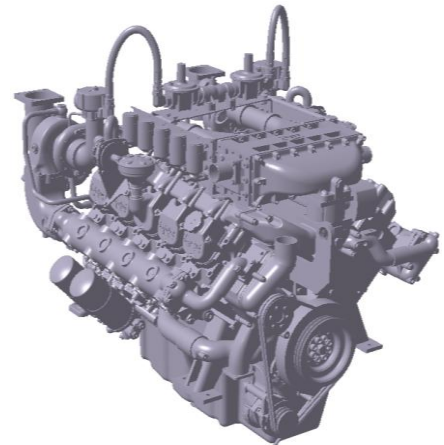


## ◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Prime Power	340	462
	Continuous Power	306	416
1500	Prime Power	290	394
	Continuous Power	261	355



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	GV180TI CO-GEN COMPLETE
○ 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	10
○ Bore x stroke	128(5.04) x 142(5.59) mm(in.)
○ Displacement	18.273 (1,115.09) lit.(in <sup>3</sup> )
○ Compression ratio	10.5 : 1
○ Firing order	1-6-5-10-2-7-3-8-4-9
○ Ignition timing	14° BTDC
○ Compression pressure	Above 28 kg/cm <sup>2</sup> (398 psi) at 200rpm
○ Dry weight	Approx. 1,520 kg (3,351 lb)
○ Dimension (LxWxH)	1,495 x 1,222 x 1,169 mm (59 x 48 x 46 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 <sup>3</sup> /hr)	<b>1,500 rpm</b>	<b>1,800 rpm</b>
25%	26.1	31.9
50%	41.5	50.6
75%	57.4	71.7
100%	74.7	90.8
○ Continuous (Nm <sup>3</sup> /hr)	<b>1,500 rpm</b>	<b>1,800 rpm</b>
100%	67.5	83.4

## ◎ 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 35 liters ( 9.25 gal.) Low level 28 liters ( 7.40 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      42 liters ( 11.1 gal.)  
(engine only)
- Pressure system      Max. 0.9 kg/cm<sup>2</sup> ( 12.8 psi)
- Water pump            Centrifugal type driven by belt
- Water pump Capacity   700 liters ( 184.9 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                    | 580 liters/min @1,500 rpm                                      |
| ○ Heat rejection to coolant     | 70.7 kcal/sec @1,500 rpm                                       |
| ○ Heat rejection to CAC         | 4.3 kcal/sec @1,500 rpm  |
| ○ Air flow                      | 23.9 m <sup>3</sup> /min @1,500 rpm                            |
| ○ Exhaust gas flow              | 38.8 m <sup>3</sup> /min @1,500 rpm                            |
| ○ Exhaust gas temp.             | 520 °C @1,500 rpm  |
| <hr/>                           |  |
| ○ Water flow                    | 700 liters/min @1,800 rpm                                      |
| ○ Heat rejection to coolant     | 87.3 kcal/sec @1,800 rpm                                       |
| ○ Heat rejection to CAC         | 6.8 kcal/sec @1,800 rpm  |
| ○ Air flow                      | 29.4 m <sup>3</sup> /min @1,800 rpm                            |
| ○ Exhaust gas flow              | 47.9 m <sup>3</sup> /min @1,800 rpm                            |
| ○ Exhaust gas temp.             | 530 °C @1,800 rpm  |
| <hr/>                           |  |
| ○ Max. permissible restrictions |  |
| -Intake system                  | 220 mmH <sub>2</sub> O initial<br>635 mmH <sub>2</sub> O final |
| -Exhaust system                 | 800 mmH <sub>2</sub> O 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/cm <sup>2</sup> x 14.2233                              | kW = 0.2388 kcal/s                 |
| in <sup>3</sup> = lit. x 61.02                                  | lb/PS.h = g/kW.h x 0.00162         |
| hp = PS x 0.98635   | cfm = m <sup>3</sup> /min x 35.336 |
| lb = kg x 2.20462   | Nm <sup>3</sup> = SCF × 0.0283     |
| Kg/hr = Nm <sup>3</sup> /hr × 0.732 (natural gas)               |                                    |
| Btu/ft <sup>3</sup> = MJ/m <sup>3</sup> × 26.8392 (natural gas) |                                    |

### Doosan Infracore Co., Ltd.

21st Floor, Doosan Tower, 18-12, Euljiro 6-ga,  
Jung-gu, Seoul, Korea

TEL : +82-2-3398-8400 / Fax : +82-2-3398-8509

E-mail : [enginesales@doosan.com](mailto:enginesales@doosan.com)

Web site : [www.doosaninfracore.com](http://www.doosaninfracore.com)