GENERAL ENGINE DATA

Type
Aspiration
Cylinder Arrangement
No.of Cylinders
Bore mm(in.)
Stroke mm(in.)
Displacement Liter(in.³)
Compression Ratio
Dry Weight - Engine only - kg(lb)
Wet Weight - Engine only - kg(lb)

4-Cycle, Water Cooled
Turbo-Charged, Inter Cooler
(60°V)
12
170 (6.69)
180 (7.09)
49.0 (2992)
14.5 : 1
5320 (11731)
5600 (12348)

PERFORMANCE DATA

Idling Speed -rpm
Maximum Overspeed Capacity - rpm
Moment of Inertia of Rotating Components J- kg·m²(lbf·ft²)

600～650
1870
20.22 (1920)

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - N·m(lbf·ft) ---- 4413 (3256)

AIR INLET SYSTEM

Maximum Intake Air Restriction (Includes piping)- kPa (in.H₂O)
Maximum Allowable Intake Air Temperature- °C (°F)

3.92 (15.7)
45 (113)

EXHAUST SYSTEM

Maximum Allowable Back Pressure - kPa (in.H₂O)

4.41 (17.7)

LUBRICATION SYSTEM

Oil Pressure at Idle - MPa (psi)
at Rate Speed - MPa (psi)
Maximum Oil Temperature- °C (°F)
Oil Capacity of Marine Pan
High - liter (U.S.gal)
Low - liter (U.S.gal)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal)

0.2～0.3 (29～43)
0.5～0.6 (71～86)
110 (230)
200 (52.8)
158 (41.7)
230 (60.8)

Maximum Installation Angle
Front Up
Front Down

12.5°
15°

Maximum Instantaneous Operating Angle
Front Up
Front Down
Side to Side

30°
30°
22.5°

COOLING SYSTEM

Coolant Capacity of Jacket(Engine only) - liter (U.S.gal)
Coolant Capacity of Air cooler(Engine only) - liter (U.S.gal)
Maximum External Friction Head at Engine Outlet-MPa(psi)
Recommended Static Head of Coolant above Crankshaft Center - m(ft)

111 (29.3)
14 (3.7)
0.034 (5.0)

MAX. --- 10 (32.8)
MIN. --- 7 (23.0)

Standard Thermostat (Modulating)Range- °C (°F)
Maximum Coolant Temperature at Engine Outlet- °C (°F)
Recommended Coolant Temperature at Engine outlet-°C (°F)
Minimum Coolant Expansion Space-% of System Capacity
Maximum Coolant Temperature at Inter Cooler Inlet, PTAW type-°C (°F)

71～85 (160～185)
95 (203)
80 (176)
- 10
see page 4/4

The specifications are subject to change without notice.
**FUEL SYSTEM**
- Fuel Injection Pump: Mitsubishi PS6 Type x 2
- Maximum Suction Head of Feed Pump - kPa (in. Hg): 14.7 (4.3)
- Maximum Level of Fuel Tank - m Continuous Use: 5.0
- Maximum Level of Fuel Tank - m Stand-by Use: 2.0
- Minimum Fuel Oil Supply Pipe Inner Diameter - mm(in.): 20 (0.79)
- Minimum Fuel Oil Leak Pipe Inner Diameter - mm(in.): 20 (0.79)

**STARTING SYSTEM**
- Battery Charging Alternator - V-Ah: 24-35
- Starting Motor Capacity - V-kW: 24-7.5×2
- Maximum Allowable Resistance of Cranking Circuit - m Ω: 1.5
- Recommended Minimum Battery Capacity
  - At 5°C (41°F) and above - Ah: 300
  - Below 5°C (41°F) through -5°C (23°F): 600
- Cranking Ampere of Starter at 5°C (41°F) / -5°C (23°F)
  - Static Ampere -A: 380 × 2 / 480 × 2
  - Momentary Ampere -A: 720 × 2 / 920 × 2

**ACCESSORY EQUIPMENT**
- Air Cleaner: Silencer Type
- Exhaust Manifold: Air Cooled
- Turbocharger: Air Cooled
- Air Cooler: Fresh Water Cooled
- Breather: Conduction Type
- Governor: Hydraulic PSG Type
- Fuel Injection Pump
- Fuel Feed Pump
- Fuel Injection Pipe
- Fuel Injection Nozzle: Single walled Type
- Fuel Filter: Paper Element Type
- Lubricating Oil Pump
- Lubricating Oil Cooler
- Lubricating Oil Filter(Full-Flow) Paper Element Type
- Lubricating Oil Filter(By-Pass Flow) Paper Element Type
- Oil Pan: Large Capacity, steel
- Cooling Water Pump (Jacket water)
- Cooling Water Thermostat(Jacket water)
- Starter: Earth Float Type
- Alternator: Earth Float Type
- Stop Solenoid: DC24V-15A
- Engine Support: Marine Type
- Accessory Drive: Front Drive Pulley

**ACCESSORY EQUIPMENT (LOOSE SUPPLY)**
- Relay Safety
- Jack Bolt
- Companion Flange
- Standard Tools
- Standard Spare Parts

The specifications are subject to change without notice.

APPLICATION: MARINE

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ENGINE RATING

All data represent net performance according to ISO3046 with standard accessories such as fuel injection pump, water pump L.O. pump and charging alternator under the condition of 100kPa(750 mm Hg), barometric pressure 298K(25°C) ambient temperature and 30% relative humidity.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Engine Model</th>
<th>UNIT</th>
<th>Propulsion use</th>
<th>Generator use</th>
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<tr>
<td></td>
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<td>-Y3MPTAW-3</td>
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<tr>
<td>Test cycle (ISO 8178)</td>
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<td>HD</td>
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<td>Engine Speed</td>
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<td>E3</td>
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<tr>
<td>No. of Cylinders</td>
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<tr>
<td>Bore</td>
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<td>(in.)</td>
<td>(6.69)</td>
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<td>Stroke</td>
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<td>(in.)</td>
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<td>Displacement</td>
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<td>(in.³)</td>
<td>(2992)</td>
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<td>Brake Horse Power</td>
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<td>(HP)</td>
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<td>Brake Mean Effective Pressure</td>
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<td>(psi)</td>
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<td>(ft/min)</td>
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<td>Maximum Regenerative Power</td>
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<td>Absorption Capacity</td>
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<td>Intake Air Flow</td>
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<td>(CFM)</td>
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<td>Coolant Flow</td>
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<td>(water pump outlet)</td>
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<td>(psi)</td>
<td>(22)</td>
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<td>Coolant Flow to Inter Cooler</td>
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<td>liter/min</td>
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<td>(Max. Flow: 320L/min)</td>
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<td>(U.S. GPM)</td>
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<td>(U.S. GPM)</td>
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<td>(BTU/min)</td>
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<td></td>
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<td>(BTU/min)</td>
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</tbody>
</table>

- Cooling System
  - Direct Sea Water Cooling
  - Intermediate Fresh Water Cooling
  - Max. sea water temp. at inter cooler inlet
  - Max. fresh water temp. at inter cooler inlet
  - Radiator Cooling
  - N/A

Max. 32°C
(When sea water temp. 25°C)

- Noise Level (1 m height & distance)
  - (excludes, Intake, Exhaust)
  - dB(A)
  - N/A

- Maximum No Load Governed Speed
  - min⁻¹
  - 1720

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APPLICATION : MARINE

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