Sales Guide Crawler Drill ECD45E

EVERDIGM



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History

1994 First Top Hammer Drill in Korea
Tech Cooperation with Toyo

1997 Tech Cooperation for rock drill with Taisei, Japan

2001 Rock Drill Localization, ED-100

2005 New Top Hammer Drill Rocky D-10

2007 Merged by EVERDIGM

2010 Upgraded Rock Drill ED-150

2010 New THD Rig ECD Series, ECD40, by EVERDIGM

2011 Launch of ECD35

2012 Launch of ECD45

2012 Launch of Diamond Core Drill Rig ECR Series

2012 Start of Rock Tool Business

2014 Launch of New THG Rig T-Series

2014 Launch of New DTH Rig D-Series

2012 Development

NEW Diamond Core Drilling Rig ECR Series 2014 Upgrade

NEW THD Rig T Series NEW DTH Rig D Series

2010 New Start

NEW THD Rig ECD Series by EVERDIGM

Merged by EVERDIGM

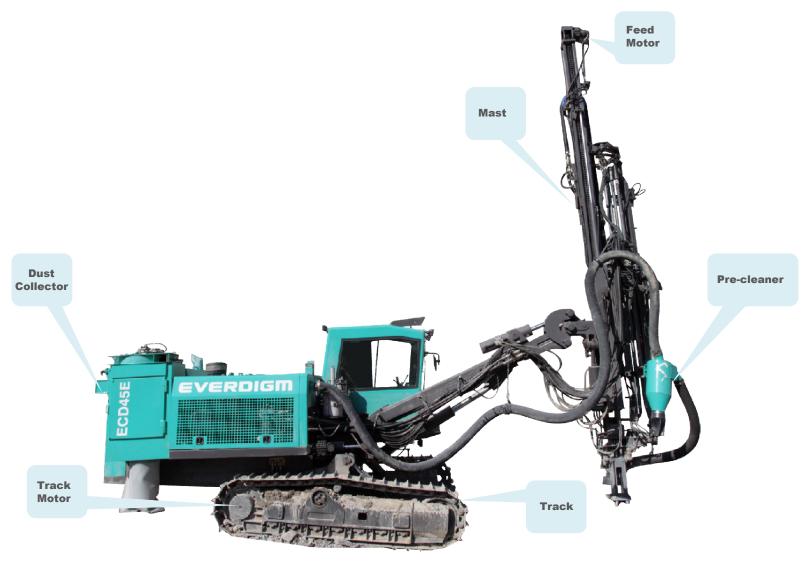
1994 Beginning

First Top Hammer Drill in Korea by DHI



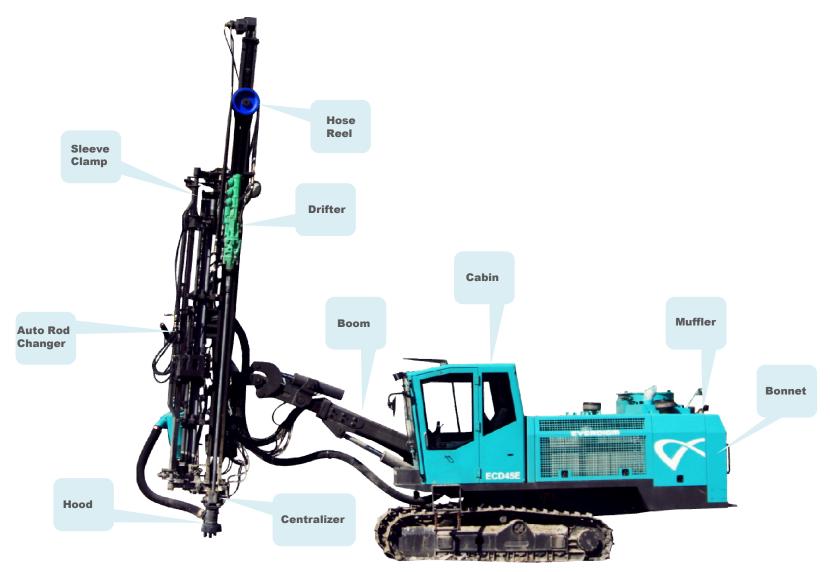


Overall Machine Structure



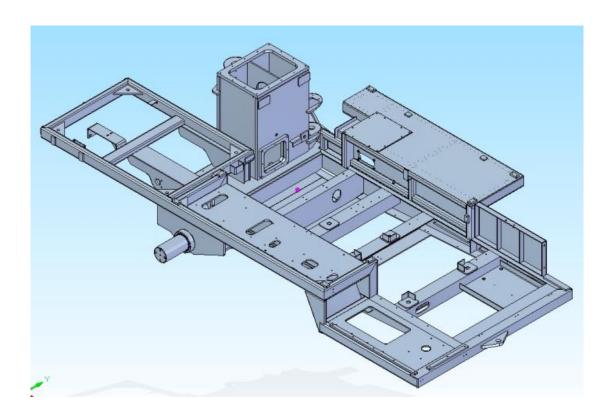


Overall Machine Structure



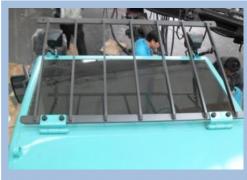


Frame



- Rigid Frame Structure
- Designed for ruggedness
- Computer Aided Design
- Built to works as counterweight to machine front where boom and mast is attached





Wide Upper Widow for better view



Visual & intuitive lever array



Simple & straightforward

Cabin

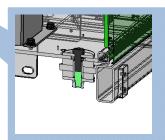




less used switches & indicators / CD Player



Column integrated ventilation hole for effective air conditioning



4 rubber dampers for operator comfort





Track

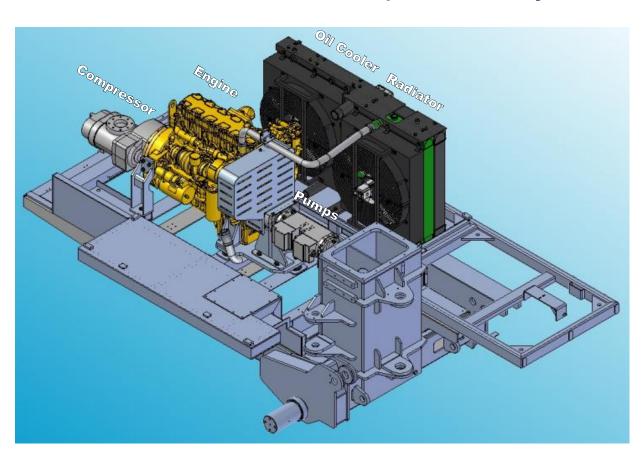
- 550 mm ground clearance allows easier movement on difficult and dangerous ground condition.
- Oscillation angle of 22° (F11° / R11°)



- In-house design and production
- Imported High Rigidity Shoe Plates
- Rugged and proven from the field
- Towing hooks as standard for easier transportation
- Slant angle on track body makes less contamination with dirt



Optimized Layout



Direct connection of pumps and comp to Engine

- Less fuel consumption.
- Less noise
- Increased efficiency of power transfer
- Simple internal layout

High cooling capacity for radiator and oil cooler

- 27 inch radiator & oil cooler fan
- Cooling module is designed for effective heat ventilation.

Safety cover for fan belt in engine

In-lined main parts

- Attribute optimal weight distribution for sound machine movement







Compressor

Large capacity air compressor with high output helps to obtain an excellent boring effect and decrease bit wear as discharging dust promptly.



ARC(Auto Rod Changer)

Rods can be exchanged by a simple operation







Main Components

Engine

Equipped with environment friendly Tier 3 Caterpillar C7 engine. It also provides low fuel consumption. In addition, operator is less exposed from engine noise and vibrations due to direct connection of engine, compressor and pump. **Upon request Cummins 6CTAA8.3C(Tier II) engine is also** available.

Pump

Equipped with the 2 stage piston pump and the 2 stage gear pump, it has been improved the work performance with the sufficient flux. The engine, pump and compressor are connected directly to maximize power transmission

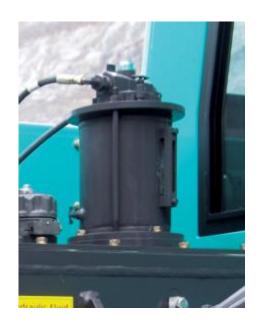




Pre-cleaner

-Lengthens the life of the filter in the dust collector by primarily intercepting the large fragments toward the dust collector.

Main Components



Drifter Lubricating device

The large-volume lubricating oil tank allow you to easily control the volume of oil which flows to the drifter.



Dust Collector

With the six built-in filters, the interval and time of pulse is controllable and therefore the dust collecting capability has been improved.



Serviceability





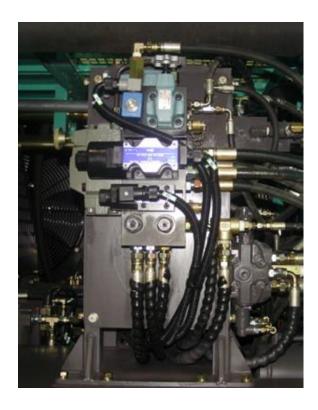
Engine and oil filters are in hand-reaching distance for better serviceability.

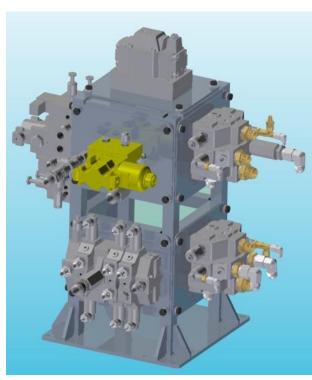


Bonnet is designed to cope with major overhaul such as main components change with detachable panels.









Valve Tower

- -Compact and centralized tower makes easier test
- -Easy check with extra pressure test port



Serviceability



Unique Hose Terminal

- Minimize the hose interference
- Convenient hose replacement
- Good durability of hose connector



ARC(Auto Rod Changer) block on mast

- Easy maintenance





Simple Hydraulic hose connection from main body to mast

- Easy maintenance
- No more messy hoses
- Less chance of hose rupture from abrasion



Serviceability



Extra high capacity
water separator
Extends engine lifetime
with less chance of fuel
contamination.







- When the water filled up on water separator, indicator in side of cabin gives signal for drain.



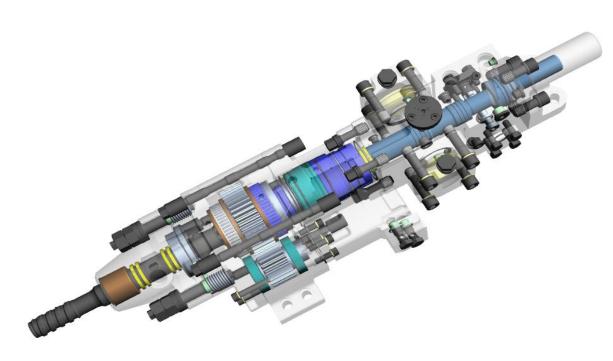
Main Control Panel

- -Fuse connection can be seen from control cover.
- No more hassle with computer ization
- Use of high capacity relay



Rock Drill

EHD210 by EVERDIGM



ITEM	EHD210
Hole range	75~115mm
Drill steel	T45 / T51
Impact power	21 kW
Impact frequency	50 Hz
Rotation speed	140 rpm
Hyd. Damping	Standard
Reverse Percussion	On/Off

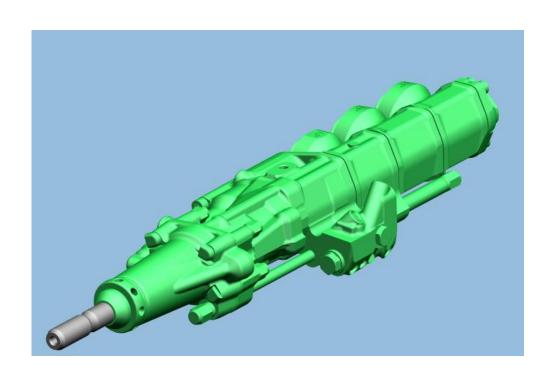
"Features & Benefits

- Hyd. damping & reverse percussion
- R/P on/off for drilling performance
- Simple design & less inner parts
- Low maintenance cost
- Reliable & durable structure
- Enhanced productivity



Rock Drill

HC150-RP by Montabert



Feature

Progressive Blow Energy

- better transmission of energy at the couplings
- minimum stress into the drilling rods
- better bit penetration

Hydraulic Dampening System

- optimum shock wave transmission
- protection of the drifter and tools
- reduced vibrations

Energy Recovery Valve

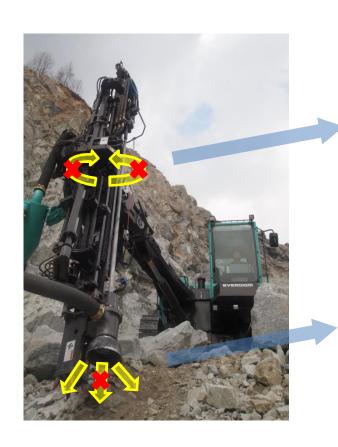
- better efficiency
- no internal peak of pressure source of cavitations
- best drifter protection

Hydraulic Reverse Percussion

- tool extraction in fractured ground
- no rods left in the hole.



Anti-Jamming (Automatic drifter backward with resistance)





When the rotation is stuck, HYD. Pressure reach 110 bar, then this sensor gives signal to feed motor



When the air hole of bit is blocked, air pressure reach 9.5 bar, then this sensor gives signal to feed motor



Drifter immediately move back upon getting one of both signal. When the pressure goes back to normal drifter moves forward.





Drilling Depth & Angle



Options

Water Spray System



Rear View Camera



Drifter Hour Meter



Rotating Beacon



Centralized Auto Greasing



Cabin Guard



Digital Angle Gauge



Technical Specification

Model	ECD45E(Std)
BIT DIAMETER	3"~ 4.5" (75mm~115mm)
ROD SIZE	T51, T45(Option)
ROD LENGTH	12' (3,660mm)
HOLE DEPTH	72' (22,000mm)
WEIGHT	30,860 lbs (14,000kg)
DRIFTER MODEL	HC150RP
DRIFTER IMPACT POWER, MAX	21kw
ENGINE MODEL	CATERPILLAR C7 / CUMMINS 6CTAA8.3C
ENGINE OUTPUT	168kw(225hp) - 2,200rpm / 153kw(205hp)-2,200rpm
FUEL TANK CAPACITY	92gal (350 ℓ)
FREE AIR DELIVERY	282cfm (8 m³/min)
AIR PRESSURE	149 lbs/in² (10.5 kg/cm²)
BOOM TYPE	EXTENSION BOOM
BOOM LENGTH	10.2' / 14.1'(3,100mm / 4,300mm)
DUST COLLECTOR SUCTION CAPACITY	847cfm (24 m ³ /min)
PRE-CLEANER	STANDARD
NUMBER OF RODS ON ROD CHANGER	5+1
CABIN	AIR CONDITIONER, HEATER, ROPS& FOPS CERTIFIED

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Technical Specification

Model	ECD50E(Std)
BIT DIAMETER	3"~ 5" (75mm~127mm)
ROD SIZE	T51, T45(Option)
ROD LENGTH	12' (3,660mm)
HOLE DEPTH	72' (22,000mm)
WEIGHT	30,860 lbs (14,000kg)
DRIFTER MODEL	HC150RP
DRIFTER IMPACT POWER, MAX	21kw
ENGINE MODEL	CATERPILLAR C7 / CUMMINS 6CTAA8.3C
ENGINE OUTPUT	250hp - 2,200rpm / 260hp-2,200rpm
FUEL TANK CAPACITY	400 ℓ
FREE AIR DELIVERY	11 m³/min
AIR PRESSURE	149 lbs/in² (10.5 kg/cm²)
BOOM TYPE	EXTENSION BOOM
BOOM LENGTH	10.2' / 14.1'(3,100mm / 4,300mm)
DUST COLLECTOR SUCTION CAPACITY	847cfm (24 m ³ /min)
PRE-CLEANER	STANDARD
NUMBER OF RODS ON ROD CHANGER	5+1
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Specification Comparison

Sort	EVERDIGM ECD45	Atlas Copco Flexi ROC T35	taran da antara da a		Furukawa HCR1500
Engine	CAT C7(Tier III) Cummins / QSB6.7		CAT C7	CAT C7	Cummins QSC8.3-C
	225HP 190HP		225HP	225HP	300HP
Compressor	8m³/min	7.7m³/min	8.1m³/min	8.1m³/min	12.3m³/min
	10.5bar	10bar	10bar	10.3bar	10.5bar
Rock Drill	HC150RP(Montabert)	COP1840	HL 710	HD712	HD715
	21kW	18kW	19.5kW	18.2kW	23kW
Hole Size	115mm	115mm	115mm	102mm	127mm
Drill Depth	22m	25m	22m	22m	25m





Performance

4.5 inch bit

Date	: Nov 07th 2011
Loacation	: Cheongwon, Korea
Operator	: Jung Ho Kim
Start of work	: 9:00
Finish of work	: 14:50

Type of work	: Hard Granite
Drifter Model	: HC150RP(EP Version)
Bit Diameter	: 4.5"(115mm)
Hole Inclination	: Vertical

Drifter Hour meter		
Start	End	
9:40	12:82	

Production by drilling holes

No of Hole	1	2	3	4	5	6	7	8	9
Depth of Hole	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

Time of drilling stop

<u></u>	Time of drining step				
	Start	Finish	Minutes	Motive of stop	
	9:00	9:30	30	Equipment Check & Wram up time	
	9:30	9:35	5	Diesel Filling	
	10:20	10:25	5	Hole Blocked	
	12:00	12:05	5	Hammering Upwards	
	13:00	14:00	60	Lunch	
	14:05	14:10	5	Bit Change	
		TOTAL	110		

Result of productivity		
Drilling depth in total	162.00	meters
Work time of drifter	3.42	hours
Velocity of drifter	47.37	m/h
Time of drilling stop	1.83	hours
Pure work time w/o stop	4.00	hours
Productivity	40.50	m/h
Operation efficiency of drifter	0.86	%

This data shows practical representation of drilling capacity of ECD45. It can drill 47.37 meter in one hour with 4.5 inch bit in hard granite. Given the idling time for machine check & etc, it drill 40.50 meter drilling in one hour



Performance

5 inch bit

Date	: Nov 08th 2011
Loacation	: Cheongwon, Korea
Operator	: Jung Ho Kim
Start of work	: 8:00
Finish of work	: 15:40

Type of work	: Hard Granite
Drifter Model	: HC150RP(EP Version)
Bit Diameter	: 5"(127mm)
Hole Inclination	: Vertical

Drifter Hour meter		
Start	End	
9:00	13:45	

Production by drilling holes

No of Hole	1	2	3	4	5	6	7	8	9
Depth of Hole	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

Time of drilling stop

Time or arming sto	Υ		
Start	Finish	Minutes	Motive of stop
8:00	8:30	30	Equipment Check & Wram up time
9:00	9:05	5	Diesel Filling
10:05	10:15	10	Hole Blocked
11:20	11:25	5	Hammering Upwards
12:00	13:00	60	Lunch
15:20	15:25	5	Bit Change
	TOTAL	115	

Result of productivity	
Drilling depth in total	162.00 meters
Work time of drifter	4.45 hours
Velocity of drifter	36.40 m/h
Time of drilling stop	1.91 hours
Pure work time w/o stop	5.75 hours
Productivity	28.17 m/h
Operation efficiency of drifter	0.77%

This data shows practical representation of drilling capacity of ECD45. It can drill 36.40 meter in one hour with 5 inch bit in hard granite. Given the idling time for machine check & etc, it drill 28.17 meter drilling in one hour



Customer Service

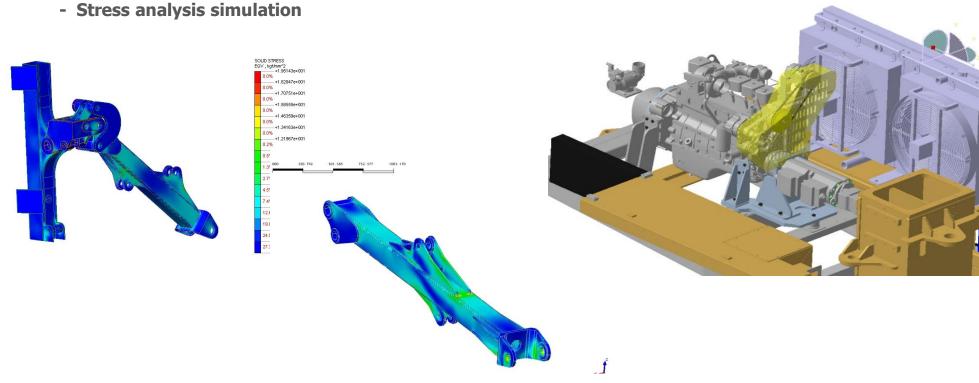
- Customized Education Program based on the level of customer
- Fast response and customer oriented attitude.
- Giving practical solution working with major components company.
- Professional technicians and engineers with foreign language and drilling terminology.





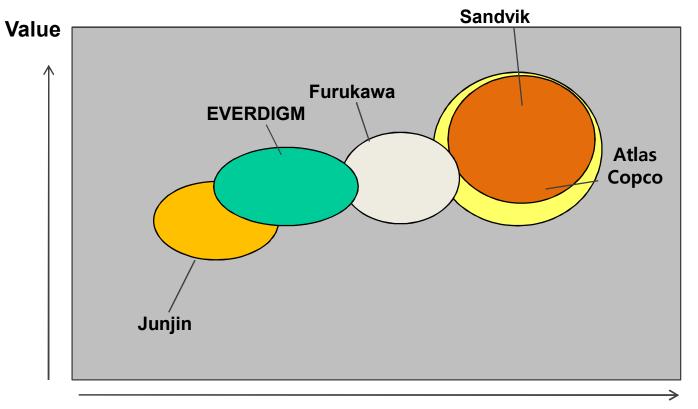
R&D Capability

- Developing the Product Life cycle Management(PLM) system based on such as 3D design.
- 15 people for R&D center
- Repeated simulation from design to production to reduce product design failure.
- Utilizing highest level of quality control and manufacturing process





Marketing Positioning



- "Low Initial Investment
- "Good Drilling Performance
- "Economical Operating Cost
- "Top Brand from Korea
- Alternatives for Global Top Brand

Price



Marketing & Promotion



Bauma China 2010- Shanghai





- **Exposed in all major exhibitions**
- Active public relations by advertisement





Bauma 2010 - Germany

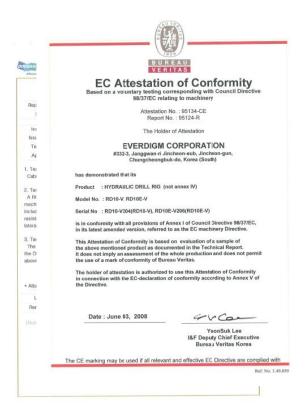


Intermat 2012 - Paris



Certification

- Obtained certificates: ROPS, FOPS, CE, GOST, RTN, ISO 9001, 14001,
- PL (Product Liability) Insured with worldwide coverage









Comments from Customer

- "EVERDIGM has consistently provided excellent support to us. They are fast in tech question and service people are well-qualified."
- -Mr. Bora OYGUR; Product Manager in ERKOM KOMPRSSOR in Turkey





Sales Reference





Build the **Future**