A Smarter Directional Drill from TT Technologies.

The GRUNDODRILL 4X from TT Technologies gives you the power you need to complete tough bores and the maneuverability you want for tight working conditions. Plus, the GRUNDODRILL 4X comes with the exclusive Smart Vice system that makes directional drilling easier than ever before.

**GRUNDODRILL 4X Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine</td>
<td>37.5 HP</td>
</tr>
<tr>
<td>Length x Width x Height</td>
<td>130 in x 35.5 in x 70.5 in</td>
</tr>
<tr>
<td>Weight including drill stems</td>
<td>4,829 lbs</td>
</tr>
<tr>
<td>Pull back</td>
<td>9,900</td>
</tr>
<tr>
<td>Thrust</td>
<td>9,800</td>
</tr>
<tr>
<td>Max Torque</td>
<td>1,100 ft-lb</td>
</tr>
<tr>
<td>Spindle Speed</td>
<td>230 rpm</td>
</tr>
<tr>
<td>Diameter Pilot Bore</td>
<td>2.5 in</td>
</tr>
<tr>
<td>Diameter Drill Rod</td>
<td>1.75 in</td>
</tr>
<tr>
<td>Length Drill Rod</td>
<td>60 in</td>
</tr>
<tr>
<td>Diameter Back Ream</td>
<td>8 in</td>
</tr>
<tr>
<td>Pipe OD</td>
<td>6 in (dependent on conditions)</td>
</tr>
<tr>
<td>Bore Length</td>
<td>dependent on conditions</td>
</tr>
</tbody>
</table>

Specifications subject to change at any time.

**GRUNDOMUDD 225 Bentonite System**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine</td>
<td>9.5 HP (gas) or 7.5 HP (diesel)</td>
</tr>
<tr>
<td>Length x Width x Height</td>
<td>72 in x 46 in x 46 in</td>
</tr>
<tr>
<td>Weight</td>
<td>800 lbs</td>
</tr>
<tr>
<td>Capacity</td>
<td>225 gal (larger sizes available)</td>
</tr>
<tr>
<td>Max Operating Pressure</td>
<td>800 psi</td>
</tr>
<tr>
<td>Max Operating Flow</td>
<td>10 gpm</td>
</tr>
</tbody>
</table>

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The compact GRUNDO DRILL 4X is ideal for residential service, last mile, small diameter main and fiber-to-the-home applications. With over 9,800 lbs. of thrust and pullback, the 4X is the most compact and powerful directional drill in its class. The drill features a dual hydrostatic pump system that gives the operator optimum control during drilling operations. All components of the 4X are easily accessible, making maintenance a snap. For residential areas, tight working conditions, difficult access projects and anything in between, the GRUNDO DRILL 4X has the power and the portability to finish the job.

The computerized Smart Vice system simplifies the drilling process by performing vice cycling operations automatically. It provides single push button control, improving efficiency, speeding up drill times and enhancing operator performance. The vice is also self-centering, reducing wear and tear. With a flip of a switch the operator can return to manual control for special situations. The Smart Vice system is another exclusive from TT Technologies.

The highly compact design of the GRUNDO DRILL 4X makes it an ideal choice for residential service and “last mile” operations. It’s power and performance make it the first choice. The 4X's 37.5 HP engine is the most powerful in its class. And since the 4X utilizes an external bentonite pumping system, all power is used for drilling operations.

The convenient handheld remote allows the user to quickly position the GRUNDO DRILL 4X, even in the tightest working conditions. The 4X incorporates individual hydraulic pumps for rotation/thrust, increasing downhole power.

The GRUNDO DRILL’s control panel and gauges are clearly marked and labeled providing the user with simple, single joystick operation. The 4X features an innovative dual hydrostatic pump system, the most efficient way to transfer power downhole. The efficient hydraulic system gives the operator optimum control during drilling operations. The 4X's 37.5 HP engine is the most powerful in its class.

The unique stake down system provides greater stability, helping maximize thrust and pullback power. The 4X incorporates individual hydraulic pumps for rotation/thrust, increasing downhole power. The rack and pinion drive system provides greater reliability and less maintenance than standard chain drive systems.

The 4X's special steel track with bonded rubber pads offers excellent traction and durability while minimizing potential damage to concrete and turf. DUAL MOTORS—Dual drive motors pull equally down center of the rack and pinion drive system, providing greater reliability and less maintenance than standard chain drive systems.

At a weight of only 4,829 lbs fully loaded, the GRUNDO DRILL 4X can be towed with a pick-up or work truck.

The GRUNDO DRILL 4X trailer is designed and rated to accommodate the GRUNDO DRILL 4X and a bentonite mixing and delivery system. The trailer comes equipped with added stem racks that can hold up to 32 additional drill stems (160 feet) and comes standard with electric brakes, a built-in toolbox, tie-downs and a spare tire.

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The compact GRUNDO DRILL 4X is ideal for residential service, last mile, small diameter main and fiber-to-the-home applications. With over 9,800 lbs. of thrust and pullback, the 4X is the most compact and powerful directional drill in its class. The drill features a dual hydrostatic pump system that gives the operator optimum control during drilling operations. All components of the 4X are easily accessible, making maintenance a snap. For residential areas, tight working conditions, difficult access projects and anything in between, the GRUNDO DRILL 4X has the power and the portability to finish the job.

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The compact and highly portable GRUNDO DRILL 4X travels easily from jobsite to jobsite. The rack and pinion drive system provides greater reliability and less maintenance than standard chain drive systems.

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The TRUCK frame serves as the reservoir for diesel and hydraulic fluids. This helps give the 4X an extremely compact profile as well as a low center of gravity, increasing stability.
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**GRUNDODRILL 4X Specifications**

- **Engine:** 37.5 HP
- **Length x Width x Height:** 130 in x 35.5 in x 70.5 in
- **Weight including drill stems:** 4,829 lbs
- **Pull back:** 9,800 lbs
- **Thrust:** 9,800 lbs
- **Max Torque:** 1,100 ft-lbs
- **Spindle Speed:** 230 rpm
- **Diameter Pilot Bore:** 2.5 in
- **Diameter Drill Rod:** 1.75 in
- **Length Drill Rod:** 60 in
- **Diameter Back Ream:** 8 in
- **Pipe OD:** 6 in (dependent on conditions)
- **Bore Length:** dependent on conditions

Specifications subject to change at any time.

**GRUNDOMUDD 225 Bentonite System**

- **Engine:** 9.5 HP (gas) or 7.5 HP (diesel)
- **Length x Width x Height:** 72 in x 46 in x 46 in
- **Weight:** 650 lbs
- **Capacity:** 225 gal (larger sizes available)
- **Max Operating Pressure:** 800 psi
- **Max Operating Flow:** 10 gpm

Specifications subject to change at any time.