6ETAA12.8-G31/G31.1

◎ **Power**

Engine Speed	Type of	Gross Engine Output	Net Engine Output
r/min	Operation	kW	kW
1500	**Prime Power**	401	360
	Standby Power	441	400
1800	**Prime Power**	401	360
	Standby Power	441	400

-. The engine performance is as per GB/T2820

-. Ratings are based on GB/T1147.1.

→**Prime Power** :--- There is no time limit in the case of variable load operation. In any 250hours of continuous operation period, the variable load of average work load less than 70%of the prime power. The operation time in the situation of 100%prime power no more than 500 hours. Permit 10%overload running1hours in any 12 hours of continuous operation period. The overload 10% power running time of every year no more than 25 hours..

→**Standby Power**：The annual total standby power load should be less than 80%and the average running time shall be less than200 hours. Among them the standby power point should be no more than 25 hours a year. 。

◎ **SPECIFICATIONS**

○ Engine Model	6ETAA12.8-G31/G31.1
○ Engine Type	In-line,4strokes,4valves,water-cooled, Turbo charged with aftercooler
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	6
○ Bore × stroke	130 ×161mm
○ Displacement	12.8 L
○ Compression ratio	17 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	Electronic control
○ Dry weight	Approx. 1164kg
○ Dimension (L×W×H)	1787×919×1287mm
○ Rotation	SAE NO.1
○ Fly wheel housing	SAE NO.14(tooth number of gear:133)

◎ **MECHANISM**

○ Type	Overhead valve
○ Number of valve	Intake 2, exhaust 2 per cylinder
○ Valve lashes at cold	Intake 0.40mm Exhaust 0.65mm

◎ **VALVE TIMING**

	Opening	Close
○ Intake valve	15° BTDC	30° ABDC
○ Exhaust valve	45° BBDC	13° ATDC

◎ **FUEL CONSUMPTION**

○ Power	L/h（1500r/min）	L/h（1800r/min）
25%	25.7	27.8
50%	48.0	51.2
75%	72.3	79.6
100%	99.1	102.3
110%	102.7	116.3

◎ **FUEL SYSTEM**

○ Injection pump	BOSH
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	250 kg/cm2
○ 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 36liters Low level 31liters
○ Angularity limit	Front down 25 deg. Front up 35 deg. Side to side 35 deg.
○ Lub. Oil	Refer to Operation Manual

◎ COOLING SYSTEM

- ○ Cooling method   Fresh water forced circulation
- ○ Water capacity   23 liters
  (engine only)
- ○ Lid Min. pressure   70kPa
- ○ Water pump   Centrifugal type driven by belt
- ○ Water pump Capacity   600L/min （1500r/min）

                                                 700L/min （1800r/min）

- ○ The maximum temp. of
  coolant in prime/ Standby
  power   104/100
- ○ Thermostat   Wax–pellet type

               Opening temp. 85 ℃
               Full open temp. 95 ℃

- ○ Cooling fan   Blower type, plastic
  1000 mm diameter, 8blades
  Power consumption 15kw

◎ ENGINEERING DATA

- ○ Heat rejection to coolant   36.2 kcal/sec（1500r/min）
  34.5 kcal/sec（1800r/min）
- ○ Heat rejection to intercooler   23.7 kcal/sec （1500r/min）
  22.5 kcal/sec（1800r/min）
- ○ Exhaust gas temp.   600 ℃
- ○ Max. permissible restrictions   3 kPa initial
  6 kPa final (need charge filter
  element)
  Intake system
  Exhaust system   10 kPa max.
- ○ Max. permissible altitude   2000 m
- ○ intercooler permissible
  restrictions   9 kPa
- ○ Cooling air flow   10.8m³ /s

◎ ELECTRICAL SYSTEM

- ○ Charging generator   28V×70A
- ○ Voltage regulator   Built-in type　IC regulator
- ○ Starting motor   24V×5.5kW
- ○ Battery Voltage   24V
- ○ Battery Capacity   180 AH

◆ 换算表

in. = mm ×0.0394	lb/ft = N.m ×0.737
PS = kW ×1.3596	U.S. gal = L ×0.264
psi = kg/cm2 ×14.2233	kW = 0.2388 kcal/s
in3 = L ×61.02	lb/PS.h = g/kW.h ×0.00162
hp = PS ×0.98635	cfm = m3/min ×35.336
lb = kg ×2.20462	