

P086TI G-DRIVE

O POWER RATING

Engine Speed rev/min	Type of	Engine Power	
	Operation	kWm	Ps
	Continuous Power	186	253
1800	Prime Power	205	279
	Standby Power	223	303
	Continuous Power	151	205
1500	Prime Power	177	240
	Standby Power	199	270



Note: -. The engine performance corresponds to ISO 3046, 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.
 - → **Standby power** available in the event of a main power network failure. No overload is permitted.

◎ MECHANICAL SYSTEM

© FUEL CONSUMPTION

○ Engine Model	P086TI	• Prime Power (lit/hr)	1,500 rpm	1,800 rpm
○ Engine Type	In-line 4 cycle, water cooled	25%	11.3	13.8
	Turbo charged & intercooled (air to air)	50%	21.1	25.1
○ Combustion type	Direct injection	75%	31.7	37.7
○ Cylinder Type	Replaceable dry liner	100%	43.1	50.6
 Number of cylinders 	6	○ Standby Power (lit/h	1,500 rpm	1,800 rpm
○ Bore x stroke	111(4.37) x 139(5.47) mm(in.)	25%	12.7	15.2
○ Displacement	8.071(492.49) lit.(in ³)	50%	23.7	27.7
○ Compression ratio	16.4:1	75%	35.5	41.6
○ Firing order	1-5-3-6-2-4	100%	48.4	56.8
○ Injection timing	12° BTDC			
${\color{gray}\circ} Compression\ pressure$	Above 28 kg/cm2(398 psi) at 200rpm	◎ FUEL SYSTEM		
O Dry weight	Approx. 790 kg (1,742 lb)	○ Injection pump	Zexel in-line "P"	' type
○ Dimension	1,242 x 918 x 1,099.5 mm	○ Governor	Electric type	
(LxWxH)	(48.9 x 36.1 x 43.3 in.)	○ Feed pump	Mechanical type	
○ Rotation	Counter clockwise viewed from Flywheel	○ Injection nozzle	Multi hole type	
○ Fly wheel housing	SAE NO.1	Opening pressure	224 kg/cm ² (3,13	86 psi)
○Fly wheel	Clutch NO.14	○ Fuel filter	Full flow, cartrid	lge type
		○ Used fuel	Diesel fuel oil	

© MECHANISM

© LUBRICATION SYSTEM

○ Type	Over head valve		○ Lub. Method	Fully forced pressure feed type	
O Number of valve	Intake 1, exhaust 1 per cylinder		○ Oil pump	Gear type driven by crankshaft	
O Valve lashes at cold	Intake 0.30mm (0.0118 in.)		Oil filter	Full flow, cartridge type	
	Exhaust 0.30mm (0.0118 in.)		Oil pan capacity	High level 15.5 liters (4.09 gal.)	
				Low level 12 liters (3.17 gal.)	
© VALVE TIMING			○ Angularity limit	Front down 25 deg.	
	Opening	Close		Front up 25 deg.	
○ Intake valve	16 deg. BTDC	36 deg. ABDC		Side to side 25 deg.	
○ Exhaust valve	46 deg. BBDC	14 deg. ATDC	○ Lub. Oil	Refer to Operation Manual	



P086TI G-DRIVE

© COOLING SYSTEM

○ Cooling method Fresh water forced circulation 14 liters (3.70 gal.)

• Water capacity (engine only)

OPressure system Max. 0.9 kg/cm^2 (12.8 psi) Centrifugal type driven by belt O Water pump

OWater pump Capacity 150 liters (39.6 gal.)/min

at 1,800 rpm (engine)

○ Thermostat Wax – pellet type

> Opening temp. 71°C Full open temp. 85°C

O Cooling fan Blower type, plastic

660.4 mm diameter, 7 blade

© ELECTRICAL SYSTEM

24V x 45A alternator • Charging generator Built-in type IC regulator ○ Voltage regulator

24V x 6.0kW ○ Starting motor

24V ○ Battery Voltage

100 AH (recommended) O Battery Capacity

Block heater ○ Starting aid (Option)

© ENGINEERING DATA

○ Water flow	130 liters/min @1,500 rpm
 Heat rejection to coolant 	17.3 kcal/sec @1,500 rpm
 Heat rejection to CAC 	4.5 kcal/sec @1,500 rpm
○ Air flow	12.1 m ³ /min @1,500 rpm
 Exhaust gas flow 	33.9 m ³ /min @1,500 rpm
○ Exhaust gas temp.	580 °C @1,500 rpm
○ Water flow	150 liters/min @1,800 rpm
 Heat rejection to coolant 	20.3 kcal/sec @1,800 rpm
 Heat rejection to CAC 	10.8 kcal/sec @1,800 rpm
○ Air flow	16.8 m ³ /min @1,800 rpm
 Exhaust gas flow 	38.8 m ³ /min @1,800 rpm
○ Exhaust gas temp.	530 °C @1,800 rpm

O Max. permissible restrictions

-.Intake system 220 mmH₂O initial

635 mmH₂O final

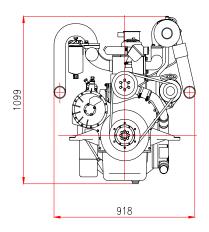
600 mmH₂O max. -. Exhaust system

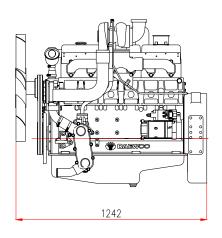
♦ CONVERSION TABLE

in. = $mm \times 0.0394$ $lb/ft = N.m \times 0.737$ $PS = kW \times 1.3596$ U.S. $gal = lit. \times 0.264$ kW = 0.2388 kcal/s $psi = kg/cm2 \times 14.2233$

in3 = lit. x 61.02 $lb/PS.h = g/kW.h \times 0.00162$ $hp = PS \times 0.98635$ $cfm = m^3/min \times 35.336$

 $lb = kg \times 2.20462$





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* Speccifications are subject to change without prior notice