Calibration certificate

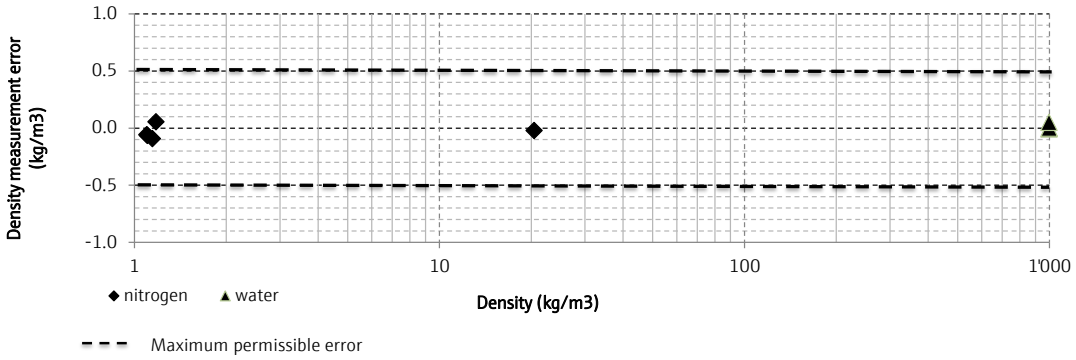
Cal. Cert. No: 2068

2068

Density calibration

DLO-M1	C0=-2.76358	C1=2.25762E+9	C2=-1.2994E+5
Nanomass GD	Density coefficients		
544	C22=0E+2	C5=0E-2	C7=0.91577E-6
544	Density coefficients		
TDDCP-03	C8=1.88547E-6	D1=-11.3149E-3	D2=45.26042E-4
TDDCP-03	Density coefficients	Damping coefficients	
	A0=0	A1=0E+8	A2=0
	Viscosity coefficients		

	Reference Data				DUT Data			Error verus Specification (2K)			
Fluid	Press (bara)	Temp (°C)	Density (kg/m³)		Frequency (Hz)	Temp (°C)	Density (kg/m³)	Temp Error (°C)	Spec (°C)	Density Error (kg/m³)	Spec (kg/m³)
water	24.98	24.9868	0.913798	0		997.0484	997.1				
nitrogen	24.99	24.98	0.98	-		1.10	1.04	-23.88	0.30	0.06	0.50
nitrogen	18.02	24.71	20.44		28465.7	24.67	20.42	-0.04	0.30	-0.02	0.50
nitrogen	1.01	24.70	1.15		28558.8	24.70	1.05	-0.00	0.30	-0.09	0.50
nitrogen	0.97	4.89	1.18		28571.9	4.89	1.23	0.00	0.30	0.06	0.50
nitrogen	0.97	60.08	0.98		28533.8	60.08	1.02	-0.00	0.30	0.03	0.50
water	0.91	24.97	997.05		24485.7	25.09	997.04	0.12	0.30	-0.01	0.50
water	18.12	24.98	997.82		24487.3	25.01	997.83	0.03	0.30	0.00	0.50
						Calibration without adjustment					
water	0.91	24.98	997.05		24485.6	24.98	997.10	0.00	0.30	0.05	0.50
nitrogen	0.98	24.99	1.10		28558.7	24.98	1.04	-0.00	0.30	-0.06	0.50
nitrogen	0.97	24.98	1.10		28558.7	24.98	1.04	0.00	0.30	-0.06	0.50



Calibration method: Traceable Standard Reference Materials (SRM) are used during the calibration procedure
Expanded measurement uncertainty of calibration: < 0.05 kg/m3
Note: Density measurement of the Density Module (DML) depends on pressure. If the actual measuring pressure is known, the pressure effect can be compensated.
The listed calibration data shows measuring performance with active pressure compensation. By default, the pressure compensation is set to a fixed pressure, typically 1 bar (absolute). If the actual measuring pressure is higher than the fixed compensation pressure, the DML shows a density that is too low.
For detailed information concerning specifications and pressure compensation, see the product documentation.

26.11.2018 07:02
Calibration date and time

Dr. Ch. Huber
Calibrated by

TrueDyne Sensors AG ▪ Christoph-Merian-Ring 20 ▪ CH-4153 Reinach
T +41 61 715 89 00 ▪ F +41 61 715 87 87 ▪ info@truedyne.com ▪ www.truedyne.com