

GV158TIC

© POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Prime Power	270	367
	Standby Power	*	*
1500	Prime Power	230	313
	Standby Power	*	*



Note : -. The engine performance corresponds to ISO 3026, BS 5514 and DIN 6271.

-. Ratings are based on ISO 8528.

→ Prime power available at variable load. The permissible average power out put (during 24h period) shall not exceed 70% of the prime power rating.

© MECHANICAL SYSTEM

○ Engine Model	GV158TIC
○ 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/cm ² (398 psi) at 200rpm
○ Dry weight	Approx. 1,300 kg (2,866 lb)
○ Dimension (LxWxH)	1,389 x 1,222 x 1,070 mm (55 x 48 x 42 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 (Nm ³)	1,500 rpm	1,800 rpm
25%	22.7	30.1
50%	33.6	43.1
75%	45.8	55.3
100%	57.0	70.6

© 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.)
○ Angularity limit	Front down 20 deg. Front up 20 deg. Side to side 15 deg.
○ Lub. Oil	Refer to Operation Manual Low ash type(0.5wt%) natural gas engine oil API service grade CD or higher SAE 15W-40

© COOLING SYSTEM

- Cooling method Fresh water forced circulation
- Water capacity 36 liters (9.51 gal.)
(engine only)
- Pressure system Max. 0.9 kg/cm² (12.8 psi)
- Water pump Centrifugal type driven by belt
- Water pump Capacity 660 liters (174.4 gal.)/min
at 1,800 rpm (engine)
- 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 550 liters/min @1,500 rpm
- Heat rejection to coolant 55 kcal/sec @1,500 rpm
- Heat rejection to CAC 3.1 kcal/sec @1,500 rpm
- Air flow 18.5 m³/min @1,500 rpm
- Exhaust gas flow 30.0 m³/min @1,500 rpm
- Exhaust gas temp. 495 °C @1,800 rpm

- Water flow 660 liters/min @1,800 rpm
- Heat rejection to coolant 68 kcal/sec @1,800 rpm
- Heat rejection to CAC 4.7 kcal/sec @1,800 rpm
- Air flow 22.9 m³/min @1,800 rpm
- Exhaust gas flow 37.8 m³/min @1,800 rpm
- Exhaust gas temp. 520 °C @1,800 rpm

- Max. permissible restrictions
 - Intake system 220 mmH₂O initial
635 mmH₂O final
 - Exhaust system 800 mmH₂O max.

◆ 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 = m³/min x 35.336
- lb = kg x 2.20462 Nm³ = SCF x 0.0283
- Kg/hr = Nm³/hr x 0.732 (natural gas)
- Btu/ft³ = MJ/m³ x 26.8392 (natural gas)