GENERAL ENGINE DATA
Type ......................................................... 4-Cycle, Water Cooled
Aspiration ........................................... Turbo-Charged, Inter Cooler (Raw Water)
Cylinder Arrangement ......................... Inline
No. of Cylinders ...................................... 6
Bore mm(in.) ........................................... 150 (5.91)
Stroke mm(in.) ....................................... 175 (6.89)
Displacement liter(in³) ......................... 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
Idling Speed - rpm ...................................... 600～650
Maximum Overspeed Capacity - rpm .......... 2195
Moment of inertia of Rotating Components - kgf·m²(lbf·ft²) .... 18.9 (449)
(Includes 14 inch Flywheel)

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

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 at Idle - MPa(psi) .................... 0.2～0.3 (29～43)
Oil Pressure at Idle - MPa(psi) .................... 0.5～0.6 (71～86)
Maximum Oil Temperature - °C(°F) .............. 110 (230)
Oil Capacity of Marine Pan - High - liter (U.S.gal) ................. 100 (26.4)
Oil Capacity of Marine Pan - Low - liter (U.S.gal) ............. 70 (18.5)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal) .... 110 (29.1)
Maximum Installation Angle ......................
Front Up ............................................. 16°
Front Down ........................................ 11.5°
Maximum Instantaneous Operating Angle (Engine Level) ............
Front Up ........................................... 25°
Front Down ........................................ 14°
Side to Side ...................................... 22.5°

COOLING SYSTEM
Coolant Capacity of Jacket (Engine Only) - liter (U.S.gal) .......... 36 (9.5)
Maximum External Friction Head at Engine Outlet - MPa(psi) ....... 0.034 (5.0)
Maximum Static Head of Coolant above Crankshaft Center - m(ft) .. 10 (32.8)
Standard Thermostat (modulating)Range of Jacket- °C(°F) .......... 71～85 (160～185)
Maximum Coolant Temperature at Engine Outlet- °C(°F) .......... 95 (203)
Recommended Coolant Temperature at Engine Outlet- °C(°F) .... 80 (176)
Minimum Coolant Expansion Space - % of System Capacity ....... 10
Maximum Coolant Temperature at Inter Cooler Inlet, TK type- °C(°F) see page 4/4

APPLICATION : MARINE

The specifications are subject to change without notice.
FUEL SYSTEM
Fuel Injection Pump ------------------------------- Bosch S7S 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 - m Ω 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 Air Cooled
Turbocharger Air Cooled
Air Cooler Raw Water Cooled
Breather Conduction Type
Governor Mechanical RSUVT Type
Fuel Injection Pump Standard Type
Fuel Feed Pump Paper Element Type
Fuel Injection Pipe Paper Element Type
Fuel Injection Nozzle Paper Element Type
Fuel Filter Large Capacity, aluminium
Lubricating Oil Pump
Lubricating Oil Cooler
Lubricating Oil Filter(Full-Flow)
Lubricating Oil Filter(By-Pass Flow)
Oil Pan
Cooling Water Pump Earth Float Type
Cooling Water Thermostat Earth Float Type
Starter DC24V-25A-0.5A
Alternator Marine Type
Stop Solenoid Front Drive Pulley
Engine Support
Accessory Drive

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

The specifications are subject to change without notice.

APPLICATION : MARINE

MITSUBISHI
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.

HD: Heavy duty

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>Propulsion use</th>
<th>Generator use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Model</td>
<td>-Y3MPTK-3</td>
<td>HD</td>
<td></td>
</tr>
<tr>
<td>No. of Cylinders</td>
<td></td>
<td>6</td>
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</tr>
<tr>
<td>Bore</td>
<td>mm (in.)</td>
<td>150 (5.91)</td>
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</tr>
<tr>
<td>Stroke</td>
<td>mm (in.)</td>
<td>175 (6.89)</td>
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</tr>
<tr>
<td>Displacement</td>
<td>liter (in.³)</td>
<td>18.56 (1133)</td>
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</tr>
<tr>
<td>Brake Horse Power</td>
<td>kW (HP)</td>
<td>405 (543)</td>
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<tr>
<td>Brake Mean Effective Pressure</td>
<td>MPa (psi)</td>
<td>1.42 (206)</td>
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<tr>
<td>Mean Piston Speed</td>
<td>m/s (ft/min)</td>
<td>10.7 (2106)</td>
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<tr>
<td>Maximum Regenerative Power</td>
<td>kW (HP)</td>
<td>56 (75)</td>
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<tr>
<td>Intake Air Flow</td>
<td>m³/min (CFM)</td>
<td>40 (1412)</td>
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<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min (CFM)</td>
<td>107 (3778)</td>
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<tr>
<td>Coolant Flow</td>
<td>liter/min (U.S. GPM)</td>
<td>590 (156)</td>
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<tr>
<td>Coolant (Jacket water) Pressure</td>
<td>MPa (psi)</td>
<td>0.14 (21)</td>
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<tr>
<td>(water pump outlet)</td>
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<tr>
<td>Minimum Coolant Flow to Inter Cooler</td>
<td>liter/min (U.S. GPM)</td>
<td>325 (86)</td>
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<tr>
<td>(Max. Flow: 180 liter/min)</td>
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<tr>
<td>Oil Flow</td>
<td>liter/min (U.S. GPM)</td>
<td>255 (67)</td>
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<tr>
<td>Radiated Heat to Ambient</td>
<td>kJ/hr (BTU/min)</td>
<td>127283 (2011)</td>
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<tr>
<td>Heat Rejection to Coolant (include water cooled manifold)</td>
<td>kJ/hr (BTU/min)</td>
<td>784914 (12402)</td>
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<tr>
<td>Heat Rejection to Inter Cooler</td>
<td>kJ/hr (BTU/min)</td>
<td>487919 (7709)</td>
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<tr>
<td>Heat Rejection to Exhaust</td>
<td>kJ/hr (BTU/min)</td>
<td>1384683 (21878)</td>
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<tr>
<td>Direct Sea Water Cooling</td>
<td>Max. sea water temp. at inter cooler inlet</td>
<td>Max. 32°C</td>
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<tr>
<td>Intermediate Fresh Water Cooling</td>
<td>Max. fresh water temp. at inter cooler inlet</td>
<td>N/A</td>
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<tr>
<td>Radiator Cooling</td>
<td>Max. coolant temp. at inter cooler inlet</td>
<td>N/A</td>
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<tr>
<td>Noise Level (1 m height &amp; distance) (excludes, Intake, Exhaust)</td>
<td>dB(A)</td>
<td>TBD</td>
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<tr>
<td>Maximum No Load Governed Speed</td>
<td>rpm</td>
<td>1978</td>
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</table>

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