



 **GEOTECHNICS**

# PAGANI CPT RIG

[www.geotechnics.co.nz](http://www.geotechnics.co.nz)

## Overview:

With our Pagani CPT machine (TG63-150), Geotechnics can now offer Piezocone Penetration Testing (CPTu) including various soil sampling methods in the North Island.

We have a mature management system and have been IANZ accredited since 1976 with CPT tests added in 2012.

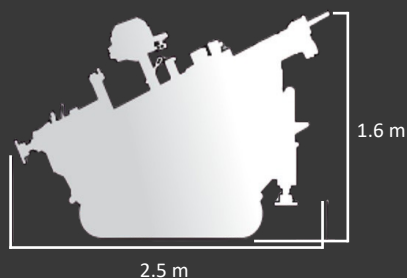
## Pagani TG63-150:

- Compact Machine
- CPT maximum thrust capacity: 150 kN

## Maximum test depth (dependent on soil types) up to:

- CPTs - 30 m
- DPSH - 20 m
- DS44 - 5 m (1 m dynamic samples retained in plastic liner)
- Shelby tube - 5 m (500 mm static sample retained in stainless steel push tube)

The CPT rig performs both static and dynamic penetrometer tests in a single compact machine. This dual functionality allows for comprehensive soil characterisation.



## Static tests:

- Static tests are the continuous push method for CPTu testing and Shelby push tube sampling which use the Pagani's 150 kN hydraulic push force. Shelby tube samplers, are thin-walled tubes ideal for sampling high quality undisturbed soil samples for laboratory testing.
- Shelby push tube sample - sample tube 80 mm diameter, 500 mm length.
- Samples can either be sealed in plastic bags or have paraffin wax sealing at each end of the push tube for transport to the laboratory.

## Dynamic tests:

- Dynamic tests are the direct percussion drive method for the DPSH test and DS44 samples which use a 63.5 kg hammer.
- DS44 sample - retained in 44 mm diameter plastic liner, 1 m length.
- Samples can be either sealed with end caps for transport, or safely opened by the cutting attachment, for logging onsite.

## Key Capabilities:

- Mounted on hydraulic-powered rubber tracks, it can navigate challenging terrains, from wet-land areas to hard to access residential sites.
- The stabilisers and tilting mast ensure verticality is maintained on uneven ground.
- Can transverse up and down slopes up to 25 degrees and along slopes up to 10 degrees to access suitable testing locations.
- Independently powered hydraulic anchoring systems ensure an effective counter force and reduced setup time.

## Supplementary features:

- Piezocones containing temperature sensors (up to 50°C).
- Dissipation testing.
- Secondary saturation to ensure high quality porewater pressure data.
- Additional Rotary Head for predrilling up to 3 metres.
- In appropriate soil conditions, we can install 32 mm standpipe piezometers.

## Technical Accreditation

We implement our IANZ accreditation status according to our scope of services where possible. We conduct our CPT testing according to the ISO 2012 standard (ISO 22476-1: 2012), with guidance from the CETANZ technical guideline (TG6 - Industry Best Practice Guideline for Performing Cone Penetrometer Testing (CPT) in New Zealand). Ensuring that the correct methodology is followed when preparing, conducting and reporting CPT results.

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