**SDEC SPECIFICATIONS for Marine Engine**

<table>
<thead>
<tr>
<th>Engine Model</th>
<th>SC33W825CA2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order No</td>
<td>W0070</td>
</tr>
</tbody>
</table>

**Displacement** 32.8L  
**Rated power/speed** 605/1500 kW/r/min  
**Bore** 180mm  
**Overload power/speed** 665/1545 kW/r/min  
**Stroke** 215mm  
**Oceangoing rated power/speed** 588/1500 kW/r/min  
**Cylinder No.** 6  
**Oceangoing overload power/speed** 647/1545 kW/r/min  
**Fuel system** mechanical  
**Type** Turbocharged&intercooled  

cert: CCS, IMO Tier II

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**SC33W825CA2功率曲线（curve of output）**

![Power Curve](https://via.placeholder.com/150)

**external characteristic curve**

<table>
<thead>
<tr>
<th>Speed (r/min)</th>
<th>Power (kW)</th>
<th>Torque (N.m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1545</td>
<td>665</td>
<td>3926</td>
</tr>
<tr>
<td>1500</td>
<td>646</td>
<td>4113</td>
</tr>
<tr>
<td>1400</td>
<td>628</td>
<td>4284</td>
</tr>
<tr>
<td>1300</td>
<td>598</td>
<td>4393</td>
</tr>
<tr>
<td>1200</td>
<td>565</td>
<td>4496</td>
</tr>
<tr>
<td>1100</td>
<td>519</td>
<td>4506</td>
</tr>
<tr>
<td>1000</td>
<td>473</td>
<td>4517</td>
</tr>
<tr>
<td>900</td>
<td>428</td>
<td>4542</td>
</tr>
<tr>
<td>800</td>
<td>376</td>
<td>4489</td>
</tr>
<tr>
<td>700</td>
<td>323</td>
<td>4407</td>
</tr>
</tbody>
</table>

**propelling characteristic curve**

<table>
<thead>
<tr>
<th>Speed (r/min)</th>
<th>Power (kW)</th>
<th>Torque (N.m)</th>
<th>Fuel Consumption (g/kW.h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1545</td>
<td>665</td>
<td>4111</td>
<td>210.5</td>
</tr>
<tr>
<td>1500</td>
<td>605</td>
<td>3852</td>
<td>208.8</td>
</tr>
<tr>
<td>1400</td>
<td>495</td>
<td>3375</td>
<td>207.5</td>
</tr>
<tr>
<td>1300</td>
<td>396</td>
<td>2910</td>
<td>206.6</td>
</tr>
<tr>
<td>1200</td>
<td>312</td>
<td>2480</td>
<td>206.4</td>
</tr>
<tr>
<td>1100</td>
<td>240</td>
<td>2084</td>
<td>209.2</td>
</tr>
<tr>
<td>1000</td>
<td>180</td>
<td>1722</td>
<td>214.3</td>
</tr>
<tr>
<td>900</td>
<td>131</td>
<td>1395</td>
<td>220.1</td>
</tr>
<tr>
<td>800</td>
<td>92</td>
<td>1102</td>
<td>226.3</td>
</tr>
<tr>
<td>700</td>
<td>62</td>
<td>844</td>
<td>237.6</td>
</tr>
</tbody>
</table>

Remark: ★The measurement of rated power&speed is according to standard reference condition under ISO 8665(atmospheric pressure 100kpa, ambient temperature 25℃, Relative humidity 30%, intercooler inlet temperature 25℃), without any accessories, the guaranteed max power after running-in

★The measurement of oceangoing power&speed is according to specified environmental condition under IACS (atmospheric pressure 100kpa, ambient temperature 25℃, Relative humidity 60%, intercooler inlet temperature 32℃), without any accessories, the guaranteed max power after running-in
General specification

Engine model: SC33W825CA2
Usage: Marine propulsion
Type: Turbocharged & intercooled
Rated Power/Speed: kW/r/min 605/1500
Overload power/speed: kW/r/min 665/1545
Oceangoing rated power/speed: kW/r/min 588/1500
Oceangoing overload power/speed: kW/r/min 647/1545
Max torque @900r/min: N⋅m 5160
Max unload stable speed: r/min 1650
Max output power of crankshaft front end: 50%
Compression Ratio: 15:1
Average piston speed: m/s 10.75
Ignition Order: 1-5-3-6-2-4
Net Weight: kg 3400
Speed Governing Rate: % ≤10
Min unload speed: r/min ≤500 ± 25
Fuel system: mechanical pump, dual walled fuel pipe

advance angle of injection: ° CA 19 ± 0.5
Max temp of inlet fuel: °C 45
Max fuel inlet flow: °C 5.15
Max temp of return fuel: °C 84
Max fuel return flow: L/min 3.45
Air intake pressure: kPa 195
Air intake flow: kg/h 4652
Exhaust flow: kg/h 4793
Exhaust temp: °C ≤ 550
Casing system: Seawater-freshwater double system
Open temp of thermostat: °C 77
Full-open temp of thermostat: °C 90
Crankshaft Rotation: Anticlockwise (From flywheel)
Oversize (L × W × H): mm 2511 × 1265 × 1898
Max allowable air inlet restriction: kPa ≤ 550
Max allowable air outlet restriction: kPa 6
Oil pan capacity: L 75
Declared working condition oil pressure: MPa 0.35 ~ 0.55

Incline & trim: ° 5
Swing rolling: ° 22.5
Pitch: ° 7.5

★ Power tolerance: the max tolerance between rated power or overload power should not above 5%

★ Power output interface
flywheel house: SAE0# 16×M12 depth 20mm bore 27mm  
flywheel: SAE18#  6×M16 depth 27mm bore 35mm  
belt pulley: 6groove C type, with flange

**seawater pump**
transmission: 2.31  
rpm n=3000rpm, flow Q≥27m³/h.

**alternator**
rated power 1500W  
rated speed 3500r/min  
connection mode: double

**starter**
rated power: 13kW  
rated voltage: 24V  
rotation direction: clockwise(from drive end)  
connection mode: double

**Air starting motor**
rated power: 17kW  
rated speed: 2100r/min  
air pressure: 0.7~0.9Mpa  
control voltage: DC24V

**instrument system**
low oil pressure alarm value: 0.25MPa  
Low oil pressure stop value: 0.20MPa  
High water temp alarm value: 90℃  
High oil temp alarm value: 110℃

**exhaust pipe outlet size(bellow)**

**cooling system**
seawater inlet flange size

Seawater pump inlet size  
Seawater pump install footing size

**fuel system**
Fuel transfer pump inlet pipe size  
fuel pump return pipe size