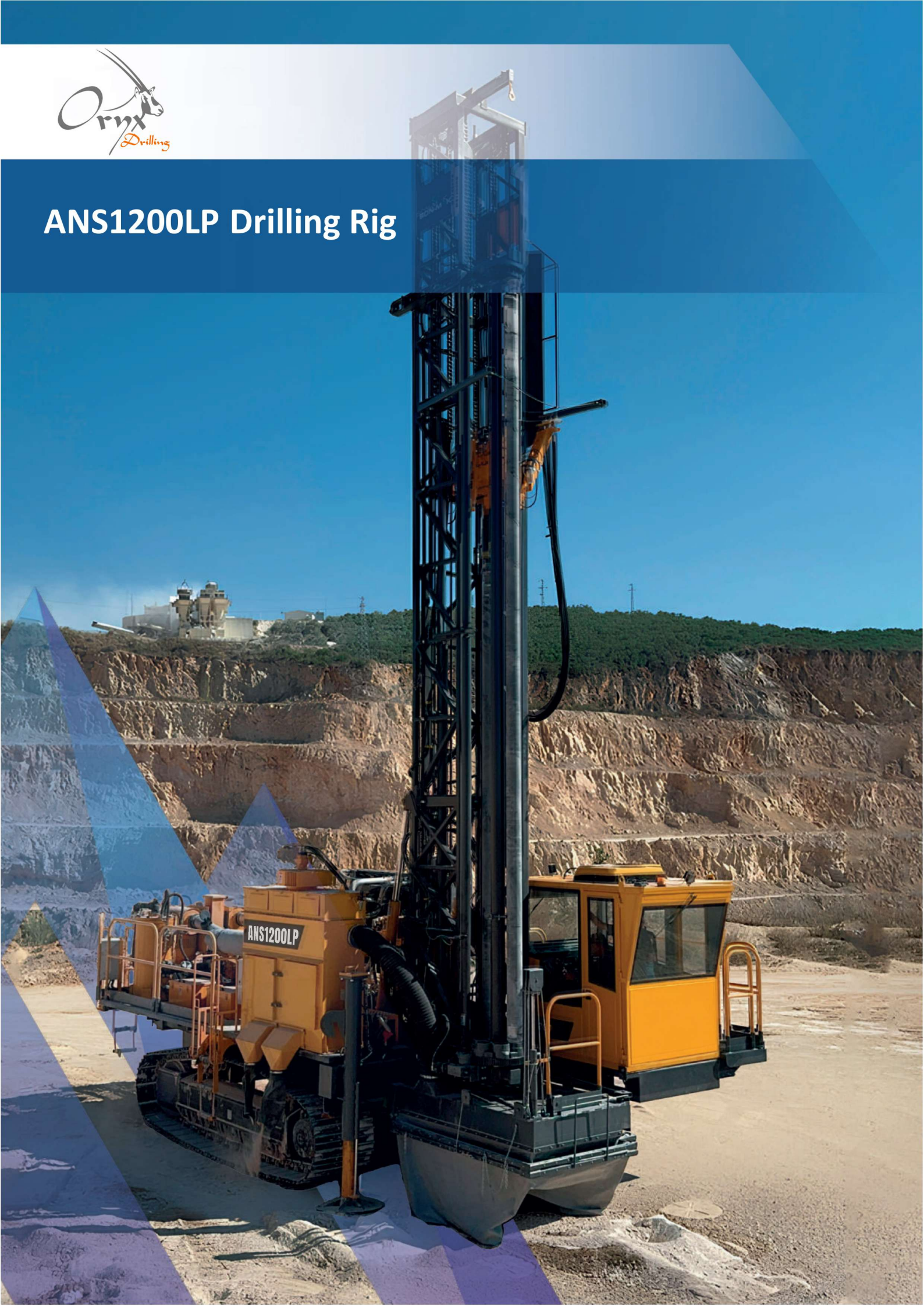
ANS1200LP Drilling Rig



RELIABLE

POWERFUL

EFFICIENT

The ANS1200LP drilling rig delivers high performance, unmatched operational readiness, and is indispensable for the drilling industry.

The crawler drilling rig with a hydraulic top drive is designed for multi-pass rotary drilling.
It is intended for drilling blast holes up to 53.3 m deep using 9.1 m drill pipes.

High performance

The forward pressure generated by hydraulic cylinders reaches 60,000 lbf (267 kN) using a diesel engine to drive the air compressor and hydraulic system. Powerful rotary drilling system with tri-cone bits allows drilling boreholes with a diameter of 150–230 mm and a depth of 32.5 ft (9.9 m) in a single pass, and up to 55.3 m in multi-pass drilling.

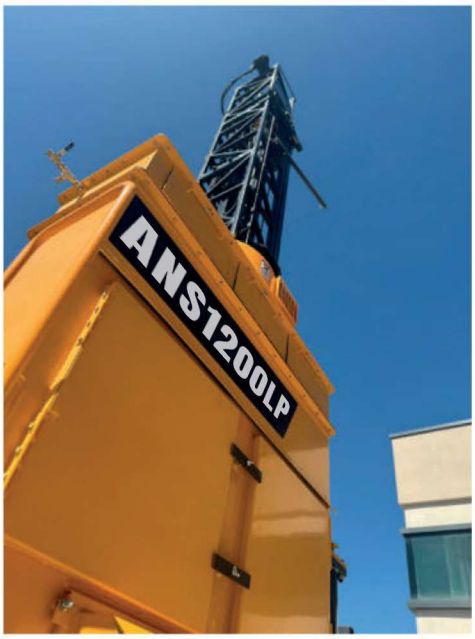
MAXIMUM PERFORMANCE
AND EFFICIENCY

Operator comfort

The pressurized operator cabin is equipped with air conditioning, an adjustable swivel seat, and provides excellent visibility.
All operating functions are controlled using the control panel. The ergonomic layout allows the operator to quickly switch between drilling and travel modes, improving work efficiency.
All rigs feature identical controls, making operation easier for operators familiar with similar machines.
The cabin noise level does not exceed 80 dBA, ensuring additional comfort for the operator.

Easy maintenance

The smart design of the drilling rigs provides easy access to all serviceable components. The built-in air conditioning system is located on the side, eliminating the need to climb onto the roof for maintenance, and the automatic lubrication system facilitates maintenance.
To increase convenience, an optional quick-fill and drain system is available for fuel, hydraulic oil, coolant, and other fluids via quick-connect couplings.



Enhanced safety

The drilling rig is equipped with numerous features, components, and systems that ensure operator safety. These include FOPS-certified cabin protection, safety glass, remote hydraulic mast control, feed system with a cutoff valve, and hydraulic locks on leveling cylinders. The rigs also come with protective guards on rotating components and an emergency shutdown system for temperature, low fluid levels, and pressure.
Other safety features include hydraulically actuated normally closed brakes, with optional automation features available to further enhance safety.

Service support

We offer a flexible approach for cooperation with our customers. Each client can expect customized terms and solutions tailored to their specific needs and operational requirements. You can purchase a full range of services or select individual services. Our subscription-based service includes the continuous presence of our engineer at the worksite, regardless of location, including remote regions of the Russian Federation. Customers can choose between a fully autonomous service station (including an independent spare parts warehouse) or a mobile repair unit. We also offer flexible financial arrangements: you can choose between a subscription fee or individual payments for each service stage.
Our engineers prioritize proactive maintenance. The goal is not only to eliminate failures as quickly as possible, but also to prevent them in advance.
The specialist monitors the condition of all machine components, alerting the owner about required replacements in advance. As a result, equipment downtime is minimized: preventive maintenance is carried out according to a clearly defined schedule. This approach maintains an operational availability ratio of 92–98%.
By choosing JSC “Mining Solutions” for service support, you ensure maximum efficiency and profitability for your business.

The mast design ensures a long service life even under the most extreme operating conditions, while the welded mast braces at an angle guarantee structural reliability.

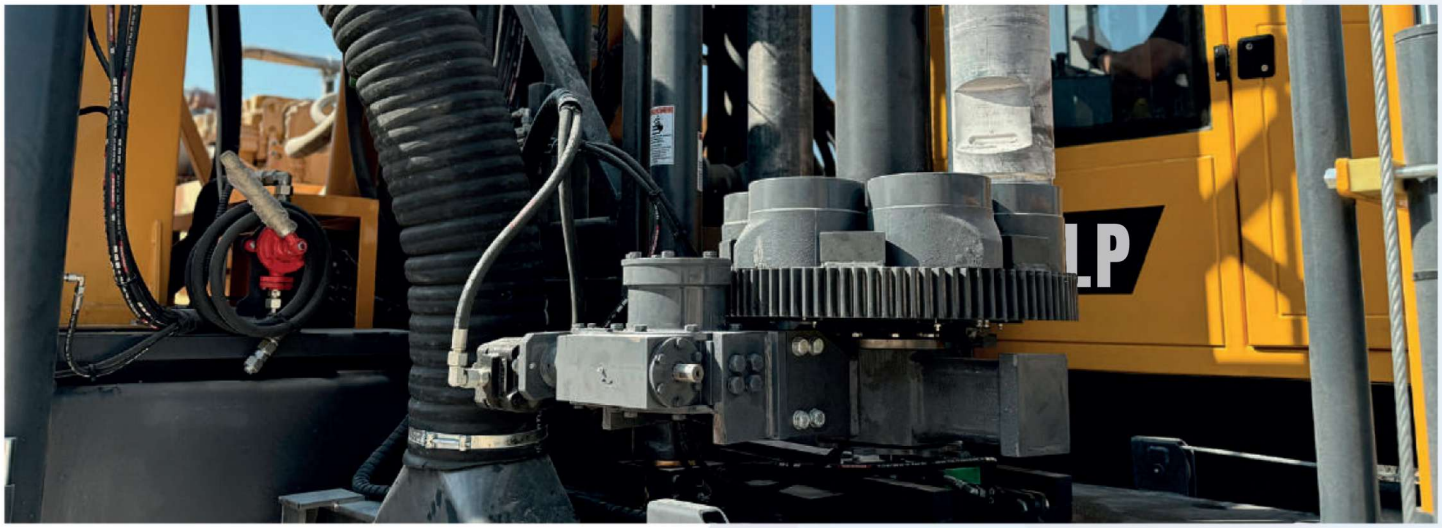
The spacious one-piece cabin with a Falling Object Protective Structure (FOPS) provides the operator with excellent visibility and a high level of comfort.

The welded beam frame is designed to withstand dynamic loads.

Electronic air feed control system enables easy compressor adjustment to optimize power usage and reduce fuel consumption, lowering the total cost of ownership.

The oscillation angles achieved through the balance beam allow the rig to traverse uneven terrain while reducing frame stress.


GENUINE PART
HYDRAULIC FILTER



TECHNICAL SPECIFICATIONS

BASE

Main frame
• Welded metal structure of longitudinal and transverse beams • Designed, manufactured, and tested for maximum dynamic deformation resistance

Leveling jacks	
Type	Hydraulic cylinder
Quantity	3
Design pressure on jack plate	On the drilling equipment side: 68.9 psi (475 kPa) The side opposite the drilling equipment side (3 jacks): 667 psi (460 kPa) The side opposite the drilling equipment side (4 jacks): 59.9 psi (413 kPa)
Position indication	Jack lift status indicators on the control panel

Capacities	
Fuel tank	1,438 L
Hydraulic tank	568 L

Chassis and propulsion system	
Model	Caterpillar 330S
Mounting	Equalizing beam suspension with 5° oscillation per side, total 10
Overall length	Caterpillar 330S: 4.60 m
Ground contact length	Caterpillar 330S: 3.61 m
Tension adjustment	Lubricated tension adjustment system
Rollers	Caterpillar 330S: 7 lower / 2 upper rollers
Roller placement	Evenly distributed between idler and drive wheel
Roller bearings	Sealed for life
Track shoes	Triple grouser Width: 33.5" (851 mm) Ground pressure: Caterpillar 300S (94 kPa)
Drive system	Closed-loop hydrostatic circuit through planetary gearbox
Travel motors	Two hydraulic axial-piston motors with fixed displacement (each 151 hp / 112.6 kW)
Travel speed range	0–1.3 mph (0–2.1 km/h)

TECHNICAL SPECIFICATIONS

MAST, CAROUSEL, AND DRILL ROD CHANGING SYSTEM

Mast	
Mast structure	Welded rectangular-section tubular frame, open at the front
Mast raising	Two hydraulic cylinders (mast raising and lowering with a full carousel-type automatic drill rod changing system and rotary head at the top of the mast)
Drill rod support	Hydraulic cylinder-driven centering mechanism
Drilling depth	
Single-pass drilling depth (open hole with drill bit above the table)	Standard mast for standard 30-ft rods: 27.5 ft (8.4 m)
Maximum borehole depth	Standard mast for standard 30-ft rods: 175 ft (53.3 m)
Carousel	
Rod length	30 ft (9.1 m)
Capacity	• 5 rods with diameters of 4½", 5", or 5$^{1}/_{2}$" (114, 127, or 140 mm) • 4 rods with diameters of 5$^{1}/_{2}$", 6¼", or 7" (140, 159, or 178 mm) • 4 rods with diameters of 7" or 7⅝" (178 or 194 mm) • 2 rods with diameters of 7⅝" (194 mm)
Operation	Two hydraulic cylinders
Safety features	• The drill rod is securely held in the carousel by a special locking mechanism • Shock-free rod changing system prevents damage to the carousel

Drill pipes		
Pipe diameter — 30 or 35 ft	Thread type	Recommended tri-cone bit diameter
4½" (114 mm)	3½" API	5⅞" – 6¾" (150–171 mm)
5" (127 mm)	3½" API or BECO	6¾" – 7⅜" (171–187 mm)
5½" (140 mm)	3½" BECO	6¾" – 7⅞" (171–200 mm)
6¼" (159 mm)	4" BECO	7⅞" – 9" (200–229 mm)
7" (178 mm)	4½" BECO	9" – 9⅞" (229–251 mm)
Rotary head		
Rotation speed range	Adjustable, 0–161 RPM	
Torque	Adjustable, 0–7,200 lbf-ft (0–9,762 Nm)	
Number of drive motors	2	
Motor type	One variable displacement axial-piston motor and one fixed displacement motor	
Gear ratio	15:1	
Rotary head travel	35 ft 7" (10.9 m), 40 ft 6" (12.3 m), optional	
Feed system		
Forward pressure	Up to 60,000 lbf (267 kN)	
Lifting force	0–22,000 lbf (0–98 kN)	
Bit load	Adjustable, 0–60,000 lbf (0–27,216 kg)	
Feed mechanism type	Hydraulic cylinders with feed cable and chains	
Cable diameter	1" (25.4 mm)	
Lifting chain	160 H	
Feed speed	Standard mast for standard 30-ft rods: 146 ft/min (44.5 m/min)	
Lifting speed	Standard mast for standard 30-ft rods: 205 ft/min (62.5 m/min)	

TECHNICAL SPECIFICATIONS

CABIN AND CONTROLS

Cabin

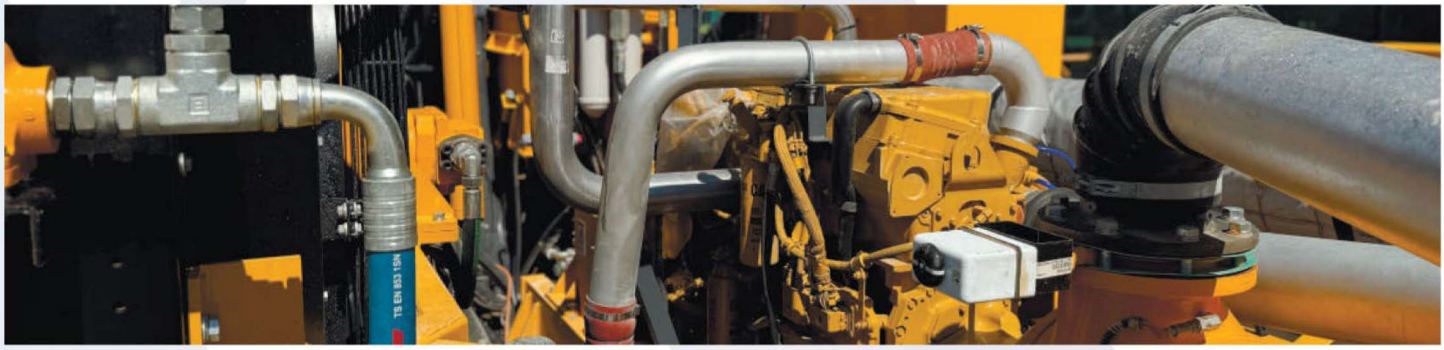
- Heat-insulated with a pressurized air system
- Adjustable swivel seat with suspension and seatbelt
- Two lockable looped doors
- Noise insulation (does not exceed 80 dBA)
- FOPS-certified (Falling Object Protective Structure standard)
- Side-mounted air conditioning system (easier to service as roof access is not required) ● Ergonomically designed semi-circular control panel
- Windshield wipers for front (drilling) and rear (machine movement) windows
- Easy access around the cabin

Controls (electro-hydraulic part)

Control panel	• Ignition panel and instruments • Engine diagnostics • Air supply controls • Drilling instruments and controls

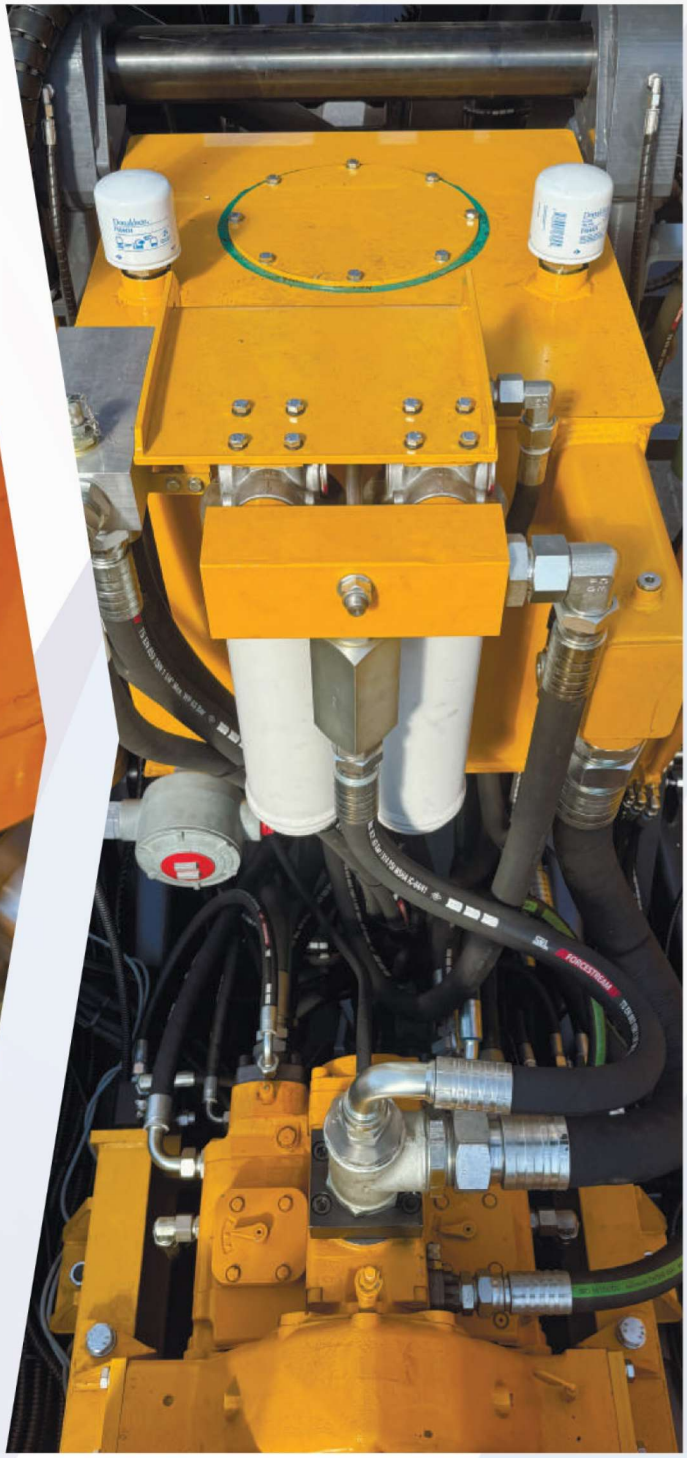
Hydraulic system

- Hydraulic pumps mounted on a single gearbox, driven by the engine via a driveshaft
- Main hydraulic pumps operate through a bypass valve to regulate feed/rotation and machine movement
- Two main pumps
- One triple pump



POWER UNIT

Compressor	
Options available with diesel engine	1,200 cfm at 110 psi (34 m^2/min at 7.6 bar)



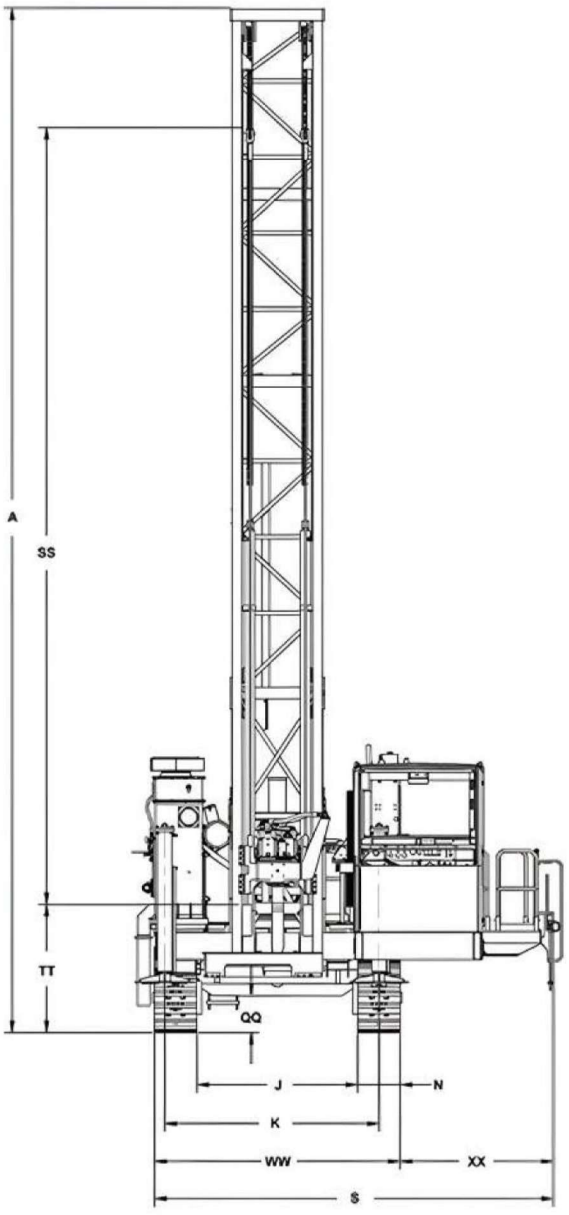
TECHNICAL SPECIFICATIONS

DIMENSIONS AND WEIGHT

Operating weight	
Estimated weight	87,000–110,000 lbs (39–50 t)

Overall dimensions (for DML LP with Caterpillar 330L chassis)

	Description	Dimensions, inches (m)
A	Height with mast raised (30-ft rod mast)	529 (13.44)
	Height with mast raised (35-ft rod mast)	590 (14.99)
B	Length with mast lowered (30-ft rod mast)	522 (13.26)
	Length with mast lowered (35-ft rod mast)	583 (14.99)
C	Length from jack center to jack center	243 (6.17)
D	Chassis length	198 (5.02)
F	Jack height from ground (the side opposite the drilling equipment installation side)	17 (0.43)
H	Height with mast lowered (mast clearance)	157 (3.99)
J	Track width (inner edge to inner edge)	81 (2.06)
K	Width from jack center to jack center	116 (2.95)
M	Overall width	204 (5.18)
N	Track width	33.5 (0.85)
Q	Height from ground to cabin top	143 (3.63)
S	Width at drilling equipment installation side (without dust collector)	201 (5.11)
U	Cabin width	65 (1.65)
V	Work platform width (the side opposite the drilling equipment installation side)	150 (3.81)
W	Work platform length	375 (9.53)
Y	Length from the side opposite the drilling equipment installation side to dust collector end	282 (7.16)
AA	Mast width (front view)	38 (0.97)
BB	Jack height from ground (the drilling equipment installation side)	19 (0.48)
CC	Length from cabin to chassis edge	108 (2.74)
DD	Length from cabin to front jack center (front view)	95 (2.41)
GG	Mast length (front view, 30-ft rod mast)	495 (12.57)
	Mast length (front view, 35-ft rod mast)	561 (14.25)
JJ	Height from ground to cooler	148 (3.76)



KK	Length from ground to dust screen platform	221 (5.61)	SS	Rotary head travel (30-ft rod mast) Rotary head travel (35-ft rod mast)	391.6 (9.95) 451.6 (11.47)
NN	Length from the side opposite the drilling equipment installation side to cabin end	387 (9.83)	TT	Height from ground to lower stop (30-ft rod mast), (35-ft rod mast)	70.4 (1.79) 71.4 (1.81)
PP	Height with mast lowered (rod changing device clearance)	174 (4.42)	WW	Chassis assembly width	148 (3.76)
QQ	Height from ground to equalizing beam suspension	24 (0.61)	XX	Work platform width (from cabin edge to chassis edge)	56 (1.42)
RR	Length from work platform edge to cabin edge	31 (0.79)	YY	Work platform width (from cabin edge to the side opposite the drilling equipment installation side)	50 (1.27)