



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. : 23P1956

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Equipment : Pressure Calibrator

Manufacturer: Fluke

Model : 717 30G

Serial No.: 5730135

ID No.: PART013

Condition As-Received: Used Item

Received Date: 06 June 2023

Calibration Date: 12 June 2023

Reference: 2306-0124WSC

Submitted by: National Healthcare Systems Co.,Ltd.

Ambient Temperature: (23 ± 2) °C

Relative Humidity: (50 ± 15) %

Atmospheric Pressure: 1006 mbar

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except with the prior written approval of the head of
Corporate Services 3: Equipment Calibration and Testing Services.

2301/2 New Petchburi Soi 47 (Soonvijai),
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 and CP-P06, using " DKD-R 6-1 ; Calibration of Pressure Gauges, Edition 03/2014 " as a guidelines.

Condition of this result of calibration

1.Reference standards instruments :

<u>Instrument</u>	<u>Model</u>	<u>Serial No.</u>	<u>Certificate No.</u>	<u>Due Date</u>
1) Pressure Calibrator	PC106P	1189	MP-0137-22	24 Aug 2023
2) Dead-Weight Tester	T2300/2	11450-98	MP-0156-20	06 Oct 2025

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

3.Scale and conversion factor is 1 kPa = 7.50062 mmHg

4.This instrument was installed in horizontal orientation and top of the pressure port was used as the reference level.

5.This instrument was used clean air and nitrogen gas as pressure media.

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 : Suksan Khankaew

Issue Date : 13 June 2023

Approved Signatory :

Attapol P.
[] Phalinee Prabpaipal
[] Sura Suwannasri
[x] Attapol Panurach

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Result of calibration:- Without adjustment**Range :** 0 mmHg to 1550 mmHg**Function:- Pressure Measurement****Resolution :** 0.1 mmHg**Increasing Pressure**

Applied Pressure (mmHg)	0.00	146.71	293.43	440.17	623.60	770.34	917.06	1063.81	1210.53	1393.95	1553.44
UUC* Indication (mmHg)	0.0	146.7	293.3	440.0	623.4	770.0	916.9	1063.6	1210.3	1393.8	1553.1
Error (mmHg)	0.00	-0.01	-0.13	-0.17	-0.20	-0.34	-0.16	-0.21	-0.23	-0.15	-0.34

Decreasing Pressure

Applied Pressure (mmHg)	1553.44	1393.95	1210.53	1063.81	917.06	770.34	623.60	440.17	293.43	146.71	0.00
UUC* Indication (mmHg)	1553.1	1393.8	1210.4	1063.8	917.0	770.2	623.6	440.2	293.5	146.8	-0.1
Error (mmHg)	-0.34	-0.15	-0.13	-0.01	-0.06	-0.14	0.00	0.03	0.07	0.09	-0.10

The uncertainty of measurement was ± 0.37 mmHg**Result of calibration:- Without adjustment****Range :** 0 mmHg to -622 mmHg**Function:- Vacuum Pressure Measurement****Resolution :** 0.1 mmHg**Increasing Pressure**

Applied Pressure (mmHg)	0.00	-62.07	-124.13	-186.01	-247.98	-309.95	-372.01	-434.08	-495.95	-557.97
UUC* Indication (mmHg)	0.0	-62.0	-124.0	-186.0	-248.0	-310.0	-372.0	-434.0	-496.0	-558.0
Error (mmHg)	0.00	0.07	0.13	0.01	-0.02	-0.05	0.01	0.08	-0.05	-0.03

Decreasing Pressure

Applied Pressure (mmHg)	-622.00	-558.02	-495.95	-434.08	-372.06	-309.95	-248.08	-186.03	-124.18	-62.15
UUC* Indication (mmHg)	-622.0	-558.0	-496.0	-434.0	-372.0	-310.0	-248.0	-186.0	-124.0	-62.0
Error (mmHg)	0.00	0.02	-0.05	0.08	0.06	-0.05	0.08	0.03	0.18	0.15

The uncertainty of measurement was ± 0.19 mmHg

* UUC = Unit Under Calibration

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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Ahtapol P.

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