



320XPC

Rotary Blasthole Drill



Working Ranges

Hole Diameter	270 mm to 444 mm	10 5⁄8 in. to 17 1⁄2 in.
Maximum Single Pass Hole Depth:		
Standard:	19.8 m	65 ft.
Optional:	21.3 m	70 ft.
Maximum Multi-Pass Hole Depth:		
Single Pipe Rack:	39.6 m	130 ft.
Dual Pipe Rack:	59.4 m	195 ft.
Maximum Bit Loading	68,038 kg	150,000 lbs.

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:	6350 kg	14,000 lbs.
Breakout Wrench	P&H brand SureWrench		

Lower/Propel

Crawler Type	Heavy-duty lug and tumbler drive system, Joy Global design		
Shoe Width	Standard:	914 mm	36 in.
	Optional:	1117 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
		50 Hz:	1.28 kph
	Low:	60 Hz:	.97 kph
		50 Hz:	.80 kph
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

- 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 lbs.
Drill Feed	To	4.9 m/min	16 ft/min
Hoist	To	37.0 m/min	105 ft/min

Rotary Machinery

Design	Dual DC P&H electric motors, independent ABB DCS-800 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

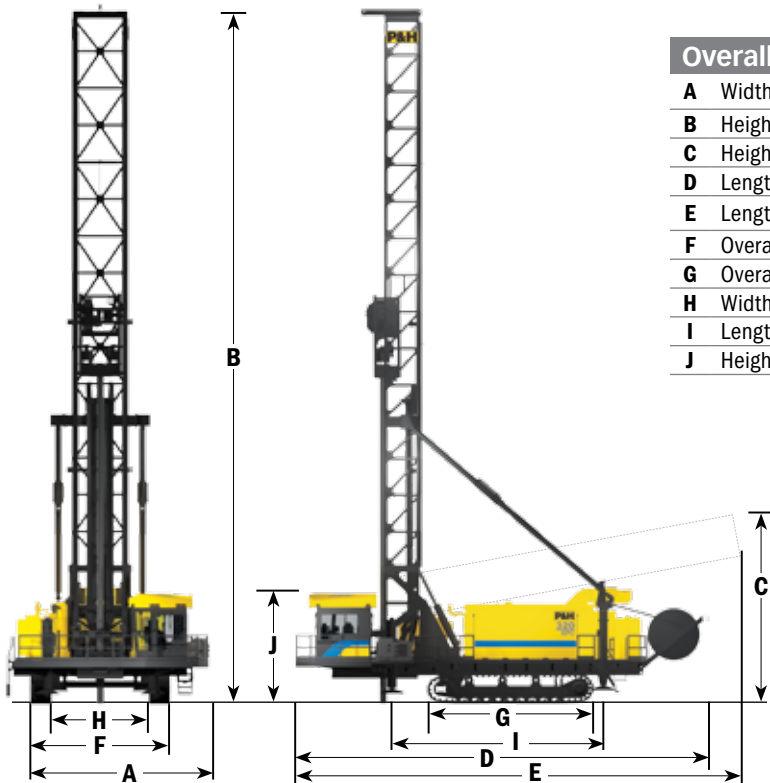
Gardner-Denver SSY Series oil-flooded screw type

Available Volumes	Standard:	97 m ³ /min	3,450 cfm*
Sullair oil-flooded screw type			
Available Volumes	Optional:	109 m ³ /min requires 746 kW / 1000 hp main motor	3,850 cfm*
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 Supply Voltage	60Hz	4160V / 7200V 3-Phase	
	50Hz	6600V or 7200V 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



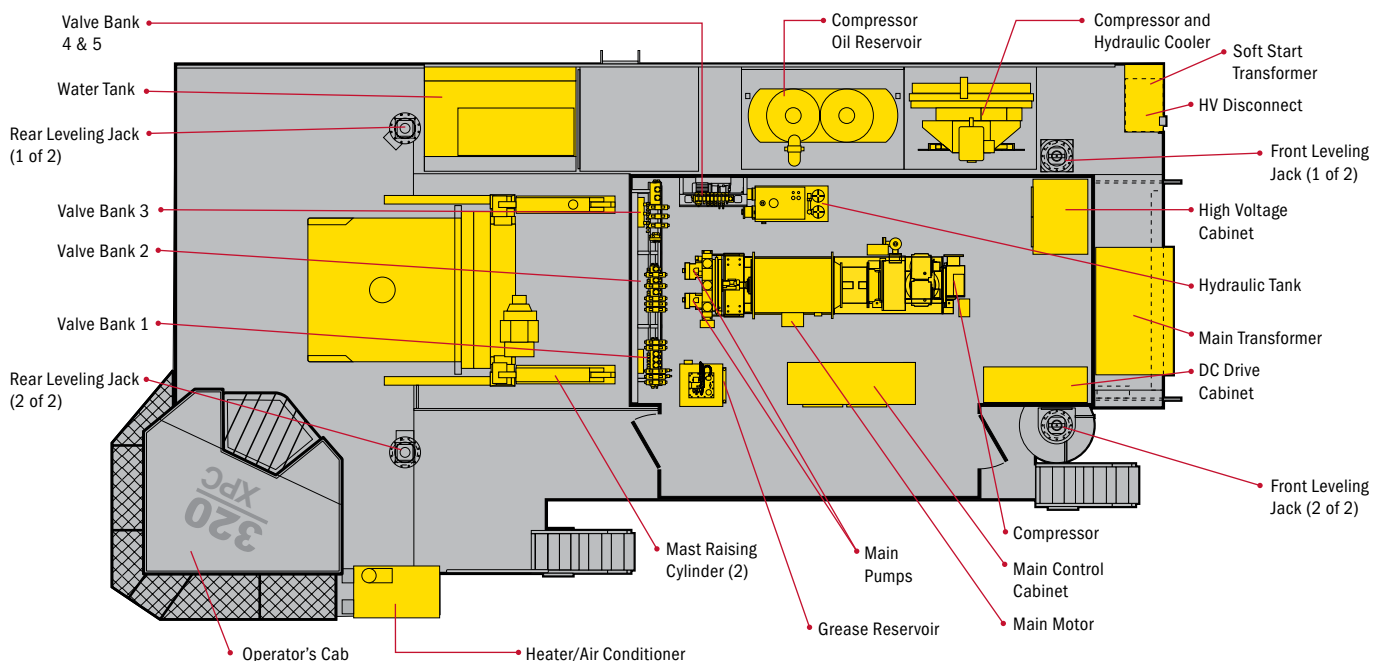
Overall Dimensions

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 op. cab	4.86 m	15 ft.	11 in.

Weights – Approximate

Operating Weight (maximum)	181,437 kg	400,000 lbs.
Shipping Weight with Mast	153,949 kg	339,400 lbs.
Ground Bearing Pressure for Track Pads		
914 mm (36 in.) shoes	200 kPa	29.0 psi
1117 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		

Lighting

Standard: LED floodlights for work and area lighting

Operator's Cab

Type	Rear mounted with vibration and noise suppression
Noise	< 80 dB while drilling
Controls	PLC controlled, backlit 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

Optional Equipment

- 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)
- Hydraulic Rear Dust Curtain
- Modular®* and Terrain* Interface Package
- Remote Propel Control
- Shock Sub Adaptor
- Soft Start Transformer
- Stand Alone Welder
- Tow Package
- Wiggins 'Quickfill' System

* Modular and Terrain are not registered trademarks of Joy Global Inc. or any of its affiliates.

JOYGLOBAL



Product designs, specifications and/or data in this document are provided for informational purposes only and are not warranties of any kind. Product designs and/or specifications may be changed at any time without notice. The only warranties that apply to sales of products and services are Joy Global's standard written warranties, which will be furnished upon request.

Joy Global, Joy, P&H, Centurion, Mine Air, PreVail, SureWrench and related logos are trademarks of Joy Global Inc. or one of its affiliates. © 2013 Joy Global Inc. or one of its affiliates. All rights reserved.



joyglobal.com