

Marine Medium-speed Diesel Engine

R6160/X170 Series Marine Diesel Engine

R6160,X170 series marine diesel engine is a new generation engine which is developed by Weichai Power to meet the requirement of market. This product integrates the internationally-advanced engine design conception with the 50-year-long engine manufacturing experience of Weichai, boasting wide power range, low fuel consumption, excellent emission targets and rapid starting, etc. The engine can widely be used in various shipping.



Technical Parameters

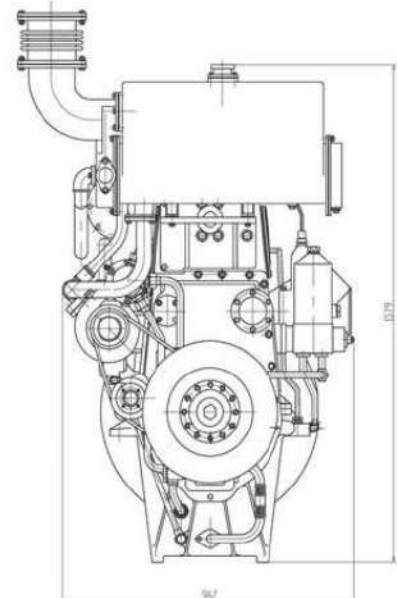
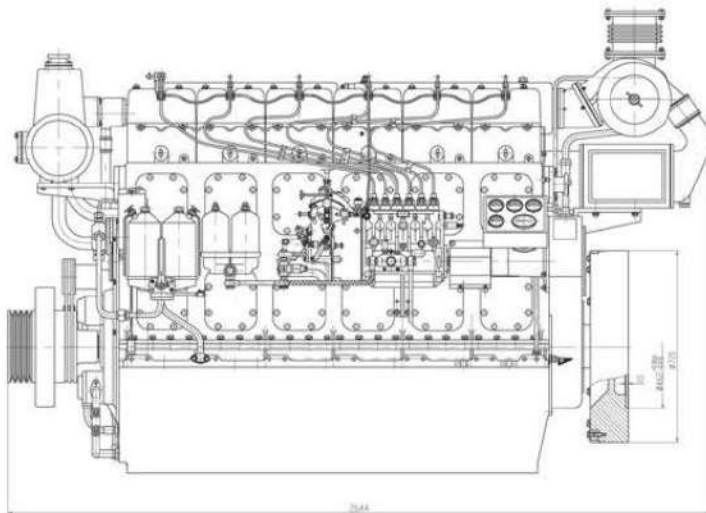
Model	R6160	X6170	8170
Type	In line,direct injection,4 strokes,double-circulation water cooled		
Cylinder numbers	6	6	8
Bore(mm)	160	170	170
Stroke(mm)	225	200	200
Displacement(L)	27.14	27.24	36.32
Compression ratio	14.5:1	14.5:1	14.5:1
Min. steady working speed(r/min)	400	400	400
Min. steady idling speed(r/min)	450	450	450
Min. fuel consumption(g/kW.h)	≤200	≤200	≤200
Oil consumption(g/kW.h)	≤1.36	≤1.36	≤1.36
Smoke intensity(Bosch)	≤1.5	≤1.0	≤1.0
Noise[dB(A)]	≤115	≤116	≤116
Emission	IMO Tier II		
Crankshaft rotating direction (face to flywheel)	Anticlockwise		
Fire Sequence	1-5-3-6-2-4	1-5-3-6-2-4	1-6-2-4-8-3-7-5
Starting method	Electrical/Air start		
Oil sump capacity(L)	90	65	80
Net weight(kg)	3350 (< 202kW), 3400 (≥202kW)	3100	4200
Overhaul life(h)	12000	12000	12000

Model List

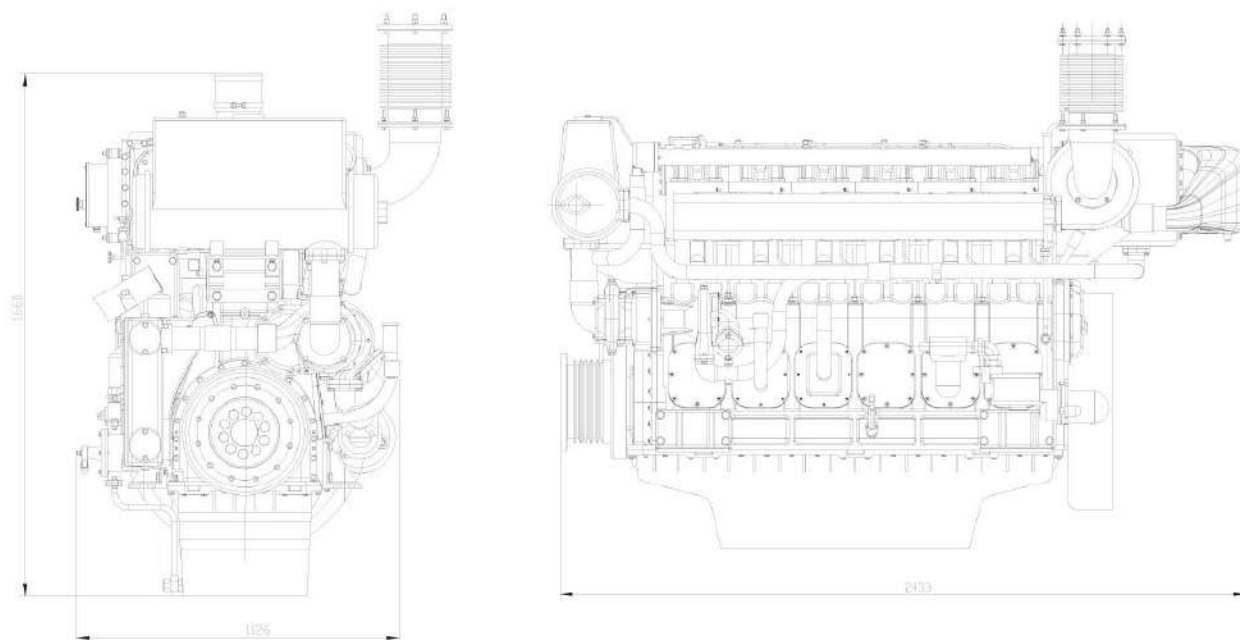
Model	Rated power Ps (kW)	Rated speed r/min	Intake method	Power output type	Application
R6160ZC223-1	223(164)	1000	Turbocharged	none/local	Marine main engine
R6160ZC250-1	250(184)	1000	Turbocharged	none/local	Marine main engine
R6160ZC275-1	275(202)	1000	Turbocharged and intercooled	none/local	Marine main engine
R6160ZC300-1	300(220)	1000	Turbocharged and intercooled	none/local	Marine main engine
R6160ZC350-1	350(255)	1000	Turbocharged and intercooled	none/local	Marine main engine
R6160ZC380-1	380(280)	1000	Turbocharged and intercooled	none/local	Marine main engine
R6160ZC408-1	408(300)	1000	Turbocharged and intercooled	none/local	Marine main engine
R6160ZC450-1	450(330)	1000	Turbocharged and intercooled	none/local	Marine main engine
R6160ZC490-2	490(360)	1200	Turbocharged and intercooled	none/local	Marine main engine
X6170ZC408-1	408(300)	1000	Turbocharged and intercooled	SAE0/16	Marine main engine
*X6170ZC450-1	450(330)	1000	Turbocharged and intercooled	SAE0/16	Marine main engine
X6170ZC450-2	450(330)	1200	Turbocharged and intercooled	SAE0/16	Marine main engine
X6170ZC480-2	480(353)	1200	Turbocharged and intercooled	SAE0/16	Marine main engine
*X6170ZC500-2	500(368)	1200	Turbocharged and intercooled	SAE0/16	Marine main engine
X6170ZC520-2	520(382)	1200	Turbocharged and intercooled	SAE0/16	Marine main engine
*X6170ZC540-2	540(397)	1200	Turbocharged and intercooled	SAE0/16	Marine main engine
X6170ZC580-3	580(426)	1350	Turbocharged and intercooled	SAE0/16	Marine main engine
X6170ZC620-4	620(456)	1500	Turbocharged and intercooled	SAE0/16	Marine main engine
8170ZC600-1	600(441)	1000	Turbocharged and intercooled	SAE0/18	Marine main engine
*8170ZC720-2	720(530)	1200	Turbocharged and intercooled	SAE0/18	Marine main engine
8170ZC818-3	818(601)	1350	Turbocharged and intercooled	SAE0/18	Marine main engine

* Recommend Models

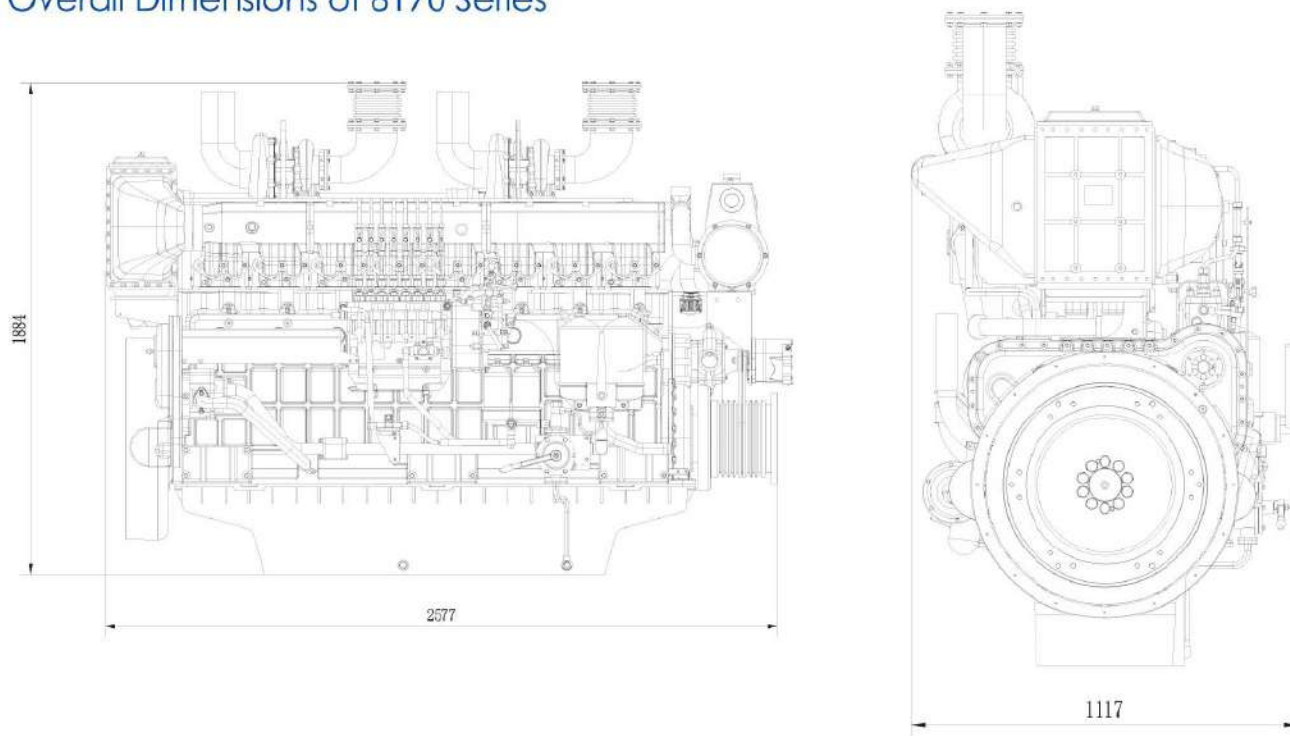
Overall Dimensions of R6160 Series



Overall Dimensions of X6170 Series



Overall Dimensions of 8170 Series



CW200/250 Series Marine Diesel Engine

CW200/250 series marine diesel engines are products with mid-speed and high power developed independently by Chongqing Weichai Engine Works on the basis of advantages of like products both in China and foreign countries. It is characterized by rational construction, advanced performance index, reliable running operation and easy maintenance, etc. It can burn diesel oil and Redwood 1000-1500s heavy duty oil. It is an optimum power source for passenger liner, fishing ship, containership and also used for generating set for ship.



■ Technical Parameters

Model	CW6200ZC/ XCW6200	CW8200ZC/ XCW8200	CW12V200ZC/ XCW12V200	CW16V200	CW6250	CW8250
Type	direct injection, 4 strokes, double-circulation water cooled, Turbocharged and intercooled					
Cylinder numbers	L6	L8	V12	V16	L6	L8
Bore(mm)	200	200	200	200	250	250
Stroke(mm)	270	270	270	270	300	300
Displacement(L)	50.89	67.856	101.784	135.68	88.36	117.81
Compression ratio	13.37	13.37	13.37	13.37	13	13
Min. steady idling speed(r/min)	300-400					
Min. fuel consumption(g/kW.h)	≤200			≤200		
Oil consumption(g/kW.h)	≤1.0			≤1.0		
Smoke intensity(Bosch)	≤1.0			≤1.0		
Noise[dB(A)]	≤110					
Crankshaft rotating direction (face to flywheel)	Clockwise					
Fire Sequence	1-4-2-6-3-5	1-3-5-7-8-6-4-2	A1-B1-A4-B4-A2-B2-A6-B6-A3-B3-A5-B5	A1-B1-A3-B3-A5-B5-A7-B7-A8-B8-A6-B6-A4-B4-A2-B2	1-4-2-6-3-5	1-3-2-5-8-6-7-4
Starting method	Air start					
Emission	IMO Tier II					
Net weight(kg)	6500	7800	11800	13680	12000	15300

■ Model List

Model	Rated power Ps (kW)	Rated speed r/min	Fuel	Configuration	Application
CW6200ZC-7	612(450)	750	LDO/MGO/HFO	OIP/IIP	Marine main engine
CW6200ZC-5	734(540)	900	LDO/MGO/HFO	OIP/IIP	Marine main engine
CW6200ZC	816(600)	1000	LDO/MGO/HFO	OIP/IIP	Marine main engine
XCW6200ZC-5	734(540)	750	LDO/MGO/HFO	OIP/IIP	Marine main engine
XCW6200ZC-6	704(518)	720	LDO/MGO/HFO	IIP	Marine main engine
XCW6200ZC-51	816(600)	750	LDO/MGO/HFO	IIP	Marine main engine
XCW6200ZC-4	881(648)	900	LDO/MGO/HFO	OIP/IIP	Marine main engine
XCW6200ZC-1	979(720)	1000	LDO/MGO/HFO	OIP/IIP	Marine main engine
XCW6200ZC-2	1126(828)	1000	LDO	IIP	Marine main engine
CW8200ZC-9	979(720)	900	LDO/MGO/HFO	OIP/IIP	Marine main engine
XCW8200ZC-4	1175(864)	900	LDO/MGO/HFO	OIP/IIP	Marine main engine
CW8200ZC	1088(800)	1000	LDO/MGO/HFO	OIP/IIP	Marine main engine
XCW8200ZC-1	1306(960)	1000	LDO/MGO/HFO	OIP/IIP	Marine main engine
XCW8200ZC-2	1501(1104)	1000	LDO	IIP	Marine main engine
CW12V200ZC-2	1469(1080)	900	LDO/MGO/HFO	IIP	Marine main engine
CW12V200ZC	1632(1200)	1000	LDO/MGO/HFO	IIP	Marine main engine
XCW12V200ZC-4	1763(1296)	900	LDO/MGO/HFO	IIP	Marine main engine
XCW12V200ZC-1	1958(1440)	1000	LDO/MGO/HFO	IIP	Marine main engine
CW16V200ZC-8	1958(1440)	900	LDO	IIP	Marine main engine
CW16V200ZC-6	2176(1600)	1000	LDO/MGO/HFO	IIP	Marine main engine
CW16V200ZC	2394(1760)	1000	LDO	IIP	Marine main engine
CW6250ZLC-1	1500(1103)	750	LDO/MGO/HFO	IIP	Marine main engine
CW6250ZLC	2000(1470)	1000	LDO/MGO/HFO	IIP	Marine main engine
CW6250ZLC-2	1800(1323)	900	LDO/MGO/HFO	IIP	Marine main engine
CW8250ZLC-1	2000(1470)	750	LDO/MGO/HFO	IIP	Marine main engine

Remarks: Light diesel oil and HFO $\leq 1500s$ (50°C, 120–180cst) according to different configuration

OIP:one-piece injection pump

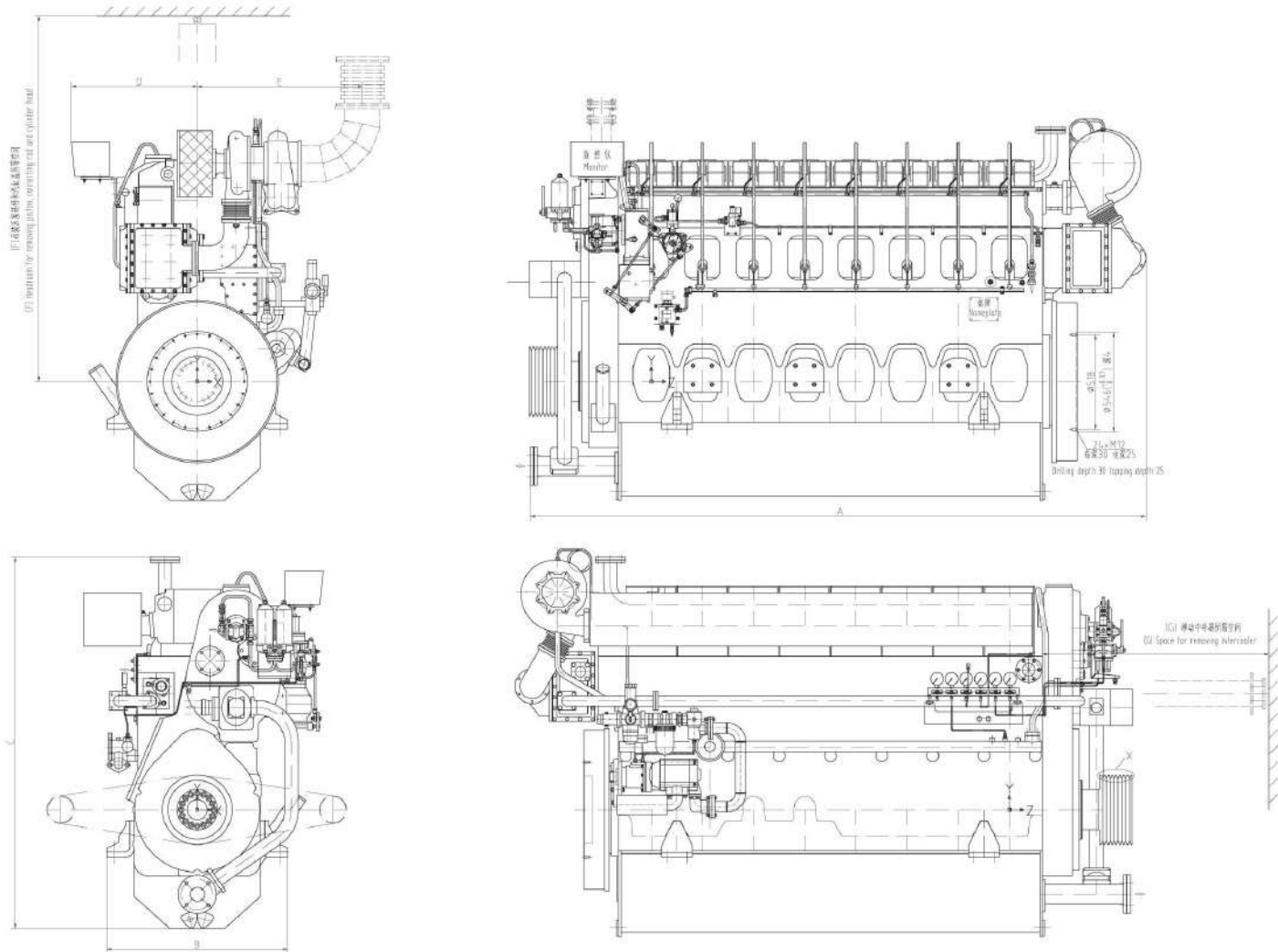
IIP:individual injection pump

LDO:light diesel oil

MGO:marine gas oil

HFO:heavy fuel oil

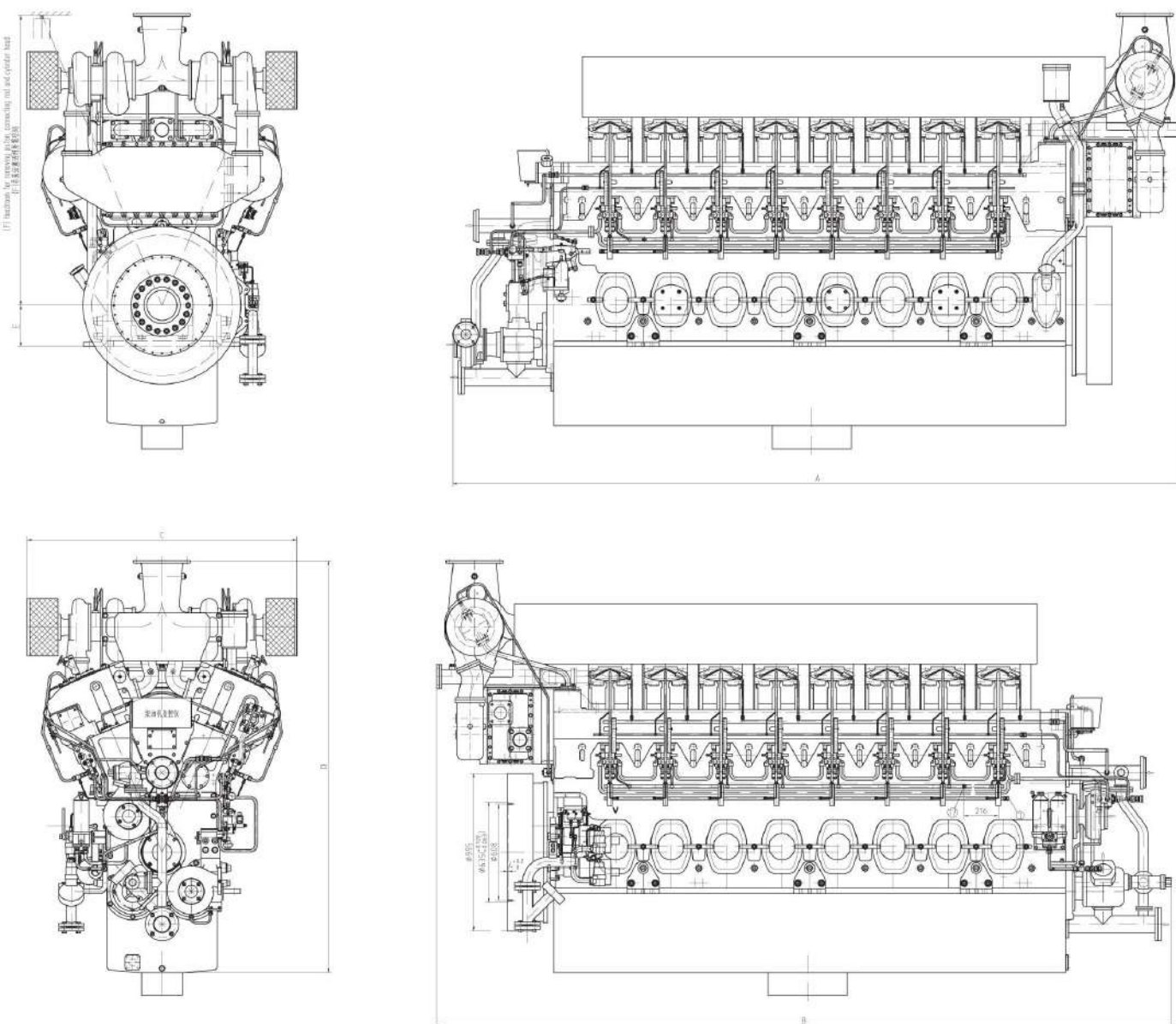
Overall Dimensions of CW6200 /8200 Series



Main Dimensions

Engine model	O'ty of cylinders	Overall dimensions (mm)						
		A	B	C	D	E	F	G
CW6200	6	2816	990	2039	689.5	904.5	2000	1840
CW8200	8	3368	990	2039	689.5	904.5	2000	1400

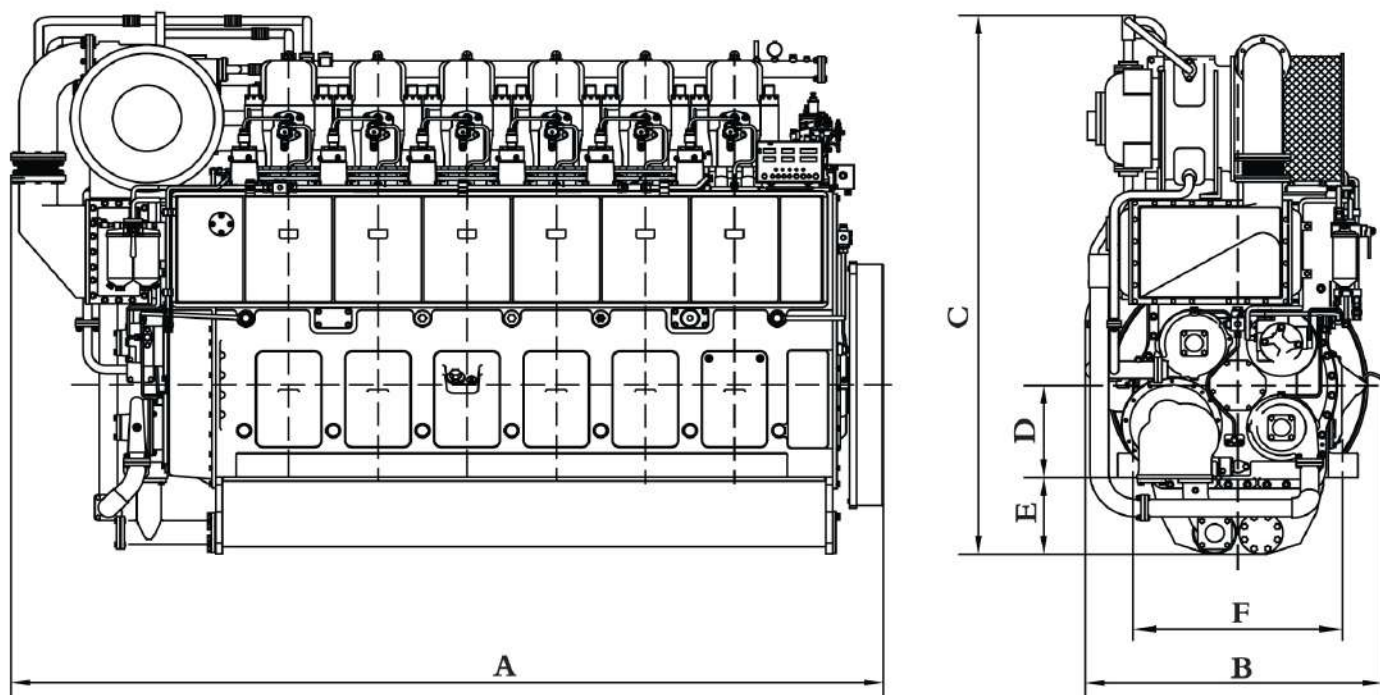
Overall Dimensions of CW12V/16V200 Series



Main Dimensions

Engine model	Qty of cylinders	Overall dimensions (mm)					
		A	B	C	D	E	F
CW12V600	12	3900	3933	1700	2600	260	1830
CW16V600	16	4603.5	4633	1700	2600	260	1830

Overall Dimensions of CW250 Series



Main Dimensions

Engine model	Q'ty of cylinders	Overall dimensions (mm)					
		A	B	C	D	E	F
CW6250ZL-1	6	3820	1400	2460	420	350	906
CW6250ZL	6	3820	1400	2460	420	350	906
CW8250ZL-1	8	4600	1400	2460	420	350	906

L27/38,L32/40 Series Marine Diesel Engine

In April of 2008, Weichai signed L27/38,L32/40 marine diesel engine licensed production agreements with MAN, the world's first brand of marine diesel engine manufacturer. The product has 6, 7, 8, and 9 cylinders, power range from 2040 kW to 4500 kW.



■ Technical Parameters

Model	6L27/38	7L27/38	8L27/38	9L27/38	6L32/40	7L32/40	8L32/40	9L32/40
Type	direct injection,4 strokes,double-circulation water cooled, Turbocharged and intercooled							
Cylinder numbers	6	7	8	9	6	7	8	9
Bore(mm)	270	270	270	270	320	320	320	320
Stroke(mm)	380	380	380	380	400	400	400	400
Displacement(L)	130.8	152.6	174.4	196.2	193.02	225.19	257.36	289.53
Compression ratio	16.5				14.5			
Fuel consumption(g/kW.h)	183				179			
Oil consumption(g/kW.h)	≤0.8				≤0.5			
Smoke intensity(mg/m3)	57-98				57-98			
Emission	IMO Tier II							
Noise[dB(A)]	Meet the ship rules				≤108			
Crankshaft rotating direction (face to flywheel)	Clockwise and counterclockwise							
Starting method	air starter							
Oil sump capacity(L)	1600	1800	2000	2200	drytype oil sump			
Net weight(kg)	31000	34000	37000	40500	38000	42000	47000	51000

Low-noise-Flange pump technology--- Flange connect high-pressure pump

◆ Using high-pressure pump via flange connection, improve the oil pump connection stiffness, Reduced high vibration problems because connect by coupling, improve reliability, reduce noise.



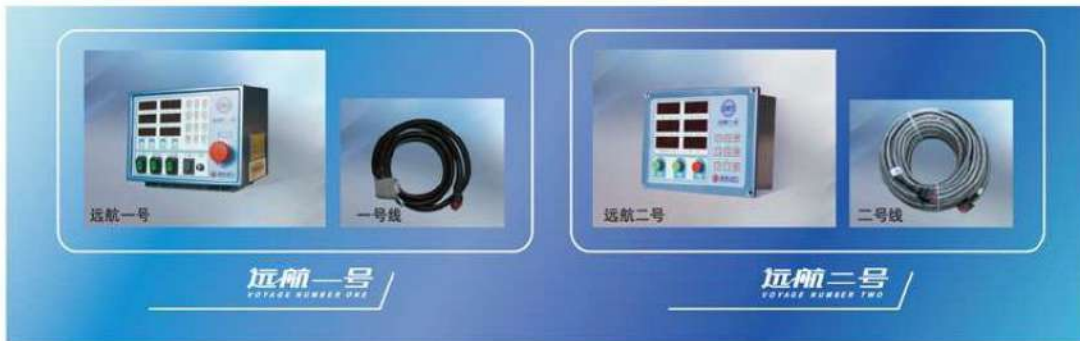
Convenient-Non-stop filter technology-Non-stop to replace the filter can be realized

◆ According to Ship regulations design, replace diesel, oil filter without downtime can be realized in the course of engine operation, convenient maintenance.

◆ Reduced shutdown diesel engine and another abnormal failure occur because of filter clogging in the course of operation of the ship.



■ Voyage safeguard monitor



◆ High adaptability

1. Much wider voltage range: DC 16V ~ 36V;
2. Much wider temperature range: -25°C ~ +70°C;
3. Much higher degrees of protection: IP55(dustproof/waterproof) —degree of deck machinery protection;
4. Can work well at extreme environment, such as high temperature, humidity, salt spray and strong vibration, electromagnetic Interference etc.

◆ High reliability

1. To use imported BOSCH sensor that is designed for resistant shake and corrosion and can measure accurately.
2. To use AMP connector that can be connected directly and reliably and can be against dust/water/corrosion and vibration.
3. To adopt advanced space technology and parts that can control and display accurately.
4. To use high-performance shield wiring harness that can be against abrasion high temperature and corrosion, and can transfer the signal accurate in time.