



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Fluid Control Research Institute, Kanjikode West, Palakkad, Kerala
Accreditation Standard ISO/IEC 17025: 2005
Certificate Number TC-7402 (in lieu of T-0027) **Page 7 of 11**
Validity 31.05.2018 to 30.05.2020 **Last Amended on** 16.08.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<u>ELECTRONICS TESTING</u>				
1.	ENVIRONMENTAL TEST FACILITY			
1.	IT Equipment /Domestic Electronic Appliances & Accessories/ Power Supplies & Stabilizers/Electronic Components & Equipment Sub Assemblies/Medical, Electrical & Mechanical Equipment	Cold (Low Temperature)	IS 9000 (Part 2) MIL STD 810G QM333 RTCA DO-160G SAE J1455 JSS 55555 JSS 50101 GR-63 ETSI-300 019 - 2 - 1 ETSI-300 019 - 2 - 2 ETSI-300 019 - 2 - 3 ETSI-300 019 - 2 - 4 IEC 60068-2-1 ISO 16750-4	Ambient to (-) 40°C Ramp rate : 3.0°C/Minute
		Dry Heat (High Temperature)	IS 9000 (Part 3) IEC 60068-2-2 including Amend 1&2 MIL Std 810G QM333 RTCA DO-160G SAE J1455 JSS 55555 JSS 50101 GR-63 ETSI-300 019 - 2 - 1 ETSI-300 019 - 2 - 2 ETSI-300 019 - 2 - 3 ETSI-300 019 - 2 - 4 ISO 16750-4	Ambient to +180°C Ramp rate: 3.0°C/Minute

Itri Saxena
Convenor

Alok Jain
Program Manager



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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Temperature Cycling Test	IS 9000 (Part 14) IEC 60068-2-14 JSS 55555 QM333	(-) 40°C to 180°C Ramp rate : 3.0°C/Minute
		Damp Heat (Steady State)	IS 9000 (Part 4) QM333 RTCA DO-160G SAE J1455 MIL STD 810G JSS 55555 JSS 50101 GR-63 ETSI-300 019 - 2 - 1 ETSI-300 019 - 2 - 2 ETSI-300 019 - 2 - 3 ETSI-300 019 - 2 - 4 IEC 60068-2-67 IEC 60068-2-78 ISO 16750-4	Temperature range: 20°C to 90°C, Humidity range: 10% to 95% RH
		Damp Heat (Cyclic)	IS 9000 (Part 5) IEC 60068-2-30 MIL Std 810G ASTM D2247 QM333 RTCA DO-160G SAE J1455 JSS 55555 JSS 50101 ETSI-300 019 - 2 - 1 ETSI-300 019 - 2 - 2 ETSI-300 019 - 2 - 3 ETSI-300 019 - 2 - 4 ISO 16750-4	Temperature range: 20 °C to 90 °C, Humidity range: 10 % to 95 % RH.

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		Composite Temperature & Humidity	IS 9000 (Part 6) RTCA DO-160G SAE J1455 MIL Std 810G ISO 16750-4 IEC60068-38	Temperature range: 20 °C to 90 °C, Humidity range: 10 % to 95 % RH.
		Vibration	IEC 60068-2-6 IS 9000 (Part 8) MIL Std 810G QM333 SAE J1455 IEC 60255-21-1 RTCA DO-160G JSS 55555, JSS 50101 GR-63 IEC 60068-2-64 ETSI-300 019 - 2 -1 ETSI-300 019 - 2 -2 ETSI-300 019 - 2 -3 ETSI-300 019 - 2 -4 ISO 16750-4 IEC 61373	Waveform type : Sine, Random, Discrete Sine, Sine on Random, Random on Random Freq Range: 5 to 2000 Hz Acceleration: Sine: upto80g pk, Random: upto 40 g- rms Displacement: upto 2.0 Inch pk-pk Velocity: upto1.4 m/s pk
		Shock & bump	IEC 60068-2-27 & 29 IS 9000 (Part 7) MIL Std 810 G RTCA DO-160G SAE J1455 IEC60255-21-2 JSS 55555, JSS 50101 ETSI-300 019 - 2 -1 ETSI-300 019 - 2 -2 ETSI-300 019 - 2 -3 ETSI-300 019 - 2 -4 IEC 60068-2-29	Pulse shape: Half Sine, Trapezoidal, Saw tooth Pulse Amplitude: upto100g pk Pulse width: 3 to 30 mSec

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			ISO 16750-4 IEC 61373	
		Determination of Sound Pressure/ Sound Power Level	IEC 534-8-1 ISA 75.07 ISO 1680 ISO 7779, ISO 11203, ISO 3745, ISO 3744	Lowest cut off frequency - 100Hz. Frequency range : One third octave mid band frequency between 100 and 20000 Hz Ambient Noise Level: 20 dBA
		IP tests (Dust & Water)	IP test as per IEC 610529 IP 5X, 6X IP X3, X4 IP X5, IP X6, IPX7, IPX8	Chamber size: 800x800x800 mm Maximum size 200x200x200 mm --
2.	Rotating Electrical & Mechanical Machineries	Vibration Measurements	ISO 10816 Part 1 to 6	Frequency range : 2 Hz to 5000 Hz

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<u>ELECTRONICS TESTING</u>				
AT-SITE				
I. ENVIRONMENTAL TEST FACILITY				
1.	IT Equipment /Domestic Electronic Appliances & Accessories/Power Supplies & Stabilizers/Electronic Components & Equipment Sub Assemblies/ Medical, Electrical & Mechanical Equipment	Determination of Sound Pressure/ Sound Power Level	IEC 534-8-1 ISA 75.07 ISO 1680, ISO 7779, ISO 11203, ISO 3744	Frequency range : One third octave mid band frequency up to 20000 Hz
2.	Rotating Electrical & Mechanical Machineries	Vibration Measurements	ISO 10816 (Part 1 to 6)	Frequency range : 2 Hz to 5000 Hz

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