

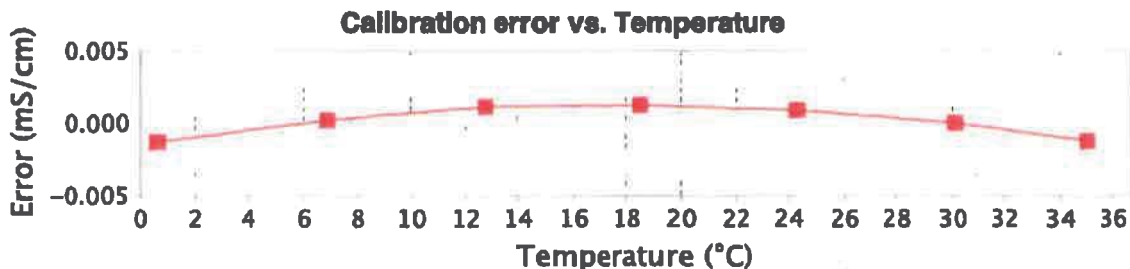
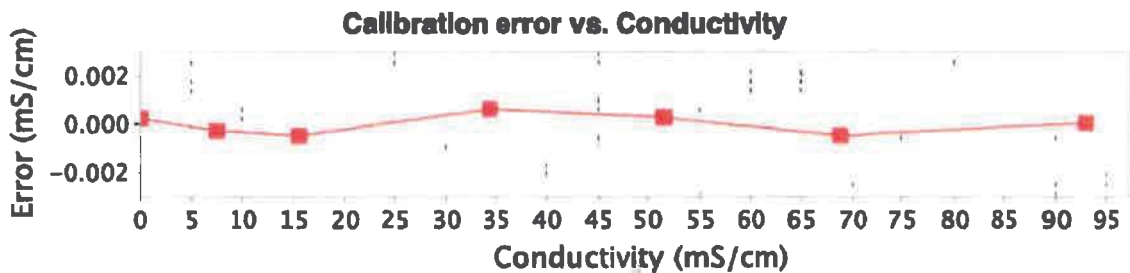
# RBR Conductivity Calibration Certificate

RBRlegato<sup>3</sup> C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208553  
 References: Autosal8400B#66289, MS-315#15506, SSW P164, RC#002


Reference Resistance (ohm)	Reference Conductivity (mS/cm)	Voltage Ratio, V	Measured Conductivity (mS/cm)	Calibration Error (mS/cm)	Coefficients
open	0.0000	-0.000118	0.0002	0.0002	
694.033	7.4333	0.038941	7.4330	-0.0003	C1: 190.29662
331.927	15.5424	0.081553	15.5419	-0.0005	(K) C2: 1.001942
150.016	34.3892	0.180598	34.3899	0.0006	X0: 333.77996E-6
100.011	51.5837	0.270952	51.5839	0.0003	X1: -119.1966E-9
75.019	68.7688	0.361255	68.7683	-0.0005	X2: 1.8469999E-6
55.516	92.9273	0.488210	92.9274	0.0001	X3: -947.2E-12
					X4: 211.199E-15
<b>Bath</b>	<b>Voltage Ratio</b>	<b>Temperature (ITS-90)</b>	<b>Salinity (PSS-78)</b>	<b>Conductivity (mS/cm)</b>	X5: 14.988609
T15S35	0.2253287	14.98861	34.9960	42.9020	X6: 10
T25S35	0.2738363	24.10597	34.9928	52.1298	

Cell Constant @T15S35 = 5.15893 1/cm

$$C_c = \frac{C_0 + C_1 * C_2 * V - X_0 * (T - X_5)}{1 + X_1 * (T - X_5) + X_2 * (P - X_6) + X_3 * (P - X_6)^2 + X_4 * (P - X_6)^3}$$



Calibration Date: 2022-01-29  
 Issue Date: 2022-01-29  
 File Name: 208553\_20220129\_1344C.rsk

Operator:   
 jwang

Approver:   
 ishkvetsov



# Temperature Calibration Certificate

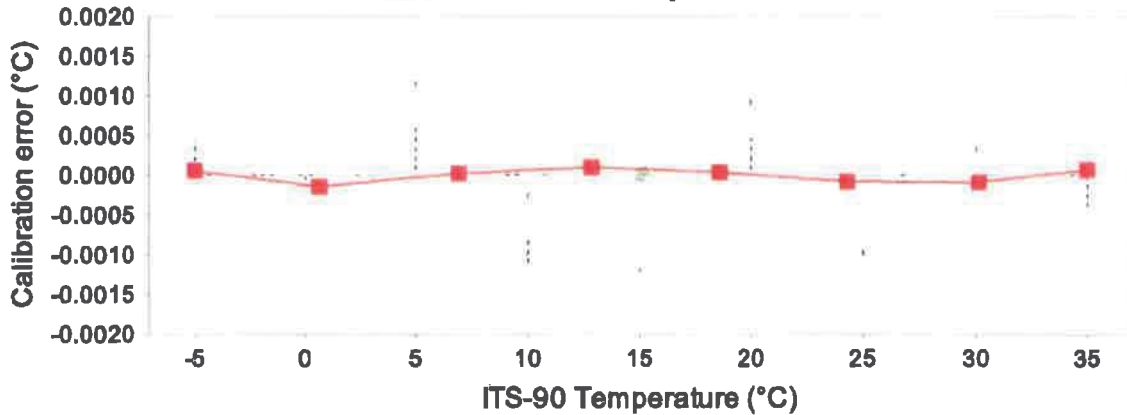
Logger ID: RBRlegato<sup>3</sup> Serial No: 208553 Channel No: 2

Reference Temperature, ITS-90	Voltage ratio, V	Measured Temperature, ITS-90	Calibration error	Coefficients
-5.01397	0.721964	-5.01391	0.00006	C0: 3.488659E-3
0.61312	0.657576	0.61298	-0.00014	C1: -249.87443E-6
6.84635	0.581838	6.84638	0.00003	C2: 2.5054878E-6
12.76367	0.508899	12.76377	0.00010	C3: -84.3323E-9
18.54612	0.439684	18.54616	0.00004	
24.30268	0.375209	24.30260	-0.00008	
30.10650	0.316336	30.10642	-0.00008	
35.00136	0.272123	35.00143	0.00007	


$$T_m = \ln\left(\frac{1}{V-1}\right)$$


$$T_c = \frac{1}{(C_0 + C_1 T_m + C_2 T_m^2 + C_3 T_m^3)} - 273.15$$

Calibration error vs. Temperature



Calibration Date: 2022-01-24  
 Issue Date: 2022-01-24  
 Calibration ID: 52000

Operator:   
 kmalorny

Approver:   
 kmalorny



# Pressure Calibration Certificate

RBRlegato<sup>3</sup> C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208553

Instrument rating: 1,000 dbar s/n: M100249

Nominal accuracy: 0.05%FS (0.5 dbar)

Reference Instrument: Mensor CPC6050 s/n: 41000CAM

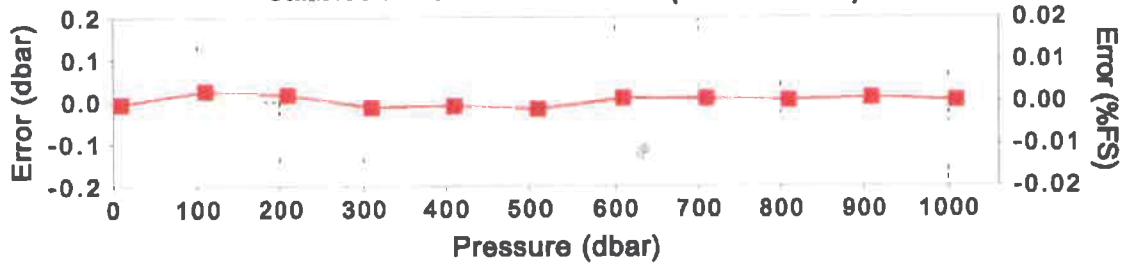
Applied pressure, P <sub>app</sub> (dbar)	Voltage ratio, V	Measured pressure, P <sub>c</sub> (dbar)	Calibration error (dbar)	Coefficients
10.014	0.013314	10.0088	-0.0056	C0: -21.666033
109.999	0.055010	110.0243	0.0253	C1: 2.397427E3
209.997	0.096666	210.0131	0.0161	C2: 21.589603
309.999	0.138291	309.9858	-0.0132	C3: -17.112734
409.999	0.179908	409.9892	-0.0098	X0: 10.0144
509.999	0.221502	509.9811	-0.0179	X1: 34.046277E-3
609.999	0.263094	610.0069	0.0079	X2: -67.693974E-6
709.999	0.304664	710.0061	0.0071	X3: -675.31715E-9
810.002	0.346225	810.0053	0.0033	X4: -132.4509E-6
909.997	0.387781	910.0063	0.0093	X5: 20.71593
1009.990	0.429329	1009.9929	0.0029	

$$P_c = X_0 + \frac{P_m - X_0 - X_1(T - X_5) - X_2(T - X_5)^2 - X_3(T - X_5)^3}{1 + X_4(T - X_5)}$$

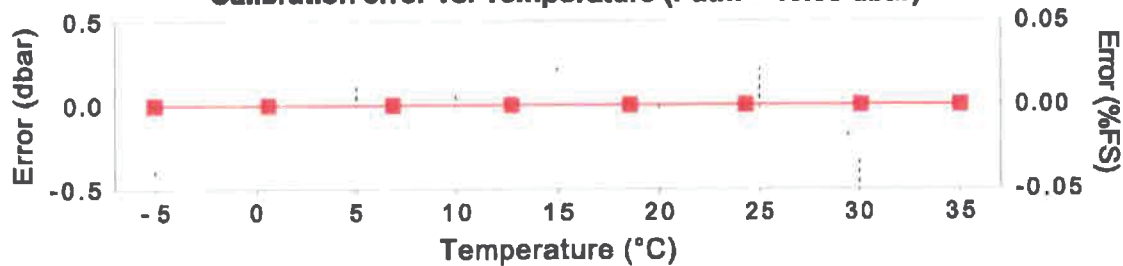
Head (mm) = 258

$$P_m = C_0 + C_1V + C_2V^2 + C_3V^3$$

Calibration error vs. Pressure (Tcal = 20.7°C)



Calibration error vs. Temperature (P<sub>atm</sub> = 10.03 dbar)



Calibration Date: 2022-01-24  
 Issue Date: 2022-01-25  
 File Name: 208553\_20220125\_0848P.rsk

Operator: Adam Fulin  
 afalicki

Approver: [Signature]  
 kmalorny