

# DIESEL ENGINE

## KDG SERIES FOR GENERATOR

<b>Model: 8KDG-445</b>	<b>Prime power</b>	<b>405.0KW(551.0HP)/1500 rpm</b>	<b>440.0KW(598.5HP)/1800 rpm</b>
	<b>Standby Power</b>	<b>445.0KW(605.0HP)/1500 rpm</b>	<b>480.0KW(653.0HP)/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	8 - 128 × 142 mm
Displacement	14,618 cc
Firing order	1-5-7-2-6-3-4-8
Compression ratio	14.6 : 1
Dry weight	Approx. 1050 kg
Dimension(LxWxH)	1484 × 1389 × 1288 mm
Rotation	Anti-clockwise
Flywheel / Housing	SAE # 14 / # 1

### Cooling System

Cooling method	Fresh water forced type
Water pump	Centrifugal, Belt driven
Water Capacity	20.0 liters (engine only)
Max. water Temp	95 degree C.
Cooling Fan	Blade 7EA - Ø 915 mm

### Intake & Exhaust System

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

### Electric System

Charging generator	27.5 V × 45 A
Starting motor	24 V × 7.0 kW
Battery	12 V x 2 x 120 Ah

### 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	101.4 liters/h
Standby power at 1500rpm	111.5 liters/h
Prime power at 1800rpm	112.4 liters/h
Standby power at 1800rpm	122.6 liters/h

### Lubrication System

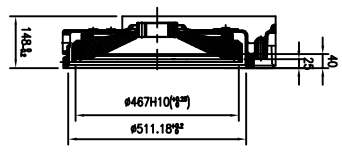
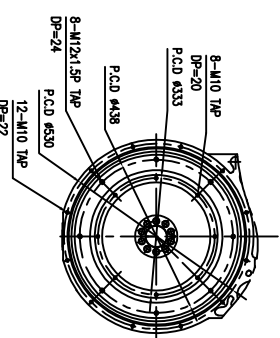
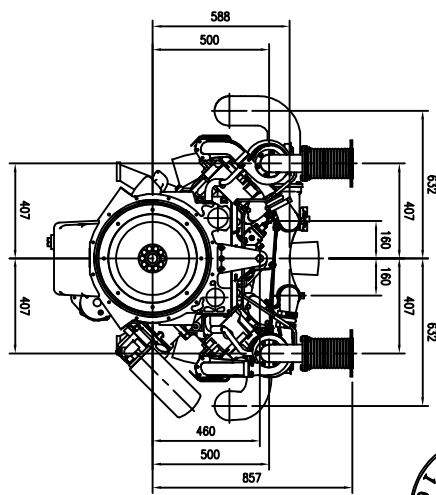
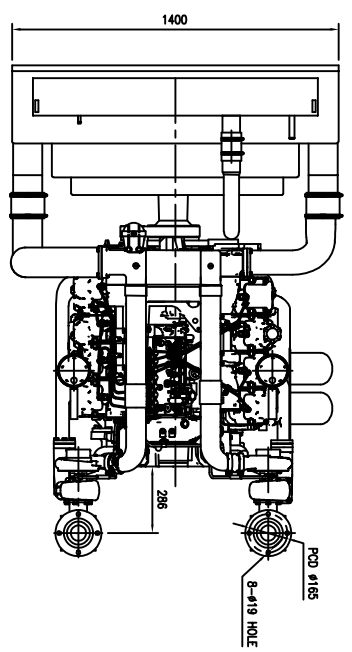
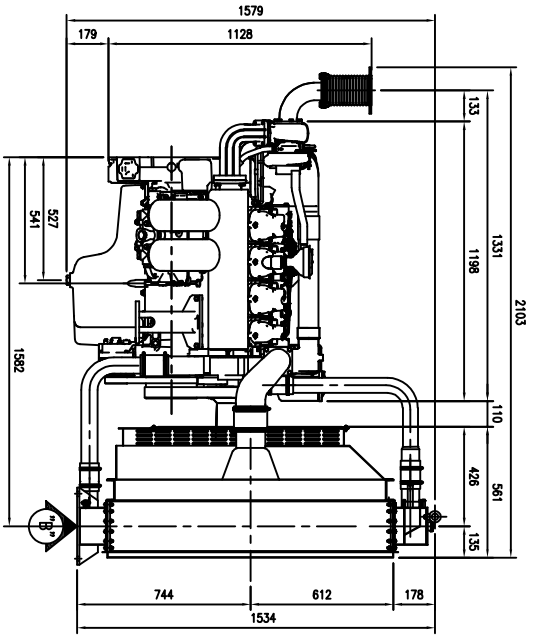
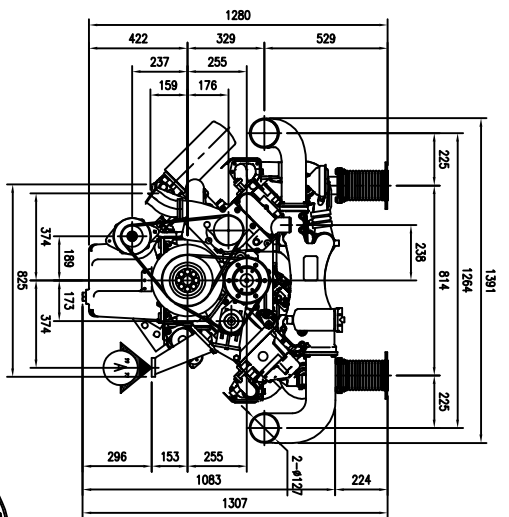
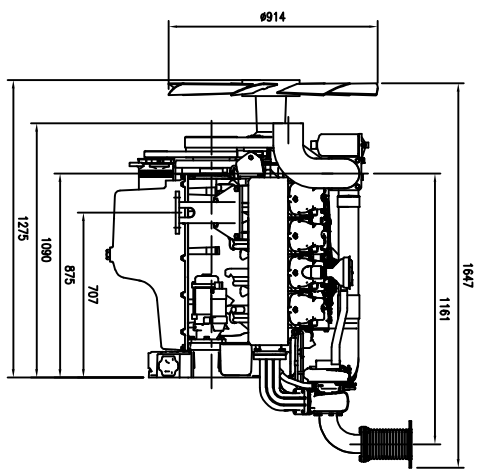
Lub. Oil Pan Capacity	21.0 liters
Max. allowable Oil Temp	120 degree C.
Oil pressure	Min. 300 kPa Max. 650 kPa

### Engineering Data

Combustion Air at 1500rpm	32.0 m3/min
Exhaust Gas at 1500rpm	83.3 m3/min
Combustion Air at 1800rpm	35.5 m3/min
Exhaust Gas at 1800rpm	92.3 m3/min

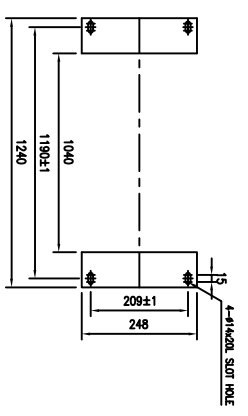
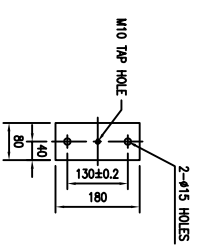
### Conversion Table

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**

SCALE = 1.5/1  
 FLYWHEEL : SAE#14  
 FLYWHEEL HOUSING : SAE#1



VIEW OF "A"  
 SCALE = 2/1

VIEW OF "B"  
 SCALE = 1.5/1

TITLE		CUSTOMER	
ROODEC ENGINE ASSEMBLY		-	
SCALE	1/25	DATE	
DRAWN BY		DATE	16/09/20
CHECKED BY		APPROVAL	
DESIGNED BY		CONTRACT NO.	
APPROVED BY		JOB NO.	2010080-00
REVISION		REV. NO.	
		REV. NO.	BR00G-455