KOODEC

DIESEL ENGINE

KDG SERIES FOR GENERATOR

Model: 4KDG-38

Prime power	**35.0KW (47.5HP)/1500 rpm**	**40.0KW(54.0HP)/1800 rpm**
Standby Power	**38.0KW(52.0HP)/1500 rpm**	**45.0KW(61.0HP)/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 - 105 × 118 mm
Displacement	4087 cc
Firing order	1 – 3 – 4 – 2
Compression ratio	17 : 1
Dry weight	Approx. 340 kg
Dimension(LxWxH)	885 × 650 × 810 mm
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	25+0.5MPa
Fuel filter	Single Stage, Paper

Fuel Consumption

Prime power at 1500rpm	9.5 liters/h
Standby power at 1500rpm	10.5 liters/h
Prime power at 1800rpm	11.6 liters/h
Standby power at 1800rpm	12.8 liters/h

Cooling System

Cooling method	Fresh water forced type
Water pump	Centrifugal, Belt driven
Water Capacity	6 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	2.0 m3/min
Exhaust Gas at 1500rpm	5.0 m3/min
Combustion Air at 1800rpm	2.3 m3/min
Exhaust Gas at 1800rpm	5.7 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/cm2 × 14.2233	
HP= PS x 0.98635	