

DIESEL ENGINE

KDG SERIES FOR GENERATOR

Model: 8KDG-445	Prime power	405.0KW(551.0HP)/1500 rpm	440.0KW(598.5HP)/1800 rpm
	Standby Power	445.0KW(605.0HP)/1500 rpm	480.0KW(653.0HP)/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	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 ² × 14.2233	
HP= PS x 0.98635	