



ESTEC Test Centre – Facility Performances summary

Vibration Facilities

Name	Max Force	Max specimen weight	Max interface size	Max acceleration w/o load	Frequency Range
80 kN	80 kN	900 kg	diam. 500 mm	100 g	3-2500 Hz
80 kN + head expander	80 kN	800 kg	Diam. 945 mm	50 g	3-2000 Hz
80 kN + slip table	80 kN	2000 kg	1200x1250 mm	33 g	3-2000 Hz
160 kN	160 kN	1350 kg	Diam 590 mm	100 g	3-2000 Hz
160 kN + head expander	160 kN	2000 kg	Diam. 1108 mm	30 g	3-2000 Hz
320 kN + slip table	320 kN	10,000 kg	3000x3280 mm	19 g	3-2000 Hz
640 kN + head expander	640 kN	10,000 kg	3230x3230 mm	20 g	3-2000 Hz
HYDRA	2520 kN	22,500 kg	5500x5500 mm	5 g	1-100 Hz

Acoustic Facilities

Chamber dimension	11x9x16.4 m [W xDxH]
Chamber volume	1670 m ³
Horn configuration	25 Hz, 35 Hz, 80 Hz, 160 Hz
Max OASPL	154.5 dB OASPL
Acoustic power	120 kW
Frequency range	20-16,000 Hz

Mechanical Data Handling

Total capacity	512 channels
Maximum no of charge channels	344 channels
Maximum no of ICV/V channel	260 channels
Maximum no of strain gauges channels	80 channels
Maximum sampling frequency	200 kHz

Variety of sensors (accelerometers, load cells, stain-gauges, microphones,...) available

Thermal Facilities

name	volume	Length	diameter	Lower T	Upper T	Thermal Channels	Vacuum limit	Sun diameter	Sun intensity
VTC 1.5	10 m ³	2.5 m	1.5 m	100 K	423 K	2	< 5e-6 mbar		
Phenix	160 m ³	10 m	4.5 m	100 K	373 K	6	< 5e-6 mbar		
LSS	2300 m ³	10 m	9.3 m	100 K	350 K	2	< 5e-6 mbar	6 m	2800 W/m ²

Versatile systems for all standard thermal sensors acquisition and power supplies control available

Mass Properties Measurement Facilities

Name	Measurement	Max specimen weight
WM50/6	CoG + Mol	2300 kg
M80 + MPMA	CoG + Mol	5000 kg
WR12	CoG	63 kg
M1	Mol	10 kg
M2	Mol	40 kg
E5	Dyna. Balancing	2000 kg
E6	Dyna. balancing	4000 kg
Weight Scales	Weight	3 kg – 6000 kg

EMC facility

Chamber dimension	10 x 6 x 9 m [W xDxH]
Conducted emission	20 Hz to 500 MHz
Radiated emission	20 Hz to 40 GHz
Conducted susceptibility	20 Hz to 100 MHz
Radiated susceptibility	20 Hz to 40 GHz
Time domain	Up to 500 MHz
Electro Static discharge	Direct / indirect