NIST Traceable Calibrations

Our laboratories are fully equipped to perform NIST traceable flow calibrations for Rotameters, Mass Flow Meters and Mass Flow Controllers.

We offer calibration services on meters and controllers of other manufacturers' products as well.

AALFA-KAL laboratory is equipped to calibrate Molboxes. Our technicians are trained and certified by the manufacturer of Molboxes and Moblocs.

For fast cost effective service please contact our customer service department.

A2LA Accredited Calibrations

AALFA-KAL Metrology Laboratory, division of Aalborg Instruments & Controls is accredited by A2LA in conformance to ISO17025/2005 and to Z540-1/1994. Gas flow calibrations up to 50L/min are performed according to Scope of Accreditation - Certificate Number: 3989.01.

Compliance Qualifications

Extensive set of Molbox/Molblocs ensure conveniently overlapping calibration ranges.

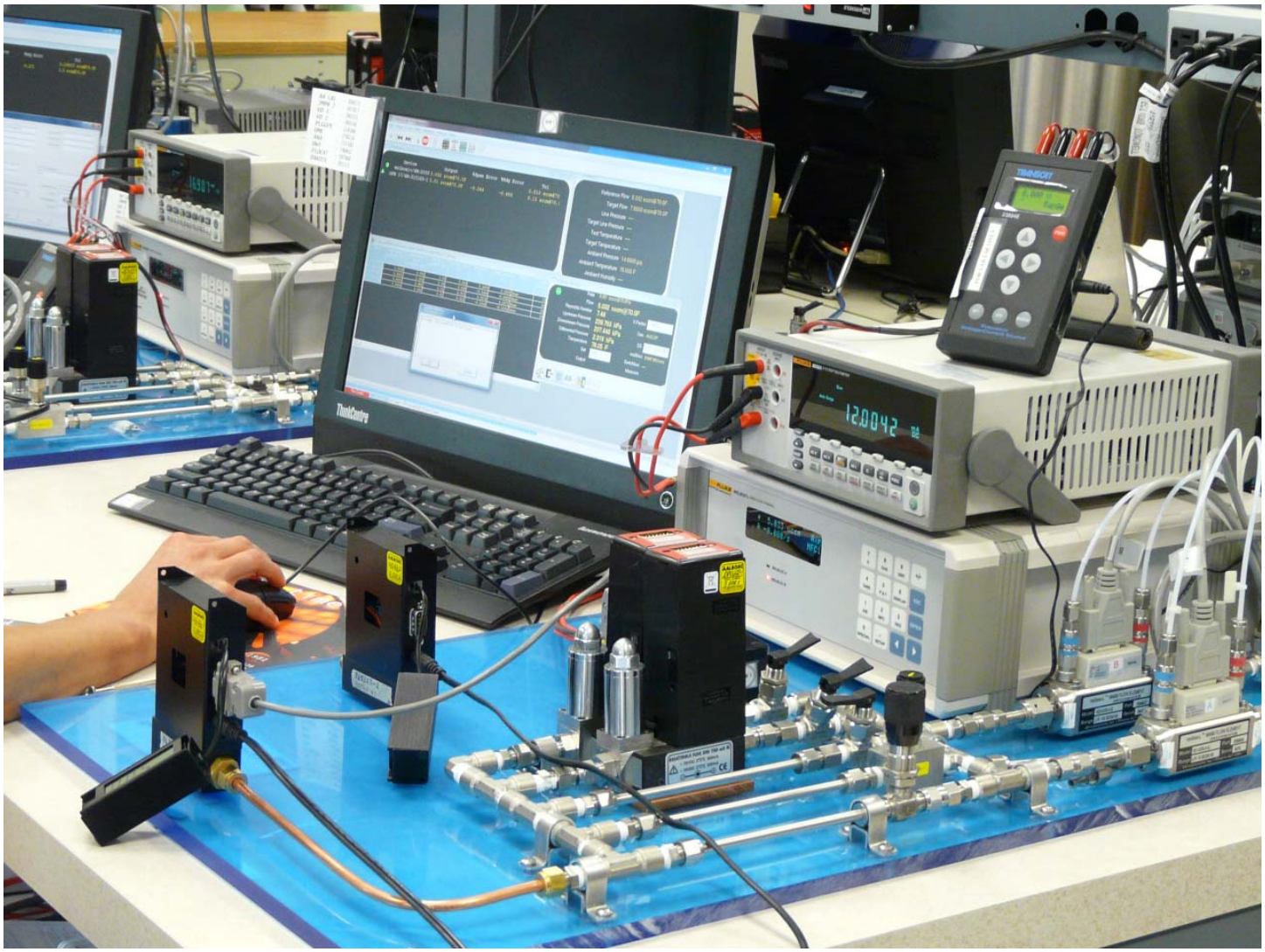
- ANSI/NCSL Z540-1-1994
- ISO9001/2008 CERTIFIED
- MIL-STD-456624A
- ISO17025 Accredited

Partial view of the gas calibration laboratory.

Technicians calibrating Flow Controllers using Bell Provers and Molbox/Molblocs technology.

ACCREDITED
Certificate 3989.01

Close-up view of Molbox/Molblocs equipment supported by COMPASS software for calibrating GFM flow meters.



Link for an explanation how to use Molbox/Molblocs method of calibrations of Flow Meters and Controllers.

http://www.youtube.com/watch?v=FVDqrW5y70A

Pressure Limits Of Calibrations

Up to 500 PSIG for routine gases (Air, N_2, He and Ar) with a maximum flow of 250 L/min. Up to 80 PSIG for Air, with a maximum flow of 1000 L/min.

- Customer calibrations are represented by primary SI flow units.
- Gas calibrations for up to 1000 L/min and water calibrations up to 4 L/min available.
- Calibrated to NIST traceable standards.

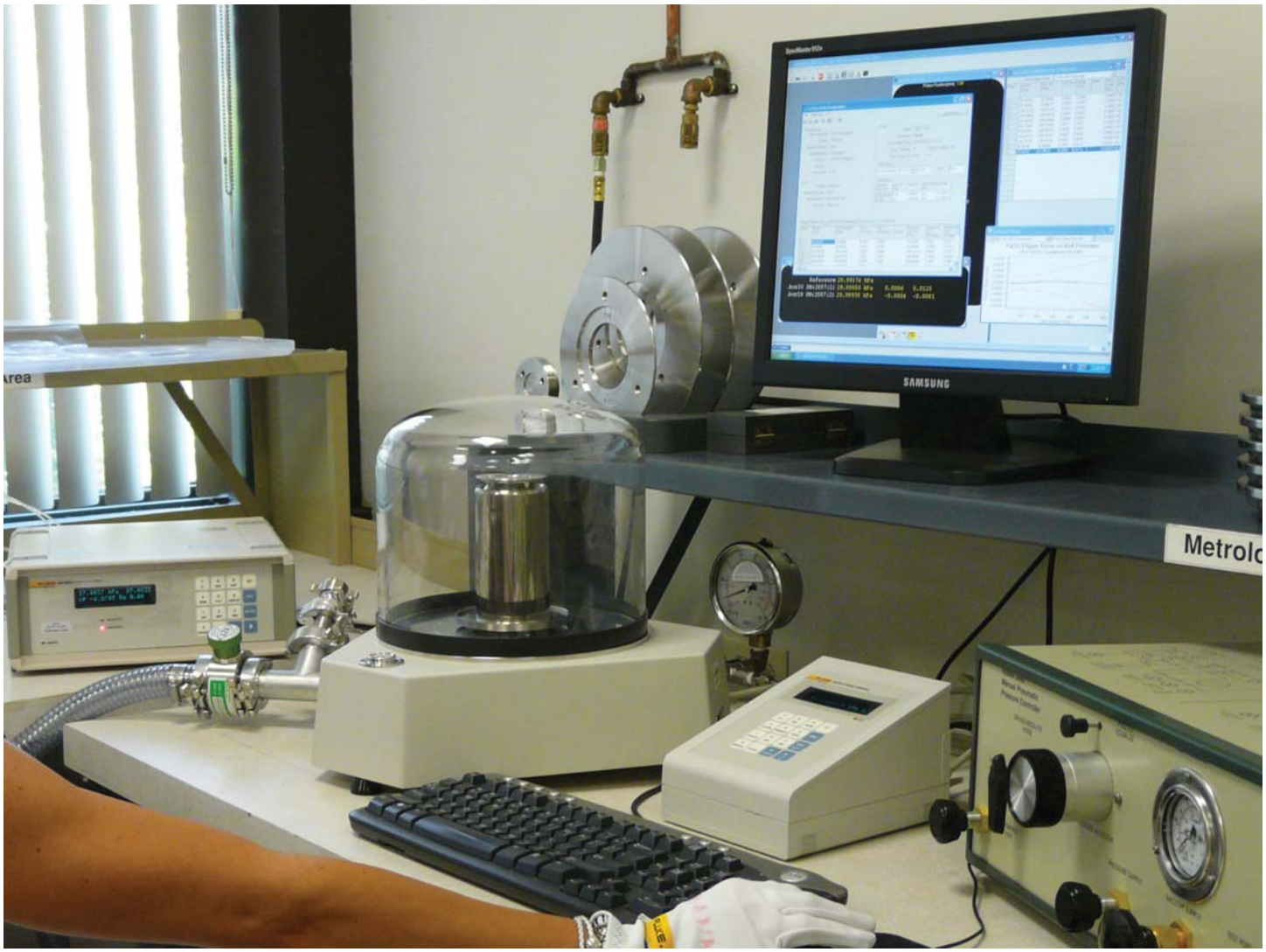
Bell prover used by technician in calibrating high flow capacity flow meter.

CAL CALIBRATIONS, SERVICES AND CERTIFICATES

ACCREDITED
Certificate 3989.01

Terminal shown for low-flow Flow Controller calibration supported by Aalborg SDPROC software.

Piston Gauge, model 7601 with gas operated, gas lubricated piston-cylinder module. It supports definition of pressure against a vacuum reference.



OPERATING MODES: Gauge, Absolute and Differential.

OVERALL SPECIFICATION FOR PRESSURE MEASUREMENT:

Sensitivity: 0.02Pa +0.5 ppm
Reproducibility: +/-4 ppm
Measurement Uncertainty (k=2): +/-(0.5Pa + 20 ppm)

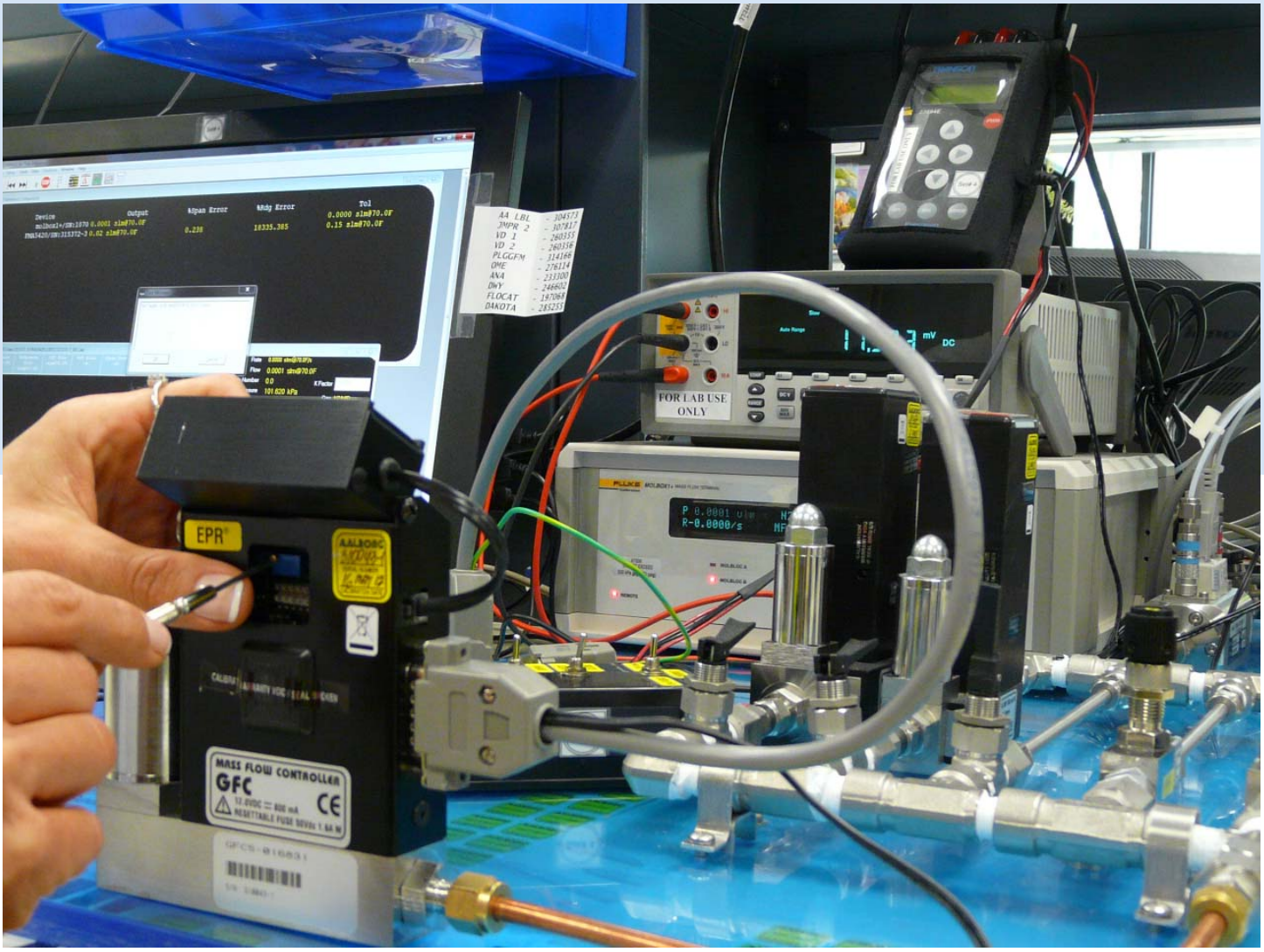
Suitable for Molbox 1+ A350/A700

CAL CALIBRATIONS, SERVICES AND CERTIFICATES

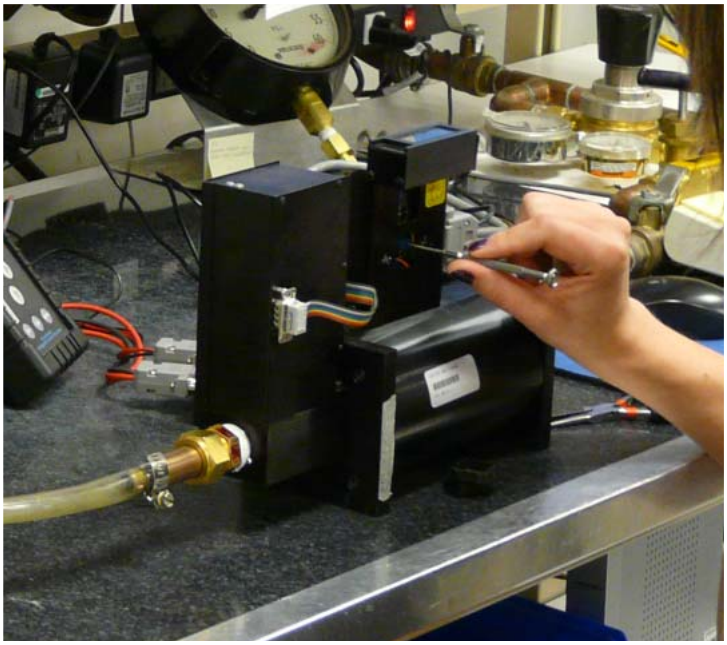
ilac-MRA

A2LA ACCREDITED
Certificate 3989.01

Our gas calibration laboratory has NIST traceable approved in-house equipment to certify our calibration devices. Molbox/Molblocs based calibration for GFC Flow Controller.



Our technicians are trained and certified and our Laboratory is equipped to calibrate Molboxes. In addition, our laboratory can calibrate NIST traceable approved "In-House" equipment to certify our primary calibration devices. We also calibrate and certify customers' Molboxes. For fast cost effective service please contact our customer service department.



Gas flow calibration laboratory is capable of performing calibrations from 1 mL/min to 1000 L/min at 21.1 °C /101.325 kPa (70 °F, 14.69 PSI abs).

According to "state of the art" calibrating practices, calibrations are performed based on 4 to 1 uncertainty ratio.

ilac-MRA

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Certificate 3989.01

Specialized software applied to calibration of Flow Meter.

EUROPEAN SERVICE FACILITY

Authorized Repair and Service Facility
for Aalborg Thermal Mass Flow Systems

AALBORG - ANALYT-MTC
MESSTECHNIK GMBH
Klosterrunsstraße 18 P.O. Box 1321
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Tel: 03 89 41 47 78
Fax: 03 89 41 59 88
e-mail: ANALYT_MTC@T-online.de

ASIAN SERVICE FACILITY

Authorized Repair and Service Facility
for Aalborg Thermal Mass Flow Systems

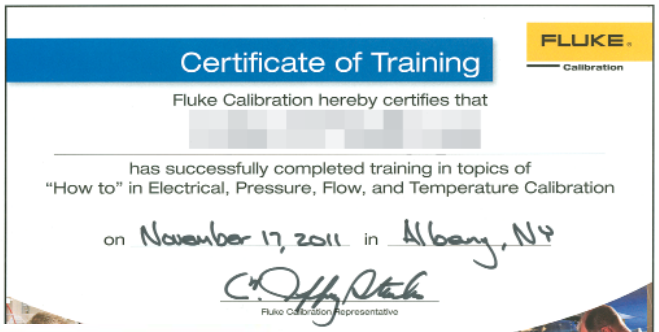
AALBORG -Beijing Comity
MEASURE & CONTROL CO.

Floor 1 Tower B Jindayuan Office Building
Xisanqi, Hai Dian District, Beijing, China

Phone: 86-10-6295-0464, 86-10-6295-0465
Fax: 86-10-6295-0466
Website: http://www.comity-tec.com

Typical Bell Prover used for NIST traceable calibrations

BULLETIN 20190517



BULLETIN 20190517

Accredited Laboratory

A2LA has accredited

AALFA - KAL METROLOGY LABORATORY,
DIVISION OF AALBORG INSTRUMENTS & CONTROLS, INC.
Orangeburg, NY

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories.* This laboratory also meets the requirements of ANSI/NCSLI Z540-1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 6th day of January 2016.

Senior Director of Quality & Communications
For the Accreditation Council
Certificate Number 3989.01
Valid to April 30, 2018

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.

American Association for Laboratory Accreditation

Has Attended the

ISO/IEC 17025 and Accreditation Course

- ISO 17025
- Documentation
- Internal Auditing

Sponsored by the

American Association for Laboratory Accreditation

Scottsdale, AZ
1.5 CEUS Awarded
February 29-March 2, 2012

Dawn Mettler
Consultant

American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

AALFA - KAL METROLOGY LABORATORY,
DIVISION of AALBORG INSTRUMENTS & CONTROLS, INC.
20 Corporate Dr.
Orangeburg, NY 10962
Mr. Stefan Radecki Phone: 845 770 3000

CALIBRATION

Valid To: April 30, 2018 Certificate Number: 3989.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1]:

I. Fluid Quantities

Parameter	Range	CMC 2, 3 (+)	Comments
Flow – Gas	Up to 10 SCCM	0.18 %	DHI Molbox-1
	(4 to 50) SCCM	0.18 %	
	(4 to 50) SCCM	0.18 %	
	(80 to 1000) SCCM	0.18 %	
	(160 to 2000) SCCM	0.18 %	
	(800 to 10 000) SCCM	0.18 %	(Air, He, Arg, CO_2, O_2, N_2)
	(2400 to 30 000) SCCM	0.19 %	
	(4000 to 50 000) SCCM	0.27 %	

[1] This laboratory offers commercial calibration services.

[2] Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

(A2LA Cert. No. 3989.01) Revised 01/07/2016 Page 1 of 1

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