FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

BLASTHOLE DRILLS

PRODUCTIVE

RELIABLE

ECONOMICAL

HIGH-PERFORMANCE DRILLING OPTIONS. MORE PRODUCTIVE. LESS MAINTENANCE.

www.frdusa.com

INSIDE FURUKAWA ROCK DRILL USA

TRADITION AND HIGH-TECH FROM ONE COUNTRY

Furukawa Rock Drill USA is a wholly owned subsidiary of FURUKAWA ROCK DRILL CO., LTD. Furukawa was founded in 1875 by Ichibei Furukawa to mine and smelt copper. The business steadily expanded to include FRD USA which includes the Breaker/Attachment Division (formerly Kent Demolition Tools) specializing in attachments for skid steer, mini excavators, backhoes and excavators. The F Series Furukawa hydraulic breaker is now a leading brand throughout North and Central America.

Our Rock Drill Division offers a complete line of advanced blasthole drills and accessories for construction and quarry sites. As a technology company our products are always on the leading edge, driving equipment advancements.

FURUKAWA CO., Ltd. has diversified over the years to become a leading corporation in Japan. Today, in addition to mining and smelting we also manufacture machinery, electronic materials and chemicals, as well as supply fuel and electric power.

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FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

CONTENT

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

Designed Specifically for FRD Tier IV Drills

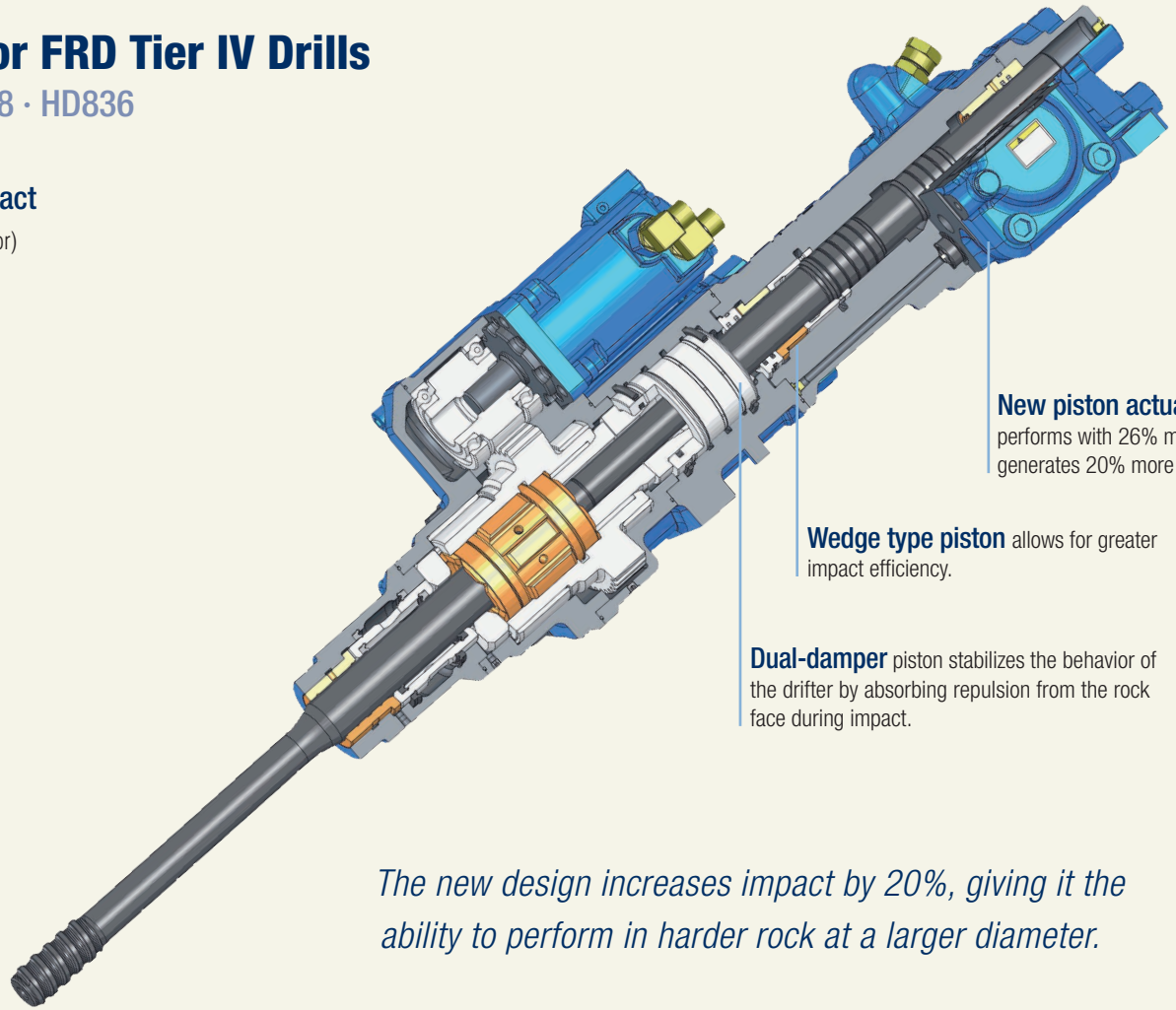
HD818 · HD822 · HD828S · HD828 · HD836

Better Penetration with Increased Impact

- The Furukawa HD800 Series drifter (patent applied for) is designed to minimize drill noise and vibration, while increasing performance.
- With 20% more impact, this drill has the ability to perform in harder rock at a larger diameter.

Dual Damper System DDS

- Stabilizes the bit against the rock, ensuring efficient energy transfer and straighter holes.
- Automatically adjusts the drifter for maximum performance regardless of the rock condition.

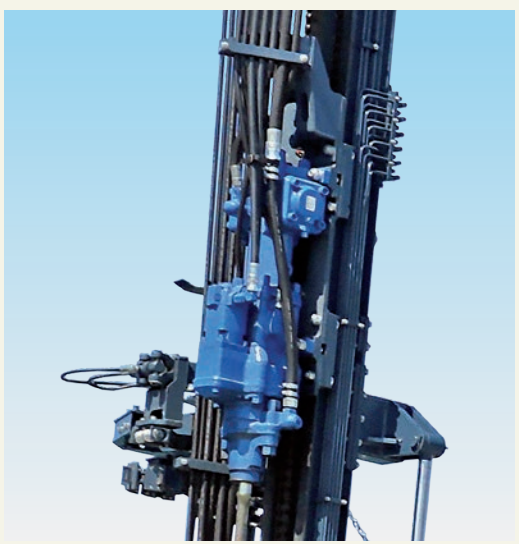


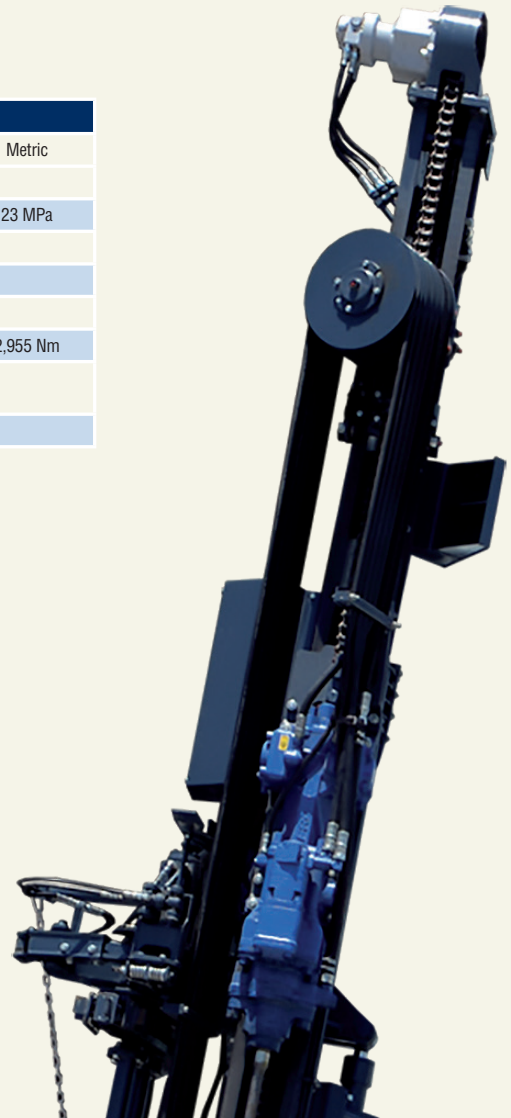
The new design increases impact by 20%, giving it the ability to perform in harder rock at a larger diameter.

HD800 SERIES DRIFTER

FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

	HD818		HD822		HD828S		HD828		HD836	
	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric
Drill Compatibility	900ES/1100-ED		1100-ER		1450		1800		1800	
Maximum Impact Pressure	2,900 psi	20 MPa	2,900 psi	20 MPa	3,118 psi	21.5 MPa	2,900 psi	20 MPa	3,335 psi	23 MPa
Blow – Long Stroke	2,800 bpm		2,700 bpm		2,500 bpm		2,700 bpm		2,600 bpm	
Blow – Short Stroke	3,400 bpm		3,300 bpm		3,000 bpm		3,300 bpm		3,100 bpm	
Stroke Adjustment	Variable		Variable		Variable		Variable		Variable	
Maximum Rotation Torque	508 ft-lbs	689 Nm	1,045 ft-lbs	1,417 Nm	1,045 ft-lbs	1,417 Nm	1,045 ft-lbs	1,417 Nm	2,179 ft-lbs	2,955 Nm
Maximum Number of Rotations Per Minute	200		190		190		190		120	
Flushing System	Swivel Type		Swivel Type		Swivel Type		Swivel Type		Swivel Type	



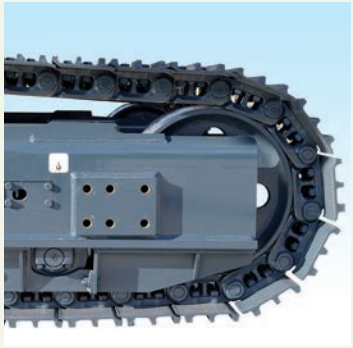


High-performance drilling options. More productive. Less maintenance.

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

900's supplied with single grouser, 1500s and DCR20s supplied with triple grousers, 1200's supplied with single or triple grousers.

Track Oscillation

Independent track oscillation +/- 10°, provides safe tramming in any terrain.

Low Gravity Point

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

Innovative Features For Higher Performance

Combining Performance and Economy

Combining performance and economy, the HCR900-ESV is the perfect drill for quarries or construction sites. Simple, durable and efficient, the HCR900-ESV with extendable boom incorporates a self-adjusting drill system that ensures high productivity no matter what the drilling situation. By automatically controlling the impact force, feed force, rotation force and dual damper pressure, the HCR900-ESV continuously adapts to the changing rock conditions, increasing drilling performance and the life of drill tools while decreasing fuel consumption.

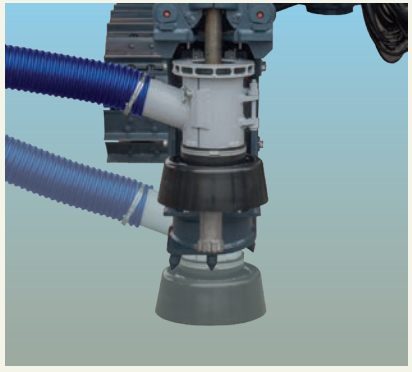
Drill Straighter with the HD818 Drifter

The Furukawa HD818 drifter (patent applied for) is designed to minimize drill noise and vibration, while increasing percussion frequency by 24% versus the HD709 drifter, its predecessor.

Duel dampening system stabilizes the bit against the rock, ensuring efficient energy transfer and straighter holes. The system automatically adjusts the drifter for maximum performance regardless of the rock condition.

Sliding suction cup minimizes dust for better visibility.

HCR900-ESV



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 and Dust Collector

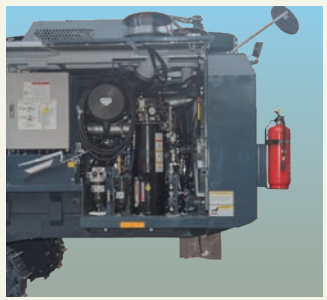
The dust collector is equipped with an effective pre-cleaner that has the same suction capacity as previous models and reduces drilling dust leakage. An optional water/dust suppression system is available for difficult drilling conditions.

Innovative Features for Higher Performance

- Low emission, Tier-IV Cummins® engine meets strict North American exhaust emissions regulations.
- Rod changer with proven design allows for the install of four drill steels plus one starter rod.
- Winch-ready frame adds application versatility.

Also Increases:

- Impact rates up to 3,400 blows per minute.
- Free air delivery up to 215 cfm (6.1 m³/min).
- Traction up to 16,636 lb-force (74.0 kN).
- Shoe width up to 12" (300 mm).
- Dust collector capacity up to 706 cfm (20 m³/min.).
- Suction hose size up to 4" (100 mm).

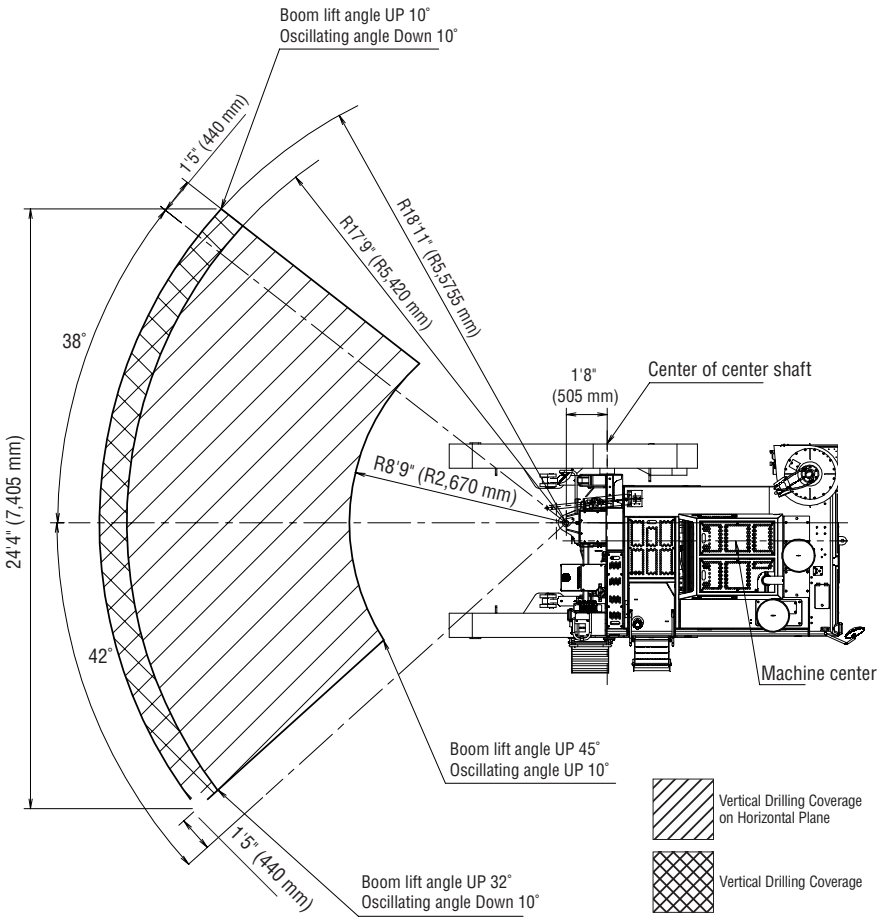


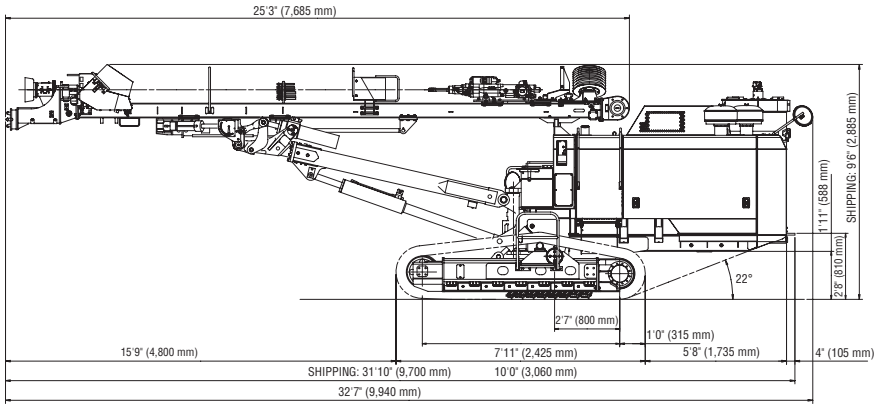
Left Access Cover

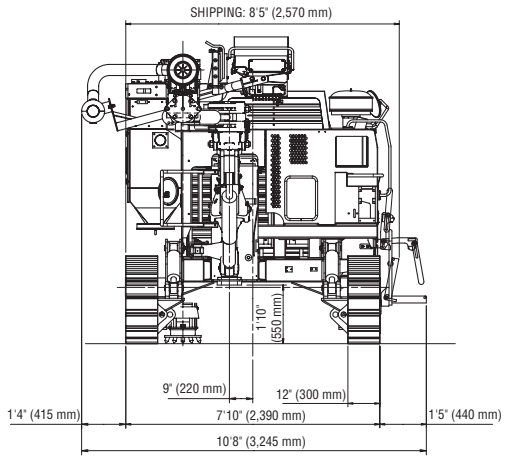
Right Access Cover

HCR900-ESV

Dimensions


Boom lift angle UP 10˚
Oscillating angle Down 10˚
1'5" (440 mm)
R18'11" (R5,5755 mm)
R17'9" (R5,420 mm)
38˚
24'4" (7,405 mm)
42˚
1'8"
(505 mm)
Center of center shaft
R8'9" (R2,670 mm)
Machine center
Boom lift angle UP 45˚
Oscillating angle UP 10˚
1'5" (440 mm)
Boom lift angle UP 32˚
Oscillating angle Down 10˚
Vertical Drilling Coverage
on Horizontal Plane
Vertical Drilling Coverage


25'3" (7,685 mm)
1'11" (588 mm)
SHIPPING: 9'6" (2,885 mm)
2'8" (810 mm)
22°
2'7" (800 mm)
1'0" (315 mm)
15'9" (4,800 mm)
7'11" (2,425 mm)
5'8" (1,735 mm)
4" (105 mm)
SHIPPING: 31'10" (9,700 mm)
10'0" (3,060 mm)
32'7" (9,940 mm)


SHIPPING: 8'5" (2,570 mm)
1'10"
(550 mm)
9" (220 mm)
12" (300 mm)
1'4" (415 mm)
7'10" (2,390 mm)
1'5" (440 mm)
10'8" (3,245 mm)

Innovative Features For Higher Performance

Combining Performance and Economy

Combining performance and economy, the HCR1100-ED is the perfect drill for quarries or construction sites. Simple, durable and efficient, the HCR1100-ED with extendable boom incorporates a self-adjusting drill system that ensures high productivity no matter what the drilling situation. By automatically controlling the impact force, feed force, rotation force and dual damper pressure, the HCR1100-ED continuously adapts to the changing rock conditions, increasing drilling performance and the life of drill tools while decreasing fuel consumption.

Drill Straighter with the HD818 Drifter

The Furukawa HD818 drifter (patent applied for) is designed to minimize drill noise and vibration, while increasing percussion frequency by 24% versus the HD709 drifter, its predecessor.

Duel dampening system stabilizes the bit against the rock, ensuring efficient energy transfer and straighter holes. The system automatically adjusts the drifter for maximum performance regardless of the rock condition.

Sliding suction cup minimizes dust for better visibility.

HCR1100-ED

Cab designed for increased visibility.

The monitoring system incorporates gauges in the cabin, allowing the operator a quick visual of engine temperature, hydraulic oil temperature and fluid levels.

Maximize Operator Performance with the Ultimate in Ergonomic Cab Designs

HCR1100-ED ROPS cabs are ergonomically friendly with features that reduce operator fatigue. In addition, all cabs are air-conditioned and continuously pressurized with filtered air to maintain a comfortable operating environment.

Manage Fuel Savings

With FRD's TFSS (total fuel savings system), the operator selects the optimum engine speed for the application, allowing all fuel savings functions to be automatically managed during drilling operation.

Added Features Bring Versatility

- Low emission, Tier-IV Cummins® engine meets strict North American exhaust emissions regulations.
- Rod changer with proven design allows for the install of five drill steels plus one 13' starter rod.
- Heavy-duty undercarriage – featuring a pentagonal section design to reduce dirt build-up and track wear – ensures strength and durability.
- High-output compressor provides faster drilling and decreases bit wear.
- Reliable dust control system provides effective pre-cleaner to reduce escape of drilling dust.
- Single-lever drilling control for easy operation.
- Walk-around ground level maintenance provides fast, easy upkeep or repair.

Options Available:

- 2D/3D angle indicator.
- Dust suppression.
- Heavy-duty rear-mounted bumper.
- Cold-start kit.
- Rear camera.
- Water.

Right Access Cover
Easy access to filters and battery.

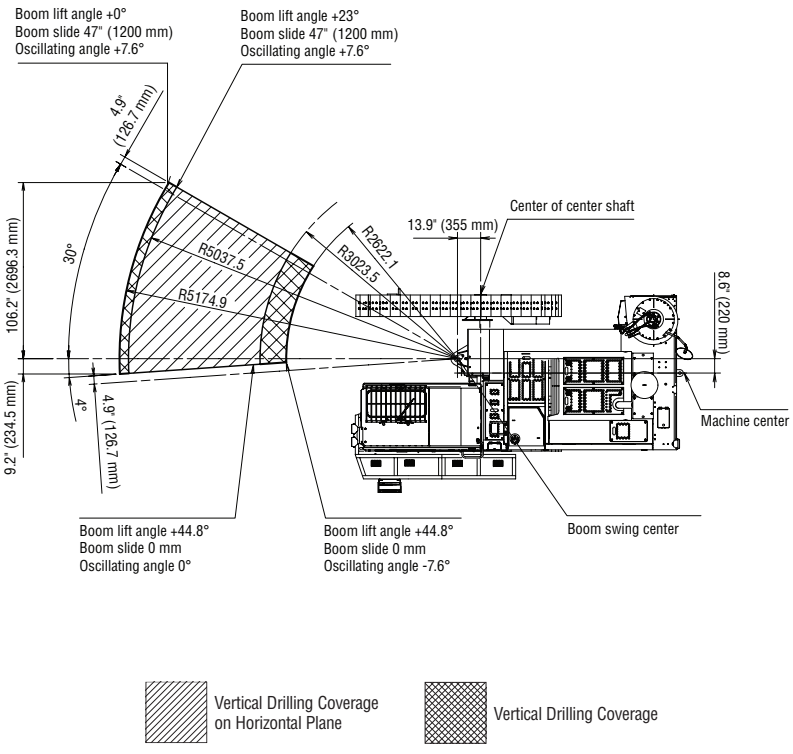
Rear Panel
Cooling systems located in the rear, providing quieter work environment for the operator.

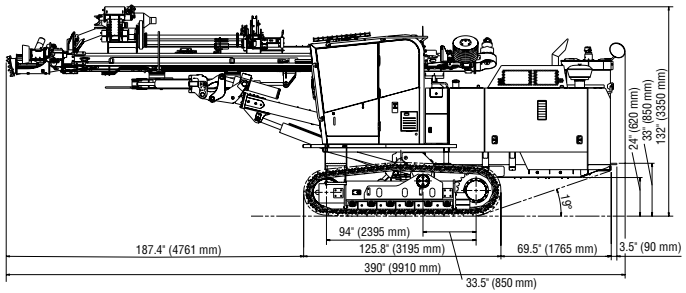
Left Access Cover
Easy access to fluid level, gauges and engine maintenance points.

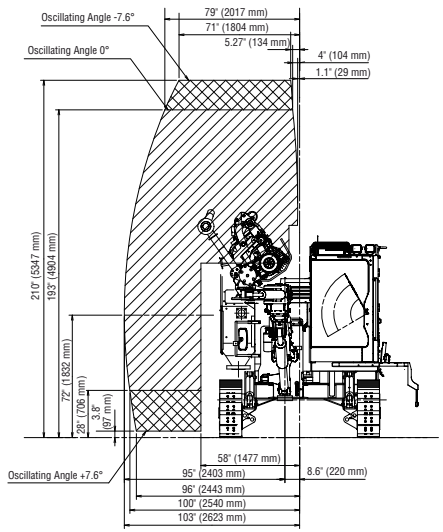
Enhanced Undercarriage Design
Increases traction up to 19,700 16-force.

HCR1100-ED

Dimensions


Boom lift angle +0°
Boom slide 47" (1200 mm)
Oscillating angle +7.6°
Boom lift angle +23°
Boom slide 47" (1200 mm)
Oscillating angle +7.6°
4.9" (126.7 mm)
30°
106.2" (2696.3 mm)
9.2" (234.5 mm)
4°
4.9" (126.7 mm)
R5037.5
R5174.9
R2622.1
R3023.5
13.9" (355 mm)
Center of center shaft
8.6" (220 mm)
Machine center
Boom lift angle +44.8°
Boom slide 0 mm
Oscillating angle 0°
Boom lift angle +44.8°
Boom slide 0 mm
Oscillating angle -7.6°
Boom swing center
Vertical Drilling Coverage on Horizontal Plane
Vertical Drilling Coverage


24" (620 mm)
33" (850 mm)
132" (3350 mm)
19°
94" (2395 mm)
187.4" (4761 mm)
125.8" (3195 mm)
69.5" (1765 mm)
3.5" (90 mm)
390" (9910 mm)
33.5" (850 mm)


Oscillating Angle -7.6°
Oscillating Angle 0°
79" (2017 mm)
71" (1804 mm)
5.27" (134 mm)
4" (104 mm)
1.1" (29 mm)
210" (5347 mm)
193" (4904 mm)
72" (1832 mm)
28" (706 mm)
3.8" (97 mm)
Oscillating Angle +7.6°
58" (1477 mm)
95" (2403 mm)
96" (2443 mm)
100" (2540 mm)
103" (2623 mm)
8.6" (220 mm)

Better Penetration with Increased Impact

The HCR1100-ER drill incorporates innovative features for higher output, capable of drilling at larger diameters. Utilizing a Cummins® Tier-IV EPA compliant engine, the HCR1100-ER combines higher performance with fuel efficiency.

Higher Output with the HD822 Drifter

The Furukawa HD822 drifter (patent applied for) is designed to minimize drill noise and vibration, while increasing performance. With 55% more impact and 28% more air flow than its predecessor, this drill has the ability to perform in harder rock at a larger diameter.

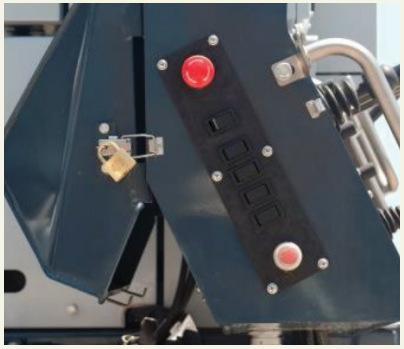
- New design increases percussion frequency by 20% versus the HD709 drifter.
- Duel dampening system stabilizes the bit against the rock, ensuring efficient energy transfer and straighter holes. The system automatically adjusts the drifter for maximum performance regardless of the rock condition.

HD822 Drifter

HCR1100-ER

Winch-Ready Frame

Improved Operator Control Station



Automatic Rod Changer

Upgraded Compressor

Improved Operator Control Station Complies with Industry Regulations

The relocated control station keeps the operator away from drill rotation and dust from drilling.

- The improved electro-hyrdaulics allows easier operation.
- With FRD's TFSS (total fuel savings system), the operator selects the optimum engine speed for the application, allowing all fuel savings functions to be automatically managed during drilling operation.
- The monitoring system incorporates gauges next to the drilling station, allowing the operator a quick visual of engine temperature, hydraulic oil temperature and fluid levels.

Automatic Rod Changer

Incorporates an automatic rod changer to eliminate the need for operators to manually install drill steel, resulting in increased production and enhanced operator safety.

Upgraded Compressor

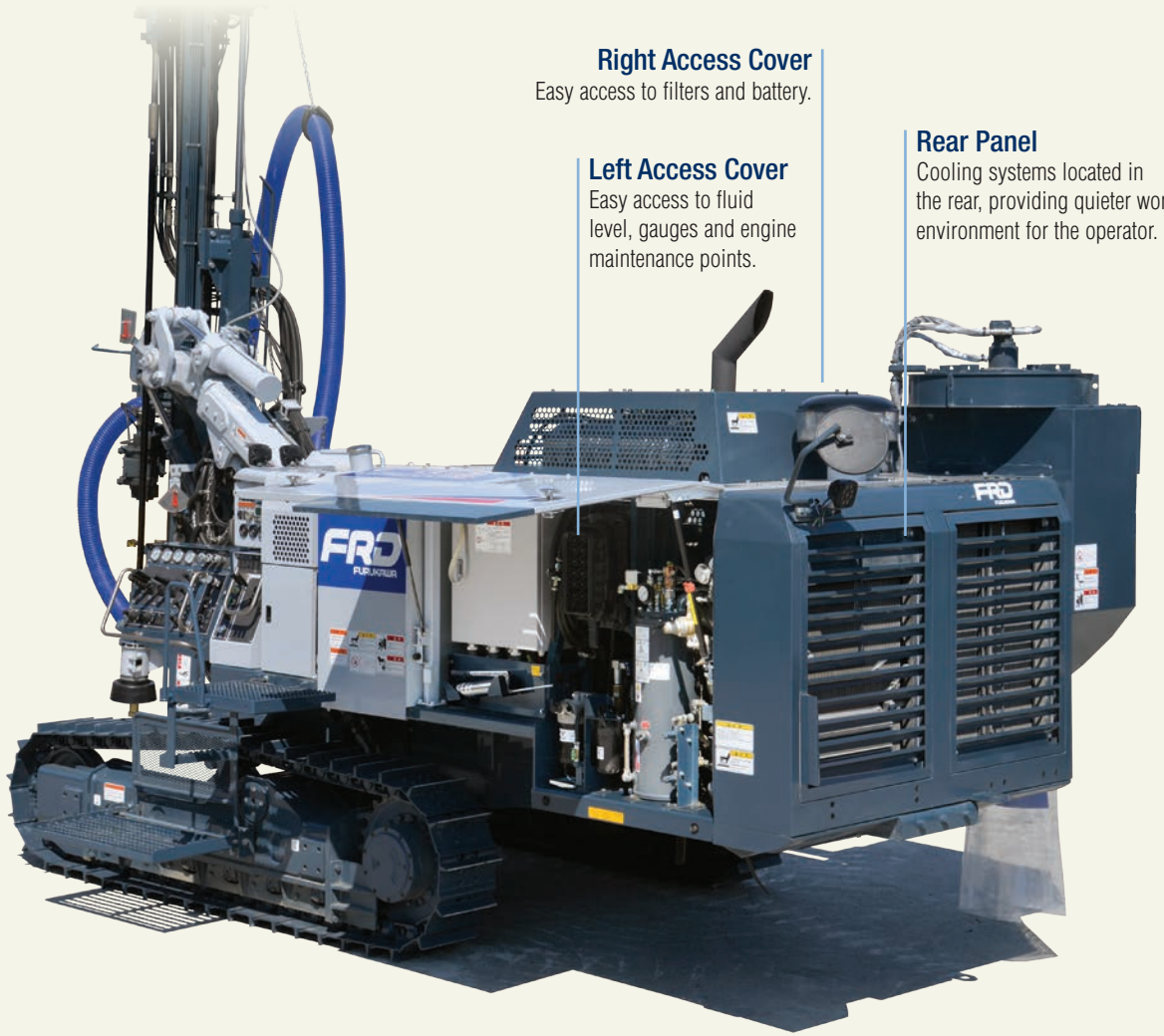
275 cfm increases free air delivery by nearly 28% to accommodate larger diameter drilling.

Innovative Features for Higher Performance

- Low emission, Tier-IV Cummins® engine meets strict North American exhaust emissions regulations.
- Rod changer with proven design allows for the install of five drill steels plus one starter rod.
- Winch-ready frame adds application versatility.
- Optional wireless remote allows tramming and drilling from a secondary location.

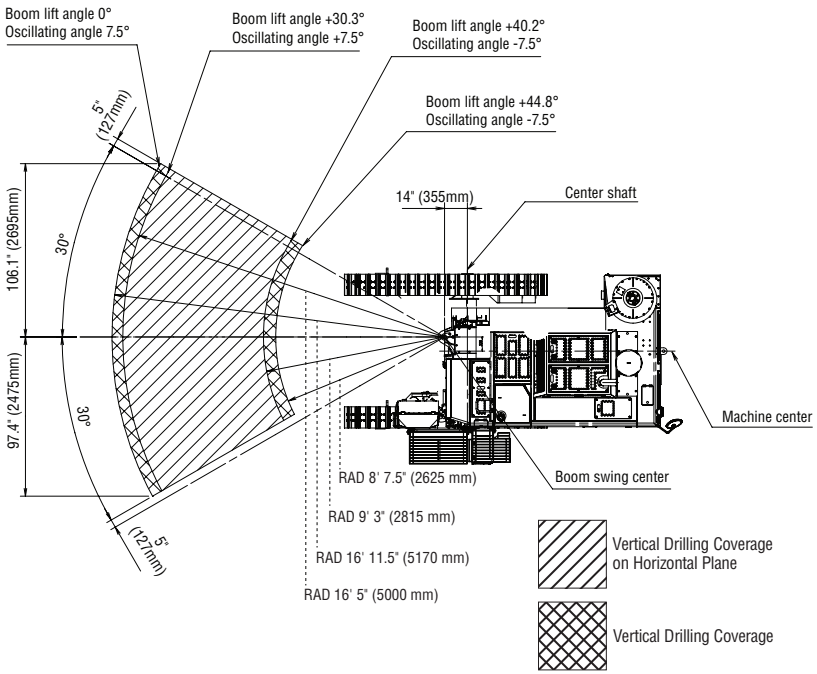
Also Increases:

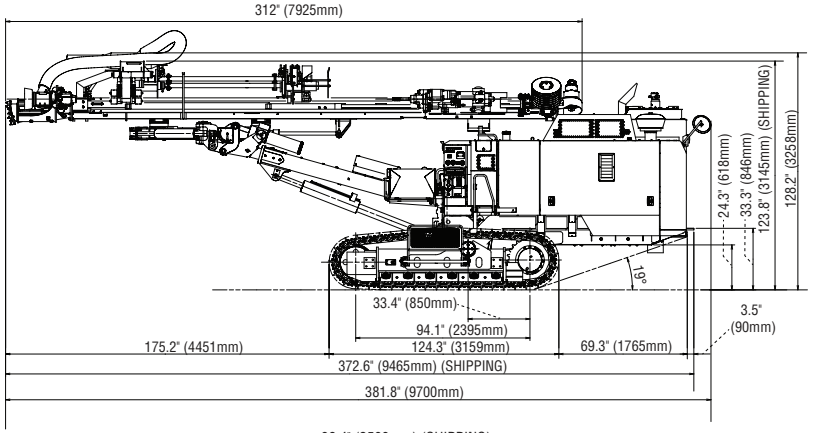
- Impact rates up to 3,300 blows per minute.
- Free air delivery up to 275 cfm.
- Traction up to 19,700 lb-force.
- Shoe width up to 13" (330 mm).
- Dust collector capacity up to 918 cfm (26 m³/min.).
- Suction hose size up to 5" (125 mm).

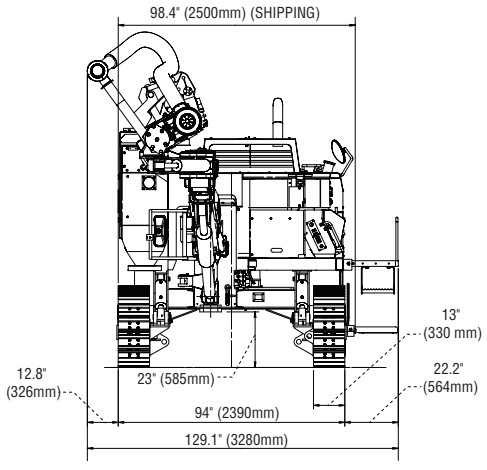


HCR1100-ER

Dimensions


Boom lift angle 0°
Oscillating angle 7.5°
Boom lift angle +30.3°
Oscillating angle +7.5°
Boom lift angle +40.2°
Oscillating angle -7.5°
Boom lift angle +44.8°
Oscillating angle -7.5°
5" (127mm)
106.1" (2695mm)
30°
97.4" (2475mm)
30°
5" (127mm)
14" (355mm)
Center shaft
Machine center
RAD 8' 7.5" (2625 mm)
Boom swing center
RAD 9' 3" (2815 mm)
RAD 16' 11.5" (5170 mm)
RAD 16' 5" (5000 mm)
Vertical Drilling Coverage on Horizontal Plane
Vertical Drilling Coverage


312" (7925mm)
24.3" (618mm)
33.3" (846mm)
123.8" (3145mm) (SHIPPING)
128.2" (3258mm)
19°
33.4" (850mm)
94.1" (2395mm)
3.5" (90mm)
175.2" (4451mm)
124.3" (3159mm)
69.3" (1765mm)
372.6" (9465mm) (SHIPPING)
381.8" (9700mm)


98.4" (2500mm) (SHIPPING)
13" (330 mm)
22.2" (564mm)
12.8" (326mm)
23" (585mm)
94" (2390mm)
129.1" (3280mm)

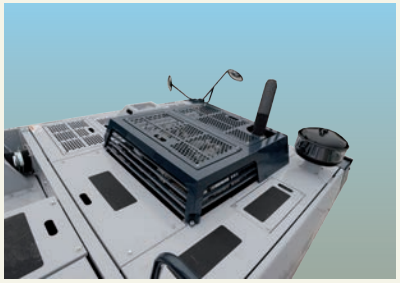
Innovative Features For Higher Performance

Drill Faster and Straighter with the HD828S Drifter

The Furukawa HD828S drifter combines powerful penetration with agility and easy operation. Equipped with features that maximize efficiency, the HD828S drifter sets the standard in high-performance drilling:

- Dual damper system maximizes energy transfer to produce straighter holes. The system automatically tunes the drifter for maximum performance regard less of the rock condition.
- Integrated drilling system is comprised of all-hydraulic controls and a reactive damper control system, which work together to accommodate changing rock conditions. The hydraulic controls automatically adjust impact and feed force, while the damper control system regulates pressure based on rock hardness.

HCR1450-EDII



Maximize Operator Performance with the Ultimate in Ergonomic Cab Designs

HCR1450-EDII cabs are ergonomically friendly with features that reduce operator fatigue. Cabs are 43" (1,100mm) with ROPS/FOPS standard. In addition, all cabs are air-conditioned and continuously pressurized with filtered air to maintain a comfortable operating environment. Other features include:

- Rubber-mounted engine frame isolates cab from engine vibrations.
- Single-lever drilling control for easy operation.
- Large windows maximize operator visibility.
- Walk-around ground level maintenance provides fast, easy upkeep or repair.
- All-In-One display allows operator to monitor machine functions while remaining focused on the drilling.

Manage Fuel Savings

With FRD's TFSS (total fuel savings system), the operator selects the optimum engine speed for the application, allowing all fuel savings functions to be automatically managed during drilling operation.

Combining Performance and Economy

Combining performance and economy, the HCR1450-EDII is the perfect drill for quarries or construction sites. Simple, durable and efficient, the HCR1450-EDII with extendable boom incorporates a self-adjusting drill system that ensures high productivity no matter what the drilling situation. By automatically controlling the impact force, feed force, rotation force and dual damper pressure, the HCR1450-EDII continuously adapts to the changing rock conditions, increasing drilling performance and the life of drill tools while decreasing fuel consumption.

Added Features Bring Versatility

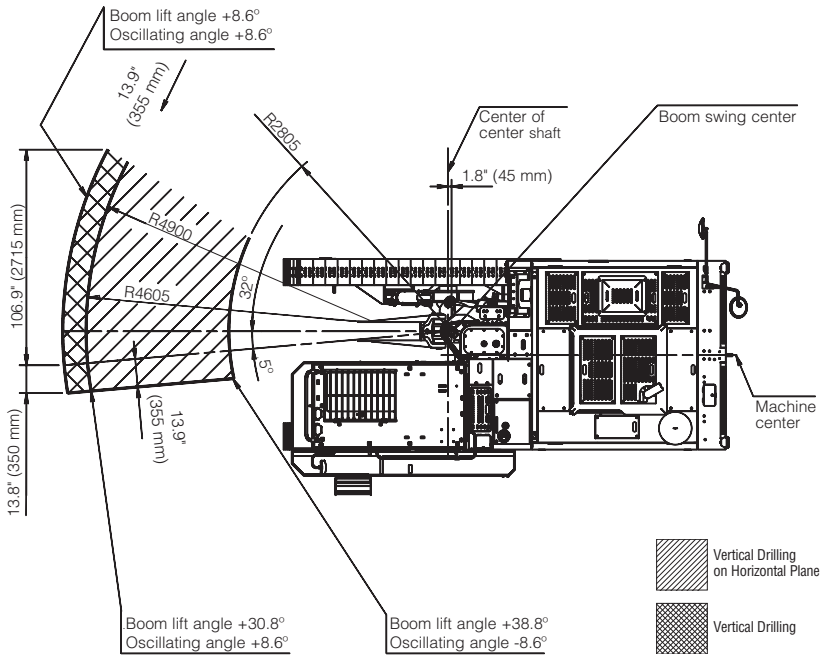
- Low-emission Tier IV engines offer low fuel consumption and meets US exhaust emissions regulations.
- Advanced rotary rod changer allows easy drill rod changes. Operators can add and remove rods using a single lever.
- HCR1450-EDII features 12' rods with extendable boom for increased drill pattern.
- Heavy-duty undercarriage – featuring a pentagonal section design to reduce dirt build-up and track wear – ensures strength and durability.
- High-output compressor increases flushing air, provides faster drilling and decreases bit wear.
- Reliable dust control system increases suction capacity and provides effective pre-cleaner to reduce escape of drilling dust. An optional dust suppression system is available for difficult drilling conditions.

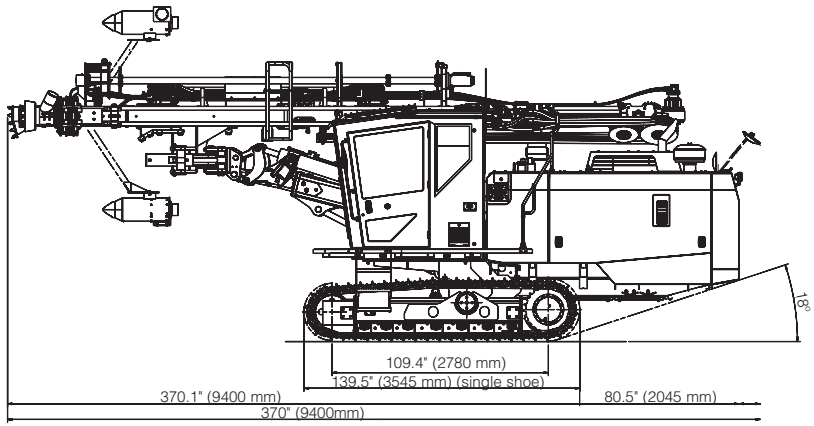
Options Available:

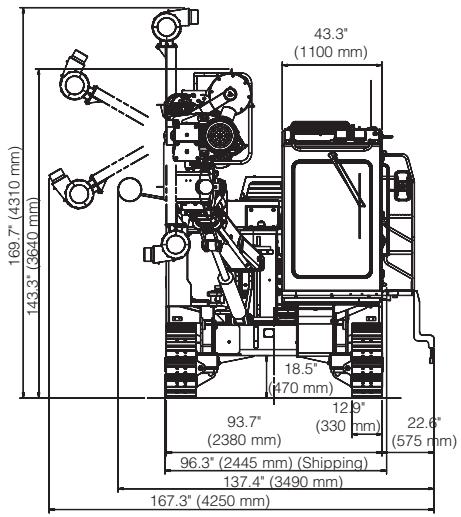
- 2D/3D angle indicator.
- Water dust suppression.
- Heavy-duty rear-mounted bumper.
- Cold-start kit.
- Rear camera.

HCR1450-EDII

Dimensions


Boom lift angle +8.6°
Oscillating angle +8.6°
13.9" (355 mm)
R2805
Center of center shaft
Boom swing center
1.8" (45 mm)
R4900
R4605
32°
5°
106.9" (2715 mm)
13.8" (350 mm)
13.9" (355 mm)
Machine center
Vertical Drilling on Horizontal Plane
Vertical Drilling
Boom lift angle +30.8°
Oscillating angle +8.6°
Boom lift angle +38.8°
Oscillating angle -8.6°


18°
109.4" (2780 mm)
139.5" (3545 mm) (single shoe)
370.1" (9400 mm)
80.5" (2045 mm)
370" (9400mm)


43.3" (1100 mm)
169.7" (4310 mm)
143.3" (3640 mm)
18.5" (470 mm)
12.9" (330 mm)
93.7" (2380 mm)
22.6" (575 mm)
96.3" (2445 mm) (Shipping)
137.4" (3490 mm)
167.3" (4250 mm)

Two Drifters for Increased Versatility

Choose the Best Drifter for Your Job.

The HCR1800 allows you to choose from two different drifters, depending on your specific application needs.

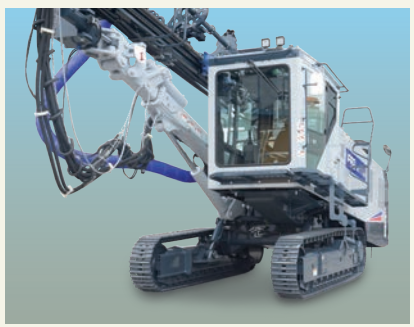
The HD828 Drifter:

- Hole diameters from 3.5" to 5."
- Operates at up to 190 rpms.
- Blow speed of 2,700 - 3,300 bpm.

The HD836 Drifter:

- Hole diameters from 4" to 6."
- Operates at up to 150 rpms.
- Blow speed of 2,600 - 3,100 bpm.
- Use the HD828 drifter to drill holes from 3.5" to 5", or step up to the HD836 drifter for holes from 4" to 6" (using GT60 drill steel).

Whether you choose the HD828 drifter or step-up to the HD836, you will benefit from dependable performance and easy operation.



HCR1800-EDII

Maximize Operator Performance with the Ultimate in Ergonomic Cab Designs

HCR1800 cabs are ergonomically friendly with features that reduce operator fatigue. Cabs are 51" (1,300mm) with ROPS/FOPS standard. In addition, all cabs are air-conditioned and continuously pressurized with filtered air to maintain a comfortable operating environment. Other features include:

- Rubber-mounted engine frame isolates cab from engine vibrations.
- Joy stick drilling control for easy operation.
- Large windows maximize operator visibility.
- Walk-around ground level maintenance provides fast, easy upkeep or repair.
- All-In-One display allows operator to monitor machine functions while remaining focused on the drilling.

Manage Fuel Savings

With FRD's TFSS (total fuel savings system), the operator selects the optimum engine speed for the application, allowing all fuel savings functions to be automatically managed during drilling operation.

Combining Performance and Economy

Combining performance and economy, the HCR1800-ED is the perfect drill for quarries or construction sites. Simple, durable and efficient, the HCR1800 series incorporates a self-adjusting drill system that ensures high productivity no matter what the drilling situation. By automatically controlling the impact force, feed force, rotation force and dual damper pressure, the HCR1800 continuously adapts to the changing rock conditions, increasing drilling performance and the life of drill tools while decreasing fuel consumption.

Added Features Bring Versatility

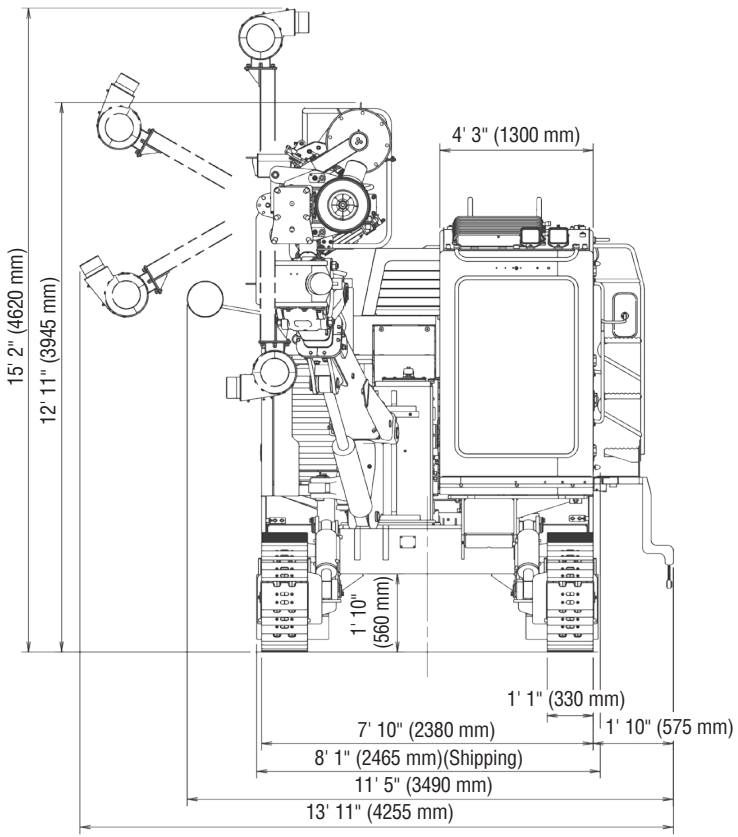
- Low-emission Tier IV CAT® engine offer low fuel consumption and meets US exhaust emissions regulations.
- Advanced rotary rod changer allows easy drill rod changes. Operators can add and remove rods using a single lever.
- HCR1800-EDII features 12' or 14' rods with extendable boom for increased drill pattern.
- Heavy-duty undercarriage – featuring a pentagonal section design to reduce dirt build-up and track wear – ensures strength and durability.
- High-output compressor increases flushing air, provides faster drilling and decreases bit wear.
- Reliable dust control system increases suction capacity and provides effective pre-cleaner to reduce escape of drilling dust. An optional dust suppression system is available for difficult drilling conditions.
- Choose from an HD828 or HD836 drifter to meet your specific application needs.

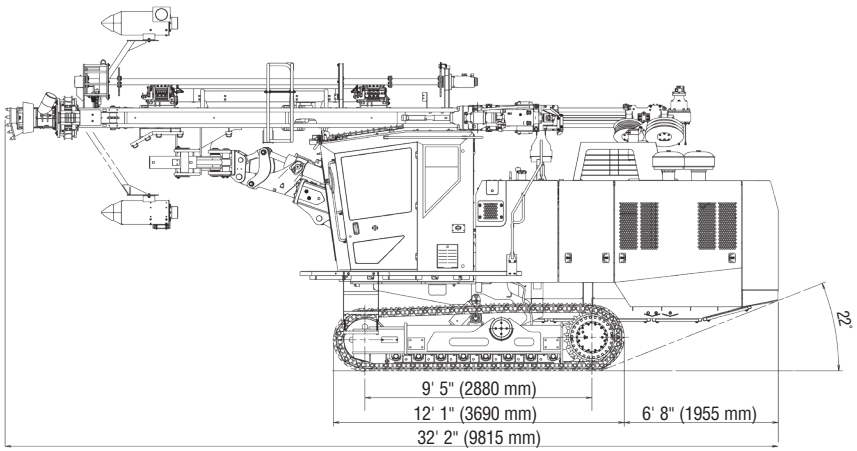
Options Available (but not limited to):

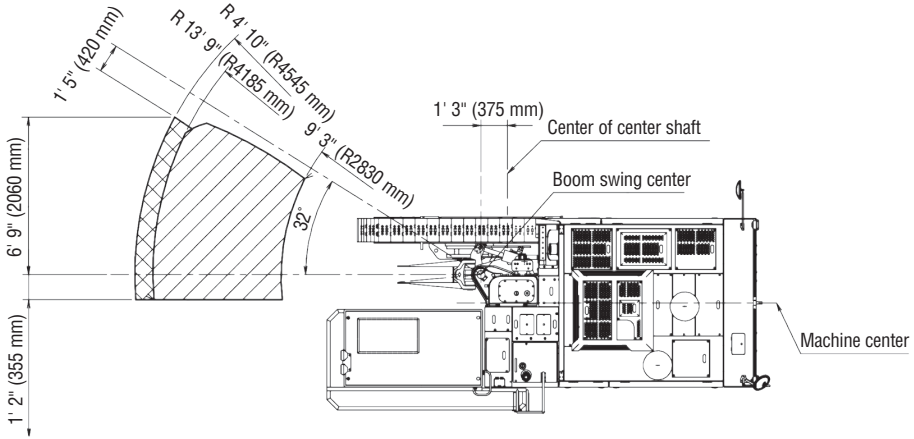
- 2D/3D angle indicator.
- Water dust suppression.
- Heavy-duty rear-mounted bumper.
- Cold-start kit.
- Rear camera.

HCR1800-EDII

Dimensions







The drilling coverage shown above is for the HCR1800-ED with HD836 drifter.

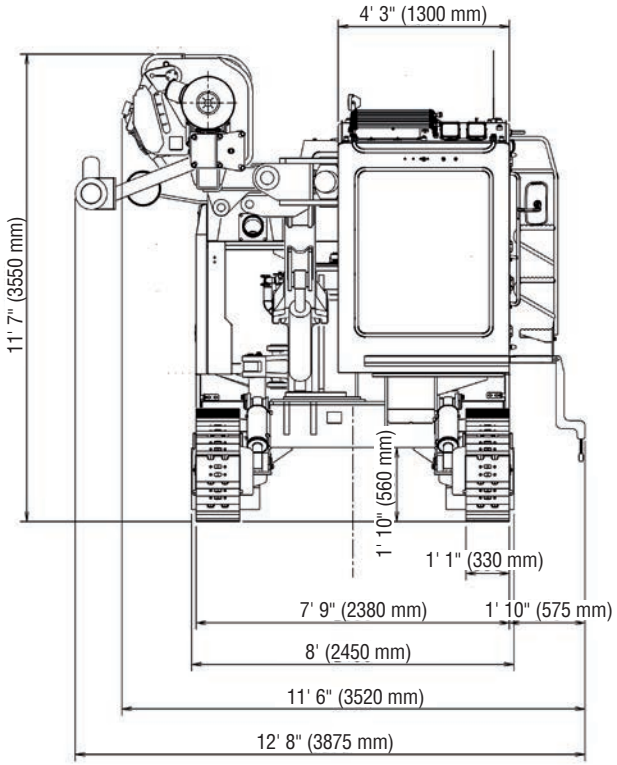
Longer Rods Mean Less Rod Changing

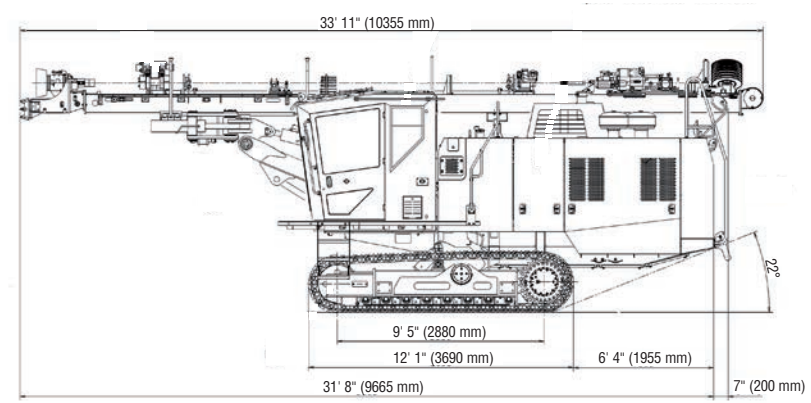
The HCR1800-D20 is equipped with longer guide shell to accommodate a longer starter rod. As a result, you'll have less rod changing time, faster drilling and a lower overall cost per hole.

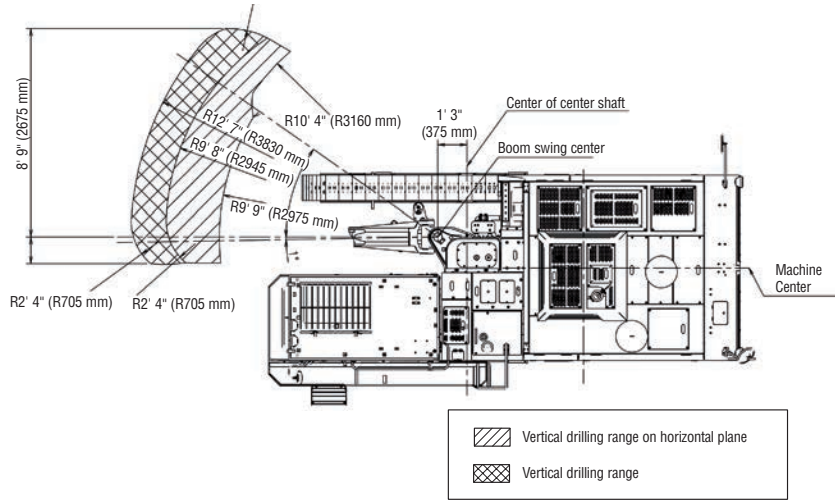
- Longer guide shell accommodates a 20' starter rod.
- Field proven rod changer holds four 20' extension rods.
- Travelling centralizer keeps rod from warping.
- Equipped with the newly developed HD828 drifter, offering a blow range of 2700-3300 bpm.
- High-efficiency 477 cfm air compressor, capable of cleaning up to a 5" hole diameter.
- Ergonomically designed wide cabin offers comfortable work environment.

HCR1800-D20II

Dimensions


4' 3" (1300 mm)
11' 7" (3550 mm)
1' 10" (560 mm)
1' 1" (330 mm)
7' 9" (2380 mm)
1' 10" (575 mm)
8' (2450 mm)
11' 6" (3520 mm)
12' 8" (3875 mm)


33' 11" (10355 mm)
22°
9' 5" (2880 mm)
12' 1" (3690 mm)
6' 4" (1955 mm)
31' 8" (9665 mm)
7" (200 mm)


8' 9" (2675 mm)
R12' 7" (R3830 mm)
R10' 4" (R3160 mm)
1' 3" (375 mm)
Center of center shaft
R9' 8" (R2945 mm)
Boom swing center
R9' 9" (R2975 mm)
Machine Center
R2' 4" (R705 mm)
R2' 4" (R705 mm)
Vertical drilling range on horizontal plane
Vertical drilling range

Model		HCR900-ESV		HCR1100-ED		HCR1100-ER		HCR1450-EDII		HCR1800-EDII WITH HD828 DRIFTER		HCR1800-EDII WITH HD836 DRIFTER		HCR1800-D20	
		US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric
Dimensions and Weight	Overall Weight (A) *1	24,317 lb	11,030 kg	28,991 lb	13,150 kg	27,514 lb	12,480 kg	36,288 lb	16,460 kg	43,938 lb	19,930 kg	43,938 lb	19,930 kg	45,062 lb	20,440 kg
	Overall Weight (B) *2	24,978 lb	11,330 kg	29,784 lb	13,510 kg	28,351 lb	12,860 kg	37,633 lb	17,070 kg	45,768 lb	20,760 kg	45,768 lb	20,660 kg	46,253 lb	20,980kg
	Overall Length	32'7"	9,940 mm	32'6"	9,910 mm	32'10"	10,020 mm	31'9"	9,670 mm	32'10"	10,015 mm	32'10"	10,015 mm	33'12"	10,355 mm
	Shipping Length	31'10"	9,700 mm	31'4"	9,545 mm	31'5"	9,575 mm	35'7"	10,855 mm	36'7"	11,160 mm	36'7"	11,160 mm	36'11"	11,245 mm
	Overall Width	10'8"	3,245 mm	10'6"	3,200 mm	10'4"	3,160 mm	11'5"	3,490 mm	11'5"	3,490 mm	11'5"	3,490 mm	12'9"	3,875 mm
	Shipping Width	8'5"	2,570 mm	7'10"	2,400 mm	8'2"	2,500 mm	8'0"	2,445 mm	8'1"	2,465 mm	8'1"	2,465 mm	8'1"	2,465 mm
	Overall Height	9'6"	2,885 mm	10'12"	3,350 mm	11'0"	3,350 mm	14'2"	4,310 mm	15'2"	4,620 mm	15'2"	4,620 mm	11'8"	3,550 mm
	Shipping Height	9'6"	2,885 mm	10'2"	3,100 mm	10'2"	3,110 mm	11'1"	3,375 mm	11'1"	3,375 mm	11'1"	3,375 mm	10'11"	3,325 mm
Drifter	Model	HD818		HD818		HD822		HD828S		HD828		HD836		HD828	
	Weight	445 lb	202 kg	445 lb	202 kg	533 lb	242 kg	597 lb	271 kg	597 lb	271 kg	772 lb	350 kg	597 lb	271 kg
	Length	3'7"	1,100 mm	3'7"	1,100 mm	3'8"	1,130 mm	3'10"	1,158 mm	3'9"	1,148 mm	3'10"	1,171 mm	3'9"	1,148 mm
	Width	1'2"	352 mm	1'2"	352 mm	1'2"	373 mm	1'3"	387 mm	1'3"	387 mm	1'4"	418 mm	1'3"	387 mm
	Height	0'11"	275 mm	0'11"	275 mm	1'1"	328 mm	1'1"	328 mm	1'1"	328 mm	1'3"	375 mm	1'1"	328 mm
	Number of Blows	2,800 ~ 3,400 bpm		2,800 ~ 3,400 bpm		2,700 ~ 3,300 bpm		2,500 ~ 3,000 bpm		2,700 ~ 3,300 bpm		2,600 ~ 3,100 bpm		2,700 ~ 3,300 bpm	
	Rotating Speed	0 - 200 rpm	0 - 200 min^{-1}	0 - 200 rpm	0 - 200 min^{-1}	0 - 190 rpm	0 - 190 min^{-1}	0 - 190 rpm	0 - 190 min^{-1}	0 - 190 rpm	0 -190 min^{-1}	0 - 120 rpm	0 - 120 min^{-1}	0 - 190 rpm	0 -190 min^{-1}
Undercarriage	Track Length	10'0"	3,060 mm	10'4"	3,159 mm	10'4"	3,159 mm	11'5"	3,490 mm	12'1"	3,690 mm	12'1"	3,690 mm	12'1"	3,690 mm
	Track Length on Ground	7'11"	2,425 mm	7'10"	2,395 mm	7'10"	2,395 mm	9'1"	2,780 mm	9'5"	2,880 mm	9'5"	2,880 mm	9'5"	2,880 mm
	Track Width	0'12"	300 mm	1'1"	330 mm	1'1"	330 mm	1'1"	330 mm	1'1"	330 mm	1'1"	330 mm	1'1"	330 mm
	Ground Contact Pressure *3	10.8 psi	74.3 kPa	11.8 psi	81.6 kPa	11.2 psi	77.5 kPa	12.8 psi	87.9 kPa	14.9 psi	102.8 kPa	14.9 psi	102.8 kPa	15.3 psi	105.4 kPa
	Ground Clearance	1'10"	550 mm	1'11"	585 mm	1'11"	585 mm	1'5"	440 mm	1'10"	560 mm	1'10"	560 mm	1'10"	560 mm
	Frame Oscillation Angle	±10°		±7.6°		±7.6°		±8.5°		±7.5°		±7.5°		±7.5°	
	Tramming Speed	0 - 2.2 mph	0 - 3.5 km/h	0 - 2.2 mph	0 - 3.5 km/h	0 - 2.2 mph	0 - 3.5 km/h	0 - 2.3 mph	0 - 3.7 km/h	0 - 2.3 mph	0 - 3.7 km/h	0 - 2.3 mph	0 - 3.7 km/h	0 - 2.2 mph	0 - 3.5 km/h
	Gradeability	57.7% (30°)		57.7% (30°)		57.7% (30°)		57.7% (30°)		57.4% (30°)		57.4% (30°)		57.4% (30°)	
	Maximum Traction Force	16,636 lb-force	74 kN	19,783 lb-force	88 kN	19,783 lb-force	88 kN	22,144 lb-force	98.5 kN	28,551 lb-force	127 kN	28,551 lb-force	127 kN	28,551 lb-force	127 kN
Engine	Make & Model	Cummins® QSB6.7 (Tier4 Final, Stage IV)		Cummins® QSB6.7 (Tier4 Final, Stage IV)		Cummins® QSB6.7 (Tier4 Final, Stage IV)		Cummins® QSB6.7 (Tier4 Final, Stage IV)		CAT® C9.3 (Tier4 Final, Stage IV)		CAT® C9.3 (Tier4 Final, Stage IV)		CAT® C9.3 (Tier4 Final, Stage IV)	
	Type	Diesel, Water-Cooled, 6 Cylinders		Diesel, Water-Cooled, 6 Cylinders		Diesel, Water-Cooled, 6 Cylinders		Diesel, Water-Cooled, Direct Fuel Injection, Turbo-Charged		Diesel, Water-Cooled, 6 Cylinders		Diesel, Water-Cooled, 6 Cylinders		Diesel, Water-Cooled, 6 Cylinders	
	Piston Displacement	408.9 cu in	6.7 L	408.9 cu in	6.7 L	408.9 cu in	6.7 L	408.9 cu in	6.7 L	567 cu in	9.3 L	567 cu in	9.3. L	567 cu in	9.3. L
	Power Output	225.3 hp / 2,200 rpm	168 kW / 2,200 min^{-1}	225 hp / 2,200 rpm	168 kW / 2,200 min^{-1}	225 hp / 2,200 rpm	168 kW / 2,200 min^{-1}	260 hp / 2,500 rpm	194 kW / 2,500 min^{-1}	350 hp / 2,200 rpm	261 kW / 2,200 min^{-1}	350 hp / 2,200 rpm	261 kW / 2,200 min^{-1}	350 hp / 2,200 rpm	261 kW / 2,200 min^{-1}
	Fuel Capacity	84.5 gal	320 L	84 gal	320 L	84 gal	320 L	112 gal	425 L	158.5 gal	600 L	158.5 gal	600 L	158.5 gal	600 L
	DEF Capacity	5.0 gal	19 L	5.0 gal	19 L	5.0 gal	19 L	5.0 gal	19 L	9.0 gal	34 L	9.0 gal	34 L	9.0 gal	34 L
Hydraulic Equipment	Variable Displacement Pump	PV Pump x2		PV Pump x2		PV Pump x2		PV Pump x2		Axial Piston Pump x2		Axial Piston Pump x2		Axial Piston Pump x2	
	Fixed Displacement Pump	Gear Pump x3		Gear Pump x3		Gear Pump x3		Gear Pump x3		Gear Pump x3		Gear Pump x3		Gear Pump x3	
	Drive Motor	Hydraulic Motor with Reduction Gear		Hydraulic Motor with Reduction Gear		Hydraulic Motor with Reduction Gear		Hydraulic Motor with Reduction Gear		Hydraulic Motor with Reduction Gear		Hydraulic Motor with Reduction Gear		Hydraulic Motor with Reduction Gear	
	Hydraulic Oil Reservoir Capacity	44.9 gal	170 L	45 gal	170 L	45 gal	170 L	57 gal	215 L	63.4 gal	240 L	63.4 gal	240 L	63.4 gal	240 L
Boom	Model	JF326		JF326		JF326		JE326-134		JE326-134		JE326-134		JE325-142	
	Type	Extension		Extension		Extension		Extension		Extension		Extension		Fixed	
	Boom Lifting Angle (Up / Down)	45° / 15°		45° / 15°		45° / 15°		41° / 20°		41° / 20°		41° / 20°		40° / 25°	
	Boom Swing Angle (Right / Left)	37° / 43°		30° / 4°		30° / 30°		32° / 5°		32° / 0°		32° / 0°		35° / 1°	
	Boom Slide Length	4'11"	1,500 mm	3'11"	1,200 mm	3'11"	1,200 mm	2'11"	900 mm	2'11"	900 mm	1'11"	600 mm	-	
	Guide Rotary Angle	-		-		-		-		-		-		90°	

HCR SPECIFICATIONS

FRD FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

Model		HCR900-ESV		HCR1100-ED		HCR1100-ER		HCR1450-EDII		HCR1800-EDII WITH HD828 DRIFTER		HCR1800-EDII WITH HD836 DRIFTER		HCR1800-D20	
		US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric	US Standard	Metric
Guide Shell	Model	GH831		GH831		GH831		JH832-33		GH832-33		GH832-33		GH830-52	
	Overall Length	25'3"	7,685 mm	25'7"	7,845 mm	26'0"	7,925 mm	28'6"	8,700 mm	28'6"	8,700 mm	28'6"	8,700 mm	33'12"	10,355 mm
	Feed Length	14'8"	4,480 mm	15'5"	4,704 mm	15'8"	4,781 mm	For 12': 15'1" For 14': 17'2"	For 3,660 mm: 4,595 mm For 4,265 mm: 5,225 mm	For 12': 15'1" For 14': 17'2"	For 3,660 mm: 4,595 mm For 4,265 mm: 5,225 mm	17'2"	5,225 mm	22'6"	6,860 mm
	Feed Type	Hydraulic Motor Driven Chain		Hydraulic Motor Driven Chain		Hydraulic Motor Driven Chain		Hydraulic Motor Driven Chain		Hydraulic Motor Driven Chain		Hydraulic Motor Driven Chain		Hydraulic Motor Driven Chain	
	Guide Slide Length	3'11"	1,200 mm	3'11"	1,200 mm	3'11"	1,200 mm	4'11"	1,500 mm	4'11"	1,500 mm	4'11"	1,500 mm	4'11"	1,500 mm
	Guide Swing Angle (Right / Left)	40° / 40°		30° / 90°		30° / 90°		25° / 90°		25° / 90°		25° / 90°		25° / 90°	
	Guide Tilt Angle	180°		180°		180°		170°		170°		170°		170°	
	Maximum Pulling Force	6,407 lb-force	28.5 kN	5,508 lb-force	24.5 kN	7,060 lb-force	31.4 kN	7,644 lb-force	34 kN	7,644 lb-force	34 kN	7,644 lb-force	34 kN	6,969 lb-force	31 kN
Compressor	Make & Model	AIRMAN PDS265-S37B		AIRMAN PDS265-S37B		AIRMAN PDS265-S37C		AIRMAN PDS265-S37F		AIRMAN PDSF290-S16		AIRMAN PDSF290-S16		AIRMAN PDSF290-S16	
	Type	1-Stage Screw Compressor		1-Stage Screw Compressor		1-Stage Screw Compressor		1-Stage Screw Compressor		1-Stage Screw Compressor		1-Stage Screw Compressor		1-Stage Screw Compressor	
	Discharge Airflow	215 cfm	6.1 m^3/min	215 cfm	6.1 m^3/min	275 cfm	7.8 m^3/min	353 cfm	10.0 m^3/min	477 cfm	13.5 m^3/min	477 cfm	13.5 m^3/min	477 cfm	13.5 m^3/min
	Discharge Pressure	149 psi	1.03 MPa	149 psi	1.03 MPa	149 psi	1.03 MPa	149 psi	1.03 MPa	149 psi	1.03 MPa	149 psi	1.03 MPa	149 psi	1.03 MPa
Dust Collector	Model	A844-221		A884-221		A844		A885-44		A885-44		A885-44		A885-44	
	Suction Capacity	706 cfm	20 m^3/min	706 cfm	20 m^3/min	918 cfm	26 m^3/min	1,413 cfm	40 m^3/min	1,413 cfm	40 m^3/min	1,413 cfm	40 m^3/min	1,413 cfm	40 m^3/min
	Number of Filter Elements	4		4		5		6		6		6		6	
	Dust Removal System	Automatic Air Pulse Jet		Automatic Air Pulse Jet		Automatic Air Pulse Jet		Automatic Air Pulse Jet		Automatic Air Pulse Jet		Automatic Air Pulse Jet		Automatic Air Pulse Jet	
	Suction Cap	Slide Type		Slide Type		Slide Type		Slide Type		Slide Type		Slide Type		Slide Type	
Rod Arrangement	Model	-		GR801		GR801		GR803-31		GR803-31		GR803-31		GR801-52	
	Type	Rack		Rod Changer		Rod Changer		Rod Changer		Rod Changer		Rod Changer		Rod Changer	
	Number of Rods	4 + 1 (Starter Rod)		5		5 (For T38 & T45) / 4 (For T51)		7 (For 12') / 6 (For 14')		7 (For T51)		7 (For GT60) or 6 (For GT60-TUBE)		4	
	Rod Diameter	1.3", 1.5", 1.8"	32 mm, 38 mm, 45 mm	1.3", 1.5", 1.8"	32 mm, 38 mm, 45 mm	1.5", 1.8", 2.0"	38 mm, 45 mm, 51 mm	1.8", 2.0"	45 mm, 51 mm	2"	51 mm	2.36", 2.52", 3.42"	60 mm, 64 mm, 87 mm	2"	51 mm
	Number of Control Levers	-		1		1		1		1		1		1	
Bit and Rod	Bit Range	2.5" - 3.5"	64 mm - 89 mm	2.5" - 3.5"	64 mm - 89 mm	2.5" - 4"	64 mm - 102 mm	3.0" - 5.0"	76 mm - 127 mm	3.5" - 5"	89 - 127 mm	4" - 5.5" (6")	102 - 140 mm (152 mm)	3.5" - 5"	89 - 127 mm
	Rod Diameter	32H, 38R, 45R, (38H)		32H, 38R, 45R, (38H)		38R, 45R, 51R		45R / 51R		T51		GT60 GT60 Tube (Dia. 87 mm / 3.42")		T51	
	Rod Length	10' or 12'	3,050 mm or 3,660 mm	10' or 12'	3,050 mm or 3,660 mm	10' or 12'	3,050 mm or 3,660 mm	12'	3,660 mm	12' or 14'	3,660 mm or 4,265 mm	14'	4,265 mm	20'	6,100 mm
	Starter Rod Length	14'	4,270 mm	13'	4,000 mm	13'	4,000 mm	14'	4,265 mm	14'	4,265 mm	18'	5,490 mm	20'	6,100 mm
Electrics	Battery	12V; 108 Ah/5hr		12V; 108 Ah/5hr		12V; 108 Ah/5hr		12V; 108 Ah/5hr x2		12V; 160Ah/5hr x2		12V; 160Ah/5hr x2		12V; 160Ah/5hr x2	
	Light	24V; 70W x4		24V; 70W x4		24V; 70W x4		24V; 70W x4		24V; 70W x4		24V; 70W x4		24V; 70W x4	
	Voltage	DC 24V		DC 24V		DC 24V		DC 24V		DC 24V		DC 24V		DC 24V	
Operating Environment	Working Temperature	5° - 113° F	-15° - 45°C	5° - 113° F	-15° - 45°C	5° - 113° F	-15° - 45°C	5° - 113° F	-15° - 45°C	5° - 113° F	-15° - 45° C	5° - 113° F	-15° - 45° C	5° - 113° F	-15° - 45° C
	Maximum Altitude	9,843'	3,000 m	9,842'	3,000 m	9,843'	3,000 m	8,202'	2,500 m	8,202'	2,500 m	8,202'	2,500 m	8,202'	2,500 m

*1 "Overall Weight (A)" includes weights of fuel and oils (full).
*2 "Overall Weight (B)" includes weight of "Overall Weight (A)", operator, rod and bit.
*3 "Ground Contact Pressure" is calculated based on "Overall Weight (A)".

Proven. Reliable. High Performing.

DCR22 Down-the-Hole-Drill

The DCR22 has established itself as a reliable, productive resource for drilling operations around the world. These drills have been proven in soft, medium and hard rock conditions with multiple end-users and applications providing deep holes from 3.5" to 6.5" at fast drilling rates with low maintenance requirements.

Servicing the DCR22 is easy with access to all key components such as the engine, fluid levels and compressor through large panel doors located at ground level for maintenance when needed.

The cabs have been redesigned to provide operators maximum comfort with single-lever drilling controls, digital gauges, and superior views of drilling operation.

- Low-emission, Tier IV Caterpillar® engine offers low fuel consumption at 440hp and meets US Tier IV exhaust emissions regulations.
- Hoses and wiring are placed in a compact and efficient routing design for more protection, less wear and easy replacement.
- Drill pipe changer equipped with electronic sensors that speeds up pipe addition and extraction.
- Heavy-duty undercarriage with low center of gravity – featuring a pentagonal section design to reduce dirt build-up and track wear – ensures strength, durability and stability.

DCR22

Console Moves Back and Forth

Tramming Control

Maximize Operator Performance with the Ultimate in Ergonomic Cab Design

When it comes to ergonomically-friendly cabs, Furukawa offers various options to minimize operator fatigue. Cabs are 43" wide (W1,100 mm) with ROPS/FOPS. In addition, all cabs are air-conditioned and continuously pressurized with filtered air to maintain a comfortable operating environment. Other features include:

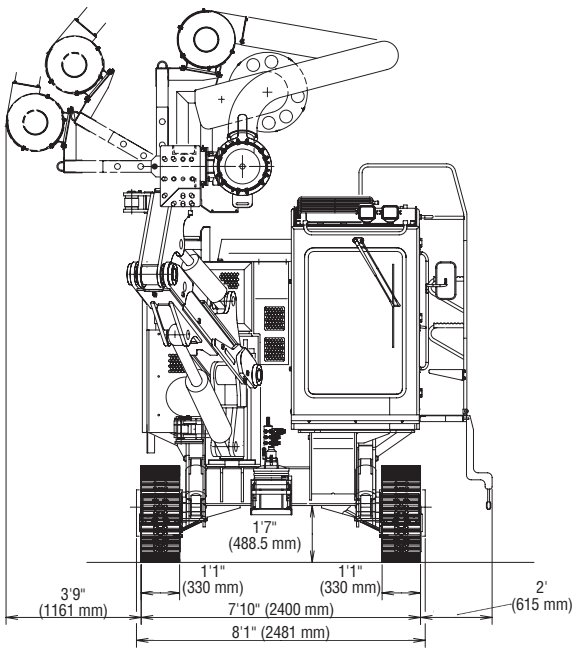
- Single-lever drilling control for easy operation.
- Finger-touch levers for smooth tramming control.
- Large windows maximize operator visibility.
- All-in-One display allows operator to monitor machine functions and angle indicator for quick and easy drilling alignment while remaining focused on the drilling.
- Walk-around ground level maintenance provides fast, easy upkeep or repair.
- Rubber-mounted engine frame isolates cab from engine vibrations.
- Bluetooth Player/Sirius XM Radio is standard.

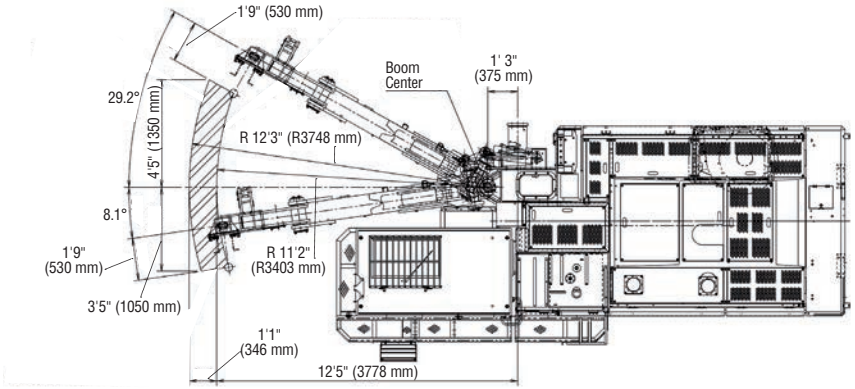
Combining Performance and Economy

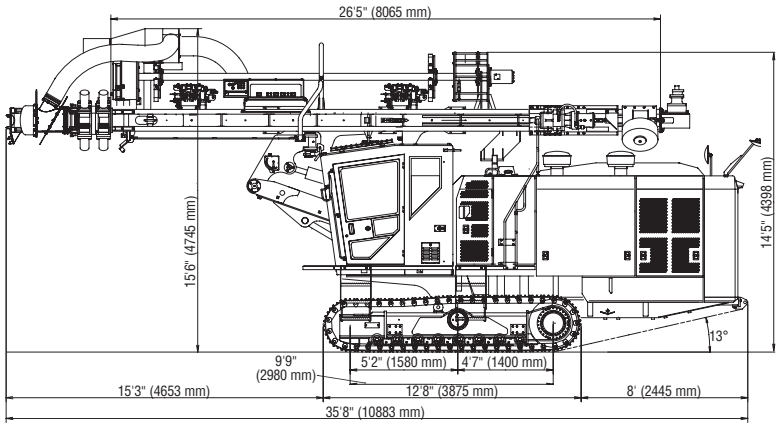
- Angle indicator for quick and easy drilling alignment.
- Drill hole diameter 3.5" - 6.5".
- Reliable dust control system increases suction capacity and provides effective pre-cleaning to reduce the escape of drilling dust. An optional dust suppression system is available for difficult drilling conditions.
- Advanced rotary pipe changer allows easy drill pipe changes.
- High-output compressor increases flushing air, provides faster drilling and decreases bit wear.

DCR22

Dimensions


1'7"
(488.5 mm)
1'1"
(330 mm)
1'1"
(330 mm)
3'9"
(1161 mm)
7'10" (2400 mm)
2'
(615 mm)
8'1" (2481 mm)


1'9" (530 mm)
Boom
Center
1' 3"
(375 mm)
29.2°
4'5" (1350 mm)
R 12'3" (R3748 mm)
8.1°
1'9"
(530 mm)
R 11'2"
(R3403 mm)
3'5" (1050 mm)
1'1"
(346 mm)
12'5" (3778 mm)


26'5" (8065 mm)
15'6" (4745 mm)
14'5" (4398 mm)
13°
9'9"
(2980 mm)
5'2" (1580 mm)
4'7" (1400 mm)
15'3" (4653 mm)
12'8" (3875 mm)
8' (2445 mm)
35'8" (10883 mm)

Model		DCR22	
		US Standard	Metric
Dimensions and Weight	Overall Weight (A) *1	56,218 lb	25,500 kg
	Overall Weight (B) *2	58,422 lb	26,500 kg
	Overall Length	36'2"	11,035 mm
	Shipping Length	38'3"	11,671 mm
	Overall Width	14'3"	4,335 mm
	Shipping Width	8'10"	2,700 mm
	Overall Height	15'7"	4,750 mm
	Shipping Height (A) *3	12'3"	3,742 mm
	Shipping Height (B) *4	12'	3,652 mm
Drill Motor	Model	DOWMAX/ME350	
	Maximum Torque	3,098 lb-force-ft	4.2 KN-m
	Rotating Speed	0 - 120 rpm	0 -120 min^{-1}
Undercarriage	Track Length	12'5"	3,785 mm
	Track Length on Ground	9'9"	2,980 mm
	Track Width	1'1"	330 mm
	Ground Contact Pressure *5	18.4 psi	127 kPa
	Ground Clearance	1'7"	475 mm
	Frame Oscillation Angle	±7.5°	
	Tramming Speed	0 - 2.2 mph	0 - 3.5 km/h
	Gradeability	46.6% (25°)	
	Maximum Traction Force	35,969 lb-force	160 kN
Engine	Make & Model	CAT® C13 (Tier4 Final, Stage IV)	
	Type	Diesel, Water-Cooled, 6 Cylinders	
	Piston Displacement	762 cu in	12.5. L
	Power Output	440 hp / 2,000 rpm	328 kW / 2,000 min^{-1}
	Fuel Capacity	216.6 gal	820 L
	DEF Capacity	9.0 gal	34 L
Hydraulic Equipment	Variable Displacement Pump	PV Pump x2	
	Fixed Displacement Pump	Gear Pump x3	
	Drive Motor	Hydraulic Motor with Reduction Gear	
	Hydraulic Oil Reservoir Capacity	74 gal	280 L
Boom	Model	JF325	
	Type	Fixed	
	Boom Lifting Angle (Up / Down)	49° / 13°	
	Boom Swing Angle (Right / Left)	30° / 8°	

Model		DCR22	
		US Standard	Metric
Guide Shell	Model	GH834	
	Overall Length	32'11"	10,030 mm
	Feed Length	19'1"	5,827 mm
	Feed Type	Hydraulic Motor Driven Chain	
	Guide Slide Length	4'11"	1,500 mm
	Guide Swing Angle (Right / Left)	88° / 16°	
	Guide Tilt Angle	118°	
	Maximum Pulling Force	7,868 lb-force	35 kN
Compressor	Make & Model	AIRMAN PDSK900-S20	
	Type	2-Stage Screw Compressor	
	Discharge Airflow 1	858 cfm	24.3 m^3/min
	Discharge Airflow 2	953 cfm	27.0 m^3/min
	Discharge Pressure	363 psi	2.5 MPa
Dust Collector	Model	A885	
	Suction Capacity	2,649 cfm	75 m^3/min
	Number of Filter Elements	12	
	Dust Removal System	Automatic Air Pulse Jet	
	Suction Cap	Slide Type	
Rod Changer	Model	GR803	
	Number of Rods	8	
	Rod Diameter	3", 3.5", 4", 4.5"	76 mm, 89 mm, 102 mm, 114 mm
	Number of Control Levers	1	
Bit and Rod	Bit Range	3.5" - 6.5"	89 mm - 165 mm
	Rod Type	O.D. 3", 3.5", 4", 4.5" Tube w/ API Threads	O.D. 76 mm, 89 mm, 102 mm, 114 mm Tube w/ API Threads
	Rod Length	16'5"	5,000 mm
	Starter Rod Length	16'5"	5,000 mm
Electrics	Battery	12V; 140Ah/5hr	
	Light	24V; 70W x4	
	Voltage	DC 24V	
Operating Environment	Working Temperature	5° - 113° F	-15° - 45° C
	Maximum Altitude	6,562'	2,000 m

Note:
*1 "Overall Weight (A)" includes weights of fuel and oils (full).
*2 "Overall Weight (B)" includes weight of "Overall Weight (A)", operator, rod and bit.
*3 "Shipping Height (A)" includes dimensions with disassembling guide rest.
*4 "Shipping Height (B)" includes dimensions with disassembling guide rest and rear magazine plate.
*5 "Ground Contact Pressure" is calculated based on "Overall Weight (A)".

DCR SPECIFICATIONS

FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

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 is designed for easy maintenance.

Exceptional Stability on Soft Ground

Shoe plate width is 11.8 inches (300 mm), 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

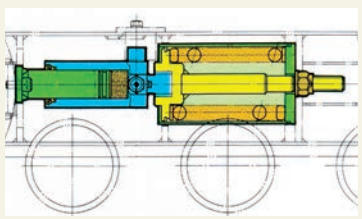
Powerful 12HP air motors and a hydraulic oscillating system permit ample mobility and traction even on rough terrain. The motors provide adequate power to climb slopes while towing a compressor.

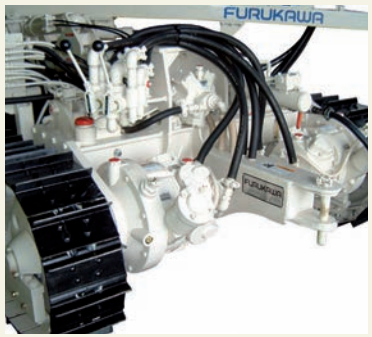
Direct Motor-Connected Final Drive

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

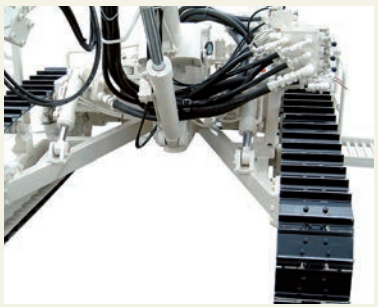
Highly Reliable Automatic Brake

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

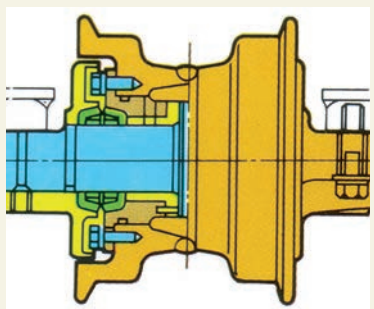




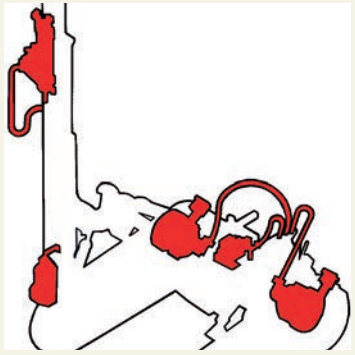
Pneumatic Drive Motor



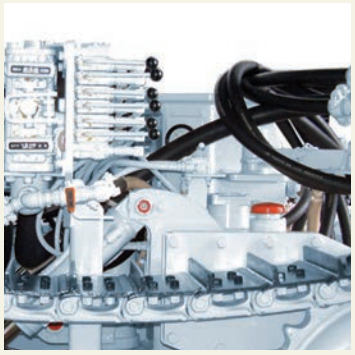
Ample Clearance



PCR200



Air Components

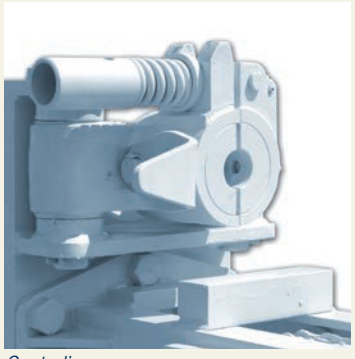


Controls

Pneumatic Drifter PD200

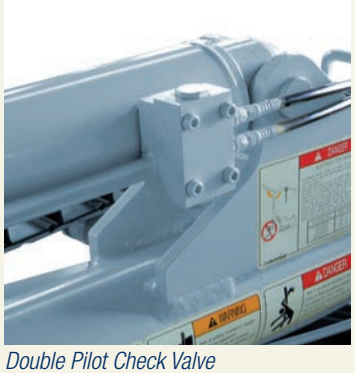
Heavy-Duty Track

Sub Valve for Rod Change



Centralizer

Feed Motor



Double Pilot Check Valve

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 (130 mm) 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 (65 mm) to 4 inch (100 mm) is available.

Triple Noise-Muffling System

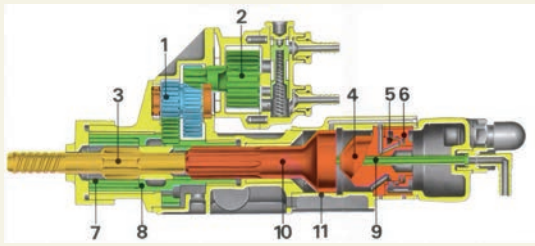
Two-stage noise diffusion takes place within the drifter to reduce the exhaust noise. The exhaust then passes through a muffler hose and another diffusion muffling device, located in the guide shell, which reduce the noise level even lower.

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 movement 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

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. (1200 mm) 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.

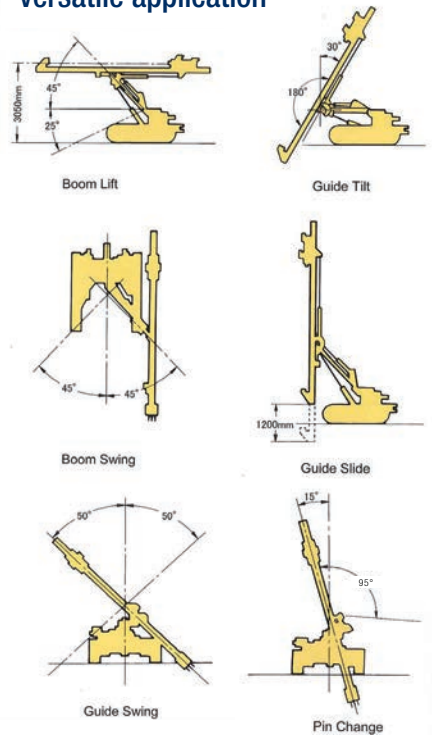
Outstanding Drilling Performance

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

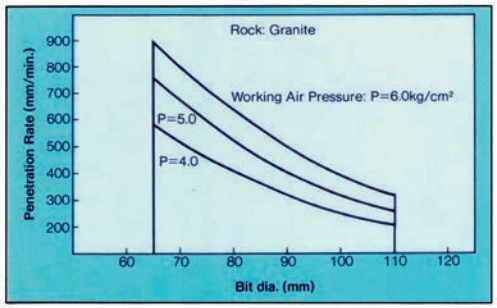
Exhausts of the drifter and all other motors are channeled through mufflers. A portion of the exhaust is recycled and used to lubricate the guide shell and chain of the sprocket. The rest is discharged after passing through the muffling system.

Wide drilling coverage and versatile application

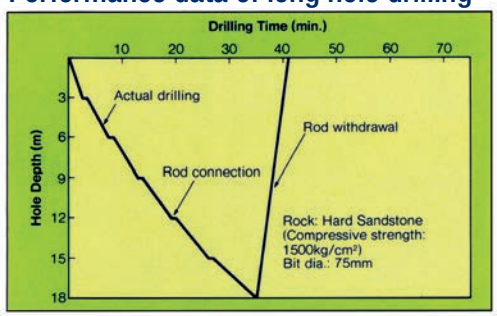


The advanced design of the boom and hydraulic system assures outstanding versatility and high performance for handling all types of drilling operations. Road construction, dam work, open area drilling, mining, quarrying operations, tunneling and other drilling operations are all performed with unsurpassed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

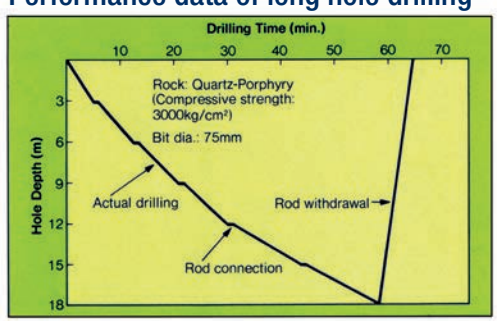
Performance of PD200 drifter



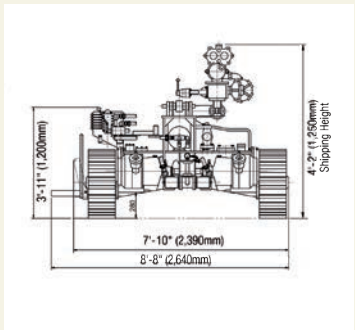
Performance data of long hole drilling

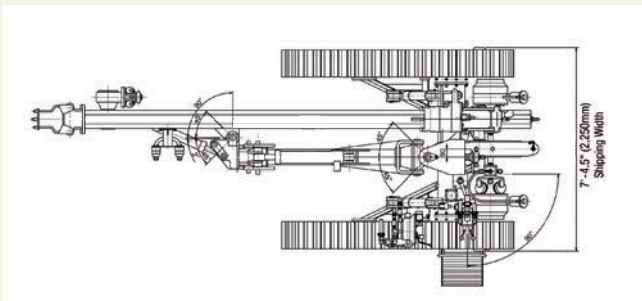


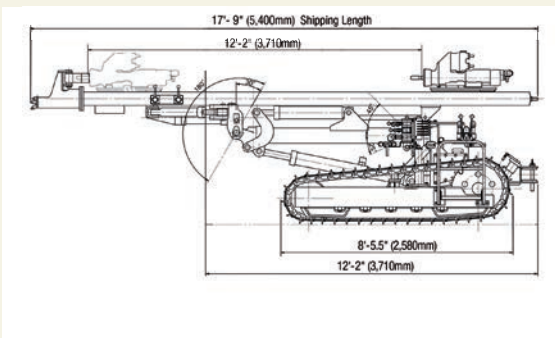
Performance data of long hole drilling



Dimensions



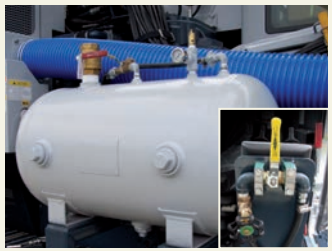




Model		PCR200	
		US Standard	Metric
Dimensions and Weight	Weight	11,020 lb	5,000 kg
	Overall Length	17'9"	5,400 mm
	Feed Travel	12'	3,710 mm
	Track Length	8'5"	2,580 mm
	Length of Ground Contact	6'1"	1,885 mm
	Tow Hitch Height	1'9.5"	550 mm
	Overall Width	7'9.5"	2,390 mm
	Track Width	7'3"	2,200 mm
	Width of Grousers	1'	300 mm
	Overall Height (Boom lowered)	4'2"	1,250 mm
	Ground Clearance	11"	280 mm
Crawler Traction	Ground Pressure	.45 kg/cm²	
	Traveling Speed (Towing a compressor on level ground)	1.9 mph	3.2 km/h
	Gradeability	22°	
	Oscillating Angle	15°	
	Traction Air Motor (Model MR13, Piston-Type)	8,8 kW	
Guide Shell	Max. Horizontal Drill Height	10'	3,050 mm
	Guide Slide Travel	3'11"	1,200 mm
	Air Feed Motor (Model MC2)	4 kW	
	Steel Change	10'	3,050 mm
Hydraulic Units	Boom Length	6'6"	2,000 mm
	Boom Lift (Up / Down)	45° / 25°	
	Boom Swing (Right / Left)	45° / 45°	
	Guide Swing (Right / Left) (95° right, 15° left with pin change)	50° / 50°	
	Guide Tilt	180°	
	Power Pump (Model MP12)	4 kW	
Drifter (Model PD200)	Weight without Shank rod	396 lb	180 kg
	Length without shank Rod	3'3.5"	1,020 mm
	Cylinder Diameter	5.1"	130 mm
	Piston Stroke	3.1"	80 mm
	Air Consumption	565 cfm	16 cbm
	Blows/min	~1,600	
	Main Air Hose Connection	2"	50 mm

Option		HCR900-ESV	HCR1100-ED	HCR1100-ER	HCR1450-EDII	HCR1800-EDII	HCR1800-D20II	DCR22
Water/Dust Suppression System	35 gal	●	●	●	●	●	●	–
	70 gal	●	●	●	●	●	●	●
Remote Control		–	–	●	–	–	–	–
2D Angle Indicator		●	●	●	●	●	●	●
3D Angle Indicator		–	●	–	●	●	●	●
All-in-One 3D Angle Indicator		–	–	–	●	●	●	–
with side/rear camera		–	–	–	●	●	●	Standard
Rear & Side View Camera with Separate Monitor		–	●	–	●	●	●	–
Rear Bumper		●	●	●	●	●	●	●
Cold Weather Kit (Esper, Webasto)		●	●	●	●	●	●	●
Heating Pad		●	●	●	●	●	●	●
Hand Rail		–	–	–	●	●	●	●
Central Greaser		–	●	–	●	●	●	●

● option
– not available

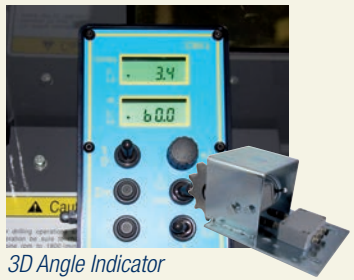


Water/Dust Suppression System HCR

Rear Bumper

Heating Pad

Rear Camera



3D Angle Indicator

2D Angle Indicator

A variety of options are available to fit the Furukawa crawler drill. Contact your local dealer for more information.

OPTIONS

FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

BREAKER ATTACHMENT DIVISION

With over 55 years of experience, FRD USA Attachment Division offers a one-stop shop for attachments that cover almost any demolition job. What's more – built to last – FRD attachments meet the everyday need for reliability and high-performance.

FRD USA is backed by the resources of Furukawa Corporation – one of Japans largest and most diverse corporations. Today – a multi-billion dollar company – Furukawa provides FRD USA with the engineering and manufacturing support of a global company whose roots are based in mining and construction.

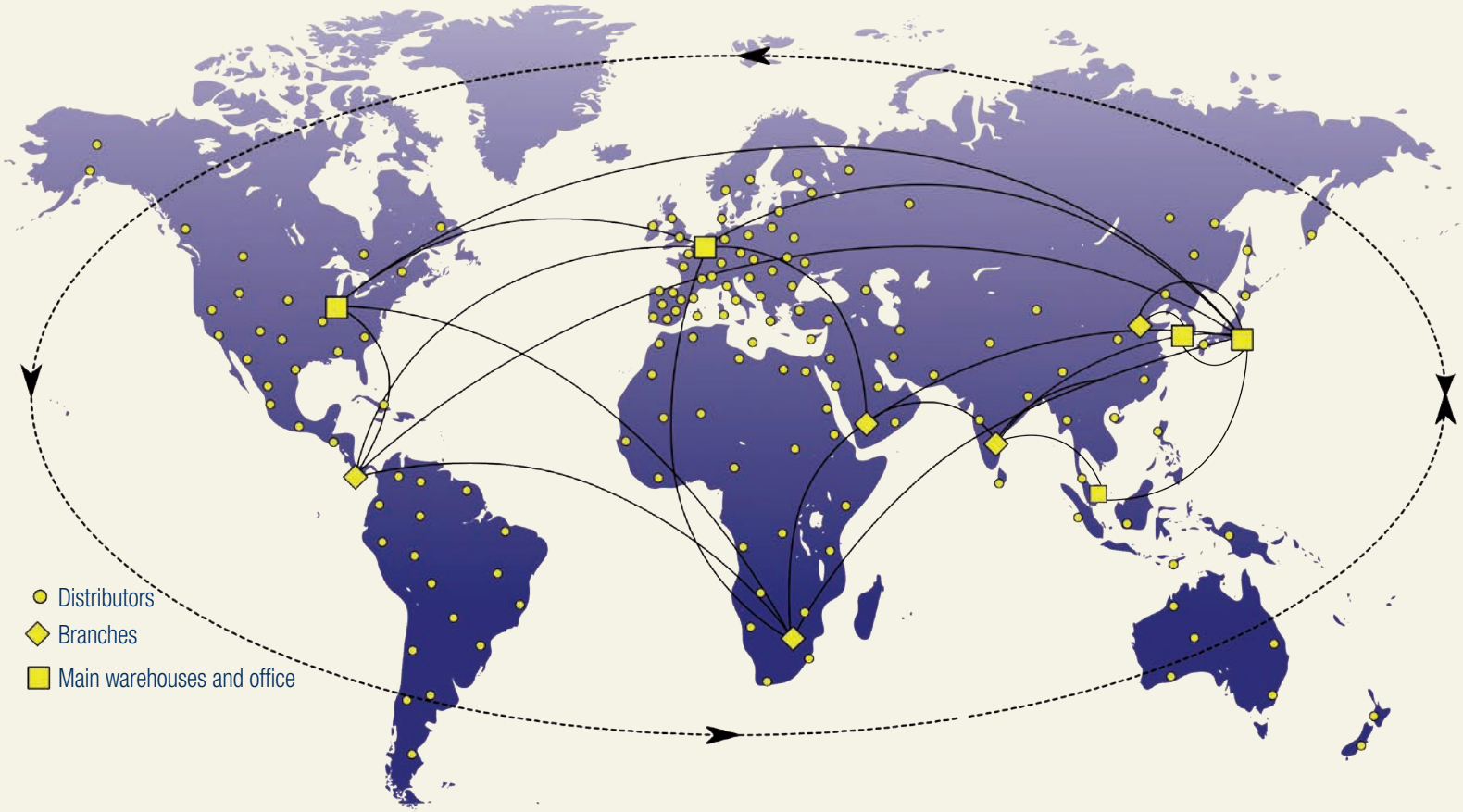
FRD's complete line of products maximizes the versatility of your equipment, while minimizing your overhead costs. With more than 30 different attachments, FRD USA helps you get any job done right.

www.frdusa.com

GLOBAL DISTRIBUTOR NETWORK

FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

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



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

LOCAL SERVICE AND SUPPORT

FRD USA seeks to supply a product of value and dependability. We back this up with a support network of dedicated distributors to ensure your needs.

FRD distributors have been selected for their professional competence, market coverage, 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 provide. They actively exchange experience with each other to ensure their customers are up-to-date.

Top:
Corporate Headquarters
Kent, Ohio

Bottom:
Branch Office
Spartanburg, South Carolina

SERVICE & SUPPORT

FRD HEADQUARTERS

Structured for success with nearly 85,000 square feet.

HIGH-PERFORMANCE DRILLING OPTIONS. MORE PRODUCTIVE, LESS MAINTENANCE.

DISTRIBUTOR:

FURUKAWA ROCK DRILL USA
ROCK DRILL DIVISION

Furukawa Rock Drill USA
805 Lake Street, Kent, Ohio 44240-0017
Phone 800-358-4476, Fax 330-673-8504
www.furukawarockdrill.com

Southeast Sales & Service Facility
155 Dexter Road, Spartanburg, SC 29303
Phone 864-541-0125
www.furukawarockdrill.com

Scan this code for more information on Furukawa Rock Drills.

FRD-RD-2020