



GWS Metrology Services

Certificate Number:  
CBRE-7433-CK

CBRE - GWS LLC  
Metrology Services  
9410 Bunsen Parkway  
Suite 100B  
Louisville, KY 40220  
502-495-5700



Date of Cal:  
24-Feb-2024  
Issue Date:  
26-Feb-2024

# Calibration Certificate

PO Number  
48157262

Customer :  
GE APPLIANCES - A HAIER COMPANY  
GE APPLIANCE PARK  
LOUISVILLE, KY 40225

Work Order  
71692

Asset Number : **AP2/21740410046**  
Manufacturer : **TPI**  
Description : **MANOMETER, DIGITAL**  
Department : **AP2**  
Location : **WATER HEATER LAB**

Serial Number : **21740410046**  
Model Number : **608**  
Cal. Location : **9410 BUNSEN PKWY #100B, LOUISVILLE, KY**

## Environmental Data

Temp : **22.3 °C**  
Humidity : **34.1 %**

## Calibration Information

\*\*\*Calibration Due Date : **02/24/2025**  
Condition As Received : **MEETS SPEC.**  
Condition As Returned : **PASS**

## Procedures used for this Calibration:

Procedure #	Procedure Description	Rev #	Rev Date
CP-0087 PNEUM/	CP-0087 PNEUMATIC/HYDRAULIC PRESSURE/VACUUM GAUGES	2	11/21/2023

## Traceability Information

Asset Number	Description	Cal. Due Date	Reference Number
MET-0163	PRESSURE CALIBRATOR, 8 TO 17 PSIA	8/16/2024	CBRE-3404-TSM
MET-0165	MODULE, PRESSURE, $\pm 100$ INH <sub>2</sub> O	8/16/2024	CBRE-3408-TSM
MET-0992	TEMP AND HUMIDITY, DATALOGGER	8/7/2024	CBRE-3918-TSM

Traceability to NIST or other national metrology institutes for secondary measurement standards is established through laboratories approved by the CBRE-GWS, LLC Metrology Services quality assurance program. Test reports and calibration certificates maintained by CBRE - GWS are available upon request to the recipient of this calibration report.

Calibrated By:  **CHRISTOPHER KROLIK** - Metrologist

This is to certify that the above listed instrument/gage was inspected by CBRE GWS Metrology Services using a procedure(s) developed from the manufacturer specifications, accepted industry practices and/or customer requirements. The CBRE GWS Metrology Services Quality System conforms to ISO/IEC-17025:2017. It is hereby further certified that the inspection described herein was performed using standards whose values are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) or other National Metrology Institute (NMI), or have been derived from accepted values of natural constants, or have been derived by the ratio type of self calibration techniques. Uncertainties are estimated at a 95% confidence level. (k=2). The results indicated in this certificate relate only to the item(s) listed above. CBRE GWS Metrology Services responsibility shall in no event nor for any reason whatsoever exceed the purchase price of this calibration.

\*\*\* Calibration due dates are only issued if requested by the customer and are based upon customer dictated recall intervals.



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# Calibration Certificate (Cont)

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## CALIBRATION TEST POINTS

\* Not accredited for this parameter

ERDICT- (P)=Passed, (A)=Adjusted after As Found Failure, (L)=Limited, (F)=Failed, (R)=Report of Value only

Description	Nominal	Tol -	Tol +	As Found	As Left	Units	Verdict	Comment
Pressure - Increasing	0.00	-0.30	0.30	0.00	0.00	in-H2O	P	
	12.00	11.70	12.30	11.95	11.95	in-H2O	P	
	28.00	27.70	28.30	27.95	27.95	in-H2O	P	
	45.0	44.4	45.6	44.9	44.9	in-H2O	P	
	59.0	58.4	59.6	58.9	58.9	in-H2O	P	
Pressure - Decreasing	45.0	44.4	45.6	44.9	44.9	in-H2O	P	
	28.00	27.70	28.30	27.87	27.87	in-H2O	P	
	12.00	11.70	12.30	11.95	11.95	in-H2O	P	
	0.00	-0.30	0.30	-0.03	-0.03	in-H2O	P	
Vacuum - Increasing	0.00	-0.30	0.30	-0.03	-0.03	in-H2O	P	
	-12.00	-12.30	-11.70	-11.95	-11.95	in-H2O	P	
	-28.00	-28.30	-27.70	-27.96	-27.96	in-H2O	P	
	-45.0	-45.6	-44.4	-45.0	-45.0	in-H2O	P	
	-59.0	-59.6	-58.4	-58.9	-58.9	in-H2O	P	
Vacuum - Decreasing	-45.0	-45.6	-44.4	-45.0	-45.0	in-H2O	P	
	-28.00	-28.30	-27.70	-27.95	-27.95	in-H2O	P	
	-12.00	-12.30	-11.70	-11.96	-11.96	in-H2O	P	
	0.00	-0.30	0.30	-0.02	-0.02	in-H2O	P	

The verdicts above are based upon a direct comparison of the measured value at the time of calibration, to a published or customer supplied tolerance for the specification listed. CBRE-GWS does not include the measurement uncertainty in making these determinations unless specifically requested. It is the responsibility of the user of this equipment to determine if the accept / reject tolerances meet the requirements of the intended measurement process.

### Certificate Comments :

No Additional Comments

### Expanded measurement uncertainty at an approximate 95% confidence level (k=2)

(-100 to 100) inH2O ± 0.023 inH2O