
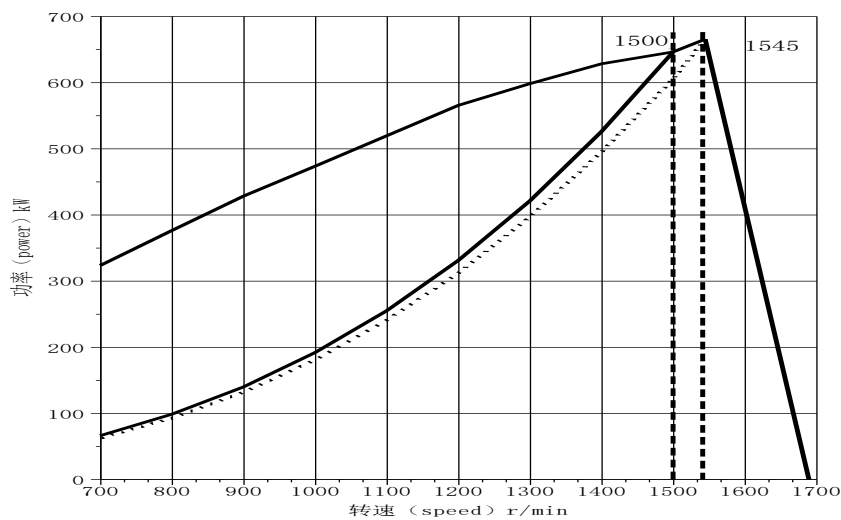


# Shanghai Diesel Engine Co., Ltd.

	<b>SDEC</b> <b>SPECIFICATIONS for Marine Engine</b>		Engine Model SC33W825CA2
			Order No W0070
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

SC33W825CA2功率曲线 (curve of output)



external characteristic curve			propelling characteristic curve			
speed	power	torque	speed	power	torque	fuel consumption
r/min	kW	N. m	r/min	kW	N. m	g/kW.h
1545	665	3926	1545	665	4111	210.5
1500	646	4113	1500	605	3852	208.8
1400	628	4284	1400	495	3375	207.5
1300	598	4393	1300	396	2910	206.6
1200	565	4496	1200	312	2480	206.4
1100	519	4506	1100	240	2084	209.2
1000	473	4517	1000	180	1722	214.3
900	428	4542	900	131	1395	220.1
800	376	4489	800	92	1102	226.3
700	323	4407	700	62	844	237.6

remark: ★The measurement of rated power&speed is according to standard reference condition under ISO 8665 (atmospheric pressure 100kpa, ambient temperature 25°C, Relative humidity 30%, intercooler inlet temperature 25°C),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°C, Relative humidity 60%, intercooler inlet temperature 32°C),without any accessories, the guaranteed max power after running-in

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

## 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
Cooling system.....	Seawater-fresh water 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	2551×1265×1898
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
infeed.....°	15
Incline& trim.....°	5
swing rolling.....°	22.5
pitch.....°	7.5

### ★power output interface

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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      self-suction=2m; suction duration≤35s  
 rpm n=3000rpm, flow Q≥27m<sup>3</sup>/h,      lift H=15m;

★**alternator**

rated power 1500W      rated voltage 28V  
 rated speed 3500r/min      rated current 54A  
 connection mode: double

★**starter**

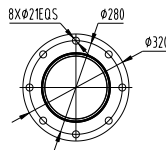
rated power: 13kW      rotation direction: clockwise(from drive end)  
 rated voltage: 24V      connection mode: double

★**Air starting motor**

rated power: 17kW      rated speed: 2100r/min  
 air pressure: 0.7-0.9Mpa      air consumption: ≤240L/S  
 control voltage: DC24V      rotation direction: clockwise(from drive end)

★**instrument system**

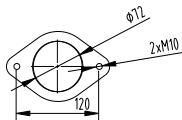
low oil pressure alarm value: 0.25MPa      over speed alarm value:115% rated speed  
 Low oil pressure stop value: 0.20MPa      over speed stop value:120% rated speed  
 High water temp alarm value: 90°C      High oil temp alarm value: 110°C  
 Electromagnet: DC24V N.0 type



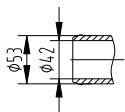
★**exhaust pipe outlet size(bellow)**

★**cooling system**

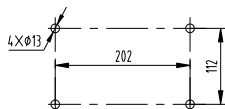
seawater inlet flange size



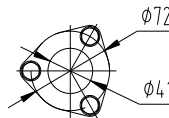
Seawater pump inlet size



Seawater pump install footing size

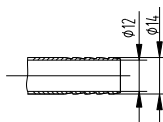


Seawater pump outlet size

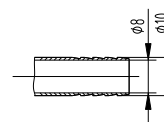


★**fuel system**

Fuel transfer pump inlet pipe size



fuel pump return pipe size



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