IMO
S6A3-MPTK
SPECIFICATION SHEET
MITSUBISHI
DIESEL ENGINES

GENERAL ENGINE DATA

Type: 4-Cycle, Water Cooled
Aspiration: Turbo-Charged, Inter Cooler
(Raw water to Cooler)

Cylinder Arrangement: Inline
No. of Cylinders: 6
Bore mm(in.): 150 (5.91)
Stroke mm(in.): 175 (6.89)
Displacement Liter(in.³): 18.56 (1133)
Compression Ratio: 14.5 : 1
Dry Weight - Engine only - kg(lb): 1900 (4190)
Wet Weight - Engine only - kg(lb): 2030 (4476)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load (Generator Use)
- Hydraulic (std.) or Electric Governor - %: ±0.25 or better
- Idling Speed - rpm: 600–650
- Maximum Overspeed Capacity - rpm: 2195
- Moment of Inertia of Rotating Components J- kg·m²(lbf·ft²): 4.73 (449)
(Includes 14 inch Flywheel)
- Cyclic Speed Variation with Flywheel at: 1/107, 1/68

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing: 1373 (1013) - N·m(lbf·ft)

AIR INLET SYSTEM

Maximum Intake Air Restriction (Includes piping)- kPa (in.H₂O): 3.92 (15.7)
Maximum Allowable Intake Air Temperature- °C (°F): 45 (113)

EXHAUST SYSTEM

Maximum Allowable Back Pressure - kPa (in.H₂O): 4.41 (17.7)

LUBRICATION SYSTEM

Oil Pressure: 0.2–0.3 (29–43)
- Maximum Oil Temperature- °C (°F): 110 (230)
- Oil Capacity of Marine Pan: 100 (26.4)
- Total System Capacity (Includes Oil Filter) - liter (U.S.gal): 110 (29.1)
- Maximum Installation Angle: 16°
- Maximum Instantaneous Operating Angle (Engine Level): 25°

COOLING SYSTEM

Coolant Capacity - liter (U.S.gal): 36 (9.5)
(Maximum External Friction Head at Engine Outlet-MPa(ksi): 0.034 (5.0)
Recommended Static Head of Coolant above Crankshaft Center - m(ft):
MAX. 10 (32.8)
MIN. 7 (23.0)
Standard Thermostat (Modulating) Range- °C (°F): 71–85 (160–185)
Recommended Coolant Temperature at Engine Outlet- °C (°F): 95 (203)
Minimum Coolant Expansion Space-% of System Capacity: 10
Maximum Coolant Temperature at Inter Cooler Inlet, TK type- °C (°F): 32 (90)

The specifications are subject to change without notice.

APPLICATION : MARINE

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FUEL SYSTEM
Fuel Injection Pump ___________________________ Bosch P Type x 1
Maximum Suction Head of Feed Pump - kPa (in. Hg) ___________ 14.7 (4.3)
Maximum Level of Fuel Tank - m Continuous Use ___________ 5.0
Stand-by Use ___________ 2.0
Minimum Fuel Oil Supply Pipe Inner Diameter - mm(in.) ___________ 16 (0.63)
Minimum Fuel Oil Leak Pipe Inner Diameter - mm(in.) ___________ 12 (0.47)

STARTING SYSTEM
Battery Charging Alternator - V-Ah ___________ 24-35
Starting Motor Capacity - V -kW ___________ 24-6.0
Maximum Allowable Resistance of Cranking Circuit - mΩ ___________ 2.5
Recommended Minimum Battery Capacity
At 5°C (41°F) and above - Ah ___________ 200
Below 5°C (41°F) through -5°C (23°F) ___________ 400
Cranking Ampere of Starter at 5°C (41°F) / -5°C (23°F)
Static Ampere -A ________ 300 / 330
Momentary Ampere -A ________ 525 / 585

ACCESSORY EQUIPMENT
Air Cleaner Silencer Type
Exhaust Manifold Water Cooled
Turbocharger Air cooled
Air Cooler Raw Water Cooled
Breather Conduction Type
Governor Hydraulic PSG Type
Fuel Injection Pump
Fuel Feed Pump
Fuel Injection Pipe Standard Type
Fuel Injection Nozzle
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, aluminium
Cooling Water Pump
Cooling Water Thermostat
Starter Earth Float Type
Alternator Earth Float Type
Stop Solenoid DC24V-25A-0.5A
Engine Support Marine Type
Accessory Drive Front Drive Pulley

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

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**IMOS6A3-MPTK**

**SPECIFICATION SHEET**

**DIESEL ENGINES**

**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.

A: Light duty  B: Medium duty  C: Heavy duty

### ITEM

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>Propulsion use</th>
<th>Generator use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm</td>
<td>1960</td>
<td>1900</td>
</tr>
<tr>
<td>No. of Cylinders</td>
<td></td>
<td>6</td>
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<tr>
<td>Bore</td>
<td>mm (in.)</td>
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</tr>
<tr>
<td>Stroke</td>
<td>mm (in.)</td>
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<tr>
<td>Displacement</td>
<td>liter (in.) ^3</td>
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<tr>
<td>Brake Horse Power</td>
<td>kW (HP)</td>
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<tr>
<td>Brake Mean Effective Pressure</td>
<td>MPa (psi)</td>
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<tr>
<td>Mean Piston Speed</td>
<td>m/s (ft/min)</td>
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<tr>
<td>Maximum Regenerative Power</td>
<td>kW (HP)</td>
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<tr>
<td>Absorption Capacity</td>
<td>m^3/min (CFM)</td>
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<tr>
<td>Intake Air Flow</td>
<td>m^3/min (CFM)</td>
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<td>Exhaust Gas Flow</td>
<td>m^3/min (CFM)</td>
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<tr>
<td>Coolant Flow</td>
<td>liter/min (U.S. GPM)</td>
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<tr>
<td>Coolant (Jacket water)</td>
<td>MPa (psi)</td>
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<td>Coolant Flow to Inter Cooler</td>
<td>liter/min (U.S. GPM)</td>
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<td>Oil Flow</td>
<td>liter/min (U.S. GPM)</td>
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<td>Radiated Heat to Ambient</td>
<td>kJ/hr (BTU/min)</td>
<td>69008</td>
<td>(1090)</td>
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<td>Heat Rejection to Coolant</td>
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<td>1127132</td>
<td>(17809)</td>
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<tr>
<td>Heat Rejection to Inter Cooler</td>
<td>kJ/hr (BTU/min)</td>
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<td>Heat Rejection to Exhaust</td>
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<td>(23010)</td>
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<td>Noise Level (1 m height &amp; distance) (excludes, Intake, Exhaust)</td>
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<tr>
<td>Maximum No Load Governed Speed</td>
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