

**APPENDIX 8**  
**RIG SPECIFICATIONS**

# Drilling Rig Specification

## TXD ROTADRILL SPECIFICATIONS

### Engine

Detroit Diesel DDC/MTU 12V-2000TA DDEC  
760 bhp (567 kw) @ 1800 rpm, air starter

### Cooling

Two core, side by side type  
130 F (54.4 C) ambient design temp.

### Dimensions

OA length, transport - 50' (15.2 m) less tractor  
OA width - 9' 6" (2.9 m) OA height,  
transport - 13' 6" (4.1 m)  
Weight std. rig - 95,000 lb (43,181 kg)

### Top Head Rotation - Hydraulic Tilting

Ductile iron, single reduction oil bath gearbox  
with 4 two-speed disc valve type hydraulic motors.  
Infinitely variable rotation speed.

3.5:1 Reduction Gear  
4.75" diameter (120.6 mm) spindle,  
3" ID swivel 0-90 rpm @ 17,750 ft-lb,  
0-180 rpm @ 7,670 ft-lb 3" ID,  
3000 psi fluid flushing system

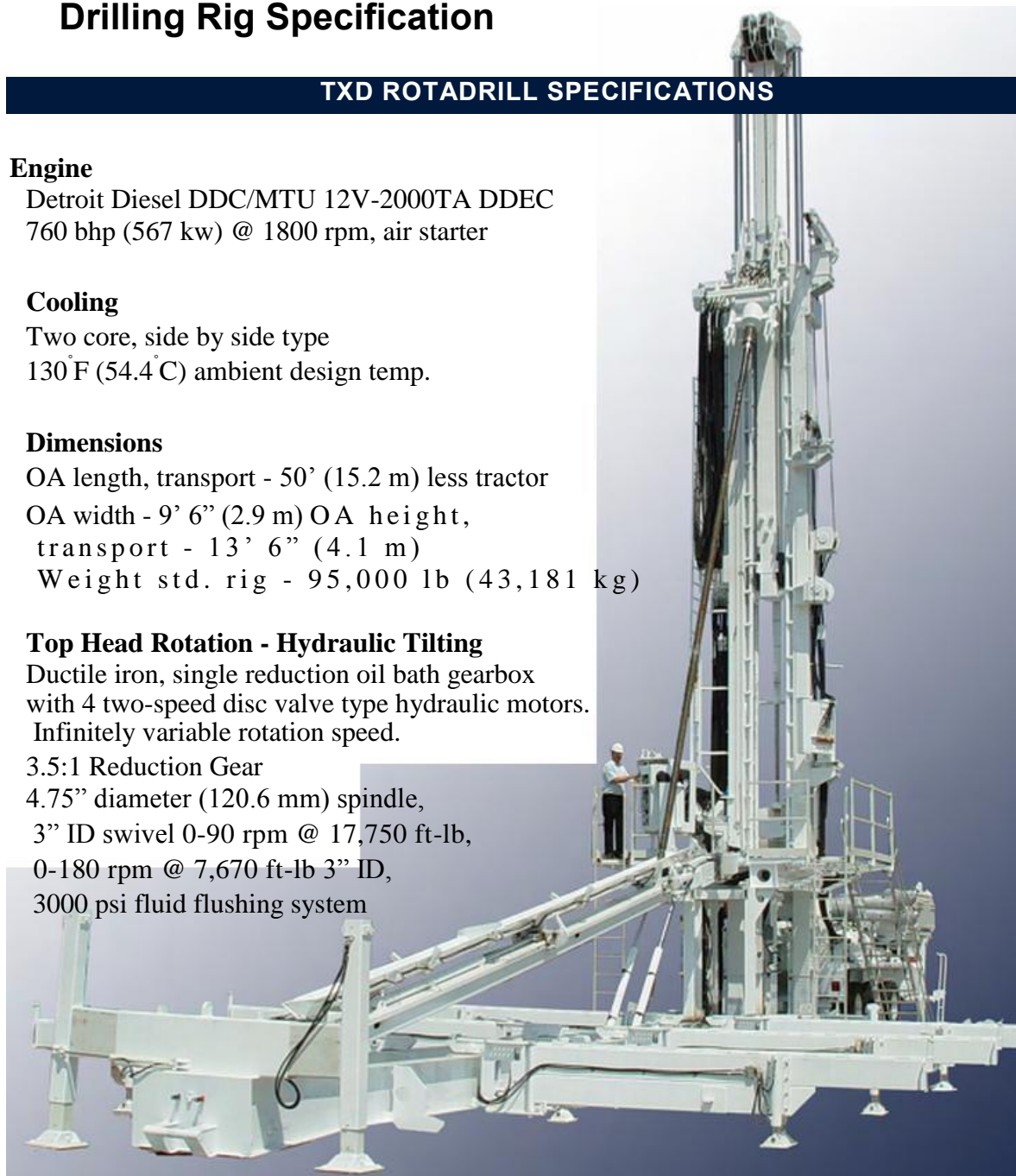
### Feed System

Top head is driven by hydraulic traverse  
cylinders through special wire rope and large diameter Nylatron sheaves. As top head is  
raised, the inner mast section extends by a ratio of 1:2 until it reaches its fully extended  
position.

50' (15.24 m) top head travel

200,000 lb (90,909 kg) pullup

100 fpm (30.48 mpm) pullup speed-rapid feed 32,000 lb (14,545 kg) pulldown capacity



14 fpm (7.92 mpm) pulldown speed-slow feed 200 fpm (60.9 mpm) pulldown speed-rapid feed

52' 10" (16.1 m) working clearance mast spindle to table (sub removed)

48' 10" (14.9 m) working clearance floating sub to table **Drill Pipe & Casing**

Range 2 drill pipe, range 3 casing

30.25" (768 mm) max. diameter through slipbox **Mast**

Telescoping construction permits long head travel and working height, yet short OA length in transport position.

72" (1828 mm) cylinder operated slide Free-standing mast

Hydraulically operated adjustable mast feet Hydraulically retracted slip box

30.25" (768 mm) table opening w /o slips 124" (3.150 m) working height below table

### **Pipe Handling Winch**

Planetary with spring applied hydraulic release brake

9,600 lb (4,354 kg) bare drum line pull 151 fpm (46 mpm) bare drum line speed Hydraulic jib boom swing & extend

### **Hydraulic System**

Open loop load sensing system

7 micron filtration

210 gallon (798 l) system capacity

### **Outriggers**

Front - (2) 5" bore x 36" stroke (127 mm x .91 m)

Rear - (2) 5" bore x 41" stroke  
(127 mm x 1.04 m)

### **Electrical System - 24 Volt**

Power supply for explosion proof environment

(2) 12V gel batteries

Power convertor & charger

### **Automated Pipe Handling System**

Lifts drill pipe and casing from horizontal position into alignment with tilting top head, racks and stores tubulars and positions blow out preventer.

47' (14.3 m) tubular lengths

Up to 30" (762 mm) diameter casing

### **Optional Equipment**

A variety of equipment is available and includes the following:

- 25 gpm (95 lpm) Cat water injection pump
- 35 gpm (132.5 lpm) Bean water injection pump
- Tool lubricator for DTH hammer
- Schramm i-Control drilling display
- Power breakout ; Power slips
- Survey line winch
- Rotation brake for directional drilling