

## Pneumatic crawler drill



### CRAWLER ASSEMBLY

The crawler uses parts designed and time tested by Furukawa. These include the track-link crawler chains and track rollers. The ruggedly constructed crawler demonstrates effortless maneuverability on rough ground and designed for easy maintenance.

#### Exceptional stability on soft ground

Shoe plate width is 11.8 inches ( 300mm ) which is wider than that of any other competitive model. Low ground-contact pressure as well as a low center of gravity further ensure dependable traction on soft ground and maximum stability during the drilling operation.

#### Lifetime floating seals for minimum maintenance

Lifetime floating seals are used in the front idlers and track rollers, making lubrication unnecessary over an extended period of time. Track guards prevent the shoe links from misalignment and also protect and help extend the life of the links.

#### Convenient crawler-tension adjustment

Crawler tension may be hydraulically adjusted with the utmost ease by using a grease gun.

#### Effortless mobility on rough terrain

Powerful 12HP air motors and a hydraulic oscillating system permit ample mobility and traction even on rough terrain. The motors provide adequate power to climb slopes while towing a compressor.

#### Direct motor-connected final drive

The final drive is directly connected to the air motor to minimize power loss and ensure drive efficiency.

#### Highly reliable automatic brake

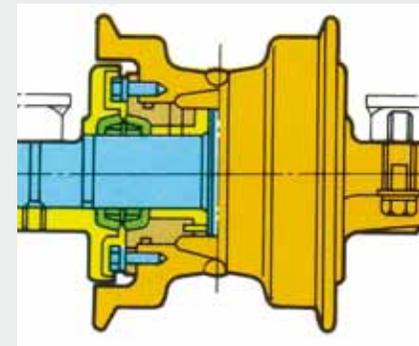
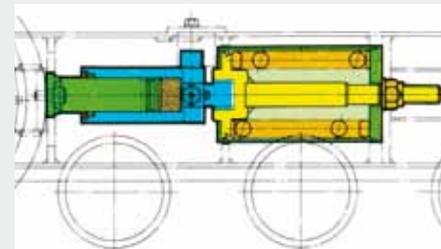
An automatic brake is incorporated inside the air motor and interlocked with the traction control valve.



Pneumatic drive motor



Ample clearance



# PCR-200



Air components



Controls



Pneumatic drifter PD200

## PNEUMATIC DRIFTER (PD200)

### Super high-speed drilling

The PD200 pneumatic drifter, newly perfected for the PCR200 crawler drill by FRD, has a large bore 5 inches (130mm) cylinder, providing a powerful drive for the rapid and reliable hammering action. A dependable and durable geared motor as well as an independent rotation device further ensure outstanding drilling performance. The drifter can withstand severe working conditions, and can also easily handle a wide range of jobs involving various kinds of rock. A variety of bits ranging in size from 2.5 inch (65mm) to 4 inch (100mm) is available.

### Triple noise-muffling system

Two-stage noise diffusion takes place within the drifter to reduce the exhaust noise. The exhaust then passes through a muffler hose and another diffusion muffling device, located in the guide shell, which reduce the noise level even lower.

### Streamlined piston

The piston has a streamlined design, a unique FRD development, that has successfully increased hammering power and efficiency. The special piston has been in use in different drifter models, as well as in other FRD products, such as air leg drills, and has proved its superiority. Less stress is placed on the rod and a consistently high long-hole drilling performance is achieved.

### Minimized rotation stress

The integrated motor speed-reduction unit and front head are fixed onto the carriage, which means that the front head moment is not exerted on the through bolts. This greatly reduces rotation stress on the bolts and on the entire drifter.



Heavy-duty track



Sub valve for rod change



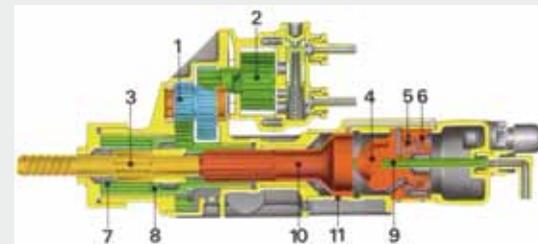
Centralizer



Feed motor

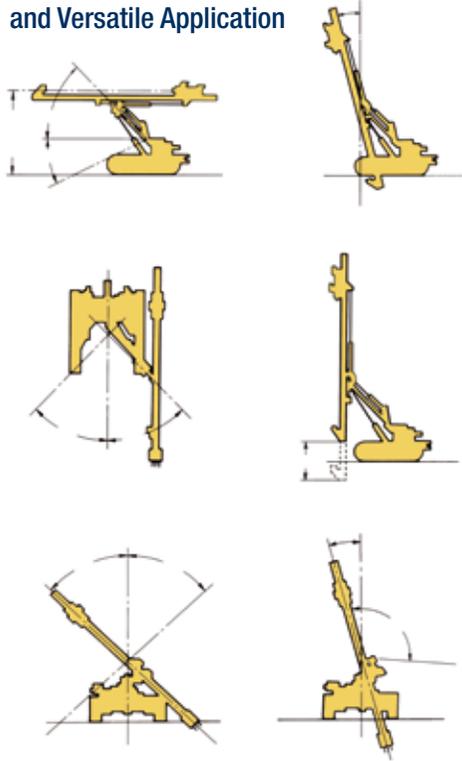


Double pilot check valve



1. Reduction gear
2. 2-rotor gear motor
3. Shank rod
4. Valve plug
5. Valve
6. Valve chest
7. Chuck
8. Chuck driver
9. Blow tube
10. Piston
11. Cylinder

## Wide Drilling Coverage and Versatile Application



The advanced design of the boom and hydraulic system assures outstanding versatility and high performance for handling all types of drilling operations. Road construction, dam work, open area drilling, mining, quarrying operations, tunneling and other drilling operations are all performed with unsurpassed efficiency.

# PCR-200

## BOOM

### Easy 180 degree power dumping

The guide shell is hydraulically operated within a 180 degree range without inconvenient index pin change.

### Toe-hole drilling made simple

Changeover from vertical drilling to toe-hole drilling can be made easily without changing the pin.

## GUIDE SHELL

### Sturdy structure incorporating the third muffler

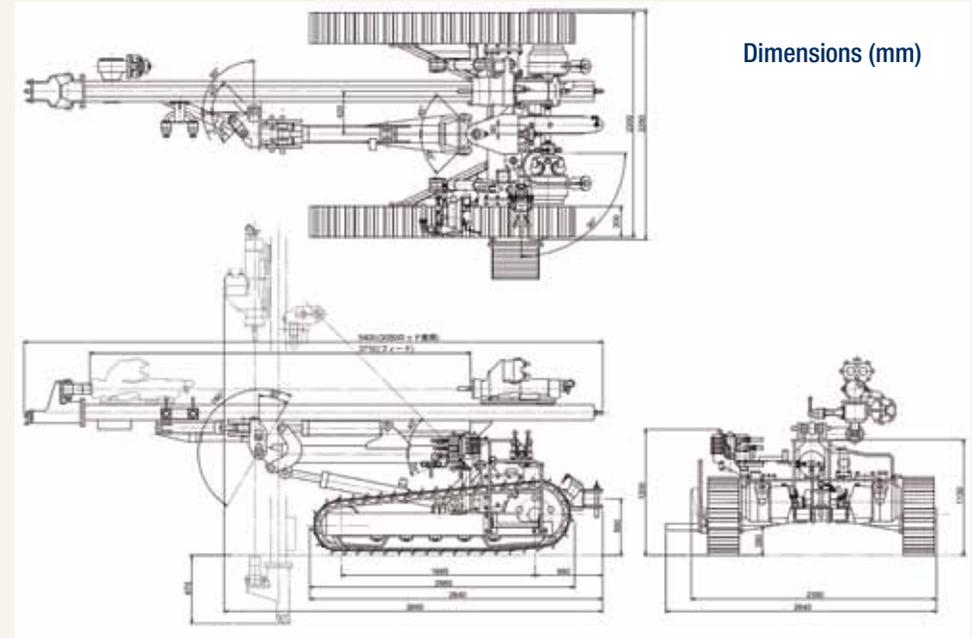
The box-type guide shell (patent pending) incorporates a third-stage of the diffusion muffling system for quiet operation. The firmly supported foot pad and other design features provide top rigidity for the guide shell. The third muffler is incorporated along almost the entire length of the guide shell to guarantee complete muffling efficiency.

### Quick and powerful rod pull-out

The piston-type air motor with an output of 5HP provides an extremely high rod retracting force and ensures rapid operation. This air motor is interchangeable with the power pump motor to reduce your parts stock requirements.

### Extra-long Guide Shell Slide

The extra-long 4 ft (1200mm) guide shell slide facilitates drilling and drill-extending operations. It permits easier drilling with the foot pad firmly pressed against the rock – even on rough and irregular surfaces. It also ensures safe guide shell retraction with no danger of damage to the guide shell tip.



Dimensions (mm)



## Outstanding Drilling Performance

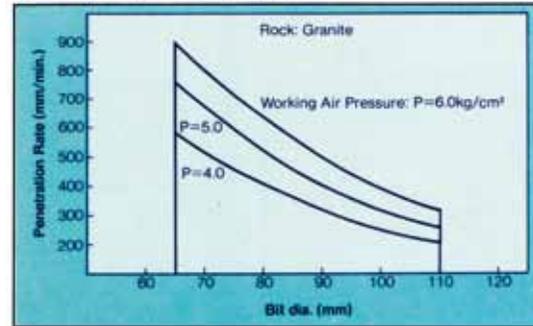
The powerful PCR200 crawler drill features a high-performance PD200 drifter. It's capable of high maneuverability and exceptional operation ease on any site to assure you a total drilling capability that ranks as the best in this class. All figures were compiled during consecutive factory/on-site actual-use testing.

## Total Muffling System for Operator Comfort

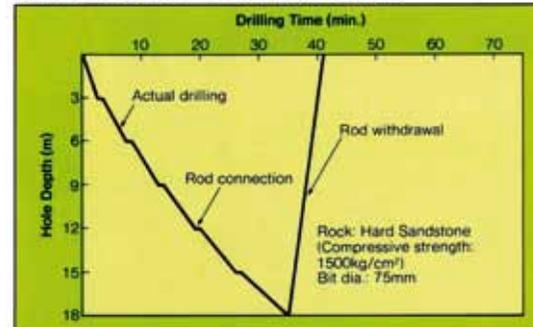
Exhausts of the drifter and all other motors are channeled through mufflers. A portion of the exhaust is recycled and used to lubricate the guide shell and chain of the sprocket. The rest is discharged after passing through the muffling system



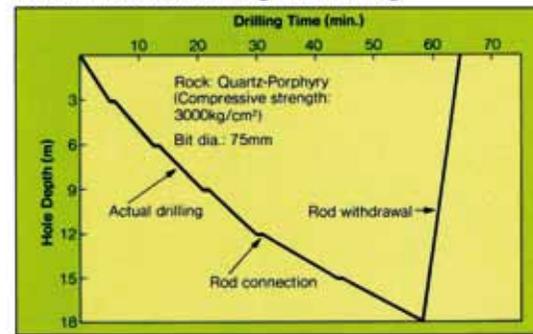
Performance of PD200 Drifter



Performance Data of Long Hole Drilling



Performance Data of Long Hole Drilling



Model					
Dimensions	US Standard	Metric			
Weight	1,102 lb	5000 kg	<b>Hydraulic Units</b>		
Overall length	17 ft	5400 mm	Boom length	6.5 ft	2000 mm
Feed travel	12 ft	3710 mm	Boom lift ( up / down )	45°/25°	
Track length	8.4 ft	2580 mm	Boom swing ( right / left )	45°/45°	
Length of ground contact	6.1 ft	1885 mm	Guide swing (right / left) (95° right, 15 °left with pin change)	50° / 50°	
Tow hitch height	1.8 ft	550 mm	Guide tilt (without pin change)	180°	
Overall width	7,8 ft	2390 mm	Power pump (Model MP12)	4 kW	
Track width	7.2	2200 mm	<b>Drifter ( Model PD200 )</b>		
Width of grousers	1 ft	300 mm	Weight without shank rod	396 lb	180kg
Overall height ( Boomlowered)	4.1 ft	1250 mm	Length without shank rod	3.3 ft	1020 mm
Ground clearance	11 in	280 mm	Cylinder diameter	5 in.1	130 mm
<b>Crawler traction</b>			Piston stroke	3.1 in	80 mm
Ground pressure	.45 kg/cm²		Air consumption	????	16 cbm
Traveling speed (towing a compressor on level ground)	1.9 mph	3.2 km/h	Blows / min	~ 1600	
Grade ability	22°		Main air hose connection	2 in	50 mm
Oscillating angle	15°				
Traction air motor (Model MR13, piston-type)	8,8 kW				
<b>Guide Shell</b>					
Max. horizontal drill height	10 ft	3050 mm			
Guide slide travel	3.9 ft	1200 mm			
Air feed motor (Model MC2)	4 kW				
Steel change	10 ft	3050 mm			

High-performance drilling options. More productive. Less maintenance.

## Pneumatic Down-the-Hole Drill



### CRAWLER ASSEMBLY

The crawler uses parts designed by Furukawa. These include the track-link crawler chains and track rollers. The ruggedly constructed crawler demonstrates effortless maneuverability on rough ground. It is also designed for easy maintenance.

### Exceptional stability on soft ground

Shoe plate width is 11.8 inches (300mm) which is wider than that of any other competitive model. Low ground-contact pressure as well as a low center of gravity further ensure dependable traction on soft ground, and maximum stability during the drilling operation.

### Lifetime floating seals for minimum maintenance

Lifetime floating seals are used in the front idlers and track rollers, making lubrication unnecessary over an extended period of time.

### Well-protected shoe links

Track guards prevent the shoe links from dropping off and also help extend the life of the links.

### Convenient crawler-tension adjustment

Crawler tension may be hydraulically adjusted with the utmost ease by using a grease gun.

### Effortless mobility on rough terrain

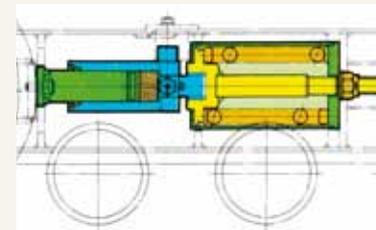
Powerful 12HP air motors and a hydraulic oscillating system permit good mobility and traction even on rough terrain. The motors provide adequate power to climb slopes while towing a compressor.

### Direct motor-connected final drive

The final drive is directly connected to the air motor to minimize power loss and ensure drive efficiency.

### Highly reliable automatic brake

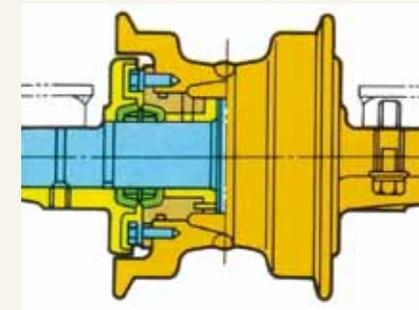
An automatic brake is incorporated inside the air motor and interlocked with the traction control valve.



Pneumatic drive motor



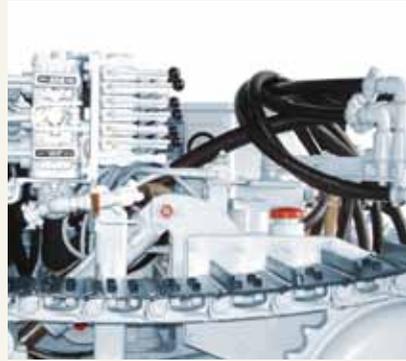
Excellent ground clearance



# PCR-200DTH



Air components



Controls



Rotary head



Heavy-duty track



Sub valve for rod change



Footpad & Dusthood



Feed motor



Double pilot check valve

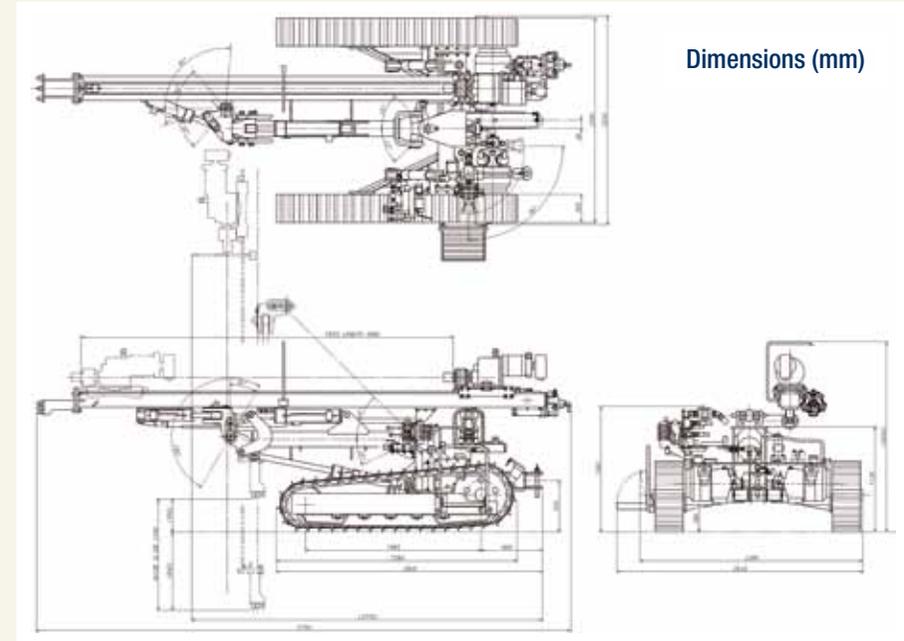


Hydraulic breakout clamp



High-performance drilling options. More productive. Less maintenance.

Specifications					
Dimensions		US Standard	Metric		
Overall length		18.86 ft	5750 mm	<b>Guide Shell</b>	
Overall width		7.84 ft	2390 mm	Length	18.86 ft / 5750 mm
Overall width (without operator step)		7.38 ft	2250 mm	Feed travel	13 ft / 3980 mm
Overall height (Boom lowered)		4.46 ft	1360 mm	Max. pulling force	14 kN
Track length		8.46 ft	2580 mm	<b>Feed system</b>	
Length of ground contact		6.18 ft	1885 mm	Air feed motor / Chain feed	3,7 kW
Width of grousers		11.8 in	300 mm	<b>Hydraulic Units</b>	
Ground clearance		11.0 in	280 mm	Power pump	3,7 kW
<b>Crawler traction</b>				Operating pressure	2,495 psi / 172 bar
Machine weight (without hammer & rod)		10,934 lb	4960 kg	Hydraulic fluid tank capacity	4.5 gal / 17 litre
Travelling speed		2.7 mph	3,5 km/h	<b>Supply air requirement</b>	
Traction air motor		8,8 kW		Air pressure (Max.)	290 psi / 20 bar
Grade ability (without compressor)		34°		Air flow rate (Min.)	22 m³/min
Oscillating angle		15°		Inlet size	2 in / 51 mm
<b>Rotary head</b>				<b>Drill rod</b>	
Air motor & reduction gear				Rod length	9.84 ft / 3000 mm
Weight		429.9 lb	195 kg	Rod diameter	3 in / 76 mm
Max. torque		2 kN		<b>Hammer</b>	
				Size	3 - 4 in / 76 - 102 mm
				Weight	83.7 lb / 38 kg
				Length	43 in / 1098 mm
				Diameter	3.8 in / 93 mm
				Bit gauge	4 - 5 in / 95 - 127 mm



# PCR-200DTH

## BOOM

### Easy 180 degree power dumping

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### Toe-hole drilling made simple

Changeover from vertical drilling to toe-hole drilling can be made easily without changing the pin.

## GUIDE SHELL

### Sturdy structure incorporating the third muffler

The box-type guide shell, which incorporates the third-stage of the diffusion muffling system, has been developed by FRD and patents have been applied for. The firmly supported foot pad and other design features provide top rigidity for the guide shell. The third muffler is incorporated along almost the entire length of the guide shell to guarantee complete muffling efficiency.

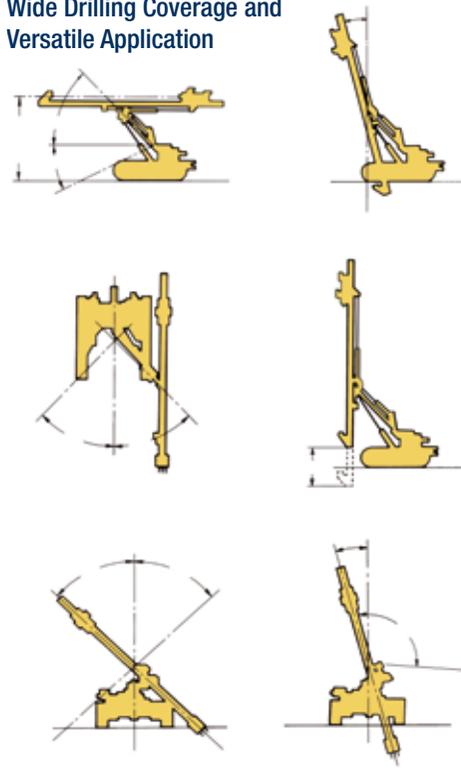
### Quick and powerful rod pull-out

The piston-type air motor with an output of 5HP provides an extremely high rod retracting force and ensures rapid operation. This air motor is interchangeable with the power pump motor to reduce your parts stock requirements.

### Extra-long Guide Shell Slide

The extra-long 47.2 inches (1200mm) guide shell slide facilitates drilling and drill-extending operations. It permits easier drilling with the foot pad firmly pressed against the rock – even on rough and irregular surfaces. It also ensures safe guide shell retraction with no danger of damage to the guide shell tip.

### Wide Drilling Coverage and Versatile Application



The advanced design of the boom and hydraulic system assures outstanding versatility and high performance for handling all types of drilling operations. Road construction, dam work, open area drilling, mining, quarrying operations, tunneling and other drilling operations are all performed with unsurpassed efficiency.



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Option	HCR900-ES II	HCR900-ES20	HCR1200-ED II	HCR1500-ED II	HCR1500-D20	DCR20	PCR200	PCR DTH
Water/dust suppression system	✓	✓	✓	✓	✓	✓	✓	✓
Heavy-duty rear mounted bumper	-	-	✓	✓	✓	-	-	-
Cold start	✓	✓	✓	✓	✓	✓	-	-
2D angle indicator	✓	✓	✓	✓	✓	✓	-	-
3D angle indicator	✓	✓	✓	✓	✓	✓	-	-
Global position tracking (GPS)	✓	✓	✓	✓	✓	✓	-	-

✓ = option, - = not available

# OPTIONS