

**200 N**



## AIM OF THE EXCITERS

The aim of the exciters is to transform the current produced by an amplifier into a proportional force which, applied on appropriated points of a structure, sends a vibratory movement to this structure.

## MAIN FEATURES

The magnetic circuit of a ticonal cylindrical permanent magnet generates a magnetic field in which the moving coil is suspended by the circular membranes insuring an important longitudinal movement and an extremely weak transverse movement. The transverse movement is limited by mechanical protection with the possibility to visualise on the amplifier any lateral friction of the moving coil on the centring tool.

The exciter type EX 220 SC includes a fan directly powered by the power amplifier to insure the cooling of the moving coil.

A multicoloured luminous scale allows, at any time, the visualisation of the moving coil median position in the magnetic circuit when connecting the exciter to the structure and the indication of the movement amplitude. This visualisation is repeated on the front panel of the associated amplifier.

## APPLICATIONS

The exciter type EX 220 SC is especially designed for most of vibration tests thanks to its volume, its weight and its technical features. Associated with an amplifier A 648 (400 Watt), this exciter supplies a force of 200 N and an acceleration without load of about  $650 \text{ m/s}^2$ , with an harmonic distortion less than 1% in a frequency range between DC and 2,700 Hz.

# TECHNICAL FEATURES

Nominal force	200 N	
Maximum current with ventilation	20 A. peak	
Maximum current without ventilation	10 A. peak	
Nominal displacement	± 10 mm	
Maximum mechanical displacement	± 12 mm	
Force/current linearity	> 0.5%	
Variation of the force according to the coil position in the air gap	at 50% of the stroke : < 1.5% at 75 of the stroke : < 4%	
Maximum admissible transverse force	75 N	
Maximum resistance of the connection cable	0.1 Ohm	
Associated amplifier	A 648 S (400 W)	
Magnetic circuit	Cylindrical ticonal permanent magnet	
Cooling	By included fan 220 V 50/60 Hz	
Electrical connection	Souriau socket 840.43.132 and Cannon DE 9P	
Mechanical connection	Threaded rod M6	
Total weight	24 kg	
	<b>COPPER COIL (STANDARD)</b>	<b>ALU COIL</b>
Force factor	10.2 N/A	9.6 N/A
Coil resistance at 20°C	0.40	0.55
Armature weight	312 grams	195 grams
Maximum acceleration without load	650 m/s <sup>2</sup>	980 m/s <sup>2</sup>
Moving system suspension frequency in Hz		
<u>Without load</u>	13.1	16.2
<u>With load of 1.870 kg</u>	5.2	5.3
Suspension stiffness	2.11 N/mm	2.02 N/mm
First resonance frequency without load	4,600 Hz	5,300 Hz
First resonance frequency with load	2,020 Hz	2,800 Hz
Coil impedance at 500 Hz and 10 m cable	1.2 Ohm	1.3 Ohm
Working frequency range at 100% of the force	DC to 2,800 Hz	DC to 1,600 Hz
Working frequency range at 75% of the force	DC to 5,800 Hz	DC to 5,200 Hz

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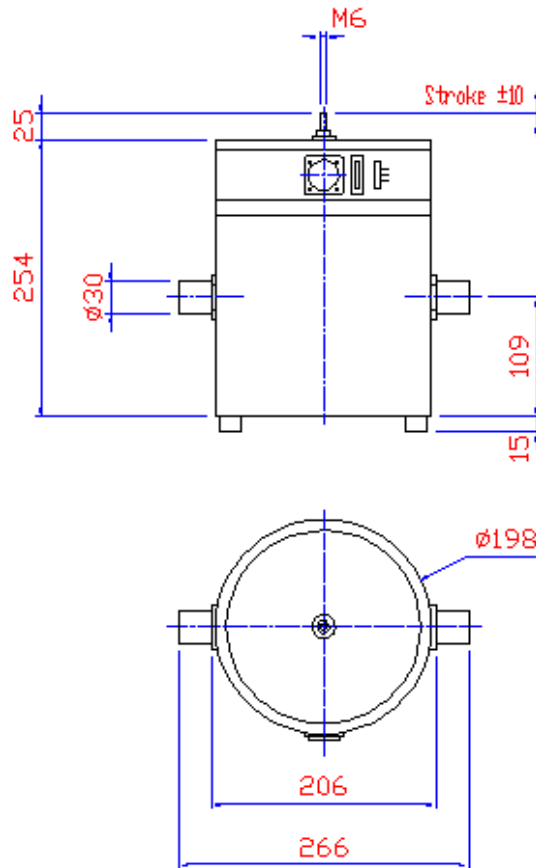


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### OPTIONAL ACCESSORIES:

- Power cables references CL 220-5 (5 meters), CL 220-10 (10 meters), CL 220-20 (20 meters), CL 220-30 (30 meters)
- Position cables references CL-S-5 (5 meters), CL-S-10 (10 meters), CL-S-20 (20 meters), CL-S-30 (30 meters)
- Mechanical link reference L25; Mechanical adjustable link reference LMA 200;
- Linear elastic cord suspension system reference S 220 L; linear elastic cord suspension system for shaker with trunnion reference S 220 BL;
- Trunnion reference BF 220
- Seismic support reference SS 331
- Stirrup reference ES 220

## DIMENSIONS



EX220 SC EXCITER

200N

Dimensions in mm.

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