TEKSAN

HYUNDAI INFRACORE GENERATOR ENGINE

DP126CBK
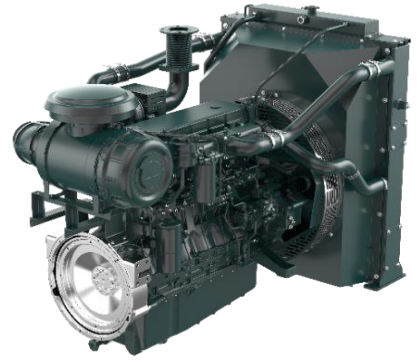
Ratings (kWm)	Gross Engine Output			Net Engine Output		
	Standby	Prime	COP	Standby	Prime	COP
1500rpm(50Hz)	-	-	-	-	-	-
1800rpm(60Hz)	402	-	-	379	-	-

Ratings Definitions

The power ratings of Emergency Standby and Prime are in accordance with ISO 8528.

Fuel Stop power in accordance with ISO 3046.

Electric power (kWe) must be considered cooling fan loss, alternator efficiency, altitude derating and ambient temperature.

STANDBY POWER RATING is applicable for supplying emergency power for the duration of the utility power outage.
No overload capability is available for this rating. A standby rated engine should be sized for a maximum of an 80% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Standby Power rating.

PRIME POWER RATING is available for an unlimited number of hours per year in variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 24 hours. The Total operating time at 100% Prime Power shall not exceed 500 hours per year. A 10% overload capability is available for a period of 1 hour withing a 12 hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

◎ GENERAL ENGINE DATA

○ Engine Model	DP126CBK(EPA Tier3)
○ Engine Type	4-Cycle, In-line, 6-Cylinder Diesel, water cooled, Turbo charged & intercooled
○ Bore x stroke	123 x 155 mm
○ Displacement	11.051 liters
○ Compression ratio	16.5 : 1
○ Rotation	Counter clockwise viewed from Flywheel
○ Firing order	1-5-3-6-2-4
○ Injection timing	-
○ Dry weight	1,058 Kg
○ Dimension (LxWxH)	1,411 X 1,133 X 1,323 mm
○ Fly wheel housing	SAE NO.1M
○ Fly wheel	Clutch NO.14M
○ Number of teeth on flywheel	106

◎ ENGINE MOUNTING

Maximum Bending Moment at Rear Face to Block	1325 N・M

◎ EXHAUST SYSTEM

Maximum Back Pressure	5.9 kPa

◎ AIR INDUCTION SYSTEM

Maximum Intake Air Restriction	
. With Clean Filter Element	2.16 kPa
. With Dirty Filter Element	6.23 kPa
○ Max. static pressure after Radiator	0.125 kPa

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◎ COOLING SYSTEM

Water circulation by centrifugal pump on engine.

○ Cooling method	Fresh water forced circulation
○ Coolant capacity	Engine Only : Approx. 23 lit., With Radiator : Approx.53 lit.(standard)
○ Coolant flow	500 liters / min @ 1800RPM Engine
○ Pressure Cap	90 kPa
○ Water Temperature	
- Maximum for standby and Prime	110°C
- Before start of full load	40.0°C
○ Water pump	Centrifugal type driven by Pulley
○ Thermostat Type and Range	Wax – pellet type, Opening temp. 71°C , Full open temp. 85°C
○ Cooling fan	Blower type, Plastic , 863.6 mm diameter, 7 blade
○ Max. external coolant system restriction	Not Available

◎ LUBRICATION SYSTEM

Forced-feed lubrication by gear pump, lubricating oil cooling in cooling water circuit of engine.

○ Lub. Method	Fully forced pressure feed type
○ Oil pump	Gear type driven by crank-shaft gear
○ Oil filter	Full flow, cartridge type
○ Oil capacity	Max. 44 liters , Min. 20 liters
○ Lub oil pressure	Idle Speed : Min 100 kPa
	Governed Speed : Min 300 kPa
○ Maximum oil temperature	120°C
○ Angularity limit	Front down 10 deg , Front up 10 deg , Side to side 22.5 deg
○ Lubrication oil	Refer to Operation Manual

◎ FUEL SYSTEM

In-line pump with integrated, electromagnetic actuator.

○ Injection pump	Bosch C/Rail Pump
○ Governor	Controlled by ECU
○ Speed drop	G3 Class (ISO 8528)
○ Feed pump	Gear type
○ Injection nozzle	Multi hole type
○ Opening pressure	Controlled by ECU
○ Fuel filter	Main(On Engine): Full flow, High efficiency dust in fuel filter, cartridge
	Pre(Loosed Part): Full flow, cartridge type with water drain valve
○ Maximum fuel inlet restriction	0.5~1bar(Abs.)
○ Maximum fuel return restriction	0~1.2bar(Abs.)
○ Fuel feed pump Capacity	386 liters / hr @ 1500 rpm(engine), 464 liters / hr @ 1800 rpm(engine
○ Used fuel	Domestic : Korean Ultra Low Sulfur Diesel, Europe : EN590: 2013/A

◎ ELECTRICAL SYSTEM

○ Battery Charging Alternator	24V x 80A alternator
○ Voltage regulator	Built-in type IC regulator
○ Starting motor	24V x 6.0 kW
○ Battery Voltage	24V
○ Battery Capacity	200 Ah (recommended)
○ Starting aid (Option)	Block heater, Air heater

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◎ VALVE SYSTEM

○ Type	Overhead valve type
○ Number of valve	Intake 2, exhaust 2 per cylinder
○ Valve lashes at cold	Intake 0.4mm , Exhaust 0.7mm
○ Valve timing	

	Opening	Close
- Intake valve	25 deg. BTDC	28 deg. ABDC
- Exhaust valve	60 deg. BBDC	30 deg. ATDC

◎ PERFORMANCE DATA

		COP	Prime Power	Standby Power
○ Governed Engine speed	rpm			1800
○ Engine Idle Speed	rpm			750
○ Over speed limit	rpm			1980
○ Gross Engine Power Output	kW			402
	PS			547
○ Break Mean effective pressure	MPa			2.47
○ Mean Piston Speed	m/s			9.3
○ Friction Power	kW			33
	PS			45
○ Specific fuel consumption				
- 25% load	liters/hr			33
- 50% load	liters/hr			56
- 75% load	liters/hr			84
- 100% load	liters/hr			103
○ Fan Power	kW			23
○ Sound Pressure at 1m from the each side of Cylinder Block				
(without Fan)	dB(A)			102db

The all data and the specific fuel consumption are based on ISO 3046/1, Standard reference conditions are in accordance with 298 K(25° Celsius) air temperature, 100kPa(1000mbar) air pressure, 60% relative humidity, 110m(361ft) altitude.

Engine Data with Dry Type Exhaust Manifold

○ Intake Air Flow	m³/min		30.1
○ Exhaust gas temp. after turbo.	°C		496
○ Exhaust Gas Flow	m³/min		76
○ Heat Rejection to Exhaust	kW		279
○ Heat Rejection to Coolant	kW		148
○ Heat Rejetion to Intercooler	kW		80
○ Radiated Heat to Ambient	kW		30
○ Cooling water circulation	liters/min		500
○ Cooling fan air flow	m³/min		483

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◆ ENGINE DIMENSION

911mm
149mm
1,323mm
1,411mm

DP126C : 1,411(L) X 1,133 (W) X 1,323 (H) mm
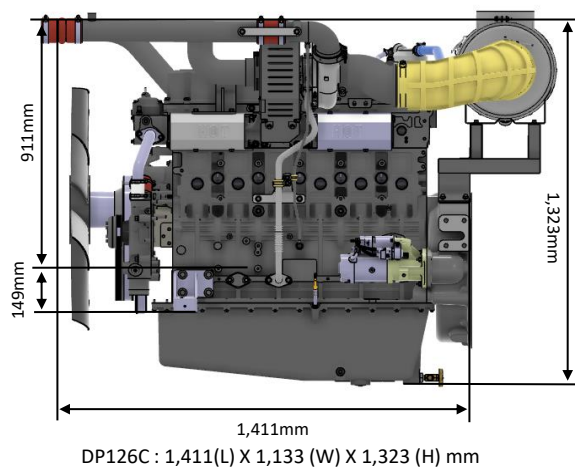
◆ CONVERSION TABLE

in. = mm x 0.0394
PS = kW x 1.3596
psi = kg/㎠ x 14.2233
in3 = lit. x 61.02
hp = PS x 0.98635
lb = kg x 2.20462

lb/ft = N.m x 0.737
U.S. gal = lit. x 0.264
kW = kcal/sec x 4.184
lb/PS.h = g/kW.h x 0.00162
cfm = ㎥/min x 35.336
MPa = kPa x 0.001 = bar x 0.1

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※ Specifications are subject to change without prior notice

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