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## CM458 Hydraulic Engineering Drilling Rig



### SPECIFICATION

#### DRILLING SPECIFICATION

1	Rock Hardness	F=6-20	
2	Hole Diameter	mm	90-230
3	Hole Depth	m	40-200

#### ROTARY HEAD

4	Rotation Torque	Nm	4000
5	Rotation Speed	rpm	0-80

#### FEEDING SYSTEM

6	Max. Feed force	KN	30
7	Max. Lifting force	Kgf	6000
8	Max. Feed Speed	M/min	15
9	Max. Lifting Speed	M/min	15

#### BOOM&GUIDE

10	Max Swing of Boom	°	45° left / 45° right
11	Max Dump of Boom	°	up60 down20
12	Max Swing of Guide	°	30(L) / 91(R) or 91(L) / 30(R)
13	Max Dump of Guide	°	180
14	Feed Stroke	m	3

<b>ENGINE</b>			
15	Manufacturer		CUMMINS
16	Model		4BTA3.9-C100
17	Rated Horse power	Kw	74
18	Electrical System	24	Volt
19	Cylinder		4
<b>AIR COMPRESSOR</b>			
20	Air Consumption	M <sup>3</sup> /min	11-25
21	Compressor Type	Rotary Screw/Movable	
22	Compressor Pressure Required	Mpa	1.2-2.4
<b>GENERAL SPECIFICATION</b>			
23	Max. Travel Speed	Km/h	2
24	Gradeability	°	24
25	Grouser Width	mm	324
26	Net Weight	kg	6200
27	Shipping Length	mm	6900
28	Shipping Width	mm	2200
29	Shipping Height	mm	2200
30	Ground Clearance	mm	252
31	Guide Extension	mm	1200
<b>FLUID CAPACITIES</b>			
32	Hydraulic Oil Tank	L	206
33	Fuel Tank (diesel)	L	72
34	Engine Crankcase	L	9
35	Water Pump Crankcase	L	0.6
36	Rotary Gear Box	L	5.5
37	Travel Gear Box	L	2X 5.2
38	Rock Drill Lubricator	L	7.5
<b>COOLING SYSTEM</b>			
39	Volume of Flow	L/Min	200
40	Rated Pressure	Mpa	1.6
<b>DUST COLLECTOR(Optional)</b>			
41	WET		OPTIONAL
<b>MUD PUMP(Optional)</b>			
42	Model		BW200
43	Type		Horizontal
44	Cylinder quantity		2
45	Cylinder diameter	mm	80:65
46	Travel (mm)	mm	85
47	Reciprocating times	min-1	145

48	Pressure	Mpa	4.0; 6.0
49	Displacement	L/min	200; 125
50	Power	KW	11
51	Speed	r/min	530
52	Pitch of belt pulley	mm	385
53	Belt pulley	mm	B type, five solts
54	Power(by client's request)		295 type-diesel or motor
55	Suction pipe dia.(mm)	mm	Φ65
56	Scupper pipe dia.	mm	Φ37
57	Dimensions(L×W×H)	mm	1050×630×820
58	Weigh	kg	300

## INTRODUCTION



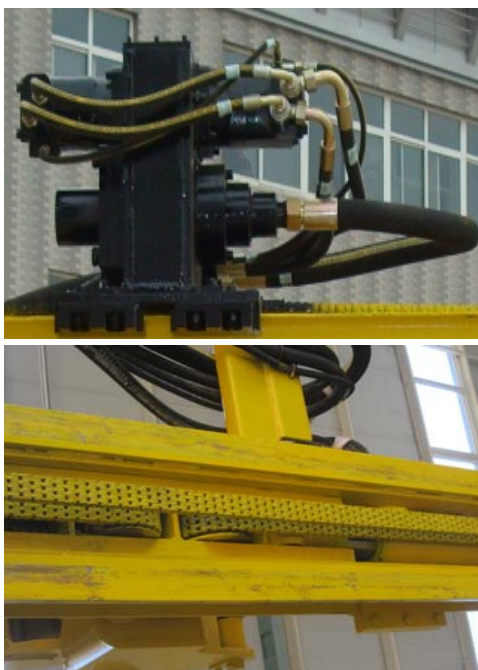
CM458<sup>®</sup> crawler deep hole adopts diesel motor, hydraulic oil pump unit offers power to hydraulic motor moving, turn-ground, propulsion and lifting, and angle orientation of oil cylinder, etc. When the drill is working, only the down the hole hammer consume the compressed air. The drill is used for water well, geothermic air-conditioner drilling operation and various stonework blasting hole operation, the drill can also realize the process such as breast wall drilling with casing following, conduct drilling grouting hole of the hydropower cofferdam, grouting hole for dyke seepage control and grouting hole for base enforcement and anchor hole.

## MAIN COMPONENT



**Diesel Engine:** The drill was equipped with CUMMINS<sup>®</sup> 59kw diesel engine, which has reliable performance and strong power, meanwhile, the suction system of diesel engine has safe and reliable air filter device to make sure that the diesel will absorb fresh air.

**Oil Pump:** Imported hydraulic oil pump has steady performance and long service life.



**Rotary Head Assembly:** Equipped an EATON<sup>®</sup> hydraulic rotary motor, the Rotary Head Assembly speed reduced by two planetary gear, the output torque is 4000N/m, rotary speed 0-80rp/m, Rotary with impact cushioning capacity, with the ability to reduce the impact of drilling reaction forces transmitted to the rotary motor, to reduce parts wastage, simple internal structure, easy maintenance. rotary motor equipped YX ring, and thrust needle roller bearings equipped U.S. IR OEM product, increase the capability and life.

**Drill Guide Assembly:** Drill Guide Assembly: Heavy structure drill guide with Manganese steel rail trim & Multiple roller designing, make the guide can withstand high torque, resistance to deformation, also can greatly extend the life of skateboarding and guide, and effectually guarantee the various drilling angle.

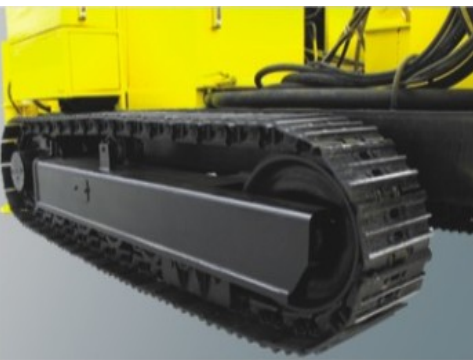




**Operating System:** Operating System equipped in the back of rig, easy drill operator to observe and centralized control the machinery and hydraulic system, the pneumatic operating system is convenient and safety, could be one-handed control while traveling.



**Lubricator:** Lubricator provides drilling system( hammer & drill pipe), regular maintenance of the lubricator with dedicated lubricating Oil will improve the drilling efficiency and service life.



**Traveling System:** Each crawler were all powered by imported high power hydraulic motor, driven by a closed-end reducing gear, brake through the spring brake system, air clutch, same power of positive and negative direction, the gradeability arrives 35° while drag a compressor.

**Crawler:** Each side of frame equipped an oscillating cylinder, hick powered the crawler can up-down floating in the range of 15 degrees, which ensure the keep balance while the drill is walking and working, advanced plate designing make the crawler have high grip capability.

#### ATTACHMENT PARTLIST

NO.	NAME	CODE	Q'ty
1	Bit	According hole diameter	1
2	Hammer	According hole diameter	1
3	Fork	530000003	1
4	J-Wrench	530000004	1
5	J-Wrench	530000009	1
6	Reducer union	CM458-000022	1
7	Reducer union	CM458-000007	2
8	Axis traction	CL351-031201	1
9	Union (ZG2" , M52*2)	JK580-080003	2
10	Liner	JK580-010301	4
11	Drill pipe (L=3000)	JK580-000100	5
12	High pressure air hose	38 II *20m	1
13	High-pressure grease gun	50*280	1
14	Pressure gauge components		1
15	Chain Easter	31.75	2
16	Engine Instruction & Parts		1
17	Combination washer	14 JB982 - 77	5
18	Combination washer	18 JB982 - 77	5
19	Combination washer	22 JB982 - 77	5
20	Combination washer	27 JB982 - 77	5

21	Combination washer	33 JB982 - 77	5
22	O-ring	45*3.1	5
23	O-ring	125*2.65	5
24	O-ring	180*3.55	3
25	O-ring	PD80*110*12	3
26	O-ring	38*3.1 GB1235 - 76	3
27	O-ring	40*3.1 GB1235 - 76	5
28	Other Tool	CM458	1
29	Instruction& parts manual	CM458	1
30	Product certificate	CM458	1

**PICTURE**

