

◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Prime Power	410	557
	Standby Power	*	*
1500	Prime Power	350	476
	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	GV222TIC
○ 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	12
○ Bore x stroke	128(5.04) x 142(5.59) mm(in.)
○ Displacement	21.927 (1,338.0) lit.(in ³)
○ Compression ratio	10.5 : 1
○ Firing order	1-12-5-8-3-10-6-7-2-11-4-9
○ Ignition timing	12° BTDC
○ Compression pressure	Above 28 kg/cm ² (398 psi) at 200rpm
○ Dry weight	Approx. 1,750 kg (3,858 lb)
○ Dimension (LxWxH)	1,717 x 1,222 x 1,195 mm (68 x 48 x 47 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 /h)	1,500 rpm	1,800 rpm
25%	32.2	40.6
50%	51.5	64.9
75%	72.8	86.5
100%	90.9	109.3

◎ 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 40 liters (10.6 gal.) Low level 33 liters (8.7 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 44 liters (11.62 gal.)
(engine only)
- Pressure system Max. 0.9 kg/cm² (12.8 psi)
- Water pump Centrifugal type driven by belt
- Water pump Capacity 760 liters (200.8 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 630 liters/min @1,500 rpm
- Heat rejection to coolant 90.1 kcal/sec @1,500 rpm
- Heat rejection to CAC 6.1 kcal/sec @1,500 rpm
- Air flow 29.6 m³/min @1,500 rpm
- Exhaust gas flow 47.8 m³/min @1,500 rpm
- Exhaust gas temp. 490 °C @1,500 rpm
- Water flow 760 liters/min @1,800 rpm
- Heat rejection to coolant 108.2 kcal/sec @1,800 rpm
- Heat rejection to CAC 9.1 kcal/sec @1,800 rpm
- Air flow 35.5 m³/min @1,800 rpm
- Exhaust gas flow 57.4 m³/min @1,800 rpm
- Exhaust gas temp. 515 °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)

Head office

7-11, Hwasu-Dong, Dong-Gu, Incheon, Korea
TEL : 82-32-760-1437, 1964 FAX : 82-32-760-1964

Seoul Office

Doosan Infracore Co. Ltd.,
22nd Floor, Doosan Tower, 18-12, Euljiro 6-ga, Jung-gu,
Seoul, Korea.

TEL : 82-2-3398-8521~8535 FAX : 82-2-3398-8509

Web site : www.doosaninfracore.com