

Borehole Log Visualization Software *VisLog*

VisLog is a creative computer program for 3-dimensional modeling of the boreholes and in-situ test results.

Drawing soil profiles by just drag & drop of the boreholes! Several different features for soil group definition and their shading styles are provided in VisLog.

- Providing 3D view of the site
- Easy zoom, rotate and pan
- Each layer of data supports transparency
- Importing gINT files
- Export to image, DXF and video formats
- Automatic generation of soil profiles
- Plotting field test results beside boreholes
- Rendering contour maps for each parameter across the site

Pile Bearing Capacity Software *NovoPile*

NovoPile is the newest Novo Tech Software product for estimation of bearing capacity and settlement of piles based on the methodology proposed by "H. Poulos & E. Davis" which covers both driven and bored piles. There is no limitation for number of soil layers and both drained and undrained conditions are incorporated.

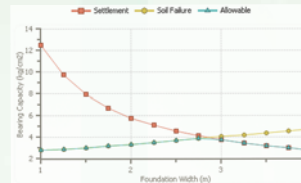
- Skin and end bearing in clay and sand
- Applying critical depth (Z_c) for arching effect in sands
- Models for variable pile diameter, tapered piles and belled piles
- Automatic calculation of bearing capacity factor (N_q) and $K_s \tan(\Phi)$ based on pile type and soil properties
- Calculation of pile settlement

All calculation details for each step are presented in tabular format, and can be exported as Excel and image files.

Bearing Capacity Software *Peysanj*

Peysanj is a series of geotechnical engineering modules for:

- Allowable bearing capacity: by concurrent calculation of shear failure and settlement for each footing size
- Pressure-meter test: calculation of Menard modulus (E_m) and limit pressure (P_l)
- Plate loading test: calculation of modulus of subgrade reaction (K_s)
- Soil liquefaction analysis
- Lateral earth pressure coefficients (seismic, static)



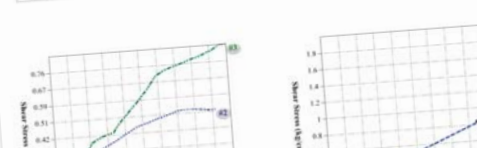
Lab. Test Processor and Borehole Log Software *NovoLab*

NovoLab is designed for processing soil mechanics tests and drafting the borehole log and test summary tables:

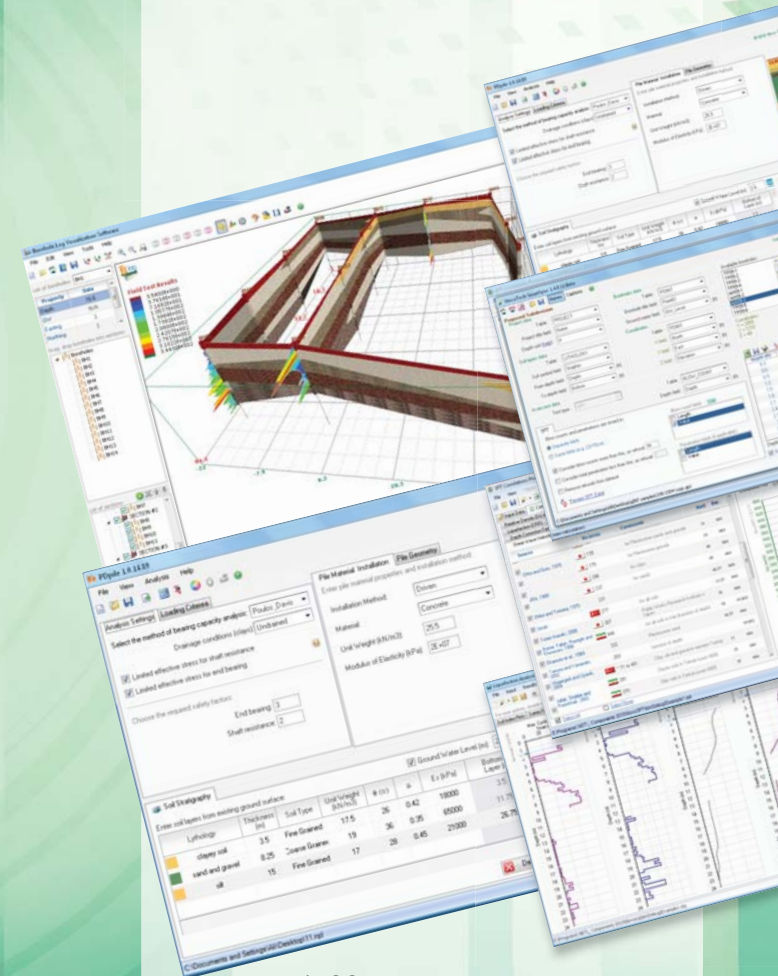
- Sieve analysis test
- Atterberg limits test
- Moisture and density test
- Field density test
- Direct shear test
- Three-axial compression test
- Permeability test (falling head, constant head)
- Compaction test
- Borehole log drafting
- Borehole locations on Google Earth map

#	Moisture Content (%)	Shrinkage Factor (%)	Shrinkage Ratio	Dry Density (g/cm³)	Moisture Deficit (%)	Moisture Deficit (mm)	Void Ratio	Shrinkage Limit (%)
1	0.12 (0.3)	0.18	1.81	8.6	8.6	0.40	48.9	
2	1.1 (1)	0.18	1.81	7.7	7.7	0.40	44.1	
3	1.09 (1.5)	0.18	1.81	8.3	8.3	0.40	47.3	

#	Shear Stress (kg/cm²)	Shear Strain or Failure (%)	Vertical Strain (%)
1	0.23	11	
2	0.53	12	
3	0.84		



NOVO TECH SOFTWARE



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SPT Correlations Software

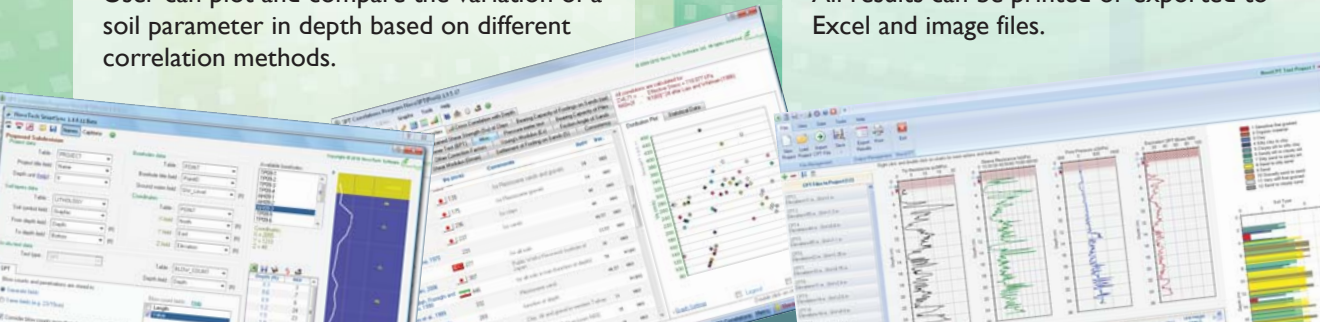
NovoSPT

NovoSPT is the ONLY geotechnical software containing more than 265 formulas for correlation of soil properties based on SPT blow counts. Each correlation is valid for certain soil type(s) and has the full reference information. NovoSPT correlates the following soil properties based on SPT:

- All SPT correction factors
- Modulus of elasticity (E_s)
- Friction angle (Φ)
- Relative density (D_r)
- Undrained shear strength (S_u)
- CPT tip resistance (q_c)
- Modulus of subgrade reaction (K_s)
- Overconsolidation ratio (OCR)
- Shear wave velocity (V_s)
- Shear modulus (G_{max})
- Cyclic resistance ratio (CRR)
- Bearing capacity of piles and footings
- Settlement of footings
- Becker density test blow count
- Compressibility factor (m_v)
- Normalized dilation angle (v_r)
- Pressuremeter Menard modulus (E_{PMT})
- Saturated unit weight (γ)
- Wildcat cone resistance (q_w)
- Initial modulus of stiffness (G_0)
- Import from gINT, Text file, ...
- Supports both Metric and Imperial units
- Supports Wildcat and DCP penetrometers

All results can be printed or exported to Excel and image files.

User can plot and compare the variation of a soil parameter in depth based on different correlation methods.



Cone Penetration Test Interpretation Software

NovoCPT

NovoCPT is a very intuitive CPT interpenetration software tool that imports CPT files and performs interpretations and correlations to soil parameters including but not limited to:

- Shear strength (S_u): 3 methods
- Equivalent SPT blow counts (N_{60})
- Hydraulic conductivity (K)
- Clay sensitivity (S_c)
- Young's modulus (E_s)
- Relative density (D_r)
- Friction angle (Φ) and unit weight (γ)
- Soil behavior type index (I_c)
- Fines content (%)
- Other parameters such as q_t , Q_t , Q_{tn} , F_r , R_r , B_q , n , C_c , K_O , OCR, e , V_s , G_{max} ...

Other key features:

- Soil liquefaction analysis (based on Robertson 2009 method)
- Piles bearing capacity analysis (LCPC method)
- Footings bearing capacity (3 methods) and settlement analysis (Elastic, Consolidation)
- Soil behaviour type charts (Robertson 1986 and 1990, Jefferies & Been 2006)
- Comparing two or more parameters on the same graph by overlying plots
- Advanced selective report
- Supports both Metric and Imperial units

All results can be printed or exported to Excel and image files.

Soil Liquefaction Software

NovoLiq

Analysis of soil liquefaction during earthquake has always been challenging. By using NovoLiq, user is able to assess the liquefaction potential and estimate the post-liquefaction lateral displacement and settlements, based on different methods. Input data can be Standard Penetration Test (SPT), Becker Density Test (BDT) and Shear Wave Velocity Test (V_s).

- 10 methods for liquefaction assessment including NCEER 1997, Vancouver TF 2007, Idriss & Boulanger 2006, Cetin 2004, etc.
- Unlimited soil layers
- Analysis of probability of soil liquefaction
- Fines content correction
- Several options for correlation of "Magnitude Scaling Factor (MSF)", "Depth Reduction Factor (Rd)", "Relative Density (D_r)", "Overburden Stress Factor (KS)", etc.
- Importing gINT files
- Lateral spreading of site is estimated according to: Zhang, Robertson and Brachman 2004, Youd et al. 2002, Barlett and Youd 1992, Youd and Perkins 1987, Hamada et al. 1986
- Post-liquefaction residual strength (S_r)
- Several plots and tabular data for each step of calculation
- Supports both Metric and Imperial units

