

DIESEL ENGINE

MODEL 4DSP-80

Performances

Ratings		3000 rpm	
		PRIME	STAND-BY
Rated Output	kWm	72	80

Note:

PRIME POWER: The prime power is the maximum power available with varying loads for an unlimited number of hours. The average power output during a 24h period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions. A 10% overload is permissible for 1 hour every 12 hours of operation.

STAND-BY POWER: The stand-by power is the maximum power available for a period of 500 hours/year with a mean load factor of 90% of the declared stand-by power. No kind of overloads is permissible for this use.

Specifications

Mechanical system

Engine model	4DSP-80
Engine type	In-line, 4 stroke, water cooled
Combustion type	Direct Injection
Cylinder type	Dry liner
Air intake type	Turbocharger
Cylinder No.	4
Bore*Stroke(mm)	102*118
Total displacement(L)	3.856
Compression ratio	17.5:1
Firing order	1-3-4-2
Injection timing	15°±1°
Speed governor	Mechanical ≤8%
Exhaust temperature (°C)	≤550
Mean Effective Pressure (KPa)	747
Noise Level(dBA)	≤93
Exhaust gas back pressure(KPa)	7.5
Exhaust flow (m³/h)	1320
Cooling air flow (m³/h)	720
Air for combustion flow (m³/h)	547
Piston Speed(m/s)	11.8
Dry weight (kg)	342
Dimension(L*W*H)(mm)	985*545*961 (with radiator)
Rotation	Counter clockwise viewed from flywheel
Flywheel housing/flywheel	SAE3/ 11.5"

Mechanism

Type

Over head valve

Valves per cylinder

2

Valve lash(cold state)

Air intake valve 0.30-0.40mm

Exhaust valve 0.30-0.40mm

Valve timing (crankshaft rotating angel)

Air intake valve open

24.5° before top dead center

Air intake valve close

55.5° after bottom dead center

Exhaust valve open

54° before bottom dead center

Exhaust valve close

26° after top dead center

Specific fuel consumption

rpm

3000

Fuel consumption (g/kWh)

≤218

Oil consumption

Oil consumption(g/kWh)

≤1.63

Fuel system

Fuel injector pump

BQ pump

Governor model

RSV full range type

Feed pump

Mechanical type

Injection nozzle

multi holes type

Fuel filter

Spin-on type

Fuel

Diesel

Lubrication system

Type

Mixed type, pressure and splash lubrication

Oil pump Displacement/speed

Inner and outer rotor type

(L/min/r/min)

50/2000

Oil filter

Spin-on type

Lube oil total system capacity

9L including pipes, filters etc.

Cooling system

Cooling method

Water cooled, forced circulation

Coolant capacity: engine only

6L

Engine + radiator

14L

Water pump type

Centrifugal type driven by belt

Water pump capacity(L/min)

≥150

Thermostat

Opening temp.73℃

Cooling fan

Φ450mm, 7blades, PA

Electronic system

Charging alternator

14v/500w

AVR

Built-in type

Starting motor

12v/3.7kW

Battery capacity

12v/100Ah