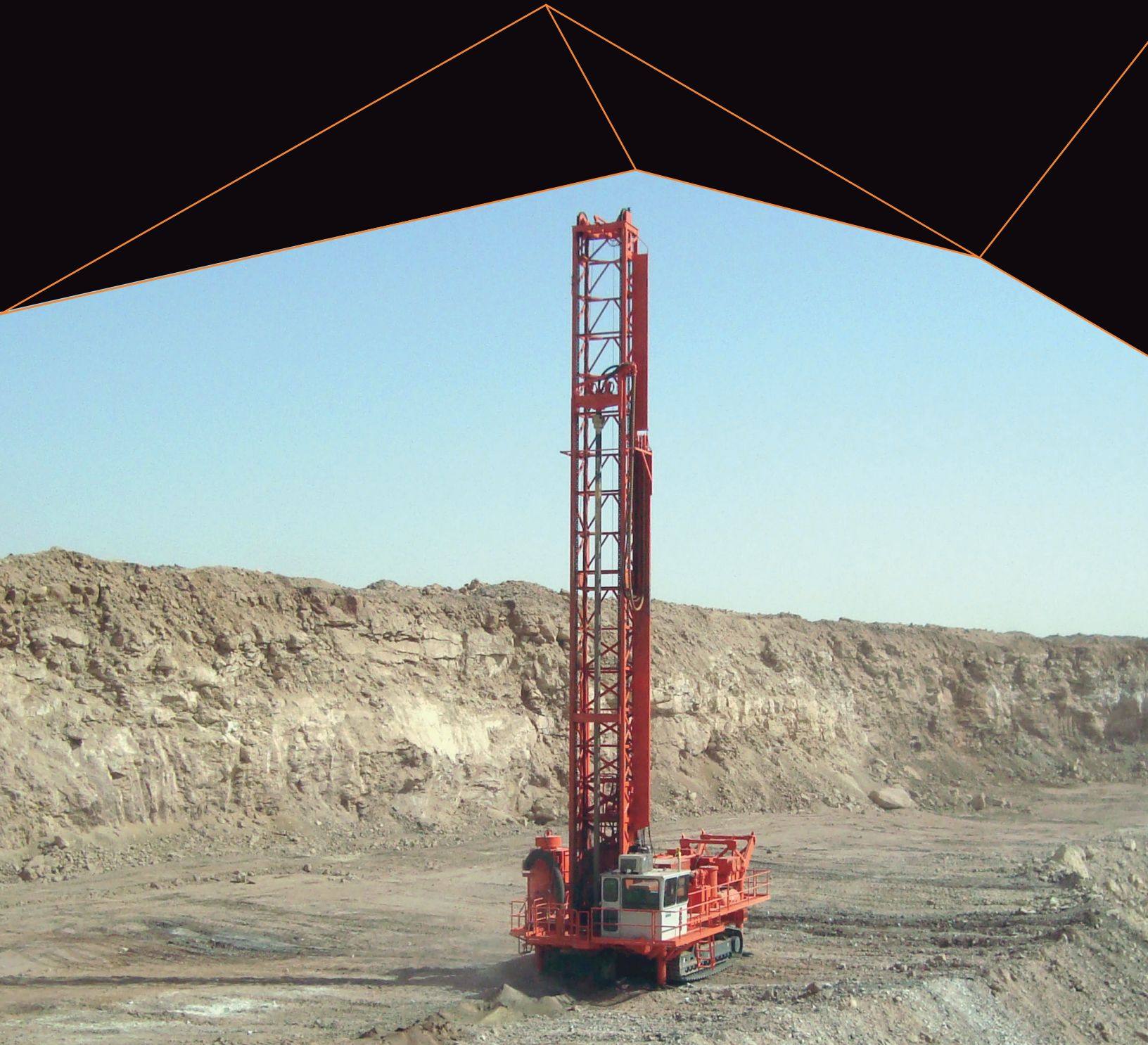




D90KS/1190E

ROTARY BLAST HOLE DRILLS





A HISTORY OF INNOVATION 1862 – PRESENT

Only one thing can take a company from a small town in Sweden to a worldwide operation. Innovation. With it, we've created a legacy of problem-solving with an unwavering commitment to quality.

That means every Sandvik product is a product you can depend on.



DIESEL VS ELECTRIC FOR DYNAMIC PRODUCTION

BUILT TO LAST!

Rotary blasthole drills from Sandvik set the standard for productivity, durability, and cost effectiveness. These machines are built for continuous drilling in some of the harshest operating environments in the world. Proven designs, rigid lattice style masts, heavy duty pulldown chains, and durable power groups place these rigs in a class of their own. Choose the right Sandvik rig for your needs and count on it to perform for years to come.

PROVEN DRILLS FOR DEPENDABLE OPERATION

The D90KS and 1190E are powerhouse crawler mounted blasthole drills. Based on a similar platform, but with different standard configurations and well developed options, each machine is built for optimum performance in a broad range of mining applications. Whether you are powered by electric motor or diesel engine you have the best of both worlds at your control. With their heavy duty frames and undercarriages, it is no wonder they have built such a reputation for longevity and solid performance.

SANDVIK D90KS

The D90KS is a diesel-powered, crawler-mounted blasthole drill for mining. It is equipped with low pressure air for rotary drilling. The D90KS with excellent visibility, powerful slewing, and strut-less mast support, results in high mobility, good hole-spotting, and maximum productive time. The exceptionally operator-friendly D90KS has a high record of reliability proven at high altitude and in the harshest desert and arctic conditions.

- 229 to 349 mm (9" to 13 3/4") diameter holes
- Single pass depths up to 20 m (65')
- Pulldown 400 kN (90,000 lbf)
- Bit load up to 523 kN (118,000 lbf)

SANDVIK 1190E

The 1190E is an electrically-powered, crawler-mounted blasthole drill for mining. It is equipped with low pressure air for rotary drilling. The drill when equipped for single pass drilling excels, including when angle drilling. The 1190E delivers on increasing productivity significantly, in particular in soft and medium hard rock, like in coal mining and metals mining.

- 229 to 349 mm (9" to 13 3/4") diameter holes
- Single pass depths up to 20 m (65')
- Pulldown 400 kN (90,000 lbf)
- Bit load up to 523 kN (118,000 lbf)



KEY PRODUCT FEATURES

01

The 19.8 m (72') headstroke single-pass mast on the D90KS or 1190E will provide a hole up to 20 m (65') deep in one pass. Mast construction is ASTM A500, 344 MPa (50,000 psi) steel, minimum yield. Mast length is 22.25 m (73')

02

The effective handling of drill pipe contributes to shorter cycle times and more holes drilled.

03

Increasing the driller's comfort and functionality supports a safer environment and contributes to greater work output.

04

Sandvik hydraulic systems manage power operation with few moving parts, produce abundant power, work under extreme operating conditions, and are self lubricating.

05

Moving and set-up are important parts of the drilling cycle. To overcome the rugged terrain in a mining environment, Sandvik drills deliver top performance from strong, structurally sound undercarriages and heavy duty frames.

06

Open design, full perimeter walkways for quicker servicing, all components providing lower maintenance costs and ease of service. The D90KS and 1190E offer the quick access that keeps you up and running.

07

The machinery house on the 1190E is a controlled environment which houses the power groups away from dust and the extreme operating conditions that the mining process involves. Motor and compressor options provide the right combination for each drilling condition. Maintenance is accomplished in a relatively comfortable and sheltered workspace.

08

The two front leveling jacks are integral to the frame, and two rear bolt-on provide a lift capacity of 56,972 kg (125,600 lb) each. Jacks provide stability for the drilling process even on rough benches. A PLC controlled auto leveling system with manual override, and indicator lights at the control panel complete the system.

09

The large dragline style operator's cab on the D90KS and 1190E offers a ceiling to floor full vision drill window, where the operator faces the drilled hole. Cabin is shock mounted and climate controlled with a sound rating of 80 dBA or less.

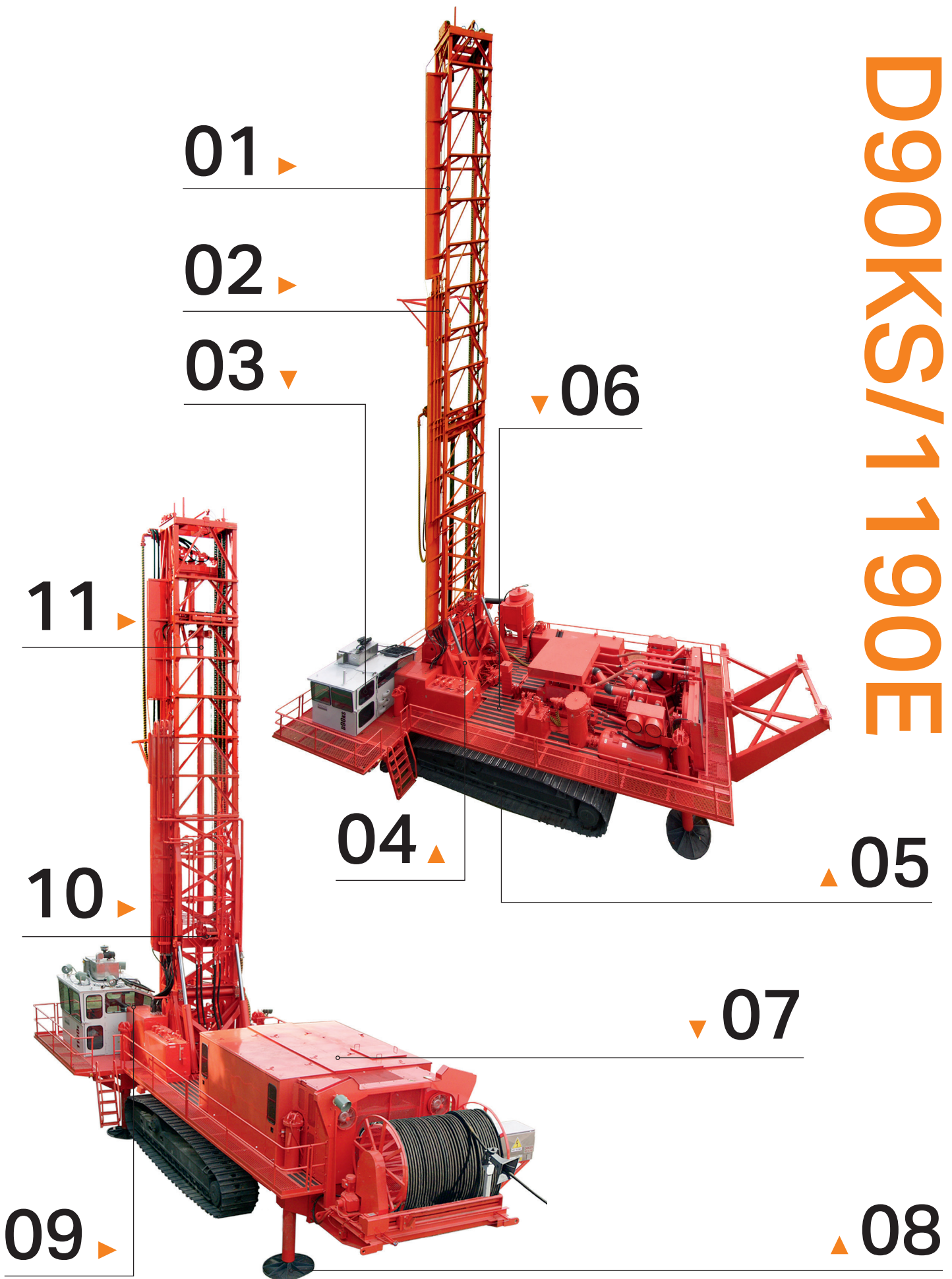
10

An auxiliary winch is provided on the D90KS and 1190E for lifting tools, with a rating of 2,971 kg (6,550 lb) on the main drum. Line speed 37.5 m/min (123 fpm), up and down.

11

The effective handling of drill pipe contributes to shorter cycle times and getting more holes drilled.

D90KS/1190E



TURNING INHERENT ISSUES INTO INTRINSIC SOLUTIONS

Innovation is more than our end goal. It's our state of mind. We don't just work towards it- we work within it.

This mindset has powered Sandvik since our founding in 1862. Precise solutions are the natural byproduct of constant improvement. To that end, we've created a patented Compressor Management System (CMS) to tackle two of the primary issues facing drillers today – increasing productivity and reducing environmental impact.


VALUE IN EVERY MODE

Start-Up: CMS holds the inlet butterfly closed to allow the engine to crank, start, and accelerate to low idle, making the drill much easier to start.

Off Load: When the compressor is off load, the CMS regulates receiver pressure and evacuates the main compressor, thus reducing engine load and compression where when air is not needed.

On Load: When the compressor is on load, the CMS throttles the volume of the compressor to deliver the desired up hole velocity so no air is wasted with excess pipe and bit wear.

Shutdown: CMS unloads the compressor from the engine to allow for cooler engine shutdown, extending turbo and engine life.



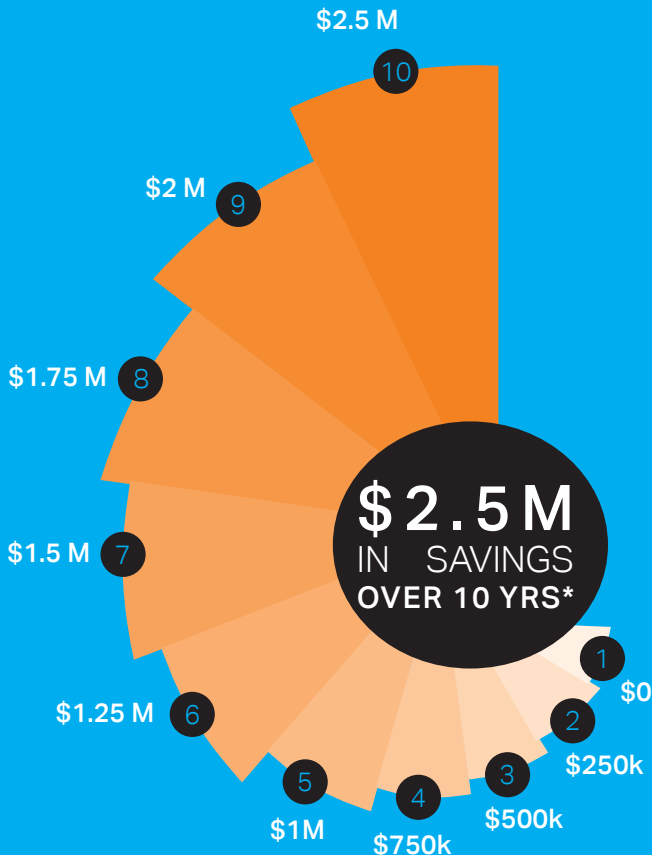
"The Sandvik CMS will save us thousands of gallons of fuel every year. It was a classic no-brainer."

– Mark Gilbertson, Director of Asset Management, Cloud Peak Energy

INCORPORATING OUR REVOLUTIONARY CMS SYSTEM TO BOOST PRODUCTIVITY.

Sandvik's patented CMS solves the inherent inefficiencies of rotary blasthole drills that have a direct connection between the engine and compressor. Isolating the compressor reduces the load on the engine by eliminating the need to maintain pressure when the machine is not drilling.

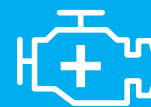
IN ADDITION TO REDUCING THE CARBON FOOTPRINT OF MINES AND DRILL SITES, THE CMS MAKES A TANGIBLE IMPACT ON PRODUCTIVITY.



*actual results may vary depending upon operating conditions.



REDUCED CARBON EMISSIONS by 300t



INCREASED ENGINE AND COMPRESSOR LIFE

20-35% LESS FUEL CONSUMPTION



MAINTENANCE intervals EXTENDED



MACHINE SPECIFICATIONS

D90KS/1190E

D90KS	METRIC	IMPERIAL
Hole diameter	229-349 mm	9"-13 3/4"
Maximum hole depth - Multi-pass	85 m	279'
Maximum hole depth - Single-pass	35.7 m	117'
First pass capability - Multi-pass	11.8 m	39'
First pass capability - Single-pass	20 m	65'
FEED		
Maximum pulldown	400kN	90,000 lbf
Maximum bit load	523 kN	108,000 lbf
Feed rate up/down - Single-pass	0-17.1 m/min	0-56 fpm
Feed rate up - Multi-pass	0-36.6 m/min	0-120 fpm
Feed rate down - Multi-pass	0-21.6 m/min	0-71 fpm
ENGINE, QSK45		
Power	1,007 kW	1,350 hp
RPM	1,800 rpm	
Low pressure	84.9 m ³ /min	3,000 scfm
Rotary	5.5 bar	80 psi
HOIST		
Hoist rate	0-36.6 m/min	0-120 fpm

*Optional power group shown - consult factory for other configurations

1190E	METRIC	IMPERIAL
Hole diameter	229-349 mm	9"-13 3/4"
Maximum hole depth - Multi-pass	85 m	279'
Maximum hole depth - Single-pass	35.7 m	117"
First pass capability - Multi-pass	11.8 m	39'
First pass capability - Single-pass	20 m	65'
FEED		
Maximum pulldown	400 kN	90,000 lbf
Maximum bit load	523 kN	108,000 lbf
Feed rate up/down - Single-pass	0-17.1 m/min	0-56 fpm
Feed rate up - Multi-pass	0-36.6 m/min	0-120 fpm
Feed rate down - Multi-pass	0-21.6 m/min	0-71 fpm
ENGINE, ELECTRIC MOTOR 60Hz		
Power	746 kW	1,000 hp
RPM	1,800 rpm	
Low pressure	94.4 m ³ /min	3,335 scfm
Rotary	4.1 bar	60 psi

*Optional power group shown - consult factory for other configurations





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