



10641 Highway 36
Covington, GA
30014

www.sunbeltbuilders.com

t 770.786.3031
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NEWTON COUNTY CENTRALIZED STORAGE FACILITY

Mechanical Repair Services
P.O. Box 883
Watkinsville, GA 30677
ph: 706-546-5003
Eddie Powell
mechanicalrepairserviceinc@gmail.com

23-0000 HVAC Test & Balance Report

ATLANTA TEST & BALANCE INC
3890 HIGHWAY 17
PO BOX 2495
CLARKESVILLE, GA 30523
706-754-0065

Test and Balance Report

For

CENTRALIZED STORGE FACILITY
NEWTON COUNTY BOARD OF COMMISSIONERS
1113 USHER STREET
COVINGTON, GA 30014

Mechanical Contractor: **MECHANICAL REPAIR SERVICE, INC.**

Architect: **GM ARCHITECT**

Mechanical Engineer: **TOTAL ENGINEERS**

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB Procedural Standard for Testing, adjusting and Balancing of Environmental Systems. The measurements shown, and the information given, in this report are certified to be accurate and complete, at the time and date information was gathered. Any variances from design quantities, which exceed NEBB tolerances, are noted in this report.



TAB Supervisor
NEBB Certification no. **3143**
Date: 5/22/2025

Firm Certification Number: 3143

Firm Name: Atlanta Test & Balance Corporation

Certification: Testing, Adjusting and Balancing of Environmental Systems

Certified Professional Name: BRIAN KUKNYO

Expiration Date: 12/31/25



ATLANTA TEST & BALANCE INC

HVAC TESTING & BALANCING

3890 HIGHWAY 17 PO BOX 2495
CLARKESVILLE, GA 30523

Tel. 706-754-0065

PROJECT SUMMARY

CLIENT: _____ DATE: _____
JOB: _____ JOB #: _____

ALL AIR MOVING SYSTEMS HAVE BEEN PROPORTIONATELY
BALANCED AND MEASURED WITH A SHORTRIDGE AIR DATA
METER.

ALL TEMPS, ELECTRICAL AND PRESSURE DATA TAKEN, ARE
WITHIN ACCEPTABLE RANGES.

EXCEPTIONS: SEE INDIVIDUAL REPORT PAGES.

THIS REPORT MEETS ALL REQUIREMENTS FOR A N.E.B.B.

CERTIFICATION





BY: BRIAN KUKNYO

ATLANTA TEST & BALANCE, INC.
3890 Highway 17, PO Box 2495
Clarkesville. Ga 30523

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ATLANTA TEST & BALANCE INC
3890 HIGHWAY 17 # 2495, CLARKESVILLE, GA 30523
Tel 706-754-0065

Project: NEWTON CO. ADMIN STORAGE FACILITY 25127

AIR MOVING EQUIPMENT TEST SHEET

System	PU-1			
Equipment Location	PAD			
Area Served	STORAGE			
Equipment Manufacturer	CARRIER			
Model	50JC-V06M1ASA30A0			
Serial Number	4424C10357			

	Specified	Actual	Specified	Actual
Total CFM-Fan	1750	1831		
Total CFM-Outlet	1750	1831		
R/A CFM	1500	1590		0
O/A CFM	250	241		
Total Static Press.(Total/Ext)	-/0.60	1.12	0.98	0
Inlet Pressure	-	0.71	0.57	
Discharge Pressure	-	0.41		
Fan RPM	-	D.D.		
EDB / EWB	-/-	71.3 / 60.1		
LDB / LWB	-/-	53.7 / 51.2		

	Specified	Actual	Specified	Actual
Motor Manufacturer	-	-		
Motor HP	-	-		
Phase	1	1		
Voltage	208-230	219		
Amperage	7.2	6.8		
Motor RPM	-	D.D.		
Motor Service Factor	-	1.15		
Starter Heater Elements	-	T.P.		

Motor Sheave & No. Grooves	D.D.	
Fan Sheave & No. Grooves	D.D.	
Belts	D.D.	

Remarks

ATLANTA TEST & BALANCE INC
3890 HIGHWAY 17 # 2495, CLARKESVILLE, GA 30523
Tel. 706-754-0065

Project: NEWTON CO. ADMIN STORAGE FACILITY 25127

System: PU-1

DIFFUSER & GRILLE TEST SHEET

TOTAL 1831

NOTE if effective area = 1.0, velocity information and measurements are not required

Remarks _____

Date 5/22/25 Technician NA Page 2

ATLANTA TEST & BALANCE INC
 3890 HIGHWAY 17 #2495, CLARKESVILLE, GA 30523
 TEL 706-754-0065

Project:

NEWTON CO. ADMIN. STORAGE FACILITY

25127

FAN DATA SHEET

System	EF-1	EF-2
Equipment Location	CEILING	CEILING
Area Served	RR	MORGUE
Equipment Manufacturer	GREENHECK	GREENHECK
Model	SP-B90-QD	SP-B200-QD
Serial Number	175258854-0020	192889293-0002

	Specified	Actual	Specified	Actual
Total CFM-Fan	70	75	-	181
Total CFM-Outlet	70	75	-	181
Total Static Press (Total/Ext.)	0.25	0.21	-	0.29
Inlet Pressure	-	-	-	-
Discharge Pressure	-	0.21	-	0.29
Fan RPM	-	D.D.	-	D.D.

	Specified	Actual	Specified	Actual
Motor Manufacturer	-	-	-	-
Motor HP	-	-	-	-
Phase	1	1	1	1
Voltage	115	119	115	121
Amperage	0.19	0.15	2.7	2.5
Motor RPM	-	D.D.	-	D.D.
Motor Service Factor	-	1.0	-	1.0
Starter Heater Elements	-	T.P.	-	T.P.

Motor Sheave & No. Grooves	D.D.	D.D.
Fan Sheave & No. Grooves	D.D.	D.D.
Belts	D.D.	D.D.

Remarks

Date

5/22/25

Technician NA

Page

3

ATLANTA TEST & BALANCE INC
3890 HIGHWAY 17 - PO BOX 2495 CLARKESVILLE, GA 30523
CLARKESVILLE, GA 30523
Tel. 706-754-0065

INSTRUMENT CALIBRATION



Certificate of Calibration

Company Information		Equipment Information		Event Result:	PASS
ATLANTA TEST & BALANCE		ID Number:	M09529	As Found:	PASS
3890 HIGHWAY 17		Manufacturer:	Shortridge	As Left:	PASS
CLARKSVILLE, GEORGIA 30523		Model:	ADM-860C	Issue Date:	03/28/2025
Order:	WO38256	Serial Number:	M09529	Cal Date:	03/28/2025
PO Number:	ATB03202025	Alternate I.D.:		Due Date:	03/28/2026
Gage Location:	NONE SPECIFIED	Description:	AIRDATA MULTIMETER	Environment:	Temp: 70 °F RH: 40 %
Cal Location:	LAB			Size / Range:	0 TO 60 inH2O

Event Result: PASS - Gage Meets Specifications / FAIL - Gage did not meet specifications / LTD - Limited Calibration / ADJ - Passed after adjustment / ROV - Report of Value

Notes & Comments:

Asset Notes:

Comments:

Expanded Uncertainty Details:

± 0.0018% of Reading + 0.28 inH2O

Standards Used:

Asset/Standard	Description	Serial Number	Cal Date	Due Date
JJM001	Thermo Hygrometer	SY52D16608077	9/3/2024	9/30/2025
RA0667	PRESSURE LOOP CALIBRATOR	12262987	8/22/2024	8/31/2025

Procedures Used:

Name	Description	Rev Level	Rev Date
P-101	PRESSURE GAGE	3.40	5/25/2021

Test Points:	Pressure	Checkpoints Marked: A = Adjusted, F = Out of Tolerance				
Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left
1	12.0000	inH2O	11.7590	12.2410	11.9800	11.9800
2	24.0000	inH2O	23.5190	24.4810	23.9500	23.9500
3	36.0000	inH2O	35.2790	36.7210	35.8900	35.8900
4	48.0000	inH2O	47.0390	48.9610	47.9300	47.9300
5	60.0000	inH2O	58.7990	61.2010	59.8600	59.8600
6	12.0000	inH2O	11.7590	12.2410	11.9700	11.9700

Transcat is accredited by ANSI National Accreditation Board to ISO/IEC 17025:2017 and ANSI/NCSL Z540-1-1994. Transcat certifies that the above listed instrument at the time of calibration meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). The calibrations within the certificate are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or through NIST accepted intrinsic standards of measurement, or derived by the ratio type of self-calibration techniques. This calibration complies with ANSI/NCSL Z540-1-1994 and ISO/IEC 17025:2017. The measurement results relate only to the items tested or calibrated. Transcat is responsible for all information within the certificate except for customer provided information. Customer provided data is clearly identified. Transcat is not responsible for any effects that customer provided data has on the results. Measurement uncertainties are calculated in accordance with the method described in EA-4/02 and NIST TN1297 using a coverage factor of $k = 2$, corresponding to a confidence level of approximately 95%. Uncertainties were not considered in all Pass / Fail criteria. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

Calibrated At:

11402 Reading Road
Cincinnati, OH 45241

Facility Responsible:

11402 Reading Road
Cincinnati, OH 45241

Calibrated By:

Electronically Signed By:

JAMES MILLS

CALIBRATION TECHNICIAN - 3/28/2025 12:15:28 PM

Reviewed By:

Electronically Signed By:

Rebecca Kramer

CALIBRATION TECHNICIAN - 3/28/2025 2:09:25 PM

Shortridge Instruments, Inc. HydroData Multimeter Calibration Equipment

Order Number: 241130 Serial Number: WZ4104 Test Type: Initial As-Received Final

DIFFERENTIAL / GAGE PRESSURE STANDARDS

HDM #01-L	S/N: 41744/42459	Heise Model: PPM-1	Mfgd by Dresser Industries	Calibrated by Ashcroft	Calibration Date: 09/30/24	Due Date: 09/2025
HDM #03-L	S/N: 41745/42460	Heise Model: PPM-1	Mfgd by Dresser Industries	Calibrated by Ashcroft	Calibration Date: 08/01/24	Due Date: 07/2025
HDM #11-L	S/N: 45651/48600	Heise Model: PPM-1	Mfgd & Calibrated by Ashcroft, Inc.		Calibration Date: 04/24/24	Due Date: 04/2025
Rated Accuracy: 0.06% fs		Range: 0.0 to 15.0 in wc		Resolution: 0.001 in wc	Uncertainty: < 0.00651 in wc	
Used at Set Points:	3.0; 14.0 for all models.					
HDM #01-R	S/N: 41744/42457-1	Heise Model: PPM-1	Mfgd by Dresser Industries	Calibrated by Ashcroft	Calibration Date: 10/01/24	Due Date: 09/2025
HDM #03-R	S/N: 41745/42458	Heise Model: PPM-1	Mfgd by Dresser Industries	Calibrated by Ashcroft	Calibration Date: 08/02/24	Due Date: 07/2025
HDM #11-R	S/N: 45651/48599	Heise Model: PPM-1	Mfgd & Calibrated by Ashcroft, Inc.		Calibration Date: 04/25/24	Due Date: 04/2025
Rated Accuracy: 0.06% fs		Range: 0.0 to 150.0 in wc		Resolution: 0.01 in wc	Uncertainty: < 0.07540 in wc	
Used at Set Points:	25.0; 31.0; 140.0 for all models.					
HDM #02-L	S/N: 41747/42464	Heise Model: PPM-2	Mfgd by Dresser Industries	Calibrated by Ashcroft	Calibration Date: 09/26/24	Due Date: 09/2025
HDM #04A-L	S/N: 44806/47224	Heise Model: PPM-2	Mfgd & Calibrated by Ashcroft, Inc.		Calibration Date: 07/30/24	Due Date: 07/2025
HDM #12-L	S/N: 45652/48602	Heise Model: PPM-2	Mfgd & Calibrated by Ashcroft, Inc.		Calibration Date: 04/22/24	Due Date: 04/2025
Rated Accuracy: 0.05% fs		Range: 0.0 to 1400 in wc		Resolution: 0.1 in wc	Uncertainty: < 0.479 in wc	
Used at Set Points:	225.0; 275.0; 1025 for HDM-250 and HDM-300		Used at Set Points:	250.0; 305.0 for HDM-150		
HDM #02-R	S/N: 41747/42462	Heise Model: PPM-2	Mfgd by Dresser Industries	Calibrated by Ashcroft	Calibration Date: 09/26/24	Due Date: 09/2025
HDM #04A-R	S/N: 44806/47216	Heise Model: PPM-2	Mfgd & Calibrated by Ashcroft, Inc.		Calibration Date: 07/30/24	Due Date: 07/2025
HDM #12-R	S/N: 45652/48601	Heise Model: PPM-2	Mfgd & Calibrated by Ashcroft, Inc.		Calibration Date: 04/22/24	Due Date: 04/2025
Rated Accuracy: 0.05% fs		Range: 0.0 to 8320 in wc		Resolution: 1 in wc	Uncertainty: < 2.77 in wc	
Used at Set Points:	1620; 2000; 4500; 6930 for HDM-250		Used at Set Points:	1620; 2000; 4500; 8300 for HDM-300	Used at Set Points:	2000; 4150 for HDM-150

TEMPERATURE STANDARDS

RTD Simulator S/N: 249	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 04/11/24	Due Date: 04/2028
RTD Simulator S/N: 250	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 04/11/24	Due Date: 04/2028
RTD Simulator S/N: 253	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 04/11/24	Due Date: 04/2028
RTD Simulator S/N: 254	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 08/20/24	Due Date: 08/2028
RTD Simulator S/N: 256	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 08/20/24	Due Date: 08/2028
RTD Simulator S/N: 257	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 08/20/24	Due Date: 08/2028
RTD Simulator S/N: 292	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 01/15/24	Due Date: 01/2028
RTD Simulator S/N: 293	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 01/15/24	Due Date: 01/2028
RTD Simulator S/N: 294	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 01/15/24	Due Date: 01/2028
RTD Simulator S/N: 313	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 03/25/22	Due Date: 03/2026
RTD Simulator S/N: 314	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 03/25/22	Due Date: 03/2026
RTD Simulator S/N: 315	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 03/25/22	Due Date: 03/2026
RTD Simulator S/N: 316	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 06/06/22	Due Date: 05/2026
RTD Simulator S/N: 317	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 05/23/22	Due Date: 05/2026
RTD Simulator S/N: 318	Model RTD-1000/500	Mfgd by General Resistance	Calibrated by IET Labs	Calibration Date: 05/23/22	Due Date: 05/2026
Rated Accuracy: 0.025% of setting		Range: 100.00 Ω to 11111.10 Ω	Resolution: 0.01 Ω		Uncertainty: < 32 ppm

Thermometer #1 S/N 8A089/Thermistor S/N A410660	Model 1504/5610	Mfgd by Hart Scientific	Calibrated by Fluke	Calibration Date: 04/09/24	Due Date: 04/2026
Thermometer #2 S/N 8B104/Thermistor S/N 871507	Model 1504/5610	Mfgd by Hart Scientific	Calibrated by Fluke	Calibration Date: 12/07/22	Due Date: 11/2024
Thermometer #5 S/N B11780/Thermistor S/N B10505	Model 1504/5610	Mfgd by Hart Scientific	Calibrated by Fluke	Calibration Date: 06/27/24	Due Date: 06/2026
Thermometer #6 S/N B11782/Thermistor S/N B10509	Model 1504/5610	Mfgd by Hart Scientific	Calibrated by Fluke	Calibration Date: 09/21/24	Due Date: 09/2026
Thermometer #7 S/N B49938/Thermistor S/N B482202	Model 1504/5610	Mfgd and Calibrated by Fluke		Calibration Date: 02/05/24	Due Date: 02/2026
Rated Accuracy (combined): 0.0324° F		Range: 32° F to 176° F	Resolution: 0.001° F	Combined Uncertainty with Baths: < 0.040° F	

Temp Transfer Standard S/N M00136 Model ADM-870	Mfgd & Calibrated by Shortridge Instruments, Inc.	Calibration Date: 10/25/24	Due Date: 10/2025
Temp Transfer Standard S/N M96100 Model ADM-870	Mfgd & Calibrated by Shortridge Instruments, Inc.	Calibration Date: 03/21/24	Due Date: 03/2025
Rated Accuracy: 0.03° F	Range: 33° F to 158° F	Resolution: 0.01° F	Uncertainty: < 0.023° F
Total combined Uncertainty for MultiTemp and TemProbe testing :	< 0.046° F		

This form must remain with the Certificate of Calibration corresponding to the Order Number listed above.

Shortridge Instruments, Inc.
7855 East Redfield Road Scottsdale, Arizona 85260
(480) 991-6744 • Fax (480) 443-1267 • www.shortridge.com

CO ID: 016587

HDM-250 HYDRODATA MULTIMETER CERTIFICATE OF CALIBRATION

S/N: W24104Customer: ATLANTA TEST & BALANCE, INC.City: CLARKSVILLEState: GAModel #: HDM-250

PO #:

Calibration Due Date:

Order #: 241130Rh 27 %Ambient Temperature 68 °FBarometric Pressure 28.64 in Hg

HDM Pressure Standard Heise #1-L	Used at Set Points: 3.0; 14.0	S/N 41744/42459
HDM Pressure Standard Heise #3-L	Used at Set Points: 3.0; 14.0	S/N 41745/42460
HDM Pressure Standard Heise #11-L	Used at Set Points: 3.0; 14.0	S/N 45651/48600
HDM Pressure Standard Heise #1-R	Used at Set Points: 25.0; 31.0; 140.0	S/N 41744/42457-1
HDM Pressure Standard Heise #3-R	Used at Set Points: 25.0; 31.0; 140.0	S/N 41745/42458
HDM Pressure Standard Heise #11-R	Used at Set Points: 25.0; 31.0; 140.0	S/N 45651/48599
HDM Pressure Standard Heise #2-L	Used at Set Points: 225.0; 275.0; 1025	S/N 41747/42464
HDM Pressure Standard Heise #4A-L	Used at Set Points: 225.0; 275.0; 1025	S/N 44806/47224
HDM Pressure Standard Heise #12-L	Used at Set Points: 225.0; 275.0; 1025	S/N 45652/48602
HDM Pressure Standard Heise #2-R	Used at Set Points: 1620; 2000; 4500; 6930	S/N 41747/42462
HDM Pressure Standard Heise #4A-R	Used at Set Points: 1620; 2000; 4500; 6930	S/N 44806/47216
HDM Pressure Standard Heise #12-R	Used at Set Points: 1620; 2000; 4500; 6930	S/N 45652/48601

DIFFERENTIAL PRESSURE TEST (in wc)
TEST METER TOLERANCE = $\pm 2.0\% \pm 0.3$ in wc

Approx Set Pt	Standard	Test Meter	% Diff
3.0	<u>3.06</u>	<u>3.0</u>	<u>-1.96</u>
14.0	<u>14.03</u>	<u>14.1</u>	<u>.50</u>
25.0	<u>25.03</u>	<u>25.1</u>	<u>.28</u>
31.0	<u>31.00</u>	<u>31.2</u>	<u>.65</u>
140.0	<u>143.36</u>	<u>142.2</u>	<u>-.81</u>
225.0	<u>226.3</u>	<u>225.6</u>	<u>-.31</u>
275.0	<u>283.0</u>	<u>282.7</u>	<u>-.11</u>
1025	<u>1031.3</u>	<u>1028</u>	<u>-.32</u>
1620	<u>1654</u>	<u>1641</u>	<u>-.79</u>
2000	<u>2000</u>	<u>2000</u>	<u>.00</u>
4500	<u>4523</u>	<u>4502</u>	<u>-.46</u>
6930	<u>6953</u>	<u>6916</u>	<u>-.53</u>

GAGE PRESSURE (P_g) TEST (in wc)
TEST METER TOLERANCE = $\pm 2.0\% \pm 0.3$ in wc

Approx Set Pt	Standard	Test Meter	% Diff
3.0	<u>3.05</u>	<u>3.0</u>	<u>-1.64</u>
14.0	<u>14.03</u>	<u>14.1</u>	<u>.50</u>
25.0	<u>25.03</u>	<u>25.2</u>	<u>.68</u>
31.0	<u>31.00</u>	<u>31.2</u>	<u>.65</u>
140.0	<u>143.11</u>	<u>142.8</u>	<u>-.22</u>
225.0	<u>225.1</u>	<u>225.6</u>	<u>.22</u>
275.0	<u>282.0</u>	<u>282.9</u>	<u>.32</u>
1025	<u>1032.7</u>	<u>1032</u>	<u>-.07</u>
1620	<u>1656</u>	<u>1647</u>	<u>-.54</u>
2000	<u>2049</u>	<u>2044</u>	<u>-.24</u>
4500	<u>4537</u>	<u>4527</u>	<u>-.22</u>
6930	<u>6980</u>	<u>6964</u>	<u>-.23</u>

Shortridge Instruments, Inc.
7855 East Redfield Road Scottsdale, Arizona 85260
(480) 991-6744 • Fax (480) 443-1267 • www.shortridge.com

HDM-250 HYDRODATA MULTIMETER CERTIFICATE OF CALIBRATION

S/N: WZ4104
Order #: 741130TEMPERATURE TEST - HYDRODATA MULTIMETER (° F)
TEST METER TOLERANCE = ± 0.2° F

RTD Simulator: S/N 249	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 250	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 253	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 254	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 256	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 257	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 292	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 293	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 294	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 313	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 314	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 315	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 316	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 317	Set Point: 35.6° F 95° F 154.4° F
RTD Simulator: S/N 318	Set Point: 35.6° F 95° F 154.4° F

RTD Simulator Temperature Equivalent Set Point	Test Meter	Diff
35.60	35.7	.1
95.00	95.1	.1
154.40	154.3	-.1

All meters are set to zero prior to taking pressure readings.

NOTES: _____

_____Procedure used: Procedure for Differential Pressure, Gage Pressure, and Temperature Calibration of HydroData Multimeters SIP-CP10 Revision: 05
Dated: 07/31/14. There were no additions to or deviations from the specified calibration procedure during the calibration process.

This instrument has been calibrated using Calibration Standards which are traceable to NIST (National Institute of Standards and Technology). Calibration accuracy ratio is 4:1 for pressures and temperature. Quality Assurance Program and calibration procedures meet the requirements for ANSI/NCSL Z540-1, ISO 17025, MIL-STD 45662A and manufacturer's specifications. Calibration accuracy is certified when meters are used with properly functioning accessories only. Uncertainties are expressed in expanded terms (twice the calculated uncertainty). This report shall not be reproduced, except in full, without the written approval of Shortridge Instruments, Inc. Results relate only to the item calibrated.

Limitations on use: See Shortridge Instruments, Inc. Instruction Manual for the use of HydroData Multimeters

The enclosed HDM Calibration Standards form is an integral part of this calibration and must remain with this Certificate of Calibration. Any calibration due date shown is specified by the customer.

Calibration Technician(s): B. Jn Calibration Date: 11/21/2024Calibration Approved by: D. Bab Title: Cal Super Date: 11/21/2024Shortridge Instruments, Inc.
7855 East Redfield Road Scottsdale, Arizona 85260
(480) 991-6744 • Fax (480) 443-1267 • www.shortridge.com



Certificate of Calibration

Company Information		Equipment Information		Event Result:	PASS
ATLANTA TEST & BALANCE		ID Number:	102623023	As Found:	PASS
3890 HIGHWAY 17		Manufacturer:	Cooper Instrument	As Left:	PASS
CLARKSVILLE, GEORGIA 30523		Model:	SRH77A	Issue Date:	04/11/2025
Order:	WO38256	Serial Number:	102623023	Cal Date:	03/28/2025
PO Number:	ATB03202025	Alternate I.D.:		Due Date:	03/28/2026
Gage Location:	NONE SPECIFIED	Description:	HUMIDITY / TEMPERATURE INSTRUMENT	Environment:	Temp: 71 °F RH: 38 %
Cal Location:	LAB			Size / Range:	-40 to 300 °F 10 to 95 %Rh

Event Result: PASS - Gage Meets Specifications / FAIL - Gage did not meet specifications / LTD - Limited Calibration / ADJ - Passed after adjustment / ROV - Report of Value

Notes & Comments:

Asset Notes:

Comments: This certificate is an amendment to a previous certificate. Thermo-hygrometer probe was removed from calibration certificate per customer. 4/11/2025 MMG

Expanded Uncertainty Details:

$$\begin{array}{ll} \pm (0.14 + 0.0016T) ^\circ\text{F} & \pm (1.25 + 0.011) \% \text{Rh} \\ \pm 0.54 ^\circ\text{F} (\% \text{Rh}) & \end{array}$$

Standards Used:

Asset/Standard	Description	Serial Number	Cal Date	Due Date
JJM001	Thermo Hygrometer	SY52D16608077	9/3/2024	9/30/2025
RA0680	Temperature Bath	A99336	8/9/2024	8/31/2025

Procedures Used:

Name	Description	Rev Level	Rev Date
P-102	TEMPERATURE DEVICES	2.50	5/25/2021
P-103	RELATIVE HUMIDITY	2.10	8/6/2019

Test Points: Immersion Probe

Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left	Description
1	32.00	°F	31.70	32.30	32.2	32.2	PN: 1075
2	150.00	°F	149.25	150.75	150.0	150.0	PN: 1075
3	249.83	°F	248.58	251.08	249.9	249.9	PN: 1075

Test Points: Contact Probe

Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left	Description
4	32.00	°F	30.00	34.00	32.1	32.1	PN: 4011
5	150.00	°F	148.00	152.00	150.0	150.0	PN: 4011
6	200.00	°F	198.00	202.00	200.1	200.1	PN: 4011

Transcat is accredited by ANSI National Accreditation Board to ISO/IEC 17025:2017 and ANSI/NCSL Z540-1-1994. Transcat certifies that the above listed instrument at the time of calibration meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). The calibrations within the certificate are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or through NIST accepted intrinsic standards of measurement, or derived by the ratio type of self-calibration techniques. This calibration complies with ANSI/NCSL Z540-1-1994 and ISO/IEC 17025:2017. The measurement results relate only to the items tested or calibrated. Transcat is responsible for all information within the certificate except for customer provided information. Customer provided data is clearly identified. Transcat is not responsible for any effects that customer provided data has on the results. Measurement uncertainties are calculated in accordance with the method described in EA-4/02 and NIST TN1297 using a coverage factor of $k = 2$, corresponding to a confidence level of approximately 95%. Uncertainties were not considered in all Pass / Fail criteria. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

CALIBRATED
BY **TRANSCAT**



Certificate ID: 14-914429



Certificate of Calibration

Calibrated At:

11402 Reading Road
Cincinnati, OH 45241

Facility Responsible:

11402 Reading Road
Cincinnati, OH 45241

Calibrated By:

Electronically Signed By:

JAMES MILLS

CALIBRATION TECHNICIAN - 3/28/2025 10:44:34 AM

Reviewed By:

Electronically Signed By:

Megan Guyer

Assistant Service Manager - 4/11/2025 4:07:26 PM

Issue Date: 04/11/2025

Certificate ID: 14-914429

Revision: 1

Page 2 of 2



Certificate of Calibration

Company Information		Equipment Information		Event Result:	PASS
ATLANTA TEST & BALANCE		ID Number:	4011-3	As Found:	PASS
3890 HIGHWAY 17		Manufacturer:	Cooper Instrument	As Left:	PASS
CLARKSVILLE, GEORGIA 30523		Model:	4011	Issue Date:	03/28/2025
Order:	WO38256	Serial Number:	N/A	Cal Date:	03/28/2025
PO Number:	ATB03202025	Alternate I.D.:		Due Date:	03/28/2026
Gage Location:	NONE SPECIFIED	Description:	TEMPERATURE PROBE	Environment:	Temp: 71 °F RH: 38 %
Cal Location:	LAB			Size / Range:	-25 to 212 °F

Event Result: PASS - Gage Meets Specifications / FAIL - Gage did not meet specifications / LTD - Limited Calibration / ADJ - Passed after adjustment / ROV - Report of Value

Notes & Comments:	Calibrated to: Manufacturer Specification
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Asset Notes:	Comments:
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Expanded Uncertainty Details:

± (0.14 ± 0.0016T) °F

Standards Used:				
Asset/Standard	Description	Serial Number	Cal Date	Due Date
JJM001	Thermo Hygrometer	SY52D16608077	9/3/2024	9/30/2025
RA0680	Temperature Bath	A99336	8/9/2024	8/31/2025

Procedures Used:				
Name	Description	Rev Level	Rev Date	
P-102	TEMPERATURE DEVICES	2.50	5/25/2021	

Test Points:	Contact Probe	Checkpoints Marked: A = Adjusted, F = Out of Tolerance					
Seq.	Standard	UOM	Tolerance -	Tolerance +	As Found	As Left	Description
1	32.000	°F	30.000	34.000	32.1	32.1	PN: 4011
2	150.000	°F	148.000	152.000	150.0	150.0	PN: 4011
3	200.000	°F	198.000	202.000	200.4	200.4	PN: 4011

Transcat is accredited by ANSI National Accreditation Board to ISO/IEC 17025:2017 and ANSI/NCSL Z540-1-1994. Transcat certifies that the above listed instrument at the time of calibration meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). The calibrations within the certificate are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or through NIST accepted intrinsic standards of measurement, or derived by the ratio type of self-calibration techniques. This calibration complies with ANSI/NCSL Z540-1-1994 and ISO/IEC 17025:2017. The measurement results relate only to the items tested or calibrated. Transcat is responsible for all information within the certificate except for customer provided information. Customer provided data is clearly identified. Transcat is not responsible for any effects that customer provided data has on the results. Measurement uncertainties are calculated in accordance with the method described in EA-4/02 and NIST TN1297 using a coverage factor of $k = 2$, corresponding to a confidence level of approximately 95%. Uncertainties were not considered in all Pass / Fail criteria. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

Calibrated At:	Facility Responsible:	Calibrated By: <input checked="" type="checkbox"/> Electronically Signed By:	Reviewed By: <input checked="" type="checkbox"/> Electronically Signed By:
11402 Reading Road Cincinnati, OH 45241	11402 Reading Road Cincinnati, OH 45241	JAMES MILLS CALIBRATION TECHNICIAN - 3/28/2025 10:44:34 AM	Rebecca Kramer CALIBRATION TECHNICIAN - 3/28/2025 2:07:42 PM

Issue Date:	Certificate ID:	Page 1 of 1
03/28/2025	14-914469	

Revision: 0



Certificate of Calibration

Company Information		Equipment Information		Event Result:	PASS
ATLANTA TEST & BALANCE		ID Number:	1075-3	As Found:	PASS
3890 HIGHWAY 17		Manufacturer:	Cooper Instrument	As Left:	PASS
CLARKSVILLE, GEORGIA 30523		Model:	1075	Issue Date:	03/28/2025
Order:	WO38256	Serial Number:	N/A	Cal Date:	03/28/2025
PO Number:	ATB03202025	Alternate I.D.:		Due Date:	03/28/2026
Gage Location:	NONE SPECIFIED	Description:	Temperature Probe	Environment:	Temp: 71 °F RH: 38 %
Cal Location:	LAB			Size / Range:	-40 to 300 °F

Event Result: PASS - Gage Meets Specifications / FAIL - Gage did not meet specifications / LTD - Limited Calibration / ADJ - Passed after adjustment / ROV - Report of Value

Notes & Comments:	Calibrated to: Manufacturer Specification
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Asset Notes: Comments:

Expanded Uncertainty Details:

± (0.14 + 0.0016T) °F

Standards Used:				
Asset/Standard	Description	Serial Number	Cal Date	Due Date
JJM001	Thermo Hygrometer	SY52D16608077	9/3/2024	9/30/2025
RA0680	Temperature Bath	A99336	8/9/2024	8/31/2025

Procedures Used:				
Name	Description	Rev Level	Rev Date	
P-102	TEMPERATURE DEVICES	2.50	5/25/2021	

Test Points: Immersion Probe						Checkpoints Marked: A = Adjusted, F = Out of Tolerance	
Seq.	Standard	UOM	Tolerance -	Tolerance +	As Found	As Left	Description
1	32.000	°F	31.700	32.300	32.2	32.2	PN: 1075
2	150.000	°F	149.250	150.750	150.0	150.0	PN: 1075
3	250.000	°F	248.750	251.250	249.9	249.9	PN: 1075

Transcat is accredited by ANSI National Accreditation Board to ISO/IEC 17025:2017 and ANSI/NCSL Z540-1-1994. Transcat certifies that the above listed instrument at the time of calibration meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). The calibrations within the certificate are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or through NIST accepted intrinsic standards of measurement, or derived by the ratio type of self-calibration techniques. This calibration complies with ANSI/NCSL Z540-1-1994 and ISO/IEC 17025:2017. The measurement results relate only to the items tested or calibrated. Transcat is responsible for all information within the certificate except for customer provided information. Customer provided data is clearly identified. Transcat is not responsible for any effects that customer provided data has on the results. Measurement uncertainties are calculated in accordance with the method described in EA-4/02 and NIST TN1297 using a coverage factor of k = 2, corresponding to a confidence level of approximately 95%. Uncertainties were not considered in all Pass / Fail criteria. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

Calibrated At:	Facility Responsible:	Calibrated By: <input checked="" type="checkbox"/> Electronically Signed By: JAMES MILLS CALIBRATION TECHNICIAN - 3/28/2025 10:44:34 AM	Reviewed By: <input checked="" type="checkbox"/> Electronically Signed By: Rebecca Kramer CALIBRATION TECHNICIAN - 3/28/2025 2:07:14 PM
11402 Reading Road Cincinnati, OH 45241	11402 Reading Road Cincinnati, OH 45241		



Certificate ID: 14-914341



Certificate of Calibration

Test Points:		Resistance		Checkpoints Marked: A = Adjusted, F = Out of Tolerance		
Seq.	Standard	UOM	Tolerance -	Tolerance +	As Found	As Left
14	100.0	Ohm	98.0	102.0	100.0	100.0
15	200.0	Ohm	196.0	204.0	199.9	199.9

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Calibrated At:

11402 Reading Road
Cincinnati, OH 45241

Facility Responsible:

11402 Reading Road
Cincinnati, OH 45241

Calibrated By:

Electronically Signed By:

SEAN BRADY

CALIBRATION TECHNICIAN - 3/28/2025 9:35:44 AM

Reviewed By:

Electronically Signed By:

Rebecca Kramer

CALIBRATION TECHNICIAN - 3/28/2025 12:36:12 PM



Certificate of Calibration

Company Information		Equipment Information		Event Result:	PASS	
ATLANTA TEST & BALANCE		ID Number:	51772491MV	As Found:	PASS	
3890 HIGHWAY 17		Manufacturer:	Fluke	As Left:	PASS	
CLARKSVILLE, GEORGIA 30523		Model:	323	Issue Date:	03/28/2025	
Order:	WO38256	Serial Number:	51772491MV	Cal Date:	03/28/2025	
PO Number:	ATB03202025	Alternate I.D.	N/A	Due Date:	03/28/2026	
Gage Location:	NONE SPECIFIED	Description:	TRUE RMS CLAMP METER	Environment:	Temp: 71 °F	RH: 37 %
Cal Location:	LAB			Size / Range:	AS LISTED	

Event Result: PASS - Gage Meets Specifications / FAIL - Gage did not meet specifications / LTD - Limited Calibration / ADJ - Passed after adjustment / ROV - Report of Value

Notes & Comments:

Asset Notes: Comments:

Expanded Uncertainty Details:

± (0.022 + 0.00034X) VAC	± (0.0024 + 0.00004X) Ω
± (0.0017 + 0.000022X) VDC	± (0.57 + 0.0062X) AAC

Standards Used:

Asset/Standard	Description	Serial Number	Cal Date	Due Date
RA0071	Multi-Product Calibrator	6310012	4/18/2024	4/30/2025
RA0661	Thermo Hygrometer	N/A	12/2/2024	12/31/2025

Procedures Used:

Name	Description	Rev Level	Rev Date
P-128	CURRENT METERS	1.00	8/6/2019

Test Points: DC Voltage						Checkpoints Marked: A = Adjusted, F = Out of Tolerance
Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left
1	10.0	VDC	9.8	10.2	10.0	10.0
2	100.0	VDC	99.3	100.7	100.1	100.1
3	250.0	VDC	248.3	251.7	250.4	250.4
4	500.0	VDC	497.3	502.7	501.1	501.1

Test Points: AC Voltage @ 60 Hz						Checkpoints Marked: A = Adjusted, F = Out of Tolerance
Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left
5	10.0	VAC	9.8	10.2	10.0	10.0
6	100.0	VAC	98.2	101.8	100.2	100.2
7	250.0	VAC	246.8	253.2	250.6	250.6
8	500.0	VAC	494.2	505.8	501.4	501.4

Test Points: AC Current @ 60 Hz						Checkpoints Marked: A = Adjusted, F = Out of Tolerance
Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left
9	10.0	AAC	9.7	10.3	10.1	10.1
10	50.0	AAC	48.4	51.6	50.3	50.3
11	100.0	AAC	97.3	102.7	100.6	100.6
12	200.0	AAC	195.6	204.4	201.5	201.5

Test Points: Resistance						Checkpoints Marked: A = Adjusted, F = Out of Tolerance
Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left
13	40.0	Ohm	39.2	40.8	40.0	40.0



Certificate ID: 14-914429



Certificate of Calibration

accepted intrinsic standards of measurement, or derived by the ratio type of self-calibration techniques. This calibration complies with ANSI/NCSL Z540-1-1994 and ISO/IEC 17025:2017. The measurement results relate only to the items tested or calibrated. Transcat is responsible for all information within the certificate except for customer provided information. Customer provided data is clearly identified. Transcat is not responsible for any effects that customer provided data has on the results. Measurement uncertainties are calculated in accordance with the method described in EA-4/02 and NIST TN1297 using a coverage factor of $k = 2$, corresponding to a confidence level of approximately 95%. Uncertainties were not considered in all Pass / Fail criteria. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

Calibrated At:

11402 Reading Road
Cincinnati, OH 45241

Facility Responsible:

11402 Reading Road
Cincinnati, OH 45241

Calibrated By:

Electronically Signed By:

JAMES MILLS

CALIBRATION TECHNICIAN - 3/28/2025 10:44:34 AM

Reviewed By:

Electronically Signed By:

Rebecca Kramer

CALIBRATION TECHNICIAN - 3/31/2025 12:53:06 PM

Issue Date: 03/28/2025

Certificate ID: 14-914429

Revision: 0

Page 2 of 2



Certificate of Calibration

Company Information		Equipment Information		Event Result:	PASS
ATLANTA TEST & BALANCE		ID Number:	DT-10S	As Found:	PASS
3890 HIGHWAY 17		Manufacturer:	DigT	As Left:	PASS
CLARKSVILLE, GEORGIA 30523		Model:	DT-10S	Issue Date:	03/28/2025
Order: WO38256		Serial Number:	N/A	Cal Date:	03/28/2025
PO Number: ATB03202025		Alternate I.D.:		Due Date:	03/28/2026
Gage Location: NONE SPECIFIED		Description:	STROBOSCOPE	Environment:	Temp: 71 °F RH: 37 %
Cal Location: LAB				Size / Range:	60 - 99,999 RPM

Event Result: PASS - Gage Meets Specifications / FAIL - Gage did not meet specifications / LTD - Limited Calibration / ADJ - Passed after adjustment / ROV - Report of Value

Notes & Comments:

Asset Notes:

Comments:

Expanded Uncertainty Details:

± 0.3% of Reading + 0.002 RPM

Standards Used:

Asset/Standard	Description	Serial Number	Cal Date	Due Date
RA0661	Thermo Hygrometer	N/A	12/2/2024	12/31/2025
RA0699	UNIVERSAL COUNTER	MY64130003	8/6/2024	8/31/2025

Procedures Used:

Name	Description	Rev Level	Rev Date
P-122	TACHOMETER	1.10	8/6/2019

Test Points:

Checkpoints Marked: A = Adjusted, F = Out of Tolerance

Seq.	Standard.	UOM	Tolerance -	Tolerance +	As Found	As Left
1	300.000	fpm	299.970	300.030	299.999	299.999
2	3000.000	fpm	2999.700	3000.300	2999.991	2999.991
3	15000.000	fpm	14998.500	15001.500	14999.994	14999.994

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Calibrated At:

11402 Reading Road
Cincinnati, OH 45241

Facility Responsible:

11402 Reading Road
Cincinnati, OH 45241

Calibrated By:

Electronically Signed By:

SEAN BRADY

CALIBRATION TECHNICIAN - 3/28/2025 10:10:33 AM

Reviewed By:

Electronically Signed By:

Rebecca Kramer

CALIBRATION TECHNICIAN - 3/28/2025 12:36:31 PM