

DESCRIPTION

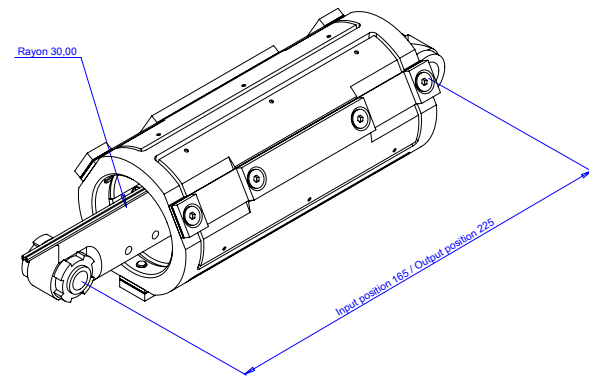
CEDRAT TECHNOLOGIES, in collaboration with a large industrial group, has developed an Active Damper. Passive dampers are commonly used in the industry to damp undesired vibrations. In some cases, the performances of industrial machines and subsystems are limited by the dampers'. The active damper aims at increasing the performances of damping ratio while being compatible in terms of interface and cost expectations.

This magnetic damper has the ability to brake dynamic vibration forces in a range of 200N in less than 15ms: This is faster than Magnetorheological dampers and more efficient than proof mass actuators. The Damper design is also compatible with mass production as well as high quality standard such as aerospace and defence.

The damping is achieved through a controllable magnetic braking system so called MBS200. The breaking force is linear with the input current.



Fig. 1.a: View of MBS200



Response of the damper (off/on) when its load is submitted to a cycling force

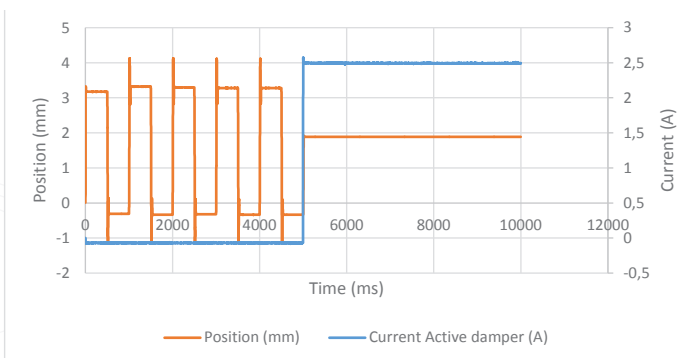


Fig. 1.b: Cycling motion up to damper is on @t=5000ms

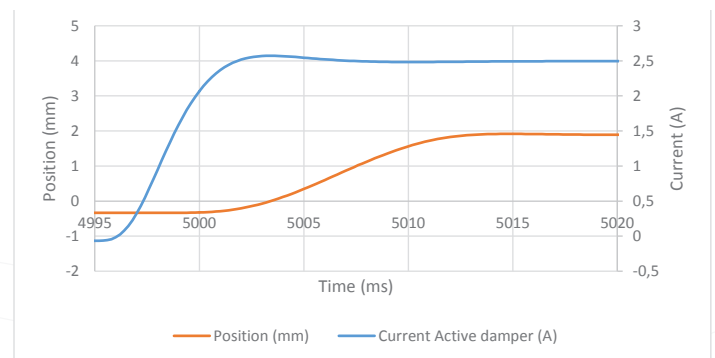


Fig. 1.c: Zoom @t=5000ms showing the damper response time

PARAMETER	UNIT	VALUE
Force	N	200N
Force constant	N/A	60
Time response	ms	15 ms from 0 to 150N
Size	mm	Dia 60x200
Stroke	mm	60
Resistance	Ohm	1.2 @20°C