

Micro Motion, Inc. - ISO/IEC 17025 Accredited Calibration Certificate: 1.31210243

Model Code	Serial ID	Order ID	Line	Item	Customer Tag
CMFHC3M819N2BAEZZZ	12102714	10171558	1.1	1	FE-1031C
PUCK800	33092808				

Calibration Information	
Date/Time:	2014.07.23 7:23:37
Calibration Stand:	TSM3A
Fluid:	H2O
Mass Uncertainty (%):	0.030
Density Uncertainty (kg/m³):	0.080
Volume Uncertainty (%):	0.031
Max Rate P/T (kPa/°C):	121.03 / 22.4
CORIOLIS ISO/IEC 17025 VERIFY	

The reported expanded uncertainties are based on the standard uncertainty of measurement multiplied by a coverage factor $k=2$, which provides a confidence level of approximately 95%. The standard uncertainty has been determined in accordance with the GUM and EA 04/2.

This calibration was performed by comparison to a reference meter (dynamic start/stop reference meter method) as described in ISO 10790:1999(E) "Measurement of fluid flow in closed conduits - Guidance to the selection, installation and use of Coriolis meters (mass flow, density and volume flow measurements)", Annex A "Calibration techniques", and internal procedure GWI-24.

This calibration certificate only applies to the item(s) identified and shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the United States Federal Government.

These measurements have been made using the calibration stand listed above, which is traceable to one or more of the following National Metrology Institutes: NIM-China, NIST-USA, and VSL-The Netherlands.

These calibration results comply with the requirements of ISO/IEC 17025:2005, and ANSI/NCSS Z540-1-1994; Part 1.

UUT Avg Results - Mass ☐ AS FOUND ☒ AS LEFT

Mass Rate (kg/min)	Fluid Pressure (kPa)	Fluid Temp (°C)	Mass Total (kg)	Error (%)	n (--)	u _A Mean (%)	U _e (%)	Spec (%)	Cal Mode
11959.5	121	22.4	11980.5	-0.002	3	0.002	0.030	0.100	TSM
1192.9	79	22.4	1196.07	-0.077	3	0.005	0.032	0.189	TSM
6020.82	43	22.4	6028.4	-0.016	3	0.003	0.030	0.100	TSM

UUT Avg Results - Density

Mass Rate (kg/min)	Fluid Pressure (kPa)	Fluid Temp (°C)	Density (kg/m³)	Error (kg/m³)	n (--)	u _A Mean (kg/m³)	U _e (kg/m³)	Spec (kg/m³)
11959.5	121	22.4	997.816	-0.006	3	0.008	0.082	0.500
1192.9	79	22.4	997.798	0.008	3	0.007	0.081	0.500
6020.82	43	22.4	997.751	-0.018	3	0.012	0.084	0.500

UUT Avg Results - Volume

Volume Rate (l/min)	Fluid Pressure (kPa)	Fluid Temp (°C)	Volume Total (l)	Error (%)	n (--)	u _A Mean (%)	U _e (%)	Spec (%)
11985.6	121	22.4	12006.8	-0.002	3	0.002	0.031	0.112
1195.53	79	22.4	1198.71	-0.077	3	0.005	0.033	0.196
6034.39	43	22.4	6041.99	-0.014	3	0.003	0.032	0.112



Calibration Operator
ALMAZOORY, HUSSEIN

[Signature]
Signature

7/23/14
Date

Approved By
TINOMIR GEORGIEV

[Signature]
Signature

7/23/14
Date