

INGERSOLL-RAND®

CM-470/ECM-470 Hydraulic Crawler Drills



INGERSOLL-RAND
CONSTRUCTION & MINING

The ECM470 is the Crawler Drill for Your Tough Job

In the harsh world of drilling, humidity, dust and vibration are enemies of your drill. You want a drill that performs reliably every day in your challenging conditions. The ECM470 will be there when you need it, because it is built to last.



Simple Combination of Hydraulic Direct Controls / On-Off Electric Controls

By staying away from complex electronics (proximity switches, sequencers, modular valves, pressure switches, limit switches, etc) we built this crawler to last. Troubleshooting is accomplished easily and quickly. Simple On-Off electrics for the Automatic Rod Changer give the operator easy operation with "Soft Touch" joysticks.



Sensible Hose Management

Use of steel pipe sections and efficient hose routing reduce hose wear and damage. Efficient hose routing provides lower hose replacement cost and easy service.

Reliable Dust Control System

Cartridge-type fiber filters help prevent clogging during wet hole drilling and allow partial filter exchange.

Time-Tested YH-70

The YH-70 is a high efficiency drifter with a patented inline valve mechanism. It has many years of proven results. A powerful reverse percussion device is available, allowing you to more easily retrieve your stuck drillstring.

Reliable Air Compressor

The Ingersoll-Rand screw compressor, the most widely used in the world, yields excellent output efficiency and high reliability.

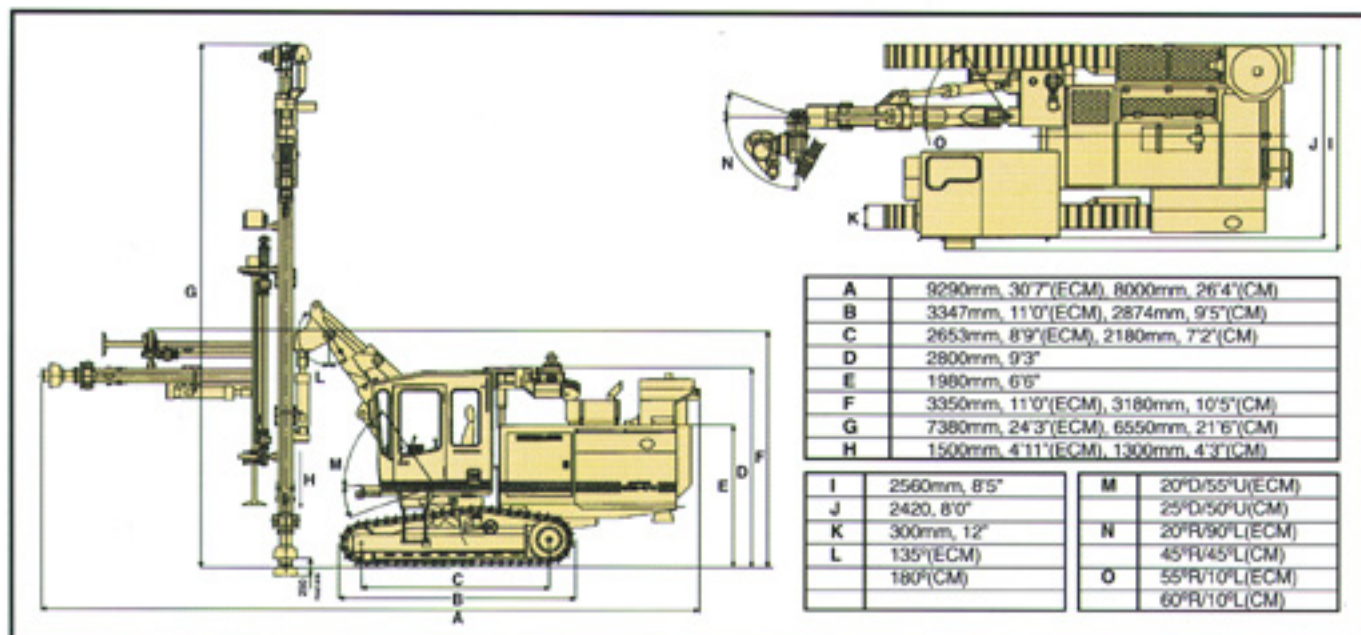
Water Cooled Engine

The power pack is sized right for efficient operation and meets strict emission standards. The automatic throttle control lowers engine RPM during non-drilling operations to save up to 15 percent in fuel costs. 500 hour oil/filter change interval increases uptime and reduces maintenance cost. Concentration of relief valves in one location provides easy maintenance.

Reliable, In Line, Direct-Drive Powertrain

No power divider gear box, clutches or hydraulic motors are required to power the hydraulic pumps or the compressor. The compressor airend and pumps are coupled directly to engine.





Specifications CM-470 & ECM-470

Drifter:

Type	YH-70
Hole diameter	65-69 mm (2-1/2-3-1/2")
Rotation Speed	0-180 RPM
Rotation Torque	450 N m (101 lb-ft)
Frequency	3,000 BPM
Fronthead Lubricator	0.7 L (0.74 qt)
Accessory size- Std.(Opt.)	38R(45R)

Engine:

Type	Cummins B5.9-C
Rated Power	107 kW (144 hp)
Operating speed	2,300 RPM
Fuel capacity	290 L (77 gal)

Boom and Guide:

Boom swing-ECM470 (CM470)	55R/10L (50R/10L)
Guide swing-ECM470 (CM470)	20R/90L(45R/45L)
Guide dump-ECM470(CM470)	135 deg (180 deg)
Boom extension-ECM470	800 mm (31.5 in)
Drifter travel-ECM470(CM470)	4,250 mm, 13 ft. 11 in (4,170 mm, 13 ft. 6 in)
Feed force/pullback-ECM470(CM470)	19,600N, 4,406 lbf (17,650N, 3,992 lbf)
Guide extension-ECM470(CM470)	1,500 mm, 59 in. (1,300 mm, 51 in)
Total guide length-ECM470(CM470)	7,380 mm, 24 ft. 2 in (6,550 mm, 21 ft. 6 in)
Starter rod length	12 ft (3.66 m)
Auto Rod Changer -ECM470	(5)12 ft x 38R, Opt. (5)12 ft x 45R
-CM470	(5)10 ft x 38R, Opt.(4)10 ft x 45R

Cab:

Full instrumentation	Standard
Wipers, top and front	Standard
Noise level	87 dba
Cooling(external air)	3000 k.calories, (11,904 BTU) AC
Heating	3500 k.calories,(13,888 BTU) Heat
Seat	6 way safety
Glass	

Ingersoll-Rand Rotary Screw Compressor:

Compressor volume	5.0 m ³ /min (176 cfm)
Compressor pressure(max)	8.0 kgf/cm ² (114 psi)

General:

Gradability	30 deg (60%)
Ground clearance	420 mm (16.6 in)
Track oscillation	20 deg - total
Tram speed	0-3.0 km/h (0-1.85 mph)
Grouser width	300 mm (12")

Dust Collector:

Remote controlled dust hood	
- ECM470(CM470)	vertical sliding (side-open)
-suction capacity	18 m ³ /min (636 cfm)
-air vacuum	6,864 Pa (700 mmHg)
-filter area	13.8 m ² (148 ft ²)

Shipping:

Weight-ECM470 (CM470)	10,500 kg 23,148 lb (8,950 kg 19,731 lb)
Shipping width	2,530 mm (8 ft. 4 in)
Shipping length-ECM470 (CM470)	9,290 mm, 30 ft. 6 in (8,000 mm, 26 ft. 3 in)
Shipping height-ECM470 (CM470)	3,350 mm, 11 ft. 0 in (3,180 mm, 10 ft. 5 in)

Standard Equipment:	CM470	CM470	ECM470	ECM470
	STD	CE	STD	CE
20 deg. indexed drill guide				
90 deg. indexed drill guide				
Fire extinguisher				
Hydraulic centralizer (66 mm half bushing)				
Auto rod changer with auto greaser				
carries 5 x 10 ft(3m) x T38 rods				
carries 5 x 12 ft(3.66m) x T38 rods				
Full length track guards				
Auto throttle				
Rear mirror				
Accumulator Charge kit				
Dust Collector-remote control side-open dust hood				
Dust Collector with vertical sliding hood				
Standard Tool Set				
Night lights (F, 3 / R, 1)				
Warning horn				
JIC hose fittings				
JIS fittings (+ JIC adapters for emergency use)				
50 hour filter set				
Operation and parts manuals-one set				
24 volt electric system				

Options (factory installed)	CM470	CM470	ECM470	ECM470
	STD	CE	STD	CE
Smooth drilling				
Anti-jamming				
Reverse percussion				
Super rotation				
Preskimmer				
Vapocool - less tank (151 L, 40 gal)				
5 x 12 ft (3.66m) 45R auto rod changer				
4 x 10 ft (3.05m) 45R auto rod changer				
Rod changer lockout system				
Anti-freezing system (compressor)				
Overhaul tool set (YH-70 drifter)				
Drifter hour meter				
Electric angle indicator (2 dim.)				
Hydraulic pressure test kit				
Vertical sliding dust hood				
Full length track guard				
Extra set of parts book/operation manual				



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