



innovation in
geotechnical
instrumentation

Calibration Record

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Vibrating Wire Piezometer

Customer: PT. Unggul Ejawantah Industri
Model: VW2100-0.7-HD
Customer Number: PZ 9
Serial Number: VW55244
Mfg Number: P107264
Range: 700.0 kPa
Temperature: 23.0 °C
Barometric Pressure: 1026.2 millibars
Work Order Number: 219550
Cable Length: 48 meters
Cable Markings: 6489 m to 6536 m
Cable Colour Code: Red / Black (Coil) Green / White (Thermistor)
Cable Type: EL380004HDL
Thermistor Type: 3 kΩ

Applied Pressure (kPa)	First Reading (B units)	Second Reading (B units)	Average Reading (B units)	Calculated Linear (kPa)	Linearity Error (% FS)	Calculated Polynomial (kPa)	Polynomial Error (% FS)
0.0	9048	9048	9048	0.2	0.02	0.2	0.02
140.0	8303	8303	8303	139.8	-0.03	139.8	-0.03
280.0	7556	7556	7556	279.9	-0.02	279.9	-0.02
420.0	6807	6808	6807	420.1	0.02	420.1	0.02
560.0	6059	6060	6060	560.3	0.04	560.3	0.04
700.0	5315	5315	5315	699.8	-0.03	699.8	-0.03
Max. Error (%):					0.04		0.04

Linear Calibration Factor: CF = 1.8743E-01 kPa/B unit
Temperature Correction Factor: Tk = -3.9829E-02 kPa/°C rise

Polynomial Gage Factors:

A = 2.9595E-09 kPa/(B unit)² B = -1.8747E-01 kPa/B unit C = kPa

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 kPa

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:	12-Dec-18	9051	20.1	1021.7

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

Technician: B. Amos Date: 12-Dec-18



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