

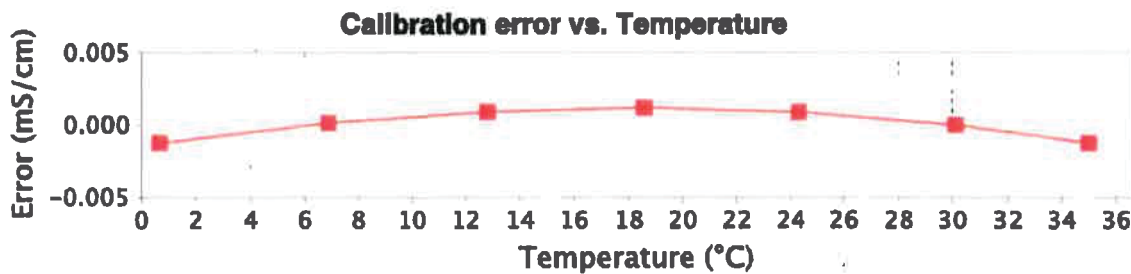
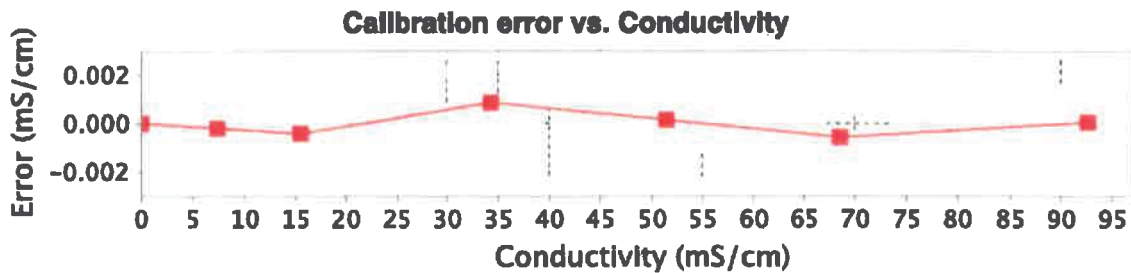
RBR Conductivity Calibration Certificate

RBRiegato³ C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208551
 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	-0.000075	0.0000	0.0000		C0: 14.32304E-3
694.033	7.4103	0.038981	7.4101	-0.0002	(K)	C1: 189.72655
331.927	15.4944	0.081589	15.4940	-0.0004		C2: 1.001942
150.016	34.2831	0.180627	34.2840	0.0009		X0: 347.38498E-6
100.011	51.4245	0.270971	51.4247	0.0002		X1: 1.2392873E-6
75.019	68.5566	0.361266	68.5560	-0.0006		X2: 1.8469999E-6
55.516	92.6405	0.488209	92.6406	0.0001		X3: -947.2E-12
						X4: 211.199E-15
						X5: 14.977271
						X6: 10
Bath	Voltage Ratio	Temperature (ITS-90)	Salinity (PSB-78)	Conductivity (mS/cm)		
T15S35	0.2260361	14.97727	35.0038	42.8994		
T25S35	0.2747698	24.11191	34.9971	52.1417		

Cell Constant @T15S35 = 5.14301 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: 2022-02-03
 Issue Date: 2022-02-03
 File Name: 208551_20220203_1705C.rsk

Operator: 
 jwang

Approver: 
 Ishkvorets



Temperature Calibration Certificate

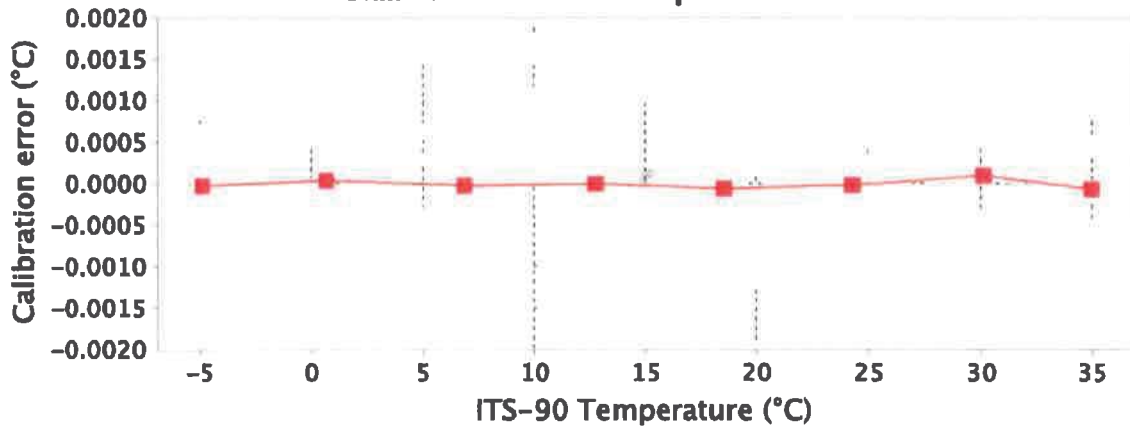
Logger ID: RBRlegato³ Serial No: 208551 Channel No: 2

Reference Temperature, ITS-90	Voltage ratio, V	Measured Temperature, ITS-90	Calibration error	Coefficients
-4.91234	0.701957	-4.91236	-0.00002	C0: 3.5082502E-3
0.67378	0.636884	0.67382	0.00005	C1: -254.40016E-6
6.89971	0.561010	6.89969	-0.00002	C2: 2.478798E-6
12.80714	0.488968	12.80715	0.00001	C3: -64.838524E-9
18.57581	0.421431	18.57576	-0.00005	
24.32084	0.359074	24.32083	-0.00001	
30.11515	0.302527	30.11526	0.00011	
35.00054	0.260289	35.00048	-0.00006	


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


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

Calibration error vs. Temperature



Calibration Date: 2022-02-02
 Issue Date: 2022-02-02
 Calibration ID: 52258

Operator: 
 jwang

Approver: 
 kmalomy



Pressure Calibration Certificate

RBRlegato³ C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208551

Instrument rating: 1,000 dbar s/n: M100247

Nominal accuracy: 0.05%FS (0.5 dbar)

Reference Instrument: Mensor CPC6050 s/n: 41000CAM

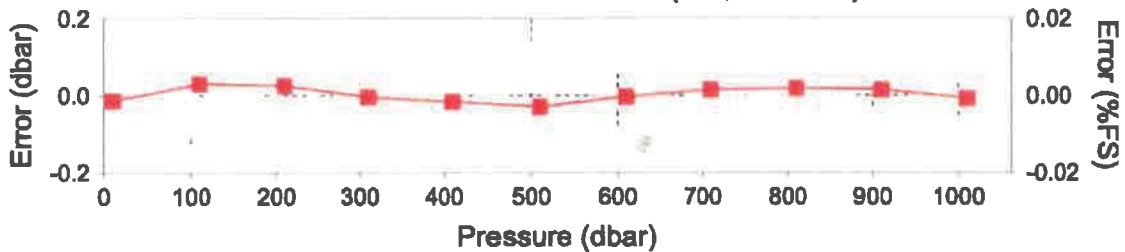
Applied pressure, P _{app} (dbar)	Voltage ratio, V	Measured pressure, P _c (dbar)	Calibration error (dbar)	Coefficients
10.118	0.015292	10.1054	-0.0130	C0: -25.49325
109.999	0.057891	110.0295	0.0305	C1: 2.3434822E3
209.998	0.100472	210.0238	0.0258	C2: 33.5517
309.999	0.143003	309.9956	-0.0034	C3: -23.027931
409.998	0.185503	409.9823	-0.0157	X0: 10.1184
509.998	0.227972	509.9693	-0.0287	X1: 49.692787E-3
609.998	0.270430	609.9958	-0.0022	X2: -34.54956E-6
709.998	0.312860	710.0137	0.0157	X3: -739.7908E-9
810.000	0.355266	810.0187	0.0187	X4: -137.60471E-6
909.997	0.397656	910.0128	0.0158	X5: 20.361616
1010.000	0.440029	1009.9931	-0.0069	

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

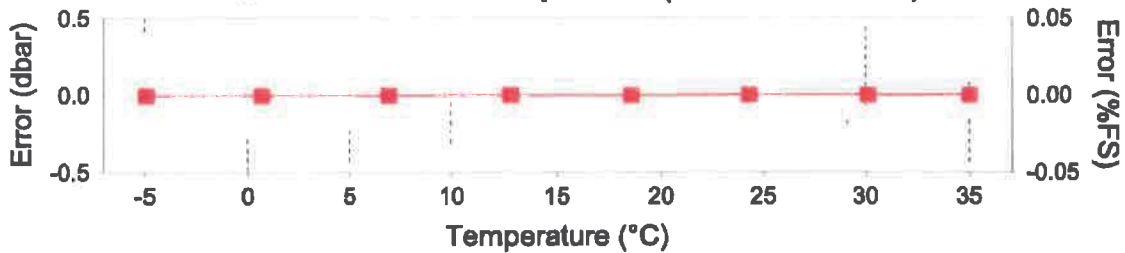
Head (mm) = 256

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

Calibration error vs. Pressure (Tcal = 20.4°C)



Calibration error vs. Temperature (Patm = 10.15 dbar)



Calibration Date: 2022-02-02
 Issue Date: 2022-02-02
 File Name: 208551_20220202_1518P.rsk

Operator: *Duong*
 dluong

Approver: *Kmatomy*
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