DIESEL ENGINE

KDG SERIES FOR GENERATOR

Model: 12KDG-700

Prime power	**630.0KW(857.0HP)/1500 rpm**	**718.0KW(976.0HP)/1800 rpm**
Standby Power	**700.0KW(952.0HP)/1500 rpm**	**790.0KW(1074.0HP)/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	12 - 128 × 142 mm
Displacement	21,927 cc
Firing order	1–12–5–8–3–10–6–7–2–11 –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	157.7 liters/h
Standby power at 1500rpm	175.4 liters/h
Prime power at 1800rpm	183.4 liters/h
Standby power at 1800rpm	201.9 liters/h

Cooling System

Cooling method	Fresh water forced type
Water pump	Centrifugal, Belt driven
Water Capacity	23.0 liters (engine only)
Max. water Temp	95 degree C.
Cooling Fan	Blade 7EA - Ø 915 mm

Lubrication System

Lub. Oil Pan Capacity	57.0 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	49.8 m3/min
Exhaust Gas at 1500rpm	129.6 m3/min
Combustion Air at 1800rpm	57.9 m3/min
Exhaust Gas at 1800rpm	150.6 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/cm2 × 14.2233	
HP= PS x 0.98635	