

	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
MIRAGE REBUILD FACTORY
PAKISTAN AERONATICAL COMPLEX
Kamra Cantt, District 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 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 25-11-2020.

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

18-08-2020

Date

Sd

Director General



ACCREDITATION DOCUMENT

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

Calibration Laboratory.

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

Permanent laboratory premises

Field of measurement:			
Calibration Area	Range	*Expanded Uncertainty (±)	Technique, Reference Standard, Equipment
Electrical (Generation & Measurement)			
DC Voltage 0.00 V to ±1000 V	10 mV to 320 mV 321 mV to 32 V 32.1 V to 320 V 321 V to 1000 V	0.00069 mV 0.00035 V 0.00039 V 0.00417 V	CP: CP/MM/CM/PMEL/023 & CP/DMM/CM/PM/PMEL/024 Universal Calibration System 9100, Multifunction Calibrator 5730A with Transconductance 52120A & Amplifier 5725A, Fluke 8505A Reference Multimeter
AC Voltage @ 60 Hz 0.00 V to 1000 V	10 mV to 320 mV 321 mV to 32 V 32.1 V to 320 V 321 V to 1000 V	0.00067 mV 0.00008V 0.00146 V 0.00238 V	CP: CP/MM/CM/PMEL/023 & CP/DMM/CM/PM/PMEL/024 Universal Calibration System 9100, Multifunction Calibrator 5730A with Transconductance 52120A & Amplifier 5725A, Fluke 8505A Reference Multimeter
DC Current 0.00 A to ±600 A	10 mA to 320 mA 321 mA to 20 A 21 A to 100 A 101 A to 600 A	0.005794 mA 0.000025 A 0.050 A 0.053 A	CP: CP/MM/CM/PMEL/023 & CP/DMM/CM/PM/PMEL/024 Universal Calibration System 9100, Multifunction Calibrator 5730A with Transconductance 52120A & Amplifier 5725A, Fluke 8505A Reference Multimeter
AC Current @ 60 Hz 0.00 A to 600 A	10 mA to 320 mA 321 mA to 20 A	0.000015 mA 0.000014 A	CP: CP/MM/CM/PMEL/023 & CP/DMM/CM/PM/PMEL/024 Universal Calibration System

18-08-2020

Date

Sd

Director

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

	21 A to 100 A 101 A to 600 A	0.050 A 0.053 A	9100, Multifunction Calibrator 5730A with Transconductance 52120A & Amplifier 5725A, Fluke 8505A Reference Multimeter
Resistance 0.0 Ω to 40 MΩ	10 Ω to 400 Ω 401 Ω to 4 kΩ 4.1 kΩ to 400 kΩ 401 kΩ to 40 MΩ	0.0011 Ω 0.000030 kΩ 0.000030 kΩ 0.000080 MΩ	CP: CP/MM/CM/PMEL/023 & CP/DMM/CM/PM/PMEL/024 Universal Calibration System 9100, Multifunction Calibrator 5730A with Transconductance 52120A & Amplifier 5725A, Fluke 8505A Reference Multimeter
Temperature Measurements			
Digital/Analogue Thermometers, Temperature Gauges	-10 °C to 110 °C	0.2 °C	CP: CP/ATG/TH/PMEL/007 Digital Thermometer Calibrator PN 5201 & Temperature Bath MRI
Torque Measurement 0.0 inlbs 600 inlbs 0.0 ftlbs to 600 ftlbs	3 inlbs to 15 inlbs 16 inlbs to 75 inlbs 76 inlbs to 200 inlbs 201 inlbs to 300inlbs 301 inlbs to 600inlbs 7 ftlbs to 20 ftlbs 21 ftlbs to 100 ftlbs 101 ftlbs to 600 ftlbs	0.004 inlbs 0.43 inlbs 0.43 inlbs 0.43 inlbs 0.43 inlbs 0.13 ftlbs 0.09 ftlbs 0.52 ftlbs	CP: CP/TW/TM/PMEL/022 Digital Torque Tester Calibrator TTC 2800
Pressure Measurement			
Pressure Gauges 0.0 psi to 5000 psi	20 psi to 50 psi 501 psi to 1000 psi 1001 psi to 2000 psi 2001 psi to 3000 psi 3001 psi to 4000 psi 4001 psi to 5000 psi	0.7 psi 1.2 psi 1.6 psi 2.0 psi 3.1 psi 3.4 psi	CP: CP/PG/PMEL/2 Dead Weight Tester 5020
Dimensional Measure			
Dial Test Indicator	0.01 mm to 10 mm	0.001 mm	CP: CP/DTI/PMEL/001 Dial Testing Machine 865E
Outside Micrometer	0.5 mm to 25 mm	0.001 mm	CP: CP/OSM/PMEL/004 Gauge Block Set Grade 00 & Gauge Block Set 826E Grade 0
Feeler Gauge	0.05 mm to 1 mm	0.001 mm	CP: CP/FG/PMEL/005 Digital Outside Micrometer 293- 340-30

18-08-2020

Date

Sd

Director

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

Ring Gauge	10 mm to 80 mm	0.0006 mm	CP: CP/RG/PMEL/006 Universal Measuring Machine MU314
Length			
Mass	1 g to 200 g	0.0002 g	CP: CP/W/PMEL/002 Digital Weighing Scale TE214S & Mass Set SS13
Length			
Gauge Block Set	0.5 mm to 100 mm	0.13 μ m	CP: CP/GB/PMEL/003 Gauge Block Testing Unit 826E, Gauge Block Set 516-937 Grade 00 & Gauge Block Set 826E Grade 0

*** 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.

18-08-2020
Date

Sd
Director