



HYDRAULIC CRAWLER DRILL



DURABLE AND RELIABLE

WHERE EXPERIENCE COUNTS

TRADITION AND HIGH-TECH FROM ONE COUNTRY.

Japan, a country of old traditions, has proven its highly technical performances in many different ways. Already, many years ago, Japanese electronic equipment contributed greatly to the possibility to reach the moon and other planets. In almost every computer, telephone or any other kind of electronic equipment we can find some Japanese components. In the car industry Japanese engineers have achieved high performances in order to produce more efficient and economical cars. Car tests in different countries have often concluded that Japanese cars are the most reliable and with a minimum of maintenance costs. Also Furukawa is one of those traditional concerns, which could show continuous growth through their ongoing product improvement and development.

Everything started in 1875, when Furukawa opened the Kusakura Copper Mine. The mining of the ore always required new and specific solutions to improve ore production. For this reason Furukawa started in 1900 to produce their own mining equipment, which led to higher production levels of the mine. With this step Furukawa unintentionally created the base for a new, high technology concern. The better results with their custom made machinery soon created a demand for similar machines in other mines. To be able to fulfill these requirements, Furukawa started to separate their activities in different divisions.

In 1918 Furukawa Mining Co. Ltd was founded and, in 1920, Furukawa Electric Co. Ltd. Later in 1961 the start of Furukawa Rock Drill Co. Ltd was an answer to the demand to be able to sell worldwide, the machines that initially were meant only for their own use. In 1971 Furukawa established a new factory in Yoshii for the production of crawler drills and demolition equipment. The demand for those products was so large, that in 1976 a second production unit was established in Takasaki. Since then, far more than 35.000 crawler- and Jumbo drills, numerous hydraulic breakers, demolition grabs, concrete- and steel crushers, have been produced and delivered all over the world. In the meantime Furukawa Rock Drill division has built an international sales and service network, which secures an optimum after sales service for all equipment. Our slogan " FRD – WHERE EXPERIENCE COUNTS" we take as seriously as other Japanese traditions and we hope you will approach us with your specific demands. We and our dealer network are ready to help you.



INSIDE FURUKAWA



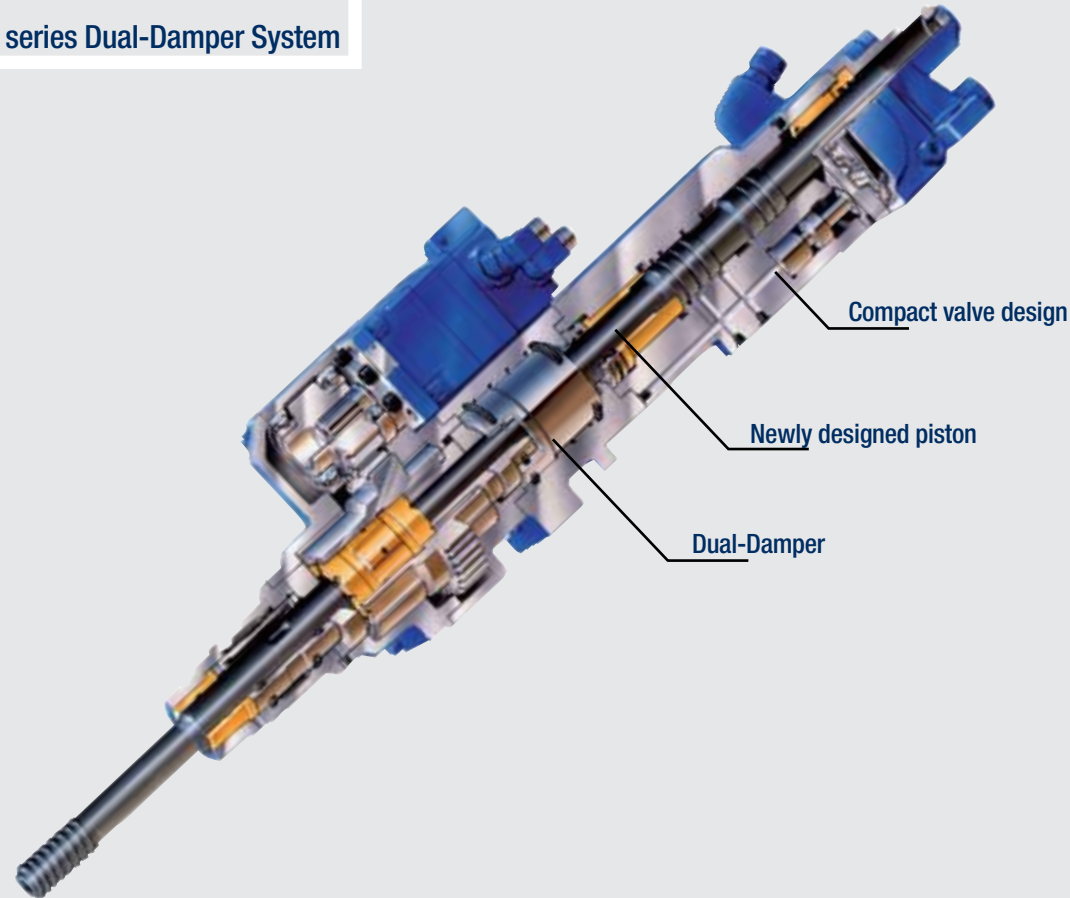
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WHERE **EXPERIENCE COUNTS**

Advanced drifter system

HD700 series Dual-Damper System



The Ultimate Combination of Performance & Economy

Drill faster and straighter with the patented HD700 series drifter

The Furukawa HD700 series drifter is designed to minimize drill noise and vibration without sacrificing performance. Incorporating a new piston design, the HD700 series drifter maximizes energy transmission and drills effectively in a variety of rock types.

Integrated Drilling System

Incorporates all-hydraulic controls for automatic adjustment of impact and feed force to accommodate changing rock conditions. A reactive dampening control system regulates the pressure based on rock hardness, providing superior drilling performance.

Dual-Damper System DDS

FRD has developed the Dual-Damper System, a first in the industry. For maximum energy transfer, active DDS minimizes the return of shock waves by keeping the bit firmly against the rock at all times during drilling. Active DDS minimizes percussion energy loss and by optimizing the overall feed force, greatly improves the life of drilling accessories. An additional benefit is the greatly improved life of drilling accessories. Active DDS (U.S. Patent No.5,896,937)

Compact valve design

A compact shuttle valve minimizes loss of oil pressure and maintains total power output of the drifter.

DRIFTER

Model		HD709		HD712		HD715	
Specification		Without RP	With RP	Without RP	With RP	Without RP	With RP
Max. Impact Pressure	Mpa	17,5	17,5	17,5	17,5	17,5	17,5
Impact Energy	Long Stroke J	378	378	484	484	613	613
Impact Energy	Short Stroke J	278	278	353	353	513	513
Blow	Long Stroke min ⁻¹	2250	2250	2250	2250	2250	2250
Blow	Short Stroke min ⁻¹	2500	2500	2500	2500	2500	2500
Max. Impact Output	Long Stroke kW	14,2	14,2	18,2	18,2	25	25
Max. Impact Output	Short Stroke kW	11,6	11,6	14,7	14,7	21,5	21,5
Stroke Adjustment		Variable Type		Variable Type		Variable Type	
Max. Rotation Pressure	Mpa	18,1	18,1	20,1	20,1	20,1	20,1
Max. Rotation Torque	Nm	669	669	1417	1417	1417	1417
Max. No. of Rotation	min ⁻¹	200	200	190	190	190	190
Flushing System		Swivel Type		Swivel Type		Swivel Type	
Flushing Volume	m³/min	6,1	6,1	7,8	7,8	12,3	12,3
Flushing Pressure	Mpa	1,03	1,03	1,03	1,03	1,03	1,03
RP means „Reverse Percussion“ device.							



Reverse Percussion System

The Reverse Percussion System (RPS) makes it easier to free a stuck rod. A substantial increase in extraction force allows the field proven RPS (optional) to remove stuck rods quickly.



Heavy-duty under carriage

Heavy-duty track frames provide strength and durability. They feature a pentagonal section design to reduce dirt build up and track wear. One-piece drive sprockets are manufactured with hardened wear surfaces for longer life. Track rollers and carrier rollers are forged and hardened for durability and lifetime-lubricated to reduce maintenance requirements. Heavy-duty track links are forged from high-manganese alloy steel, and pins and bushings are induction-hardened. Alloy steel front idlers are hardened and lifetime-lubricated. Standard full track guards protect the under carriage. Track tension can be easily adjusted with a grease gun.



HEAVY-DUTY UNDER CARRIAGE



Ground contact

Optimal contact with the ground in any terrain. Depending on your needs: single or triple grouser shoes available.

Track oscillation

Independent track oscillation $\pm 10^\circ$ degree, provides safe tramming in any terrain.

Low gravity point

Due to the low centre of gravity a stable position and safe working are guaranteed.



WHERE **EXPERIENCE COUNTS**

ECO-friendly, Energy-saving, & High-productivity

Combining performance and economy

The HCR900 is ideal for demanding site preparation applications. Simple, durable and efficient, the HCR900-ES and the HCR900-ES20 incorporate a self-adjusting drill-system designed to maximize drilling efficiency through to the bottom of the hole. By automatically controlling the impact force, feed force, rotation force and dual dampener pressure, the HCR900-ES continuously adapts to the changing rock conditions. As a result, drilling performance and the life of the drill tools are increased, while lowering fuel consumption.

Extension boom

Extension boom increases drilling pattern flexibility.

Advanced hydraulic & pneumatic systems

Thanks to advanced hydraulic and pneumatic technology, out put energy can be transferred to each component with minimum power loss. These systems support high productivity.

Power-saving selector

By using the power-saving selector, fuel consumption is reduced during light working conditions.

Standard: 2.500 min-1

Power-saving: 2.200 min-1

Low-emission engine

The powerful CAT engine is fully compliant with Tier 3/ Euro stage-3 emission control regulations.

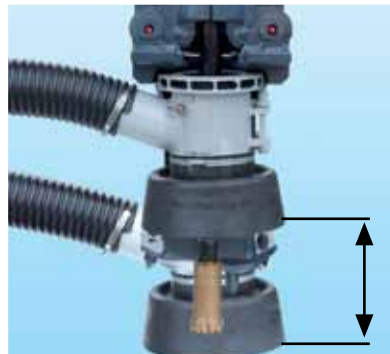


CATERPILLAR®C7

Power-saving
selector



HCR 900 ES II



Maximize operator performance with the ultimate in drilling technology

Ergonomically designed to minimize operator fatigue. The engine, compressor and hydraulic oil temperature gauges are highly visible, allowing the operator to monitor machine functions while remaining focused on the drilling.

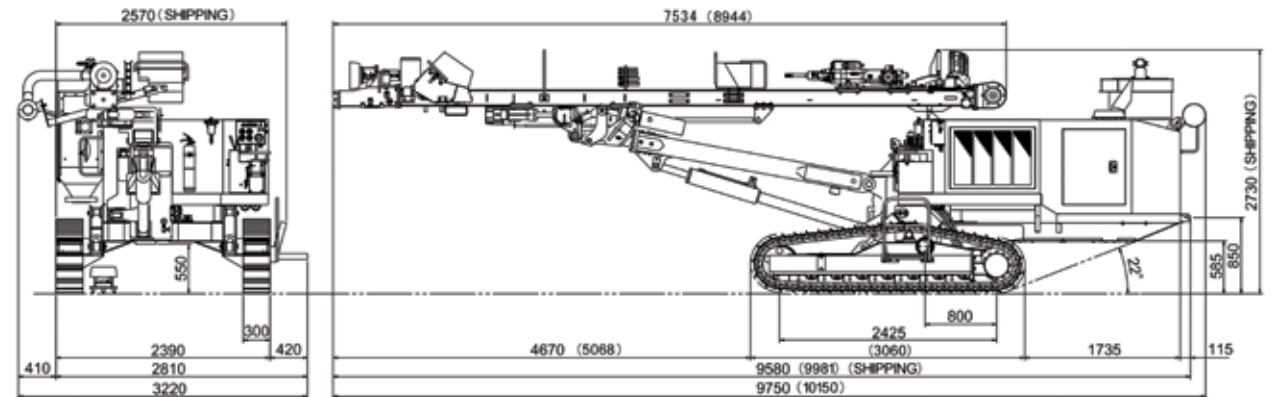
High output compressor & dust collector

High output compressor increases flushing air, provides faster drilling and decreases bit wear. The upgraded dust collector has a suction capacity higher than previous models. The dust collector includes an effective pre-cleaner to reduce the escape of drilling dust. An optional dust suppression system is available for difficult drilling conditions.



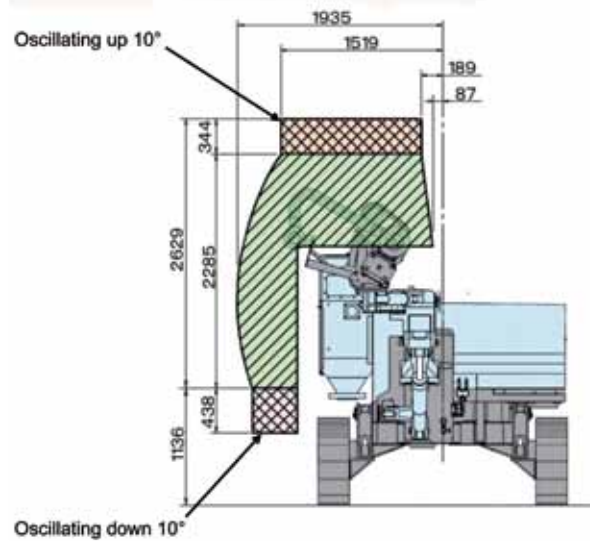
WHERE **EXPERIENCE COUNTS**

Job site, construction and small quarry

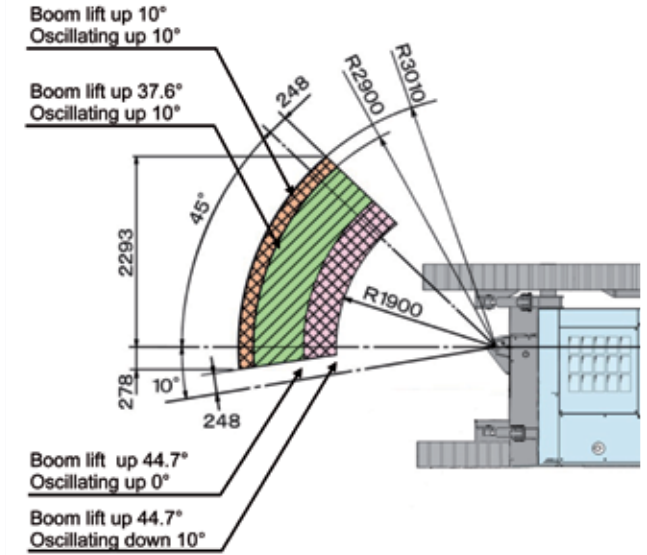


Dimensions (mm)

Horizontal drilling coverage



Vertical drilling coverage



HCR 900 ES II



Access to the right side cover



Access to the left side cover



Access to the rear cover



Fan guard



Tramming lever



Angle indicator



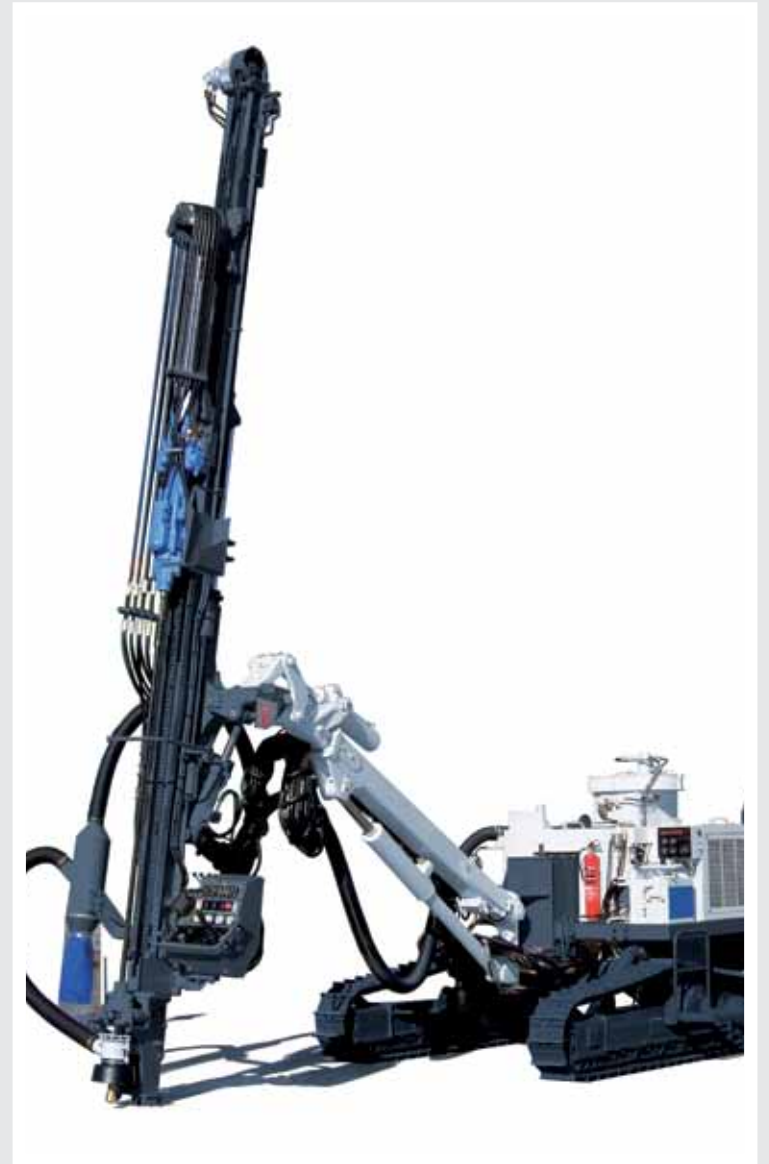
Synthetic hose reels

Maintenance & Safety

Walk-around, ground-level maintenance provides fast, easy upkeep or repair. Hinged service doors provide easy access to required areas.

Accessibility for maintenance

Fully opened access cover makes access to the radiator, the grease can and the drilling control valves easier. Service for the engine, the electric control panel can be made from the left side access cover. Filters are within the reach.



WHERE **EXPERIENCE COUNTS**

New release, in the 10 ton class



Comfortable control levers



Standard cab



Tilt type control levers



Ventilation

HCR 910 DS



Ergonomic operator seat



Anti-jamming device

An anti-jamming device optimizes the drilling condition for a variety of rock types, thus offering extended bit and rod life, and consequent reduction in running cost.

Mode selector

A mode switching hydraulic circuit performs switching between N mode for homogeneous rocks and H mode for hard rocks, thus enabling safe and speedy drilling.



Control panel

Tilt type control panel, operator friendly design.

Switch panel

Integrated in the control panel. Safe and ergonomic operation position.



High output compressor & dust collector

High output compressor increases flushing air, provides faster drilling and decreases bit wear. The upgraded dust collector has a suction capacity higher than previous models. The dust collector includes an effective pre-cleaner to reduce the escape of drilling dust. An optional dust suppression system is available for difficult drilling conditions.

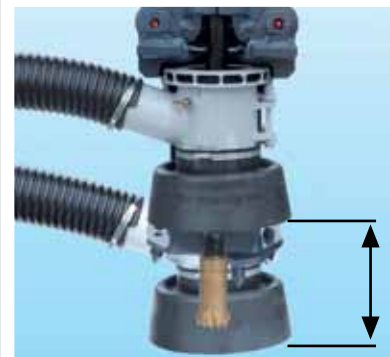
Combining performance and economy

New design comfort cab

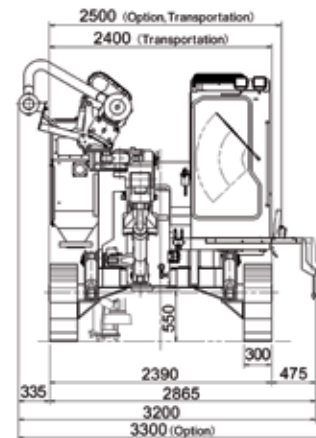
New design cab provides large windows at the front and on the right side to maximize operator visibility. Cab is air conditioned and pressurized with air filters to keep out dust.



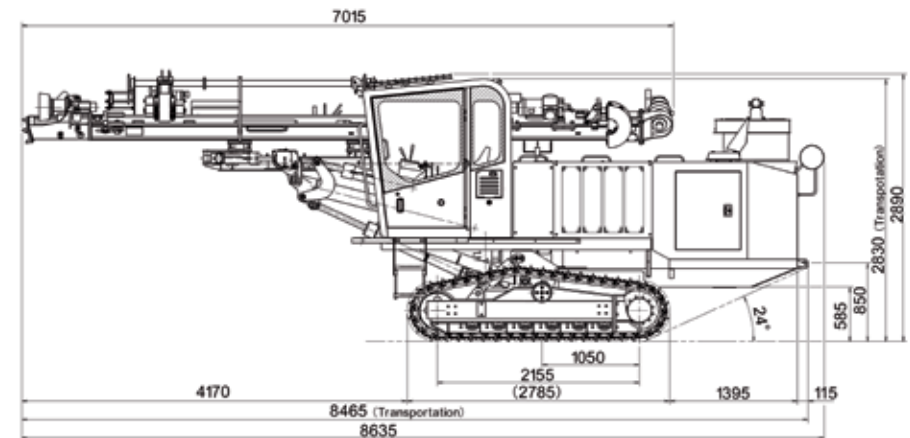
Control panels



WHERE **EXPERIENCE** COUNTS

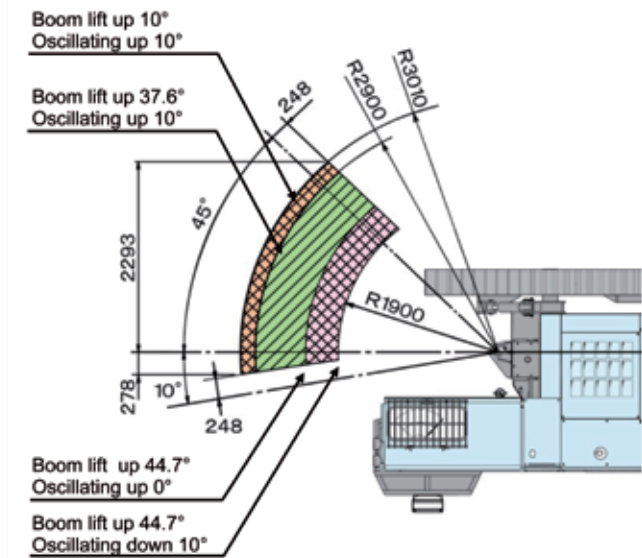
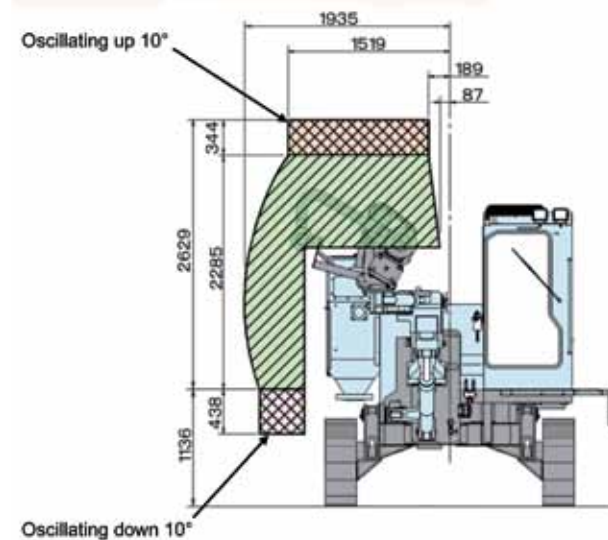


Horizontal drilling coverage



Vertical drilling coverage

Dimensions (mm)



HCR 910 DS



Access to the right side cover



Access to the left side cover



Access to the rear cover



Access to the upper cover

New design economy mode

By using the power-saving switch, fuel consumption is reduced during light working conditions. Maximum of 30 % reduction on previous models. While drilling, engine speed can be adjusted lower than the power mode. Engine speed can be selected from one of the following speeds.

1,600min⁻¹

1,800min⁻¹

2,000min⁻¹

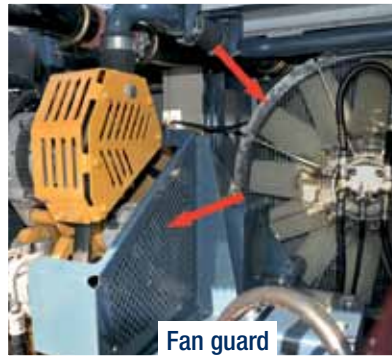
In the power mode, the engine speed is 2,200 min⁻¹, even in economy mode, you can realize the same perfect cleaning as the power mode. For hole cleaning, engine speed automatically increases to 2,200 min⁻¹.



Synthetic hose reels



Engage travel lock while drilling.



Fan guard



WHERE **EXPERIENCE COUNTS**

The HCR quarry-allrounder



HCR 1000 EDSII

Combining performance and economy

ROPS / FOPS Comfort cab

The standard FOPS/ ROPS cab provides large windows at the front and on the right side to maximize operator visibility. Cab is air conditioned and pressurized with filtered air to keep out dust.

IMS is always monitoring machine conditions and supports trouble shooting by the operator and mechanics. IMS helps to reduce daily maintenance time and down time.



Right side



Control panels



Control boxes



Air conditioned ventilation



Hydraulic lock lever

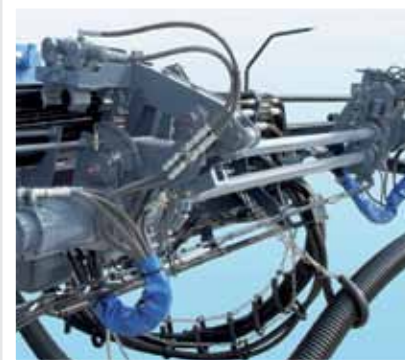


Control panel

Tilt type control panel, operator friendly design.

Advanced hydraulic & pneumatic systems

Thanks to advanced hydraulic and pneumatic technology, output energy can be transferred to each component with minimum power loss. These systems support high productivity.



Easy handling rod changer

The all hydro-mechanical In-Line design is field proven. Rod change speed is improved over previous designs. Joystick operated rod changer assures fast rod changing.

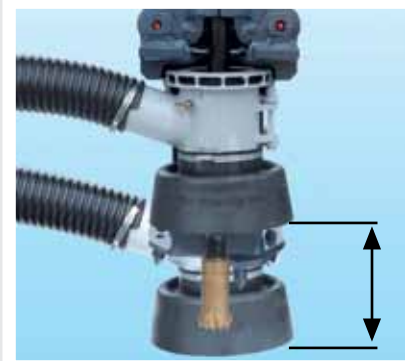
Extension boom

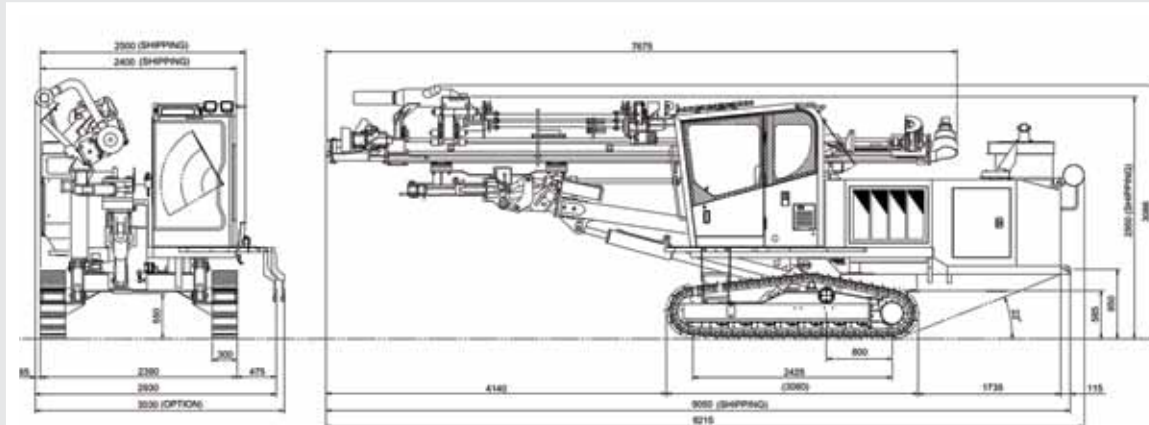
Extension boom increases drilling pattern flexibility.



High output compressor & dust collector

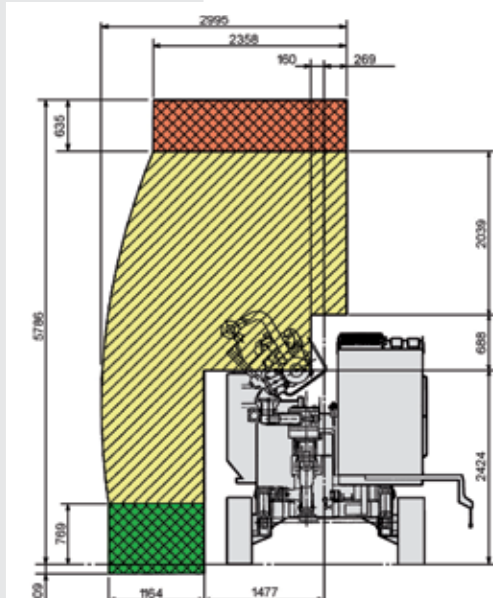
High output compressor increases flushing air, provides faster drilling and decreases bit wear. The upgraded dust collector has a suction capacity higher than previous models. The dust collector includes an effective pre-cleaner to reduce the escape of drilling dust. An optional dust suppression system is available for difficult drilling conditions.



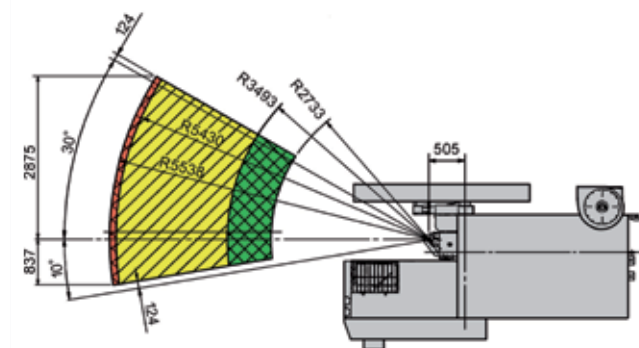


Dimensions (mm)

Horizontal drilling coverage



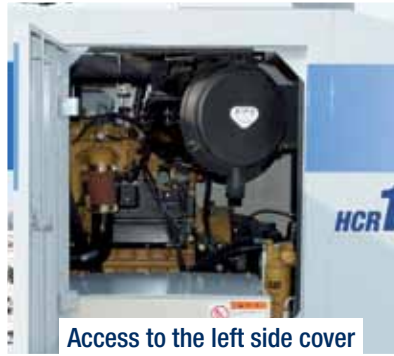
Vertical drilling coverage



HCR 1000 EDSII



Access to the right side cover



Access to the left side cover



Access to the rear cover



Access to the upper cover



Angle indicator



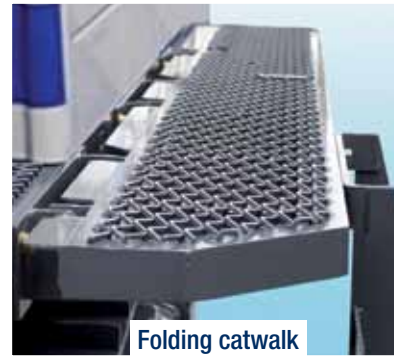
Fire extinguisher



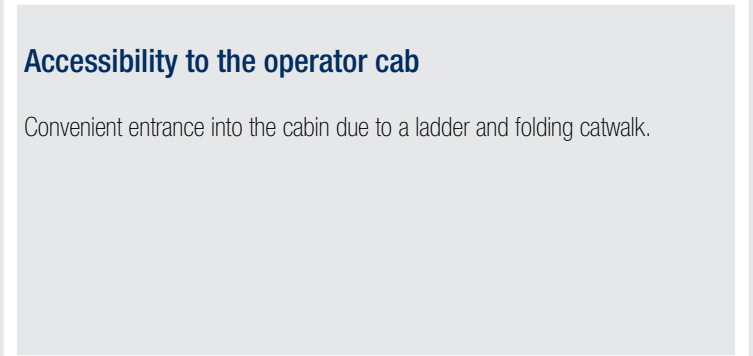
Synthetic hose reels



Hose connections



Folding catwalk



Accessibility to the operator cab

Convenient entrance into the cabin due to a ladder and folding catwalk.

WHERE **EXPERIENCE COUNTS**

The HCR quarry and construction solution



Comfortable cab

1100 mm wide cab provides large windows at the front and on the right side to maximize operator visibility. Cab is air conditioned and pressurized with filtered air to keep out dust.



HCR 1200 EDII



A single multi-function lever controls all the drilling functions.



IMS is always monitoring machine conditions and supports trouble shooting by the operator and mechanics. IMS helps to reduce daily maintenance time and down time.



Easy handling rod changer

Joystick operated rod changer assures fast rod changing.

Advanced hydraulic & pneumatic systems

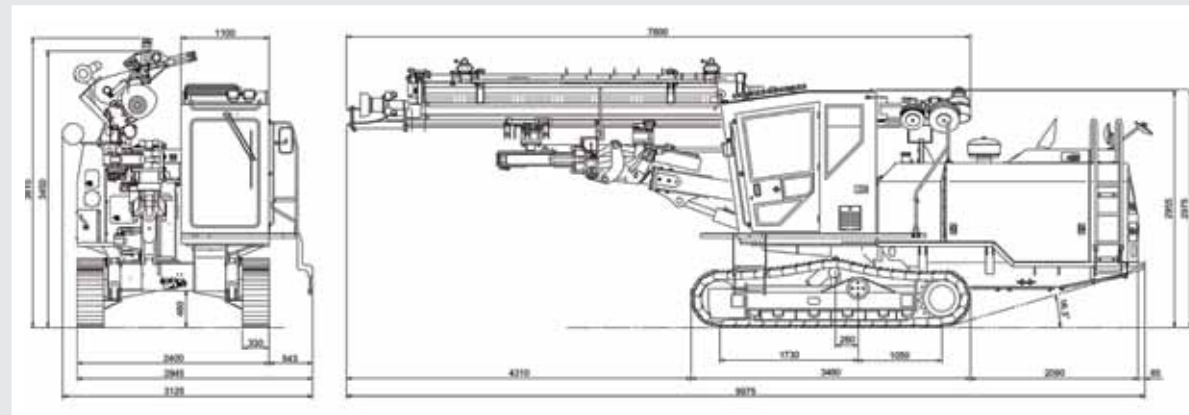
Thanks to advanced hydraulic and pneumatic technology, output energy can be transferred to each component with minimum power loss. These systems support high productivity.



High output compressor & dust collector

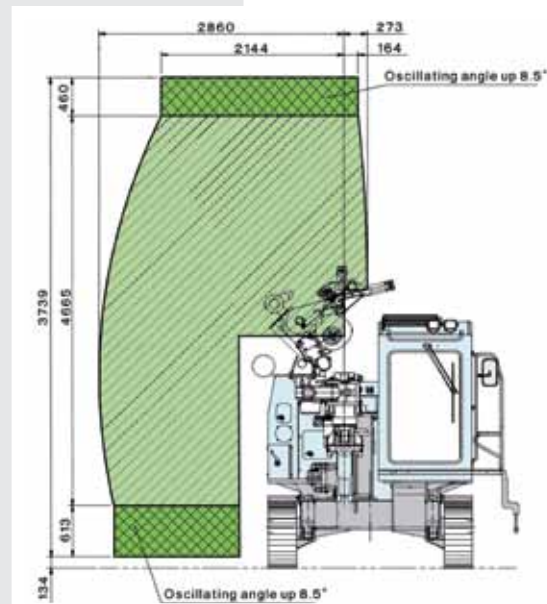
High output AIRMAN compressor increases flushing air, provides faster drilling and decreases wear of drilling accessories. It also reduces re-drilling of cuttings, and improves drilling speed. Large suction capacity of the dust collector maintains the environment.

WHERE **EXPERIENCE COUNTS**

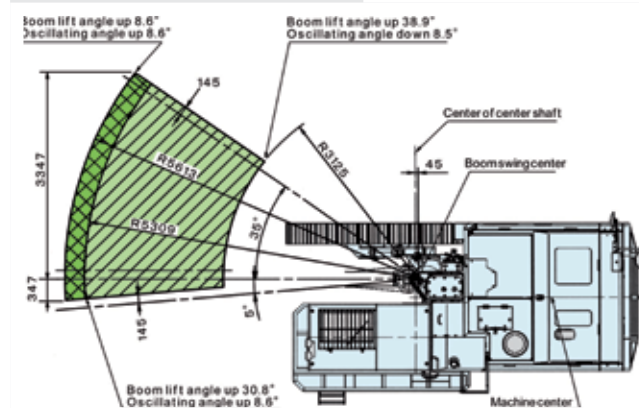


Dimensions (mm)

Horizontal drilling coverage



Vertical drilling coverage



HCR 1200 EDII



Right service gullwing door



Left service gullwing door



Rear cover



Upper cover



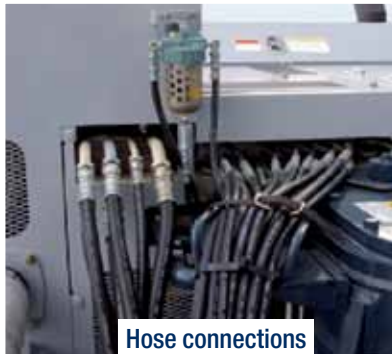
Cyclone filter



Hydraulic lock lever



Hose reels



Hose connections



Hose connections



WHERE **EXPERIENCE COUNTS**

The HCR quarry professional



Air conditioned ventilation

Comfortable cab

1100 mm wide cab provides large windows at the front and on the right side to maximize operator visibility. Cab is air conditioned and pressurized with filtered air to keep out dust



HCR 1500 EDII



Ergonomic operator seat



Right side control box



A single multi-function lever controls all the drilling functions.



Left side control box



Engine panel



ims

IMS is always monitoring machine conditions and supports trouble shooting by the operator and mechanics. IMS helps to reduce daily maintenance time and down time.

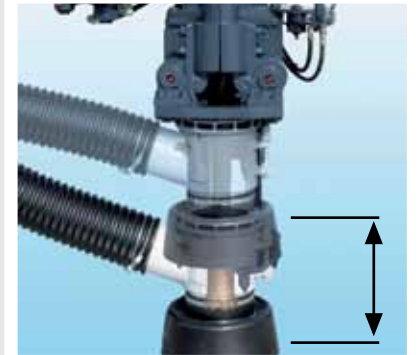


Easy handling rod changer

Joystick operated rod changer assures fast rod changing.

Advanced hydraulic & pneumatic systems

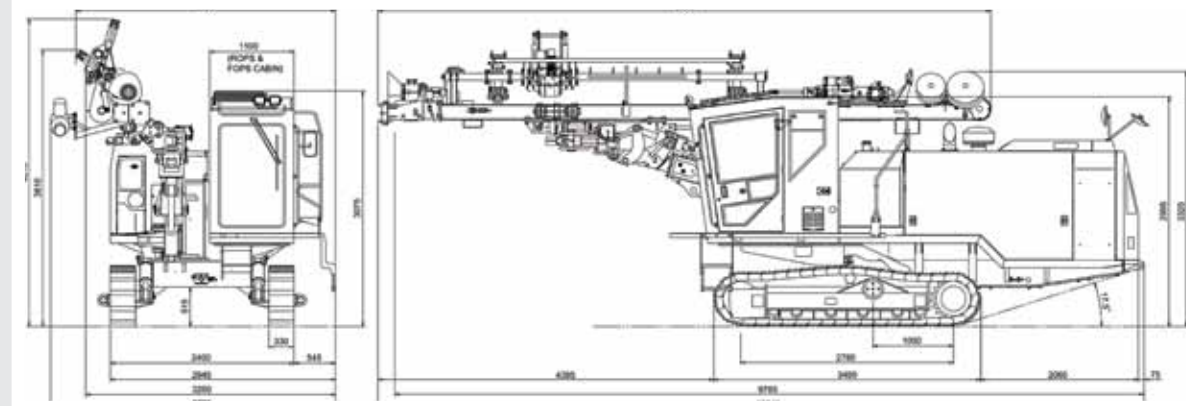
Thanks to advanced hydraulic and pneumatic technology, output energy can be transferred to each component with minimum power loss. These systems support high productivity.



High output compressor & dust collector

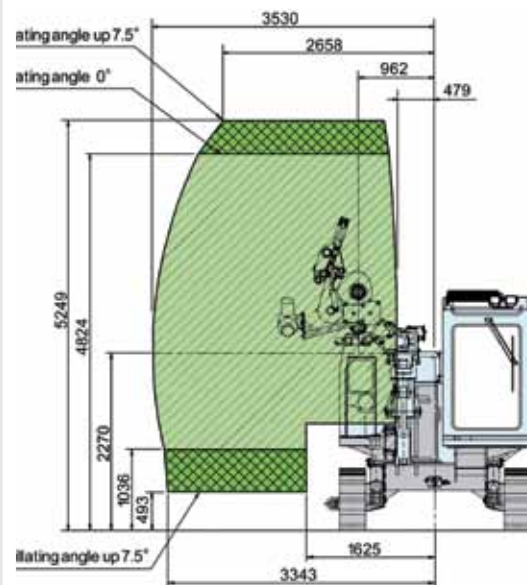
High output AIRMAN compressor increases flushing air, provides faster drilling and decreases wear of drilling accessories. It also reduces re-drilling of cuttings, and improves drilling speed. Large suction capacity of the dust collector maintains the environment.

WHERE **EXPERIENCE COUNTS**

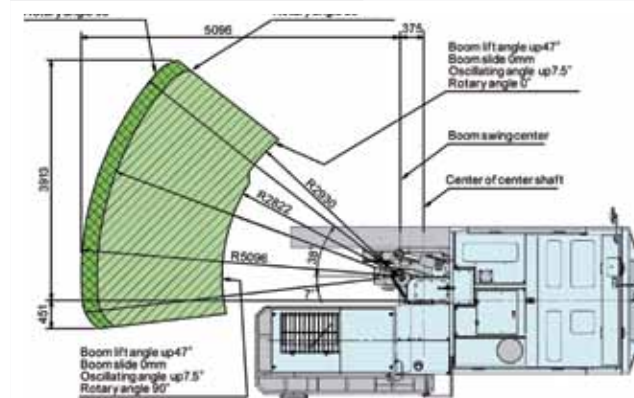


Dimensions (mm)

Horizontal drilling coverage



Vertical drilling coverage



HCR 1500 EDII



Access to dust collector



Access to compressor



Easy radiator cleaning



Access to engine



Cyclone filter



Hydraulic lock lever



Hose reels



Hose connections



Hose connections



WHERE **EXPERIENCE COUNTS**

Model		HCR900-ES II / HCR900-ES II (20)	HCR910-DS	HCR1000-EDS II	HCR1200-EDS II
Weight & dimensions					
Operating weight with ROPS/FOPS cab	kg	10270 / 10930	10450	12000	14000
A Overall length	mm	9750 / 10150	8635	9215	9755
B Ground contact length	mm	2425	2425	2425	2780
C Overall width with pre-cleaner	mm	3220	2865	2400	3125
D Width over tracks	mm	2570	2400	2390	2400
E Width of shoe	mm	300		300	330
F Overall height (traveling)	mm	2730	2830	2950	3605 (2975)
Drifter					
Model		HD709	HD709	HD709	HD712
Weight	kg	185	185	185	220
Impact rate	min ⁻¹	2250 - 2500	2250 - 2500	2250 - 2500	2300
Number of rotations	min ⁻¹	0 - 250	0 - 250	0 - 250	0 - 190
Undercarriage					
Ground clearance	mm	550	550	550	460
Oscillating angle	deg	±10°	±10°	±10°	±7.5°
Travel speed	km/h	0 - 3.5	0 - 3.8	0 - 3.8	0 - 3.1
Grade ability	%	57.7 (30°)	57.7 (30°)	57.7 (30°)	57.7 (30°)
Engine					
Make/model		CATERPILLAR / C7	CATERPILLAR / C7	CATERPILLAR / C7	CUMMINS / QSB 6.7
Type		Turbocharged and air to air after cooled diesel, direct fuel injection, electronic governor	Turbocharged and air to air after cooled diesel, direct fuel injection, electronic governor	Turbocharged and air to air after cooled diesel, direct fuel injection, electronic governor	Turbocharged and air to air after cooled diesel, direct fuel injection, electronic governor
Output/speed (gross)	kW/min-1	168 / 2200	168 / 2200	168 / 2200	179 / 2500
		Meets Tier 3 and EU stage-3	Meets Tier 3 and EU stage-3	Net usable output available at flywheel of the installed engine with all the standard accessories. SAEJ1349, SAEJ1995 conditions.	Net usable output available at flywheel of the installed engine with all the standard accessories. SAEJ1349, SAEJ1995 conditions.
Piston displacement	Liter	7.2	7.2	7.2	6.7
Fuel tank capacity	Liter	330	320	320	420
Hydraulic pump					
Type		2-variable displacement piston pumps supply pressure oil for both travel and drilling. 3-gear pumps for cooling and dust collector.	2-variable displacement piston pumps supply pressure oil for both travel and drilling. 3-gear pumps for cooling and dust collector.	2-variable displacement piston pumps supply pressure oil for both travel and drilling. 2-gear pumps for cooling and dust collector.	2-variable displacement piston pumps supply pressure oil for both travel and drilling. 3-gear pumps for cooling and dust collector boom and rod changer.
Hydraulic oil tank capacity	Liter	170	170	170	215

The down the hole answer



ROPS/FOPS cab



Comfortable control levers



Comfortable cab

1000 mm wide cab provides large windows at the front and on the right side to maximize operator visibility. Cab is air conditioned and pressurized with filtered air to keep out dust.



AM/FM radio

DCR 20



Control lever

A single multi-function lever controls all the drilling functions.



Control lever



Air conditioned ventilation



ims

IMS is always monitoring machine conditions and supports trouble shooting by the operator and mechanics. IMS helps to reduce daily maintenance time and down time.



Engine panel

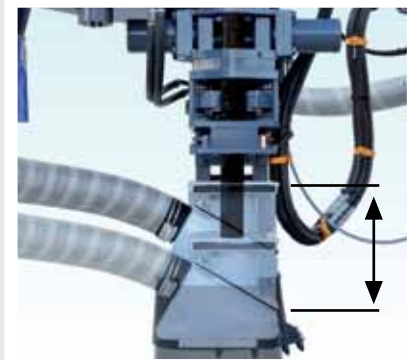


Easy handling rod changer

Joystick operated rod changer assures fast rod changing.

Advanced hydraulic & pneumatic systems

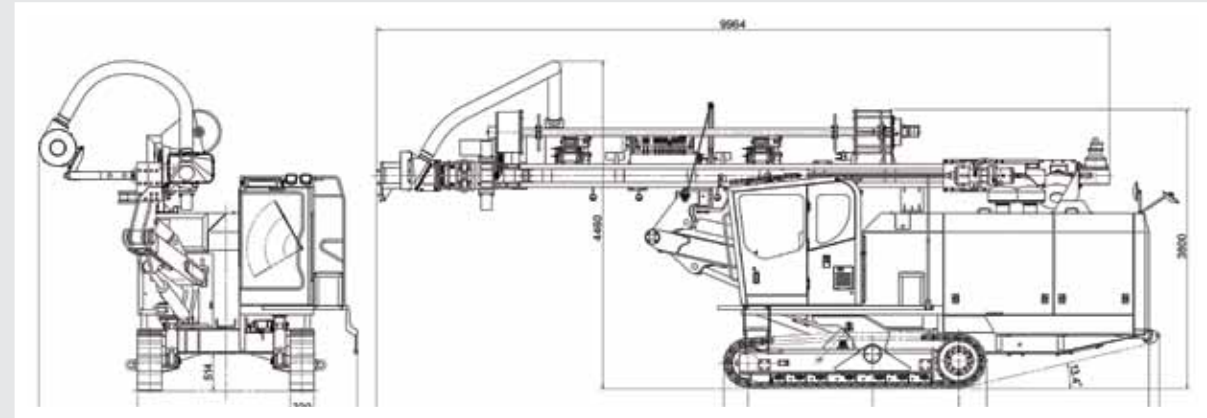
Thanks to advanced hydraulic and pneumatic technology, output energy can be transferred to each component with minimum power loss. These systems support high productivity.



High-output and pressure compressor & dust collector

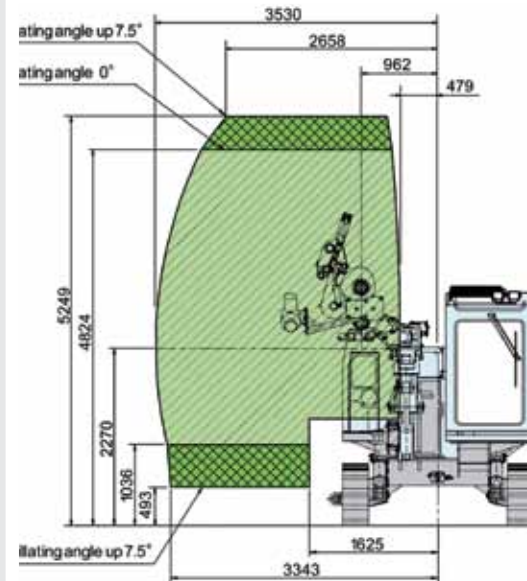
High-output and pressure (24m² / min, 25 bar) AIRMAN compressor increases flushing air, provides faster drilling and decrease wear of drilling accessories. It also reduces re-drilling of cuttings, and improves drilling speed. Large suction capacity of the dust collector maintains the environment.

WHERE **EXPERIENCE COUNTS**

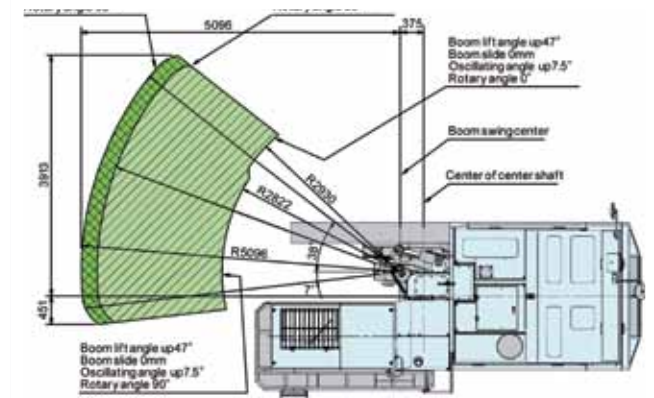


Dimensions (mm)

Horizontal drilling coverage



Vertical drilling coverage



DCR 20



Access to the right side



Access to the left side



Gullwing door



Access to the top



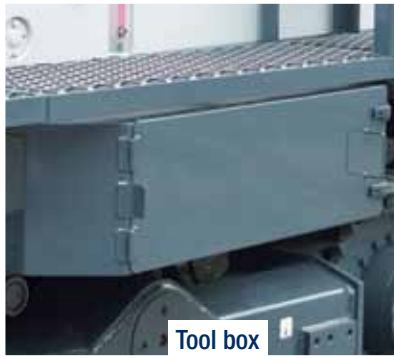
Cyclone filter



Security lever



Hose reels



Tool box



Hose connections



WHERE **EXPERIENCE COUNTS**

Model		DCR 20
Overall dimension		
Mass	kg	21.000
Overall length	mm	10.645
Overall width	mm	4.330
Overall width for transportation	mm	2.400
Overall height	mm	3.800
Traveling unit		
Track length	mm	3.570
Ground contact length	mm	2.865
Track width	mm	330
Ground clearance	mm	502
Oscillating angle	deg	±7.5°
Traveling speed	km/h	3.6
Grade ability	deg	25
Max. traction force	Kn	105
Drill motor	deg	
Max. Rotation torque	kN-m	3.25
Max. rotation speed	min-1	120
Drilling bit range	mm	89 - 165
Engine		
Model	CAT C-13 Tier 3	
Type	Turbo-charged & air to air after cooled diesel direct fuel injection, electronic governor	
Output	kW/min-1	328 / 2.100
Fuel tank capacity	Liter	700
Hydraulic pump		
Main pump	Tandem variable displacement pump	
Dust collector pump	Gear pump	
Boom/Fan/Pilot line pump	Gear pump	

Model		DCR 20	
Model		Airman PDSK 900	
Type		Screw, double stage, oil-cooled	
Max. Air delivery	MPa	2.5	
Max. Free Air Delivery	m³/min	24	
Boom			
Boom swing angle	deg	30° R - 13° L	
Boom lift angle	deg	49° UP - 14° Down	
Guide shell			
Length	mm	9.964	
Feed distance	mm	5.678	
Guide slide distance	mm	1.200	
Guide swing angle	deg	L77°- R16°	
Max. pulling force	kN	30	
Feed system		Hydraulic motor	
Rod changer			
Rod length	mm	5.000	
Rod size	mm	76, 89 and 102	
Greasing		Automatic	
Rod capacity		8pcs. (100kg / pc.)	
Dust collector			
Suction air volume	m³/min	70	
Air filter	pcs.	20	
Dust removal system		Air pulse jet	
Suction cap		Sliding	
Inner diameter of dust hose	mm	D150	
Pre-cleaner		standard	

The contents of these specifications are subject to change without notice.



SPECIFICATIONS DCR 20



WHERE **EXPERIENCE COUNTS**

Pneumatic crawler 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 300mm 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, 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. This makes 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.

Ample mobility on rough terrain

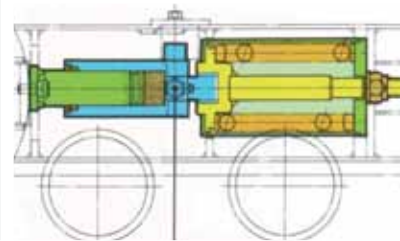
Powerful 12HP air motors and a hydraulic oscillating system permit good mobility and traction even on rough terrain. The motors provide adequate power to climb slopes while towing a compressor.

Direct motor-connected final drive

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

Highly reliable automatic brake

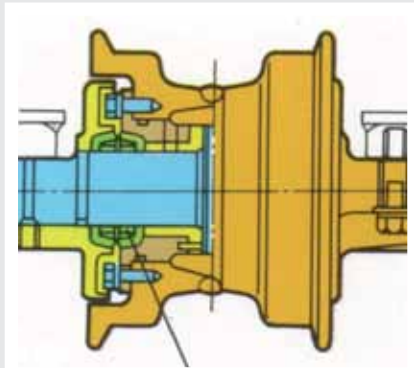
An automatic brake is incorporated inside the air motor and interlocked with the traction control valve.



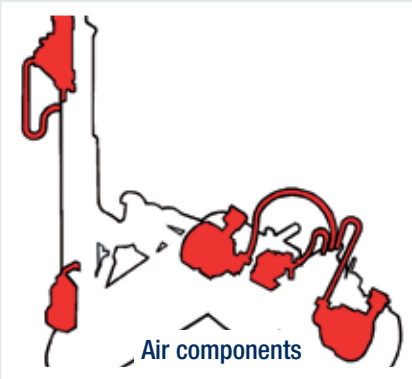
Pneumatic drive motor



Ground clearance



PCR-200



PNEUMATIC DRIFTER (PD200)

Super high-speed drilling

The PD200 pneumatic drifter, newly perfected for the PCR200 crawler drill by FRD, has a large bore (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 65mm to 100mm is available.

Triple noise-muffling system

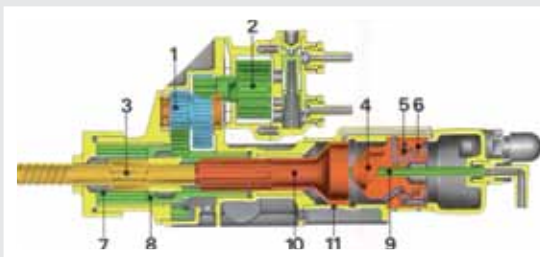
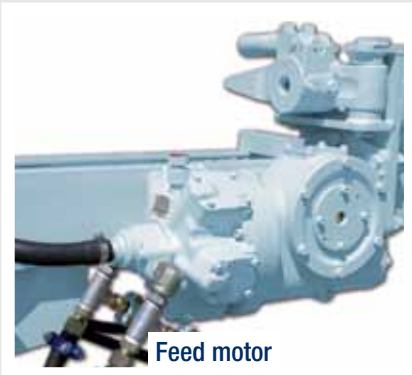
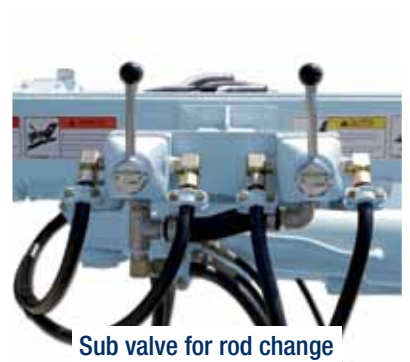
Two-stage noise diffusion takes place within the drifter to reduce the exhaust noise. The exhaust then passes through a muffler hose and another diffusion muffling device, located in the guide shell, which reduce the noise level even lower.

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

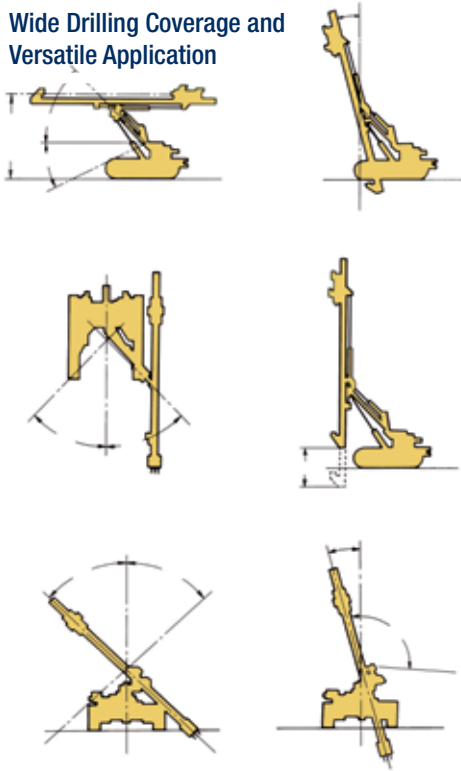
The integrated motor speed-reduction unit and front head are fixed onto the carriage, which means that the front head moment is not exerted on the through bolts. This greatly reduces rotation stress on the bolts and on the entire drifter.



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

WHERE **EXPERIENCE COUNTS**

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.

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, 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.

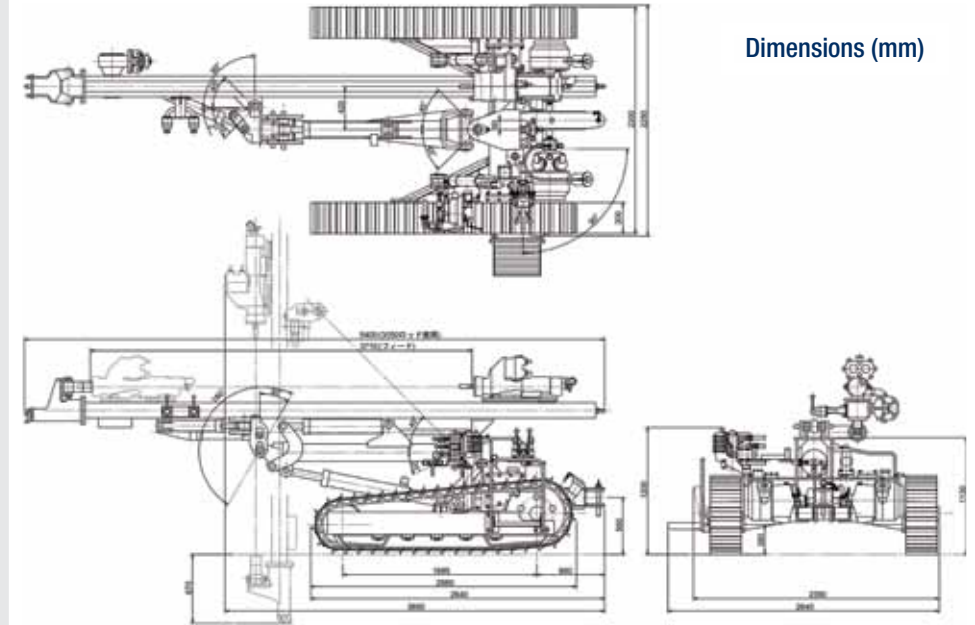
Quick and powerful rod pull-out

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 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

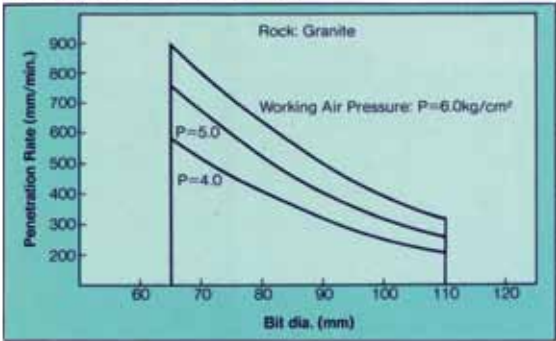
The powerful PCR200 crawler drill features a high-performance PD200 drifter. It's capable of high maneuverability and exceptional operation ease on any site to assure you a total drilling capability that ranks as the best in this class. Check the drilling performance data shown right, if you are not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

Total Muffling System for Operator Comfort

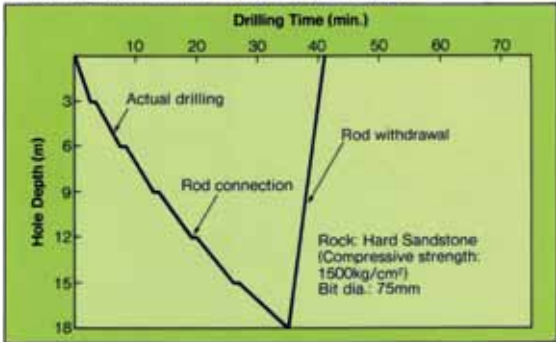
Exhausts of the drifter and all other motors are channeled through mufflers. A portion of the exhaust is recycled and used to lubricate the guide shell and chain of the sprocket. The rest is discharged after passing through the muffling system



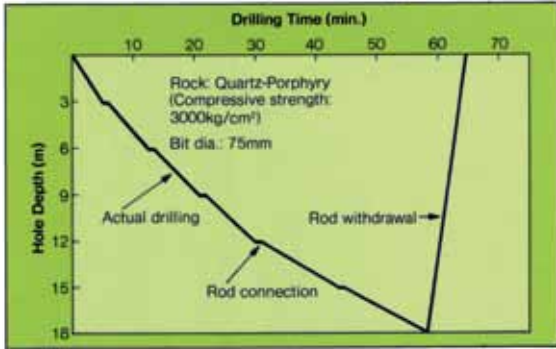
Performance of PD200 Drifter



Performance Data of Long Hole Drilling



Performance Data of Long Hole Drilling



Model					
Dimensions			Hydraulic Units		
Weight	kg	5000	Boom length	mm	2000mm
Overall length	mm	5400	Boom lift (up / down)	degree	45° / 25°
Feed travel	mm	3710	Boom swing (right / left)	degree	45° / 45°
Track length	mm	2580	Guide swing(right / left)	degree	50° / 50°
Length of ground contact	mm	1885	Guide tilt (without pin change)	degree	180°
Tow hitch height	mm	550	(95°right, 15°left with pin change)		
Overall width	mm	2390	Power pump (Model MP12)	kW	4 kW
Track width	mm	2200	Drifter (Model PD200)		
Width of grousers	mm	300	Weight without shank rod	kg	180kg
Overall height (Boom lowered)	mm	1250	Length without shank rod	mm	1020mm
Ground clearance	mm	280	Cylinder diameter	mm	130mm
Crawler traction			Piston stroke	mm	80mm
Ground pressure	kg/cm ²	0.45	Air consumption	cbm	~ 16
Traveling speed	km/h	3.2	Blows / min		~ 1600
(towing a compressor on level ground)			Main air hose connection		2"
Grade ability		22°			
Oscillating angle		15°			
Traction air motor (Model MR13,piston-type)	kW	8,8			
Guide Shell					
Max. horizontal drill height	mm	3050			
Guide slide travel	mm	1200			
Air feed motor (Model MC2)	kW	4			
Steel change	mm	3050			

WHERE **EXPERIENCE COUNTS**

Pneumatic down the hole drill



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Convenient crawler-tension adjustment

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

Ample mobility on rough terrain

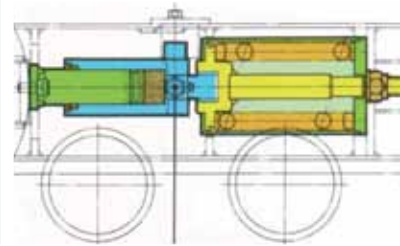
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The final drive is directly connected to the air motor to minimize power loss and ensure drive efficiency.

Highly reliable automatic brake

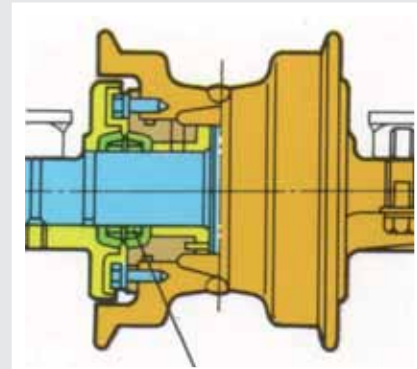
An automatic brake is incorporated inside the air motor and interlocked with the traction control valve.



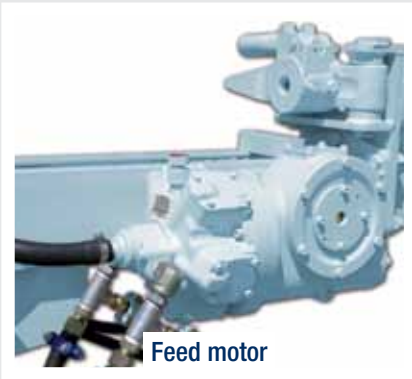
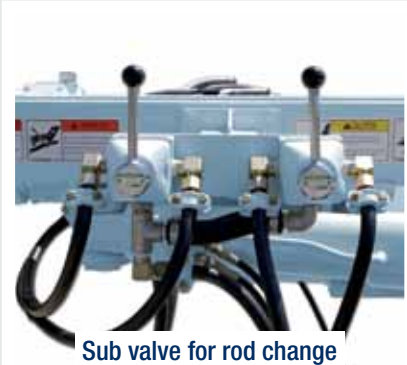
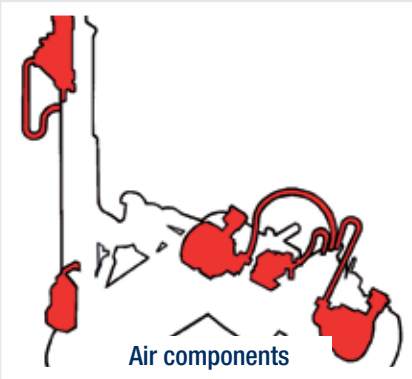
Pneumatic drive motor



Ground clearance



PCR 200-DTH



WHERE **EXPERIENCE COUNTS**

Specifications

Dimensions

Overall length	mm	5750
Overall width	mm	2390
Overall width (without operator step)	mm	2250
Overall height (Boom lowered)	mm	1360
Track length	mm	2580
Length of ground contact	mm	1885
Width of grousers	mm	300
Ground clearance	mm	280

Crawler traction

Machine weight (without hammer & rod)	kg	4960
Travelling speed	km/h	3,5
Traction air motor	kW	8,8
Grade ability (without compressor)	degree	34°
Oscillating angle	degree	15°

Rotary head

Air motor & reduction gear		
Weight	kg	195
Max. torque	kN	2

Guide Shell

Length	mm	5750
Feed travel	mm	3980
Max. Pulling force	kN	14

Feed system

Air feed motor / Chain feed	kW	3,7
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Hydraulic Units

Power pump	kW	3,7
Operating pressure	bar	172
Hydraulic fluid tank capacity	litre	17

Supply air requirement

Air pressure (Max.)	bar	20
Air flow rate (Min.)	m³/min	22
Inlet size		2"

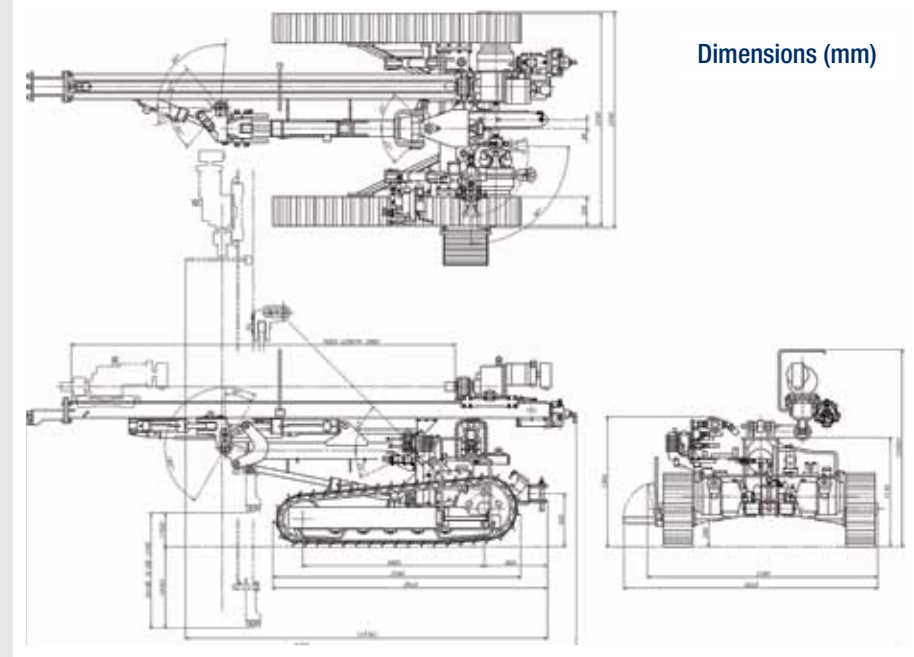
Drill rod

Rod length	mm	3000
Rod diameter	mm	76

Hammer

Size		3 - 4"
Weight	kg	38
Length	mm	1098
Diameter	mm	93
Bit gauge	mm	95 - 127

Dimensions (mm)



PCR 200-DTH

BOOM

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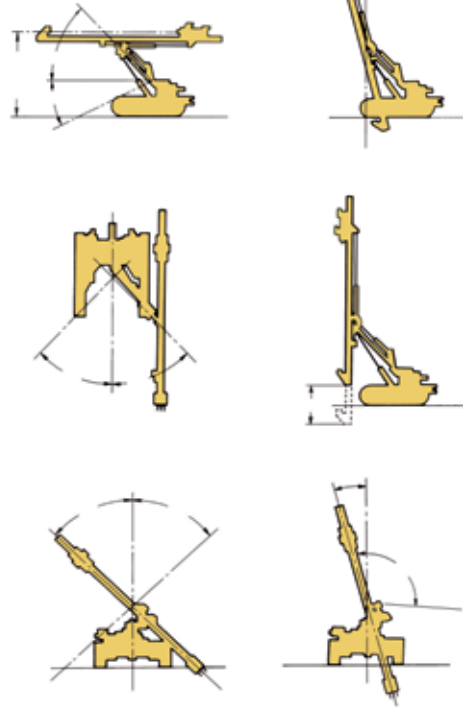
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WHERE **EXPERIENCE COUNTS**

Option	HCR900-ES II	HCR910-DS	HCR1000-EDS II	HCR1200-ED II	HCR1500-ED II	DCR20	PCR200	PCR DTH
Central lubrication	0	0	0	0	0	0	0	0
Detergent system	0	0	0	0	0	0	0	0
Fuel pump	0	0	0	0	0	0	-	-
Fire prevention system	0	0	0	0	0	0	-	-
Rear jack	-	-	-	-	-	0	-	-
Low horizontal option	-	-	-	0	0	-	-	-
Rod magazin 8+1	-	-	-	0	0	-	-	-
Working lights 2 x 70W	0	0	0	0	0	0	-	-
Winter package	0	0	0	0	0	0	-	-
Rear camera	-	0	0	0	0	0	-	-
2D angle indicator	0	0	0	0	0	0	-	-
3D angle indicator	0	0	0	0	0	0	-	-
Engine and drill data transfer (Flash stick)	0	0	0	0	0	0	-	-
Engine and drill data transfer (GMS)	0	0	0	0	0	0	-	-
Global position tracking (GPS)	0	0	0	0	0	0	-	-
Engine remote shut down (GMS)	0	0	0	0	0	0	-	-

0 = option, - = not available



OPTIONS



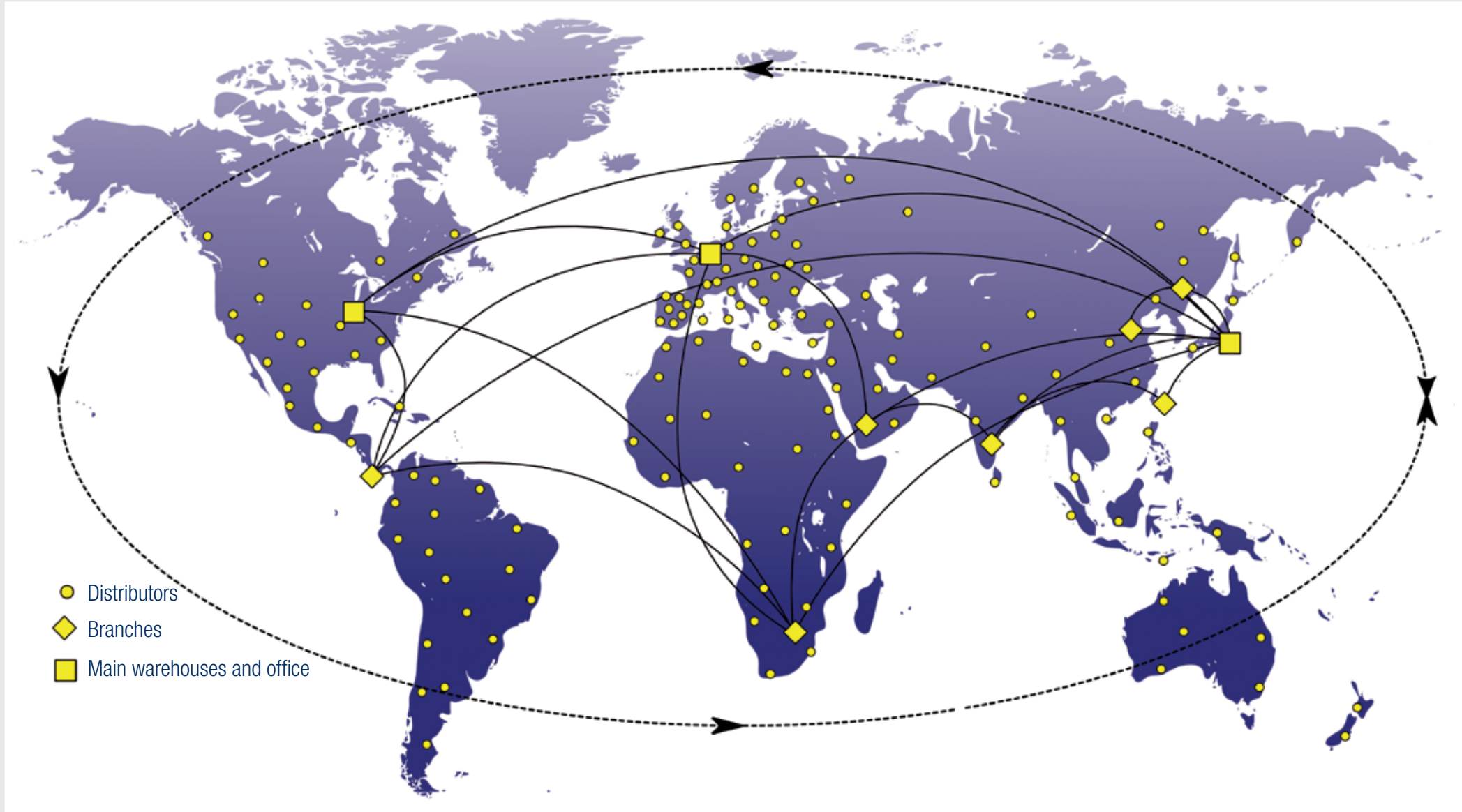
Options

To fit the Furukawa crawler drill to your needs Furukawa offers a wide range of functional options like central lubrication, 2/3 D angle indicator, water detergent system and much more.

Please contact your local dealer for more information.



WHERE **EXPERIENCE COUNTS**



GLOBAL DISTRIBUTOR NETWORK

LOCAL SERVICE AND SUPPORT

FRD seeks firstly to supply a product of undoubted integrity. Then back this up with a support network of dedicated Distributors to ensure whatever support, wherever and whenever needed. The FRD-Distributor combination has been made unbeatable.

FRD Distributors have been selected for their professional competence, their market coverage, their dedication to quality and their willingness to work. They receive intense training on all machines and systems and every support that a committed manufacturer can give them. They actively exchange experience between each other to ensure their clients get the latest lessons from the market. They are a skilled and fast team of professionals.

VALUE FOR MONEY

Buying FRD products is a smart investment. A reasonable price for top quality, long lifetime, low maintenance and low breakdown time products in the long term makes financially good sense.

Next steps? FRD Europe and its Distributors have a vast resource of information beyond what can be mentioned here. Do not hesitate to get in touch for more detail and an unbeatable quote.



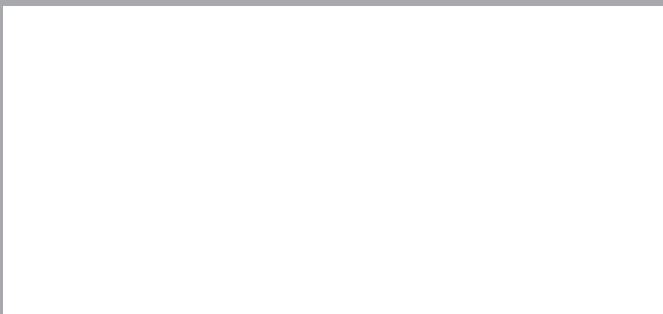
"For a professional problem-free job FRD offers the best combination of quality equipment and instant service and support. The Distributor network is outstanding."

WHERE EXPERIENCE COUNTS



WHERE EXPERIENCE COUNTS

DISTRIBUTOR:



Furukawa Rock Drill Europe BV

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www.frd.eu or www.frdEuropebv.nl