### Engine Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>6AYEM-ET</th>
<th>6AYEM-ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>6AYEM-ET</td>
<td>6AYEM-ST</td>
</tr>
<tr>
<td>No. of cylinders</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Bore</td>
<td>155x180</td>
<td>155x180</td>
</tr>
<tr>
<td>Stroke</td>
<td>20.38</td>
<td>20.38</td>
</tr>
<tr>
<td>Displacement</td>
<td>653</td>
<td>653</td>
</tr>
<tr>
<td>Rated Output</td>
<td>485 / 1900</td>
<td>599(803) / 1900</td>
</tr>
<tr>
<td>Emission</td>
<td>EPA Tier III</td>
<td>EPA Tier III</td>
</tr>
<tr>
<td>Fuel consumption</td>
<td>215+5%</td>
<td>215+5%</td>
</tr>
<tr>
<td>Engine</td>
<td>Counterclockwise</td>
<td></td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>15.6:1</td>
<td>15.6:1</td>
</tr>
<tr>
<td>Cooling system</td>
<td>Constant High temperature cooling system</td>
<td></td>
</tr>
<tr>
<td>Starting system</td>
<td>Electric start(DC24V-8kW)</td>
<td></td>
</tr>
</tbody>
</table>

### Dimensions [Unit : mm (in.)]

<table>
<thead>
<tr>
<th>Type</th>
<th>6AYEM-ET</th>
<th>6AYEM-ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>2418</td>
<td>2418</td>
</tr>
<tr>
<td>Width</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Height</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>Dry weight</td>
<td>3.48</td>
<td>3.48</td>
</tr>
</tbody>
</table>

### Performance Curves

- Max torque: 200 N·m
- Max output: 599 kW
- Output ranges: 0-2000 rpm

### Marine Gear Specifications

<table>
<thead>
<tr>
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<th>6AYEM-ET</th>
<th>6AYEM-ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>YXH-240-7(12V)</td>
<td>YXH-240-7(24V)</td>
</tr>
<tr>
<td>Reduction ratio</td>
<td>3.03</td>
<td>3.03</td>
</tr>
<tr>
<td>Direction of rotation</td>
<td>Clockwise or Counter-clockwise</td>
<td></td>
</tr>
<tr>
<td>Dry weight</td>
<td>632</td>
<td>632</td>
</tr>
</tbody>
</table>

### Control System

- 6AYEM Control System for VC10
- 6AYEM Control System for Automaskin Panel

- Camram Rail
- EPA Tier III Compliant

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**Engine Room**

- Remote monitor
- Gear shift
- Shield harness
- Monitor in local
- Start / Stop in local
- R/L change in local
- Override
- Safety relay for SCS

**Bridge**

- Remote

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**YANMAR POWER TECHNOLOGY CO., LTD.**

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Tel: +81-6-489-8069
Fax: +81-6-489-1082

yanmar.com
Born for “Pure Marine” By Over 60 years experience.

**High Torque**

Excellent Torque-Rise Characteristics in High Speed and High Load Range Enable Stable Performance of Job Duties even at High Load.

1. Low, stable LOC (Lubricating Oil Consumption) without sacrifice in Performance (even with low viscosity lubricating oil consumption). 
2. Tufftride treated cylinder liners and improved wear resistance, (Improved wear resistance and reduced oil consumption) by low friction coefficient in combination with "Silicard" treated cylinder liners. 
3. Piston rings and the finely judged compression ratio.  (Reduced piston swing) 
4. Individual cylinder heads for each cylinder. (Improved combustion efficiency)
5. Valves are located at side of block and outer bearing is provided. (Small skirt clearance) 
6. Large skirt clearance and Tufftride treatment of cylinder liners. (Improved wear resistance) 
7. Two stage oil circulation system. 

**Toughness:**

1. Low, stable LOC (Lubricating Oil Consumption) without sacrifice in Performance (even with low viscosity lubricating oil consumption). 
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**Lower Down Time**

Easy Routine Inspections, Easy Maintenance

1. Large inspection windows on the side of the block allow in-site replacement of pistons.
2. All important parts are easily replaced.
3. Outdoor bearing minimizes maintenance work.
4. Cylinder liners are with flat top (Improved lubrication)

**High capacity front PTO**

Adoption of appropriate fuel injection pressure map

- Improve Fuel Economy
- Low CO2 & Nox Emissions
- High power with low stroke

Exhaust manifold, Turbo charger, Viscous damper, Fuel filter, Inter cooler (tube type), Cast iron, water cooled, Pressure pump, Fuel high pressure pump, Alternator, Exhaust manifold, Intake manifold, Dicstock, by pass filter, Lubrication Oil, Lubrication Oil cooler (Multi-plates type), by gear driven centrifugal pump, High temperature water pump, Photograph may show optional equipment.

**Strategies to obtain Low noise**

- Realized the quietness at the low idle engine speed by multi-stage fuel injection pattern.

**Strategies to obtain good starting performance**

- External good starting performance by performing a normal or more multi-stage injection at start-up. 
- So unrequired the heater was required in a conventional engine.

**Adoption of appropriate fuel injection pressure map**

- 100%
- 80%
- 60%
- 40%
- 20%
- 0%
- Engine Speed
- Multi-Stage Fuel Injection Pattern
- Pre-injection
- Pilot injection
- Engine Torque

**Comparison of Combustion Noise**

- 100%
- 80%
- 60%
- 40%
- 20%
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- Ambient Temperature (ºC)

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