

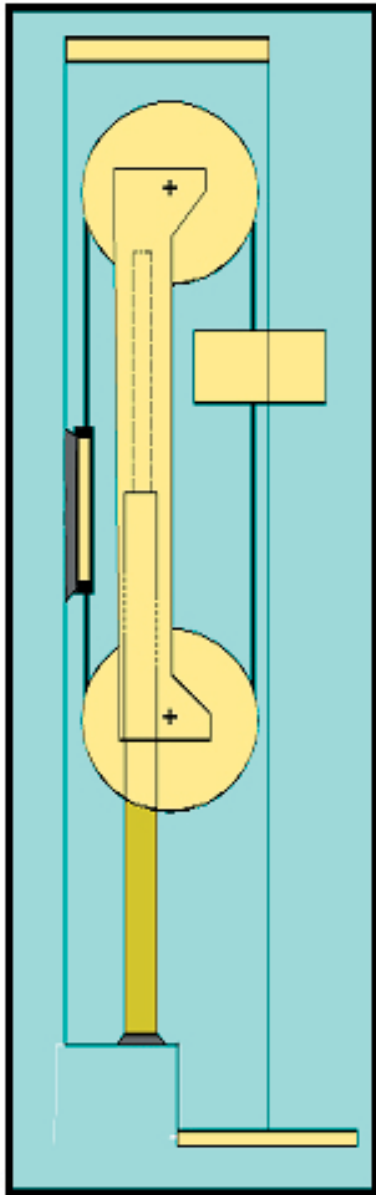
# Atlas Copco

## RD20



*Atlas Copco*

# The RD20 Advantage equals power, performance, and mobility



## Powerful Feed System

The patented carriage feed system is the heart of the RD20. It delivers a full 110,000 lb. (49,896 kg) of pullback to the RD20II and 120,000 lb. (54,446 kg) to the RD20III. The feed carriage is raised and lowered by two cylinders inside the derrick. This feed system delivers rapid feed speeds as well as precise weight and speed control and provides optimal mechanical efficiency unobtainable on competitive machines. The derrick eliminates compressive loads on the upper derrick, even at full pullback.



## Superior Pipe Handling

One of the primary advantages of the RD20 is the simplicity and effectiveness with which it handles drill pipe. The whole process of changing or adding drill pipe with the RD20 normally takes between 45 and 60 seconds. This is much quicker than handling drill pipe on a conventional drill rig.

The RD20 uses either a standard 2-pod loader or an optional 7-pipe carousel. During the drill-in process, either the carousel or loader can be used and loaded continuously from the pipe tubs or trailers behind the drill rig using the dedicated pipe handling hoist and jib boom. To change drill pipe, the RD20 uses a square chuck, which is set down through a recessed opening in the centralizer or table bushing. This not only holds the drill string so it doesn't drop back into the hole, but acts as a back-up tong to prevent the drill string from turning as a new pipe is broken free or added to the drill string.



## Tough Mobile Carrier

Mobility is one of the main advantages of the RD20, a completely self-contained drill mounted on a 10 x 6 tridem carrier. The separate 380 HP engine and drive train move the rig down the road at standard highway speeds while providing ample power for off-the-road maneuverability. A Jake brake and dual no-spin rear axles further enhance off-road mobility. This ability to get to the job ready to work reduces set up time and cost.

## Versatile Application

A variety of standard and optional components equip the RD20 to handle a wide range of drilling applications including water well, shallow oil and gas, and coal bed methane drilling. The standard model provides 1500 psi (10,342 kPa) air piping with an auxiliary and booster compressor connection. High pressure water and foam injection systems as well as oil injection for DHD operation are optional.



## Heavy-duty Derrick and Tophead Drive

The derrick and centralizer table on the RD20 are designed to handle large diameter Range II or Range III casing with ease. A 41 ft. 7 in. (12.67 m) clearance between the spindle and the table on the RD20II provides plenty of room for 30 ft. (9 m) drill pipe while the RD20III boasts a full 51 ft. 7 in. (15.72 m) clearance for Range III casing. The 8,000 ft-lb. (10,848 Nm) spur gear tophead drive maintains full torque regardless of changes in speed.



## Floating Power Pack

A Cummins QSK-19C, 755 HP deck engine powers the RD20. An optional CAT 3412, 760 HP engine is also available. Coupled with an Ingersoll-Rand HR2.5 over/under air end that supplies 1,250 cfm at 350 psi, the RD20 provides power to get the job done.

An In/Out box allows the operator to disconnect the compressor from the engine, allowing for easier start-up in cold weather.



The engine, compressor, and hydraulic pumps are mounted on a floating power pack base rather than directly onto the chassis mainframe. This arrangement assures proper alignment of power components and decreases wear.

The RD20 is a self-contained, mobile rig providing:

- Less site preparation time and cost
- A smaller footprint
- Reduced transport time and cost
- Fewer loads
- Reduced set-up and tear-down time and cost
- Less rig up
- Smaller crew requirements

The RD20—high performance with versatility:

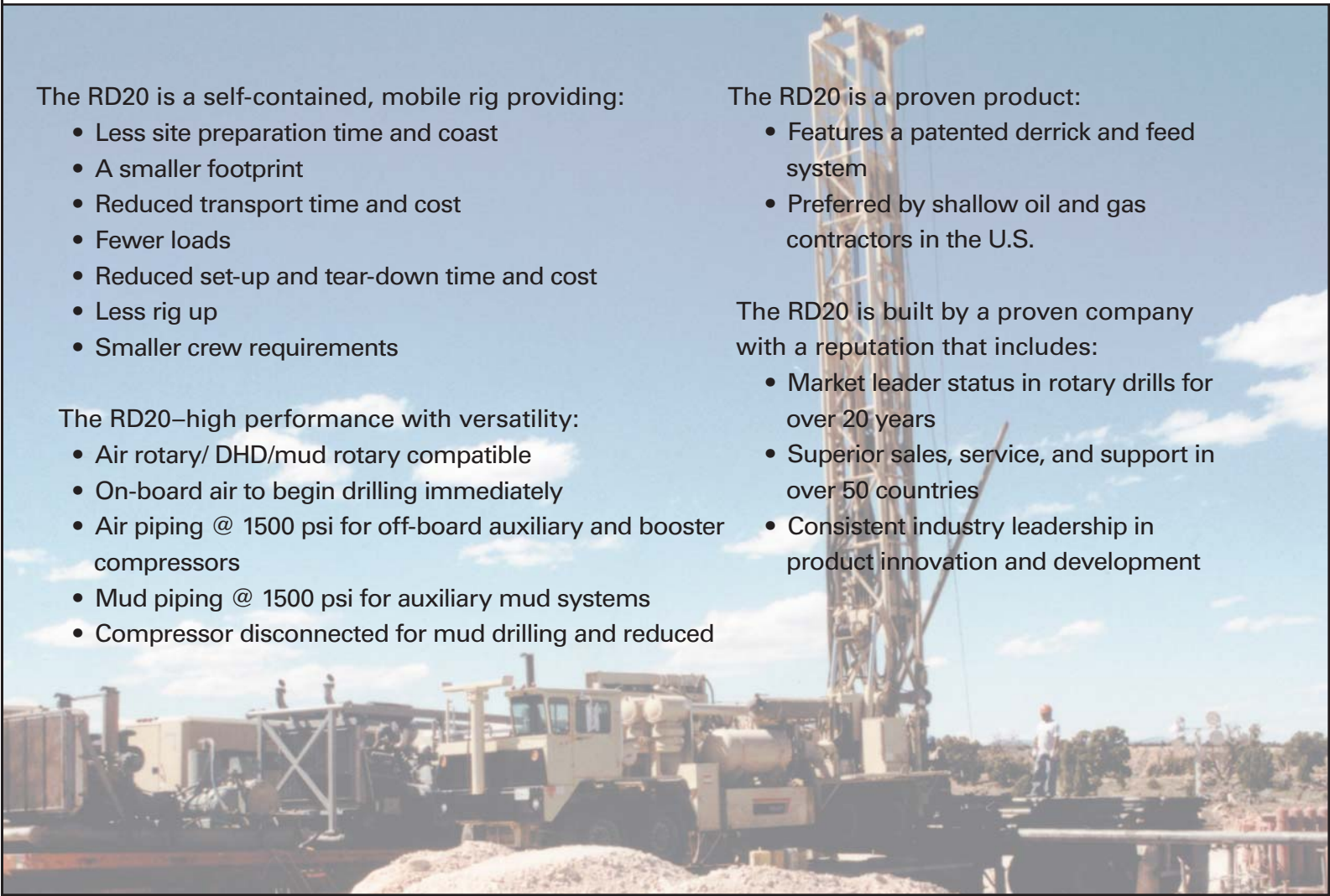
- Air rotary/ DHD/mud rotary compatible
- On-board air to begin drilling immediately
- Air piping @ 1500 psi for off-board auxiliary and booster compressors
- Mud piping @ 1500 psi for auxiliary mud systems
- Compressor disconnected for mud drilling and reduced

The RD20 is a proven product:

- Features a patented derrick and feed system
- Preferred by shallow oil and gas contractors in the U.S.

The RD20 is built by a proven company with a reputation that includes:

- Market leader status in rotary drills for over 20 years
- Superior sales, service, and support in over 50 countries
- Consistent industry leadership in product innovation and development



# Specifications

## RD20II

## RD20III

CARRIER			
Custom tandem chassis built to Atlas Copco specifications 226 in. / 5,740 mm wheelbase 86,000 lb. / 39,010 kg GVWR	Custom tridem chassis built to Atlas Copco specifications 281 in. / 5,740 mm wheelbase 90,000 lb. / 40,824 kg GVWR		
POWERPACK			
Cummins QSK-19C engine 755 HP / 522 KW @ 1800 RPM IR HR2.5 over/under screw air end 1250 / 350 @ 1800 RPM Engine silencer	Cummins QSK-19C engine 755 HP / 522 KW @ 1800 RPM IR HR2.5 over/under screw air end 1250 / 350 @ 1800 RPM Engine silencer		
DERRICK			
Dimensions: 51' 1-1/2" L x 48 - 1/2" W x 41" D 15.57 m x 1231.9 mm x 1041.4 mm	61' 11-1/2" L x 48 - 1/2" W x 41" D 18.88 m x 1231.9 mm x 1041.4 mm		
FEED SYSTEM			
Pullback: 110,000 lb. / 49,896 kg Pulldown: 30,000 lb. / 13,608 kg Drill Feed Rate: 22 fpm / 6.7 m/m Fast Feed Up (regen on): 63 fpm / 19.2 m/m Fast Feed Down: 154 fpm / 46.9 m/min	Pullback: 120,000 lb. / 54,446 kg Pulldown: 30,000 lb. / 13,608 kg Drill Feed Rate: 29 fpm / 8.8 m/m Fast Feed Up (regen on): 106 fpm / 32.29 m/m Fast Feed Down: 192 fpm / 58.5 m/m		
ROTARY HEAD			
4SF-2-10 spur gear head 0-110 RPM, 8,000 ft-lb. torque Piping: 3 in. / 76 mm circulation rated at 1,500 psi working pressure	4SF-2-12 spur gear head 0-120 RPM, 8,000 ft-lb. torque Piping: 3 in. / 76 mm circulation rated at 1,500 psi working pressure		
JIB HOIST & BOOM			
Lifting Capacity: 4,000 lb. / 1,814 kg bare drum Line Speed: 100 FPM / 30.5 m/min bare drum	4,000 lb. / 1,814 kg bare drum 225 ft./min / 68.5 m/min		
CASTING HOIST			
Lifting Capacity: 7,500 lb. / 3,402 kg maximum Line Speed: 60 ft/min / 18.3 m/min maximum	7,500 lb. / 3,204 kg 106 ft/min / 32.29 m/min		
OPTIONS			
Collar Handling Package Compressor Disconnect	Drill Pipe Carousel Mud Manifold	Water Injection DHD Lube	Step and Storage Area CAT 760 HP 3412 Deck Engine

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Brochure RD20-1 2.5M0605CM Printed in USA  
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