T450WS

FIELD PROVEN RELIABILITY AND PERFORMANCE

The T450WS is the drilling contractor’s rig of choice for water, geothermal, mineral exploration and environmental where high pressure, high volume air is required and over-the-road portability is vital.

Schramm’s patented air-Control® comes standard, providing fuel savings of up to 12 percent by matching fan speed to meet cooling system temperature and air compressor DTH volume requirements on a continuous basis.

Any climate, any terrain, Schramm rigs are built your way, delivering maximum performance, reliability and operating efficiency to give you the edge you need to stay ahead of your competition.

- Up to 30,000 lb (133 kN) pullback
- Optional sliding top head drive with hands-free pipe spinner available
- Drill compressor air at 1,050 cfm @ 350 psi (29.7 m³/minute @ 24 bar)
- Fuel saving CAT deck engine with load-sensing hydraulics
- Schramm patented air-Control®
- 15 pipe 3.5 inch (8.9 cm) or 12 pipe 4.5 inch (11.4 cm) pipe carousels available

PIPE CAROUSEL
Hydraulic pipe arm or available pipe carousel significantly improves safety, reliability and production efficiency.

AIR CONTROL
Offers up to 12%* fuel savings by continuously adjusting compressor load to air requirements.
*Based on actual results.

TOP-HEAD DRIVE
Multiple options available including combination side inlet/discharge swivel mounted to floating shaft.
# T450WS Truck Mounted Top Head Drive Rotary Rig

## SPECIFICATIONS

### DECK ENGINE
- Caterpillar C-15 DIT ATAAC (ACERT)
- Advanced Combustion Emissions Reduction Technology
- 580 bhp (432 kw) @ 1,800 rpm
- 200 gallon (757 liter) fuel tank

### STANDARD COMPRESSOR
- Two-stage, oil-flooded rotary screw
- 1,050 cfm @ 350 psi (27 m³/min @ 24.1 bar)
- Manually operated clutch between the engine and compressor
- Schramm patented air-CONTROL®

### COOLING
- 122°F (50°C) ambient design temperature
- Variable speed cooling fan

### DIMENSIONS
- OA length-transport: 34 ft 4 inch (10.5 m)
- OA width: 8 ft 6 inch (2.6 m)
- OA height-transport with pipe carousel: 12 ft 10 inch (3.9 m)
- Weight-less drill pipe with 15 pipe carousel: 48,500 lb (22,000 kg)

### TRUCK
- Separate drill rig subframe design allows mounting on various trucks or special purpose vehicles other than Schramm specified truck
- Standard truck: International, 8x4 or 6x4 available
- 20,000 lb (9,072 kg) front axle
- 46,000 lb (20,865 kg) full locking rear axle
- 66,000 lb (29,937 kg) GVWR (for 6x4)

### TOP HEAD DRIVE
- Single reduction gearbox with heavy duty single speed, disc valve type motor
- Infinitely variable rotation speed
- Spindle Thru Hole: 2-11/16 inch ID (68.3 mm)
- Maximum Torque: 0-105 rpm @ 6,532 ft-lb (8,856 N-m)

### OUTRIGGERS
- Dual Front – 4 inch (102 mm) bore x 41 inch (1.04 m) stroke
- Dual Rear – 5 inch (127 mm) bore x 33 inch (0.84 m) stroke

### FEED SYSTEM
- Top head driven by hydraulic traverse cylinder through heavy duty leaf chain
- 30,000 lbf (133 kN) pullback
- 216 fpm (65.8 m/min) up feed
- 161 fpm (49.1 m/min) down feed
- 15,000 lbf (66.7 kN) pulldown

### MAST
- Tubular steel, all welded mast
- 32 ft 6 inch (9.9 m) OA length

### DRILL PIPE AND CASING
- 20 ft (6.1 m) drill pipe length
- 25 ft (7.6 m) maximum casing length
- 16.5 inch (42 cm) maximum diameter through slipbox

### PIPE HANDLING
- Pipe carousel, 15 pipe breakout style 3.5 inch (8.9 cm) x 20 ft (6 m)
- Sliding top head
- Hands-free pipe spinner
- Hydraulic swing & extend jib boom
- 6 inch hammer holder
- 60 inch breakout wrench
- Angled pipe rack with rod slide holds 20 pcs of 3.5 inch (8.9 cm) pipe or 12 pcs of 4.5 inch (11.4 cm) pipe

### WINCH
- 5,800 lbf (25.8 kN) bare drum pull
- 163 fpm (49.7 m/min) bare line speed
- Planetary design with spring applied hydraulic release brake

### HYDRAULIC SYSTEM
- Open loop load sensing system
- 140 gallon (530 l) system capacity
- 7 micron filtration

### WATER & FOAM INJECTION SYSTEM
- 18 GPM (68.1 lpm) water pump

### TOOL LUBRICATOR
- Positive displacement, air operated piston pump
- Oil Flow: Variable to 5.0 GPH (18.91 ph)

### LIGHTING & ELECTRICAL SYSTEM – 24 VOLT
- Mast (3) 60 watt floodlights
- Control Panel (1) floodlight
- Work (1) 70 watt halogen floodlight, (2) 70 watt halogen spotlights

### STANDARD ACCESSORIES
- Side pipe rack, tool box, pipe handling sling, breakout wrench and 50 hour maintenance kit

### OPTIONAL EQUIPMENT
- 4.5 inch (11.4 cm) 12 pipe or 3.5 inch (8.9 cm) 15 pipe carousel
- Sliding tophead drive
- Hands-free pipe spinner
- Floating sub
- Mud pumps
- See your Schramm representative for additional available options

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Rig performance is directly related to geological conditions encountered in the field. Rig specifications presented here illustrate equipment performance under factory test conditions. Schramm, Inc. continuously improves its products and reserves the right to change specifications, design, prices and terms at any time without notification or obligation. These specifications do not extend any warranty, expressed or implied, nor do they or Schramm, Inc. make or imply any representation of the machine’s merchantability or fitness for a particular purpose.

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