National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

FLUID CONTROL RESEARCH INSTITUTE

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

KANJIKODE WEST, PALAKKAD, KERALA, INDIA

in the field of

CALIBRATION

Certificate Number: CC-2395

Issue Date: 01/07/2022 **Valid Until:** 30/06/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : FLUID CONTROL RESEARCH INSITUTE

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

SCOPE OF ACCREDITATION

Laboratory Name :	FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2395	**Page No**	1 of 86
Validity	01/07/2022 to 30/06/2024	**Last Amended on**	15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 1kHz to 10kHz	Using 8½ DMM by Direct Method	1 A to 10 A	0.11 % to 0.31 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 1kHz to 10kHz	Using 8½ DMM by Direct Method	10 mA to 1 A	0.26 % to 0.11 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 45Hz to 1kHz	Using 8 ½ Digital Multimeter by Direct Method	1 A to 20 A	0.098 % to 0.12 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 45Hz to 1kHz	Using 8 ½ Digital Multimeter by Direct Method	100 µA to 1 A	0.098%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 2 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Power 50Hz Single phase @UPF 60V to 240V and 0.5A to 20A	Using Digital Power Meter by Direct Method	30 W to 4.8 kW	1.0%
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 100kHz to 1MHz	Using 8 ½ Digital Multimeter by Direct Method	1 V to 10 V	3.5%
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 1kHz to 100kHz	Using 8 ½ Digital Multimeter by Direct Method	100 mV to 100 V	0.10%
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 20Hz to 1kHz	Using 8 ½ Digital Multimeter by Direct Method	10 mV to 100 mV	0.11 % to 0.02 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 20Hz to 1kHz	Using 8 ½ Digital Multimeter by Direct Method	100 mV to 1000 V	0.02 % to 0.022 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 3 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1 kHz	Using Multiproduct Calibrator by Direct Method	10 A to 20 A	0.10 % to 0.17 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 5 kHz	Using Multifunction Calibrator by Direct Method	1 A to 10 A	0.1 % to 0.32 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 5 kHz	Using Multifunction Calibrator by Direct Method	1 mA to 1 A	0.15 % to 0.1 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct Calibrator with current coil by Direct Method	20 A to 1000 A	0.58 % to 0.35 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 1kHz to 100 kHz	Using Multiproduct Calibrator by Direct Method	10 V to 100 V	0.15 % to 0.3 %
15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 1kHz to 100 kHz	Using Multiproduct Calibrator by Direct Method	30 mV to 10 V	0.45 % to 0.15 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 4 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	1 mV to 10 mV	0.75 % to 0.12 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	100 mV to 1 V	0.019 % to 0.027 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 20 Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	100 V to 1000 V	0.033 % to 0.04 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45 Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	1 V to 100 V	0.027 % to 0.033 %
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45 Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	10 mV to 100 mV	0.075 % to 0.035 %
21	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8 ½ Digital Multimeter by Direct Method	1 A to 20 A	0.021 % to 0.049 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 5 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
22	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8 ½ Digital Multimeter by Direct Method	10 µA to 100 µA	0.04 % to 0.002 %
23	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8 ½ Digital Multimeter by Direct Method	100 µA to 100 mA	0.002 % to 0.007 %
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 8 ½ Digital Multimeter by Direct Method	100 mA to 1 A	0.0066 % to 0.021 %
25	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8 ½ Digital Multimeter by Direct Method	0.1 mV to 100 mV	0.54 % to 0.0009 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 8 ½ Digital Multimeter by Direct Method	100 mV to 1000 V	0.0009 % to 0.0009 %
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 8 ½ Digital Multimeter by Direct Method	0.1 ohm to 1 ohm	0.055 % to 0.0023 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 6 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 8 ½ Digital Multimeter by Direct Method	1 Gohm to 10 Gohm	0.23 % to 0.25 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 8 ½ Digital Multimeter by Direct Method	1 Mohm to 100 Mohm	0.0015 % to 0.027 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 8 ½ Digital Multimeter by Direct Method	1 Ohm to 1 Mohm	0.0023 % to 0.0015 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using Micro Ohm Meter by Direct Method	100 µohm to 1 kohm	4.04 % to 0.40 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 Wire)	Using 8 ½ Digital Multimeter by Direct Method	100 Mohm to 1 Gohm	0.027 % to 0.23 %
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	1 mA to 100 mA	0.006%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 7 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct Calibrator by Direct Method	10 A to 20 A	0.054 % to 0.12 %
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	100 mA to 10 A	0.006 % to 0.054 %
36	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	100 Micro Amp. to 1 mA	0.021 % to 0.006 %
37	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct Calibrator with current coil by Direct Method	1000 A	0.31%
38	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	1 mV to 10 mV	0.060 % to 0.007 %
39	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	10 mV to 10 V	0.007 % to 0.001 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 8 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
40	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multiproduct Calibrator by Direct Method	10 V to 1000 V	0.0025%
41	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	100 Micro Volt to 1 mV	0.64 % to 0.060 %
42	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	1 µohm	6.24%
43	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	1 Gohm	0.041%
44	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	1 kohm	0.009%
45	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	1 Mohm	0.0023%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 9 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

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46	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	1 Ohm	0.0004%
47	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	10 µohm	0.81%
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	10 kohm	0.009%
49	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	10 Mohm	0.0045%
50	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	10 mohm	0.010%
51	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	10 Ohm	0.0004%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 10 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
52	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	100 µohm	0.078%
53	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	100 kohm	0.009%
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	100 mohm	0.009%
55	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	100 Mohm	0.0146%
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	100 Ohm	0.0004%
57	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Standard Resistors Discrete values by Direct Method	25 Ohm	0.009%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 11 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
58	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Amplitude AC Voltage (Sine Wave) @ 50ohm Load and 1kHz	Using Oscilloscope Calibrator by Direct Method	100 mV to 4.8 V	1.7%
59	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Amplitude AC Voltage (Square Wave) @ 1M ohm Load and 1kHz	Using Oscilloscope Calibrator by Direct Method	10 mV to 60 V	0.54 % to 0.17 %
60	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Amplitude DC Voltage @ 1M ohm Load	Using Oscilloscope Calibrator by Direct Method	10 mV to 100 V	0.38 % to 0.08 %
61	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Bandwidth/Flatness (Relative to 50 kHz)	Using Oscilloscope Calibrator by Direct Method	50 kHz to 600 MHz	4.24%
62	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Time Marker	Using Oscilloscope Calibrator by Direct Method	10 ns to 10 ms	0.14 % to 0.058 %
63	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD Sensor (Pt-100)	Using 8 ½ Digital Multimeter with ITS-90 Table by Direct Method	-200 °C to 800 °C	0.011°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 12 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
64	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD Sensor (Pt-1000)	Using 8 ½ Digital Multimeter with ITS-90 Table by Direct Method	-200 °C to 630 °C	0.014°C
65	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple B Type	Using Multiproduct Calibrator by Direct Method	600 °C to 1820 °C	0.53°C
66	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple C Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.39°C
67	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	-100 °C to 350 °C	0.25°C
68	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	350 °C to 1000 °C	0.28°C
69	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	150 °C to 1200 °C	0.28°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 13 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
70	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	-210 °C to 150 °C	0.31°C
71	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	120 °C to 1300 °C	0.5°C
72	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 120 °C	0.4°C
73	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 410 °C	0.43°C
74	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	410 °C to 1300 °C	0.30°C
75	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple R Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.68°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 14 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
76	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple R Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.49°C
77	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.50°C
78	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.50°C
79	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple T Type	Using Multiproduct Calibrator by Direct Method	-150 °C to 400 °C	0.32°C
80	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-100)	Using Multiproduct Calibrator by Direct Method	0 °C to 800 °C	0.27°C
81	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-100)	Using Multiproduct Calibrator by Direct Method	-200 °C to 0 °C	0.059°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 15 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
82	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-1000)	Using Multiproduct Calibrator by Direct Method	0 °C to 630 °C	0.27°C
83	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-1000)	Using Multiproduct Calibrator by Direct Method	-200 °C to 0 °C	0.04°C
84	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple B Type	Using Multiproduct Calibrator by Direct Method	600 °C to 1820 °C	0.51°C
85	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple C Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.37°C
86	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	-100 °C to 350 °C	0.21°C
87	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	350 °C to 1000 °C	0.28°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 16 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
88	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	150 °C to 1200 °C	0.28°C
89	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	-210 °C to 150 °C	0.31°C
90	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	120 °C to 1372 °C	0.48°C
91	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 120 °C	0.40°C
92	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 410 °C	0.46°C
93	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	410 °C to 1300 °C	0.33°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 17 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
94	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple R Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.68°C
95	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple R Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.49°C
96	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.50°C
97	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.50°C
98	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple T Type	Using Multiproduct Calibrator by Direct Method	-150 °C to 400 °C	0.28°C
99	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Universal Counter by Direct Method	1 Hz to 225 MHz	10 mHz to 0.00062 mHz

SCOPE OF ACCREDITATION

Laboratory Name :	FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2395	**Page No**	18 of 86
Validity	01/07/2022 to 30/06/2024	**Last Amended on**	15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
100	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time interval	Using Universal Counter by Direct Method	1 s to 5400 s	10.3 µs to 56 ms
101	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Function Generator by Direct method	1 Hz to 9 kHz	1 % to 0.0034 %
102	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using RF Signal Generator by Direct method	9 kHz to 200 MHz	0.001 % to 0.0003 %
103	FLUID FLOW-FLOW MEASURING DEVICES	Flow Rate (High pressure conditions, 0-20 bar-Medium Air)	Using Positive Displacement Meter & Secondary Standards.	0.8 m^3/h to 25 m^3/h	0.50%
104	FLUID FLOW-FLOW MEASURING DEVICES	Flow Rate (High pressure conditions, 0-20 bar-Medium Air)	Using Critical Flow Venturi Nozzles & Secondary Standards.	1 kg/h to 1000 kg/h	0.15%
105	FLUID FLOW-FLOW MEASURING DEVICES	Flow Rate (High pressure conditions, 0-20 bar-Medium Air)	Using Turbine Meters & Secondary Standard.	10 m^3/h to 400 m^3/h	0.30%

SCOPE OF ACCREDITATION

Laboratory Name :	FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2395	**Page No**	19 of 86
Validity	01/07/2022 to 30/06/2024	**Last Amended on**	15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
106	FLUID FLOW-FLOW MEASURING DEVICES	Flow Rate (High pressure conditions, 0-20 bar-Medium Air)	Using Gravimetric System & Primary Operating System	4 kg/h to 1000 kg/h	0.10%
107	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium Air)	Using Thermal Mass Flow Meters & Secondary Standard	0.00075 l/min to 1000 l/min	1%
108	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium Air)	Using Positive Displacement Meter & Secondary Standard	0.5 m^3/h to 160 m^3/h	0.50%
109	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium Air)	Using Critical Flow Venturi Nozzles & Secondary Standard	0.7 m^3/h to 400 m^3/h	0.15%
110	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium Air)	Using Turbine Meters & Secondary Standard	200 m^3/h to 4000 m^3/h	0.50%
111	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium Air)	Using Critical Flow Venturi Nozzles & Secondary Standard	400 m^3/h to 10000 m^3/h	0.25%
112	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium Air)	Using Turbine Meters & Secondary Standard	90 m^3/h to 1000 m^3/h	0.50%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 20 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
113	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium N2)	Using Automatic Primary Gas Flow Calibrator/Piston Prover & Primary Operating System	0.0012 m^3/h to 3 m^3/h	0.20%
114	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient Condition-Medium N2)	Using Volume meter/ Piston Prover & Primary Operating System	0.75 ml/min to 250 ml/min	0.30%
115	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient condition-Medium Air)	Using Bell Prover & Primary Operating System	0.016 m^3/h to 0.25 m^3/h	0.30%
116	FLUID FLOW-FLOW MEASURING DEVICES	Flow rate (Near Ambient condition-Medium Air)	Using Bell Prover & Primary Operating System	0.25 m^3/h to 40 m^3/h	0.12%
117	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Oil)	Using 2 kg / 60 kg weighing system by gravimetric method	0 kg to 25 kg	0.01 %
118	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Oil)	Using 2 kg / 60 kg weighing system by gravimetric method	0.05 kg to 25 kg	0.01 %
119	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Oil)	Using 10000 kg weighing system by gravimetric method	1600 kg to 8000 kg	0.025 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 21 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
120	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Oil)	Using 300 kg weighing system by gravimetric method	25 kg to 250 kg	0.01 %
121	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Oil)	Using 2000 kg weighing system by gravimetric method	250 kg to 1600 kg	0.015 %
122	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Water)	Using 2 kg / 60 kg weighing system by gravimetric method	0 kg to 30 kg	0.01 %
123	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Water)	Using 2 kg / 60 kg weighing system by gravimetric method	0.05 kg to 30 kg	0.01 %
124	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Water)	Using 2000 kg weighing system by gravimetric method	200 kg to 2000 kg	0.01 %
125	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Water)	Using 20000 kg weighing system by gravimetric method	2000 kg to 20000 kg	0.025 %
126	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass (Water)	Using 300 kg weighing system by gravimetric method	30 kg to 200 kg	0.01 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 22 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
127	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass Flow Rate	Using 80 mm coriolis mass flow meter by comparison method	0 Tons/hour to 150 Tons/hour	0.1 %
128	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass Flowrate (Oil)	Using 10000 kg weighing system by gravimetric method	80 t/h to 500 t/h	0.05 %
129	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Mass Flowrate (Water)	Using 20000 kg weighing system by gravimetric method	200 t/h to 2500 t/h	0.05 %
130	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume (Oil)	Using 10000 kg weighing system by gravimetric method	1.8 cu.m to 9 cu.m	0.04 %
131	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume (Water)	Using 20000 kg weighing system by gravimetric method	2 cu.m to 20 cu.m	0.05 %
132	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flow Rate (Water)	Using Electromagnetic flow meters by comparison method	4500 m^3/h to 15000 m^3/h	0.5 %
133	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Oil)	Using 2 kg / 60 kg weighing system by gravimetric method	0 cu.m/h to 1 cu.m/h	0.05 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 23 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
134	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Oil)	Using 2 kg / 60 kg weighing system by gravimetric method	0.0012 cu.m/h to 1 cu.m/h	0.05 %
135	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Oil)	Using 300 kg weighing system by gravimetric method	1 cu.m/h to 6 cu.m/h	0.05 %
136	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Oil)	Using 10000 kg weighing system by gravimetric method	100 cu.m/h to 600 cu.m/h	0.05 %
137	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Oil)	Using 2000 kg weighing system by gravimetric method	6 cu.m/h to 100 cu.m/h	0.05 %
138	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Water)	Using 2 kg / 60 kg weighing system by gravimetric method	0.001 cu.m/h to 1 cu.m/h	0.05 %
139	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Water)	Using 300 kg weighing system by gravimetric method	1 cu.m/h to 6 cu.m/h	0.05 %
140	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Water)	Using 20000 kg weighing system by gravimetric method	200 cu.m/h to 2500 cu.m/h	0.1 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 24 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
141	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Water)	Using 500 mm flow meter by comparison method	2500 cu.m/h to 4500 cu.m/h	0.15 %
142	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Volume Flowrate (Water)	Using 2000 kg weighing system by gravimetric method	6 cu.m/h to 200 cu.m/h	0.05 %
143	FLUID FLOW-FLOW MEASURING DEVICES	Velocity (Medium Air)	Using Thermal Anemometer & Point Velocity Measuring System	0.20 m/s to 0.50 m/s	0.015m/s
144	FLUID FLOW-FLOW MEASURING DEVICES	Velocity (Medium Air)	Using Thermal Anemometer & Point Velocity Measuring System.	0.50 m/s to 3 m/s	3.0%
145	FLUID FLOW-FLOW MEASURING DEVICES	Velocity (Medium Air)	Using Pitot Static Tube & Point Velocity Measuring System.	3.0 m/s to 80 m/s	1.10%
146	FLUID FLOW-FLOW MEASURING DEVICES	Volume (Medium Air)	Using PVTt tank (Primary system) by Gravimetric method	0 l to 2000 l	0.10%
147	FLUID FLOW-FLOW MEASURING DEVICES	Volume (Medium Air)	Using Bell Prover (Primary System) by Gravimetric method	0 l to 500 l	0.10%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 25 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
148	MECHANICAL-ACCELERATION AND SPEED	Accelerometer, Vibration sensor - Linearity	Using reference accelerometer, accelerometer calibration system and as per ISO16063 Part 21	1 g to 30 g	1.25%
149	MECHANICAL-ACCELERATION AND SPEED	Accelerometer, vibration sensor - Phase	Using reference accelerometer, accelerometer calibration system	2 Hz to 15000 Hz	1.5 ° to 3 °
150	MECHANICAL-ACCELERATION AND SPEED	Laboratory Centrifuge/ MST apparatus/ Stroboscope	Using reference Tachometer	10000 rpm to 50000 rpm	2.1rpm
151	MECHANICAL-ACCELERATION AND SPEED	Laboratory Centrifuge/ MST apparatus/ Stroboscope	Using reference tachometer	60 rpm to 10000 rpm	1.0rpm
152	MECHANICAL-ACCELERATION AND SPEED	Tachometer, Speed Indicator - Contact mode	Using variable speed drive and reference tachometer	100 rpm to 10000 rpm	1.0rpm
153	MECHANICAL-ACCELERATION AND SPEED	Tachometer, Speed Indicator - Non contact mode	Using Function generator	10000 rpm to 50000 rpm	1.3rpm
154	MECHANICAL-ACCELERATION AND SPEED	Tachometer, Speed Indicator - Non contact mode	Using function generator	50000 rpm to 100000 rpm	2.4rpm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 26 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
155	MECHANICAL-ACCELERATION AND SPEED	Tachometer, Speed Indicator - Non contact mode	Using calibrated function generator	60 rpm to 10000 rpm	0.3
156	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude (Acceleration) - Vibration Analyzer/ Vibration Meter - Multi point,	Using reference accelerometer, multi meter, vibration shaker, Frequency range : 5Hz to 5000Hz	0.1 g (pk) to 15 g(pk)	2.4%
157	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude (Displacement) - Vibration Analyzer/ Vibration Meter - Multi point,	Using reference accelerometer, multi meter, vibration shaker, Frequency range 5Hz to 800Hz	0.01 mm (pk) to 10 mm (pk)	2.4%
158	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude (Velocity) - Vibration Analyzer/ Vibration Meter - Multi point	Using reference accelerometer, multi meter, vibration shaker for frequency range 5Hz to 1250Hz	1 mm/sec (pk) to 240 mm/sec (pk)	2.4%
159	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Vibration shaker/ exciter/ calibrator	Using reference accelerometer, Mutimeter & Frequency counter, Frequency range: 2Hz to 10000Hz	0.1 g to 30 g	2.5%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 27 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
160	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Accelerometer/ vibration sensor	Using reference accelerometer, accelerometer calibration system and as per ISO16063 Part 21, Frequency range 100Hz to 160Hz	0.1 g to 10 g	1.25%
161	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Accelerometer/ vibration sensor	Using reference accelerometer, accelerometer calibration system and as per ISO16063 Part 21, Frequency range 5000Hz to 15000Hz	0.1 g to 10 g	2.5
162	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Accelerometer/ vibration sensor	Using reference accelerometer, Accelerometer calibration system as per ISO 16063 (part 21), for frequency response: Frequency range 2 Hz to 5000 Hz	0.1 g to 10 g	1.8 %
163	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Accelerometer/ vibration sensor, Vibration meter/analyzer	Using portable calibrator as per ISO 16063 (part 21), Frequency range 5 Hz to 10000 Hz	0.1 g to 10 g	2.5%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 28 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
164	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Charge amplifier use with vibration/ acoustic sensor	Using Vibration controller System, Frequency range 2Hz to 20000Hz	1 Gain to 1000 Gain	0.4%
165	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - IEPE amplifier use with vibration/ acoustic sensor	Using Vibration controller system, Frequency range 2Hz to 20000 Hz)	1 Gain to 1000 Gain	0.3%
166	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Impact hammer used in modal analysis, Sensitivity verification	Usning Pendulum type calibration system, vibration analyzer, accelerometer.	0.1 pC/N, mv/N to 10 pC/N, mv/N	2.8%
167	MECHANICAL-ACOUSTICS	Acoustic power - sound source	Using Hemi Anechoic chamber, Sound level meter, As per ISO 3745, ISO 6926, Frequency range 20Hz to 20000Hz	30 dB to 140 dB	0.6dB
168	MECHANICAL-ACOUSTICS	Acoustic pressure - Free field Microphone, Microphone with preamplifier	Using Anechoic chamber, Reference microphone and vibration control unit, as per IEC 61094-8, Frequency range 125Hz to 20000Hz	74 dB to 90 dB	0.3dB

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 29 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
169	MECHANICAL-ACOUSTICS	Acoustic pressure - Free field Sound level meter	Using anechoic chamber, Reference microphone and vibration control unit as per IEC 61672,Frequency range 125Hz to 20000Hz	74 dB to 90 dB	0.5 dB
170	MECHANICAL-ACOUSTICS	Acoustic pressure - Pressure Field Microphone, Sound Level Meter	Using Reference Piston Phone, Vibration Control Unit at 250Hz	124 dB	0.2dB
171	MECHANICAL-ACOUSTICS	Acoustic pressure - Pressure Field Microphone, Sound Level Meter	Using Reference Acoustic Calibrator, Vibration Control Unit at 1000Hz	94 dB to 114	0.2dB
172	MECHANICAL-ACOUSTICS	Acoustic pressure - Pressure Field, Multifunction acoustic calibrator	Using reference microphone and control unit, Frequency range 20Hz to 20000Hz	64 dB to 140 dB	0.3dB
173	MECHANICAL-ACOUSTICS	Acoustic pressure - Pressure Field, Sound level calibrator/ Poston phone	Using piston phone/ acoustic calibrator and reference control unit by substitution method as per IEC 60942, Frequency 250Hz and 1000Hz	94 dB to 124 dB	0.15dB

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 30 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
174	MECHANICAL-ACOUSTICS	Acoustic pressure - Pressure Field, Sound level calibrator/ Poston phone	Using reference microphone & reference control unit by measurement method as per IEC60942, Frequency 250Hz and 1000Hz	94 dB to 124 dB	0.2dB
175	MECHANICAL-DENSITY AND VISCOSITY	Density - Digital Densitymeter Range (0 to 3) g/ml Resolution 0.000001 g/ml	Using Certified Density Liquids	0.75 g/ml to 1.56 g/ml	0.000025g/ml
176	MECHANICAL-DENSITY AND VISCOSITY	Density indication - Mass Flow Meter/ Densitometer / Density Measuring Instruments	Using Precision Balances and Distilled water of known density, Reference Density Meter, by Gravimetric Method	1 g/ml to 2 g/ml	0.00014g/ml
177	MECHANICAL-DENSITY AND VISCOSITY	Density, Specific Gravity - Unknown Sample (DUC) Liquid	Using Certified Density Liquids and Anton Paar Density Meter by Comparison method	0.75 g/ml to 1.56 g/ml	0.000028g/ml

SCOPE OF ACCREDITATION

Laboratory Name :	FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2395	**Page No**	31 of 86
Validity	01/07/2022 to 30/06/2024	**Last Amended on**	15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
178	MECHANICAL-DENSITY AND VISCOSITY	Density, Specific Gravity, Concentration - Density Hydrometer/ Specific Gravity Hydrometer / Alcoholometer / Twaddle Hydrometer / Baume Hydrometer / Brix Hydrometer / Arbitrary Scale Hydrometer at S	Using Standard Hydrometers By Comparison Method	0.64 g/ml to 1.00 g/ml	0.0004g/ml
179	MECHANICAL-DENSITY AND VISCOSITY	Density, Specific Gravity, Concentration - Density Hydrometer/ Specific Gravity Hydrometer / Alcoholometer / Twaddle Hydrometer / Baume Hydrometer / Brix Hydrometer / Arbitrary Scales Hydrometer at Spe	Using Standard Hydrometers By Comparison Method	>1.00 g/ml to 1.65 g/ml	0.00076g/ml
180	MECHANICAL-DENSITY AND VISCOSITY	Dynamic Viscosity - Brookfield Viscometer	Certified Viscosity liquids	1 mPas to 23000 mPas	1.0% rdg.
181	MECHANICAL-DENSITY AND VISCOSITY	Dynamic Viscosity - Falling Ball Viscometer	Using Certified viscosity liquid, Const. temp. bath	1 mPas to 85000 mPas	0.7% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 32 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
182	MECHANICAL-DENSITY AND VISCOSITY	Dynamic, Kinematic viscosity - Unknown Sample (DUC) liquid	Using Falling Ball Viscometer / Ubbelohde Capillary Viscometer	1 mPas/cSt to 23000 mPas/cSt	1.0% rdg.
183	MECHANICAL-DENSITY AND VISCOSITY	Dynamic, Kinematic Viscosity - Capillary Viscometers, Digital Viscometer	Using Ubbelohde capillary viscometer/falling ball viscometer	1 mPas/cSt to 23000 mPas/cSt	1% rdg.
184	MECHANICAL-DENSITY AND VISCOSITY	Dynamic, Kinematic Viscosity - Zahn Cup, Ford Cup, Flow Cup, Viscosity Cup, Sheen Cup	Using Ubbelohde Capillary Viscometer /Falling Ball Viscometer/Certified Viscosity liquids	1 mPas / cSt to 23,000 mPas / cSt	1.0% rdg.
185	MECHANICAL-DENSITY AND VISCOSITY	Kinematic Viscosity - Capillary Viscometer	Using Certified Viscosity liquids, Const. Temp. bath	1 cSt to 23000 cSt	0.5% rdg.
186	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Angle - Bevel Protractor L.C. 5 arc min	Using Angle Gauge Blocks by Comparison Method	(0 -90º -0) º	4min of Arc
187	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Gauge (Transmission Only) L.C:1 µm Probing range : Upto 2 mm	Using Universal Length Measuring Machine by Comparison Method	0 to 2 mm	2.9µm

SCOPE OF ACCREDITATION

Laboratory Name :	FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2395	**Page No**	33 of 86
Validity	01/07/2022 to 30/06/2024	**Last Amended on**	15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
188	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Calipers (Vernier/Dial/Digital) L.C.:10 µm	Using Gauge Blocks by Comparion Method	> 600 mm to 1000 mm	10.0µm
189	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Calipers (Vernier/Dial/Digital) L.C.:10 µm	Using Gauge Blocks by Comparison Method	0 to 600 mm	8.0µm
190	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer (Mech./Dial/Digital) LC : 1 µm	Using Gauge Blocks by Comparison Method	0 to 300 mm	6.7µm
191	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Thickness Gauge L.C:1 µm	Using '0' Grade Gauge Blocks by Comparison Method	0 to 25 mm	2.2µm
192	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Electronic Comparator / Mu Checker L.C:0.01µm	Using Gauge Blocks by Comparison Method	0 to 25 mm	0.16µm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 34 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
193	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Electronic /LVDT Probe L.C:0.1µm	Using Universal Length Measuring Machine by Comparison Method	0 to 25 mm	1.7µm
194	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Electronic Frame Level, Inclinometer.Precision Levels	Using Reference Electronic Frame Level by Comparison method.	0 to 2000 µm/m	5.0µm/m
195	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech./Dial/Digital) L.C.: 1 µm	Using Gauge Blocks /Long Gauge Blocks by comparison method	> 100 mm to 1000 mm	5.0µm
196	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech./Dial/Digital) L.C.: 1 µm	Using Gauge Blocks / Long Gauge Blocks by Comparison Method	0 to 100 mm	3.0µm
197	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge	Using Universal Length Measuring Machine by Comparison Method	0.01 mm to 2.0 mm	3.27µm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 35 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
198	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Flatness - Comparator Stand	Using Coordinate Measuring Machine by Comparison Method	0 to (600x600) mm	6.0µm
199	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Dial/Digital) LC : 0.1 µm	Using Gauge Blocks by Comparison Method	0 to 600 mm	2.0µm
200	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Dial/Digital) LC : 0.1 µm	Using Gauge Blocks by Comparison Method	> 600 mm to 1000 mm	10.3µm
201	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Master	Using Gauge Blocks & Coordinate Measuring Machine by Comparison Method	5 mm to 300 mm	4.2µm
202	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside/stick micrometer (dial /digital) L.C:1 µm	Using Universal Length Measuring Machine & Gauge Blocks by Comparison Method	0 to 100 mm	2.0µm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 36 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
203	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside/stick micrometer (dial /digital) L.C:1 µm	Using Universal Length Measuring Machine ,Gauge Blocks and Accessories by Comparison Method	>100 mm to 1000 mm	4.6µm
204	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Lever Type Dial Gauge L.C. 0.001 mm	Using Universal Length Measuring Machine by Comparison	0 to 2 mm	1.0µm
205	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 11 g micro balance, d=0.001mg	5 g	0.005 mg
206	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Scale L.C:0.5mm	Using Tape and Scale Calibrator by Comparison Method. work instructions ref WP PSL L28.1	0 to 1000 mm	60µm
207	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Tape/Pie Tape L.C:1 mm	Using Tape and Scale Calibrator by Comparison Method	> 1 m to 100 m	200 +(200*Sqrt(L)) µm, L in m

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 37 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
208	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pin Gauge	Using Universal Length Measuring Machine by Comparison Method	0.5 mm to 20 mm	3.6µm
209	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	Using Universal Length Measuring Machine by Comparison Method	Dia. 1 mm to Dia. 100 mm	1.0µm
210	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring gauge	Using Universal Length Measuring Machine & Setting Rings by Comparison Method	>200 mm to 225 mm	6.0µm
211	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain ring gauge	Using Universal Length Measuring Machine & Setting Rings by Comparison Method	1 mm to 100 mm	1.5µm
212	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring gauge	Using Universal Length Measuring Machine & Setting Rings by Comparison Method	Dia.100 mm to Dia. 200 mm	2.0 µm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 38 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
213	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plunger type dial gauge (Analog / digital) L.C:1 µm	Using Universal Length Measuring Machine by Comparison Method	0 to 100 mm	1.5µm
214	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Radius Gauges	Using Profile Projector by Comparison Method	0.5 mm to 50 mm	4.0µm
215	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Reference Spheres	Using universal Length Measuring Machine By Comparison Method	0.4 mm to 50 mm	0.37µm
216	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Setting Rod / Extension Rod	Using Universal Length Measuring Machine & Gauge Blocks by Comparison Method	20 mm to 600 mm	2.9µm
217	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge	Using Coordinate Measuring Machine by Comparison Method	200 mm to 800 mm	7.0µm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 39 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
218	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate (Granite/Cast Iron)	Using Electronic Level, In-Direct method	325 x 325 mm to 2000 x 2000 mm	1.2*Sqrt((W+L)/150) L & W in mmµm
219	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Tape and Scale Calibrator L.C:1 µm	Using Gauge Blocks by Comparison Method	0 to 1000 mm	10.32µm
220	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test sieves	Using Profile Projector by Comparison Method	0.005 mm to 25 mm	4µm
221	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Measuring Wires	Using Universal Length Measuring Machine by Comparison Method	Dia. 0.15 mm to Dia. 7.0 mm	0.3µm
222	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge - Angle	Using Profile Projector by Comparison Method	0 to 90 °	10' of Arc

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 40 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
223	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge - Dimension	Using Profile Projector by Comparison Method	0.2 mm to 8.0 mm	4.0µm
224	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge	Using Universal Length Measuring Machine and Thread Measuring Wire by Comparison Method	Dia. 3 mm to Dia.100 mm	1.0µm
225	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge	Using Universal Length Measuring Machine by Comparison Method	Dia. 3 mm to Dia. 100 mm	1.0µm
226	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Three Point Internal Micrometer L.C:1 µm	Using Ring Gauges by Comparison Method	Dia. 3 mm to Dia. 100 mm	3.5µm
227	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V - Block (parallelism)	Using Coordinate Measuring Machine by Comparison Method	0 to 150 mm	5.36 µm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 41 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
228	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V - Block (Flatness)	Using Coordinate Measuring Machine by Comparison Method	0 to 150 mm	5.36µm
229	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V - Block (Squareness)	Using Coordinate Measuring Machine by Comparison Method	0 to 150 mm	80min of arc
230	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V - Block (Symmetry)	Using Coordinate Measuring Machine by Comparison Method	0 to 150 mm	80min of arc
231	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Caliper Checker/Step Gauges/Check Master	Using Coordinate Measuring Machine and Gauge Blocks by Comparison Method	20 mm to 600 mm	4.44µm
232	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Co-Ordinate Measuring Machine L.C:0.1 µm	Using Gauge Blocks/Master Sphere by Comparison Method	0 to 800	4.2µm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 42 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
233	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Depth Micro Checker	Using Gauge Blocks & Coordinate Measuring Machine by Comparison Method	2.5 mm to 150 mm	5.36µm
234	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Dial Calibration Tester L.C:0.1 µm	Using Gauge Blocks, Electronic Probe by Comparison Method	0 to 25 mm	1.0µm
235	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Long Slip Gauge/Length Bar	Using ULM &Master Gauge Blocks By Comparison Method	100 mm to 500 mm	0.25+(L/200)µm. L - Length in mm
236	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Precision Parallel Blocks(Parallelism)	Using Coordinate Measuring Machine by Comparison Method	50 mm to 500 mm	6.0µm
237	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector Angle L.C: 1'	Using Angle Gauge Blocks by Comparison Method	0 º to 360 º	1Arc minute
238	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector Linear L.C:1 µm	Using Glass Scale by Comparison Method	0 to 50 mm	2.0µm
239	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile projector Magnification	Using Glass Scale and vernier caliper by Comparison Method	2 X to 50 X	0.05%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 43 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
240	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Suface Roughness Specimens /Masters	Using Surface Roughness Tester by Comparison Method	0.01 µm to 15 µm	7%
241	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Surface Roughness Tester	Using Surface Roughness Master by Comparison Method	0.01 µm to 15 µm	7%
242	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring Machine L.C:0.1 µm	Using Long K Grade Gauge Blocks by Comparison Method	> 100 mm to 600 mm	0.20+(L/200) µm. where L is Length in mm
243	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Universal Length Measuring Machine L.C:0.1 µm	Using K Grade Slip Gauges & Long K Grade Gauge Blocks by Comparison Method	0 to 100 mm	0.15+(L/200) µm where L is in mm
244	MECHANICAL-PRESSURE BALANCE OR DEAD WEIGHT TESTER	Hydraulic Pressure - Hydraulic Dead Weight Testers	Using Dead Weight Tester by Comparison Method through Cross Float as per EURAMET cg-3	>60 bar (g) to 1200 bar (g)	0.0081% rdg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 44 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
245	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester by Comparison Method as per DKDR6- 1	>60 bar (g) to 1200 bar (g)	0.0083% rdg
246	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Transducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	1 bar (g) to 100 bar (g)	0.017% rdg.
247	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Transducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	100 bar (g) to 1000 bar (g)	0.017 % rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 45 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
248	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Transducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	20 bar (g) to 250 bar (g)	0.017% rdg.
249	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Transducers / Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester by Comparison Method as per DKDR6- 1	6 bar (g) to 60 bar (g)	0.014% rdg
250	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure Analog/ Digital Pressure Gauges, Absolute Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester (Pressurements) by Comparison Method as per DKD-R6-1	0.25 bar (abs) to 20 bar (abs)	0.0075% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 46 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
251	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure - Analog/ Digital Absolute Pressure Gauges, Absolute Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester (Pressurements) by Comparison Method as per DKD-R6-1	0.25 bar (abs) to 20 bar (abs)	0.0075% rdg.
252	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure - Analog/ Digital Pressure Gauges, Absolute Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester (Pressurements) by Comparison Method as per DKD-R6-1	30 mbar (Abs) to 2000 mbar (Abs)	0.0066% rdg.
253	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure - Analog / Digital Pressure Gauges, Pressure Transducers / Transmitters, Indicator of Pressure Switch, Absolute Pres. transmitters, Absolute Pres. transducers	Using Digital Pressure Calibrator by Comparison Method as per DKD-R6-1	2 bar (abs) to 20 bar (abs)	0.02% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 47 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
254	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure - Analog / Digital Pressure Gauges, Pressure Transducers / Transmitters, Indicator of Pressure Switch, Absolute Pres. transmitters, Absolute Pres. transducers	Digital Pressure Calibrator Comparison Method as per DKD-R6-1	100 mbar (abs) to 2600 mbar (abs)	0.02% rdg.
255	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure – Analog/ Digital Pressure Gauges, Absolute Pressure Transducers / Transmitters, Indicator of Pressure Switch	Using Digital Pressure by Comparison Method as per DKD-R6-1	100 mbar (abs) to 2600 mbar (abs)	0.02% rdg.
256	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Differential / Gauge Pressure Analog/ Digital Pressure Gauges, Pressure Differential or Gauge Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester (Pressurements) by Comparison Method as per DKD-R6-1	0.2 mbar (g) to 10 mbar (g)	0.018 % rdg. to

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 48 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
257	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Differential Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	-10 mbar (g) to 10 mbar (g)	0.4% rdg.
258	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Differential/ Gauge Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	10 mbar to 100 mbar	0.06% rdg.
259	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge / Differential Pressure - Analog/ Digital Gauges, Gauge / Differential PressureTransducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	0.2 mbar (g) to 10 mbar (g)	0.4% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 49 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
260	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure Analog/ Digital Pressure Gauges, Gauge Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester (Pressurements) by Comparison Method as per DKD-R6-1	30 mbar (g) to 2000 mbar (g)	0.0065% rdg.
261	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	30 mbar (g) to 2000 mbar (g)	0.017% rdg.
262	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Pressure Gauges, Gauge Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester (Pressurements) by Comparison Method as per DKD-R6-1	0.25 bar (g) to 20 bar (g)	0.008% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 50 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
263	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	2 bar g to 20 bar (g)	0.017% rdg.
264	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Gauges, Gauge Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	10 bar (g) to 100 bar (g)	0.017% rdg.
265	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Vacuum – Analog/ Digital Gauge Vacuum Gauges, Gauge Vacuum Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester by Comparison Method as per DKDR6- 1	-0.98 bar (g) to 0.015 bar (g)	0.029% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 51 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
266	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Vacuum Pressure - Analog/ Digital Gauges, Vacuum Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	-0.98 bar (g) to -0.015 bar (g)	0.026% rdg.
267	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge/ Differential Pressure - Analog/ Digital Pressure Gauges, Gauge/ Differential Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Dead Weight Tester (Pressurements) by Comparison Method as per DKD-R6-1	10 mbar to 160 mbar	0.068% rdg
268	MECHANICAL-TORQUE MEASURING DEVICES	Torque - Torque Transducers, Torque Meter, Torque Master, Torque Measuring Instruments	Using 1500 mm Norbar Beam and Certified Beam as per BS 7882	10 Nm to 1500 Nm	0.023% rdg.
269	MECHANICAL-TORQUE MEASURING DEVICES	Torque - Torque Wrench,Torque screw driver, Torque generating devices	Using Torque Transducer as per ISO 6789	2 Nm to 1500 Nm	1.0% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 52 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
270	MECHANICAL-WEIGHING SCALE AND BALANCE	Micro pipette volume measurement (contain and delivery type)	Using Precision (0 to 11)g(d=0.001 mg) weighing balance,ISO 8655 part 6	10 µl to 100 µl	2µl
271	MECHANICAL-WEIGHING SCALE AND BALANCE	Micropipette, Volume measurements Contain and Delivery type	Using BALANCE (0 to 210)g(d=0.01 mg) and ISO 8655 Part 6	100 µl to 10000	6µl
272	MECHANICAL-WEIGHING SCALE AND BALANCE	Sp.gravity bottle,Pipettes,Burettes,Measuring Flasks Glass/Plastic/Metallic wares/Dispensette, volume measurements(contain and delivery type)	Using Precision (0 to 220) g(d=0.01 mg) weighing balance, ISO 4787	>10 ml to 100 ml	0.20ml
273	MECHANICAL-WEIGHING SCALE AND BALANCE	Sp.gravity bottle,Pipettes,Burettes,Measuring Flasks Glass/Plastic/Metallic wares/Dispensette, volume measurements(contain and delivery type)	Using Precision (0 to 5) kg(d=1 mg) weighing balance, ISO 4787:	2000 ml to 4000 ml	0.3ml

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 53 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
274	MECHANICAL-WEIGHING SCALE AND BALANCE	Sp.gravity bottle,Pipettes,Burettes,Measuring Flasks Glass/Plastic/Metallic wares/Dispensette, volume measurements(contain and delivery type)	Using Precision (0 to 2.5) kg(d=0.1 mg) weighing balance, ISO 4787	100 ml to 2000 ml	0.2ml
275	MECHANICAL-WEIGHING SCALE AND BALANCE	Sp.gravity bottle,Pipettes,Burettes,Measuring Flasks Glass/Plastic/Metallic wares/Dispensette, volume measurements(contain and delivery type)	Using Precision (0 to 64) kg(d=0.01 g) weighing balance, ISO 4787	4000 ml to 5000 ml	0.5ml
276	MECHANICAL-WEIGHING SCALE AND BALANCE	Volume Jars, prover tanks/jars, volume measurements (Contain and delivery type)	Using Precision (0 to 3000) kg(d=0.001 kg) weighing balance, ISO 4787	100 l to 250 l	14ml
277	MECHANICAL-WEIGHING SCALE AND BALANCE	Volume Jars, prover tanks/jars, volume measurements (Contain and delivery type)	Using Precision (0 to 3000) kg(d=0.001 kg) weighing balance, ISO 4787	20 l to 100 l	5ml

SCOPE OF ACCREDITATION

Laboratory Name :	FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2395	**Page No**	54 of 86
Validity	01/07/2022 to 30/06/2024	**Last Amended on**	15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
278	MECHANICAL-WEIGHING SCALE AND BALANCE	Volume Jars, prover tanks/jars, volume measurements (Contain and delivery type)	Using Precision (0 to 64) kg(d=0.01 g) weighing balance, ISO 4787	5 l to 20 l	2ml
279	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing scale d=1 g Precision (0 to 3000) kg/0.001 kg Mass Comparator	Using F1 and M1 Class standard weights	0 to 3000 kg	0.005kg
280	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 11 g	0.009mg
281	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 20 g	0.009mg
282	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 5 g	0.004mg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 55 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
283	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.01 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 220 g	0.05mg
284	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.1 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 2.5 kg	0.0004g
285	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=10 mg	Using E1 And F1 Std. Weights based on OIML R-76-1	0 to 64 kg	0.15g
286	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d = 0.05 kg	Using F1 Std. Weights based on OIML R-76-1	0 to 2000 kg	0.1kg
287	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 2 g	0.004mg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 56 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
288	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=1 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 5 kg	0.004g
289	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d = 1 g	Using F1 Std. Weights based on OIML R-76-1	0 to 600 kg	0.02kg
290	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d = 2 kg	Using F1 Std. Weights based on OIML R-76-1	0 to 20000 kg	1.9kg
291	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 11 g micro balance, d=0.001mg	1 g to 1 g	0.004mg
292	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	Using E1 standard weights & 2.5 kg comparator d=0.1 mg	1 kg to 1 kg	0.2mg
293	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 11 g micro balance, d=0.001mg	1 mg to 500 mg	0.002mg
294	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 11 g micro balance, d=0.001mg	10 g to 10 g	0.007mg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 57 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
295	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 220 g Semi Micro Balance, d=0.01mg	100 g to 100 g	0.03mg
296	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 11 g micro balance, d=0.001mg	2 g	0.005mg
297	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 220 g Semi Micro Balance, d=0.01mg	20 g to 50 g	0.02mg
298	MECHANICAL-WEIGHTS	Mass - Standard Weights -E1 class and coarser	E1 standard weights & 220 g Semi Micro Balance, d=0.01mg	200 g to 200 g	0.04mg
299	MECHANICAL-WEIGHTS	Mass - Standard Weights -F1 class and coarser	F1 standard weights & 600 kg comparator d=1 g	500 kg to 500 kg	900mg
300	MECHANICAL-WEIGHTS	Standard Weights - E2 class and coarser	Using E1 standard weights & 64 kg comparator d=10 mg	10 kg to 10 kg	9mg
301	MECHANICAL-WEIGHTS	Standard Weights - E2 class and coarser	Using E1 standard weights & 2.5 kg comparator d=0.1 mg	2 kg to 2 kg	0.4mg
302	MECHANICAL-WEIGHTS	Standard Weights - E2 class and coarser	Using E1 standard weights & 64 kg Mass comparator d=10 mg:	20 kg to 20 kg	11mg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 58 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
303	MECHANICAL-WEIGHTS	Standard Weights - E2 class and coarser	Using E1 standard weights & 5 kg comparator d=1 mg	5 kg to 5 kg	1.2mg
304	MECHANICAL-WEIGHTS	Standard Weights - E2 class and coarser	Using E1 standard weights & 64 kg comparator d=10 mg	50 kg	22mg
305	MECHANICAL-WEIGHTS	Standard Weights - E2 class and coarser	Using E1 standard weights & 2.5 kg comparator d=0.1 mg	500 g to 500 g	0.10mg
306	MECHANICAL-WEIGHTS	Standard Weights - F1 class and coarser	Using F1 standard weights & 600 kg comparator d=1 g	200 kg to 200 kg	830mg
307	MECHANICAL-WEIGHTS	Standard Weights - M1 class and coarser	Using F2 standard weights & 150 kg comparator d=0.1 g	100 kg	820mg
308	THERMAL-SPECIFIC HEAT & HUMIDITY	RH Indicator, Transmitter, Hygrometer, RH Indicator with Sensor (Relative Humidity) @ 10°C to 60°C	Using Humidity/Temperature Generator by Comparison Method	10 %RH to 95 %RH	0.7%RH
309	THERMAL-TEMPERATURE	IR Thermometer	Using IR Calibrator 9132 (Emissivity 0.95) have built in sensor with indicator, by comparison method	100 °C to 500 °C	1.57°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 59 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
310	THERMAL-TEMPERATURE	IR Thermometer (for non-medical purpose)	Using IR Calibrator (Emissivity 0.95) have built in sensor and RTD with indicator by comparison method	10 °C to 100 °C	1.0°C
311	THERMAL-TEMPERATURE	Liquid-In-Glass Thermometer, RTD, Thermocouple, Thermistor, Temperature Indicator/Transmitter with Sensor, Temperature Gauges	Using SPRT with 8 ½ DMM & Temperature Source: Oil Bath by Comparison method	-70 °C to 300 °C	0.043°C
312	THERMAL-TEMPERATURE	RH /Temperature Indicator, Transmitter, Thermo Hygrometer, (Temperature) @ 50%RH	Using Humidity/Temperature Generator by Comparison Method	5 °C to 70 °C	0.14°C
313	THERMAL-TEMPERATURE	RTD, Thermocouple, Temperature Indicator/Transmitter with Sensor	Using SPRT with 8½ DMM & Temperature Source: Dry Block Calibrator by Comparison Method	300 °C to 660 °C	0.063°C

SCOPE OF ACCREDITATION

Laboratory Name :	FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2395	**Page No**	60 of 86
Validity	01/07/2022 to 30/06/2024	**Last Amended on**	15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
314	THERMAL-TEMPERATURE	RTD, Thermocouple, Thermistor, Temperature Indicator/Transmitter with Sensor, Temperature Gauges	Using SPRT with 8 ½ DMM & Temperature Source : Dry block calibrator by Comparison Method	-95 °C to -70 °C	0.043°C
315	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Fp of Ag Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	961.78 °C to	10.9m°C
316	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Fp of Al Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	660.323 °C to	9.4m°C
317	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Fp of In Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	156.5985 °C to	5.56m°C
318	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Fp of Sn Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	231.928 °C to	5.23m°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 61 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
319	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Fp of Zn Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	419.527 °C to	6.6m°C
320	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Mp of Ga Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	29.7646 °C to	4.04m°C
321	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Tp of Hg Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	-38.8344 °C to	6.75m°C
322	THERMAL-TEMPERATURE	SPRTs, HTPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors – Tp of Water Cell	Using SPRT/HTPRT, Thermometer bridge, Realization Furnace/Apparatus using Fixed Point by Fixed Point Method	0.01 °C to	4.09m°C
323	THERMAL-TEMPERATURE	SPRTs, PRTs & Thermocouples, Temperature Indicator with Sensors/	Using SPRT with 8 ½ DMM & Temperature Source : Liquid Nitrogen Apparatus by Comparison Method	(-)196 °C to	0.083°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 62 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
324	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Dry Block / Furnace	Using STC with Digital Temperature Indicator, Temperature Indicator Single position calibration by comparison method	600 °C to 1200 °C	1.6°C
325	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Oven/Furnace/Dry Block Calibrator/Bath/Chamber	Using S-type T/C with Digital Temperature Indicator Single Position Calibration by comparison method	660 °C to 1200 °C	1.6°C
326	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Oven/Furnace/Dry Block Calibrator/Bath/Chamber	Using RTD with Digital Temperature Indicator Single Position Calibration by comparison method	-95 °C to 660 °C	0.20°C
327	THERMAL-TEMPERATURE	Thermocouple, Temperature Indicator with Sensor	Using S-Type T/C with Indicator & Temperature Source: High Temperature Calibration System by Comparison Method	660 °C to 1200 °C	1.6°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 63 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 40Hz to 1kHz	Using 6 ½ Digital Multimeter by Direct Method	0.1 A to 1.0 A	0.85 % to 0.2 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 40Hz to 1kHz	Using 6 ½ Digital Multimeter by Direct Method	1 A to 3 A	0.2 % to 0.35 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Power 50Hz Single phase @UPF 60 to 240V 0.5A to 20A	Using Digital Power Meter by Direct Method	30 W to 4.8 kW	1.1%
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 40Hz to 1kHz	Using 6 ½ Digital Multimeter by Direct Method	1 V to 750 V	0.12 % to 0.15 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 64 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage @ 40Hz to 1kHz	Using 6 ½ Digital Multimeter by Direct Method	10 mV to 1 V	0.55 % to 0.12 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 1kHz to 5kHz	Using MFC by Direct Method	1 A to 20 A	0.85 % to 3.5 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 1kHz to 5kHz	Using MFC by Direct Method	20 mA to 1 A	0.4 % to 0.85 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	1 A to 20 A	0.10 % to 0.18 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 45Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	190 µA to 1 A	0.25 % to 0.10 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 65 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current @ 50Hz	Using Multiproduct Calibrator with current coil by Direct Method	20 A to 1000 A	3.74%
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 1kHz to 100kHz	Using Multiproduct Calibrator by Direct Method	30 mV to 100 V	0.45 % to 0.3 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45 Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	330 V to 1000 V	0.03 % to 0.038 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	1 mV to 33 mV	0.8 % to 0.04 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage @ 45Hz to 1kHz	Using Multiproduct Calibrator by Direct Method	33 mV to 330 V	0.04 % to 0.03 %
15	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 ½ Digital Multimeter by Direct Method	10 mA	0.3 % to 0.1 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 66 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
16	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 ½ Digital Multimeter by Direct Method	10 mA to 100 mA	0.1 % to 0.07 %
17	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6 ½ Digital Multimeter by Direct Method	100 mA to 2 A	0.07 % to 0.17 %
18	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using 6 ½ Digital Multimeter by Direct Method	1 Mohm to 10 Mohm	0.015 % to 0.048 %
19	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using 6 ½ Digital Multimeter by Direct Method	10 Mohm to 100 Mohm	0.048 % to 1.0 %
20	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using 6 ½ Digital Multimeter by Direct Method	10 Ohm to 100 Ohm	0.13 % to 0.015 %
21	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using Micro ohm meter by Direct Method	100 µohm to 1 kohm	4.04 % to 0.40 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 67 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
22	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Resistance	Using 6 ½ Digital Multimeter by Direct Method	100 Ohm to 1 Mohm	0.015%
23	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 ½ Digital Multimeter by Direct Method	1 mV to 100 mV	0.44 % to 0.1 %
24	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 ½ Digital Multimeter by Direct Method	1 V to 1000 V	0.007%
25	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6 ½ Digital Multimeter by Direct Method	100 mV to 1 V	0.1 % to 0.007 %
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct Calibrator with current coil by Direct Method	1000 A	0.31%
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct Calibrator by Direct Method	190 µA to 3 A	0.050%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 68 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multiproduct Calibrator by Direct Method	3 A to 20 A	0.050 % to 0.31 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multiproduct Calibrator by Direct Method	0.3 mV to 100 mV	0.8 % to 0.007 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multiproduct Calibrator by Direct Method	100 mV to 1000 V	0.007 % to 0.006 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Multiproduct Calibrator by Direct Method	100 Mohm to 300 Mohm	0.071 % to 0.39 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 Wire)	Using Multiproduct Calibrator by Direct Method	300 Mohm to 1000 Mohm	0.39 % to 3.59 %
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Multiproduct Calibrator by Direct Method	10 Mohm to 100 Mohm	0.016 % to 0.071 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 69 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 Wire)	Using Multiproduct Calibrator by Direct Method	2 Ohm to 10 Mohm	0.58 % to 0.016 %
35	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Amplitude AC Voltage (Sine Wave) @ 50ohm Load and 1kHz	Using Oscilloscope Calibrator by Direct Method	100 mV to 4.8 V	1.7%
36	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Amplitude AC Voltage (Square Wave) @ 1Mohm Load and 1kHz	Using Oscilloscope Calibrator by Direct Method	10 mV to 60 V	0.54 % to 0.17 %
37	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Amplitude DC Voltage @ 1Mohm Load	Using Oscilloscope Calibrator by Direct Method	10 mV to 100 V	0.38 % to 0.08 %
38	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Bandwidth/Flatness (Relative to 50 kHz)	Using Oscilloscope Calibrator by Direct Method	50 kHz to 600 MHz	4.24%
39	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Time Marker	Using Oscilloscope Calibrator by Direct Method	10 ns to 10 ms	0.14 % to 0.058 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 70 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
40	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple B Type	Using Multiproduct Calibrator by Direct Method	600 °C to 1820 °C	0.53°C
41	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple C Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.39°C
42	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	-100 °C to 350 °C	0.25°C
43	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	350 °C to 1000 °C	0.29°C
44	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	150 °C to 1200 °C	0.28°C
45	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	-210 °C to 150 °C	0.31°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 71 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
46	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	120 °C to 1300 °C	0.48°C
47	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 120 °C	0.4°C
48	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 410 °C	0.43°C
49	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	410 °C to 1300 °C	0.30°C
50	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple R Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.68°C
51	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple R Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.49°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 72 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
52	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.50°C
53	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.50°C
54	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Thermocouple T Type	Using Multiproduct Calibrator by Direct Method	-150 °C to 400 °C	0.34°C
55	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-100)	Using Multiproduct Calibrator by Direct Method	0 °C to 800 °C	0.27°C
56	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-100)	Using Multiproduct Calibrator by Direct Method	-200 °C to 0 °C	0.059°C
57	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-1000)	Using Multiproduct Calibrator by Direct Method	0 °C to 630 °C	0.27°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 73 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
58	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD Sensor (Pt-1000)	Using Multiproduct Calibrator by Direct Method	-200 °C to 0 °C	0.03°C
59	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple B Type	Using Multiproduct Calibrator by Direct Method	600 °C to 1820 °C	0.51°C
60	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple C Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.37°C
61	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	-100 °C to 350 °C	0.21°C
62	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple E Type	Using Multiproduct Calibrator by Direct Method	350 °C to 1000 °C	0.28°C
63	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	150 °C to 1200 °C	0.28°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 74 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
64	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple J Type	Using Multiproduct Calibrator by Direct Method	-210 °C to 150 °C	0.31°C
65	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	120 °C to 1372 °C	0.47°C
66	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple K Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 120 °C	0.38°C
67	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	-200 °C to 410 °C	0.46°C
68	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple N Type	Using Multiproduct Calibrator by Direct Method	410 °C to 1300 °C	0.33°C
69	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple R Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.49°C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 75 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
70	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	0 °C to 1000 °C	0.50°C
71	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple S Type	Using Multiproduct Calibrator by Direct Method	1000 °C to 1767 °C	0.50°C
72	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple T Type	Using Multiproduct Calibrator by Direct Method	-150 °C to 400 °C	0.28°C
73	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using Universal Counter by Direct Method	1 Hz to 225 MHz	10 mHz to 0.00062 mHz
74	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Universal Counter by Direct Method	1 s to 5400 s	10.3 µs to 56 ms
75	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Function Generator by Direct Method	1 Hz to 9 kHz	1.0 % to 0.0034 %

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 76 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
76	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using RF Signal Generator by Direct Method	9 kHz to 200 MHz	0.001 % to 0.0003 %
77	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Flow Rate	Using clamp-on ultrasonic flow meter by comparison method	1 m3/hr to 15000 m3/hr	1%
78	FLUID FLOW-FLOW MEASURING DEVICES	Liquid Flow Velocity	Using clamp-on ultrasonic flow meter by comparison method	0 m/s to 10 m/s	1%
79	FLUID FLOW-FLOW MEASURING DEVICES	Liquid mass flow rate	Using 80 mm coriolis mass flow meter by comparison method	0 t/h to 150 t/h	0.1 t/h
80	FLUID FLOW-FLOW MEASURING DEVICES	Liquid mass flow rate	Using 80 mm coriolis mass flow meter by comparison method	15 t/h to 150 t/h	0.1 t/h
81	FLUID FLOW-FLOW MEASURING DEVICES	Liquid volume flow rate	Using 80 mm coriolis mass flow meter by comparison method	15 m3/h to 150 m3/h	0.15 %
82	FLUID FLOW-FLOW MEASURING DEVICES	Site Calibration of Flow meters (Medium Air)	Using Thermal mass flow meters & Secondary standard by Comparison method	0.00075 l/min to 1000 l/min	1%

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 77 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
83	MECHANICAL-ACCELERATION AND SPEED	Laboratory Centrifuge/ MST apparatus/ Stroboscope	Using reference Tachometer	10000 rpm to 50000 rpm	2.1rpm
84	MECHANICAL-ACCELERATION AND SPEED	Laboratory Centrifuge/ MST apparatus/ Stroboscope	Using reference tachometer	60 rpm to 10000 rpm	1.0rpm
85	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Vibration shaker/ exciter/ calibrator	Using reference accelerometer, Mutimeter & Frequency counter, Frequency range: 2Hz to 10000Hz	0.1 g to 30 g	2.5%
86	MECHANICAL-ACCELERATION AND SPEED	Vibration amplitude - Accelerometer/ vibration sensor, Vibration meter/analyzer	Using portable calibrator as per ISO 16063 (part 21), Frequency range 5 Hz to 10000 Hz	0.1 g to 10 g	2.5%
87	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate (Granite/Cast Iron)	Using Electronic Level, In-Direct method	325 x 325 mm to 3000 x 3000 mm	1.2*Sqrt((W+L)/150) L & W in mmµm

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 78 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
88	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Tape and Scale Calibrator L.C:1 µm	Using Gauge Blocks by Comparison Method	0 to 1000 mm	10µm
89	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile projector - Magnification	Using Glass Scale and Vernier Caliper by Comparison Method	2 X to 50 X	0.05%
90	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector Angle L.C: 1'	Using Angle Gauge Blocks by Comparison Method	0 º to 360 º	1Arc Minute
91	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector Linear L.C:1 µm	Using Glass Scale by Comparison Method	0 to 300 mm	2µm
92	MECHANICAL-PRESSURE BALANCE OR DEAD WEIGHT TESTER	Hydraulic Pressure - Hydraulic Dead Weight Tester	Using Dead Weight Tester by Effective Area determination through Cross- Float as per EURAMET cg-3	6 bar (g) to 60 bar (g)	0.0083% rdg.
93	MECHANICAL-PRESSURE BALANCE OR DEAD WEIGHT TESTER	Hydraulic Pressure - Hydraulic Dead Weight Tester	Using Dead Weight Tester by Effective Area Determination through Cross Float as per EURAMET cg-3	60 bar (g) to 1200 bar (g)	0.0073% rdg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 79 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
94	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Transducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	1 bar g to 100 bar g	0.017% rdg.
95	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Transducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	100 bar (g) to 1000 bar (g)	0.017 % rdg.
96	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Gauge Pressure – Analog/ Digital Pressure Gauges, Transducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	20 bar (g) to 250 bar (g)	0.017% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 80 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
97	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure - Analog / Digital Pressure Gauges, Absolute Pressure Transducers / Transmitters, Indicator of Pressure Switch	Using Digital Pressure by Comparison Method as per DKD-R6-1	2 bar (abs) to 20 bar (abs)	0.02% rdg.
98	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Absolute Pressure - Analog / Digital Pressure Gauges, Pressure Transducers / Transmitters, Indicator of Pressure Switch, Absolute Pres. transmitters, Absolute Pres. transducers	Using Digital Pressure Calibrator Comparison Method as per DKD-R6-1	100 mbar (abs) to 2600 mbar (abs)	0.02% rdg.
99	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Differential Pressure Analog/ Digital Pressure Gauges, Differential Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	-10 mbar (g) to 10 mbar (g)	0.4% rdg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 81 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
100	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge / Differential Pressure - Analog/ Digital Gauges, Gauge / Differential PressureTransducers / Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	0.2 mbar (g) to 10 mbar (g)	0.018% rdg
101	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	2 bar (g) to 20 bar (g)	0.017% rdg.
102	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	30 mbar (g) to 2000 mbar (g)	0.017% rdg.
103	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Gauges, Gauge Pressure Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	10 bar (g) to 100 bar (g)	0.017% rdg.

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 82 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

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104	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	0.2 mbar (g) to 10 mbar (g)	0.018% rdg.
105	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge Vacuum - Analog/ Digital Gauges, Vacuum Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	-0.98 bar (g) to -0.015 bar (g)	0.026% rdg.
106	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Gauge/Differential Pressure - Analog/ Digital Gauges, Transducers/ Transmitters, Indicator of Pressure Switch	Using Precision Pressure Calibrator Comparison Method as per DKD-R6-1	10 mbar to 100 mbar	0.06% rdg
107	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Standard weights based on OIML R76-1	0 to 11 g	0.009mg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 83 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
108	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 20 g	0.009mg
109	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.01 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 220 g	0.05mg
110	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.1 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 2.5 kg	0.0004g
111	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.1 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 5 kg	0.004g
112	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d = 0.05 kg	Using F1 Std. Weights based on OIML R-76-1	0 to 2000 kg	0.1kg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 84 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
113	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d = 1 g	Using F1 Std. Weights based on OIML R-76-1	0 to 600 kg	0.05g
114	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d = 2 kg	Using F1 Std. Weights based on OIML R-76-1	0 to 20000 kg	1.9kg
115	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=10 mg	Using E1 and F1 Std. Weights based on OIML R-76-1	0 to 64 kg	0.150g
116	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 2 g	0.004mg
117	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Scale, Mass Comparator,Electronic weighing Balances (Class-1) d=0.001 mg	Using E1 Std. Weights based on OIML R-76-1	0 to 5 g	0.004mg

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 85 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
118	THERMAL-SPECIFIC HEAT & HUMIDITY	Relative Humidity Indicator of Chamber @ 25°C to 40°C	Using Thermo Hygrometer by Single position Calibration	10 %rh to 95 %rh	0.7%rh
119	THERMAL-TEMPERATURE	Calibration of Freezer, deep Freezer, Chamber, Oven, Auto Clave & Incubator (for non medical purpose only)	Using Nine PRT's with Data Logger Multi Position Calibration (Mapping))	-40 °C to 180 °C	0.6°C
120	THERMAL-TEMPERATURE	RTD, Thermocouple, Thermistor, Temperature Indicator/Transmitter with Sensor	sing RTD & digital Temperature Indicator & Temperature Source: Dry block Calibrators by comparison method	300 °C to 660 °C	0.06°C
121	THERMAL-TEMPERATURE	RTD, Thermocouple, Thermistor, Temperature Indicator/Transmitter with Sensor	Using RTD & Digital Temperature Indicator & Temperature Source: Dry Block Calibrators by Comparison Method	-40 °C to 300 °C	0.043 °C

SCOPE OF ACCREDITATION

Laboratory Name : FLUID CONTROL RESEARCH INSTITUTE, KANJIKODE WEST, PALAKKAD, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2395 **Page No** 86 of 86

Validity 01/07/2022 to 30/06/2024 **Last Amended on** 15/02/2023

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122	THERMAL-TEMPERATURE	RTD, Thermocouple, Thermistor, Temperature Indicator/Transmitter with Sensor	Using RTD & Digital Temperature Indicator & Temperature Source: Dry Block Calibrators by Comparison Method	660 °C to 700 °C	1.3°C
123	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Deep Freezer, Refrigerator, Incubator, Liquid Bath, Oven, Auto Clave, Dry Block, Furnace (for Non medical purpose only)	Using Digital Temperature Indicator, RTD with Temperature Indicator Single position calibration by comparison method	-40 °C to 600 °C	0.2°C
124	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Dry Block / Furnace	Using STC with Digital Temperature Indicator, Temperature Indicator Single position calibration by comparison method	600 °C to 1200 °C	1.6°C

*** CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.**