

**THIS IS TO CERTIFY THAT AFFRI INC. HAS CALIBRATED THE FOLLOWING
FORCE TESTING MACHINE IN ACCORDANCE WITH ASTM-E4-21.**

CUSTOMER

COMPANY:
ADDRESS:
CITY/PROVINCE:

CALIBRATION INFORMATION

PURCHASE ORDER NUMBER: NG-37011-1
CERTIFICATE NUMBER: CIFMetal_NGU-553475_VTS240218_E4-21_052324
CERTIFICATE ISSUED: May 23, 2024
CALIBRATION DATE: May 23, 2024
REQUESTED DUE DATE: May 23, 2025
SYSTEM LOCATION: QC Lab
MANUFACTURER: Nextgen
MODEL: EML 105D
SERIAL NUMBER: NGU-553475/VTS240218
ASSET NUMBER: N/A
LOAD CELL/TRANSDUCER: Celtron PSD-10tSJTH sn 34038398
INDICATOR RESOLUTION: 0.1 lbf
TEMPERATURE / RELATIVE HUMIDITY: 21.78°C/55.39%
CALIBRATION TECHNICIAN:

CALIBRATION IS VALID FOR THE SCALE(S), ITEMS AND RESULTS SHOWN AND HAS BEEN FOUND TO BE WITHIN TOLERANCE UNLESS OTHERWISE NOTED.

STANDARDS USED

FILE	SERIAL #	MFG	CAL DATE	DUE DATE	CERT BY	CERT #	CAPACITY	UNC
TH 003	S2450843/S2310657	Vaisala	02/02/24	02/02/26	Transcat	33-Q3F0N-20-1	Deg/%RH	0.5/0.14 Deg/%RH
AMP 003	818375701	HBM	03/06/22	03/06/24	Affri	AffriUS_818375701_AMP 003_060322	2 mV/V	0.012 %FS
AUF 010 C 50 kN	921913	AEP	18/02/22	18/02/25	Morehouse	921913B1822	5012.2 kgf	0.0025 kgf
AUF 005 T 200 kN	921266	AEP	18/02/22	18/02/25	Morehouse	921266B1822	20411.66 kgf	0.0025 kgf
AUF 010 T 50 kN	921913	AEP	18/02/22	18/02/25	Morehouse	921913B1822	5012.2 kgf	0.0025 kgf
AUF 008 T 5 kN	926987	AEP	29/07/21	29/07/24	AEP	LAT 093 211321F	5 kN	0.0025 kN
AUF 008 C kN	926987	AEP	29/07/21	29/07/24	AEP	LAT 093 211321F	5 kN	0.0025 kN
AUF 005 C 200 kN	921266	AEP	18/02/22	18/02/25	Morehouse	921266B1822	20411.66 kgf	0.0025 kgf
AUF 010 C 50 kN	921913	AEP	18/02/22	18/02/25	Morehouse	921913B1822	5012.2 kgf	0.0025 kgf

TRACEABILITY, UNCERTAINTY AND DECISION RULE STATEMENTS

The expanded uncertainties shown above use a confidence level of 95% and a coverage factor of $k = 2$. Expanded uncertainties are valid from 18°C to 28°C. ALL REFERENCE STANDARDS USED FOR VERIFICATION ARE TRACEABLE TO NIST OR ACCREDIA. Services comply with PO requirements. Affri uses a binary decision rule of pass or fail where tolerance limit equals acceptance limits without considering uncertainty. Uncertainty and measured results are provided for the user to consider their own risk.

COMMENTS

Preventative maintenance was performed.

CALIBRATED BY

This certificate was produced and owned by AFFRI Inc. Reproduction, in part or in whole, without consent and written approval from AFFRI Inc. is prohibited.

CUSTOMER

COMPANY: [REDACTED]

CALIBRATION INFORMATION

CERTIFICATE NUMBER: [REDACTED]
CERTIFICATE ISSUED: May 23, 2024
CALIBRATION DATE: May 23, 2024
REQUESTED DUE DATE: May 23, 2025
MODEL: EML 105D
SERIAL NUMBER: NG [REDACTED] 218
LOAD CELL/TRANSDUCER: Celtron PSD-10tSJTH sn 34038398

AS FOUND:

REFERENCE STANDARDS USED	REF STD READING	DUT READING RUN #1	DIRECTION:	COMPRESSION
			DUT ERROR RUN #1	DUT %RD ERROR RUN #1
			lbf	(%RD)
AUF 005 C 200 kN	0.0	0.0	0.0	
AUF 008 C 5 kN	200.0	199.6	-0.4	-0.20%
AUF 008 C 5 kN	400.0	399.4	-0.6	-0.15%
AUF 008 C 5 kN	800.0	799.0	-1.0	-0.13%
AUF 010 C 50 kN	1200.0	1198.4	-1.6	-0.13%
AUF 010 C 50 kN	1600.0	1597.6	-2.4	-0.15%
AUF 010 C 50 kN	2000.0	1994.7	-5.3	-0.26%
AUF 005 C 200 kN	4000.0	3993.6	-6.4	-0.16%
AUF 005 C 200 kN	8000.0	7991.7	-8.3	-0.10%
AUF 005 C 200 kN	12000.0	11987.6	-12.4	-0.10%
AUF 005 C 200 kN	16000.0	15985.3	-14.7	-0.09%
AUF 005 C 200 kN	22400.0	22384.2	-15.8	-0.07%
AUF 005 C 200 kN	0.0	0.0	0.0	

AS LEFT:

AS LEFT:										DIRECTION:	COMPRESSION
REFERENCE STANDARDS USED	REF STD READING	DUT READING	REF STD READING	DUT READING	DUT ERROR		DUT %RD ERROR		DUT REPEAT. (%RD)	STD UNC. DUE TO REPEAT. (%RD)	MEASURE. UNC. (K=2) (%RD)
	RUN #1		RUN #2		RUN #1	RUN #2	RUN #1	RUN #2			
	lbf	lbf		lbf	lbf	lbf	(%RD)	(%RD)			
AUF 005 C 200 kN	0.0	0.0	0.0	0.0	0.0	0.0					
AUF 008 C 5 kN	200.0	199.6	200.0	199.5	-0.4	-0.5	-0.20%	-0.25%	0.05%	0.11%	0.38%
AUF 008 C 5 kN	400.0	399.4	400.0	399.5	-0.6	-0.5	-0.15%	-0.13%	0.03%	0.06%	0.33%
AUF 008 C 5 kN	800.0	799.0	800.0	799.2	-1.0	-0.8	-0.13%	-0.10%	0.03%	0.03%	0.32%
AUF 010 C 50 kN	1200.0	1198.4	1200.0	1198.7	-1.6	-1.3	-0.13%	-0.11%	0.02%	0.02%	0.31%
AUF 010 C 50 kN	1600.0	1597.6	1600.0	1598.2	-2.4	-1.8	-0.15%	-0.11%	0.04%	0.02%	0.31%
AUF 010 C 50 kN	2000.0	1994.7	2000.0	1995.2	-5.3	-4.8	-0.26%	-0.24%	0.03%	0.03%	0.31%
AUF 005 C 200 kN	4000.0	3993.6	4000.0	3994.5	-6.4	-5.5	-0.16%	-0.14%	0.02%	0.02%	0.31%
AUF 005 C 200 kN	8000.0	7991.7	8000.0	7992.7	-8.3	-7.3	-0.10%	-0.09%	0.01%	0.01%	0.31%
AUF 005 C 200 kN	12000.0	11987.6	12000.0	11986.3	-12.4	-13.7	-0.10%	-0.11%	0.01%	0.01%	0.31%
AUF 005 C 200 kN	16000.0	15985.3	16000.0	15986.7	-14.7	-13.3	-0.09%	-0.08%	0.01%	0.00%	0.31%
AUF 005 C 200 kN	22400.0	22384.2	22400.0	22385.2	-15.8	-14.8	-0.07%	-0.07%	0.00%	0.00%	0.31%
AUF 005 C 200 kN	0.0	0.0	0.0	0.0	0.0	0.0					

CUSTOMER

COMPANY: [REDACTED]

CALIBRATION INFORMATION

CERTIFICATE NUMBER: [REDACTED]
CERTIFICATE ISSUED: May 23, 2024
CALIBRATION DATE: May 23, 2024
REQUESTED DUE DATE: May 23, 2025
MODEL: EML 105D
SERIAL NUMBER: N [REDACTED] 0218
LOAD CELL/TRANSDUCER: Celtron PSD-10tSJTH sn 34038398

AS FOUND:

REFERENCE STANDARDS USED	REF STD READING	DUT READING RUN #1	DIRECTION:	TENSION
			DUT ERROR RUN #1	DUT %RD ERROR RUN #1
			lbf	(%RD)
AUF 005 T 200 kN	0.0	0.0	0.0	
AUF 008 T 5 kN	200.0	199.4	-0.6	-0.30%
AUF 008 T 5 kN	400.0	399.4	-0.6	-0.15%
AUF 008 T 5 kN	800.0	798.7	-1.3	-0.16%
AUF 010 T 50 kN	1200.0	1196.5	-3.5	-0.29%
AUF 010 T 50 kN	1600.0	1594.3	-5.7	-0.36%
AUF 010 T 50 kN	2000.0	1992.4	-7.6	-0.38%
AUF 005 T 200 kN	4000.0	3987.5	-12.5	-0.31%
AUF 005 T 200 kN	8000.0	7975.9	-24.1	-0.30%
AUF 005 T 200 kN	12000.0	11951.9	-48.1	-0.40%
AUF 005 T 200 kN	16000.0	15942.1	-57.9	-0.36%
AUF 005 T 200 kN	22400.0	22328.7	-71.3	-0.32%
AUF 005 T 200 kN	0.0	0.0	0.0	

AS LEFT:

AS LEFT:										DIRECTION:	TENSION
REFERENCE STANDARDS USED	REF STD READING	DUT READING	REF STD READING	DUT READING	DUT ERROR		DUT %RD ERROR		DUT REPEAT. (%RD)	STD UNC. DUE TO REPEAT. (%RD)	MEASURE. UNC. (K=2) (%RD)
	RUN #1		RUN #2		RUN #1	RUN #2	RUN #1	RUN #2			
	lbf	lbf		lbf	lbf	lbf	(%RD)	(%RD)			
AUF 005 T 200 kN	0.0	0.0	0.0	0.0	0.0	0.0					
AUF 008 T 5 kN	200.0	199.4	200.0	199.8	-0.6	-0.2	-0.30%	-0.10%	0.20%	0.26%	0.61%
AUF 008 T 5 kN	400.0	399.4	400.0	399.5	-0.6	-0.5	-0.15%	-0.13%	0.03%	0.13%	0.41%
AUF 008 T 5 kN	800.0	798.7	800.0	799.2	-1.3	-0.8	-0.16%	-0.10%	0.06%	0.07%	0.34%
AUF 010 T 50 kN	1200.0	1196.5	1200.0	1197.3	-3.5	-2.7	-0.29%	-0.23%	0.07%	0.08%	0.35%
AUF 010 T 50 kN	1600.0	1594.3	1600.0	1595.6	-5.7	-4.4	-0.36%	-0.28%	0.08%	0.10%	0.37%
AUF 010 T 50 kN	2000.0	1992.4	2000.0	1994.8	-7.6	-5.2	-0.38%	-0.26%	0.12%	0.12%	0.39%
AUF 005 T 200 kN	4000.0	3987.5	4000.0	3991.7	-12.5	-8.3	-0.31%	-0.21%	0.10%	0.06%	0.33%
AUF 005 T 200 kN	8000.0	7975.9	8000.0	7981.4	-24.1	-18.6	-0.30%	-0.23%	0.07%	0.03%	0.32%
AUF 005 T 200 kN	12000.0	11951.9	12000.0	11953.4	-48.1	-46.6	-0.40%	-0.39%	0.01%	0.02%	0.31%
AUF 005 T 200 kN	16000.0	15942.1	16000.0	15946.8	-57.9	-53.2	-0.36%	-0.33%	0.03%	0.02%	0.31%
AUF 005 T 200 kN	22400.0	22328.7	22400.0	22332.9	-71.3	-67.1	-0.32%	-0.30%	0.02%	0.02%	0.31%
AUF 005 T 200 kN	0.0	0.0	0.0	0.0	0.0	0.0					