GV158TI GEN-PACK

◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Prime Power	270	367
	Standby Power	297	404
1500	Prime Power	230	313
	Standby Power	253	344

Note : -. The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271.

* Without cooling fan, inter cooler inlet water temperature 32℃

-. Ratings are based on ISO 8528.

→ **Prime power** available at variable load. The permissible average power out put (during 24h period) shell not exceed 70% of the prime power rating. No overload is permitted.

→ **Standby power** available in the event of a main power network failure. No overload is permitted.

◎ MECHANICAL SYSTEM

○ Engine Type	V-type 4 cycle, water cooled Turbo charged & intercooled (water to air)
○ Combustion type	Stoichiometric, Premixed and spark ignited
○ Cylinder Type	Replaceable wet liner
○ Number of cylinders	8
○ Bore x stroke	128(5.04) x 142(5.59) mm(in.)
○ Displacement	14.618 (892.05) lit.(in^3)
○ Compression ratio	10.5 : 1
○ Firing order	1-5-7-2-6-3-4-8-1
○ Ignition timing	14° BTDC
○ Compression pressure	Above 28 kg/cm2(398 psi) at 200rpm
○ Dry weight (Engine)	Approx. 1,230 kg (2,711 lb)
○ Dimension (Engine) (LxWxH)	1,587 x 1,238 x 1,455 mm (62.5 x 48.7 x 57.3 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 0.3mm (0.0118 in.) Exhaust 0.4mm (0.0157 in.)

◎ VALVE TIMING

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

◎ FUEL CONSUMPTION

○ **Prime** (Nm^3/hr)	**1,500 rpm**	**1,800 rpm**
25%	28.8	34.3
50%	39.0	45.5
75%	48.2	57.6
90%	54.2	64.5
100%	58.4	68.8

○ **Standby** (Nm^3/hr)	**1,500 rpm**	**1,800 rpm**
100%	63.2	72.5

◎ FUEL SYSTEM

○ Carburetor	Impco 200M Varifuel carburetor (2EA)
○ Gas regulator	Maxitrol RV61 (2EA)
○ Max. inlet pressure	1.0 psi at the engine inlet

◎ 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 31 liters (8.19 gal.) Low level 25 liters (6.60 gal.)
○ Lub. Oil	Refer to Operation Manual Low ash type(0.5wt%) natural gas engine oil API service grade CD or higher SAE 15W-40

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◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity	36 liters (9.51 gal.) (Engine only)
○ Pressure system	Max. 0.5 kg/cm^2 (7.1 psi)
○ Water pump	Centrifugal type driven by belt
○ Cooling fan	Blower, 915mm diameter, 7 blades Plastic
○ Loss power of fan	22PS(16.2kW) @ Eng. Speed 1,500 rpm 33PS(24.3kW) @ Eng. Speed 1,800 rpm
○ Thermostat	Wax – pellet type Opening temp. 71°C Full open temp. 85°C

◎ 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)
○ Ignition controller	12 or 24V DC (min 8V DC at start, 32V DC max)

◎ IGNITION SYSTEM

○ Spark plug	NGK IFR7B-D, 0.4mm air gap Champion RC78PYP, 0.38mm air gap
○ Ignition controller	Altronic CPU-95 unit (24V DC)
○ Ignition coil	Altronic 501 061 blue epoxy individual coil
○ Trigger system	Magnetic pick-up sensor and trigger wheel and Hall-effect (0.5/ 0.5/ 1.0mm air gap)

◎ ENGINEERING DATA

○ Water flow	570 liters/min @1,500 rpm 680 liters/min @1,800 rpm
○ Heat rejection to coolant	55 kcal/sec @1,500 rpm 68 kcal/sec @1,800 rpm
○ Heat rejection to CAC	3.1 kcal/sec @1,500 rpm 4.7 kcal/sec @1,800 rpm
○ Inter cooler water flow	290 liters/min @1,500 rpm 340 liters/min @1,800 rpm
○ Air flow	18.5 m^3/min @1,500 rpm 22.9 m^3/min @1,800 rpm
○ Exhaust gas flow	30.0 m^3/min @1,500 rpm 37.8 m^3/min @1,800 rpm
○ Exhaust gas temp.	495 °C @1,500 rpm 520 °C @1,800 rpm
○ Radiator air flow	550 m^3/min @1,500 rpm, 0.7kPa 650 m^3/min @1,800 rpm, 1kPa
○ Max. permissible restrictions	
-.Intake system	220 mmH_2O initial 635 mmH_2O final
-.Exhaust system	600 mmH_2O max.
○ Altitude Capability	1,000 m

◆ 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	Nm^3= SCF × 0.0283

Kg/hr = Nm^3/hr × 0.732 (natural gas)

Btu/ft^3= MJ/m^3 × 26.8392 (natural gas)

kPa = 101.97 mmH_2O = 0.01 bar

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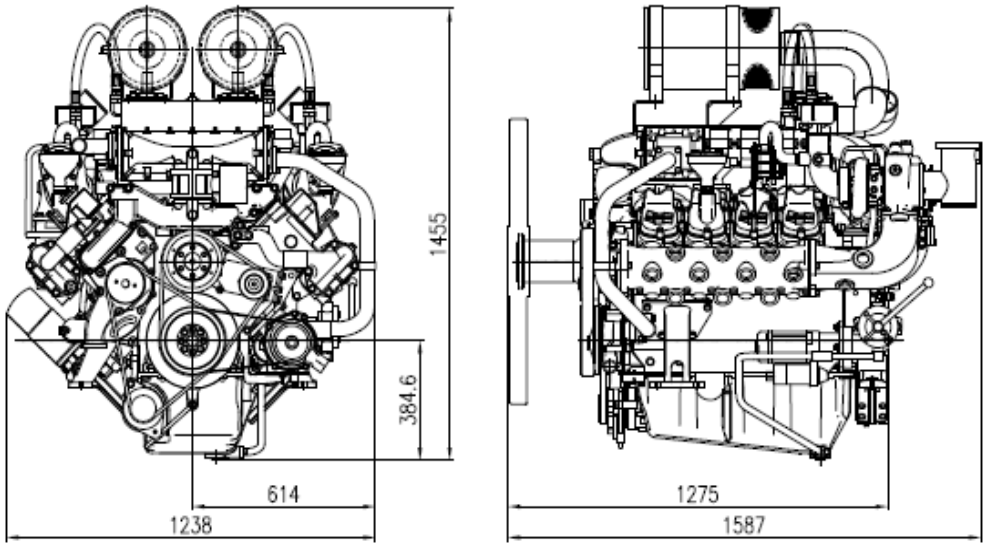
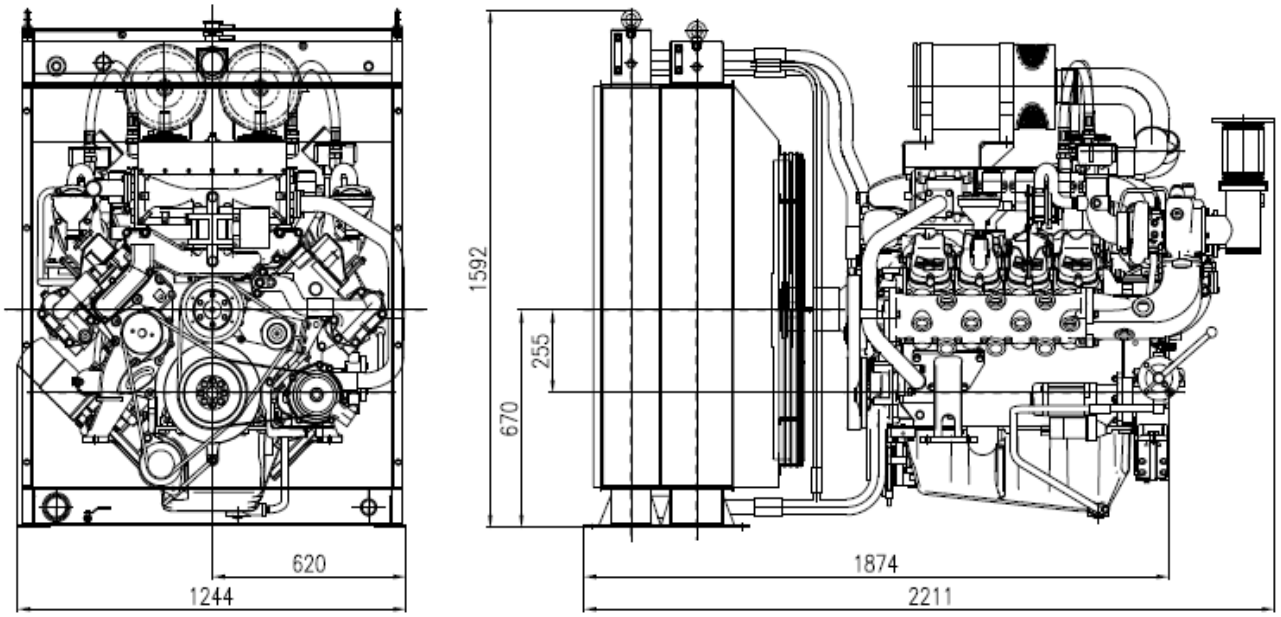
◎ Dimensions : Engine



◎ Dimensions : Gen-pack



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※ Specifications are subject to change without prior notice

Printed in August 2007 PS-GV158TI GEN-PACK-B