

DIESEL ENGINE

KDG SERIES FOR GENERATOR

Model: 16KDG-780

Prime power	705.0KW(959.0HP)/1500 rpm	790.0KW(1074.0HP)/1800 rpm
Standby Power	780.0KW(1061.0HP)/1500 rpm	875.0KW(1190.0HP)/1800 rpm

- 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	16 - 128 × 142 mm
Displacement	29,236 cc
	1-15-6-12-8-5-16-7-11-4-9-2-14-10-3-13
Firing order	
Compression ratio	14.6: 1
Dry weight	Approx. 2,100 kg
Dimension (LxWxH)	1,950 × 1,389 × 1,288 mm
Rotation	Anti-clockwise
Flywheel / Housing	SAE # 18 / # 0

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	176.6 liters/h
Standby power at 1500rpm	194.8 liters/h
Prime power at 1800rpm	201.8 liters/h
Standby power at 1800rpm	223.6 liters/h

Cooling System

Cooling method	Fresh water forced type
Water pump	Centrifugal, Belt driven
Water Capacity	26.0 liters (engine only)
Max. water Temp	95 degree C.
Cooling Fan	Blade 7EA - Ø 1450 mm

Lubrication System

Lub. Oil Pan Capacity	78.0 liters
Max. allowable Oil Temp	120 degree C.
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

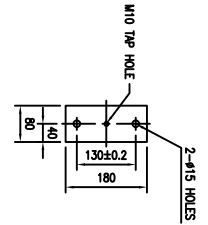
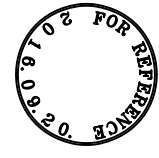
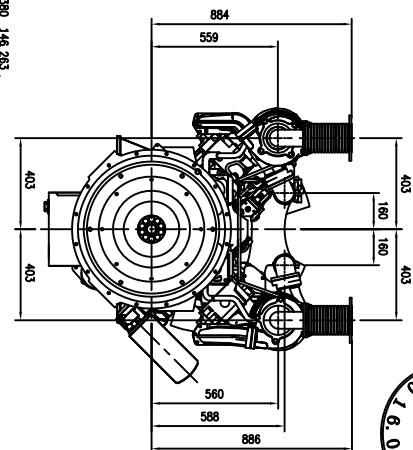
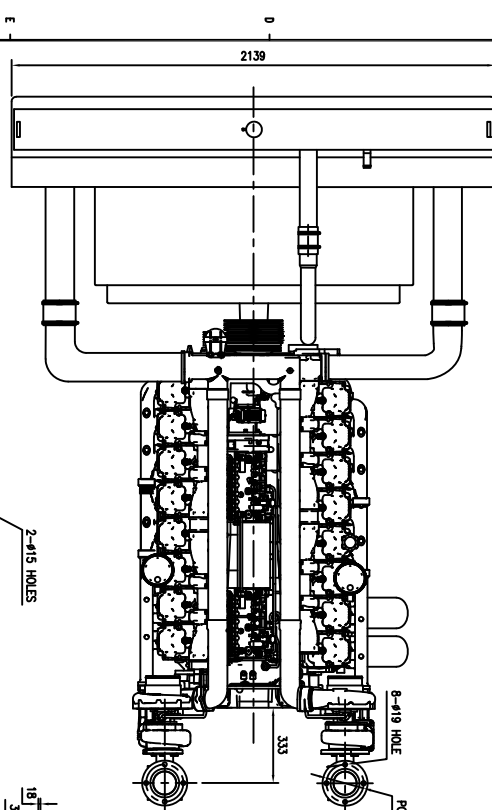
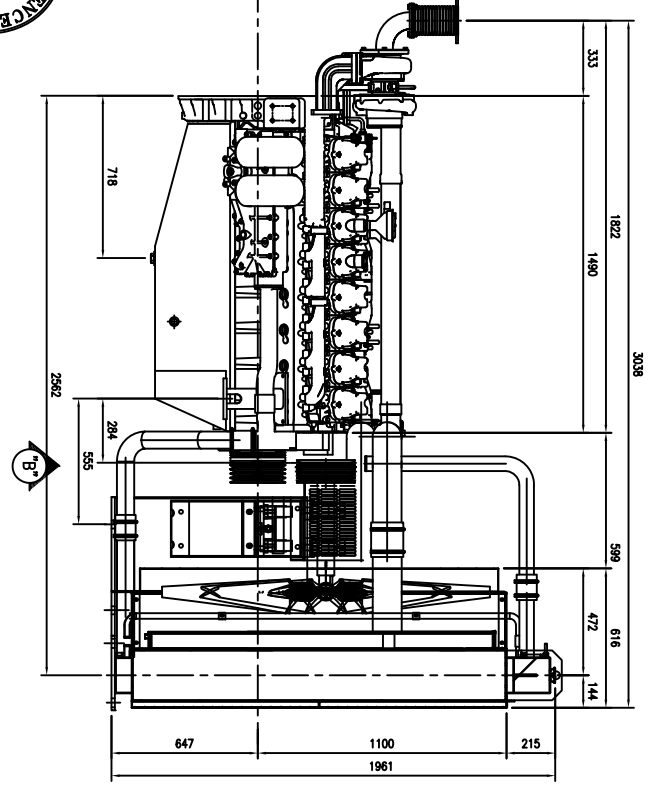
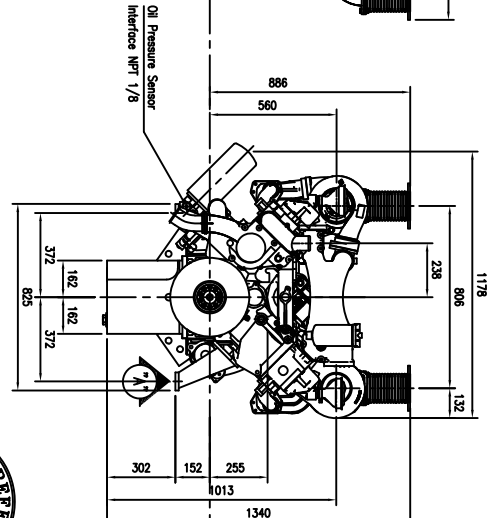
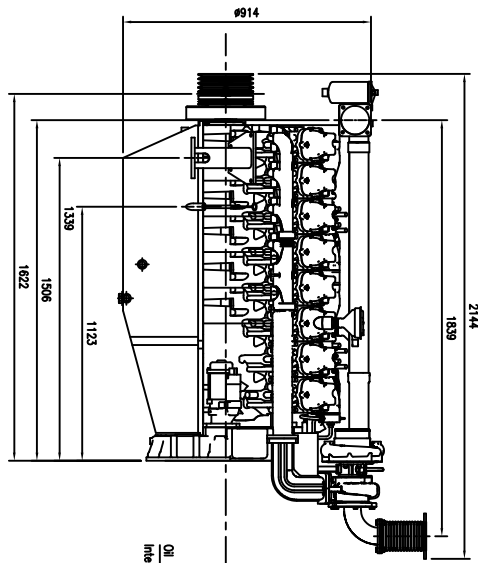
Combustion Air at 1500rpm	55.8 m3/min
Exhaust Gas at 1500rpm	145.0 m3/min
Combustion Air at 1800rpm	63.8 m3/min
Exhaust Gas at 1800rpm	165.7 m3/min

Electric System

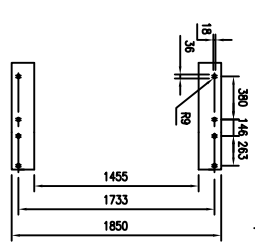
Charging generator	27.5 V × 45 A
Starting motor	24 V × 11.0 kW
Battery	12 V x 2 x 120 Ah

Conversion Table

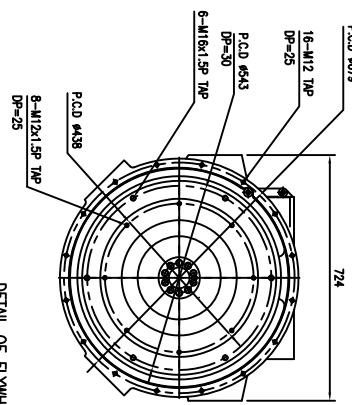
PS = kW × 1.3596	in. = mm × 0.0394
psi = kg/cm ² × 14.2233	
HP= PS x 0.98635	



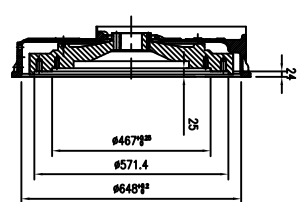
VIEW OF "A"
SCALE = 2/1



VIEW OF "B"
SCALE = 1.5/1



DETAIL OF FLYWHEEL HOUSING
SCALE = 1.5/1
FLYWHEEL : SAE#18
FLYWHEEL HOUSING : SAE#10



CUSTOMER		TITLE	
-		KODDEC ENGINE ASSEMBLY	
SCALE	1/25	DATE	16.09.20
DRAWN	-	CHECKED	-
APPROVED	-	DESIGNER	-
NO.	20181001-08	DWG. NO.	18K0G-780
REVISED	-	REVISED	-