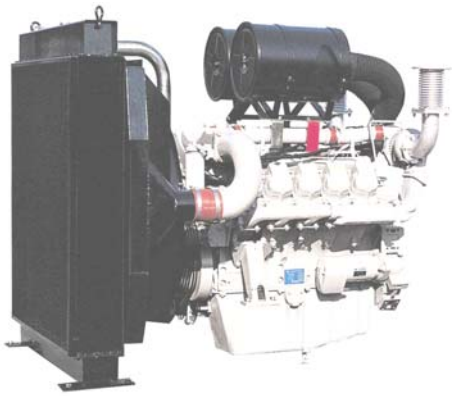
PU180TI P-DRIVE

◎ POWER RATING

Intermittent rating kW(PS) / rpm	Max. torque N.m(kg.m) / rpm	Fuel consumption g/kW.h(g/PS.h) / rpm
478 (650) / 2100	2303 (235) / 1500	226 (166) / 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 9%.
3. Max. rpm of Continuous duty is 1,800rpm.



◎ MECHANICAL SYSTEM

○ Engine Model	PU180TI
○ Engine Type	V-type 4 cycle, water cooled Turbo charged & intercooled
○ Combustion type	Direct injection
○ Cylinder Type	Replaceable wet liner
○ Number of cylinders	10
○ Bore x stroke	128(5.04) x 142(5.59) mm(in.)
○ Displacement	18.273(1,115.02) lit.(in^3)
○ Compression ratio	15 : 1
○ Firing order	1-6-5-10-2-7-8-3-4--9
○ Injection timing	18° BTDC
○ Dry weight	Approx. 1,175 kg (2,590 lb)
○ Dimension (LxWxH)	1,557 x 1,389 x 1,248 mm (61.3 x 54.7 x 49.1 in.)
○ Rotation	Counter clockwise viewed from Flywheel

◎ 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 35 liters (9.2 gal.) Low level 28 liters (7.4 gal.)
○ Angularity limit	Front down 24 deg. Front up 20 deg. Side to side 15 deg.
○ Lub. Oil	Refer to Operation Manual

◎ 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.)

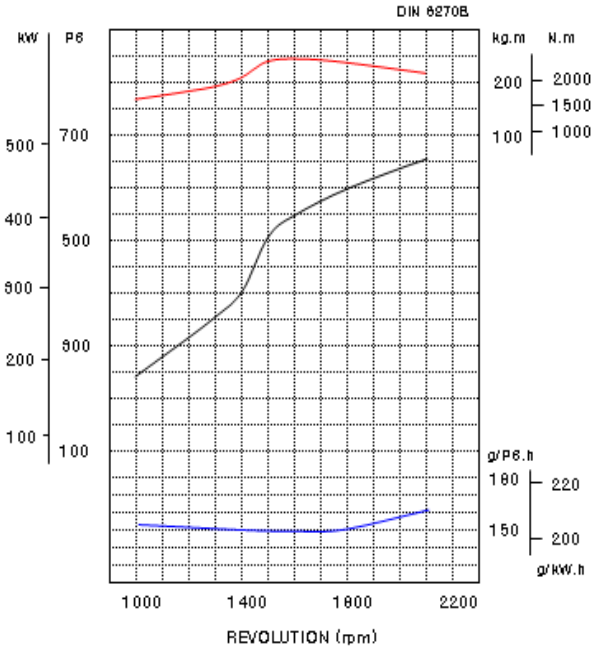
◎ VALVE TIMING

	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

◎ PERFORMANCE CURVE



Printed in Nov 2009 PS-SBM0745-E1D

PU180TI P-DRIVE

◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity (engine only)	21 liters (5.54 gal.)
○ Pressure system	Max. 0.5 kg/cm^2 (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

◎ ENGINEERING DATA

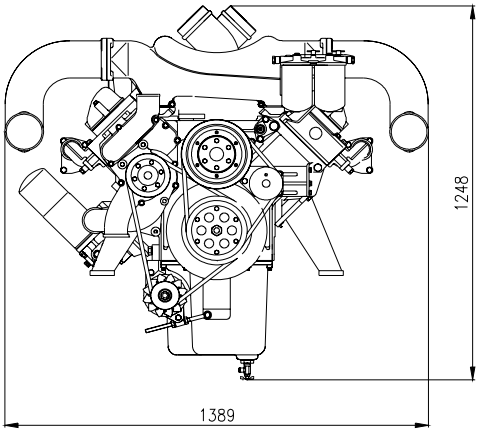
○ Water flow	454 liters/min @2,100 rpm
○ Heat rejection to coolant	54.4 kcal/sec @2,100 rpm
○ Heat rejection to CAC	22.7 kcal/sec @2,100 rpm
○ Air flow	38.0 m^3/min @2,100 rpm
○ Exhaust gas flow	107 m^3/min @2,100 rpm
○ Exhaust gas temp.	600 °C @2,100 rpm
○ Max. permissible restrictions	
-.Intake system	220 mmH_2O initial 635 mmH_2O final
-.Exhaust system	1000 mmH_2O max.

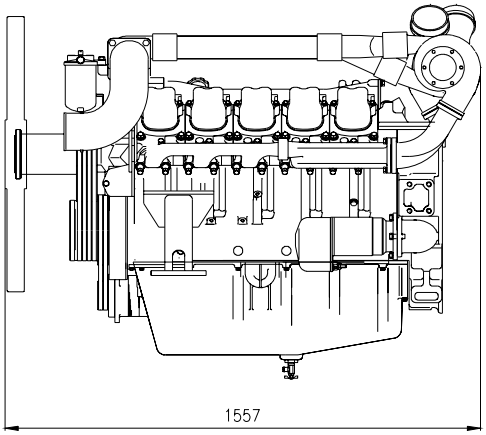
◎ ELECTRICAL SYSTEM

○ 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

◆ CONVERSION TABLE

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/cm2 x 14.2233	kW = 0.2388 kcal/s
in3 = 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	





Head office
Westen of 6thFl,3Bldg,Allay1128,Jindu Rd,Minhang District ,Shanghai
TEL : 86-21-5680-0810, FAX : 86-21-5680-9005
Shanghai Client Diesel Engine Co.,Ltd
Email : scdc@mtu-china.com
Web site : www.client-engine.com, www.mtu-china.com

※ Speccifications are subject to change without prior notice

Printed in Nov 2009 PS-SBM0745-E1D