STD Series

POWER TO SUCCESS

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Soosan STD series

Enjoy the experience of drilling with a reliable companion

The Soosan STD series hydraulic crawler drilling rigs, have been developed to be reliable top hammer drilling rigs for surface blasting in the quarry and civil work environments.

It is comprised of undercarriage, feed, booms and power unit. These components are powered by a water-cooled Cummins diesel engine. The drill rig is equipped with a safe and comfortable cabin (ROPS & FOPS) with wide visibility and an easy operation system using joysticks.

It also has a simple rod changing system and an advanced Soosan hydraulic rock drill.
Intelligent Drilling system

Synchronizing system

**Principles** - When rods are disconnected / uncoupled, feed speed and rotation speed are automatically controlled / synchronized to minimize the friction between threads.

**Advantages** - Prevents rapid wear of rod threads / shank adapter threads and reduces time to disconnect the rods.

**Operation** - Both reverse rotation and feed backward are automatically functioned when the “synchronizing switch” is pushed.

Super drilling system

**Principles** - When drilling inhomogeneous rock grades which contain clay or unstable layers, the rotation speed will increase for more efficient penetration without jamming.

**Advantages** - Better drilling efficiency and straightness of the hole.

**Operation** - By pressing the “super drilling switch” in the joystick, the super drilling system is activated and continues as long as the switch is being pressed. When button is released, drilling is automatically return to normal condition.

Antijamming system:

**Principles** - In the case of rotation pressure increases by failure to flush drill cuttings out of the hole, impact power decreases and feed moves backward until rotation pressure becomes normal.

**Advantages** - Prevents the rod and bit from getting jammed in the hole, which results in downtime and tool damage in an attempt to retract the lodged rod / bit.

**Operation** - This function is operated automatically while drilling, when the “select-switch, antijamming” is ON.

Smooth drilling:

**Principles** - By sensing rotation pressure, it optimizes percussion and feed force. If bit encounters a soil or soft deposit, rotation pressure starts to decrease and when the rotation pressure reaches a certain setting pressure, smooth drilling system is activated.

**Advantages** - Reduces blank hammering while drilling in unstable deposit and prevents damage on rods and tool bit.

**Operation** - This function is automatically activated while drilling, when the “select-switch, smooth drilling” is ON.

Collaring(spot drilling) system

**Principles** - In the beginning stage of drilling in difficult / unstable terrain (where the bit has poor contact target material) it reduces impact power and feed speed for easy collaring / set-up for drilling.

**Advantages** - Improves the hole straightness and prevents tool damage.

**Operation** - Collaring is started with pushing the “percussion button” and it is continued as long as percussion button is pushed. When button is released, the collaring is automatically converted to normal percussion and feeding speed.

Intelligent Drilling system
Applications:

- Drilling for blasting
- Small and medium-sized quarries
- Civil engineering and construction

Cabin with comfort and safety
The cabin comprises of a robust frame with safety guards and safety glass on all sides. This ergonomic design allows the driver to have wide visibility while enjoying operator safety and comfort.

Centralized electric control box
All electric controls are positioned in the central control box equipped with self-diagnosis panel to allow easy maintenance.

Dust collector
A powerful dust collector with 4 filters effectively prevent dust from escaping. This system also allows easy changing of the filter cartridges.

Operation stability
The durable structure along with the strong undercarriage, long tumbler length, wide track width and high ground clearance, enable outstanding stability on rough terrain.

Optimal power unit
The air compressor and pump are mounted directly to the engine, enabling efficient power transmission with low energy loss.
- Electronic engine control (Tier Ⅲ)
- Load sensing controlled axial piston pump
- Large capacity air compressor

Extendable boom (STD11E, STD14E)
A simple and robust sliding boom comprising of cylinder and exterior slide pad.

Extensive working area
The drilling can be executed in a wide work area thanks to its wide swing angle and extendable boom.

Rock drill (Drifter)
Advanced TD series drifter speedily performs drilling with high impact power and rotation speed.
- Rugged design
- Damping system
- Simplified hydraulic circuit

Simplified operating system
The simple operating system allows the operator to focus on the task of drilling with less fatigue.
- Joystick controls
- Central arrangement of indicators

Easy to service
Wide spacious and well-arranged engine compartment enable easy access for service and efficient cooling

Cabin with comfort and safety
The cabin comprises of a robust frame with safety guards and safety glass on all sides. This ergonomic design allows the driver to have wide visibility while enjoying operator safety and comfort.

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**STD11 & STD11E**

**Features & advantages ;**

Simple & easy control with joysticks

High quality straight holes ;
- Excellent stability with robust construction
- High-efficiency rock drill : TD45
- Powerful feed system
- Rigid boom

Simplified rod changing system with trommel magazine

Optimal power unit with load sensing hydraulic pump system
- TD45, 15 kw (20 Hp)
- 5.7 m³/min, 10.5 bar (1,506 gal/min, 152 psi)

Wide drilling coverage area

Tier-III diesel engine
- 160 Hp (119 kw)

**Options**
- Cold weather starting package (Fuel & Hydraulic oil heating device)
- Water-misting system
- Pre-separator (cyclone)

**Specification**

<table>
<thead>
<tr>
<th></th>
<th>STD11</th>
<th>STD11E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hole range</strong></td>
<td>64 – 102 mm (2.5 – 4 inch)</td>
<td>64 – 102 mm (2.5 – 4 inch)</td>
</tr>
<tr>
<td><strong>Drill steel</strong></td>
<td>T38, T45</td>
<td>T38, T45</td>
</tr>
<tr>
<td><strong>Drill steel length</strong></td>
<td>3,050 mm (10 ft)</td>
<td>3,660 mm (12 ft)</td>
</tr>
<tr>
<td><strong>Hole depth</strong></td>
<td>18 m (60 ft)</td>
<td>22 m (72 ft)</td>
</tr>
<tr>
<td><strong>Boom variation</strong></td>
<td>Single rigid boom</td>
<td>Extendable boom</td>
</tr>
<tr>
<td><strong>Rock drill</strong></td>
<td>TD45, 15 kw (20 Hp)</td>
<td>TD45, 15 kw (20 Hp)</td>
</tr>
<tr>
<td><strong>On-board compressor</strong></td>
<td>5.7 m³/min, 10.5 bar (1,506 gal/min, 152 psi)</td>
<td>5.7 m³/min, 10.5 bar (1,506 gal/min, 152 psi)</td>
</tr>
<tr>
<td><strong>Dust collector</strong></td>
<td>23 m³/min (6,076 gal/min)</td>
<td>23 m³/min (6,076 gal/min)</td>
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<tr>
<td><strong>Dimension, transport</strong></td>
<td>Weight : 10,980 kg (24,229 lb)</td>
<td>11,500 kg (2,5353 lb)</td>
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<tr>
<td></td>
<td>Width : 2,430 mm (96 inch)</td>
<td>2,430 mm (96 inch)</td>
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<tr>
<td></td>
<td>Height : 3,110 mm (122 inch)</td>
<td>3,231 mm (127 inch)</td>
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<tr>
<td></td>
<td>Length : 8,250 mm (325 inch)</td>
<td>8,851 mm (348 inch)</td>
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<tr>
<td><strong>Safety cabin</strong></td>
<td>ROPS &amp; FOPS certified</td>
<td>ROPS &amp; FOPS certified</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>Joystick, electrically controlled</td>
<td>Joystick, electrically controlled</td>
</tr>
</tbody>
</table>

*The above specifications can be changed without prior notice.*

**Coverage area**

- ROPS-FOPS certified safety cabin
- High visibility and more spacious
- Optimal power unit with load sensing hydraulic pump system
- Wide drilling coverage area
- Tier-III diesel engine
- Options
  - Cold weather starting package (Fuel & Hydraulic oil heating device)
  - Water-misting system
  - Pre-separator (cyclone)
Features & advantages;

Simple & easy control with joysticks
- High visibility and more spacious
- Optimal power unit with load sensing hydraulic pump system

High quality straight holes;
- Excellent stability with robust construction
- High efficiency rock drill: TD51
- Powerful feed system
- Rigid boom

Simplified rod changing system with trommel magazine

Advanced intelligent drilling system;
- Half drilling system for accurate drilling start
- Anti-jamming system
- Smooth drilling system
- Damping system on rock drill

ROPS-FOPS certified safety cabin
- Extension 900mm (35 inch)

Tier-III diesel engine

Options
- Cold weather starting package (Fuel & Hydraulic oil heating device)
- Water-misting system
- Pre-separator (cyclone)

*The above specifications can be changed without prior notice*
STD11T

Features & advantages ;

Wide drilling coverage area with extendable boom for face drilling

Simple & easy control with joysticks

High quality straight holes ;
- Excellent stability with robust construction
- High-efficiency rock drill : TD45T
- Powerful feed system
- Rigid boom

Tier-III diesel engine with exhaust gas reduction equipment

ROPS-FOPS certified safety cabin

Optimal power unit with load sensing variable hyd. pump

Advanced intelligent drilling system : surface drilling
- Half drilling system for accurate drilling start
- Anti-jamming system
- Smooth drilling system
- Damping system on rock drill

Tier-III diesel engine

Options
- Cold weather starting package (Fuel & Hydraulic oil heating device)
- Water-misting system
- Pre-separator (cyclone)

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>STD11T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hole range</td>
<td>64 – 102 mm (2.5 – 4 inch)</td>
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<tr>
<td>Drill steel</td>
<td>T38l (T45)</td>
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<tr>
<td>Drill steel length</td>
<td>3,660 mm (12 ft)</td>
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<tr>
<td>Hole depth</td>
<td>3 m (10 ft)</td>
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<tr>
<td>Boom variation</td>
<td>Extendable boom</td>
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<tr>
<td>Rock drill</td>
<td>TD45T, 10 kw (13 Hp)</td>
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<tr>
<td>On-board compressor</td>
<td>7 m³/min, 10.5 bar (1,849 gal/min, 152 psi)</td>
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<tr>
<td>Dust collector</td>
<td>23 m³/min (6,076 gal/min)</td>
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<tr>
<td>Diesel engine</td>
<td>Cummins QS86.7, Tier-III</td>
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<td>Dimension, transport</td>
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<td>width</td>
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<tr>
<td>height</td>
<td>10,045 mm (395 inch)</td>
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<td>Safety cabin</td>
<td>ROPS &amp; FOPS certified controlled</td>
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<tr>
<td>Control</td>
<td>Joystick, electrically controlled</td>
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</tbody>
</table>

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Hydraulic Rock Drills Soosan "TD series"

More power, less and easier maintenance

The advanced TD series rock drills speedily perform drilling with high impact power and high rotation speed. It is equipped with a damping system. This function allows a 20% higher performance compared to our former SP series. A back-hammering system is available on TD rock drills. High productivity and enhanced durability are the most valuable features of TD rock drills.

15~20 kW hydraulic rock drills for the hole range 64~102 mm

Applications :
- Blast hole drilling
- Surface & underground bolt hole drilling

Features & advantages :
- The damping system increases the drilling efficiency and durability by using a damping piston which reduces rod bounces during hammering.
- Advanced technology of Soosan percussion mechanism enables optimum drilling performance on various work conditions.

Specifications
<table>
<thead>
<tr>
<th>Specifications</th>
<th>Unit</th>
<th>TD45</th>
<th>TD51</th>
<th>TD45T</th>
<th>SP3</th>
<th>SP6</th>
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<tr>
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<td>76~115</td>
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<td>76~115</td>
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<tr>
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<td>50</td>
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<tr>
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<td>170</td>
<td>170</td>
<td>160</td>
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<tr>
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<td>kg</td>
<td>228</td>
<td>278</td>
<td>220</td>
<td>210</td>
<td>270</td>
</tr>
</tbody>
</table>

*TD45T: Application for underground/tunnel work/dowel with water flushing system

Hydraulic Rock Drills Soosan "SP series"

More power, less and easier maintenance

The well known SP rock drills, designed for surface drilling, have been developed with the very reliable percussion mechanism of SB breakers. It is one of the most reliable, durable and cost effective rock drills in the market.

7~16 kW hydraulic rock drills for the hole range 33~102 mm

Applications :
- Blast hole drilling
- Surface & underground bolt hole drilling

Features & advantages :
- The damping system increases the drilling efficiency and durability by using a damping piston which reduces rod bounces during hammering.
- Advanced technology of Soosan percussion mechanism enables optimum drilling performance on various work conditions.

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