FIELD PRESSUREMETER

TECHNICAL PARAMETERS

Item		Specifications			
		PY-3	PY-4	PY-5	PY-5
Probe	Structure	3-CELL			
	Nominal external diameter	ø60mm			Ø74mm
	Measuring chamber length	250mm			210mm
	Total length of the probe	800mm			850mm
Measuring accuracy	Min. reading of pressure gauge	0.01Mpa			
	Effective measuring range	400mm			
	Error	≤±1%			
Others	Maximum test pressure	2.5Mpa	4.0Mpa	5.5Mpa	
	Cross-sectional area of measuring tube water column	13.58cm^2	13.58cm^2	13.58cm^2	20cm^2
	Measuring tube volume	580cm^3	580cm^3	580cm^3	860cm^3
	Dimensions	830×360×220mm			
	Weight	28kg			
	Application	Cohesive soil, silty soil, etc.	Hard cohesive soil, silty soil, sandy soil, etc.	Cohesive soil, silty soil, sandy soil, strongly weathered rock, soft rock, etc.	

The pressuremeter test is an in-situ testing method used to achieve a quick measure of the in-situ stress-strain relationship of the soil. In principle, the pressuremeter test is performed by applying pressure to the sidewalls of a borehole and observing the corresponding deformation. The pressuremeter consists of two parts, the read-out unit which rests on the ground surface, and the probe that is inserted into the borehole (ground). As the pressure increases, the borehole walls deform. The pressure is held constant for a given period and the increase in volume required for maintaining the constant pressure is recorded. A load-deformation diagram and soil characteristics can be deduced by measurement of the applied pressure and change in the volume of the expanding membrane.

From the test readings (volume variation based on controlled pressure), a stress-strain curve can be obtained, in the case of plane deformation, which yields:

◎ the Ménard Pressuremeter modulus
◎ the creep pressure
◎ the Menard limit pressure