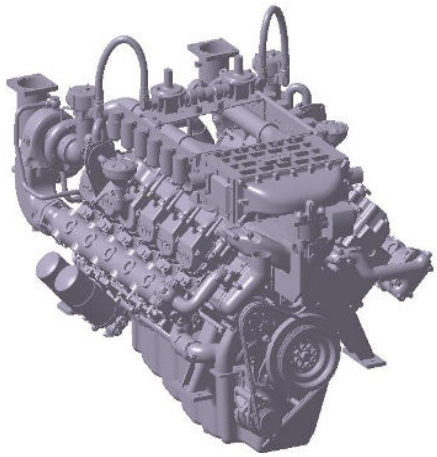
GV222TI CO-GEN

◎ POWER RATING

Engine Speed rev/min	Type of Operation	Engine Power	
		kWm	Ps
1800	Prime Power	410	557
	Continuous Power	369	502
1500	Prime Power	350	476
	Continuous Power	315	428



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) shell not exceed 70% of the prime power rating.

◎ MECHANICAL SYSTEM

○ Engine Model	GV222TI 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	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/cm2(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/hr	**1,500 rpm**	**1,800 rpm**
25%	25.6	37.5
50%	49.2	62.0
75%	73.4	89.4
100%	95.2	107.2

○ **Continuous** (Nm^3/hr)	**1,500 rpm**	**1,800 rpm**
100%	88.2	103.3

◎ 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

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◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity (engine only)	44 liters (11.62 gal.)
○ Pressure system	Max. 0.9 kg/cm^2 (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 m^3/min @1,500 rpm
○ Exhaust gas flow	47.8 m^3/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 m^3/min @1,800 rpm
○ Exhaust gas flow	57.4 m^3/min @1,800 rpm
○ Exhaust gas temp.	515 °C @1,800 rpm
○ Max. permissible restrictions	
-.Intake system	220 mmH_2O initial 635 mmH_2O final
-.Exhaust system	800 mmH_2O 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 = 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)

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※ Specifications are subject to change without prior notice

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