

DIESEL ENGINE

MODEL 4DSP-105

Performances

Ratings		3000 rpm		
		PRIME	STAND-BY	
Rated Output	kWm	95	105	

Note:

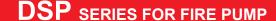
PRIME POWER: The prime power is the maximum power available with varying loads for an unlimited number of hours. The average power output during a 24h period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions. 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-105	
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)	108*115	
Total displacement(L)	4.214	
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)	902	
Noise Level(dBA)	≤93	
Exhaust gas back pressure(KPa)	8.0	
Exhaust flow (m ³ /h)	1500	
Cooling air flow (m ³ /h)	850	
Air for combustion flow (m ³ /h)	690	
Piston Speed(m/s)	11.8	
Dry weight (kg)	450	
Dimension(L*W*H)(mm)	1290*800*1050 (with radiator)	
Rotation	Counter clockwise viewed from flywheel	
Flywheel housing/flywheel	SAE3/ 11.5"	





Mechanism

Type Over head valve

Valves per cylinder Air intake valve 0.30-0.40mm Valve lash(cold state)

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) ≤210

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

Mixed type, pressure and splash lubrication

Oil pump Displacement/speed Inner and outer rotor type

(L/min/r/min) 55/2000 Oil filter Spin-on type

Lube oil total system capacity 9L including pipes, filters etc.

Cooling system

Engine + radiator

Cooling method Water cooled, forced circulation

Coolant capacity: engine only 6L

18L

Water pump type Centrifugal type driven by belt

Water pump capacity(L/min) ≥170

Thermostat Opening temp.73°C Φ510mm, 6blades, PA Cooling fan

Electronic system

Charging alternator 28v/500w **AVR** Built-in type

24v/5.5kW Starting motor 24v/120Ah Battery capacity