

320XPC Rotary Blasthole Drill



Safety



Reliability



Productivity



This drill handles up to 150,000 lbs (68,038 kg) of bit loading and has operational longevity. It's the preferred choice for large diameter blasthole drilling in extremely difficult rock and operating conditions (high altitude/ low temperature).

Working ranges

Hole diameter	Maximum single pass hole depth	Maximum multi-pass hole depth	Maximum bit loading
270 mm to 444 mm	Standard 19.8 m	Single pipe rack 39.6 m	68,083 kg
	Optional 21.3 m	Dual pipe rack 59.4 m	
10 5/8 in to 17 1/2 in	Standard 65 ft	Single pipe rack 130 ft	150,000 lb
	Optional 70 ft	Dual pipe rack 195 ft	



General specifications

Mast			
Construction	Lattice type using alloy steel structural shapes		
Mast	Standard:	19.81 m	65 ft
	Optional:	21.3 m	70 ft
Raising and lowering	Two hydraulic cylinders standard diameter:	267 mm	10.5 in

Pipe handling			
Type	Parallelogram style pipe rack, one rack is standard		
Pipe size	Diameter: 235 mm - 346 mm 9.25 in - 13.625 in		
Options	Additional pipe rack, up to two total		
Auxiliary equipment	Standard deck wrench		
Auxiliary winch	Capacity:	6,350 kg	14,000 lb
Breakout wrench	P&H brand SureWrench		

Lower/propel			
Crawler type	Heavy-duty lug and tumbler drive system, Komatsu design		
Shoe width	Standard:	914 mm	36 in
	Optional:	1,117 mm	44 in
Propel machinery	Dual hydrostatic planetary drive with spring set, hydraulic release brake, 231 kW (310 hp)		
Propel speed (maximum)	High:	60 Hz:	1.61 kph 1.0 mph
		50 Hz:	1.28 kph .8 mph
	Low:	60 Hz:	.97 kph .6 mph
		50 Hz:	.80 kph .5 mph
Maximum grade	20%		
Take-up adjustment	Jack and shim		

Hydraulic system			
Main system	Closed loop design utilizing dual variable-displacement piston pumps for propel		
Auxiliary system	Open loop design utilizing vane pumps for mast raising, machine leveling, and pipe handling		
Control valves	Manifold mounted electro-hydraulic, PLC controlled - Discrete 24VDC Solenoid		
Hydraulic lines	Extensive use of high pressure steel tubing		
Filtration	3-micron return filters, 5-micron high pressure filters, 3-micron charge filters, magnetic suction strainers		

Electrical control			
<ul style="list-style-type: none"> Centurion supervisory controller provides direct integrated communication with motor drives giving precise motor control. Real-time multi-tasking capability allows for optimal machine logic sequencing, monitoring and control. Centurion I/O system uses 'Profibus' communication protocol for seamless integration of all drill subsystems and future expandability. Low-voltage 24V DC I/O drop points feature open and short circuit detection for improved diagnostics and troubleshooting. Centurion information system's enhanced graphical user interface (GUI) features intuitive, icon-based screens to display vital information such as drill status, troubleshooting information, and production drill monitoring data. System is PreVail RHM-ready and comes with a one year free subscription to PreVail RHM. 			

Hoist/pulldown			
Design	DC electric motor driven chainless rack and pinion design		
Bit loading (maximum)	68,038 kg		150,000 lb
Drill feed	up to	4.9 m/min	16 ft/min
Hoist	up to	37.0 m/min	105 ft/min

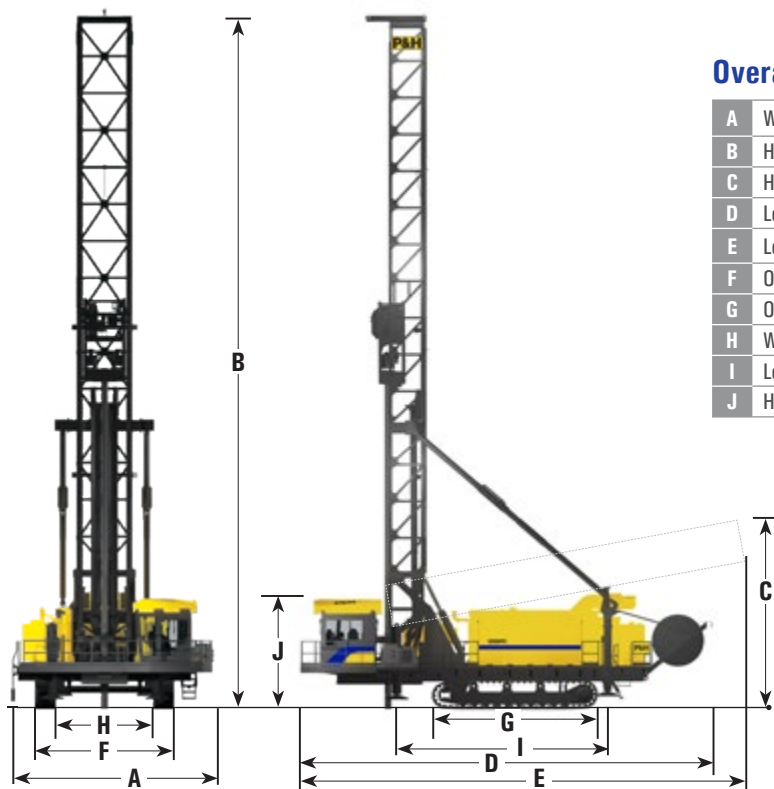
Rotary machinery			
Design	Dual DC P&H electric motors, independent ABB DCS 880 drives control (master/follower drive topology), can be run as single rotary motor during service/repairs		
Rotation speed	0-119 RPM		
Maximum Torque	Up to 33,895 Nm (25,000 ft-lbs)		

Air system			
Compressor			
Gardner-Denver SSS Series oil-flooded screw type			
Available volumes	Standard:	97 m ³ /min	3,450 cfm*
Sullair oil-flooded screw type			
Available volumes	Optional:	109 m ³ /min	3,850 cfm*
requires 746 kW / 1,000 hp main motor			
Operating pressure	448 kPa		65 psi
Air filters	Dual Donaldson 2-stage, dry type (Gardner Denver) Three Donaldson 2-stage, dry type (Sullair)		

*Nominal air volume. Actual values may vary according to application.

Electrical system			
Incoming power	60Hz	4,160V / 7,200V 3-phase	
Supply voltage	50Hz	6,600V or 7,200V 3-phase	
Recommended supply transformer	Minimum 1.5MVA continuous, 6MVA minimum short circuit at drill		
High voltage switchgear	External disconnect at trail cable junction box, high voltage load break disconnect and high voltage vacuum contactor for main drive motor and drives		
Main drive motor	Standard:	522 kW	700 hp
	Optional:	746 kW	1,000 hp

Overall dimensions

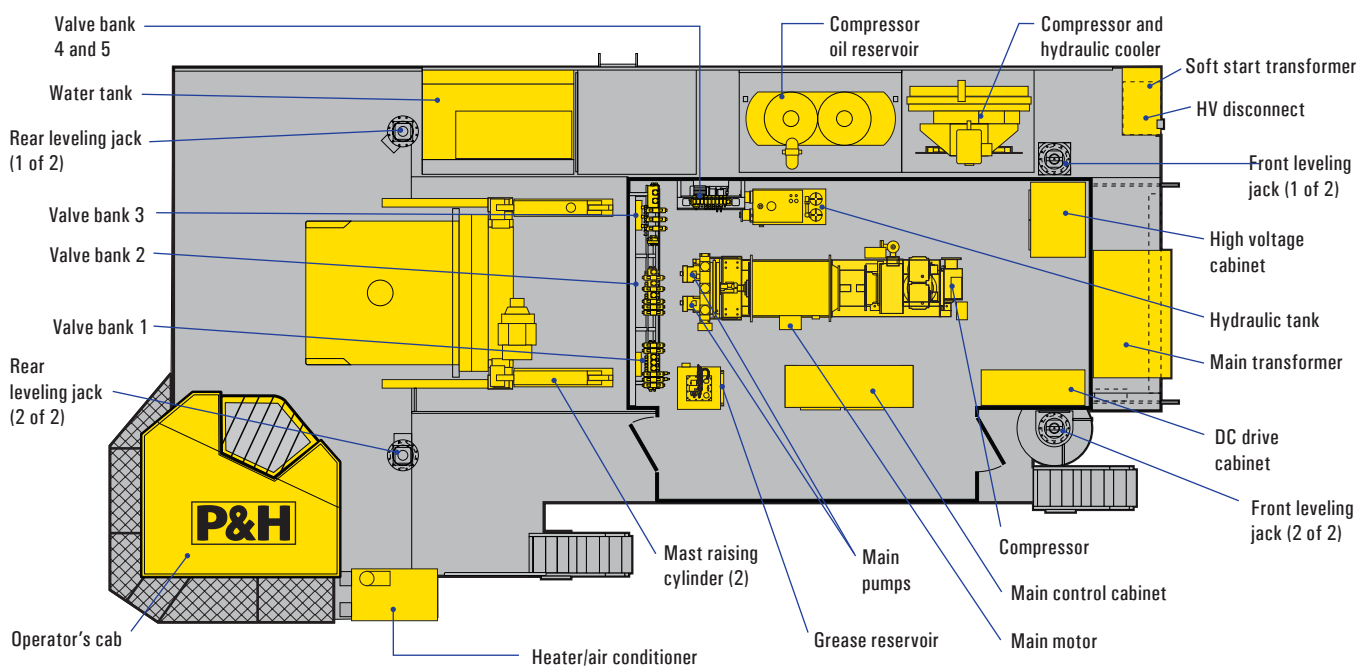


A	Width, overall	8.51 m	27 ft 11 in
B	Height, mast up	30.6 m	100 ft 6 in
C	Height, mast down	10.2 m	33 ft 6 in
D	Length, mast up	18.50 m	60 ft 8 in
E	Length, mast down	32.88 m	107 ft 10 in
F	Overall width of crawlers	6.1 m	20 ft
G	Overall length of crawlers	7.3 m	24 ft
H	Width of jacks	4.6 m	15 ft 2 in
I	Length between jacks	10.3 m	33 ft 7 in
J	Height to top of operator's cab	4.86 m	15 ft 11 in

Weights – approximate

Operating weight (maximum)	181,437 kg	400,000 lb
Shipping weight with mast	153,949 kg	339,400 lb
Ground bearing pressure for track pads		
914 mm (36 in) shoes	200 kPa	29.0 psi
1,117 mm (44 in) shoes	156 kPa	22.6 psi

Machinery deck plan



Leveling jacks	
Cylinders	Four (4) 254 mm (10 in) diameter x 1,676 mm (66 in) stroke
Jack pads	Ground pressure
Standard:	diameter: 762 mm (30 in) 840 kPa 129 psi
Optional:	diameter: 1,270 mm (50 in) 317 kPa 46 psi
Auto level	Standard feature
Operator's cab	
Type	Rear mounted with vibration and noise suppression
Noise	< 80 dB while drilling
Controls	PLC controlled, back lit for night operation
Glazing	Shatter-resistant, laminated glass on all sides, roof window with guard
Climate control	Mine air systems HVAC unit available providing pressurization and filtration
Falling object protection	FOPS level II
Mini refrigerator	

Lighting	
Standard:	LED floodlights for work and area lighting

Optional equipment	
<ul style="list-style-type: none"> • 100A welding outlet • 600V / 100A auxiliary outlet(s) • Auxiliary compressor • Bit lubrication • Cable reel • Cable reel lowering system • Cold weather package • Deck bushing (roller type) • Deck mounted jib crane • Fire suppression (locally specified and supplied) • Drill automation package • Hydraulic rear dust curtain • Modular and Terrain interface package • Remote propel control • Shock sub adapter • Stand alone welder • Tow package • Wiggins 'Quickfil' system 	

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EN-320XPCSPEC01-1122-V5