

# DIESEL ENGINE

**KDG** SERIES FOR GENERATOR

## Model: 12KDG-725

<b>Prime power</b>	<b>660.0KW(898.0HP)/1500 rpm</b>	<b>756.0KW(1028.0HP)/1800 rpm</b>
<b>Standby Power</b>	<b>725.0KW(986.0HP)/1500 rpm</b>	<b>832.0KW(1132.0HP)/1800 rpm</b>

- The engine performance is as per ISO 3046. Type of operation is based on ISO 8528.
- Prime power is available for an unlimited number of hours per year in a variable load application.
- The permissible average power output over 24 hours of operation shall not exceed 80% of the prime power rating.

### Engine Specifications

V-Type, 4 stroke, water-cooled, Turbocharged, air-to-air intercooled.

Combustion type	Direct injection
Cylinders - Bore × stroke	12 - 128 × 142 mm
Displacement	21,927 cc
	1-12-5-8-3-10-6-7-2-11
Firing order	-4-9
Compression ratio	14.6 : 1
Dry weight	Approx. 1575 kg
Dimension(LxWxH)	1,717 × 1,389 × 1,288 mm
Rotation	Anti-clockwise
Flywheel / Housing	SAE # 14 / # 1

### Fuel System

Injection pump	Direct Injection type
Governor	Electronic type
Feed pump	Mechanical type
Injection nozzle	Multi-hole type/ 0.255 mm
Opening pressure	27+0.5MPa

### Fuel filter

Single Stage, Paper

### Fuel Consumption

Prime power at 1500rpm	165.2 liters/h
Standby power at 1500rpm	181.5 liters/h
Prime power at 1800rpm	193.4 liters/h
Standby power at 1800rpm	212.9 liters/h

### Cooling System

Cooling method	Fresh water forced type
Water pump	Centrifugal, Belt driven
Water Capacity	23.0 liters (engine only)

### Lubrication System

Lub. Oil Pan Capacity	57.0 liters
Max. allowable Oil Temp	120 degree C.

Max. water Temp	95 degree C.
Cooling Fan	Blade 7EA - Ø 915 mm

Oil pressure  
Min. 300 kPa  
Max. 650 kPa

### Intake & Exhaust System

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

### Engineering Data

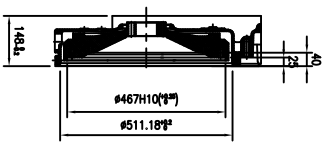
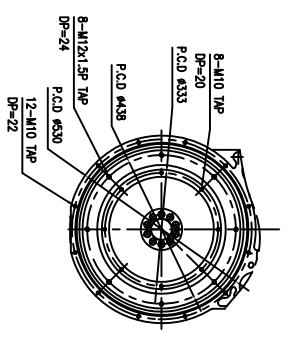
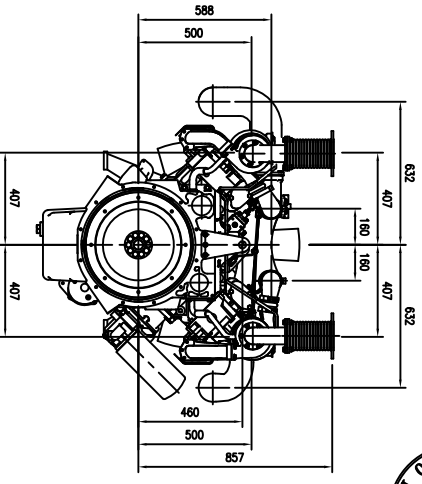
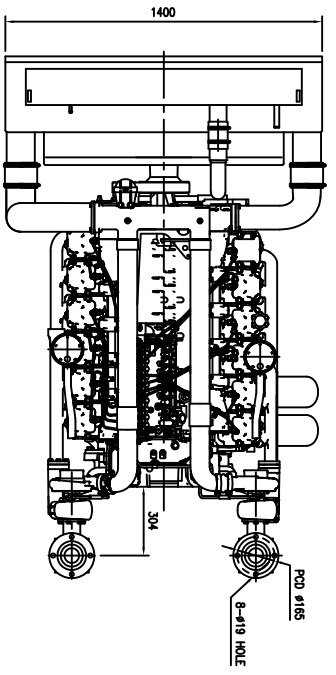
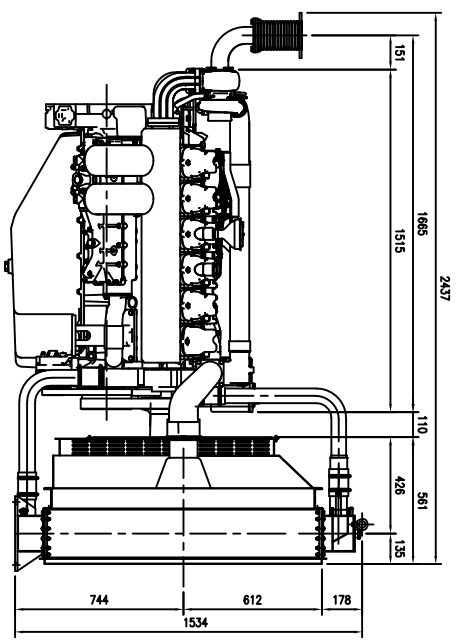
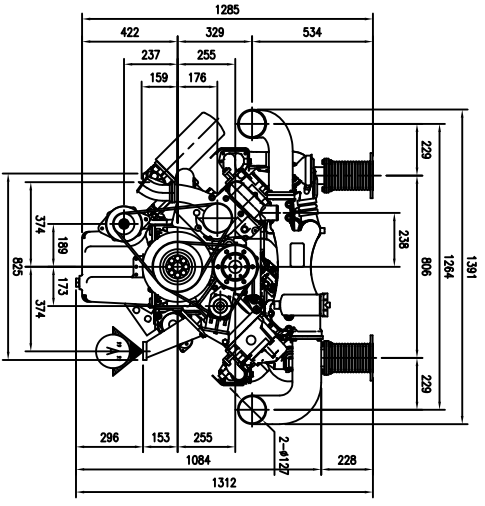
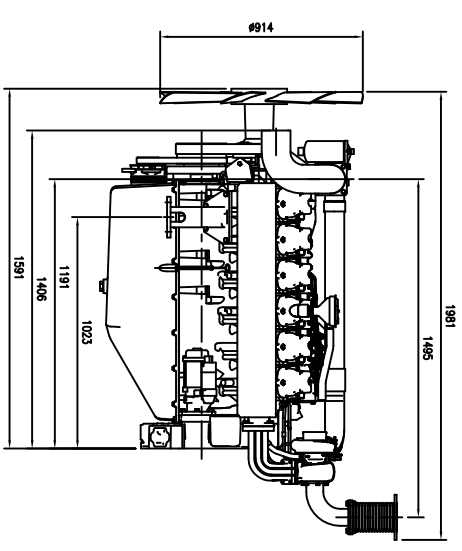
Combustion Air at 1500rpm	52.2 m3/min
Exhaust Gas at 1500rpm	135.8 m3/min
Combustion Air at 1800rpm	61.1 m3/min
Exhaust Gas at 1800rpm	159.0 m3/min

### Electric System

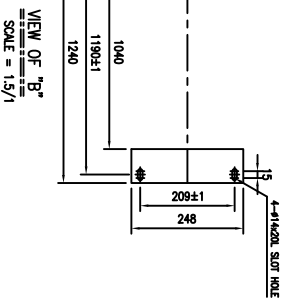
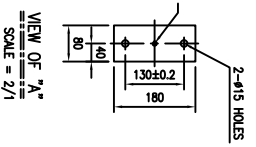
Charging generator	27.5 V × 45 A
Starting motor	24 V × 9.0 kW
Battery	12 V x 2 x 120 Ah

### Conversion Table

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



DETAIL OF FLYWHEEL HOUSING  
 FLYWHEEL : SAE#14  
 FLYWHEEL HOUSING : SAE#1



VIEW OF "A"  
 SCALE = 2/1

VIEW OF "B"  
 SCALE = 1.5/1

CUSTOMER		TITLE	
-		KODOC ENGINE ASSEMBLY	
SCALE	1/25	DATE	15.09.20
DESIGNED BY	-	CHECKED BY	-
DRAWN BY	-	APPROVED BY	-
NO.	12K00-725	REV.	01
NO.	12K00-725	REV.	02
NO.	12K00-725	REV.	03
NO.	12K00-725	REV.	04
NO.	12K00-725	REV.	05
NO.	12K00-725	REV.	06
NO.	12K00-725	REV.	07
NO.	12K00-725	REV.	08
NO.	12K00-725	REV.	09
NO.	12K00-725	REV.	10