

## PU086 P-DRIVE

◎ Production tolerance : ±3%

Intermittent rating kW(PS) / rpm	Max. torque N.m(kg.m) / rpm	Fuel consumption g/kW.h(g/PS.h) / rpm
118 (160) / 2,200	588 (60) / 1,600	228 (168) / 2,200

Note : -. The engine performance corresponds to ISO 3046.



### ◎ MECHANICAL SYSTEM

- Engine Model           PU086
- Engine Type           In-line 4 cycle, water cooled  
Naturally aspirated
- Combustion type       Direct injection
- Cylinder Type         Replaceable dry liner
- Number of cylinders   6
- Bore x stroke         111(4.37) x 139(5.47) mm(in.)
- Displacement         8.071(492.49) lit.(in3)
- Compression ratio    16.8 : 1
- Firing order           1-5-3-6-2-4
- Injection timing       18° BTDC
- Compression pressure Above 28 kg/cm<sup>2</sup>(398 psi) at 200rpm
- Dry weight            Approx. 780 kg (1,720 lb)
- Dimension            1,244 x 716 x 900 mm  
(LxWxH)               (48.2 x 28.2 x 35.5 in.)
- Rotation               Counter clockwise viewed from Flywheel

### ◎ MECHANISM

- Type                    Over head valve
- Number of valve       Intake 1, exhaust 1 per cylinder
- Valve lashes at cold   Intake 0.30 mm(0.0118 in)  
Exhaust 0.30 mm(0.0118 in.)

### ◎ VALVE TIMING

- |                 | Opening      | Close        |
|-----------------|--------------|--------------|
| ○ Intake valve  | 16 deg. BTDC | 36 deg. ABDC |
| ○ Exhaust valve | 46 deg. BBDC | 14 deg. ATDC |

### ◎ OPTION & ACCESSORY PARTS

- Engine parts           Fly wheel & housing  
Intake & exhaust manifold
- Accessory parts        Raditor, silencer & air cleaner
- Electrical parts        Gauge panel & stop solenoid

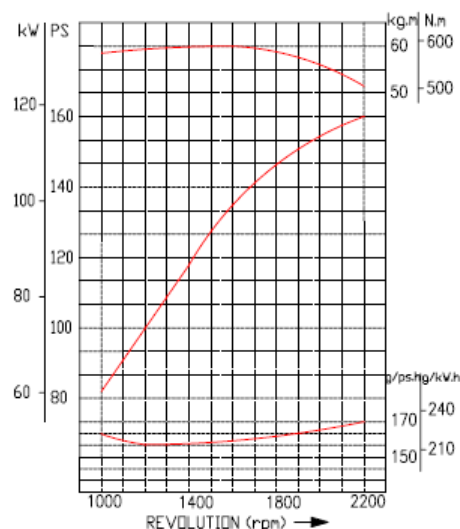
### ◎ FUEL SYSTEM

- Injection pump        Zexel in-line "AD" type
- Governor             RSV type(all speed control)
- Feed pump            Mechanical type
- Injection nozzle     Multi hole type
- Opening pressure    214 kg/cm<sup>2</sup> (3,044 psi)
- Fuel filter            Full flow, cartridge type
- Used fuel             Diesel fuel oil

### ◎ 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 15 liters ( 4.09 gal.)  
Low level 12 liters ( 3.17 gal.)
- Angularity limit    Front down 25 deg.  
Front up 25 deg.  
Side to side 25 deg.
- Lub. Oil             Refer to Operation Manual

### ◎ PERFORMANCE CURVE

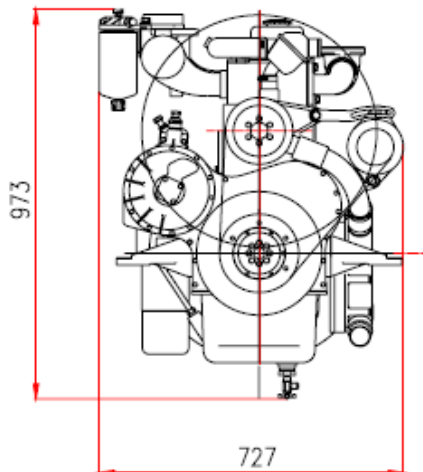


### ◎ COOLING SYSTEM

- Cooling method Fresh water forced circulation
- Water capacity 14 liters ( 3.70 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 190 liters ( 41.8 gal.)/min  
at 2,200 rpm (engine)
- Thermostat Wax – pellet type  
Opening temp. 71°C  
Full open temp. 85°C
- Cooling fan Blower type, steel  
590 mm diameter, 6 blade

### ◎ ELECTRICAL SYSTEM

- Charging generator 24V x 45A [or 12V x 26A ] alternator
- Voltage regulator Built-in type IC regulator
- Starting motor 24V x 4.5kW [or 12V x 2.5kW ]
- Battery Voltage 24V [or 12V ]
- Battery Capacity 100 AH [or 150 AH ](recommended)
- Starting aid (Option) Block heater



### ◎ ENGINEERING DATA

- Water flow 190 liters/min @2,200 rpm
- Heat rejection to coolant 20.2 kcal/sec @2,200 rpm
- Air flow 8.4 m<sup>3</sup>/min @2,200 rpm
- Exhaust gas flow 22.9 m<sup>3</sup>/min @2,200 rpm
- Exhaust gas temp. 480 °C @2,200 rpm
- Max. permissible restrictions
  - Intake system 220 mmH<sub>2</sub>O initial  
635 mmH<sub>2</sub>O final
  - Exhaust system 1,000 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

