± 25	680	120	770
ROD 100/100	100	± 50	730	120	820
ROD 100/200	100	± 100	830	125	920
ROD 150/100	150	± 50	750	140	850
ROD 150/200	150	± 100	850	140	950
ROD 250/100	250	± 50	770	150	870
ROD 250/200	250	± 100	870	150	970
ROD 300/200	300	± 100	870	160	970
ROD 500/100	500	± 50	910	200	1000
ROD 500/200	500	± 100	1050	200	1200
ROD 750/200	750	± 100	1100	200	1200
ROD 800/100	800	± 50	980	220	1200
ROD 800/200	800	± 100	1100	220	1400
ROD 1000/100	1000	± 50	1000	230	1300
ROD 1000/200	1000	± 100	1100	230	1400
ROD 1500/100	1500	± 50	1270	300	1570
ROD 1500/200	1500	± 100	1370	300	1670
ROD 2000/200	2000	± 100	1550	360	1950
ROD 2500/200	2500	± 100	1600	400	2000
ROD 3000/200	3000	± 100	2000	420	2600
ROD 3500/200	3500	± 100	2000	470	2600
ROD 3500/300	3500	± 150	2110	470	2700
ROD 4000/200	4000	± 100	2300	470	2900
ROD 4000/300	4000	± 150	2400	470	3000
ROD 5000/200	5000	± 100	2730	520	3300

The devices can be designed with different loads and displacements.

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