

# Automatic Hydraulic SPT (Soil Penetration Test) Options

TSi Part #: C2-150-9200 (Permanent Mount) and TSi Part #: C2-150-9250 (Removable Mount)

## About the Automatic Hydraulic SPT Options

The SPT is an in-situ dynamic penetration test that helps determine geotechnical properties in the soil. It is one of the most reliable site investigation techniques in geotechnical testing. Terra Sonic International has engineered our rigs to accommodate a permanent or removable automatic hydraulic actuated 140 lb. auto hammer to facilitate this testing. Two Automatic Hydraulic SPT options are available depending on the frequency of use: permanently mounted and removable.

- **Permanent Mount:** The auto hammer and slide shaft are on a hinge and permanently bolted onto the rig opposite the driller platform. The hinge allows the auto hammer to swing over the borehole when needed. The blow count is adjustable, with verification of the anvil fall height from the hydraulic control panel.
- **Removable Mount:** In this configuration, a hinge and cup, hydraulic hose, and controls are in place to operate the removable SPT. A spindle adapter lifting device is installed on the Sonic Head, and the auto hammer lifts over the borehole. The SPT is installed on-site when needed and can remain in the shop when not required.

## Benefits of Using the Breakout Wrenches and Casing Clamp:

- **Efficient and Safe:** Auto hammers are productive and secure when used for this critical geotechnical test.
- **Safety Cage:** When the auto hammer is used, a hydraulic cage ensures operator safety.
- **Compliant System:** Conforms to the ASTM D1586-11 standard for Soil Penetration Testing.

## Notes

- An interlock safety cage is available in both configurations.
- In the permanently mounted configuration, the auto hammer's top becomes the rig's highest point during transport (9' 3"). A low-deck trailer is required to transport the rig.
- If a more powerful SPT hammer is required, TSi can install a 300-pound hammer. This would be considered an upgrade to our standard SPT system.

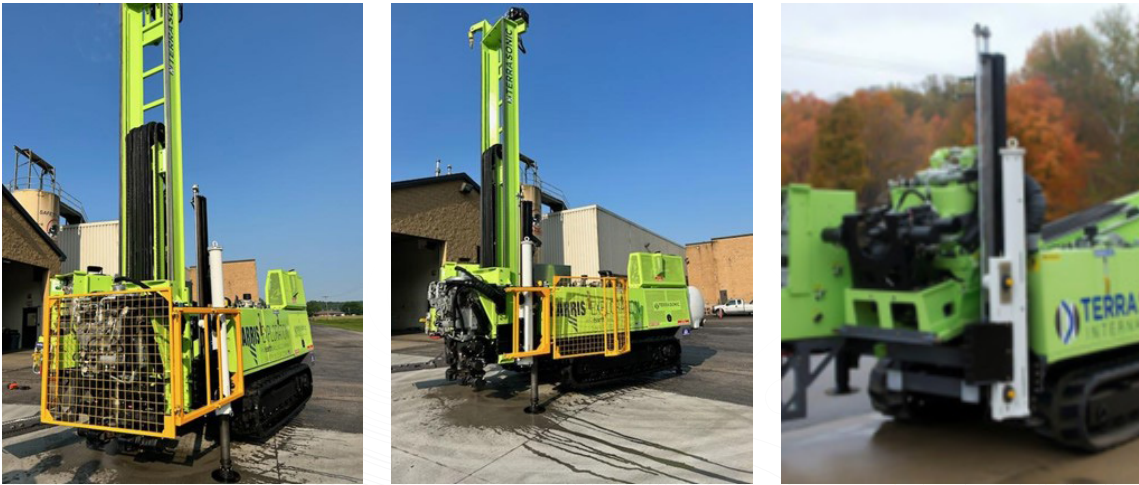
## Technical Specifications:

- |                                   |                           |
|-----------------------------------|---------------------------|
| • Hydraulic flow rate requirement | 8-10 gpm @ 2,500 psi      |
| • Stroke yield                    | Approx. 40 strokes/minute |
| • Weight                          | 140 lbs.                  |
| • Drop height                     | 30" (762 mm)              |

**Removable SPT System with Safety Cage**



**Permanently Mounted SPT System with Safety Cage**



*\* No safety cage.*