



innovation in
geotechnical
instrumentation

Calibration Record

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Vibrating Wire Piezometer

Customer: PT. Unggul Ejawantah Industri
Model: VW2100-1.0-HD
Customer ID: PZ 12
Serial Number: VW57100
Mfg Number: P110125
Range: 1.0 MPa
Temperature: 23.0 °C
Barometric Pressure: 1023.9 millibars
Work Order Number: 220592
Cable Length: 140 meters
Cable Markings: 6871 m to 7011 m
Cable Colour Code: Red / Black (Coil) Green / White (Thermistor)
Cable Type: EL380004HDL
Thermistor Type: 3 kΩ

Applied Pressure (MPa)	First Reading (B units)	Second Reading (B units)	Average Reading (B units)	Calculated Linear (MPa)	Linearity Error (% FS)	Calculated Polynomial (MPa)	Polynomial Error (% FS)
0.000	8870	8871	8871	0.002	0.16	0.000	0.02
0.200	8034	8035	8034	0.199	-0.05	0.200	-0.03
0.400	7193	7193	7193	0.399	-0.13	0.400	-0.02
0.600	6346	6346	6346	0.599	-0.10	0.600	0.01
0.800	5496	5496	5496	0.800	0.02	0.800	0.04
1.000	4647	4648	4647	1.001	0.11	1.000	-0.03
Max. Error (%):					0.16		0.04

Linear Calibration Factor: CF = 2.3666E-04 MPa/B unit
Temperature Correction Factor: Tk = 3.0766E-04 MPa/°C rise

Polynomial Gage Factors:

A = -5.7348E-10 MPa/(B unit)² B = -2.2891E-04 MPa/B unit C = _____ MPa

Pressure is calculated with the following equations:

Linear: $P = CF(L_0 - L) - Tk(T_0 - T) + (S_0 - S)$

Polynomial: $P = A(L^2) + B(L) + C - Tk(T_0 - T) + (S_0 - S)$

Users must establish site zero readings for calculation purposes

Polynomial C = - [A(L₀²) + B(L₀)]

L₀, L = initial (installation) and current readings, in B units

T₀, T = initial (installation) and current temperature, in °C

S₀, S = initial (installation) and current barometric pressure readings, in MPa

B units = B scale output of VW 2102, VW 2104, VW 2106 and DT 2011 readouts

B units = Hz/1000 ie: 1700 Hz = 2890 B units

	Date (dd/mm/yy)	VW Reading (B units)	Temperature (°C)	Baro (mbar)
Shipped Zero Readings:	29-Mar-19	8870	21.5	1027.7

This instrument has been calibrated using standards traceable to the NIST in compliance with ANSI Z540-1

Technician: I. Kurchavov

Date: 29-Mar-19



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