



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

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CALIBRATION

Valid To: January 31, 2018

Certificate Number: 1897.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Fluid Quantities

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Flowrate <sup>3</sup> –			
Flowrig FCP 6.C			
Mass	(0.002 to 11.9) kg/s	0.048 % of rdg	Gravimetric flow rig with volumetric prover
Volumetric	(0.002 to 11.9) l/s	0.057 % of rdg	
Flowrig FCP 6.F			
Mass Low Flow	(0.002 to 2.5) kg/s	0.021 % of rdg	Mass low flow calibration with volumetric prover
Mass	(0.002 to 11.9) kg/s	0.048 % of rdg	Gravimetric flow rig with volumetric prover
Volumetric	(0.002 to 11.9) l/s	0.058 % of rdg	
Flowrig FCP 6.H			
Mass	(0.002 to 11.9) kg/s	0.047 % of rdg	Gravimetric flow rig with volumetric prover
Volumetric	(0.002 to 11.9) l/s	0.056 % of rdg	

Parameter/Equipment	Range	CMC <sup>2</sup> ( $\pm$ )	Comments
Flowrate <sup>3</sup> (cont) –			
Flowrig FCP 7.1.B			
Mass	(0.2 to 200) kg/s	0.051 % of rdg	Gravimetric flow rig with volumetric prover
Volumetric	(0.2 to 200) l/s	0.066 % of rdg	
Flowrig FCP 7.1.6			
Mass	(0.2 to 200) kg/s	0.048 % of rdg	Gravimetric flow rig with volumetric prover
Volumetric	(0.2 to 200) l/s	0.066 % of rdg	
Flowrig FCP 7.1.F			
Mass	(0.2 to 200) kg/s	0.015 % of rdg	Gravimetric flow rig with volumetric prover
Volumetric	(0.2 to 200) l/s	0.057 % of rdg	
Flowrig FCP 9.B			
Volumetric	(19 to 660) l/s	0.075 % of rdg	Volumetric flow rig with master meters
Density (Water) –	(980.6 to 999.2) kg/m <sup>3</sup>	0.006 % to 0.02% of rdg	Comparison – water density within density calibration rig

<sup>1</sup> This laboratory offers commercial calibration service.

<sup>2</sup> 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.

<sup>3</sup> The CMC claim is smaller than that of the expanded uncertainty claim for The National Institute of Standards and Technology (NIST) as listed in the BIPM Key Comparison Database. A2LA has evaluated the laboratory's CMC claim and has verified this information to be correct and appropriate.



## *Accredited Laboratory*

A2LA has accredited

**ENDRESS+HAUSER FLOWTEC AG**

*Greenwood, IN*

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 3<sup>rd</sup> day of August 2016.

A handwritten signature in blue ink, appearing to read 'J. C. Bunt'.

Senior Director of Quality and Communications  
For the Accreditation Council  
Certificate Number 1897.01  
Valid to January 31, 2018

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