

POWER RATING

Intermittent rating kW(PS) / rpm	Max. torque N.m(kg.m) / rpm	Fuel consumption g/kW.h(g/PS.h) / rpm
397 (540) / 2100	2117 (216) / 1500	222 (163) / 2100

Note : 1. The engine performance corresponds to ISO 3046, DIN 6270B.
 2. Continuous duty at charge and constant speed consider on engine choice, a power derating of about 11%.
 3. Max. rpm of Continuous duty is 1,800rpm.



MECHANICAL SYSTEM

○ Engine Model	PU158TI
○ Engine Type	V-type 4 cycle, water cooled Turbo charged & intercooled
○ 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.(in ³)
○ Compression ratio	15 : 1
○ Firing order	1-5-7-2-6-3-4-8
○ Injection timing	18° BTDC
○ 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

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

OPTION & ACCESSORY PARTS

○ Engine parts	Fly wheel & housing Intake & exhaust manifold
○ Accessory parts	Raditor, silencer & air cleaner
○ Electrical parts	Gauge panel & stop solenoid

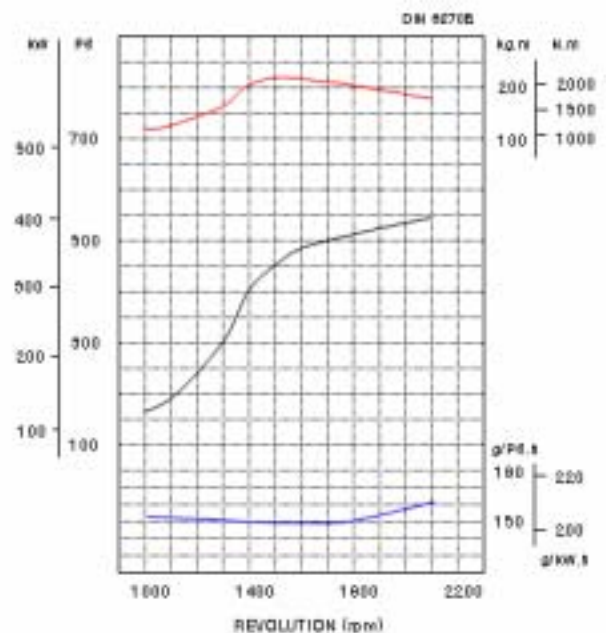
FUEL SYSTEM

○ Injection pump	Bosch in-line "P" type
○ Governor	Mechanical type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ 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 28 liters (7.40 gal.) Low level 26 liters (6.86 gal.)
○ Angularity limit	Front down 35 deg. Front up 35 deg. Side to side 35 deg.
○ Lub. Oil	Refer to Operation Manual

PERFORMANCE CURVE



COOLING SYSTEM

- Cooling method Fresh water forced circulation
- Water capacity 20 liters (5.28 gal.)
(engine only)
- Pressure system Max. 0.5 kg/cm² (7.1 psi)
- Water pump Centrifugal type driven by belt
- Water pump Capacity 454 liters (120 gal.)/min
at 2,100 rpm (engine)
- Thermostat Wax – pellet type
Opening temp. 79°C
Full open temp. 94°C
- Cooling fan Blower type, plastic
915 mm diameter, 7 blade

ELECTRICAL SYSTEM

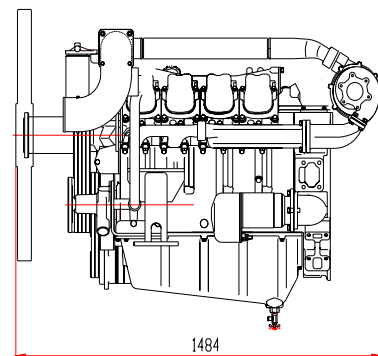
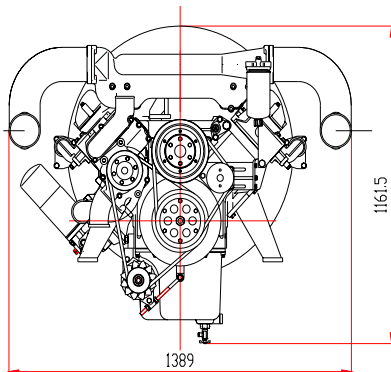
- Charging generator 24V x 45A alternator
- Voltage regulator Built-in type IC regulator
- Starting motor 24V x 7.0kW
- Battery Voltage 24V
- Battery Capacity 200 AH (recommended)
- Starting aid (Option) Block heater

ENGINEERING DATA

- Water flow 454 liters/min @2,100 rpm
- Heat rejection to coolant 45.2 kcal/sec @2,100 rpm
- Heat rejection to CAC 18.8 kcal/sec @2,100 rpm
- Air flow 34.5 m³/min @2,100 rpm
- Exhaust gas flow 87.4 m³/min @2,100 rpm
- Exhaust gas temp. 600 °C @2,100 rpm
- Max. permissible restrictions
 - Intake system 220 mmH₂O initial
635 mmH₂O final
 - Exhaust system 600 mmH₂O max.

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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