

## DEEP FOUNDATION SOLUTIONS

VIBRATORY HAMMERS • POWER UNITS • AUGER SYSTEMS • DIESEL & HYDRAULIC HAMMERS DRILL RIGS • HYDRAULIC PILING RIGS • WICK DRAIN INSTALLERS • LEAD SYSTEMS



## **APE Bottom Drive Wick Machine Practical Refusal**

The APE Model 200 Bottom Drive Wick Machine can install wick material in soil conditions up to 50bpf. The APE Model 100 Bottom Drive Wick Machine can install wick material in soil conditions up to 25bpf.

Practical refusal is 2" per second of mandrel penetration or Maximum refusal at 1" per second of mandrel penetration for no more than two-feet.

On extreme projects where there are hard layers of soil between softer layers of soils where the vibro is needed to penetrate the dense layers.

The mandrel is advanced statically with the crowd function.

When the mandrel stops statically, stop applying crowd force and start the vibro.

With the vibro engaged, apply crowd force and run the vibro for 10 seconds while advancing with the static crowd circuit.

After 10 seconds stop the vibro and continue to crowd statically.

If the mandrel does not advance under crowd influence only then practical refusal is achieved.

If the desired tip is not met, then pre-drilling or pre-punch is required to reach tip elevation.

Pre-drilling or pre-punching is required on any soil conditions above 50bpf using the 200 Bottom Drive and 25bpf with the 100 Bottom Drive.

These conditions for practical refusal may need adjustment depending on jobsite and soil conditions.