

## Ingersoll-Rand TH75E Drill Rig

The TH75E is a multipurpose hydraulic top head drive, truck-mounted, deck engine-powered drill rig, designed primarily for reverse circulation exploration applications using either rotary or downhole hammer drilling but is also capable of coring and conventional drilling.

The TH75E employs a 'dump angle derrick' for angle exploration derrick' can be positioned at any angle between vertical and 45 raising cylinders. The derrick then slides downward until the base rests firmly on the ground

surface. Automatic pinning secures the derrick once the angle is set. Drilling controls positioned on the derricks ensure that the operator is always close to the hole.

### Specifications:

#### Powerpack Deck Engine:

Cummins Qsk-19C 600hp (447kW) @ 1800rpm  
Silenced exhaust for reduced noise levels

#### Air Compressor:

Ingersoll-Rand HR2.5 1070cfm (30.3m<sup>3</sup>/min)  
Pressure Range: 120-350psi  
Operational RPM: 1800

#### Derrick:

Construction: welded cold finished rectangular steel tubing  
Rated Capacity: 100,000lb (45,360KG)

#### Top Head Drive

Type: Four 12.3 cu. in. (201.6cm<sup>3</sup>)  
Hydraulic motor spur gear 2 speed  
Torque/Rotation:  
8000ft/lb (10,848N-m) 0-105rpm  
6000ft/lb (8136N-m) 0-140rpm

#### Drill Feed System:

Pulldown (drill feed): 30,000lb (13,608KG)  
Pullback: 70,000lb (31,752KG)  
Drill Feed Rate: 27ft/min (8.2m/min)  
Fast Feed Rate Down: 130ft/min (39.6m/min)

#### Mud Pump:

Gardner Denver: 222g/min (840lmp)  
Piston Pump 5.5 x 8: 338psi (2,330kPa)

#### Drill Pipe Handling:

A carousel-mounted inside the derrick structure rotating hydraulically around a fixed axis. Patented, hydraulically operated, dual (top and bottom), retractable, drill pipe support arms. (The support arms are especially important when positioning drill pipe during angle drilling operations. A rotary head that remotely retracts to the inside of the derrick in order to be positioned over the carousel for removal or loading of pipe.

#### Wireline:

Drum Capacity: 3280ft (1000m)  
Line Speed: variable 0-150ft/min (0-45.7m/min)  
Line Pull: 2,000lb (907KG)

#### Water Injection:

Capacity: 0-35 g/min  
Pressure: 1000psi (6900kpa) maximum

#### Dimensions and Weights:

Width: 2.5m  
Length (derrick down): 12.60m  
Height (derrick down): 4.30m  
Height (derrick up): 12.00m  
Gross Weight (approx.) 29,030KG

