



INTERNATIONAL  
ACCREDITATION  
SERVICE®

# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **MANWEIR WLL – CALIBRATION LAB**

PO BOX 4038, CB-50  
RAS LAFFAN SUPPORT SERVICE AREA, 4038, RLIC, STATE OF QATAR

### **Calibration Laboratory CL-275**

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date April 12, 2023

Expiration Date May 1, 2025



A handwritten signature in black ink, reading 'Raj Nathan'.

**President**

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | [www.iasonline.org](http://www.iasonline.org)

## MANWEIR WLL – CALIBRATION LAB – CALIBRATION LAB

[www.manweir.com](http://www.manweir.com)

**Contact Name** Siva Prasad Pillai

**Contact Phone** +974 66720749

Accredited to ISO/IEC 17025:2017

Effective Date April 12, 2023

### CALIBRATION AND MEASUREMENT CAPABILITY (CMC)\*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
<b>Dimensional</b>			
Caliper (Vernier/Digital/Dial)	0 mm to 600 mm 0 mm to 1000 mm	8.0 µm 10.0 µm	IS 3651 Cal. Proc. MW-L03-DIM-01 Using Caliper Checker MW-DIM-CC-09 Using Slip Gauge Block MW-DIM-SSG-13 Using Long Slip Gauge MW-DIM-LSG-08
Height Gauge (Vernier/Digital/Dial)	0 mm to 600 mm 0 mm to 1000 mm	8.0 µm 10.0 µm	IS 2921 Cal. Proc. MW-L03-DIM-02 Using Caliper Checker MW-DIM-CC-09 Using Slip Gauge Block MW-DIM-SSG-13 Using Long Slip Gauge MW-DIM-LSG-08
Depth Gauge	0 mm to 600 mm	10.0 µm	IS 4213 Cal. Proc. MW-L03-DIM-03 Using Length Measuring Machine MW-DIM-LMM-01
External Micrometer	0 mm to 100 mm 100 mm to 300 mm 300 mm to 1000 mm	2.0 µm 4.0 µm 9.5 µm	IS 2967 Cal. Proc. MW-L03-DIM-09 Using Slip Gauge Block MW-DIM-SSG-13 Using Long Slip Gauge MW-DIM-LSG-08
Depth Micrometer	0 mm to 300 mm	4.8 µm	JIS B 7544 Cal. Proc. MW-L03-DIM-04

\* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

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Depth Micrometer (continued)			Using Length Measuring Machine MW-DIM-LMM-01 Using Slip Gauge Block MW-DIM-SSG-13 Using Long Slip Gauge MW-DIM-LSG-08
Internal Micrometer	5 mm to 25 mm 0 mm to 300 mm 300 mm to 900 mm	4.0 µm 5.8 µm 10.0 µm	IS 2966 Cal. Proc. MW-L03-DIM-08 Using Length Measuring Machine MW-DIM-LMM-01
Plunger Dial Gauge	0 mm to 25 mm 0 mm to 100 mm	4.0 µm 7.5 µm	IS 2092 Cal. Proc. MW-L03-DIM-06 Using Length Measuring Machine MW-DIM-LMM-01
Lever Dial Gauge	0 mm to 0.14 mm 0 mm to 0.6 mm 0 mm to 2 mm	3.8 µm 3.8 µm 6.8 µm	IS 11498 Cal. Proc. MW-L03-DIM-07 Using Length Measuring Machine MW-DIM-LMM-01
Dial Bore Gauge For Transmission Only	Up to 1 mm (Transmission)	3.7 µm	JIS B 7515 Cal. Proc. MW- L03-DIM-05 Using Length Measuring Machine MW-DIM-LMM-01
Dial Thickness Gauge / Dial Snap Gauge	0 mm to 100 mm	6.0 µm	Cal. Proc. MW-L03-DIM-10 Using Slip Gauge Block MW-DIM-SSG-13
Feeler Gauge	0 mm to 2 mm	1.0 µm	Cal. Proc. MW-L03-DIM-13 Using Digital Micrometer MW-DIM-DOM-03 Using Length Measuring Machine MW-DIM-LMM-01
Thickness Foils	0.01 mm to 2 mm	1.0 µm	Cal. Proc. MW-L03-DIM-18 Using Digital Micrometer MW-DIM-DOM-03 Using Length Measuring Machine MW-DIM-LMM-01
Cylindrical Gauges Plugs & Pins	Up to 100 mm	3.8 µm	Cal. Proc. MW-L03-DIM-16/17 Using Length Measuring Machine MW-DIM-LMM-01
Width Gauge	Up to 100 mm	3.8 µm	Cal. Proc. MW-L03-DIM-15

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Width Gauge (continued)			Using Length Measuring Machine MW-DIM-LMM-01
Micrometer Setting Rod / Length Bars	25 mm to 300 mm 300 mm to 1000 mm	4.5 µm 8.2 µm	IS 2984 Cal. Proc. MW-L03-DIM-11 Using Length Measuring Machine MW-DIM-LMM-01
Plain Gap Gauge / Snap Gauge	Up to 100 mm	2.0 µm	IS 14271 Cal. Proc. MW-L03-DIM-12 Using Slip Gauge Block MW-DIM-SSG-13
Bevel Protector	Up to 180°	2.9'	IS 4239 Cal. Proc. MW-L03-DIM-20 Using Angle Gauge Blocks MW-DIM-AG-10
Ultrasonic Thickness Gauge	0 mm to 100 mm	59.0 µm	IS 15468 Cal. Proc. MW-L03-DIM-19 Using Slip Gauge Block MW-DIM-SSG-13
Coating Thickness Gauge- Ferrous / Non Ferrous	0 mm to 1.5 mm	3.5 µm	IS 6012 Cal. Proc. MW-L03-DIM-18 Using Standard Thickness Foils MW-DIM-TF-11
<b>Mechanical</b>			
Pneumatic Pressure Gauge / Calibrator / Transducer / Transmitter / Switch / Compound Gauge / Indicator/ Controller / Recorder / Logger / Modules	0 bar to 7 bar	1.9 %	DKD-R-6-1 Cal. Proc. MW-L03-PRESS-01/02/03 Using Digital Pressure Calibrator MW-PRESS-DPC-04
Hydraulic Pressure Gauge / Calibrator / Transducer / Transmitter / Switch / Indicator / Controller / Recorder / Logger / Modules	0 bar to 35 bar 0 bar to 3448 bar	0.38 %	DKD-R-6-1 Cal. Proc. MW-L03-PRESS-01/02/03 Using Digital Pressure Gauge MW-PRESS-DPG-05/06/07 Using Hydraulic Dead Weight Tester MW-PRESS-DWT-01/02
Manual Torque Wrenches, Torque Screwdriver	150 N m to 1500 N m	0.88 %	ISO: 6789 Cal. Proc. MW-L03-TOR-01

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			Using NORBAR Torque Transducer MW-TOR-TWCS-02
Sound Level Meter	94 dB & 114 dB	0.6 dB	OIML R58 MW-L03-ACOU-01 Using Sound Calibrator MW-ACOU-SLC-01
<b><i>Time and Frequency</i></b>			
Centrifuge / RPM Measurement (Contact / Non-Contact Type)	60 rpm to 10000 rpm 10000 rpm to 90000 rpm	2.1 rpm 5.1 rpm	Cal. Proc. MW-L03-A&S-01 Using Digital Tachometer MW-A&S-TM-02
Centrifuge / RPM Source (Contact / Non-Contact Type)	60 rpm to 10000 rpm 10000 rpm to 90000 rpm	2.1 rpm 5.1 rpm	Cal. Proc. MW-L03-A&S-02 Using Digital Tachometer MW-A&S-TM-02

<sup>1</sup>The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

<sup>2</sup>When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.