



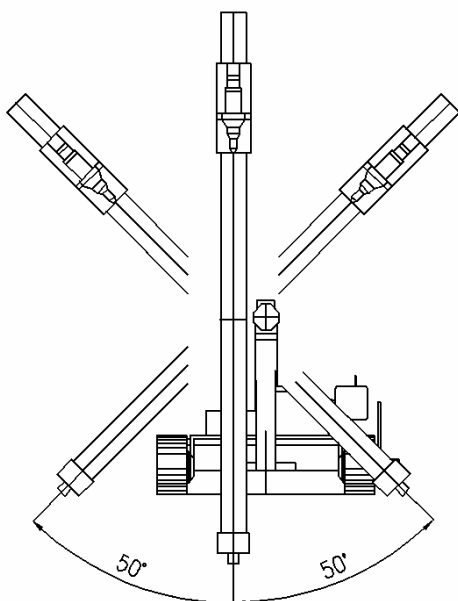
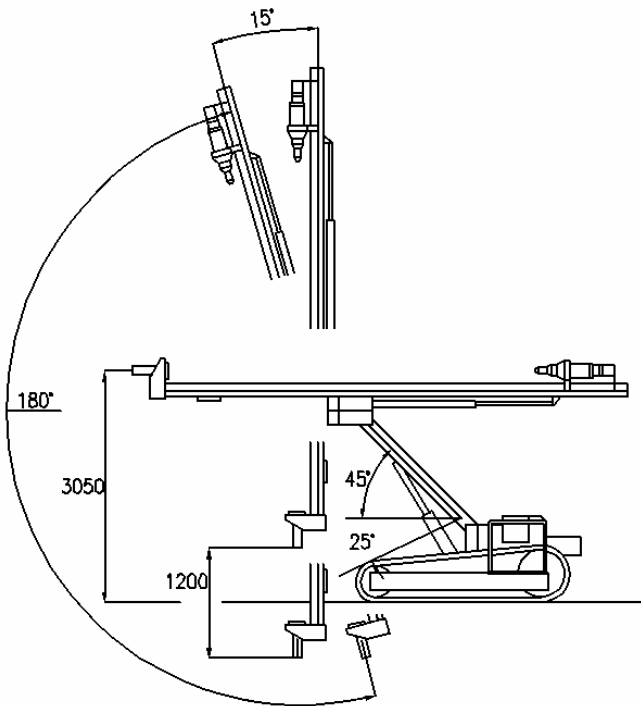
## **THE FURUKAWA PCR200 CRAWLER DRILL INTRODUCES NEW DIMENSIONS IN POWER, SPEED, NOISE CONTROL, AND ALL-ROUND OPERABILITY**

A newly developed pneumatic drifter delivers the powerful and “quick” punches that are needed for efficient drilling operations. What’s more, the noise of the punches is greatly reduced by the truly effective triple-stage noise-diffusion muffling system. The crawler fully utilizes advanced FURUKAWA power shovel know-how and quality parts for top dependability. The ground-hugging structure ensures “rock-like” stability. Easy tracking up a steep slope, too. Simple crawler-tension adjustment and easy maintenance are additional important features. The strong box-shaped guide shell and sturdy foot pad ensure complete rigidity. The feed motor generates highly reliable pull-out power. The power boom has an ample swinging range, is complete with safety devices, and can be readily set up for toe-hole drilling. Semi-circle power dumping is another advantageous feature.

# THE UNBEATABLE FURUKAWA PCR200

## 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, tunnelling and other drilling operations are all performed with unsurpassed efficiency.



## Crawler Assembly

### Sure transaction on rough sites

The crawler uses parts originally designed and manufactured for power shovels made by FURUKAWA's Construction Machinery Division. These include the track-line crawler belts and track rollers. The ruggedly constructed crawler demonstrates effortless manoeuvrability on rough ground. It is also designed for easy maintenance.

### Exceptional stability on soft ground

Shoe plate width is 300mm (12"), which is wider than that of any other competitive model. Low ground-contact pressure as well as a low centre of gravity further ensure dependable traction on soft ground, too, and maximum stability during the drilling operation.

### Lifetime floating seals for minimum maintenance

Lifetime floating seals are employed for the front idlers and track rollers. This makes lubrication unnecessary over an extended period of time.

### Ample 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.

### 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.

### Highly reliable automatic brake

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

## BOOM

### Easy 180-degree power dumping

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

### Toe-hole drilling made simple

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

# FACTS BEHIND OUR HIGH PERFORMANCE

## 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 FURUKAWA 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 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.

## SAFETY DEVICES

Accident-free operation and equipment safety are ensured by a number of safety devices, which include:

### Double pilot check valve

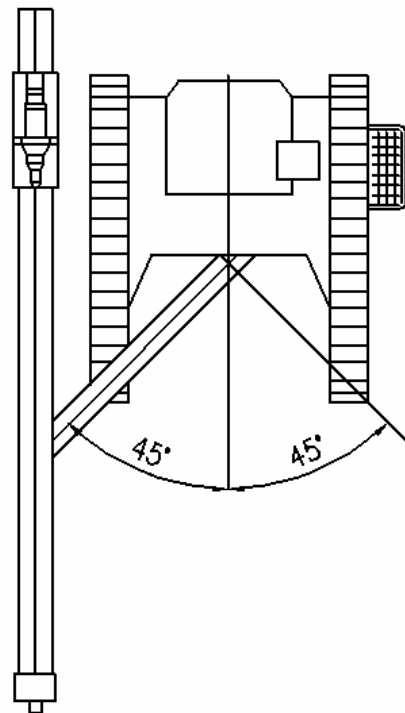
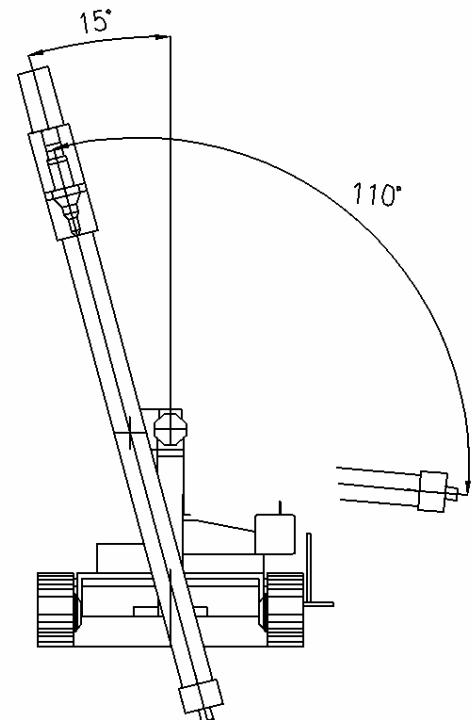
A double pilot check valve is incorporated in the boom lift cylinder and the guide tilt cylinder to prevent accidental falling due to oil hose breakage or other causes. At the same time the boom and the guide shell are prevented from free-falling even in the event of leakage from the valve or oil hose.

### Oscillation circuit pilot check valve

A pilot check valve in the oscillation circuit protects the equipment against damage due to free-falling.

### Oscillating lock valve

This valve cuts off the oscillating circuit of the oscillating cylinders to prevent sway and also fixes the track frame and center frame. It's manually operated when doing work involving right-to-left boom movement. At other times, it should be open.

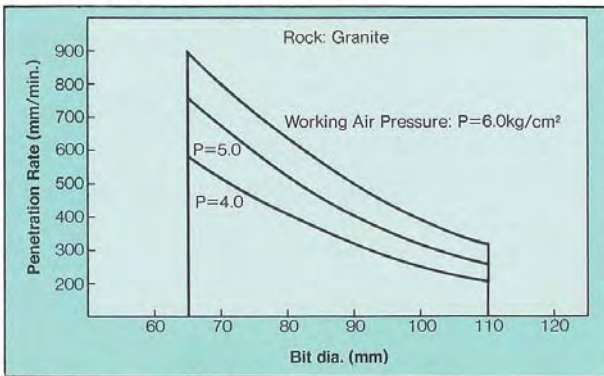




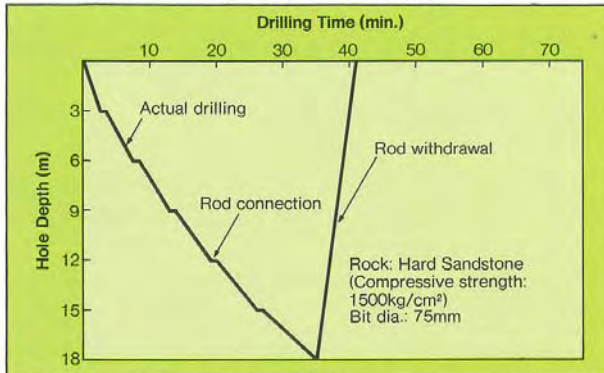
# Outstanding Drilling Performance

The powerful PCR200 crawler drill features a high-performance PD200 drifter. It's capable of high manoeuvrability and exceptional operation easy on any site to assure you a total drilling capability that ranks as best in this class. Check the drilling performance data shown below, if you are not quite convinced. All figures were compiled during on-site actual-use testing.

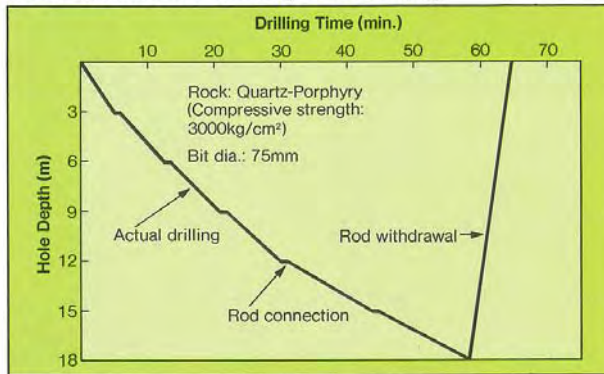
**Performance of PD200 Drifter**



**Performance Data of Long Hole Drilling**



**Performance Data of Long Hole Drilling**



## PNEUMATIC DRIFTER

### Super high-speed drilling

The PD200 pneumatic drifter, newly perfected for the PCR200 crawler drill by FURUKAWA, has a large bore (130mm or 5 1/8") 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 kind of rock. A variety of bits ranging in size from 65mm to 100mm (2 1/2" - 4") 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 FURUKAWA 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 FURUKAWA 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 bolt. This greatly reduces rotation stress on the bolt and on the entire drifter.

## CONTROLS

### Centralized control valves and cocks

Hydraulic and pneumatic control valves and cocks are laid out in a centralized location for top operability and high operational efficiency. The fine control valve offers more precise feed control for coping with variations in drilling conditions.

### Sub valve for rod change

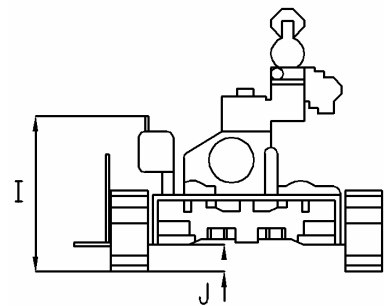
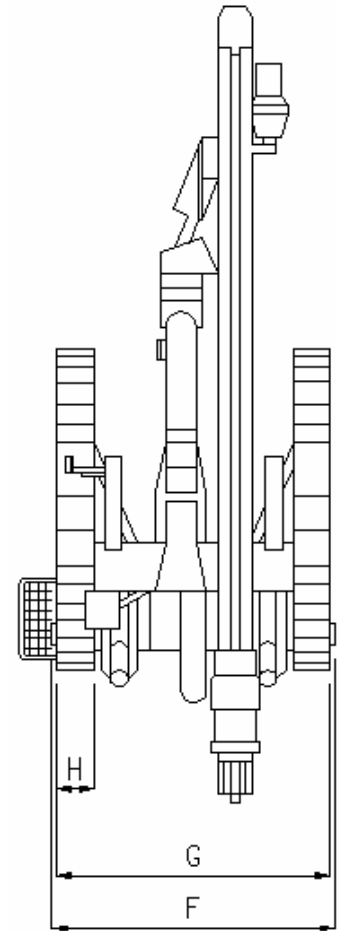
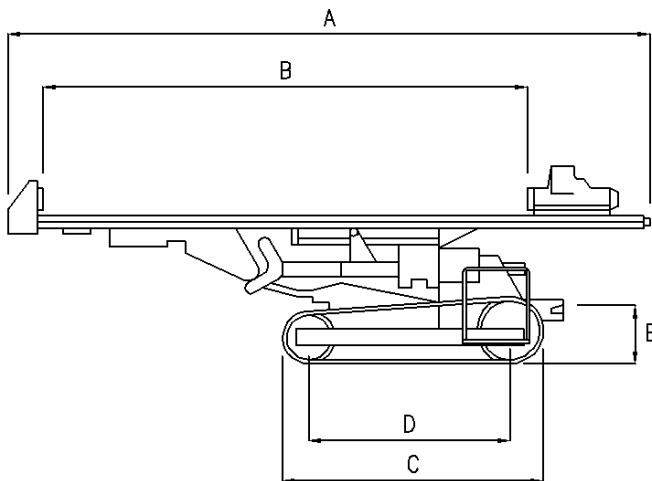
To improve efficiency and simplify rod mounting/removal, a remote control valve is installed on the guide shell to control both the drifter rotating motor and feed motor.

### Swing-arm traction control valve

The swing arm-type traction control valve allows operation from a position freely selected by the operator. A detachable operator step provides further operator convenience when moving over an extended distance.

## Technical Specifications

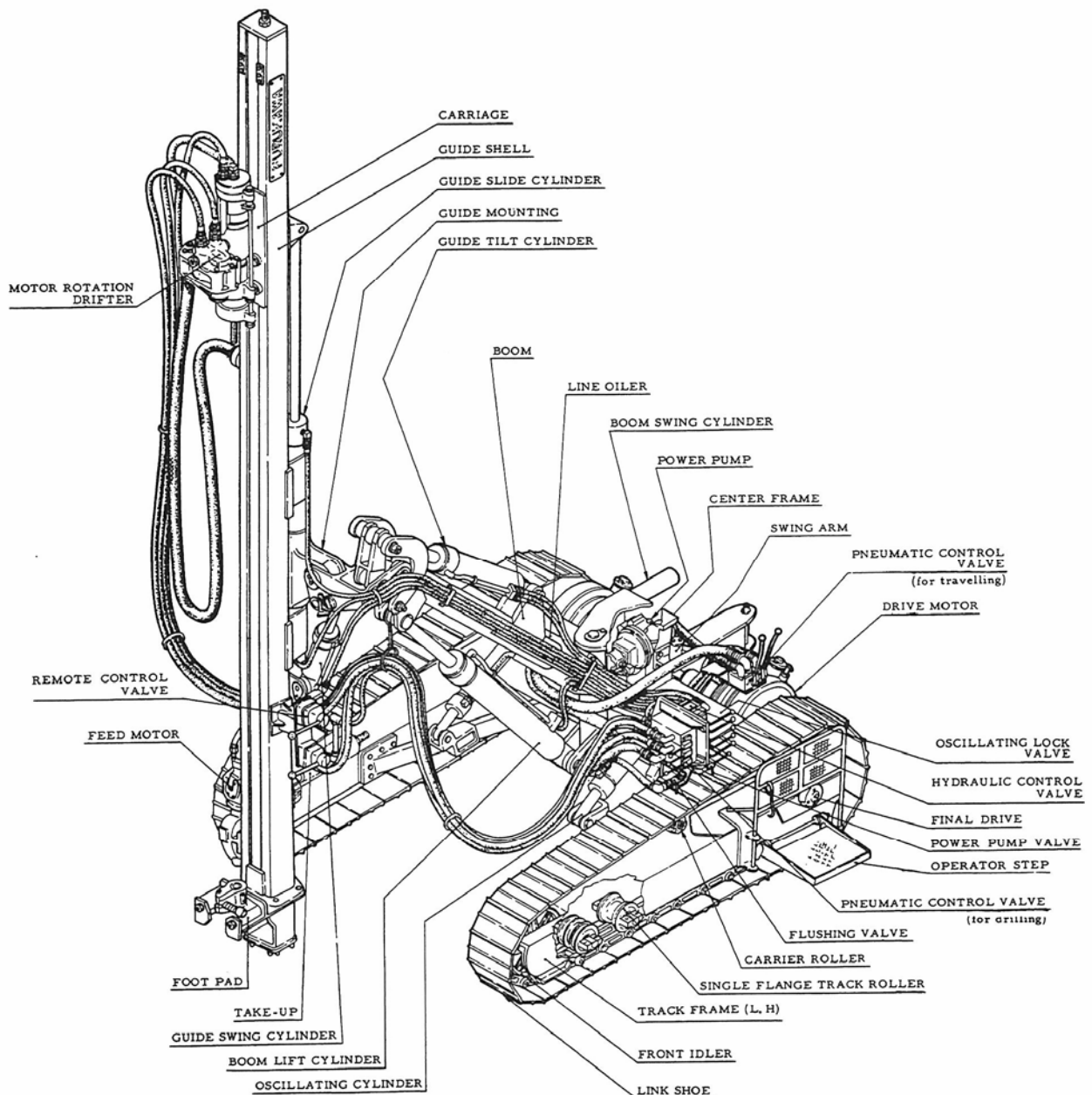
Dimensions		
Overall length (A)	mm	5400
Feed travel (B)	mm	3710
Track length (C)	mm	2580
Length of ground contactel (D)	mm	1885
Tow hitch height (E)	mm	550
Overall width (F)	mm	2390
Track width (G)	mm	2200
Width of grousers (H)	mm	300
Overall height (boom lowered) (I)	mm	1250
Ground clearance (J)	mm	280



Pneumatic drifter		
Model		PD200
Type		rotary-percussive, independent gear motor rotation
Weight (without shank rod)	kg	180
Length (without shank rod)	mm	1020
Cylinder diameter	mm	130
Piston stroke	mm	80
Number of blows	bpm	approx. 1600
Type of rotation motor		gear motor
Rotational speed	rpm	0 - 380
Rotational torque	kg-m	36,5
Air consumption	m3/min	approx. 16
Air pressure	kg/cm2	5,5

<b>Guide shell</b>		
Model		PCR200GS
Length	mm	5440
Feed length	mm	3710
Rod length	mm	3050
Guide slide length	mm	1200
Feed motor - model		MC2
Feed motor - type		piston type, 5 cylinders with reduction gears
Feed motor - output	hp	5 (at 6 kg/cm <sup>2</sup> )
Feed motor - air consumption	m <sup>3</sup> /min	0,05
Rod pull	kg	max. 1000 (at 6 kg/cm <sup>2</sup> )
<b>Boom</b>		
Model		JF200
Type		Overturn
Boom length	mm	2000
Boom lift angle	degrees	-25 - +45
Guide tilt angle (without pin change)	degrees	180
Guide swing angle (with pin change)	degrees	-15 - +95
Boom swing angle	degrees	-45 - +45
<b>Power pump</b>		
Model		MP12
Air motor - type		piston type, 5 cylinders
Air motor - output	hp	5 (at 6 kg/cm <sup>2</sup> )
Oil pump		gear type
Delivery pressure	kg/cm <sup>2</sup>	210
Oil reservoir capacity	litres	17
<b>Line oiler</b>		
Oil capacity	litres	15
Normal rock drill oil consumption	cc/min	20 - 25
<b>Crawler traction</b>		
Track length	mm	2580
Track width	mm	2200
Width of grousers	mm	300
Length of ground contact	mm	1885
Ground clearance	mm	280
Tow hitch height	mm	550
Ground contact pressure	kg/cm <sup>2</sup>	0,45
Travelling speed (towing a compressor on levelling ground)	km/h	3,2
Gradeability (without towing a compressor)	degrees	35
Gradeability (with towing a compressor)	degrees	22
Oscillating angle	degrees	15
Oscillating system		hydraulic cylinders
Traction motor - model		MR13
Traction motor - type		piston type, 5 cylinders

Traction motor - control		independent
Traction motor - output	hp	5 (per set, at 6 kg/cm <sup>2</sup> )
Traction motor - brake system		air pressure release, automatic band brake
Traction motor - air consumption	cm <sup>3</sup> /min	11,5
Tractive pull	kg	max. 4000
<b>Applicable extension rod</b>		
Size		T38
Length	m	3,05
Bit diameter	mm	65 - 100
<b>Optional: compressor</b>		
Recommended capacity	m <sup>3</sup> /min	18 (8 bar)





**FRD** PCR200  
FURUKAWA

## MAZAL INTERNATIONAL BV

Independent member of the Dutch Construction Group

Exclusive distributor Furukawa Crawler Drills

Official distributor Furukawa Rock Drill Demolition Tools

Manufacturer of Excavator Attachments

The Netherlands

Tel. +31 (0)495 542425, fax +31 (0)495 521918

info@mazal.nl, www.mazal.nl