

VERTEK

DECADES OF CPT EXPERIENCE



HT Cone &
DataPack System

Rugged, reliable, and easy-to-use DataPack and digital cones.

The HT cone penetrometer and DataPack is a field portable Cone Penetrometer Test (CPT) Data Acquisition System (DAS) which works with all digital HT cones.

Developed as a simple 'all-in-one' solution for geotechnical CPT service providers, this version incorporates USB for ease of connectivity.

A digital CPT probe is the heart of the system. The standard probe includes tip, sleeve fiction, inclination, pore pressure sensors, and dual axis seismic geophones.

The system stores unlimited data points per channel for each sounding and is saved after each sample interval (time or depth based) to ensure data integrity.

Measurements are also plotted in real time on the computer screen during the sounding, providing immediate data from the probe to the users with high resolution graphics and multiple in situ tests that can be collected simultaneously during each sounding; such as pore pressure dissipation or shear wave seismic waves. Data can be processed and presented in the field allowing field personnel to identify and locate transitions in subsurface stratigraphy or areas of concern.

Optional warnings can be preset to warn operators to stop the sounding if measured stress near alarm levels or if probe inclination is exceeds 10%.



DataPack Features

Field Portable

The DataPack is housed in a water resistant instrument case and requires use of a Windows based laptop. Vertek recommends use of a ruggedized computer for CPT applications and field conditions.

Report Quality Field Plots

The DataPack comes with a complete software package for acquisition, processing, and plotting CPT data. The DataPack generates report quality plots in the field on any Windows supported printer (color or grayscale). Plot scales can be set automatically and a wide variety of engineering parameters can be selected. With current communication technology data is easily transmitted to project engineers anywhere.

High-Powered Data Analysis

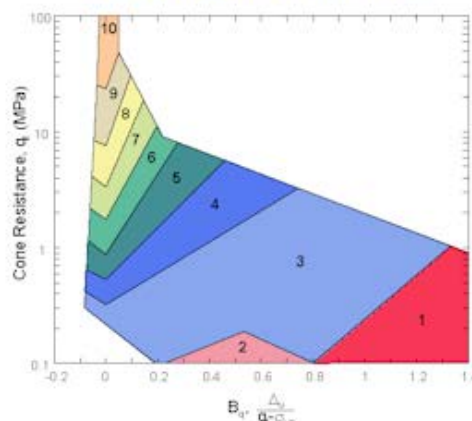
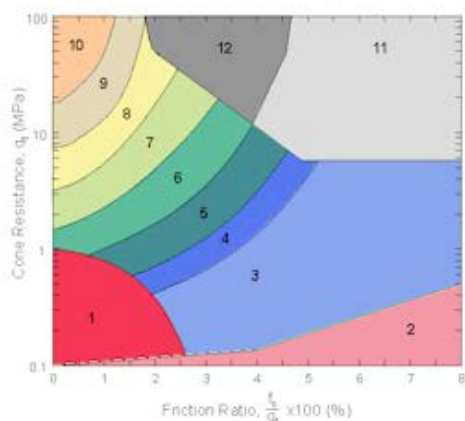
Data analysis software is included with the DataPack, allowing the operator to display both the test data and derived parameters in formats appropriate to client requirements. Standard classification algorithms can be selected for defining soil classification and behavior characteristics. Raw data is easily processed and exported in graphic or list formats for review.

Efficient Data Collection

Measurements are also plotted in real time on the computer screen during the sounding, providing immediate data from the probe and alerting the operator to potential problem layers.

CPT Soil Behavior Type Legend

Robertson et al. 1986



Zone	Soil Behavior Type
1	Sensitive, Fine Grained
2	Organic Material
3	Clay
4	Silty Clay to Clay
5	Clayey Silt to Silty Clay
6	Sandy Silt to Clayey Silt
7	Silty Sand to Sandy Silt
8	Sand to Silty Sand
9	Sand
10	Gravelly Sand to Sand
11	Very Stiff Fine Grained*
12	Sand to Clayey Sand*

*Overconsolidated or Cemented

HT Series Cones Specifications

HT 10cm² Digital Cone

Max Tip Force	2.5 Ton	5 Ton	10 Ton
Tip			
Area (cm ²)	10	10	10
Range (kn)	22	44	88
Range (lb)	5,000	10,000	20,000
Range (MPa)	22	45	90
Overload Capacity	150%	150%	150%
Accuracy (FSO)	0.5%	0.5%	0.5%
Sleeve			
Area (cm ²)	150	150	150
Range (kn)	20	20	20
Range (lb)	4,400	4,400	4,400
Range (MPa)	1.3	1.3	1.3
Overload Capacity	150%	150%	150%
Accuracy (FSO)	1%	1%	1%
Pore Pressure Transducer			
Standard Range (kPa)	6,895	6,895	6,895
Standard Range (psi)	1,000	1,000	1,000
Burst Pressure	200%	200%	200%
Accuracy (FSO)	1%	1%	1%
Inclinometer (Dual Axis)			
Range (degrees)	±15	±15	±15
Resolution (degree)	0.1	0.1	0.1
Seismic			
Dual-axial geophone (G)	±2	±2	±2

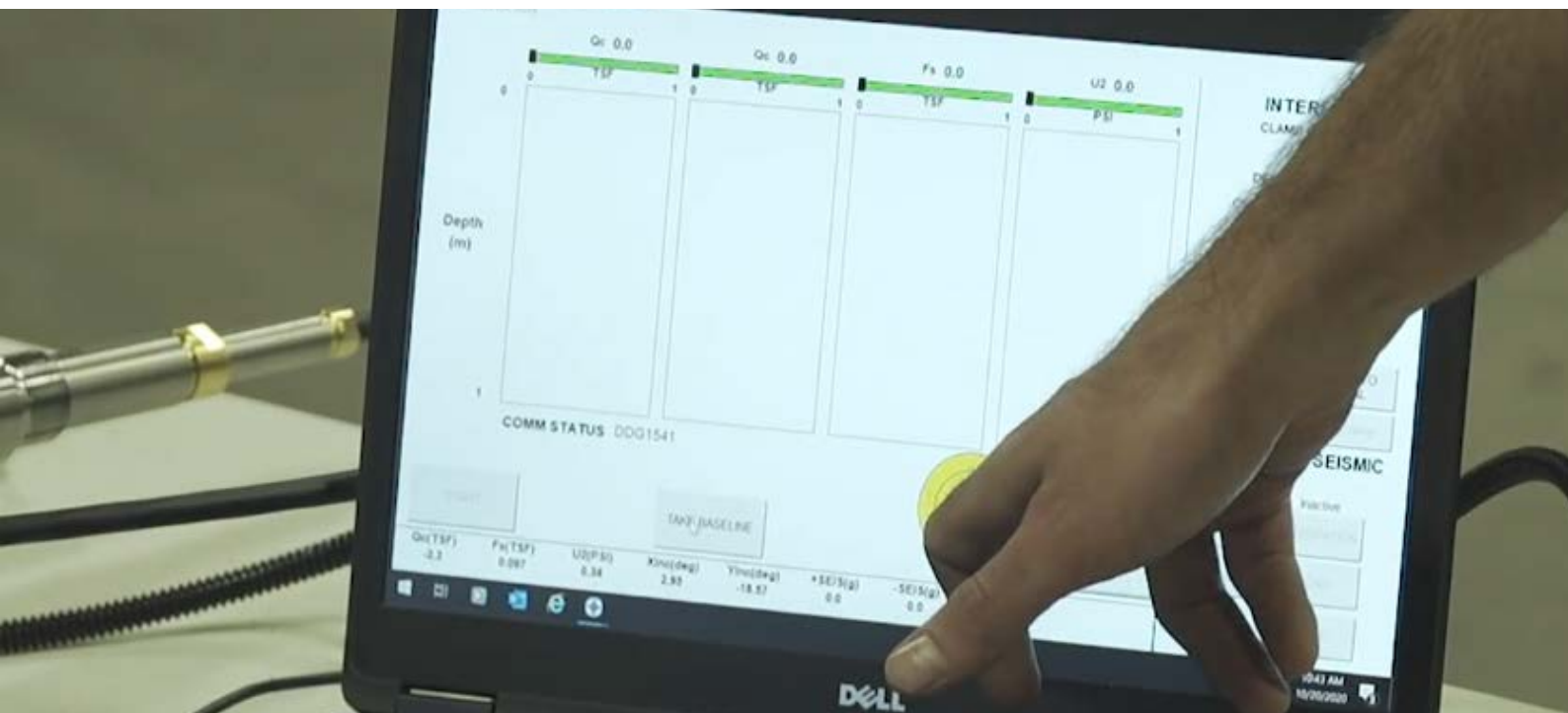
HT 15cm² Digital Cone

Max Tip Force	2.5 Ton	5 Ton	25 Ton
Tip			
Area (cm ²)	15	15	15
Range (kn)	22	44	222
Range (lb)	5,000	10,000	50,000
Range (MPa)	15	30	150
Overload capacity	150%	150%	150%
Accuracy	0.5%	0.5%	0.5%
Sleeve			
Area (cm ²)	225	225	225
Range (kn)	44	44	44
Range (lb)	10,000	10,000	10,000
Range (MPa)	2	2	2
Overload Capacity	150%	150%	150%
Accuracy	1%	1%	1%
Pore Pressure Transducer			
Standard Range (kPa)	6,895	6,895	6,895
Standard Range (psi)	1,000	1,000	1,000
Burst Pressure	200%	200%	200%
Accuracy	1%	1%	1%
Inclinometer (Dual Axis)			
Range (degrees)	±15	±15	±15
Resolution (degree)	0.1	0.1	0.1
Seismic			
Dual-axial geophone (G)	±2	±2	±2



Our Commitment

When you purchase a piece of Vertek CPT equipment, you become part of Team Vertek. We provide every customer with unparalleled customer service and unlimited technical support. From helping you choose the best solution for your business to training and field support, we will be by your side and always just a phone call away.



Contact us today.

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