

DIESEL ENGINE

KDP SERIES FOR FIRE PUMP

Model: 4KDP-90

Prime power
Standby Power

90.0KW(120HP)/3000 rpm
99.0KW(132HP)/3000 rpm

Engine Specifications

In-Line, 4 stroke, water-cooled, turbocharger	
Combustion type	Direct injection
Cylinders - Bore × stroke	4 - 105 × 118 mm
Displacement	4087 cc
Firing order	1 – 3 – 4 – 2
Compression ratio	18 : 1
Dry weight	Approx. 395 kg
Dimension(LxWxH)	950 × 660 × 830 mm
Rotation	Anti-clockwise
Flywheel / Housing	SAE # 10 / # 3

Cooling System

Cooling method	Fresh water forced type
Water pump	Centrifugal, Belt driven
Max. water Temp	95 degree C.
Cooling Fan	Blade 7EA - Ø 500 mm

Intake & Exhaust System

Max air restriction	Clean 2 kPa / Dirty 5 kPa
Exhaust back	Max 6 kPa

Electric System

Charging generator	13.5 V × 65 A
Starting motor	12 V × 3.7 kW
Battery	12 Vx 80 Ah

Fuel System

Injection pump	Direct Injection type
Governor	Mechanicaltype
Feed pump	Mechanicaltype
Injection nozzle	Multi-hole type/ 0.255 mm
Opening pressure	20±0.5MPa
Fuel filter	Single Stage, Paper

Fuel Consumption

Prime power at 3000rpm	25.0 liters/h
Standby Power at 3000rpm	27.5 liters/h

Lubrication System

Lub. Oil Pan Capacity	8 liters
Max. allowable Oil Temp	110 degree C.
	Min. 294 kPa
Oil pressure	Max. 490 kPa

Engineering Data

Combustion Air	3.72m3/min
Exhaust Gas	9.31m3/min

Conversion Table

PS = kW × 1.3596	in. = mm × 0.0394
psi = kg/cm ² × 14.2233	
HP= PS x 0.98635	



E&G POWER CO., LTD.
29, Majung 4-ro, Seo-gu, Incheon,
Republic of Korea

Power @ rpm

132BHP(99kW) @3000RPM

Max Torque@rpm

387N.m @1800RPM

Series

P

Engine Model

4KDP-90

Intake Way: Turbocharged

Compression ratio: 18:1

engine number : 1-3-4-2

Bore(mm) : 105

Stroke(mm) : 118

Displacement(L) : 4.038

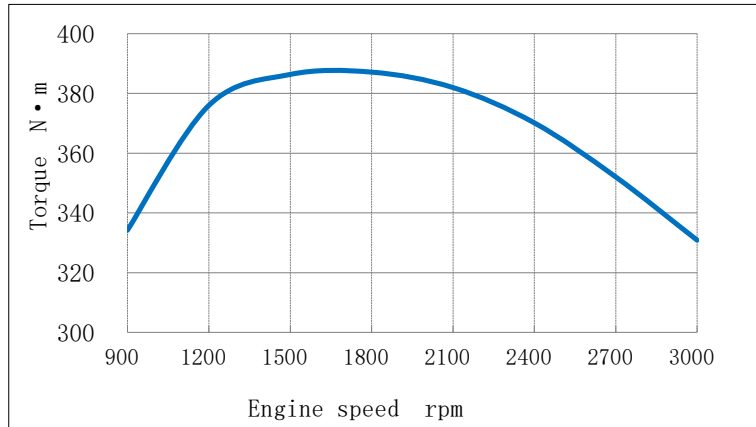
Cylinder : 4

Fuel System:

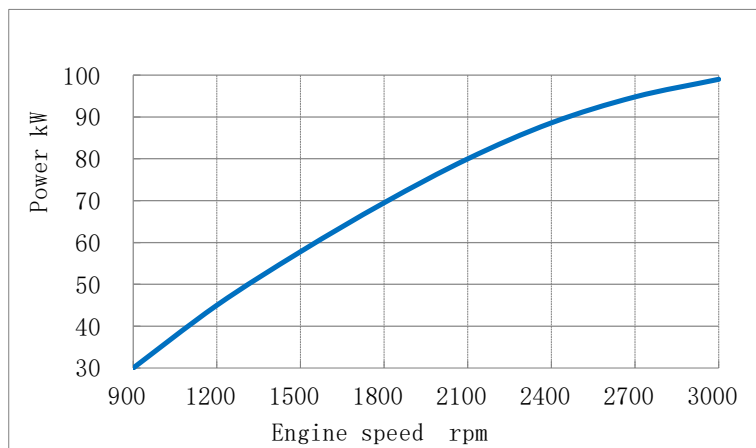
Direct injection

Speed Rate : 3%

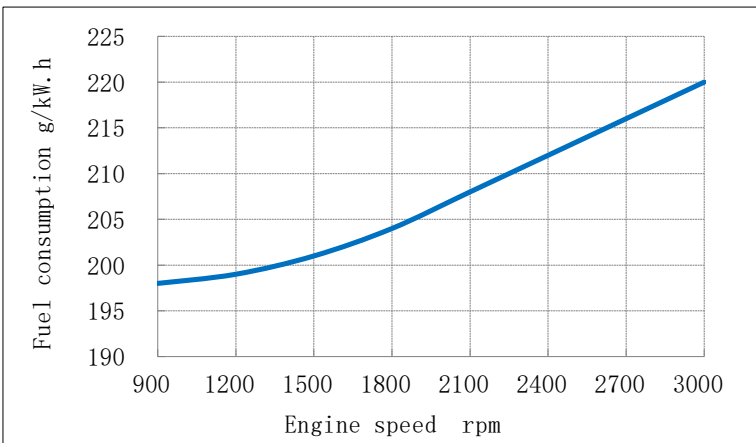
All data is based on the engine operating with fuel system, water pump, and 10 in H₂O (2.488 kPa) inlet air restriction with 5.98 in(152mm) inner diameter, and with 2.01 in Hg(7 kPa) exhaust restriction with 4.02 in(108mm) inner diameter, not included are alternator, fan, optional equipment and driven components. Coolant flows and heat rejection data based on coolants as 50% ethylene glycol/50% water. All data is subject to change without notice.



Torque	
rpm	N.m
3000	331
2700	352
2400	370
2100	382
1800	387
1500	386
1200	376
900	334

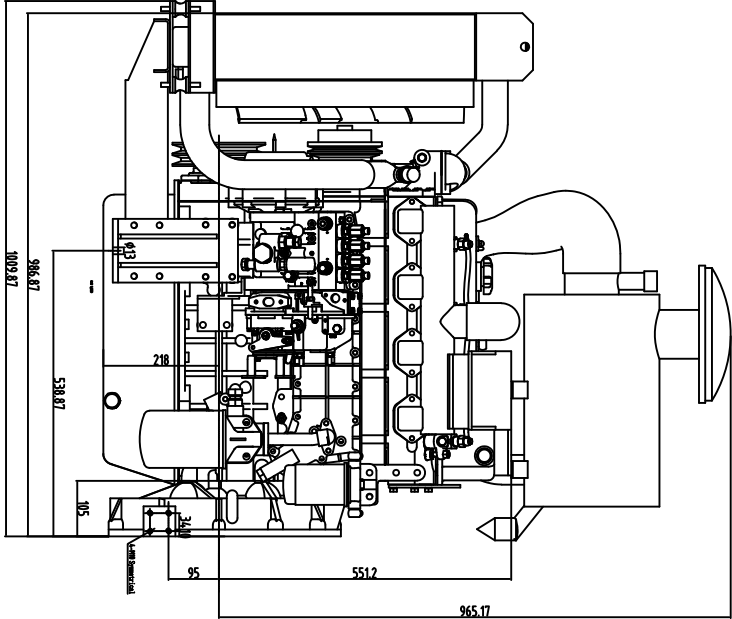
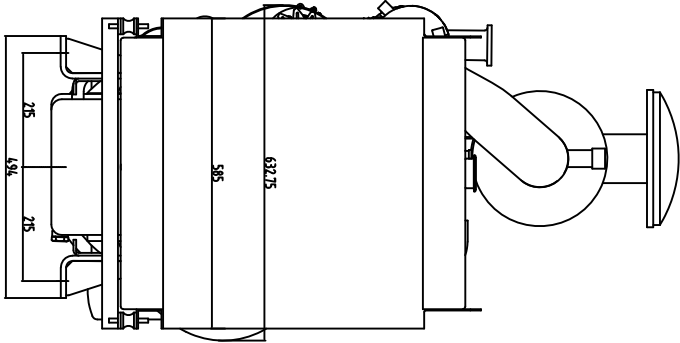
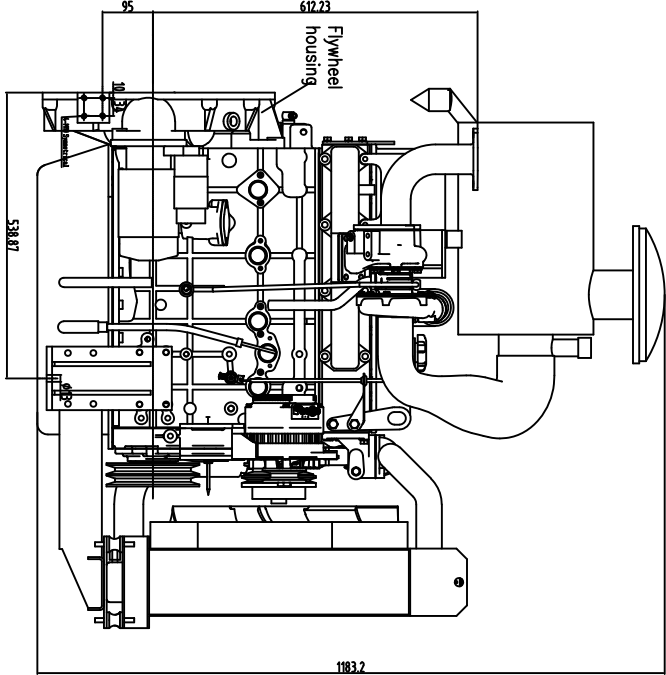
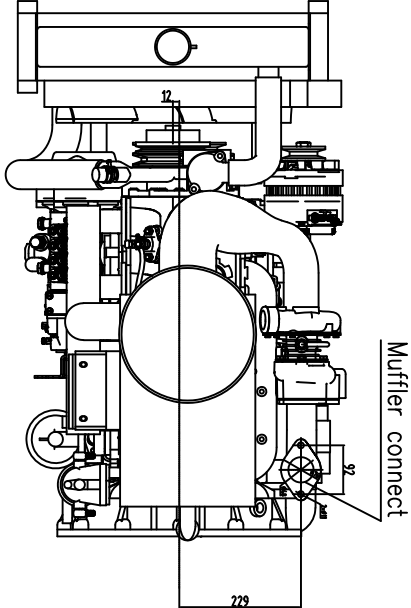
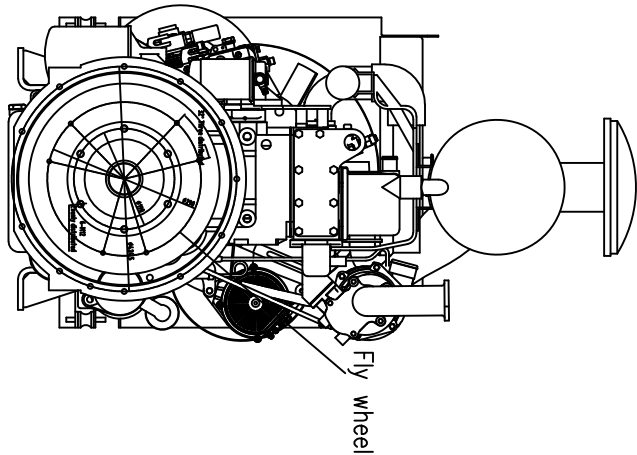


Power	
rpm	kW
3000	99,0
2700	94,8
2400	88,6
2100	80,0
1800	69,5
1500	57,8
1200	45,0
900	30,0



Fuel consumption	
rpm	g/kW.h
3000	220
2700	216
2400	212
2100	208
1800	204
1500	201
1200	199
900	198

Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.61 in.Hg) barometric pressure [80m (263ft.) altitude], 25°C(77°F) inlet air temperature, and 1 kPa(0.30 in. Hg) water vapor pressure with NO.2 diesel fuel. The engine may be operated without changing the fuel setting up to 4000m(13,123ft.) altitude. For sustained operation at high altitudes, the fuel rate of the engine will be adjusted to limit performance by 4% per 305m(1,000ft.) above 2255m(7,400ft.) altitude and 2% per 11°C above 38°C(1% per 10°F above 100°F)



CUSTOMER		TITLE	
-		KODDEC ENGINE ASSEMBLY	
SCALE		DATE	
1/11		16.09.20	
DESIGNED BY		-	
CHECKED BY		-	
APPROVAL		-	
CLIENT APPROVAL		-	
CONTRACT NO.		20111103-90	
SERIAL NO.		4KDP-90	
REVISION		0	