

DIESEL ENGINE

KDG SERIES FOR GENERATOR

Model: 4KDG-33	Prime power	30.0KW (40.0HP)/1500 rpm	36.0KW(49.0HP)/1800 rpm
	Standby Power	33.0KW(44.0HP)/1500 rpm	40.0KW(54.0HP)/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

In-Line, 4 stroke, water-cooled, Natural Aspiration	
Combustion type	Direct injection
Cylinders - Bore × stroke	4 - 102 × 118 mm
Displacement	3857 cc
Firing order	1 – 3 – 4 – 2
Compression ratio	18 : 1
Dry weight	Approx. 330 kg
Dimension(LxWxH)	885 × 650 × 810
Rotation	Anti-clockwise
Flywheel / Housing	SAE # 10 / # 3

Fuel System

Injection pump	Direct Injection type
Governor	Mechanical type
Feed pump	Mechanical type
Injection nozzle	Multi-hole type/ 0.255 mm
Opening pressure	21+0.5MPa
Fuel filter	Single Stage, Paper

Fuel Consumption

Prime power at 1500rpm	8.2 liters/h
Standby power at 1500rpm	9.0 liters/h
Prime power at 1800rpm	10.7 liters/h
Standby power at 1800rpm	11.8 liters/h

Cooling System

Cooling method	Fresh water forced type
Water pump	Centrifugal, Belt driven
Water Capacity	5 liters (engine only)
Max. water Temp	95 degree C.
Cooling Fan	Blade 7EA - Ø 450 mm

Lubrication System

Lub. Oil Pan Capacity	11.0 liters
Max. allowable Oil Temp	110 degree C.
Oil pressure	Min. 294 kPa Max. 490 kPa

Intake & Exhaust System

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

Engineering Data

Combustion Air at 1500rpm	1.8 m3/min
Exhaust Gas at 1500rpm	4.4 m3/min
Combustion Air at 1800rpm	2.1 m3/min
Exhaust Gas at 1800rpm	5.2 m3/min

Electric System

Charging generator	13.5 V × 65 A
Starting motor	12 V × 3.7 kW
Battery	12 Vx 120 Ah

Conversion Table

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