



TINPENG

## CPT-VST DUAL-USE APPARATUS TPC-3V

It is not only just the lightest CPT machine, but also vane shear test machine (i.e. VST). Its rated penetration force is 30KN (3t) and the test depth is up to 30m (in soft soil area).

While doing CPT test, it could work with 10cm<sup>2</sup> probe, also 10cm<sup>2</sup> pore-pressure probe while doing CPTu test. This machine is manual operation, suitable for clay, silt, sand, etc. After over 20 years application and development, now it is improved to put up a perfect performance.

Vane shear test ranges 0 ~130KPa, available vane size 50 × 100 (mm) (general) or 75 × 150 (mm) 75 × 100 (mm) (special).

**The data acquisition instrument and probes need to be ordered separately.**

### TECHNICAL PARAMETERS

Penetration force	20~30 KN
Penetration speed	0.8~1.2 m/min
Lifting speed	4~5 m/min
Penetration rod diameter	25~28 mm
Sectional area of probe	10 cm <sup>2</sup>
Vane size	50 × 100mm
Total weight	180 kg



SINCE 2006

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Static cone penetration test is internationally recognized as a standard field test to collect data about bearing capacity and frictional resistance of soil. Data Acquisition System JTY-3C is a new acquisition system capable. Sturdy, practical, and easy to use, JTY-3C does not require the aid of a portable PC and/or adaptors, it can be easily installed on the machine on site and transported in a handy case.

The intuitive touch-screen monitor can be read anytime and anywhere. The collected data can be downloaded to a USB disk.

**The CPT machine and probes need to be ordered separately.**



## SPECIFICATION

Qc, Fs collection value error	<1%
Output voltage	7.4V
Charging voltage	AC220V or DC12V
High-energy battery capacity	4Ah
Charging current	450mA
Charging time	13 hours, can collect data for 6-8 hours
Single-hole acquisition depth	≤100m
Storage Hole Data	600
Storage data(double bridge)	3*2856 m
Dimension	420*320*130mm 4.5kg

## FEATURES

- ⊙ High density acquisition of Qc (Ps), Fs, u value, vane shear Cu value.
- ⊙ Large-screen liquid crystal display, real-time display conical curve and the side wall curve, the proportion of self-selection to adapt to different formations.
- ⊙ Continue to collect, you can recall any curve stored in the instrument to continue collecting the design depth.
- ⊙ The data editing function, you can call up any hole curve data stored in the instrument for editing and modification.
- ⊙ Equipped with USB port to generate text type data files for communication with PC, which can be used for mapping or further data processing by engineering geological survey software package.
- ⊙ Alarm function, user can set alarm value.
- ⊙ Backlight display, suitable for night or dark light environment work.







▲ Single-bridge probe



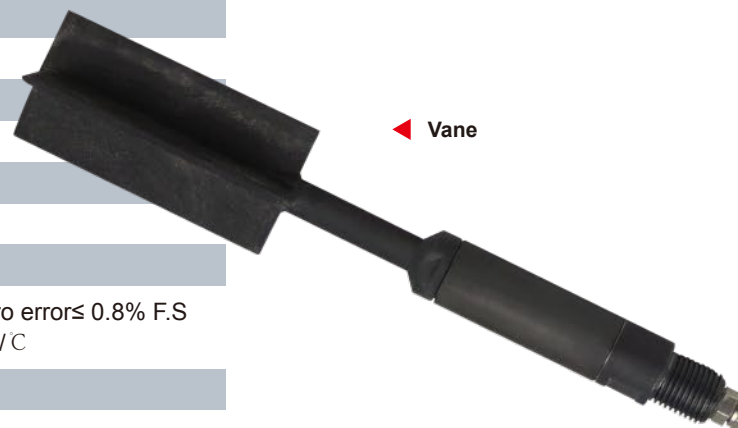
▲ Double-bridge probe



▲ Three-bridge probe

	● Single-bridge probe		● Double-bridge probe		● Three-bridge probe	
	10	15	10	15	10	15
Cone bottom area (cm <sup>2</sup> )	10	15	10	15	10	15
Cone bottom dia. (mm)	35.7	43.7	35.7	43.7	35.7	43.7
Cone angle (°)	60		60		60	
Sleeve area (cm <sup>2</sup> )	—		200	300	150	300
Sleeve length (mm)	—		179	219	133.7	219
Maximum resistance QC (Mpa)	12/24	12/24/36/42/48	12/24	12/24/36/42/48	12/24	12/24/36/42/48
Maximum friction resistance FS (Mpa)	—		0.12/0.24	0.12/0.24/0.36/0.42/0.48	0.12/0.24	0.12/0.24/0.36/0.42/0.48
Pore pressure U(KPa)	—		—		0~1500/2000	
Linear error					≤0.5%F.S	
Hysteresis error					≤0.5%F.S	
Repeatability error					≤0.3%F.S	
Zero error					≤0.3%F.S	
Zero temperature drift					≤0.05%F.S./°C	
Internal interference between several sensors during working					≤0.3%F.S	
Rated overload capacity					120% R.L.	
Operating temperature range					-10°C~45°C	

Size	50×100×2 mm	75×150×3 mm
Angle of blade	60°	
Shaft diameter	13 mm	16 mm
Shaft length	50 mm	
Vane head constant	2.18×10 <sup>-3</sup> cm <sup>3</sup>	6.47×10 <sup>-4</sup> cm <sup>3</sup>
Rated measuring range	0~130KPa	
Rated overload capacity	130% of rated range	
Accuracy	Linear, Hysteresis, repeatability and zero errors ≤ 0.8% F.S Zero temperature drift error ≤ 0.05%F.S./°C	
Operating temperature range	-10°C~45°C	



◀ Vane