



Dimensions in mm

## 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 most powerful of our exciters, the EX 5080 exciter, has a magnetic circuit made from field coils powered by direct current in order to obtain a magnetic field in the air gap of about 17,000 gauss.

The moving system is guided in such a way as to obtain a very big longitudinal movement with a minimum transverse movement.

The ventilation of the exciter is insured by a ventilator working in depression or by industrial compressed air able to deliver 90 m<sup>3</sup>/hour at a pressure of 2 bars. The customer will choose the type of ventilation system when ordering. The later changeover from one system to another one implies the replacement of the security manostat from pressure to depression or vice versa.

A 10 element multicolour and luminous scale allows at any moment the visualisation of the moving coil median position in the magnetic circuit and the indication of the movement amplitude during the tests. This visualisation is repeated on the front panel of the associated amplifier.

The excitation of the field coils is insured by a power supply regulated in direct current delivering 8 A at a voltage between 90 and 125 V.

# APPLICATIONS

The EX 5080 exciter with the amplifier A 709 (4,000 W) supplies a force of 5,000 N for an acceleration without load at about 950 m/s<sup>2</sup> and a maximum frequency of 600 Hz at 75% of the power with an harmonic distortion less than 1%. The use of the EX 5080 exciter is advised in any test on heavy structures needing very big forces.

# TECHNICAL FEATURES

Nominal force	5,000 N
Force factor	63 N/A
Maximum peak current	80 A
Maximum displacement	± 20 mm
Coil resistance at 20° C	0.28 Ohm
Moving coil weight	5,300 grams
Maximum acceleration without load	940 m/s <sup>2</sup>
First resonance frequency without load	2,300 Hz
First resonance frequency with load <sup>1</sup>	990 Hz
Coil impedance at 500 Hz	1.2 Ohm
Associated amplifier	A 709 (4,000 W)
Maximum frequency of use <sup>2</sup>	600 Hz
Field coil resistance at 20° C	12.2 Ohm
Magnetization direct current	8 A
Cooling system	With external turbine or compressed air
Maximum connection cable resistance	0.02 Ohm
Electric connection	With Souriau socket 840 43 870, Canon DE9S
Total weight	650 kg
Dimensions	See sketch

### OPTIONAL ACCESSORIES:

- Power cables references CL 5080-10 (10 meters), CL 5080-20 (20 meters), CL 5080-30 (30 meters)
- Position cables references CL-S-10 (10 meters), CL-S-20 (20 meters), CL-S-30 (30 meters)
- Mechanical link reference L41
- Linear elastic cord suspension system reference S 5080 L
- Trunnion reference BF 5080; Stirrup piece reference ES 5080

<sup>1</sup> Test weight = 10.6 kg

<sup>2</sup> With associated amplifier at 75% of the force and 1% of distortion

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