



**ACCREDITATION
DOCUMENT**

**F-06/02
Issue Date: 18/08/2020
Rev. No: 09
LAB 017**

Accreditation No: LAB 017

Awarded to

**Precision Measuring Equipment Laboratory
MRF, PAC Kamra Attock, Pakistan.**

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **28-10-2005** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2017**.

The accreditation requires regular surveillance, and is valid until **25-11-2023**

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

PAKISTAN NATIONAL ACCREDITATION COUNCIL

18-11-2021
Date

SD.
Director General



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Calibration Laboratory.

Accreditation Scope of Precision Measuring Equipment
 Laboratory MRF, PAC Kamra, Attock, Pakistan

Permanent laboratory premises

Field of Measurement: -			
Measured Quantity	Range	*Expanded Uncertainty (\pm)	Technique, Reference Standard, Equipment
Pressure 7.25 psi — 5000 psi	7.25 psi — 500 psi	± 2.4 psi	CP/PG/PMEL/2 Dead Weight Tester
	501 psi — 1000 psi	± 2.4 psi	
	1001 psi — 2000 psi	± 2.6 psi	
	2001 psi — 3000 psi	± 5.9 psi	
	3001 psi — 4000 psi	± 5.9 psi	
	4001 psi — 5000 psi	± 5.9 psi	
Temperature -10°C — 110°C	-10°C — 110°C	± 0.2 °C	CP/TG/TH/PMEL/001 Multifunction Process Calibrator (Fluke-725)
Torque 0 in lbs — 600 in lbs 0 ft lbs — 600 ft lbs	0 in lbs — 600 in lbs	± 0.47 in lbs	CP/TW/TM/PMEL/022 Digital Torque Tester Calibrator
	0 ft lbs — 100 ft lbs	± 0.11 ft lbs	
	301 ft lbs — 600 ft lbs	± 0.57 ft lbs	
DC Voltage 0 V — ± 1000 V	0.000 mV — 320 mV	± 0.00024 mV	CP/DMM/CM/PMEL/023 CP/DMM/CM/PM/PMEL/024 Universal Calibration System & Multifunction Calibrator with Transconductance, Amplifier
	321 mV — 32 V	± 0.000077 V	
	32.1 V — 320 V	± 0.000097 V	
	321 V — 1000 V	± 0.0016 V	
AC Voltage 0 V — 1000 V	0.000 mV — 320 mV	± 0.0037 mV	
	321 mV — 32 V	± 0.000031 V	
	32.1 V — 320 V	± 0.017 V	
	321 V — 1000 V	± 0.057 V	
AC Current 0 A — 600 A	0.000 mA — 320 mA	± 0.00054 mA	
	321 mA — 20 A	± 0.00050 A	
	21 A — 100 A	± 0.082 A	
	101 A — 600 A	± 0.396 A	
DC Current 0 A — ± 600 A	0.000 mA — 320 mA	± 0.00011 mA	
	321 mA — 20 A	± 0.000025 A	
	21 A — 100 A	± 0.152 A	
	101 A — 600 A	± 0.623 A	

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Resistance 0 Ω – 40 M Ω	0.0000 Ω – 400 Ω	$\pm 0.000059 \Omega$	
	401 Ω – 4 k Ω	$\pm 0.0058 \text{ k}\Omega$	
	4 k Ω – 400 k Ω	$\pm 0.0057 \text{ k}\Omega$	
	401 k Ω – 40 M Ω	$\pm 0.000021 \text{ M}\Omega$	
Dial Test Indicator 0.01 mm — 10 mm	0.01 mm — 10 mm	$\pm 0.0010 \text{ mm}$	CP/DTI/PMEL/001 Dial Testing Machine
Mass 1 g – 200 g	1 g – 200 g	$\pm 0.00020 \text{ g}$	CP/W/PMEL/002 Digital Weighing Scale and Mass Set
Gauge Block Set 0.5 mm — 100 mm	0.5 mm — 100 mm	$\pm 0.11 \mu\text{m}$	CP/GB/PMEL/003 Gauge Block Testing Unit & Gauge Block Set
Outside Micrometer 0 mm — 25 mm	0.001 — 25 mm	$\pm 0.0010 \text{ mm}$	CP/OSM/PMEL/004 Gauge Block Set
Feeler Gauge 0.05 mm— 1 mm	0.05 mm— 1 mm	$\pm 0.0010 \text{ mm}$	CP/FG/PMEL/005 Digital Outside Micrometre
Ring Gauge 12 mm — 80 mm	12 mm — 80 mm	$\pm 0.00060 \text{ mm}$	CP/RG/PMEL/006 Universal Measuring Machine

* Expanded Uncertainty:

- Expanded Uncertainty is the measurement uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k = 2$. This measurement uncertainty is a value for which the laboratory has been accredited using the procedure that was the subject of assessment. In certificates issued under its accreditation scope an accredited laboratory is not permitted to quote an uncertainty that is smaller than the published uncertainty for respective ranges as given above.

18-11-2021
Date

sd.
Director