

Self-Boring Pressuremeter (SBPM)

Specification and technical data sheet



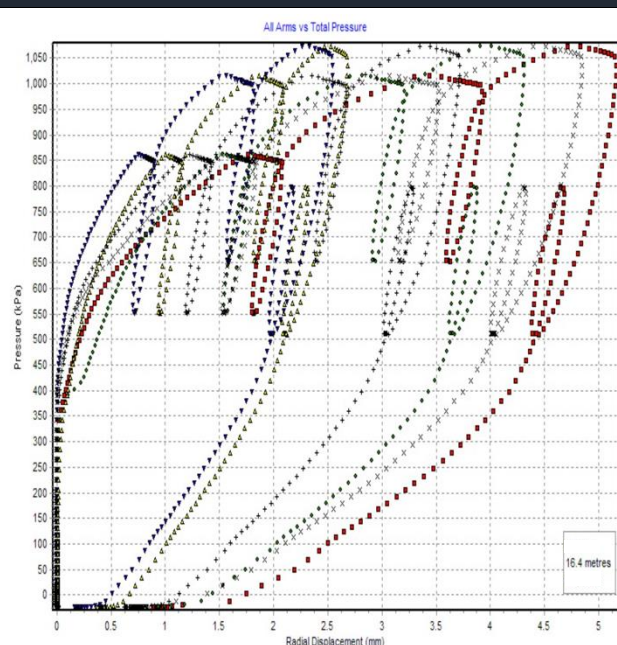
The Self-Boring Pressuremeter (SBPM) has the capability to achieve testing in minimally disturbed conditions. This probe has a cutting shoe and rotating drag bit, or rock roller, which cuts and flushes material out of the borehole, replacing the cut material instantly with the probe itself. This technique minimises the material relaxing upon the probe's insertion, achieving a test in near-undisturbed conditions.

This instrument is best used in soils. The two pore water pressure cells measure and record the pore water pressure response both during insertion and during the live test. The SBPM can also be used for permeability testing, to determine the insitu horizontal conductivity, as well as to perform consolidation testing, to determine the coefficient of consolidation and the lateral hydraulic conductivity.

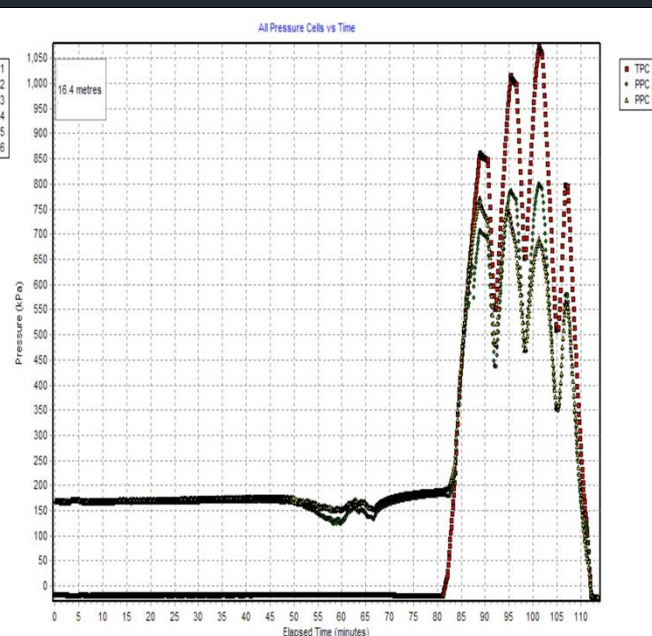
Self-Boring Pressuremeter (SBPM)	
Probe Diameter (Field Ready):	88mm
Max Working Pressure	10MPa
Max Arm Radial Displacement:	6mm
Maximum Strain:	13.6%
No. of Direct Strain Arms:	6
Arm Spacing at Circumference:	60°
No. of Total Pressure Cells:	2
No. of Pore Pressure Cells:	2
Length of expanding section:	535mm
Assembled Length (No Subs):	1467mm
Umbilical Diameter:	14mm
Actuation:	Pneumatic
Power Requirements:	12V
Pre-bored:	No
Self-bored:	Yes
Pushed:	No
Thread Type From Probe:	2" Parallel



Example Data



Self-Boring Pressuremeter Test



SBPM pore water pressure response during test

Common Parameters

Insitu horizontal stress	σ_{ho}
Yield stress	P_f
Limit Pressure	P_{lm}
Undrained shear strength	C_u
Frictional strength properties	ϕ_{cv}, ϕ_{pk}, C'
Initial shear modulus	G_i
Shear modulus	G_{ur}
Young's Modulus	E