

DIESEL ENGINE

MODEL 6DSP-125

Performances

Ratings		3000 rpm	
		PRIME	STAND-BY
Rated Output	kWm	113	125

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	6DSP-125
Engine type	In-line, 4 stroke, water cooled
Combustion type	Direct Injection
Cylinder type	Dry liner
Air intake type	Turbocharger
Cylinder No.	6
Bore*Stroke(mm)	102*118
Total displacement(L)	5.785
Compression ratio	17.5:1
Firing order	1-5-3-6-2-4
Injection timing	15°±1°
Speed governor	Mechanical ≤8%
Exhaust temperature (°C)	≤550
Mean Effective Pressure (KPa)	1172
Noise Level(dBA)	≤93
Exhaust gas back pressure(KPa)	9
Exhaust flow (m ³ /h)	1844
Cooling air flow (m ³ /h)	1100
Air for combustion flow (m ³ /h)	827
Piston Speed(m/s)	11.8
Dry weight (kg)	568
Dimension(L*W*H)(mm)	1438*652*1102 (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)	≤221

Oil consumption

Oil consumption(g/kWh)	≤1.63
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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 (L/min/r/min)	Inner and outer rotor type 80/2000
Oil filter	Spin-on type
Lube oil total system capacity	16L including pipes, filters etc.

Cooling system

Cooling method	Water cooled, forced circulation
Coolant capacity: engine only	10L
Engine + radiator	23L
Water pump type	Centrifugal type driven by belt
Water pump capacity(L/min)	≥180
Thermostat	Opening temp.73°C
Cooling fan	Φ490mm, 7blades, PA

Electronic system

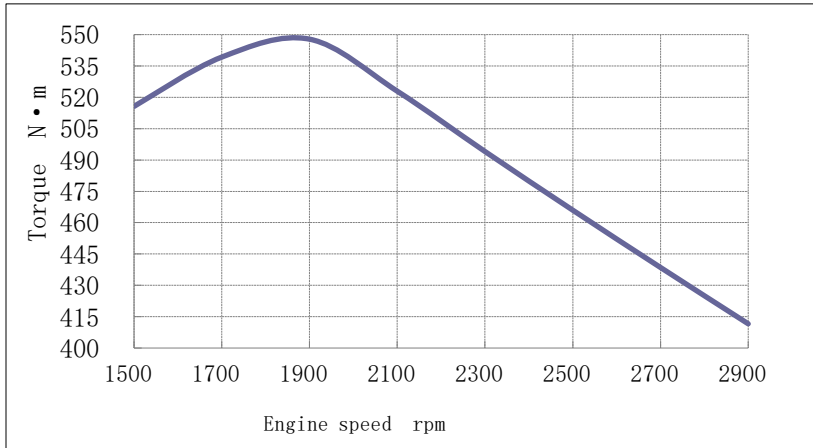
Charging alternator	14v/500w
AVR	Built-in type
Starting motor	12v/3.7kW
Battery capacity	12v/100Ah

DESSUN DIESEL ENGINE CURVE PERFORMANCE

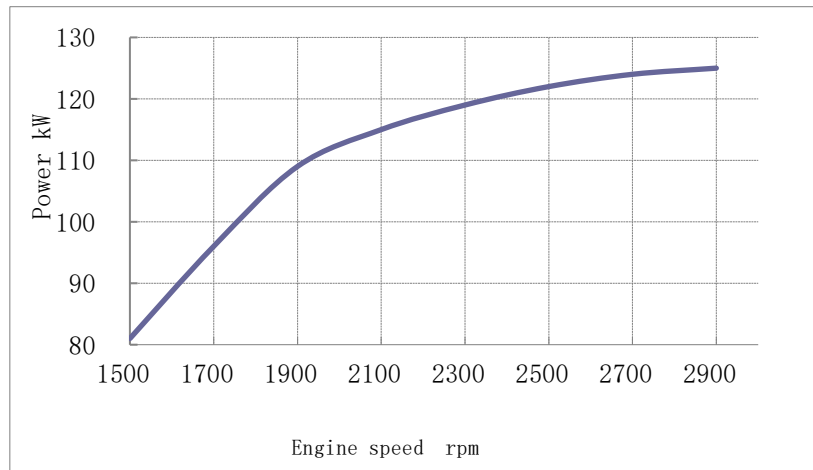
Power @ rpm		168HP(125KW) @ 2900RPM	
Max Torque@rpm		548N.m @ 1900RPM	
Series	DSP	Engine Model	6DSP-125

Intake Way: Natural Aspiration Compression ratio: 17.5:1 engine number:
 Bore(mm): 102 Stroke(mm): 118 Displacement(L): 5,787 Cylinder: 6
 Fuel System Direct injection Speed Rate: 3%

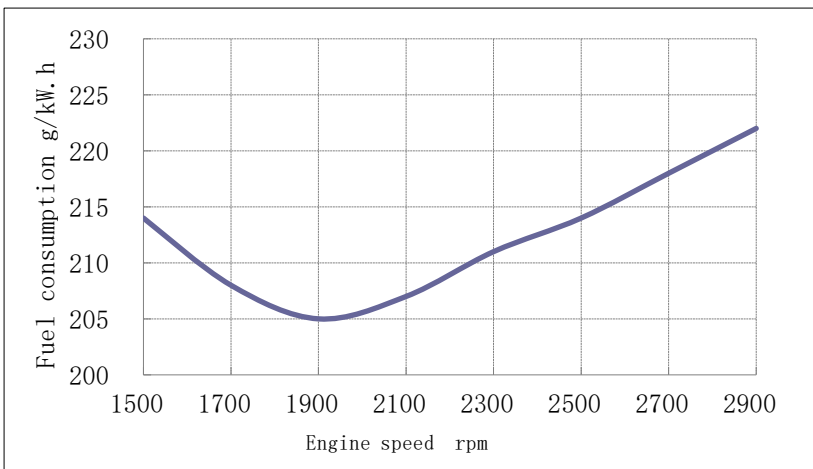
All data is based on the engine operating with fuel system, water pump, and 10 in H₂O (2.488 kPa) inlet air restriction with 5.98 in(152mm) inner diameter, and with 2.01 in Hg(7 kpa) exhaust restriction with 4.02 in(108mm) inner diameter, not included are alternator, fan, optional equipment and driven components. Coolant flows and heat rejection data based on coolants as 50% ethylene glycol/50% water. All data is subject to change without notice.



Torque	
rpm	N.m
2900	412
2700	439
2500	466
2300	494
2100	523
1900	548
1700	539
1500	516

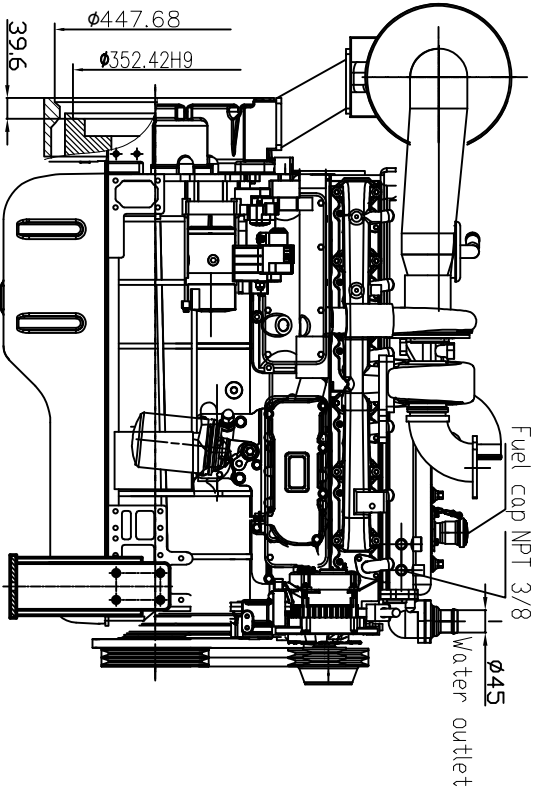
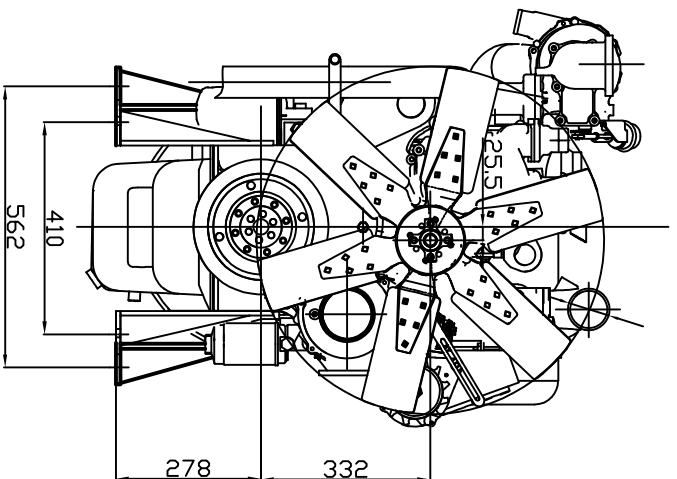
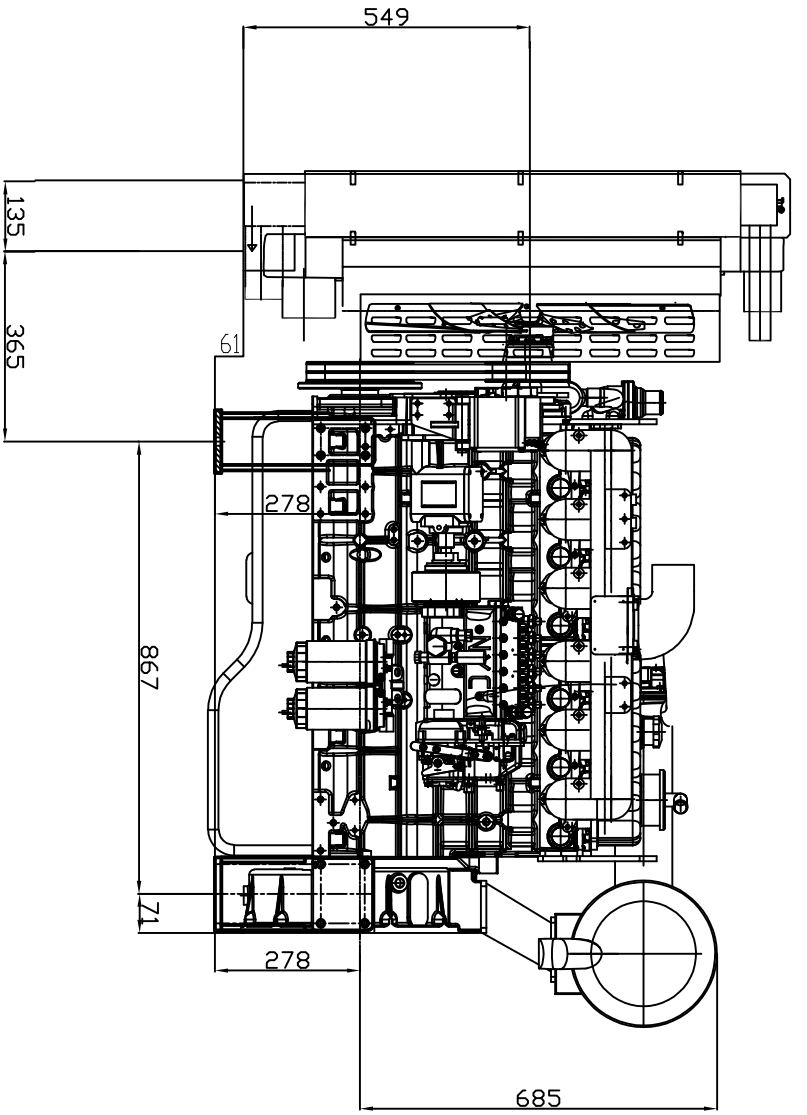


Power	
rpm	kW
2900	125,0
2700	124,0
2500	122,0
2300	119,0
2100	115,0
1900	109,0
1700	96,0
1500	81,0



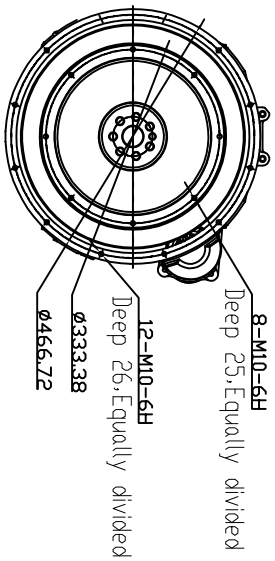
Fuel consumption	
rpm	g/kW.h
2900	222
2700	218
2500	214
2300	211
2100	207
1900	205
1700	208
1500	214

Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.61 in.Hg) barometric pressure [80m (263ft.) altitude], 25°C (77°F) inlet air temperature, and 1 kPa(0.30 in. Hg) water vapor pressure with NO.2 diesel fuel. The engine may be operated without changing the fuel setting up to 4000m(13,123ft.) altitude. For sustained operation at high altitudes, the fuel rate of the engine will be adjusted to limit performance by 4% per 305m(1,000ft.) above 2255m(7,400ft.) altitude and 2% per 11°C above 38°C(1% per 10°F above 100°F)



Fuel cap NPT 3/8
 Water outlet $\phi 45$

A (Fly Wheel)



SCALE	DATE	REVISION	DATE
1/5	18/09/20		
DESIGNED BY		APPROVED BY	
DRAWN BY		CHECKED BY	
CHECKED BY		CONTRACT NO.	00SP-125
CLIENT APPROVAL		JOB NO.	201809-00

DESSUN ENGINE ASSEMBLY

00SP-125



REVISED