ATLAS COPCO T4W

Water Well Drilling Rig

www.atlascopco.com/T4W
www.deepholedriller.com

Sustainable Productivity
WELL-DESERVED REPUTATION FOR RELIABILITY AND HIGH PRODUCTION

Still the leading waterwell rig in its class after 40+ years, the Atlas Copco T4W sets the standard. With over 2,500 rigs built and still working, it has the undisputed reputation for high production rates and a long, trouble-free life. The T4W design has not changed much from its origins, but the components and control systems incorporate today’s technology, making it even more productive and reliable.

CUSTOM CARRIER ENHANCES MOBILITY

Strength starts at the core … a rock-solid frame. Twin 16 in. / 406 mm H-beam rails provide a strong, stable base for the T4W. The carrier is powered by a 380 HP / 283 kW diesel engine so there is plenty of power to move on the highway at legal speeds. Twin rear axles with side-to-side manual lockers provide maximum traction off the road. A standard jake brake adds control and safety in mountainous terrain. New cab styling and a soft-ride front suspension add to the T4W value package.

THE POWER OF PERFORMANCE

Throughout its history, the T4W has used a conservative power factor so the drill performs at peak while maintaining an adequate power reserve.

Today’s T4W power pack provides the horsepower to back up its legendary drilling performance. The diesel deck engine, compressor and hydraulic pumps are all mounted on a separate power pack frame. The frame is cushion mounted directly to the main frame of the carrier. This smart design helps maintain critical alignment of power components to assure long life. The carrier and deck engines are 50-state certified for emissions.

The hydraulic pump-drive box connects to the other end of the engine allowing for flexibility of power components while maintaining power efficiency.

DESIGNED FOR RELIABILITY

The strength of the T4W’s main structural components is why a large number of rigs from the 1970’s are still drilling today. The main frame, derrick, table and derrick pivot structure are the strongest in the industry. Think about it … this strength is not only the reason for T4W longevity; it is the reason for strong drilling performance.

All T4W fabrications are built on engineered fixtures to ensure precise specifications and uniformity. Certified welders complete all the welds, which are meticulously inspected before final assembly.

A BALANCED DRILLING SYSTEM

The answer to sustained drilling performance is having a drill with matched, integrated components. Both 50,000 lb./ 22 700 kg and 70,000 lb. / 31 800 kg versions of the T4W’s twin cylinder, chain feed are rated at actual pullback capacity. Fast- and slow-feed functions provide precise control of bit weight and penetration rate. This feed system optimizes performance and helps control drilling cost.
The T4W’s two rotary head selections are matched to over-all rig capacity. The single motor worm-gear head is rugged and compact for down-the-hole (DTH/DHD) drilling with air and foam. Its floating spindle absorbs drilling shocks and is easy on threaded connections. The powerful spur-gear head provides more torque and speed for rotary air and mud drilling, as well as DHD drilling. It is the multi-purpose workhorse for deeper or larger diameter holes. Both rotary heads feature torque limit control to pre-set the maximum torque output of the rotary head. For making up tool joints or threading casing together, the driller can torque up to the required specification every time.

The final element in the T4W’s balanced drilling system is the circulation component which includes either a 1070/350 or a 1250/350 screw compressor. This covers the range of 6 in. / 152 mm holes up to 12 in. / 305 mm holes, or larger, with rotary or DHD drilling methods. For larger, deeper or water-filled holes, the T4W can be set up with special piping to add an off-board auxiliary compressor or booster compressor. A range of hydraulic-powered water-injection systems, with and without foam injection, is available. A 7 gal. / 26.5 l or a 60 gal. / 227 l DHD lubrication systems are optional.

**T4W — THE COMPLETE VALUE PACKAGE**

The most compelling reasons to select a T4W are its reliability and drilling performance. The T4W has established an enviable, solid reputation as the waterwell drill rig of choice. It is also the leading rig in maintaining its value. Quite simply, the T4W provides many years of production after the rig has been paid off.

Adding to the T4W value package is the after-sales support provided by Atlas Copco, its branches and distributors. An 80,000 ft² parts distribution center near the factory provides the base for an extensive network of sales and service outlets spanning over 60 countries.

Selecting an Atlas Copco T4W as your next waterwell rig is a low-risk proposition. The T4W defines reliable, and is the high production leader.
T4W GENERAL SPECIFICATIONS

CARRIER
Standard Chassis  6 x 4 Custom, 203 in. / 5, 156 mm wheelbase
Engine  CAT C-13, 380 HP / 283 kW, 50-state engine
Optional Chassis  6 x 6 all-wheel drive
8 x 4 twin steer
Polished aluminum wheels, air conditioning

FEED SYSTEM
Heavy Duty Chain
Pulldown  30,000 lb. / 13608 kg
Pullback  50,000 lb. / 22 727 kg
Optional Pullback w/regen  70,000 lb. / 31 751 kg
Drill Feed Rate  11 fpm / 3.4 m/min
Fast Feed Rate  Up 110 fpm / 33.3 m/min
Fast Feed Rate  Down 70 fpm / 21.3 m/min

POWERPACK SELECTIONS
Compressors*
1070/350  30.3 cu.m³/min. / 2 413 kPa
1250/350  35.4 cu.m³/min. / 2 413 kPa
Cummins Engines
QSX-15-C  600 HP / 447 kW @ 1800 rpm
QSX-19C  700 HP / 522 kW @ 1800 rpm
Dimensions and Weights
Length, Derrick Down  34 ft. 11 in / 10.7 m
Height, Derrick Down  13 ft. 10 in / 4.2 m
Width, Outside Jacks  8 ft. / 2.4 m
Weight, Standard Rig less pipe  60,500 lb. / 27 762 kg

DERRICK
Dimensions  33 ft. 3 in x 46 in. x 33 in. / 10.1 m x 1.2 m x 0.8 m

ROTARY HEAD
Standard Worm Gear  5,983 ft-lb. / 8 814 N-m @ 0-109 rpm
Optional Spur Gear  8,000 ft-lb. / 10 848 N-m @ 0-110 rpm

SWIVEL AND PIPING
Rated for 350 psi / 2413 kPa operation
Swivel I.D.  2 in. / 5.08 cm
Piping I.D.  2 in. / 5.08 cm

JIB HOIST/CASING HOIST
Lifting Capacity (standard)  1,250 lb. / 567 kg
Optional  2,500 lb. / 1 134 kg
Line Speed  70 fpm / 21.3 m/min.
8,000 lb. casing hoist  80 fpm / 24 m/min.

OPTIONS
Hydraulic indexing cylinder  DHD lubrication
Collar handling package  Auxiliary fuel tank
Deep hole package w/regen.  Universal pipe handling
Water injection  Extended derrick
Mud pumps  Deck Engine Starting Aid
Water tank  High-torque rotary head
Many more

*All air compressors used on the T4W are manufactured by Ingersoll-Rand and are oil flooded, asymmetrical rotary screw design.
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Sustainable Productivity
We stand by our responsibilities toward our customers, toward the environment and the people around us. We make performance stand the test of time. This is what we call—Sustainable Productivity.

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