

## TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN) CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES





534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG, BANGKOK 10250 TEL. 0-2717-3000-24 FAX. 0-2719-9484

## Certificate of Calibration

Certificate No.: 23P1417

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Equipment:

Pressure Datalogger

Manufacturer:

Omega

This certificate may not be reproduced other than in full, except with the prior written approval of the head of

Model: OM-CP-PR140 Corporate Services 3: Equipment Calibration and Testing Services.

Serial No.:

P95847

ID No.:

PRED005

Condition As-Received: Used Item

Received Date:

02 May 2023

Calibration Date:

10 May 2023

Reference:

2305-0039WSC

Submitted by: National Healthcare Systems Co., Ltd.

Ambient Temperature:

 $(23 \pm 2)$  °C

Relative Humidity:

(50 ± 15) %

2301/2 New Petchburi Soi 47 (Soonvijai),

Atmospheric Pressure:

1010 mbar

Bangkapi, Huaykwang, Bangkok 10310

Procedure used:

The calibration was conducted by direct comparison method against Pressure Measuring Instruments

Standard according to in-house calibration procedure CP-P02, using " DKD-R 6-1; Calibration of Pressure

Gauges, Edition 03/2014 " as a guidelines.

## Condition of this result of calibration

1.Reference standards instuments:

<u>Instrument</u>	<u>Model</u>	Serial No.	Certificate No.	<b>Due Date</b>	
ead-Weight Tester	T2300/2	11450-98	MP-0156-20	06 Oct 2025	

1) Dead-Weight Tester

2. This result of calibration was made on requested at the point specified by customer.

- 3. Scale and conversion factor is 1 kPa = 0.01 bar
- 4. This instrument was used nitrogen gas as pressure media.
- 5. This instrument was installed in vertical orientation and top of the pressure port was used as the reference level.
- 6. The certificate is valid only to the item calibrated on date and place of calibration.
- 7. This Certification is traceable to the International System of Unit maintained through:-

-National Institute of Metrology Thailand (NIMT)

Calibrated by: Issue Date:

Suwit Aussarree 12 May 2023

Approved Signatory : \_

Attapo P. [ ] Phalinee Prabpaipal

[ ] Sura Suwannasri

1 Attapol Panurach



Cert.No.: 23P1417

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- This instrument was connected with Data Logger Software Omega Version 2.07.1 Model OM-CP-PR140 as an indicator.

Result of calibration:- Without adjustment

Range: 0 bar to 4 bar

Offset: 0.96149999 bar

Function:- Pressure Measurement

Resolution: 0.0001 bar

Increasing Pressure

Applied Pressure (bar)	0.00000	0.39121	0.78248	1.22264	1.61390	2.00518	2.39645	2.78782	3.22800	3.61927	3.99985
UUC* Indication (bar)	0.0000	0.3907	0.7812	1.2209	1.6119	2.0030	2.3938	2.7847	3.2233	3.6127	3.9908
Error (bar)	0.00000	-0.00051	-0.00128	-0.00174	-0.00200	-0.00218	-0.00265	-0.00312	-0.00470	-0.00657	-0.00905

## Decreasing Pressure

Applied Pressure (bar)	3.99985	3.61927	3.22800	2.78782	2.39645	2.00518	1.61390	1.22264	0.78248	0.39121	0.00000
UUC* Indication (bar)	3.9908	3.6127	3.2233	2.7847	2.3939	2.0031	1.6120	1.2210	0.7814	0.3908	0.0000
Error (bar)	-0.00905	-0.00657	-0.00470	-0.00312	-0.00255	-0.00208	-0.00190	-0.00164	-0.00108	-0.00041	0.00000

The uncertainty of measurement was  $\pm$  0.0016 bar

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 %.

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<sup>\*</sup> UUC = Unit Under Calibration