MARINE PROPULSION AND AUXILIARY ENGINES

Economic Operation
All Mitsubishi engines are designed and built to deliver performance as well as fuel efficiency. From the combustion chamber design to the fuel injection technology, to the turbocharger and the advanced cooling system...everything has been perfectly balanced to provide a highly economic operation and optimum fuel consumption across the entire power curve.

Easy Maintenance
With Mitsubishi’s S12R marine engine, maintenance is very easy. Each cylinder has its own cylinder head and the engine has large inspection covers on the crankcase and oil pan. No auxiliary component requires separate lubrication, whether it’s the fuel injection pump, the governor, the water pump or the turbocharger.

Approved by All Major Classification Societies
At our ISO certified manufacturing facilities, every Mitsubishi S12R diesel engine is built to meet the highest quality standards. All major marine classification societies, as well as the national shipping authorities, recognize the precision of Mitsubishi’s manufacturing procedures.

Environmental Compatibility
Mitsubishi offers a full compiment of engines meeting IMO and EPA emissions standards

Local Support Around The Globe
A team of support specialists is available worldwide to ensure that service and maintenance are performed without delay.
### MITSUBISHI MARINE S12R

**Type**
- 4-cycle, watercooled, turbocharged diesel engine
  - MPTA with aftercooler, cooled by engine jacket water
  - MPTK with intercooler, cooled by (sea) water of max 32°C

**Combustion System**
- Direct Injection

**Cylinder Arrangement**
- 60°V, 12 Cylinder

**Bore x Stroke (mm)**
- 170 x 180

**Total Displacement**
- 49.03 Liters

**Compression Ratio**
- 14.0 : 1

**Rotation**
- SAE Standard (Counter-Clockwise Viewed from Flywheel End)

**Starting System**
- Electric Motor, 24 Volt - 7.5kW (x2)

**Flywheel**
- SAE 21

**Flywheel Housing**
- SAE #00

**Fuel Oil**
- ASTM, D975 No. 1-D, No. 2-D

**Lubricating Oil**
- API Service Grade ‘CD’ Class

<table>
<thead>
<tr>
<th>Dry Weight (lbs.)</th>
<th>11,532</th>
<th>11,731</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output Marine Auxiliary</strong></td>
<td>kWm @ RPM</td>
<td>kWm @ RPM</td>
</tr>
<tr>
<td>1110 @ 1500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1190 @ 1800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1270 @ 1800</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Output Marine Propulsion</strong></th>
<th>kWm @ RPM</th>
<th>kWm @ RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Duty</td>
<td>880 @ 1600</td>
<td>940 @ 1600</td>
</tr>
<tr>
<td>Medium Duty</td>
<td>970 @ 1650</td>
<td>1040 @ 1650</td>
</tr>
<tr>
<td>Light Duty</td>
<td>1140 @ 1800</td>
<td>1210 @ 1800</td>
</tr>
</tbody>
</table>

### Outside Dimensions

### Standard Engine Equipment

**Fuel System**
- Flexible fuel supply and return hoses, fuel feed pumps, change-over type fuel filters, MHI fuel injection pumps, double-wall fuel injection lines, fuel injectors, overflow valve

**Lubricating Oil System**
- Wet type oil pan with inspection covers, oil pressure pump (gear driven), full-flow lubricating oil filters (change-over type), by-pass filter (change-over type), oil cooler with thermostat, piston cooling though oil injectors

**Cooling System**
- Fresh water pump, thermostats with bypass

**24 Volt Electric System Earth Floated**
- Starter motors (2 x 6kW), battery charging alternator (30 amp), energize-to-stop (ETS) stop solenoid

**Air Intake and Exhaust System**
- Mitsubishi turbochargers with vertical exhaust outlet, air inlet silencers with pre-cleaner, inlet air aftercoolers or intercoolers, inlet manifolds, exhaust manifolds, individual cylinder heads for easy service and maintenance, 4-valve cylinder head design for high efficiency and low emissions

**General**
- Hydraulic Woodward PSG governor with oil supply system, mounting brackets, flywheel and housing SAE standard, torsional vibration damper, parts catalog and owners manual