



**SEA-BIRD**  
SCIENTIFIC

Sea-Bird Scientific  
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## Pressure Test Certificate

Test Date: 2019-08-22

Description: SBE-37 Microcat

### Sensor Information:

Model Number: SBE-37

Serial Number: 21148

### Pressure Test Protocol:

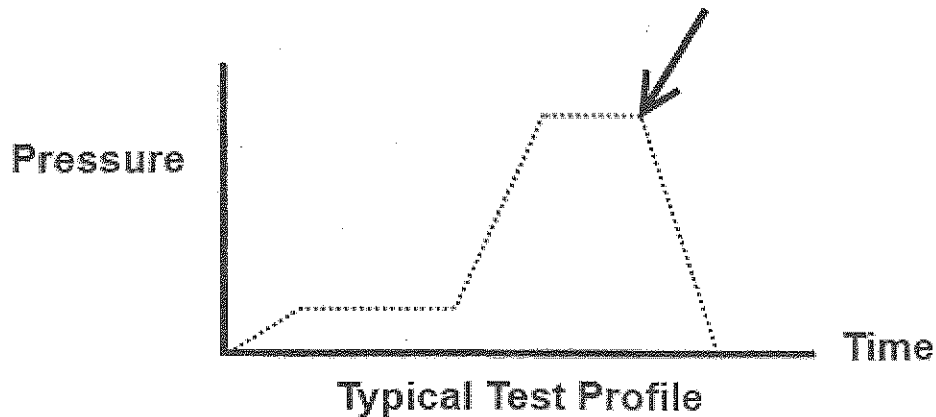
Low Pressure Test: 40 PSI Held For: 15 Minutes

High Pressure Test: 2900 PSI Held For: 15 Minutes

Passed Test: True

Tested By: db

High pressure is  
generally equal  
to the maximum  
depth rating of  
the instrument





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SENSOR SERIAL NUMBER: 21148  
CALIBRATION DATE: 22-Aug-19

SBE 37 V2 PRESSURE CALIBRATION DATA  
2900 psia S/N 5059701

#### COEFFICIENTS:

PA0 = -2.262003e+000  
PA1 = 8.964117e-003  
PA2 = 3.452364e-011  
PTEMPA0 = -9.390802e+001  
PTEMPA1 = 3.968933e-002  
PTEMPA2 = 1.220902e-006

PTCA0 = 5.236666e+005  
PTCA1 = -1.410288e+001  
PTCA2 = 9.898535e-002  
PTCB0 = 1.027948e+002  
PTCB1 = -6.491298e-003  
PTCB2 = 0.000000e+000

#### PRESSURE SPAN CALIBRATION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (counts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)
14.66	525300.0	2699.0	14.76	0.00
614.87	592119.0	2708.0	614.79	-0.00
1214.88	658904.0	2709.0	1214.79	-0.00
1714.81	714540.0	2710.0	1714.87	0.00
2314.75	781258.0	2711.0	2314.84	0.00
2914.66	847910.0	2712.0	2914.53	-0.00
2314.75	781259.0	2711.0	2314.85	0.00
1714.83	714537.0	2711.0	1714.85	0.00
1214.87	658906.0	2712.0	1214.83	-0.00
614.89	592120.0	2711.0	614.82	-0.00
14.65	525281.0	2713.0	14.65	-0.00

#### THERMAL CORRECTION

TEMP (°C)	THERMISTOR OUTPUT (counts)	INSTRUMENT OUTPUT (counts)
32.50	2922	525202.32
29.00	2847	525219.52
24.00	2740	525267.93
18.50	2621	525325.64
15.00	2545	525366.04
4.50	2315	525486.87
1.00	2237	525538.51
TEMPERATURE (°C)		SPAN
-5.50		102.83
34.49		102.57

y = thermistor output (counts)

$$t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$$

$$x = \text{instrument output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$$

$$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$$

$$\text{pressure (PSIA)} = PA0 + PA1 * n + PA2 * n^2$$

$$\text{Residual (\%FSR)} = (\text{computed pressure} - \text{true pressure}) * 100 / \text{Full Scale Range}$$

Date, Offset (%FSR)

● 22-Aug-19 -0.00

