



# ENVIRONMENTAL SYSTEMS TEST AND BALANCE SUBMITTAL

302 E 132<sup>nd</sup> Avenue Tampa, Florida 33612 Phone: 813-930-5193 – Fax: 813-930-5193 Omnibalancing@outlook.com





# SUBMITTAL FOR TEST AND BALANCE OF AIR AND WATER SYSTEMS

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# Firm Certification

## **OMNI BALANCING SOLUTIONS INC**

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFIED STATUS IN THE FOLLOWING DISCIPLINE

Testing, Adjusting and Balancing of Environmental Systems

3854

NEBB Certification Number

March 31, 2024

**Expiration Date** 

Gepper WERR President

NEBB President-Elect









# Firm Certification

# **OMNI BALANCING SOLUTIONS INC**

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFIED STATUS IN THE FOLLOWING DISCIPLINE

**Vibration Measurement** 

3854

NEBB Certification Number

March 31, 2024

**Expiration Date** 

( grappa





# State of Florida Department of State

I certify from the records of this office that OMNI BALANCING SOLUTIONS. INC. is a corporation organized under the laws of the State of Florida, filed on May 13, 2021, effective May 13, 2021.

The document number of this corporation is P21000045521.

I further certify that said corporation has paid all fees due this office through December 31, 2022, that its most recent annual report/uniform business report was filed on January 7, 2022, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Seventh day of January, 2022





Tracking Number: 7004729260CC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication



#### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 10/20/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed.

	SUBROGATION IS WAIVED, subject is certificate does not confer rights to							require an endorseme	nt. A st	atement on
	DUCER				CONTA NAME:	<sup>ст</sup> Tracey Mo	ore			
Ad	cock-Adcock Insurance Agency					<sub>o, Ext):</sub> 813-933		FAX (A/C, No	): 813 <b>-</b> 93	2 <b>-</b> 6287
	5 W. Fletcher Ave. mpa FL 33612-3414				E-MAIL ADDRESS: traceym@adcock-insurance.com					
ı aı	11pa 1 L 330 12-34 14				ADDRE			DING COVERAGE		NAIC#
						RA: Lloyd's o		DING COVERAGE		NAIC#
INSU	PED			72057						40070
	nni Balancing Solutions, Inc.					Rв: Technolo	ogy insurance	e C0.		42376
302	2 E 132nd Avenue				INSURE					
Tai	mpa FL 33612				INSURE	R D :				
					INSURE	RE:				
					INSURE	RF:				
				NUMBER: 263127164				REVISION NUMBER:		
IN CI	HIS IS TO CERTIFY THAT THE POLICIES DICATED. NOTWITHSTANDING ANY REERTIFICATE MAY BE ISSUED OR MAY KCLUSIONS AND CONDITIONS OF SUCH	EQUIF PERT POLI	REMEI AIN, CIES.	NT, TERM OR CONDITION THE INSURANCE AFFORD LIMITS SHOWN MAY HAVE	OF AN' ED BY	Y CONTRACT THE POLICIES REDUCED BY F	OR OTHER I S DESCRIBEI PAID CLAIMS.	DOCUMENT WITH RESP	ECT TO	WHICH THIS
INSR LTR	TYPE OF INSURANCE		SUBR WVD	POLICY NUMBER		POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIN	IITS	
Α	X CLAIMS-MADE OCCUR			PSL0139496217		7/29/2022	7/29/2023	EACH OCCURRENCE DAMAGE TO RENTED	\$ 3,000	,
	X CLAIMS-MADE OCCUR							PREMISES (Ea occurrence)  MED EXP (Any one person)	\$ 250,0	
								PERSONAL & ADV INJURY	\$3,000	0.000
	GEN'L AGGREGATE LIMIT APPLIES PER:							GENERAL AGGREGATE	\$ 3,000	
	X POLICY PRO- JECT LOC							PRODUCTS - COMP/OP AGO	T	
	OTHER:								\$	,,,,,,
Α	AUTOMOBILE LIABILITY			PSL0139496217		7/29/2022	7/29/2023	COMBINED SINGLE LIMIT	\$ 1,000	0,000
	ANY AUTO							(Ea accident) BODILY INJURY (Per person)	\$	-
	OWNED SCHEDULED							BODILY INJURY (Per accider		
	X HIRED XX NON-OWNED							PROPERTY DAMAGE	\$	
	AUTOS ONLY AUTOS ONLY							(Per accident)	\$	
	UMBRELLA LIAB OCCUB							EACH COCHEDENCE		
	- Joseph Godon							EACH OCCURRENCE	\$	
	CLAIIVIO-IVIADE							AGGREGATE	\$	
В	DED   RETENTION \$   WORKERS COMPENSATION			TWC4122711		7/29/2022	7/29/2023	X PER X OTH-	\$	
	AND EMPLOYERS' LIABILITY Y / N					772972022	772972023			oyers Liab
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	N/A						E.L. EACH ACCIDENT	\$ 1,000	
	(Mandatory in NH)  If yes, describe under DESCRIPTION OF OPERATIONS below							E.L. DISEASE - EA EMPLOYE		
				B01 0400 4000 47		7/22/222	7/00/0000	E.L. DISEASE - POLICY LIMI		
Α	Professional Liability			PSL0139496217		7/29/2022	7/29/2023	General Aggregate Deductible	1,000 5,000	
DES	CRIPTION OF OPERATIONS / LOCATIONS / VEHIC	LES (A	CORD	101, Additional Remarks Schedu	le, may b	e attached if more	e space is require	ed)		
CEI	RTIFICATE HOLDER				CANO	ELLATION				
	Omni Balancing Solutions,	Inc.			THE	EXPIRATION	I DATE THE	ESCRIBED POLICIES BE EREOF, NOTICE WILL Y PROVISIONS.		
	302 East 132nd Avenue			Į.	AUTHO	RIZED REPRESE	NTATIVE			
	Tampa FL 33612				AUTHORIZED REPRESENTATIVE					

2022 - 2023 HILLSBOROUGH COUNTY BUSINESS TAX RECEIPT

OCC. CODE 280.052006 CONSULTANT **EXPIRES SEPTEMBER 30, 2023** 

07/05/2022 22.00

ACCOUNT NO. 69176 RENEWAL

**Employees** 

Receipt Fee

Hazardous Waste Surcharge

Law Library Fee

22.00 0.00 0.00

OMNI BALANCING SOLUTIONS INC BUSINESS 302 E 132ND AVE

TAMPA, FL 33612

2022 - 2023

OMNI BALANCING SOLUTIONS INC

NAME MAILING

302 E 132ND AVE TAMPA, FL 33612

**ADDRESS** 

Paid 21-0-481102

**BUSINESS TAX RECEIPT** 

HAS HEREBY PAID A PRIVILEGE TAX TO ENGAGE IN BUSINESS, PROFESSION, OR OCCUPATION SPECIFIED HEREON

NANCY C MILLAN, TAX COLLECTOR 813-635-5200

THIS BECOMES A TAX RECEIPT WHEN VALIDATED.





(Rev. October 2018)

#### Request for Taxpayer **Identification Number and Certification**

Give Form to the requester. Do not

Department of the Tressury Internal Revenue Service  ▶ Go to www.irs.gov/FormW9 for	instructions and the latest	information.		send to	o the I	RS.			
1 Name (as shown on your income tax return). Name is required on this line	e; do not leave this line blank.								
Omni Balancing Solutions, Inc.									
2 Business name/disregarded entity name, if different from above									
3 Check appropriate box for federal tax classification of the person whose following seven boxes.									
5 Individual/sole proprietor or C Corporation S Corporal	instructions on page 3):  Exempt payee code (if any)								
화	n, S=S corporation, P=Partnersh	nip) ▶			_				
The component box for recersit ax classification of the person whose following seven boxes.  Individual/sole proprietor or single-member LLC  Limited liability company. Enter the tax classification (C=C corporation Note: Check the appropriate box in the line above for the tax classification LLC if the LLC is classified as a single-member LLC that is disregarded another LLC that is not disregarded from the owner for U.S. federal to is disregarded from the owner for U.S. federal to is disregarded from the owner should check the appropriate box for the company of the comp	ed from the owner unless the ow ax purposes. Otherwise, a single	mer of the LLC is -member LLC tha	code (if a	n from FATO	CA repo	rting			
☐ Other (see instructions) ►				counts maintains	ed outside	the (LS.)			
	F	Requester's name	and address	(optional)					
302 E. 132nd Avenue									
6 City, state, and ZIP code									
Tampa, Florida 33612 7 List account number(s) here (optional)									
Part I Taxpayer Identification Number (TIN)									
Enter your TIN in the appropriate box. The TIN provided must match the	name given on line 1 to avoi	~	curity numi	oer					
backup withholding. For individuals, this is generally your social security resident alien, sole proprietor, or disregarded entity, see the instructions		a	-	-					
entities, it is your employer identification number (EIN). If you do not have	a number, see How to get a								
TIN, later.	so 1. Aleo ean What Name ar	or Employe	identificat	ion number	r				
Note: If the account is in more than one name, see the instructions for lin Number To Give the Requester for guidelines on whose number to enter.		~	T	TTT	TT	$\vdash$			
		8 7	- 0 8	2 2	7   9	7			
Part II Certification									
Under penalties of perjury, I certify that:									
<ol> <li>The number shown on this form is my correct taxpayer identification needs and the subject to backup withholding because: (a) I am exempt from Service (IRS) that I am subject to backup withholding as a result of a fano longer subject to backup withholding; and</li> </ol>	backup withholding, or (b) I	have not been	notified by	the Interna	al Reve i me th	enue at I an			
3. I am a U.S. citizen or other U.S. person (defined below); and									
4. The FATCA code(s) entered on this form (if any) indicating that I am ex									
Certification instructions. You must cross out item 2 above if you have bee you have falled to report all interest and dividends on your tax return. For rea acquisition or abandonment of secured property, cancellation of debt, contril other than interest and dividends, you are not required to sign the certification	il estate transactions, item 2 di butions to an individual retiren	ioes not apply. F ment arrangemer	or mortgag it (IRA), and	e interest p d generally,	oald, , payme	ents			
Sign Here U.S. person ► Www. Lichards	De	nto > 6/22	/22						
General Instructions	<ul> <li>Form 1099-DIV (divided)</li> </ul>	dends, including	those from	m stocks o	or mutu	lau			
Section references are to the Internal Revenue Code unless otherwise noted.	Form 1099-MISC (va proceeds)	arious types of i	ncome, pri	zes, awaro	ds, or g	gross			
Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted	• Form 1099-B (stock	Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)							
after they were published, go to www.irs.gov/FormW9.	<ul> <li>Form 1099-S (proce</li> </ul>								
Purpose of Form	Form 1099-K (merch								
An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct traxpayer identification as the IRS must obtain your correct traxpayer.	<ul> <li>Form 1098 (home m 1098-T (tuition)</li> </ul>		), 1098-E (	student lo	an inte	rest),			
identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption	<ul> <li>Form 1099-C (cance</li> <li>Form 1099-A (acquis</li> </ul>		umant of a	actived per	vnort /				
taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other						nt			
(EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.	allen), to provide your	correct TIN.							
	he subject to heaters	withholding Co.	Mbat is b	nolous wit	hhaldir	gest			

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding,

Form W-9 (Rev. 10-2018)

later.

. Form 1099-INT (interest earned or paid)





# STANDARD PROCEDURES

#### **Preliminary Procedures**

- 1) Obtain and evaluate the plans, specifications, and any equipment submittals to determine the best testing approach as well as consolidate the specified information.
- 2) Inspect the equipment on-site to confirm proper installation and verify that the job is ready for test and balance.

#### **Air Side Balancing**

- 1) Verify that the units and all associated controls such as motorized dampers, interlocks, shutdowns, and safety switches are operating properly.
- 2) With units at maximum flow and all associated manual dampers, outside air dampers, fire dampers, etc. open; test units for total air flow via the preferred method of Pitot Tube traverse. Any adjustments to the system will be performed or recommended (depending on the system's capabilities) in order to obtain the design air flow. Once at design air flow, check the load on the fan motor, set the approximate design volume outside air, and confirm unit static pressures are within specified tolerance.
- 3) Balance the associated air distribution systems to design flow via the supplied manual volume dampers.
- 4) If system is multizone, confirm that all zone dampers are set to full cooling during step #1 and ensure that the entire system is balanced while zone dampers are still seeking maximum cooling.
- 5) If system is variable air volume, there are specialized procedures for testing these various types of systems. The specific testing methods will depend on the types of terminal units being balanced.
- 6) Take final readings on the air handlers to include: fan motor load, outside air volume, and static pressures.

#### Water Side Balancing

- 1) Verify that controls are functioning, air has been vented, strainers are clean, and manual valves are open.
- 2) Confirm pump impeller sizes and set pumps for design water flow using provided pump curves.
- 3) After ensuring that all connected terminal units are seeking max water flow, balance the water on the entire distribution system to design flow.
- 4) If system uses air-cooled chillers, they will then be double checked for water flow and tested for temperatures and cooling performance.
- 5) If system uses water-cooled chillers, they will then be balanced on the condenser water side via the same method as steps #1 #2 above. Once condenser water flow is at design, evaporator water flow will be double checked and the chillers will be tested for temperatures and cooling performance.

#### **Finalization**

1) After complete balancing of all air and water systems, total cooling performance for all equipment will then be tested and any final adjustments will be made. A report will then be consolidated and sent to the customer.





# **TEST AND BALANCE SERVICES**

Omni Balancing Solutions, Inc. is an experienced and dedicated team of individuals in the field of Test and Balance. At Omni, our focus on integrity and customer satisfaction helps us to offer you these services:

- Air Testing and Balancing
- Hydronic Testing and Balancing
- Sound and Vibration Testing
- Fume Hood Systems Testing
- Surveys of Air and Hydronic Systems
- Annual/Semi-Annual/Quarterly Testing
- Pre-Testing and Post Testing Verification
- Duct Leakage Witnessing





# FIELD EXPERIENCE

Omni Balancing Solutions, Inc. offers a well experienced and reliable wealth of knowledge in the field of Test and Balance. With occupant comfort and safety being at the forefront of environmental system work, we are excited to share and use our experience to help you establish and maintain a safe and comfortable environmental system. A few of the institutions we have balanced and performed work in include:

- Ambulatory Centers
- Banks
- Clean Rooms
- Convention Centers
- Detention Centers
- Department Stores/Retail Stores
- Education Facilities
- Fire Stations
- Fitness Facilities
- Government Institutions
- Grocery Stores
- Hospitals
- Libraries
- Medical Office Buildings
- Office Buildings
- Pharmaceutical Labs/Buildings
- Public Utilities
- Pump Stations
- Research Facilities
- Restaurants
- Shopping Centers
- Stadiums
- Storage Facilities
- Surgery Centers





# DRUG-FREE WORKPLACE CERTIFICATION

Omni Balancing Solutions, Inc. has created a Drug-Free Workplace program by meeting the following requirements:

- Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- Informing the employees about the dangers of drug abuse in the workplace, the business
  policy of maintaining a drug-free workplace, any available counseling, rehabilitation and
  employee assistance programs and the penalties that may be imposed upon employees
  for drug abuse violations.
- Imposing a sanction on or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- Making a good faith effort to continue to maintain a drug-free work environment through the implementation of this sanction.





# CERTIFIED TESTING, ADJUSTING, AND BALANCING REPORT

Date:

**Project #: 22-200** 

**Project Name:** 

Sample Report 123 ABC Drive Tampa, Florida 33612

**Design Engineer:** 

NG

**HVAC Contractor:** 

NG

**NEBB Certified Professional** 

Dean Davis, III

**NEBB Certified Firm #3854** 

302 E 132<sup>nd</sup> Avenue Tampa, Florida 33612 Phone: 813-930-5193 – Fax: 813-930-5193 Omnibalancing@outlook.com





## CERTIFICATION

Date:

**Project #: 22-200** 

**Project Name:** 

Sample Report 111 ABC Drive Tampa, Florida 33612

"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 the TAB report project summary."

CERTIFICATION 3854 Exp. 3/31/24

Der ODer

Dean Davis, III, CP - Vice President Omni Balancing Solutions, Inc.

Certification No. 3854

Certification Expiration Date: March 31, 2024





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# **PROJECT SUMMARY**

**Project #: 22-200** 

**Project Name:** 

Sample Report 123 ABC Drive Tampa, Florida 33612

All information contained in this report is an accurate and true representation of the installed equipment and has been verified as of the completion date of the testing. All tests performed meet or exceed the highest industry standards and are within the tolerances set forth in this project.

The following items are outside of the allowable tolerances set forth in this project:

1.





# **GUARANTEE**

**Project #: 22-200** 

**Project Name:** 

Sample Report 123 ABC Drive Tampa, Florida 33612

Omni Balancing Solutions, Inc. guarantees its' testing, adjusting, and balancing of the above-mentioned project against faulty workmanship for a period of 1 year from the completion of the test and balance.

Guarantee Period:

Dean Davis, III, Vice President

Omni Balancing Solutions, Inc.





Project:	Project #:	Date:	
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#### **AHU DATA SHEET**

MANUFACTURER:					
LOCATION:					
SERIAL:					
MODEL:					
TYPE:					
AREA SERVED:					
FAN	SECTION			COIL SECTION	
AHU DATA	SPECIFIED DATA	TEST DATA	AHU DATA	SPECIFIED DATA	TEST DATA
SUPPLY CFM			COOLING CFM		
RETURN CFM			FACE AREA		
OUTSIDE AIR CFM			COIL PD		
ESP / TSP	1	1	OA DB/WB, °F	1	1
FAN RPM			RA DB/WB,°F	1	1
			EAT DB/WB, °F	1	/
MOTOR DATA	NAMEPLATE	TEST DATA	LAT DB/WB, °F	1	1
MOTOR DATA	DATA	ILSI DAIA	ΔTH, BTU/#		
MOTOR MFR.			TOTAL BTUH		
MOTOR HP / BHP	/	1			
MOTOR RPM					
VOLTAGE / PH	/	1			
AMPERAGE					
S.F. / FRAME		I		HEATER SECTION	
P.F. / EFF.		I	KW		
ROT / SPEED		I	AMPERAGE		
OVERLOAD SIZE			VOLTS / PHASE	1	1
OVERLOAD RATING			# OF STAGES		
DR	IVE DATA			FILTER SECTION	
FAN SHEAVE / MAN		I	QUANTITY	SIZE	RATING
MOTOR SHEAVE / MAN		l .			
BELTS / MAN.		1			
OT / C to C / QUANTITY	/ /	/ /			
	1				





Project:	Project #:	Date:

#### STATIC PRESSURE PROFILE

U	NIT NO:		
CFM	TSP	FAN RPM	
CFM	TSP	FAN RPM	
ENT FILTER	=	_	
ENT COIL	=		
N SUCTION	=		
N DISCHARGE	=		
	CFM CFM ENT FILTER ENT COIL N SUCTION	CFM         TSP           ENT FILTER         =           ENT COIL         =           N SUCTION         =	CFM         TSP         FAN RPM           CFM         TSP         FAN RPM             ENT FILTER         =





Project:	Project #:	Date:
1 10,000	1	, <b>–</b> 4.0.

#### **AHU DUCT TRAVERSE SUMMARY**

LOCATION	SPECIFIED DATA		INSTRUMENT	DUCT SIZE	AREA	ТЕМР.	TESTED	FLOWS	SP
	FPM	CFM	USED				FPM	CFM	





#### AHU VARIABLE AIR VOLUME TERMINAL UNIT DATA SHEET

			SPECIFIED DESIGN	DATA	FIELD TES	FIELD TEST DATA		
TERMINAL UNIT	ADDRESS	SIZE	MIN CFM	MAX CFM	MIN CFM	MAX CFM	CORRECTION FACTOR	





#### AHU FAN POWERED TERMINAL UNIT DATA SHEET

			SPECIF	IED DESIGN	I DATA		FIELD TEST DATA				
TERMINAL UNIT	ADD.	TYPE/SIZE	MAX CFM	MIN CFM	HTG CFM	FAN CFM	MAX CFM	MIN CFM	HTG CFM	FAN CFM	C.F.





Project:	Project #:	Date:
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#### **AIR DISTRIBUTION TEST SHEET**

AREA SERVED	GRILLE			SPEC. DESIGN		INITIAL TEST		FINAL TEST		%
, <u>-</u> ,	#	SIZE	Ak	VEL	CFM	VEL	CFM	VEL	CFM	,,,





Project:	Project #:	Date:
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#### **FAN DATA SHEET**

FAN DATA	SPECIFIED DATA			
FAN#				
LOCATION / SERVES	/	1		
CFM				
ESP / TSP	1	/		
HP / BHP	1	1		
FAN RPM				
	TEST	DATA		
TYPE				
MANUFACTURER				
MODEL#				
SERIAL#				
FAN CFM				
SUCTION PRESSURE				
DISCHARGE PRESSURE				
SP TOTAL / EXTERNAL	1	1		
FAN RPM				
MOTOR MFR				
MOTOR HP / BHP	1	1		
MOTOR RPM DESIGN / TEST				
NP AMPERAGE				
NP VOLTAGE / PHASE	1	1		
SF / FRAME/ ROT.	1 1	1 1		
PF / EFF	1	1		
TEST AMPERAGE				
TEST VOLTAGE / PHASE	1	1		
HEATER SIZE				
HEATER RATING				
FAN SHEAVE / MAN.	/	1		
MOTOR SHEAVE / MAN.	/	/		
OT / C to C / QUANTITY	/ /	1 1		
BELTS / MAN.	1	1		





TEST FACE VELOCITY\_\_\_\_\_FPM

BALANCING SOLU	JTIONS, INC.		Certification No. 3854
Project:		Project #:	Date:
	FUME HOOD TI	EST SHEET	
HOOD SYSTEM	LOCATI	ION / SERVES	
HOOD DIMENSIONS (WxH)	HOOD F	FACE AREA (FT²)	
SPECIFIED EXHAUST CFM	SPECIF	IED FACE VELOCITY (	FPM)
AVERAGE VELOCITY (FPM)		OPENING S	SIZE (WxH)
AVG. VELOCITY (FPM)	X OPENING AREA (FT²)	=	CFM
HOOD MFR.			
MODEL#			
SERIAL#			
	_		
SUMMARY			
SDECIEIED EVUALIST	CEM	SPECIFIED	EACE VELOCITY

NOTES:

TEST EXHAUST \_\_\_\_\_ CFM





Project:	Project #:	Date:
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#### **PUMP DATA SHEET**

REQUIRED DATA	SPECIFIED DESIGN DATA					
PUMP#						
SERVICE						
GPM						
TDH, FT. H <sub>2</sub> O						
HP						
RPM						
		FIELD T	EST DATA			
MANUFACTURER						
MODEL#						
SERIAL#						
SIZE						
MOTOR MFR						
MOTOR HP / BHP						
MOTOR RPM / TEST						
NP VOLTAGE						
NP AMPERAGE						
SF / FRAME	1	1	1	1		
PF / EFF	1	1	1	1		
TEST VOLTAGE						
TEST AMPERAGE						
HTR SIZE / RATING	1	1	1	1		
SHUT-OFF DATA						
PUMP OFF PRESSURE						
DISCH PRESS						
SUCT PRESS						
HEAD, FT. H₂O						
OPERATING DATA						
DISCH PRESS						
SUCT PRESS						
HEAD, FT. H <sub>2</sub> O						
GPM (PUMP CURVE)						
FLOW DEVICE MFR						
SIZE						
ΔΡ						
FLOW DEVICE GPM						





Project:	Project #:	Date:
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#### AIR COOLED CHILLER TEST SHEET

EQUIPMENT #				
MANUFACTURER				
MODEL#				
SERIAL#				
CHILLER DATA	SPECIFIED DESIGN DATA	FIELD TEST DATA	SPECIFIED DESIGN DATA	FIELD TEST DATA
		EVAPO	RATOR	
EWT, °F				
LWT, °F				
CHW ∆T,°F				
ΔP, FT. H <sub>2</sub> O				
GPM				
TONS				
		COND	ENSER	
EAT DB, °F				
LAT DB, °F				
# CONDENSER FANS				
		СОМР	RESSOR	
# COMPRESSORS				
	NAMEPLATE DATA		NAMEPLATE DATA	
AMPERAGE				
VOLTAGE / PHASE	1	1	1	1
KILOWATTS				
KW PER TON	1	I	1	I





Project:	Project #:	Date:
----------	------------	-------

#### **CIRCUIT SETTER WATER BALANCE SHEET**

		DESIGN GPM	PRELIM FIEI	_D TEST	FINAL FIE	LD TEST
DESIGNATION	SIZE / MFR		SET / ΔP (PSI)	GPM	SET / ΔP (PSI)	GPM





Project:	Project #:	Date:
----------	------------	-------

#### **COOLING TOWER TEST SHEET**

TOWER#		
MANUFACTURER		
MODEL#		
SERIAL#		
TOWER DATA	SPECIFIED DESIGN DATA	FIELD TEST DATA
CAPACITY IN TONS		
GPM		
EWT, °F		
LWT, °F		
RANGE		
EAT WB / DB, °F	1	1
LAT WB / DB, °F	1	1
APPROACH		
MOTOR DATA	NAMEPLATE DATA	FIELD TEST DATA
MOTOR MFR		
MOTOR HP / BHP		1
MOTOR RPM		
VOLTAGE		
AMPERAGE		
SF / FRAME	1	
PF / EFF	1	
HEATER SIZE		
HEATER RATING		
	DRIVE	DATA
MOTOR SHEAVE / MAN.	,	1
FAN SHEAVE / MAN.		1
BELTS / MAN.		1
OT / C to C / QUANTITY	I	1
FAN RPM		





# TAB Instruments for Dean Davis

Instrument Function	Manufacturer and Model Number	Serial Number	Calibration Due Date
Humidity Measurement	Evergreen Telemetry / S-H-3-5"	2100293A	31-May-2023
Pressure/Velocity Measurement (1)	Evergreen Telemetry / S-PVF-1	2100475A	31-May-2023
Pressure/Velocity Measurement (2)	Evergreen Telemetry / S-PVF-1	2100547A	31-May-2023
Airflow Measuring Capture Hood	Evergreen Telemetry / CH-15D	2100191	31-May-2023
Immersion Temperature Probe	Evergreen Telemetry / PR-T-4-6	2100249	31-May-2023
Dry Bulb Temperature Probe	Evergreen Telemetry / PR-T-5	2100196	31-May-2023
Temperature Sensing Module	Evergreen Telemetry / RM-T-1	2100262A	31-May-2023
Water Pressure Sensing Meter	TSI Hydronic Manometer / HM675	72232010	15-Aug-2023
Ultrasonic Water Meter	Fugi / FSCS	P1L3385T	8-July-2023
Electrical Measurement	Fluke / 302+	54710095WS	31-May-2023
Rotation Measurement	CE / DT6236B	2002092930	31-May-2023
Pitot Tubes and Airfoils: 18"/24"/36"/48"	Dwyer	-	-

Technician: Dean Davis, III Page 1 of 17





Certificate Number A4593569 Issue Date: 06/03/22

#### Certificate of Calibration

Page 1 of 2

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE TAMPA, FL 33612 813-930-5193 P.O. Number:

ID Number: 1702711

Description: WRIST REPORTER
Manufacturer: EVERGREEN

Model Number: WR-401

Serial Number: 1702711
Technician: SHAUN SMITH

On-Site Calibration:

Comments:

Calibration Date: 06/03/2022 Calibration Due: 06/03/2023

Procedure: EVERGREEN TELE PVF

Rev: 3/20/2018

Temperature: 72 °F
Humidity: 35 % RH
As Found Condition://N TOLERANCE

Calibration Results: IN TOLERANCE

#### Limiting Attribute:

This instrument has been calibrated using standards traceable to the SI units through the National Institute of Standards and Technology (NIST) or other National Metrological Institute (NMI). The method of calibration is direct comparison to a known standard, derived from natural physical constants, ratio measurements or compared to consensus standards.

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Results contained in this document relate only to the Item calibrated. Calibration due dates appearing on the certificate or label are determined by the client for administrative purposes and do not imply continued conformance to specifications.

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Measurements not currently on TMI's Scope of Accreditation are identified with an asterisk.

WALLY GYNN, BRANCH MANAGER

Scott Chambalain

Scott Chamberlain, QUALITY MANAGER

#### Calibration Standards

Asset Number 0710649	Manufacturer THUNDER SCIENTIFIC	Model Number 2500ST	Date Calibrated 8/30/2021	Cal Due 6/10/2022
121197.7/IBY15	STARRETT	WEBBER 46	8/7/2021	8/17/2022
161209	OMEGA	WT4401-S	4/25/2022	4/25/2023
660TL18010015	ADDITEL CORPORATION	ADT875PC-155	5/20/2021	6/20/2022
885	FLUKE	PPC4-UI A7MS/A1.4MS	5/31/2022	3/9/2024
EBT731931028	TSI / ALNOR	EBT731	7/14/2021	7/14/2022
LRS-1	OWYER INSTRUMENTS, INC	1425	7/13/2020	7/13/2022

 $T_{MI}$ 

Technical Maintenance, Inc.

12530 TELECOM DRIVE, TEMPLE TERRACE, FL 33637

Phone: 813-978-3054 Fax 813-978-3758 www.tmicalibration.com ANSI/NCSL Z540-1-1994

Rev. 13 8/17/2018

Technician: Dean Davis, III Page 2 of 17





Technical Maintenance, Inc.

Evergreen Model: WR-401 Wrist Reporter

#### INSTRUMENT DATA SHEET

 Asset Number:
 1702711
 Customer:
 OMNI BALANCING SOLUTIONS

 Date Tested:
 6/3/2022

	200000000000000000000000000000000000000	to de la constantina	Lower	Upper	SOUNDANCE	Service Control	
Parameter Tested	Nominal Value	Tolerance	Limit	Limit	As Found	Pass/Fail	As Left
Temperature							
100000000000000000000000000000000000000	-38.4 °F	± 0.5 % +1.4°F	-40.0 °F	-36.8 °F	-37.3 °F	Pass	As Found
	100.0 °F	± 0.5 % +1.4°F	98.1 °F	101.9 °F	100.2 °F	Pass	As Found
	240.0 °F	± 0.5 % +1.4°F	237.4 °F	242.6 °F	241.2 °F	Pass	As Found
100293A	110000000000000000000000000000000000000			***************************************			
Temperature							
	60.0 °F	± 1.0 °F	59.0 °F	61.0 °F	60.5 °F	Pass	As Foun
	70.0 °F	± 1.0 °F	69.0 °F	71.0 °F	70.0 °F	Pass	As Foun
	80.0 °F	± 1.0 °F	79.0 °F	81.0 °F	79.1 °F	Pass	As Foun
Humidity							
	33.0 % RH	± 3.0 % RH	30.0 % RH	36.0 % RH	35.1 % RH	Pass	As Found
	50.0 % RH	± 3.0 % RH	47.0 % RH	53.0 % RH	52.5 % RH	Pass	As Found
	75.0 % RH	± 3.0 % RH	72.0 % RH	78.0 % RH	77.3 % RH	Pass	As Foun
2100547A w/ hood 2100191 Differential							
Pressure	1 in H2O	± 2.0 % + 0.001	0.9790 in H2O	1.0210 in H20	1.0112 in H2O	Pass	As Found
	5 in H2O	± 2.0 % + 0.001	4.8990 in H2O	5.1010 in H2O	4.9892 in H2O	Pass	As Found
	10 in H2O	± 2.0 % + 0.001	9.7990 in H2O	10.2010 in H2O	9.9656 in H2O	Pass	As Foun
Flow Hood Accuracy						00-	Valle -
	579 CFM	± 5.0 % + 7	543 CFM	615 CFM	552 CFM	Pass	As Foun
	732 CFM	± 5.0 % + 7	688 CFM	776 CFM	710 CFM	Pass	As Foun
	872 CFM	± 5.0 % + 7	821 CFM	923 CFM [	851 CFM	Pass	As Found
Air speed							
	1000 FPM	±5.0%+7	943	1057	1012 FPM	Pass	As Foun
	2000 FPM	± 5.0 % + 7	1893	2107	2024 FPM	Pass	As Foun
	3000 FPM	± 5.0 % + 7	2843	3157	2942 FPM	Pass	As Foun
2100475A w/ hood 2100191 Differential							
Pressure	1 in H2O	± 2.0 % + 0.001	0.9790 in H2O	1.0210 in H2O	0.9977 in H2O	Pass	As Foun
	5 in H2O	± 2.0 % + 0.001	4.8990 in H2O	5.1010 in H2O	4.9132 in H2O	Pass	As Foun
	10 in H2O	± 2.0 % + 0.001	9.7990 in H2O	10.2010 in H2O	9.8643 in H2O	Pass	As Foun
Flow Hood Accuracy							
	579 CFM	± 5.0 % + 7	543 CFM	615 CFM	578 CFM	Pass	As Foun
	732 CFM	± 5.0 % + 7	688 CFM	776 CFM	712 CFM	Pass	As Foun
	872 CFM	± 5.0 % + 7	821 CFM	923 CFM	848 CFM	Pass	As Foun
Air speed					1000 ED11		A . F .
	1000 FPM	± 5.0 % + 7	943	1057	1006 FPM	Pass	As Foun
	2000 FPM	± 5.0 % + 7	1893	2107	1998 FPM	Pass	As Foun
	3000 FPM	± 5.0 % + 7	2843	3157	2935 FPM	Pass	As Foun
2100183							
Pressure	0 PSI	± 2.0 % + 0.01	-0.10 PSI	0.10 PSI	0.00 PSI	Pass	As Foun
	50 PSI	± 2.0 % + 0.01	48.90 PSI	51.10 PSI	49.70 PSI	Pass	As Foun
	150 PSI	± 2.0 % + 0.01	146.90 PSI	153.10 PSI	152.00 PSI	Pass	As Foun
	250 PSI	± 2.0 % + 0.01	244.90 PSI	255.10 PSI	249.90 PSI	Pass	As Foun

SI ADM-880C Date: Nov 2013

Page 2 of 2

Technician: Dean Davis, III





Certificate Number A4589080 Issue Date: 05/31/22

## Certificate of Calibration

Page 1 of 2

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE TAMPA, FL 33612 813-930-5193

P.O. Number:

ID Number: 2100293A

Procedure:

Calibration Date: 05/31/2022 Description: HUMIDITY METER 05/31/2023 Calibration Due: Manufacturer: EVERGREEN EVERGREEN TELE PVF

Model Number: S-H-3-5 Rev: 3/20/2018 72 °F Temperature: Serial Number: 2100293A 35 % RH Humidity: Technician: SHAUN SMITH As Found Condition: IN TOLERANCE

On-Site Calibration:

Comments:

Calibration Results: IN TOLERANCE

#### Limiting Attribute:

This instrument has been calibrated using standards traceable to the SI units through the National Institute of Standards and Technology (NIST) or other National Metrological Institute (NMI). The method of calibration is direct comparison to a known standard, derived from natural physical constants, ratio measurements or compared to consensus standards.

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Measurements not currently on TMI's Scope of Accreditation are identified with an asterisk.

WALLY GYNN, BRANCH MANAGER

Soft Clantalain

Scott Chamberlain, QUALITY MANAGER

#### Calibration Standards

Asset Number	Manufacturer THUNDER SCIENTIFIC	Model Number 2500ST	Date Calibrated 8/30/2021	Cal Due 6/10/2022
0710649 121197.7/IBY15	STARRETT	WEBBER 46	8/7/2021	8/17/2022
161209	OMEGA	WT4401-S	4/25/2022	4/25/2023
660TL18010015	ADDITEL CORPORATION	ADT875PC-155	5/20/2021	6/20/2022
EBT731931028	TSI / ALNOR	EBT731	7/14/2021	7/14/2022
LRS-1	OWYER INSTRUMENTS, INC	1425	7/13/2020	7/13/2022



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ANSI/NCSL Z540-1-1994

Technician: Dean Davis, III

Rev. 13

8/17/2018

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Certificate Number A4589082 Issue Date: 05/31/22

#### Certificate of Calibration

Page 1 of 2

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE TAMPA, FL 33612 813-930-5193

P.O. Number:

ID Number: 2100475A

Procedure:

PRESSURE VELOCITY FLOW Description:

Manufacturer: EVERGREEN Model Number: S-PVF-1 Serial Number: 2100475A

Technician: SHAUN SMITH

Humidity:

On-Site Calibration: Comments:

05/31/2022 Calibration Date: 05/31/2023 Calibration Due:

EVERGREEN TELE PVF

Rev: 3/20/2018

72 °F Temperature: 35 % RH

As Found Condition: IN TOLERANCE Calibration Results: IN TOLERANCE

#### Limiting Attribute:

This instrument has been calibrated using standards traceable to the SI units through the National Institute of Standards and Technology (NIST) or other National Metrological Institute (NMI). The method of calibration is direct comparison to a known standard, derived from natural physical constants, ratio measurements or compared to consensus standards.

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Scott Chambalain Scott Chamberlain, QUALITY MANAGER

WALLY GYNN, BRANCH MANAGER

Calibration Standards

Asset Number 0710649	Manufacturer THUNDER SCIENTIFIC	Model Number 2500ST	Date Calibrated 8/30/2021	Cal Due 6/10/2022
121197.7/IBY15	STARRETT	WEBBER 46	8/7/2021	8/17/2022
161209	OMEGA	WT4401-S	4/25/2022	4/25/2023
660TL18010015	ADDITEL CORPORATION	ADT875PC-155	5/20/2021	6/20/2022
EBT731931028	TSI / ALNOR	EBT731	7/14/2021	7/14/2022
LRS-1	OWYER INSTRUMENTS, INC	1425	7/13/2020	7/13/2022



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8/17/2018

Rev 13

Technician: Dean Davis, III Page 5 of 17







### Certificate of Calibration

Page 1 of 2

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE TAMPA, FL 33612 813-930-5193

P.O. Number:

ID Number: 2100547A

Description: PRESSURE VELOCITY FLOW

Manufacturer: EVERGREEN Model Number: S-PVF-1 Serial Number: 2100547A

Technician: SHAUN SMITH

On-Site Calibration:

Comments:

05/31/2022 Calibration Date: 05/31/2023 Calibration Due:

Procedure:

EVERGREEN TELE PVF

Rev: 3/20/2018

Temperature: Humidity:

72 °F 35 % RH

As Found Condition: IN TOLERANCE Calibration Results: IN TOLERANCE

#### Limiting Attribute:

This instrument has been calibrated using standards traceable to the St units through the National Institute of Standards and Technology (NIST) or other National Matrological Institute (NMI). The method of calibration is direct comparison to a known standard, derived from natural physical constants, ratio measurements or compared to consensus standards.

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WALLY GYNN, BRANCH MANAGER

Scott Chamberlain

Scott Chamberlain, QUALITY MANAGER

#### Calibration Standards

Asset Number 0710649	Manufacturer THUNDER SCIENTIFIC	Model Number 2500ST	Date Calibrated 8/30/2021	Cal Due 6/10/2022
121197.7/IBY15	STARRETT	WEBBER 46	8/7/2021	8/17/2022
161209	OMEGA	WT4401-S	4/25/2022	4/25/2023
660TL18010015	ADDITEL CORPORATION	ADT875PC-155	5/20/2021	6/20/2022
EBT731931028	TSI / ALNOR	EBT731	7/14/2021	7/14/2022
LRS-1	OWYER INSTRUMENTS, INC	1425	7/13/2020	7/13/2022



Technical Maintenance, Inc.

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Technician: Dean Davis, III

Rev. 13

8/17/2018

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Certificate Number A4589071 Issue Date: 05/31/22

#### Certificate of Calibration

Page 1 of 2

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE **TAMPA, FL 33612** 

P.O. Number:

ID Number: 2100191 813-930-5193

FLOW HOOD Description: Manufacturer: EVERGREEN

Calibration Due: Procedure: Model Number: CH-15D

72 °F Temperature: Serial Number: 2100191 35 % RH Humidity: Technician: SHAUN SMITH As Found Condition: IN TOLERANCE

On-Site Calibration:

Comments:

Calibration Date:

Rev: 3/20/2018

05/31/2022

05/31/2023

EVERGREEN TELE PVF

Calibration Results: IN TOLERANCE

#### Limiting Attribute:

This instrument has been calibrated using standards traceable to the SI units through the National Institute of Standards and Technology (NIST) or other National Metrological Institute (NMI). The method of calibration is direct comperson to a known standard, derived from natural physical constants, ratio measurements or compared to consensus standards.

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WALLY GYNN, BRANCH MANAGER

Scott Chambalain

Scott Chamberlain, QUALITY MANAGER

#### Calibration Standards

Asset Number 0710649	Manufacturer THUNDER SCIENTIFIC	Model Number 2500ST	Date Calibrated 8/30/2021	Cal Due 6/10/2022
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161209	OMEGA	WT4401-S	4/25/2022	4/25/2023
660TL18010015	ADDITEL CORPORATION	ADT875PC-155	5/20/2021	6/20/2022
EBT731931028	TSI / ALNOR	EBT731	7/14/2021	7/14/2022
LRS-1	OWYER INSTRUMENTS, INC	1425	7/13/2020	7/13/2022



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Page 7 of 17 Technician: Dean Davis, III





Certificate Number A4589076 Issue Date: 05/31/22

## Certificate of Calibration

Page 1 of 2

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE TAMPA, FL 33612 813-930-5193 P.O. Number:

ID Number: 2100262A

Description: TEMPERATURE METER

Manufacturer: EVERGREEN Model Number: PR-T-4-6 Serial Number: 2100262A

Technician: SHAUN SMITH

On-Site Calibration: 
Comments:

Calibration Date: 05/31/2022 Calibration Due: 05/31/2023

Procedure: EVERGREEN TELE PVF

| Rev: 3/20/2018
| Temperature: 72 °F
| Humidity: 35 % RH
| As Found Condition: IN TOLERANCE

Calibration Results: IN TOLERANCE

#### Limiting Attribute:

This instrument has been calibrated using standards traceable to the SI units through the National Institute of Standards and Technology (NIST) or other National Metrological Institute (NMI). The method of calibration is direct comparison to a known standard, derived from natural physical constants, ratio measurements or compared to consensus standards.

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WALLY GYNN, BRANCH MANAGER

Scott Chambalain

Scott Chamberlain, QUALITY MANAGER

#### Calibration Standards

Manufacturer THUNDER SCIENTIFIC	Model Number 2500ST	Date Calibrated 8/30/2021	Cal Due 6/10/2022
STARRETT	WEBBER 46	8/7/2021	8/17/2022
OMEGA	WT4401-S	4/25/2022	4/25/2023
ADDITEL CORPORATION	ADT875PC-155	5/20/2021	6/20/2022
TSI / ALNOR	EBT731	7/14/2021	7/14/2022
OWYER INSTRUMENTS, INC	1425	7/13/2020	7/13/2022
	THUNDER SCIENTIFIC STARRETT OMEGA ADDITEL CORPORATION TSI / ALNOR	THUNDER SCIENTIFIC         2500ST           STARRETT         WEBBER 46           OMEGA         WT4401-S           ADDITEL CORPORATION         ADT875PC-155           TSI / ALNOR         EBT731	THUNDER SCIENTIFIC         2500ST         8/30/2021           STARRETT         WEBBER 46         8/7/2021           OMEGA         WT4401-S         4/25/2022           ADDITEL CORPORATION         ADT875PC-155         5/20/2021           TSI / ALNOR         EBT731         7/14/2021



Technical Maintenance, Inc.

ANSI/NCSL Z540-1-1994

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Technician: Dean Davis, III Page 8 of 17





Certification No. 3854



### CERTIFICATE OF CALIBRATION

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA TEL:1-800-874-2811 1-651-490-2811 FAX: 1-651-490-3824 www.tsl.com

ENVIRONMENT CONDITION		
TEMPERATURE	73.7	o F
RELATIVE HUMIDITY	49.0	% RH
BAROMETRIC PRESSURE	29.16	inHg

MODEL	Hydronic Manometer® HM675
SERIAL NO.	72232010

CALIBRATION STANDARDS USED
Hydronic Manometer Calibration System 1

			CALIBRATION I	DATA		
TESTING	DIFFERENTIA	L PRESSURE MEASI	RED IN in.H2O	DIFFERENT	AL PRESSURE MEASURED IN PSI	
POINTS	CALIBRATION STANDARD	INSTRUMENT OUTPUT	ALLOWABLE RANGE	CALIBRATION STANDARD	INSTRUMENT OUTPUT	ALLOWABLE RANGE
1	0.0	-0.0	-2.0 ~ 2.0	9.995	9.979	9.823 - 10.17
2	25.3	25.2	23.1 ~ 27.5	24.99	24.96	24.67 - 25.31
3	49.9	49.8	47.4 ~ 52.4	124.8	124.8	123.5 ~ 126.1
4	100.1	99.9	97.1 - 103.1	225.0	224.9	222.7 ~ 227.3

TESTING	GAUGE PRESSURE MEASURED IN in.H2O			GAUGE PRESSURE MEASURED IN PSI			
POINTS	CALIBRATION STANDARD	INSTRUMENT OUTPUT	ALLOWABLE RANGE	CALIBRATION STANDARD	INSTRUMENT OUTPUT	ALLOWABLE RANGE	
1	0.0	-0.0	-2.0 ~ 2.0	9.995	9.988	9.823 ~ 10.17	
2	25.3	25.3	23.1 ~ 27.5	24.99	24.97	24.67 ~ 25.31	
3	49.9	49.9	47.4 ~ 52.4	124.8	124.7	123.5 ~ 126.1	
4	100.1	100.0	97.1 - 103.1	225.0	225.0	222.7 - 227.3	

		TEMPERATURE ME	ASURED IN °F1		
CALIBRATION STANDARD	-37.8	5.0	77.0	158.0	230.0
INSTRUMENT OUTPUT 1	-37.77	5.06	76.98	157.97	229.92
INSTRUMENT OUTPUT 2	-37.77	5.05	76.98	157.97	229.92
ALLOWABLE RANGE	-38.237.4	4.8 ~ 5.2	76.8 ~ 77.2	157.8 ~ 158.2	229.6 ~ 230.4

<sup>\*</sup> Indicates out of tolerance condition

Circuit portion of temperature measurement only, not including probe
TSI Incorporated does hereby certify that the above described instrument conforms to the original manufacturer's specifications (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technology within the Unitations of NIST's calibration services or have been derived from accepted values of natural physical constants or have been derived by the ratio type of self calibration techniques. The calibration ratio for this instrument is better than 1:1. TSI is registered to ISO-9001:2015 and complies with ISO 10012:2003, Quality Assurance Requirements for Measuring Equipment. 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.

 Measurement Variable
 System ID Number
 Date Last Calibrated
 Calibration Due Date

 DC Voltage
 E002815
 06-08-22
 12-29-23

 DC Voltage
 E002818
 06-08-22
 12-29-23

 Pressure
 E004675
 10-26-21
 10-31-22

Calibration procedure used: 10000026004

Aug. 15, 2022

Calibrated By

Calibration Date

4 P/N 2300157







ULTRASONIC FLOW METER RENTAL & SALES

www.instrumentsdirect.com

888.722.5543

### Calibration Information Sheet

**Customer Name:** SO Number:

**Omni Balancing Solutions** 

SO419334

Fuji Electric Systems Co., Ltd

Instrument Manufacturer: Instrument Description:

**Transit Time** 2022

Manufacturing Date: Software Version:

4.10

Model Number:

**FSCS** 

Serial Number: **Uncertainty Rate:** 

Comments:

± 0.5%\*

P1L3385T

Calibrated using FSSD Transducers SN: N1M1468T

Calibration Date:

**Next Calibration Due:** 

Calibration Number: Temperature:

Relative Humidity: **Barometric Pressure** 

**Loop Specifications:** Loop Scale:

Standard:

Standard Serial #:

0 - 120 GPM

7/8/2022

7/8/2023

44750.53

83°F ± 1°F

63% ± 5%

999 ± 2 milliBars

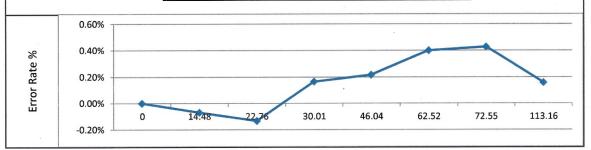
0.5-2" SCH 80 PVC

GF63204AUBA1

705128

Cal: 98%

Test	Actual Flow	Indicated	Average %	Average
Number	(gpm)	Flow (gpm)	error	Error (gpm)
Test 1	0	0	0.00%	0
Test 2	14.48	14.47	-0.07%	-0.01
Test 3	22.76	22.73	-0.13%	-0.03
Test 4	30.01	30.06	0.17%	0.05
Test 5	46.04	46.14	0.22%	0.10
Test 6	62.52	62.77	0.40%	0.25
Test 7	72.55	72.86	0.43%	0.31
Test 8	113.16	113.34	0.16%	0.18



#### **Calibration Statement**

The flow measurement system listed above was certified in accordance with ISO procedure DAS-207-001 (Meter Certification Procedure). The Equipment and methods used to generate the system performance section of this certificate emulate NIST standards and conform to ISO9001/ANSIZ540.1/MIL-STD-45662A respectively. All certifications performed are conducted with tap water around 83°F (28.3°C) and around 1.0cSt, calibrations for alternative fluids have been mathematically corrected.

*This certify that the flow measure and under the stated conditions		ta was recorded in accordance with DAS-207-001. The data show applies only	to the instrument being calibrated
Test Performed by:		on the Date of	7/8/2022
Test Certified by:	Bree	on the Date of	7/8/2022







### Calibration Information Sheet

**Customer Name:** 

**Omni Balancing Solutions** 

Calibration Date: 7/8/2022

SO Number:

SO419334

**Next Calibration Due:** 

7/8/2023

Instrument Manufacturer:

Fuji Electric Systems Co., Ltd

Calibration Number:

44750.52

Instrument Description:

**Transit Time** 

Temperature:

83°F ± 1°F

Manufacturing Date:

2022

Relative Humidity:

63% ± 5%

Software Version:

4.10

**Barometric Pressure Loop Specifications:** 

999 ± 2 milliBars 0.5-2" SCH 80 PVC

Model Number:

**FSCS** P1L3385T

Loop Scale:

0 - 120 GPM

Serial Number:

Comments:

± 0.5%\*

Standard:

GF63204AUBA1

**Uncertainty Rate:** 

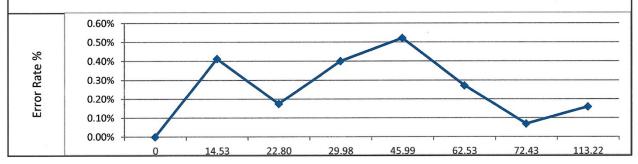
Calibrated using FSSC Transducers SN: N1P1586T

Standard Serial #:

705128

Cal: 100%

Test	Actual Flow	Indicated	Average %	Average
Number	(gpm)	Flow (gpm)	error	Error (gpm)
Test 1	0	0	0.00%	0
Test 2	14.53	14.59	0.41%	0.06
Test 3	22.80	22.84	0.18%	0.04
Test 4	29.98	30.10	0.40%	0.12
Test 5	45.99	46.23	0.52%	0.24
Test 6	62.53	62.70	0.27%	0.17
Test 7	72.43	72.48	0.07%	0.05
Test 8	113.22	113.40	0.16%	0.18



#### Calibration Statement

The flow measurement system listed above was certified in accordance with ISO procedure DAS-207-001 (Meter Certification Procedure). The Equipment and methods used to generate the system performance section of this certificate emulate NIST standards and conform to ISO9001/ANSIZ540.1/MIL-STD-45662A respectively. All certifications performed are conducted with tap water around 83°F (28.3°C) and around 1.0cSt, calibrations for alternative fluids have been mathematically corrected.

		ed and data was recorded in accordance with DAS-207-001. The data show applies only	to the instrument being calibrated
Test Performed by:	r calibration.	on the Date of	7/8/2022
Test Certified by:	BRC	on the Date of	7/8/2022

Technician: Dean Davis, III

Page 11 of 17





Certificate Number A4589018 Issue Date: 05/31/22

## Certificate of Calibration

Page 1 of Z

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE TAMPA, FL 33612 813-930-5193

P.O. Number:

ID Number: 54710095WS

DIGITAL CLAMP METER

Manufacturer: FLUKE Model Number: 302+

Description:

Serial Number: 54710095WS Technician:

SHAUN SMITH

Calibration Date: Calibration Due:

05/31/2022 05/31/2023

Procedure:

TMI-M-CLAMP Rev: 9/30/1998

Temperature:

72 °F 35 % RH

As Found Condition: IN TOLERANCE Calibration Results: IN TOLERANCE

On-Site Calibration: Comments:

#### Limiting Attribute:

This instrument has been celibrated using standards traceable to the SI units through the National Institute of Standards and Technology (NIST) or other National Metrological Institute (NMI). The method of celibration is direct comparison to a known standard, derived from natural physical constants, ratio measurements or

Reported uncertainties are expressed as expended uncertainty values at an approximately 95% confidence level using a coverage factor of k=2. Statements of compliance are based on test results falling within specified limits with no reduction by the uncertainty of the measurement.

TMI's Quality System is accredited to ISO/IEC 17025:2017 and ANSUNCSL Z540-1-1994. ISO/IEC 17025:2017 is written in a language relevant to laboratory operations, meeting the principles of ISO 9001 and aligned with its pertinent requirements. This calibration compiles with all the requirements of ANSUNCSL Z540-1-1994 and TMI's Quality Manual, QM-1.

Results contained in this document relate only to the item calibrated. Calibration due dates appearing on the cartificate or label are determined by the client for administrative purposes and do not imply continued conformance to specifications.

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Measurements not currently on TMI's Scope of Accreditation are identified with an asterisk

WALLY GYNN, BRANCH MANAGER

Scott Chamberlain

Scott Chamberlain, QUALITY MANAGER

Calibration Standards

Asset Number 1717904

Manufacturer FLUKE

Model Number 5522A/1GHZ 120 Date Calibrated 4/7/2022

Cal Due 4/7/2023



Technical Maintenance, Inc.

ANSI/NCSL Z540-1-1994

Rev. 13 8/17/2018 12530 TELECOM DRIVE, TEMPLE TERRACE, FL 33637 Phone: 813-978-3054 Fax 813-978-3758 www.tmicalibration.com

Technician: Dean Davis, III

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Technical Maintenance, Inc.

Fluke Model: 302+ Clamp Meter

#### INSTRUMENT DATA SHEET

Asset Number:	54710095WS		Customer:	OM	OMNI BALANCING SOLUTIONS			
Date Tested:	5/31/2	5/31/2022						
Parameter Tested	Nominal Value	Tolerance	Lower Limit	Upper Limit	As Found	Pass/Fail	As Left	
AC Amps Test								
•	30.0 A @ 60 Hz	± 1.8% + 5 dgts	29.0 A	31.0 A	30.0 A	Pass	As Found	
	3.5 A @ 50 Hz	± 1.8% + 5 dgts	2.9 A	4.1 A	3.6 A	Pass	As Found	
	35.0 A @ 50 Hz	± 1.8% + 5 dgts	33.9 A	36.1 A	34.9 A	Pass	As Found	
	3.5 A @ 400 Hz	± 1.8% + 5 dgts	2.9 A	4.1 A	3.3 A	Pass	As Found	
	35.0 A @ 400 Hz	± 1.8% + 5 dgts	33.9 A	36.1 A	34.8 A	Pass	As Found	
	50.0 A @ 50 Hz	± 1.8% + 5 dgts	48.6 A	51.4 A	49.8 A	Pass	As Found	
	300.0 A @ 50 Hz	± 1.8% + 5 dgts	294.1 A	305.9 A	300.3 A	Pass	As Found	
	300.0 A @ 400 Hz	± 1.8% + 5 dgts	294.1 A	305.9 A	302.5 A	Pass	As Found	
	50.0 A @ 400 Hz	± 1.8% + 5 dgts	48.6 A	51.4 A	49.9 A	Pass	As Found	
Resistance Test								
	30.0 Ω	± 1% + 5 dgts	28.0 Ω	32.0 Ω	30.2 Ω	Pass	As Found	
	500.0 Ω	± 1% + 5 dgts	490.0 Ω	510.0 Ω	500.0 Ω	Pass	As Found	
	3000.0 Ω	± 1% + 5 dgts	2965.0 Ω	3035.0 ₪	3001.0 Ω	Pass	As Found	
AC Volts Test								
	35.0 V @ 50 Hz	± 1.5% + 5 dats	34.0 V	36.0 V	35.0 V	Pass	As Found	
	350.0 V @ 60 Hz	± 1.5% + 5 dgts	344.3 V	355.8 V	350.2 V	Pass	As Found	
	600.0 V @ 60 Hz	± 1.5% + 5 dqts	590.5 V	609.5 V	600.9 V	Pass	As Found	
	35.0 V @ 400 Hz	± 1.5% + 5 dats	34.0 V	36.0 V	34.5 V	Pass	As Found	
	350.0 V @ 400 Hz	± 1.5% + 5 dgts	344.3 V	355.8 V	349.6 V	Page	As Found	
	600.0 V @ 400 Hz	± 1.5% + 5 dgts	590.5 V	609.5 V	599.8 V	Pass	As Found	
DC Volts Test								
	-350.0 V	± 1.5% + 5 dgts	-354.8 V	-345.3 V	-350.1 V	Pass	As Found	
	35.0 V	± 1.5% + 5 dgts	34.0 V	36.0 V	35.0 V	Pass	As Found	
	350.0 V	± 1.5% + 5 dgts	344.3 V	355.8 V	350.2 V	Pass	As Found	
	600.0 V	± 1.5% + 5 dgts	590.5 V	609.5 V	900.8 V	Pass	As Found	

Page 2 of 2

Fluke 322 Rev. 0 (CC) Date: Feb 2011





Certificate Number A4589012 Issue Date: 05/31/22

### Certificate of Calibration

Page 1 of 2

Customer: OMNI BALANCING SOLUTIONS

302 E. 132ND AVE TAMPA, FL 33612 813-930-5193

P.O. Number:

ID Number: 2002092930 

Calibration Results: IN TOLERANCE

DIGITAL TACHOMETER Calibration Date: 05/31/2022 Description: 05/31/2023 Calibration Due:

Manufacturer: CE TMI-TACHOMETERS Procedure: Model Number: DT6236B Rev: 8/31/2016 72 °F Serial Number: 2002092930 Temperature: 35 % RH Humidity: Technician: SHAUN SMITH As Found Condition: IN TOLERANCE

On-Site Calibration: Comments:

Limiting Attribute:

This instrument has been calibrated using standards traceable to the SI units through the National Institute of Standards and Technology (NIST) or other National Methological Institute (NIMI). The method of calibration is direct comparison to a known standard, derived from natural physical constants, ratio measurements or compared to consensus standards.

Reported uncertainties are expressed as expanded uncertainty values at an approximately 95% confidence level using a coverage factor of k=2. Statements of compliance are based on test results falling within specified limits with no reduction by the uncertainty of the measurement.

TMI's Quality System is accredited to ISO/IEC 17025:2017 and ANSI/NCSL Z540-1-1994. ISO/IEC 17025:2017 is written in a language relevant to laboratory operations, meeting the principles of ISO 9001 and aligned with its pertinent requirements. This calibration complies with all the requirements of ANSI/NCSL Z540-1-1994 and TMI's Quality Manual, QM-1.

Results contained in this document relate only to the item calibrated. Calibration due dates appearing on the certificate or label are determined by the client for administrative purposes and do not imply continued conformance to specifications.

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Measurements not currently on TMI's Scope of Accreditation are identified with an asterisk.

2000

WALLY GYNN, BRANCH MANAGER

Scott Chamberlain, QUALITY MANAGER Calibration Standards

Model Number Asset Number Manufacturer 5522A/1GHZ 120 FLUKE 1717904

Date Calibrated 4/7/2022

Scott Chambalain

Cal Due 4/7/2023

Technical Maintenance, Inc.

12530 TELECOM DRIVE, TEMPLE TERRACE, FL 33637

Phone: 813-978-3054 Fax 813-978-3758 www.tmicalibration.com

Rev. 13

ANSI/NCSL Z540-1-1994

Technician: Dean Davis, III Page 14 of 17





		Data Sh	eet				
Parameter	Nominal	Minimum	Maximum	As Found	As Left	Unit	ADJ/FAIL
hoto Tachometer Acouracy	60.0	59.9	60.1	60.0	60.0	rpm	
hoto Tachometer Accuracy	600.0	599.6	600.4	800.0	600.0	rpm	
hoto Tachometer Accuracy	6000	5996	6004	6000	6000	rpm	
hoto Tachometer Accuracy	60000	59989	60031	60008	60008	rpm	
hoto Tachometer Accuracy	90000	89954	90046	90010	90010	rpm	

 $T_{\mathbf{M_{I}}}$ 

Technical Maintenance, Inc.

12530 TELECOM DRIVE, TEMPLE TERRACE, FL 33637 Phone: 813-978-3054 Fax 813-978-3758 www.tmicalibration.com ANSI/NCSL Z540-1-1994

Technician: Dean Davis, III

Rev. 13 8/17/2018





# **ABBREVIATIONS**

# <u>Definition</u> <u>Abbreviation</u>

Air Changes Per Hour Air Handler Unit Area Known Brake Horsepower British Thermal Units Per Hour Center To Center Correction Factor Cubic Feet Per Minute Chilled Water Condenser Water Dry Bulb Temperature (°F) Direct Drive Differential Pressure Direct Expansion Electronically Protected Entering Air Exhaust Fan External Static Pressure Entering Water Temperature Exhaust Fan Coil Unit Flow Hood Feet Per Minute Gallons Per Minute Horsepower Hertz Kilowatt Leaving Air Temperature Leaving Water Temperature Leaving Water Temperature Leaving Water Temperature Make-Up Air Make-Up Air Make-Up Air Unit No Access	AC/HR AKHU BHUH C CFMW CFMW DDDDEAFSPTEXU FPM HZWTTAMAN NAC
No Access Not Given Not Listed	NA NG NL

Technician: Dean Davis, III Page 16 of 17





# **ABBREVIATIONS CONTINUED**

## <u>Definition</u> <u>Abbreviation</u>

Outside Air Opposed Blade Damper Open Turns Pressure Phase Pressure Differential Pressure Temperature Pounds Per Square inch	OA OBD OT P PH PD P/T PSI
Return Air	RA
Relative Humidity	RH
Rotation	ROT
Revolutions Per Minute	RPM
Roof Top Unit	RTU
Supply Air	SA
Supply Fan	SF
Static Pressure	SP
Temperature	T
Thermally Protected	TP
Total Dynamic Head	TDH
Total Heat/Enthalpy	TH
Total Static Pressure	TSP
Variable Air Volume	VAV
Variable Frequency Drive	VFD
Wet Bulb Temperature	WB

Technician: Dean Davis, III Page 17 of 17





# **ABBREVIATIONS**

# <u>Definition</u> <u>Abbreviation</u>

Air Changes Per Hour Air Handler Unit Area Known Brake Horsepower British Thermal Units Per Hour Center To Center Correction Factor Cubic Feet Per Minute Chilled Water Condenser Water Dry Bulb Temperature (°F) Direct Drive Differential Pressure Direct Expansion Electronically Protected Entering Air Exhaust Fan External Static Pressure Entering Water Temperature Exhaust Fan Coil Unit Flow Hood Feet Per Minute Gallons Per Minute Horsepower Hertz Kilowatt Leaving Air Temperature Leaving Water Temperature Make-Up Air	AC/HR AHU AK BHP BT to C CFM CHW CBDD DD DD EA ESP EXH FPM HP HZ KW LAT MUA
Leaving Air Temperature	LAT
•	LWT
Make-Up Air	MUA
No Access	NA
Not Given	NG
Not Listed	NL





# **ABBREVIATIONS CONTINUED**

## <u>Definition</u> <u>Abbreviation</u>

Outside Air Opposed Blade Damper Open Turns	OA OBD OT
	P PH
	PD
	P/T
·	PSI
Return Air	RA
Relative Humidity	RH
Rotation	ROT
Revolutions Per Minute	RPM
Roof Top Unit	RTU
Supply Air	SA
Supply Fan	SF
Static Pressure	SP
Temperature	Τ
Thermally Protected	TP
Total Dynamic Head	TDH
Total Heat/Enthalpy	TH
Total Static Pressure	TSP
Variable Air Volume	VAV
Variable Frequency Drive	VFD
Wet Bulb Temperature	WB