

S-27 SONIC DRILL

Environmental



Seismic



Geothermal



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LARGE CASING, LARGE



- ◆ Advance large diameter casing quickly in overburden or cobbles with no-spoil.
- ◆ Collect large diameter soil cores even in heavily saturated formations with the Aqualock Sampling System.
- ◆ Install 2-inch and 4-inch monitoring wells through open casing.
- ◆ The double hydraulic rod clamp means no pipe wrenches and speed in and out of the hole. . safety first.
- ◆ Complete injection based remediation projects with more footage per day than your competition.
- ◆ Advance casing, collect samples and install wells vertically or at an angle.
- ◆ Safe operation with remote “drilling” controls now available on truck and track mounts.
- ◆ With a cased hole and no spoil - there are no cuttings that can release VOC’s into the driller’s or helper’s breathing space. . . safety first.

ENVIRONMENTAL



- ◆ Get “high production” drilling to any hole on your grid by mounting the S-27 on rubber tracks, a tractor or a skid.
- ◆ Make “hole” quickly in all types of overburden with a very small footprint.
- ◆ Remote “drilling” control makes for safe and productive field operations.
- ◆ The double hydraulic rod clamp means no pipe wrenches with speed in and out of the hole. . . safety first.
- ◆ Advance casing quickly, place your charges and gather data with virtually no spoil on site.
- ◆ Mobilize multiple crews and get high production rates with this safe and environmentally friendly technology.
- ◆ The S-27 comes self-contained on a traditional carrier or can be broken down into components with the power source in one location and the drilling operation in another, if site access requires it.
- ◆ Get your clients the data they need quickly and easily with the speed and safety this technology can bring to your operation.

MINERAL EXPLORATION/
SEISMIC



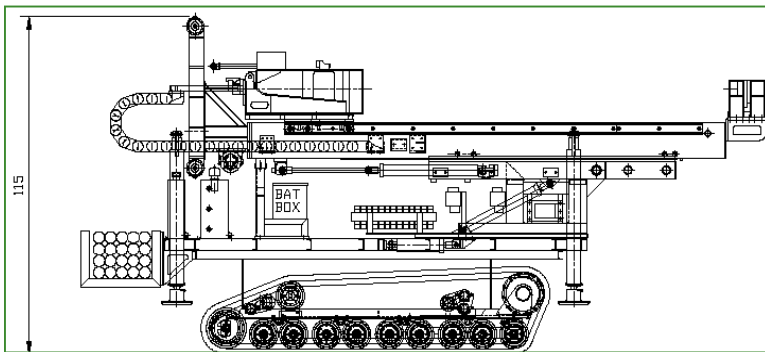
- ◆ Install your system with virtually no mess. . . no drilling mud, air hoses, dust or auger cuttings.
- ◆ Place your loop through open casing, using a drop-off environmentally friendly tip.
- ◆ Retract the open casing, grouting the hole as you go.
- ◆ One hole, one loop, no spoil.
- ◆ Install your system with little or no footprint on the existing lawn or in a new development.
- ◆ Mount the S-27 on our rubber tracks and have less ground pressure than the average man does with his own two feet.
- ◆ Imagine your client coming home from work and finding no sign that you were there except the system you just installed!
- ◆ Pull into the driveway, walk the rig off the trailer, drill the hole, install the required loops and do it from a safe distance with our remote “drilling” controls.
- ◆ Install your loops at an angle or vertically, whatever it takes to get the footage you need.
- ◆ Mount the S-27 on our full-swivel rubber tracks and get the holes down and loops installed without a rig move or a mess.

GEO THERMAL

SAMPLES... NO SPOIL

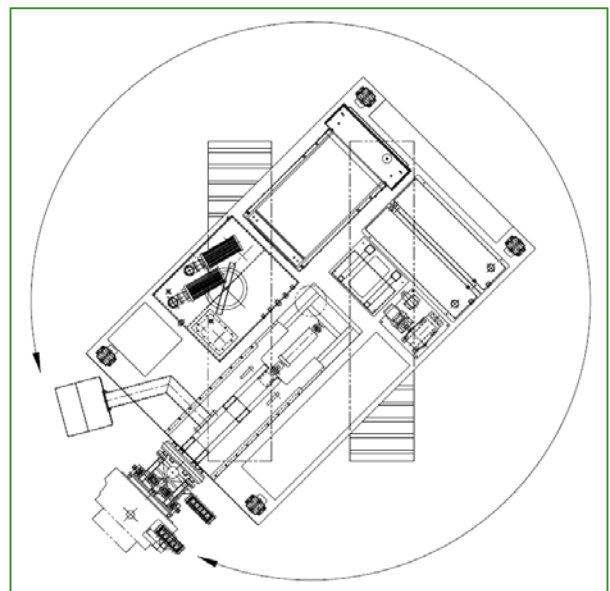
Rubber-tracked S-27 Sonic Rigs

S-27 Sonic Rig Track Carrier Type	Handheld Remote Controls for Carrier	Handheld Remote Controls for Drilling Functions	Compact 2x5 Sonic Head Available	Compact 2x5 Roto-Sonic Head Available	PTO Power Source	Deck-Mounted Diesel Engine Power Source	Feed Stroke Length (feet)
Rubber Track/ Straight Style Walk Behind	✓	✓	✓	✓		✓	Up to 12
Rubber Track/ Full-Swivel Style Walk Behind	✓	✓	✓	✓		✓	Up to 12
Morooka Rubber Tracked Carrier with Cab		✓	✓	✓	✓	✓	Up to 12
IHI Rubber Tracked Carrier with Cab		✓	✓	✓	✓	✓	Up to 12



- ◆ The wide rubber tracks leave less of a footprint than your own two feet on the “walk behind” version (pictured.)
- ◆ The Double Hydraulic Rod Clamp eliminates the need for wrenches and creates an almost “hands-free” operation when handling casing.
- ◆ Full-Swivel Base option and Mast Dump allow for multiple bore holes vertically or at an angle without a rig move.

- ◆ Our Mast Dump, Compact Roto-Sonic Head Tilt, Automated Casing Loader and Remote Drilling Controls make our rubber track rig truly state-of-the-art....with Safety First!
- ◆ Drive the “walk behind” version (pictured) from one power source and save on deck space.
- ◆ The “walk behind” version (pictured) has a U.S. manufactured chassis and power source so field service is simplified.
- ◆ Get there, drill the hole quickly, collect the samples, install the casing - all with no spoil - leaving almost no signs that you were there!
- ◆ Get the bore hole completed vertically or at an angle.
- ◆ The S-27 Sonic Rig is also available for mounting on Morooka and IHI style “self contained” carriers - driven from one power source.



Compact Sonic Head

System	Methods	HP Input	Standard Casing Diameter (inches)	Typical Depth (feet)	Vibration Force (lbs)	Rotation rpm and Torque Ranges	Sonic Sideport Swivel Available	Tilt Out Head	Tooling Options	Formations	Truck or Track Mount	Off-Hole Movement
Compact 2x5 Sonic Head	Rotation OR Vibration	80	4	100	20,000	- 0 to 205 spindle rpm - 1,275 ft/lbs Standard - 3,825 ft/lbs Optional	Yes	No	- GP Series Sonic Casing - Rotary - Auger - DTH	Soft-medium	Yes	Yes In-out slide base with S-27 basic unit (truck mount)

Compact Roto-Sonic Head

System	Methods	HP Input	Standard Casing Diameter (inches)	Typical Depth (feet)	Vibration Force (lbs)	Rotation rpm and Torque Ranges	Sonic Sideport Swivel Available	Tilt Out Head	Tooling Options	Formations	Truck or Track Mount	Off-Hole Movement
Compact 2x5 Roto-Sonic Head	Rotation AND Vibration	140	6	200	20,000	- 0 to 205 spindle rpm - 1,275 ft/lbs Standard - 3,825 ft/lbs Optional	Yes	Yes	- GP Series Sonic Casing - Rotary - Auger - DTH	Medium-hard	Yes	Yes - in-out slide base with S-27 basic unit (truck mount) and hydraulic 60° swing or manually hinged right or left



- ◆ Stainless steel panel housing allows for repeated steam cleaning and pressure washing without worrying about rust or wear.
- ◆ The panel moves with the slidebase so the driller always has clear visual access to the bore hole.
- ◆ Both truck & track rigs will utilize full remote drilling controls, stored in the panel for traditional operation from the step platform or easily removed for safe operation from a distance.
- ◆ Handheld fully-remote, portable carrier and drill rig operational controls.



- ◆ Bottom clamp holds while the top clamp makes or breaks your casing or drill rod joints.
- ◆ Performs vertically or at an angle.
- ◆ Clears tooling up to 10 inches. Larger jaw inserts are available, specify casing sizes when ordering.
- ◆ Our clamp allows the driller to trip from the bottom of the hole, hold the tool string, break the top piece of casing off with the head, so the helper simply stores the tooling and waits for the next (5 ft., 2m or 10 ft.) section.

Visit us on the web
www.useeco.net

Member of NGWA, NDA, CGA & NJGWA



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