



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 10
Serial Number: VW57098
Mfg Number: P110122
Range: 1.0 MPa
Temperature: 23.0 °C
Barometric Pressure: 1023.9 millibars
Work Order Number: 220592
Cable Length: 170 meters
Cable Markings: 7418 m to 7589 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	8966	8967	8966	0.002	0.23	0.000	0.01
0.200	8111	8112	8112	0.199	-0.06	0.200	-0.01
0.400	7251	7252	7251	0.398	-0.19	0.400	-0.01
0.600	6383	6384	6384	0.598	-0.17	0.600	0.01
0.800	5510	5511	5511	0.800	-0.02	0.800	0.02
1.000	4633	4635	4634	1.002	0.20	1.000	-0.01
Max. Error (%):					0.23		0.02

Linear Calibration Factor: CF = 2.3079E-04 MPa/B unit
Temperature Correction Factor: Tk = 1.5521E-04 MPa/°C rise

Polynomial Gage Factors:

A = -8.7809E-10 MPa/(B unit)² B = -2.1885E-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 = Hz²/1000 ie: 1700 Hz = 2890 B units

	Date (dd/mm/yy)	VW Reading (B units)	Temperature (°C)	Baro (mbar)
Shipped Zero Readings:	29-Mar-19	8971	21.4	1027.7

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

Technician: I. Kurchavov *IK*

Date: 29-Mar-19



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