

Hydraulic Crawler Drill

HCR910-DS

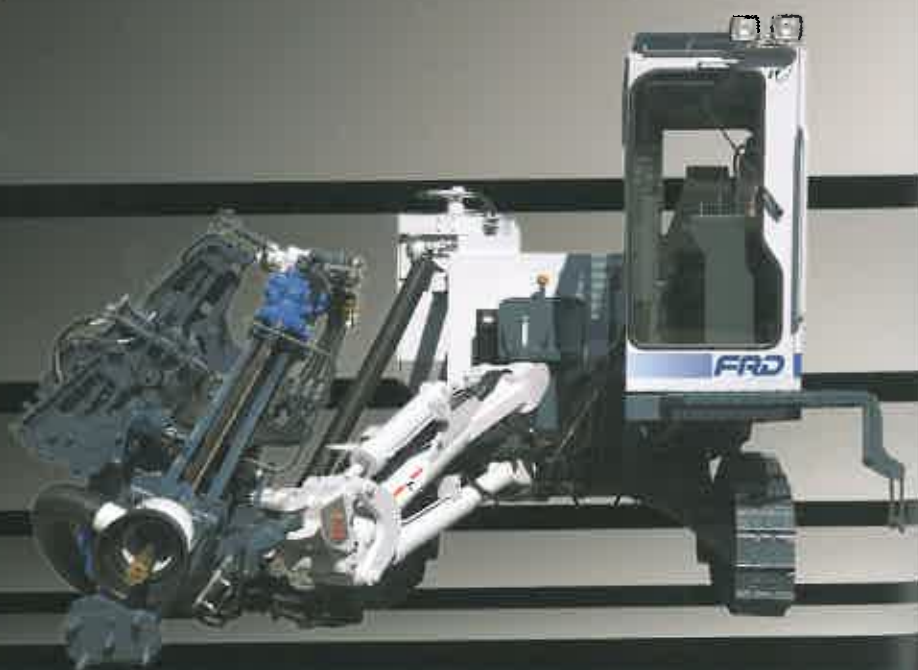
Tier3 / Euro Stage - 3



The ultimate combination performance and

- ★ *New designed economy mode*
- ★ *New comfortable cab design*
- ★ *New installed air conditioner*
- ★ *New tilt type control deck*

FRD
FURUKAWA



**on or
economy.**

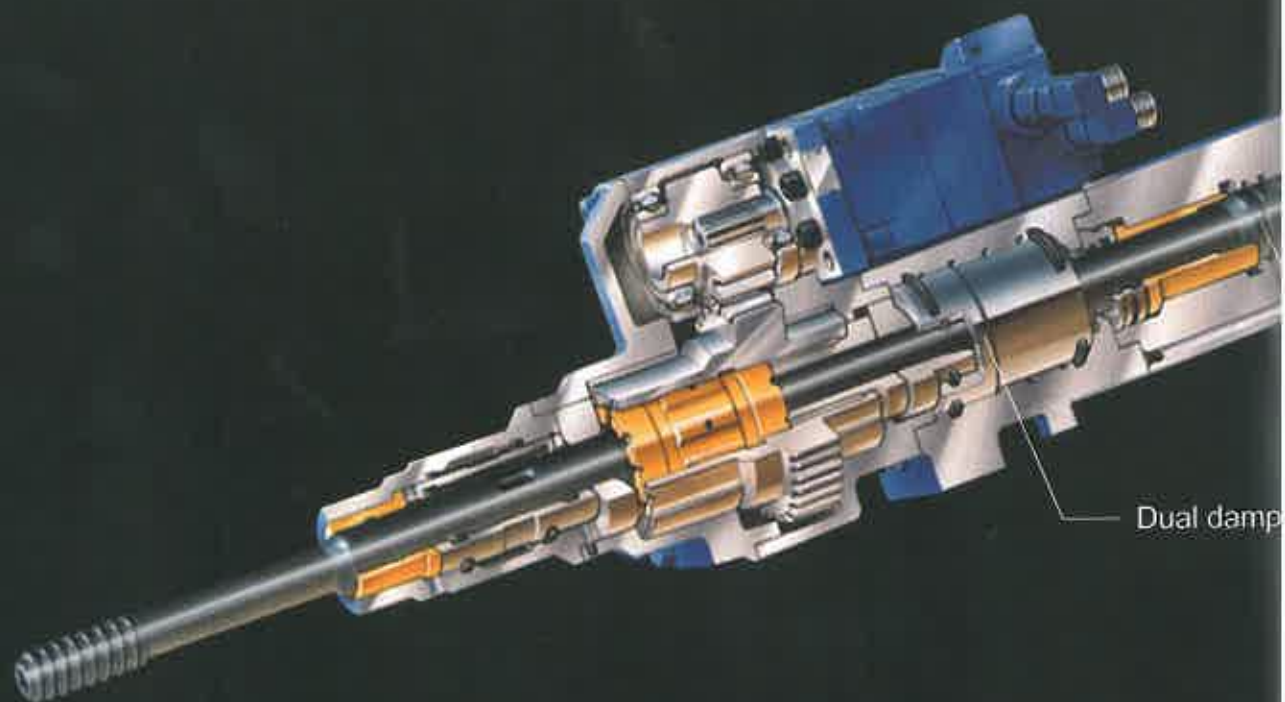
**HCR910
-DS**

FRD
FURUKAWA





Drilling performer, HCF High-productivity & Drill faster and straighter with our patented HD70



Dual-damper system DDS

FRD has developed the Dual-Damper System, a first in the industry. For maximum energy transfer, active DDS minimizes 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 greatly improved life of drilling accessories.
(U.S. PATENT No.5,896,937)

Compact valve design

The FURUKAWA HD700 series drifter is designed to minimize drill noise and vibration without sacrificing performance. Incorporating a new piston design, the HD709 drifter maximizes energy transmission and drills effectively in a variety of rock types.

HCR 910-DS

910-DS Durability drifter.



Compact valve design

Newly designed piston



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.



Maximizes operator performance the ultimate in



Powerful CAT engine is fully compliant with tier3 / Euro stage-3 emission control. It gives full control for easy drilling.



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

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New designed economy mode

By using our-saving switch, fuel consumption is reduced during light work conditions.
(Maximum 30 % reduction on previous model.)

While drilling, Engine speed can be adjusted lower than power mode. Engine speed can be selected from one of the following speeds.

- 1,600min⁻¹
- 1,800min⁻¹
- 2,000min⁻¹

(at the power mode, the engine speed is 2,200 min⁻¹)

Even in the economy mode, you can realize the perfect cleaning as power mode does.
(For the hole cleaning, engine speed automatically increases up to 2,200 min⁻¹.)

Digital engine indicator

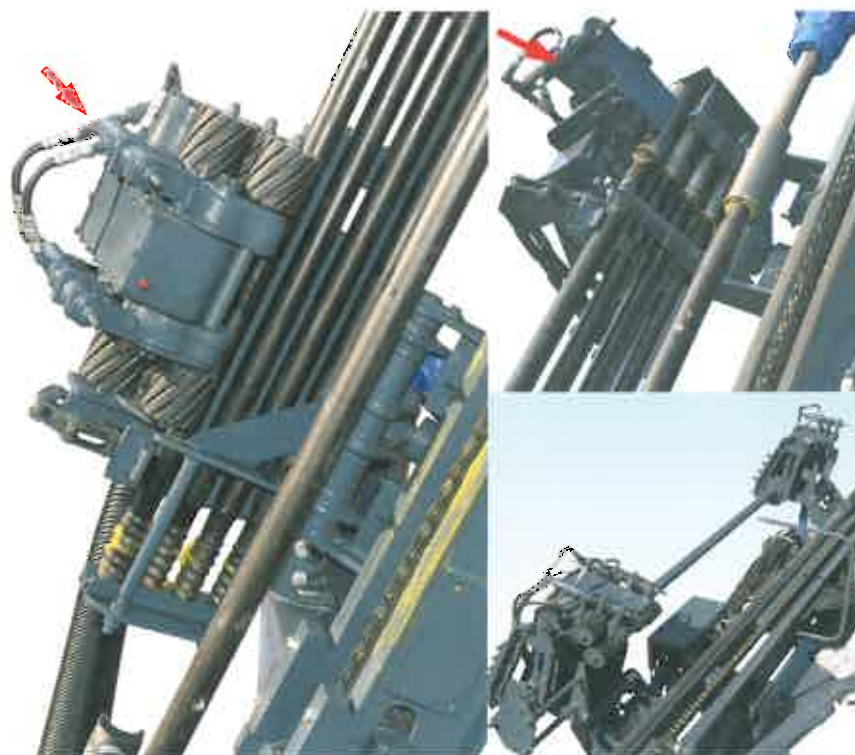
Easy check engine condition in the Cab.

- Engine rpm
- Engine hour meter
- Engine coolant temp
- Engine hydraulic pressure
etc.



Field proven rod changer system

The hydro-mechanical In-line-1 conventional design rod changer is field proven. Rod change speed is extremely fast.



● Rod changing lever



- ①Roller rotation / Roller slide
- ②Carrier Swing in / Rod adding or Rod re-lease

Easy operation and improved



High capacity compressor & Dust collector



High out-put compressor increases flushing air, provides faster drilling and decreases bit wear. The upgraded dust collector has a suction capacity. The dust collector includes an effective pre-cleaner to reduce the escape available for difficult drilling conditions.



New design and useful control deck



HCR910-DS is provided with operator proven "triple plus one" drill control design. FRD experienced operators will perform their skill level from day one, with triple hydraulic drill control and one air control lever layout. No learning time is required.

Control panel ①~④

- ① Flushing lever
- ② Rotation lever
- ③ Feed lever
- ④ Percussion lever

Switch panel ⑤~⑪

- ⑤ Feed control valve
- ⑥ Dust collector switch
- ⑦ Food & Centralize
- ⑧ Anti-jamming pilot lamp
- ⑨ Anti-jamming
- ⑩ High rotation/Normal rotation switch
- ⑪ Grease lubrication switch

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.

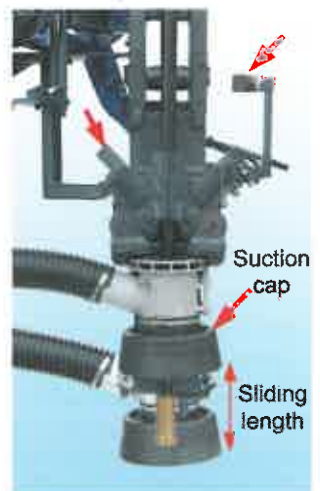
Mode selector

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.



Easy to check hole

Sliding suction cap can be raised to allow a fast visual check of operation.



Heavy duty undercarriage & oscillating

Heavy-duty track frames provide strength and durability. One-piece drive sprockets are manufactured with hardened surfaces for longer life. Heavy-duty track links are forged from high-manganese alloy steel, and pins and bushings are induction-hardened. Standard full track guards protect undercarriage, Track tension can be adjusted easily with a grease gun.

The entire machine oscillates up-down 10 degrees total 20 degree to maintain machine level. And right -and-left tracks equalize 20 degrees to negotiate uneven ground.



Oscillating cylinder

Combining performance and



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.



New design cab(Photo:Standard cab)



- 1 Engine start switch
- 2 Engine throttle
- 3 FM/AM Radio
- 4 Control panel for air conditioner
- 5 Compressor switch
- 6 Front Light switch
- 7 Rear Light switch
- 8 Front window wiper switch
- 9 Upper window wiper switch



- 1 Warning lights
- 2 Temp. Gauge, Compressor
- 3 Temp. Gauge, Hydraulic
- 4 Engine monitoring display

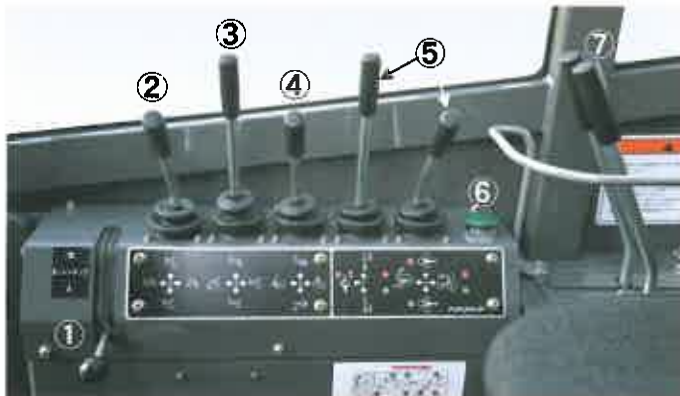
Air Conditioner Ventilation duct.

- ① ② ③





Comfortable control levers



Mutual design lever for easy control.

- ① Oscillating lock lever
- ② Guide slide & Oscillating
- ③ Guide tilt & Guide swing
- ④ Boom lift & Boom swing
- ⑤ Rod changer(2 lever)
- ⑥ Hone S/W
- ⑦ Traveling lever
- ⑧ Drink holder



Operator's seat

Hi-back operator's seat with fabric upholstery and arm rests, holds the operator in an optimum position all day.



Tilt type control deck



Tilt lock release pedal.



Pressure gauge installed to center pillar. Easily checkable from sitting position.

- ① Impact pressure gauge
- ② Feed pressure gauge
- ③ Rotation pressure gauge
- ④ Flashing air pressure gauge

Easy Maintenance & Safety

Tough hose reels



Extends hose life, ensures longer service life and reduces service load.

Wear Plate



Synthetic wear plates (Optional) for drifter carriage

Air conditioner filter



Accessibility For Maintenance



For Safety equipment

Fan guards



Fan guards and belt guards are standard.

Travel lock plates



Engage travel lock while drilling.

Head guards



Roof is reinforced and overhead window is steel gauge protected.

Fire extinguisher



Located at rear-right-side of the cab.

Functions.

HCR 910-DS

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

Access to the right side cover

Fully openable access cover makes access to the radiator, the grease can and the drilling control valves easier.



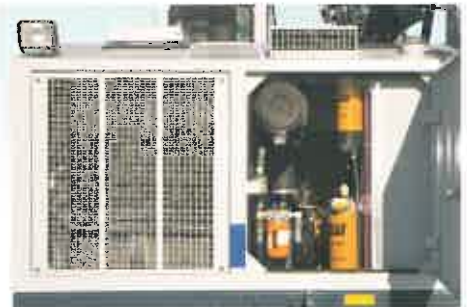
Access to the left side cover

Service for the engine and battery, the electric control panel can be reached from the left side access cover.



Access to the Rear cover

Filters are within the reach.



Access to the Upper cover

Can easily access to the engine room.



Hoses and piping clearly accessible for Maintenance



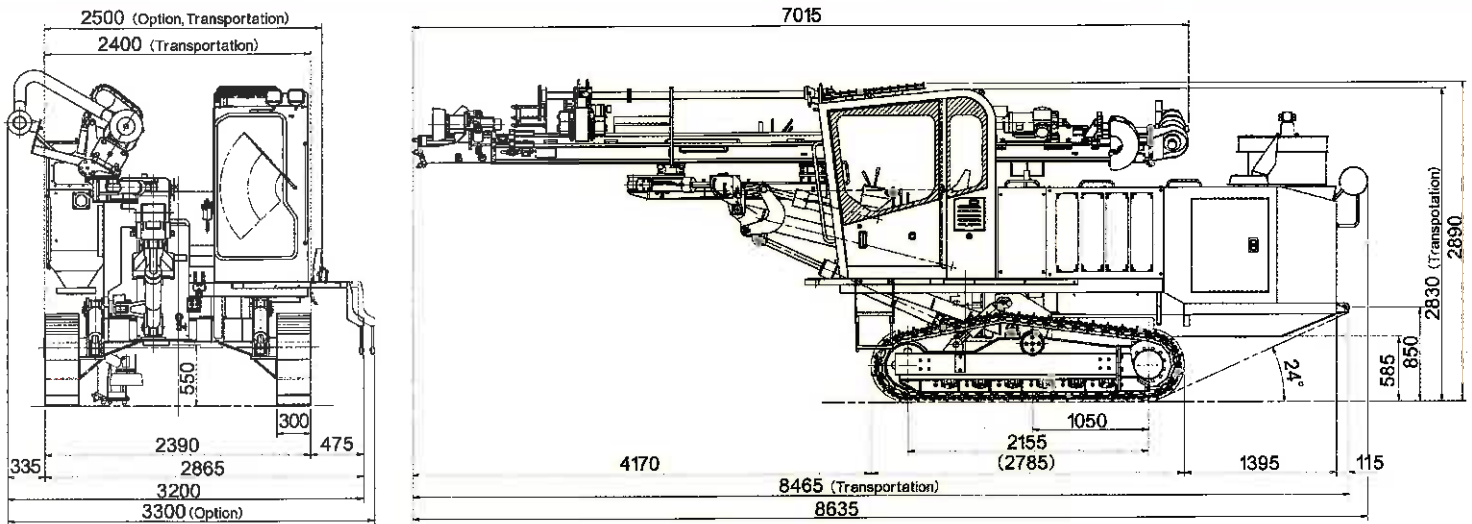
ROPS/FOPS Cab (Option)

ROPS :
Roll-Over Protective
Structures

FOPS :
Falling-Object Protective
Structures

Specifications

HCR910-DS



Model	HCR910-DS	
Weight & Dimensions	Operating weight (Standard Cab)	10,450 kg
	Operating weight with ROPS/FOPS cab	10,490 kg
	Overall length	8,635 mm
	Overall width	2,865 mm
	Overall width (Transportation)	2,400 mm
	Overall height	2,890 mm
	Overall height (Transportation)	2,830 mm
Drifter	Model	HD709
	Weight	185 kg
	Number of percussion	2,250~2,500 min ⁻¹
	Number of rotation	0~250 min ⁻¹
Undercarriage	Track length	2,785 mm
	Ground contact length	2,155 mm
	Width of shoe	300 mm
	Ground clearance	550 mm
	Oscillating angle	+10°
	Traveling speed	0 ~ 3.8 km/h
	Gradability	57.7% (30°)
Engine	Model	C7
	Type	Water-cooled, Direct injection 6-cylinders, Air to air after cooled, turbo-charged, diesel
	Maker	CATERPILLAR®
	Output	168 kW / 2,200 min ⁻¹
	Fuel tank capacity	320 liter
Hydraulic pump	Variable displacement piston	2
	Gear pump	3
	Hydraulic oil capacity	170 liter
Compressor	Model	PDS265-S35A (AIRMAN)
	Type	Screw 1-stage forced oil lubrication
	Free air delivery	5.4 m ³ /min
	Working air pressure	1.03 MPa
Boom	Model	JF200
	Type	Fixed boom
	Boom lift angle	Up 43° · Down 30°
Guide shell	Boom swing angle	Right 45° · Left 10°
	Model	GH831
	Length	7,015 mm
	Feed length	4,089 mm (3,904 mm)
	Guide slide length	1,500 mm
	Guide swing angle	Right 50° · Left 50°
	Guide tilt angle	180°
	Max.rod pull force	24.5 kN
Feed type	Hydraulically operated chain drive	
Dust collector	Suction capacity	20 m ³ /min
	Number of filter	4
Rod arrangement	Number of rod	4
	Control lever	2
	Bit & rod	Recommended bit diameter
Type of bit		Cross Button, Ballistic, Conical
Size of rod		32H,38R,45R, (38H)
Length of rod		3,050 mm (10 ft)
Starter rod (M)		4,000 mm (14 ft)