

◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Prime Power	402	547
	Standby Power	458	623
1500	Prime Power	363	494
	Standby Power	414	563



- The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271.
- Ratings are based on ISO 8528. (If you need more information, contact the sales organization.)
 - **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 70% of the prime power rating.
 - **Standby power** is available in the event of a utility power outage or under test conditions for up to 200h of operation per year. The permissible average power output over 24 hours of operation shall not exceed 70% of the standby power rating. No overload is permitted.

◎ MECHANICAL SYSTEM

○ Engine Model	P158LE
○ Engine Type	V-type 4 cycle, water cooled Turbo charged & intercooled (air to air)
○ Combustion type	Direct injection
○ Cylinder Type	Replaceable wet liner
○ Number of cylinders	8
○ Bore x stroke	128(5.04) x 142(5.59) mm(in.)
○ Displacement	14.618(892.0) lit.(in3)
○ Compression ratio	15 : 1
○ Firing order	1-5-7-2-6-3-4-8
○ Injection timing	16° BTDC
○ Compression pressure	Above 28 kg/cm2(398 psi) at 200rpm
○ Dry weight	Approx. 950 kg (2,094 lb)
○ Dimension (LxWxH)	1,484 x 1,389 x 1,161.5 mm (58.4 x 54.7 x 45.7 in.)
○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE NO.1
○ Fly wheel	Clutch NO.14

◎ MECHANISM

○ Type	Over head valve
○ Number of valve	Intake 1, exhaust 1 per cylinder
○ Valve lashes at cold	Intake 0.25mm (0.0098 in.) Exhaust 0.35mm (0.0138 in.)

◎ VALVE TIMING

	Opening	Close
○ Intake valve	24 deg. BTDC	36 deg. ABDC
○ Exhaust valve	63 deg. BBDC	27 deg. ATDC

◎ FUEL CONSUMPTION

○ Prime Power (lit/hr)	1,500 rpm	1,800 rpm
25%	23.7	28.0
50%	43.9	50.6
75%	65.1	74.7
100%	89.3	102.5
○ Standby Power (lit/hr)	1,500 rpm	1,800 rpm
25%	26.5	30.5
50%	49.6	57.6
75%	74.8	85.9
100%	102.9	118.6

◎ FUEL SYSTEM

○ Injection pump	Bosch in-line "P" type
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	285 kg/cm2 (4,054 psi)
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

◎ LUBRICATION SYSTEM

○ Lub. Method	Fully forced pressure feed type
○ Oil pump	Gear type driven by crankshaft
○ Oil filter	Full flow, cartridge type
○ Oil pan capacity	High level 21 liters (5.55 gal.) Low level 17 liters (4.50 gal.)
○ Angularity limit	Front down 35 deg. Front up 35 deg. Side to side 35 deg.
○ Lub. Oil	Refer to Operation Manual

P158LE G-DRIVE

◎ COOLING SYSTEM

- Cooling method Fresh water forced circulation
- Water capacity 20 liters (5.28 gal.)
(engine only)
- Pressure system Max. 0.5 kg/cm² (7.11 psi)
- Water pump Centrifugal type driven by belt
- Water pump Capacity 410 liters (108.2 gal.)/min
at 1,800 rpm (engine)
- Thermostat Wax – pellet type
Opening temp. 71°C
Full open temp. 85°C
- Cooling fan Blower type, plastic
915 mm diameter, 7 blade

◎ ELECTRICAL SYSTEM

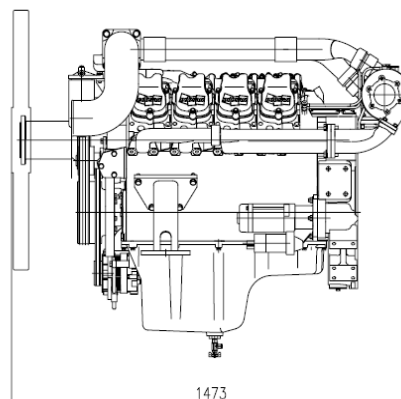
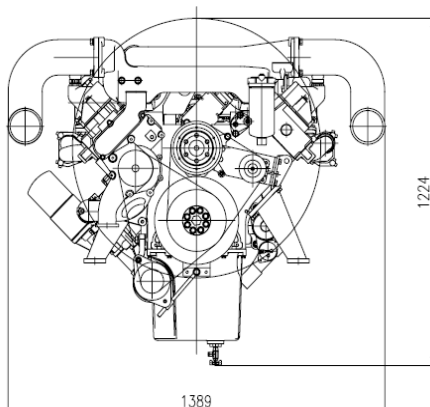
- Charging generator 24V x 45A alternator
- Voltage regulator Built-in type IC regulator
- Starting motor 24V x 7.0kW
- Battery Voltage 24V
- Battery Capacity 200 AH (recommended)
- Starting aid (Option) Block heater

◎ ENGINEERING DATA

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|---------------------------------|--|
| ○ Water flow | 342 liters/min @1,500 rpm |
| ○ Heat rejection to coolant | 38.9 kcal/sec @1,500 rpm |
| ○ Heat rejection to CAC | 14.1 kcal/sec @1,500 rpm |
| ○ Air flow | 25.3 m ³ /min @1,500 rpm |
| ○ Exhaust gas flow | 78.3 m ³ /min @1,500 rpm |
| ○ Exhaust gas temp. | 580 °C @1,500 rpm |
| <hr/> | |
| ○ Water flow | 410 liters/min @1,800 rpm |
| ○ Heat rejection to coolant | 40.1 kcal/sec @1,800 rpm |
| ○ Heat rejection to CAC | 18.6 kcal/sec @1,800 rpm |
| ○ Air flow | 31.1 m ³ /min @1,800 rpm |
| ○ Exhaust gas flow | 91.3 m ³ /min @1,800 rpm |
| ○ Exhaust gas temp. | 606 °C @1,800 rpm |
| <hr/> | |
| ○ Max. permissible restrictions | |
| -. Intake system | 220 mmH ₂ O initial
635 mmH ₂ O final |
| -. Exhaust system | 600 mmH ₂ O max. |
| ○ Max. permissible altitude | 1500 m |

◆ CONVERSION TABLE

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|------------------------------------|------------------------------------|
| in. = mm x 0.0394 | lb/ft = N.m x 0.737 |
| PS = kW x 1.3596 | U.S. gal = lit. x 0.264 |
| psi = kg/cm ² x 14.2233 | kW = 0.2388 kcal/s |
| in ³ = lit. x 61.02 | lb/PS.h = g/kW.h x 0.00162 |
| hp = PS x 0.98635 | cfm = m ³ /min x 35.336 |
| lb = kg x 2.20462 | |



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※ Specifications are subject to change without prior notice