

Powercity®

Marine Power Train System

Efficient • Reliable • intelligent



PPS-280D

Marine Engine

The D series engine is a new generation diesel engine meticulously crafted by SDEC using advanced European and American engine technology, in conjunction with AVL and SWRI (Southwest Research Institute), and in accordance with North American heavy-duty diesel engine standards. It is an outstanding representative of the technologically advanced mature models with similar displacement in China, and the social inventory of this series of products exceeds 1 million units. This series (D683) marine diesel engine is developed based on the needs of high-speed boats in China. It has advantages such as compact structure, strong power, good economy, and low vibration and noise. It can meet various application in high-speed patrol boats, yachts, traffic boats, work boats, as well as ships such as passenger ships and ferries, as well as the 100-150KW marine generator set market.



Product Features

- Optimized designed combustion chamber, 6-hole high-pressure fuel injector, and an efficient swirl ratio airway improves combustion efficiency, with a minimum fuel consumption of 196g/kW·h, which is 10-15% lower than similar products.
- Designed according to the North American heavy-duty diesel engine standard of 180bar explosion pressure, it has a high power density, a torque reserve coefficient of up to 40%, strong power, good adaptability to working conditions, and fast load response.
- High strength engine body, wet alloy cylinder liner, forged and strengthened crankshaft, with high reliability.
- Water cooled turbocharger and exhaust manifold design, cold start temperature can reach -15 °C, without any intake auxiliary heating device, good environmental adaptability.
- Integrated design, compact overall structure, light weight, small overall size, more convenient cabin layout, 20% fewer components than mature products with the same displacement, and convenient maintenance.



ISO9001:2015 system certification
 ISO/TS16949:2002 System Certification
 ISO9001:2008 system certification
 Quality System Certification
 Environmental System Certification
 Occupational Health Certification
 CCS ship inspection certificate
 IMO: Emissions Certification
 LL-C system certification

Marine Gearbox

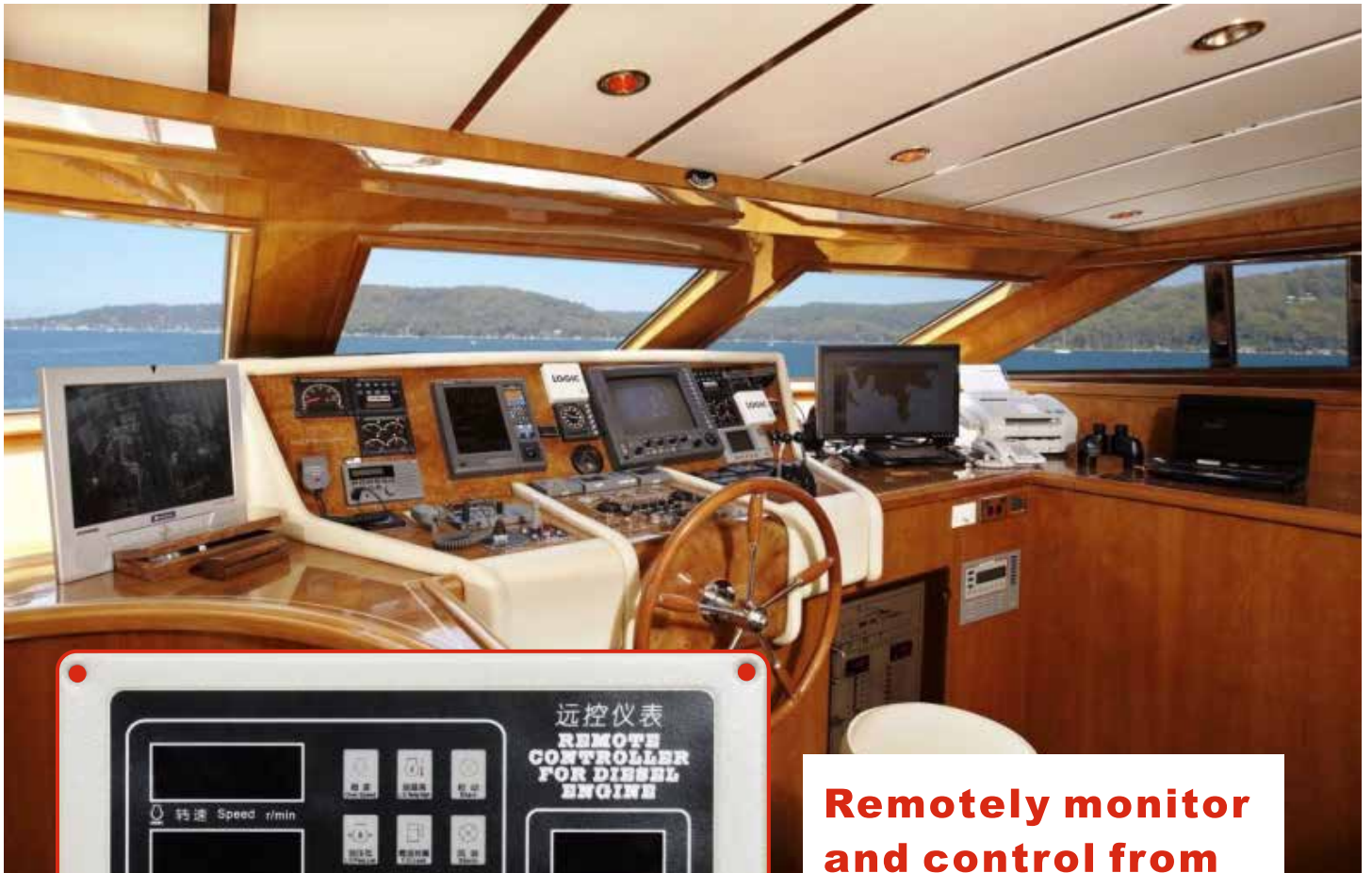
Compliant with CB/T 3003-2011 standard and certified by CCS (China Classification Society). Certifications from major international classification societies are also available upon request.

Integrates speed reduction, forward/reverse clutch, and propeller thrust bearing functions. Delivers $\geq 96\%$ mechanical efficiency, 60kN rated thrust, and an overhaul interval exceeding 10,000 hours.

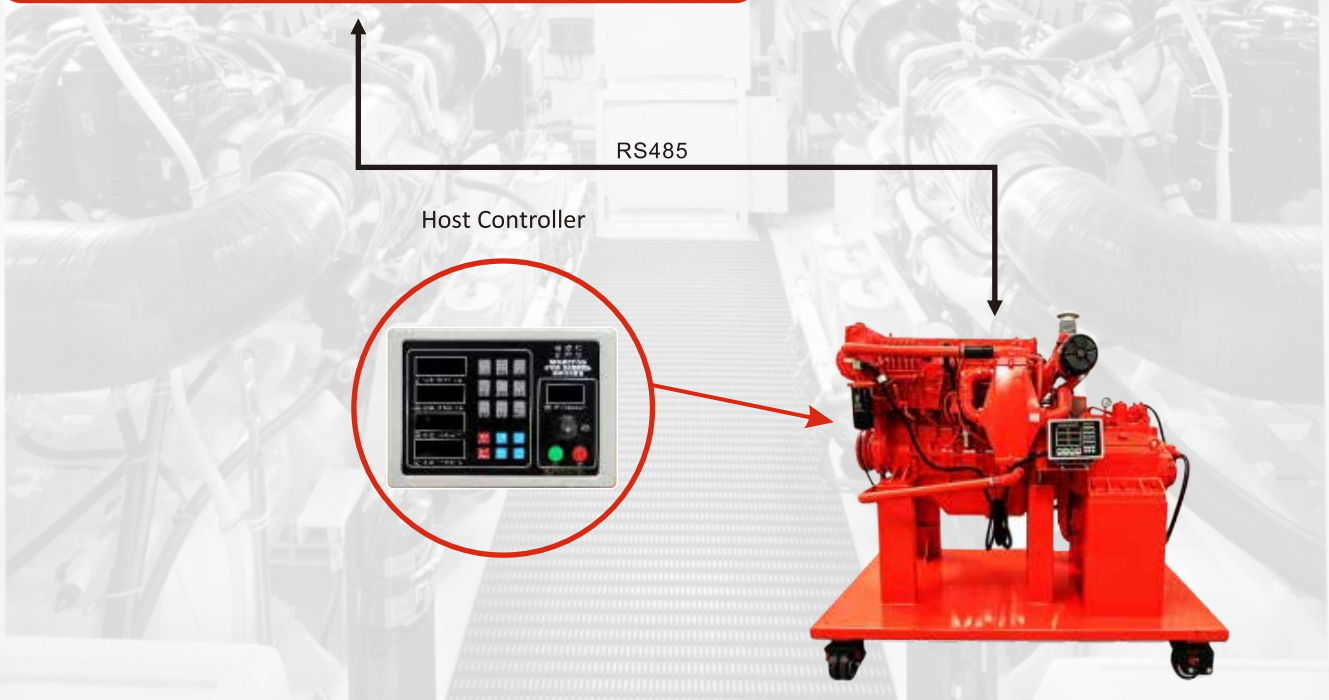
Featuring a compact, robust design, flexible control options, and easy maintenance.

Compatible with 125-642.5kW diesel engines, it is the ideal power transmission solution for all types of medium and large vessels in inland and coastal waters.



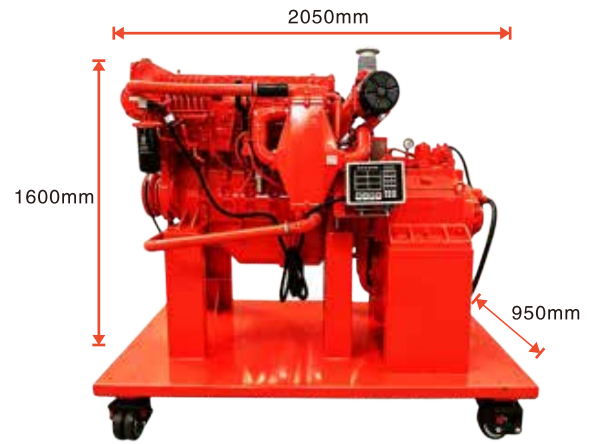


Remotely monitor and control from the Captain's bridge through Ed211 Remote Monitoring Module.



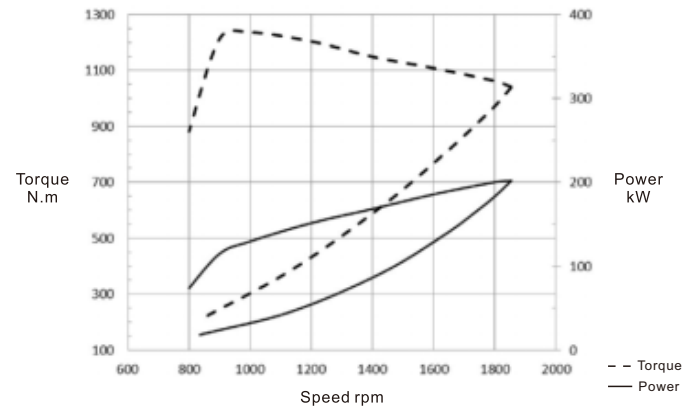
Specifications

Model	PPS-280D
Engine Model	SC9D280.18CA1
Usage	Marine Propulsion
Type	Turbocharge and intercooling
Displacement	8.82L
Rated power/speed	202/1800 kW/r/min
Overload power/speed	223/1854 kW/r/min
Bore X Stroke	114 X 144mm
Minimum fuel consumption rate	195g/kW.h
Starting method	Electric start
Noise	≤ 105dB(A)
Engine oil consumption rate	0.4g/kW.h
Cylinder No.	6
Fuel system	Mechanical
Average piston speed	10.80m/s
Ignition Order	1-5-3-6-2-4
Max temp of inlet fuel	45°C
Max temp of return fuel	84°C
Air intake pressure	200kpa
Air intake flow	1800kg/h
Exhaust flow	1850kg/h
Exhaust temp	≤ 500°C
Open temp of thermostat	82°C
Full-open temp of thermostat	93°C
Crankshaft Rotation	Anticlockwise
Max allowable air inlet restriction	6kpa
Max allowable air outlet restriction	8kpa
Oil pan capacity	25L
Marine Gearbox Model	D300A
Rated Input Speed	1000~2500RPM
Ratio	4.00
Rate	0.345hp/rpm
Options/Comments	PTO device available (except ratio 7.63:1); Mechanical orelectricalremote control
Centre distance	355mm
Reted propeller thrust	60KN
Mechanical Efficiency	≥ 96%
Reversal Time	≤ 10s
Hydraulic Oil Pres.	1.2~1.4MPa
Oil Brand	SD/CC30 SD/CC40 or SAE30
Oil Capacity	~13kg
Oil Temperature	≤ 80°C
Consumption of Cooling Water	≥ 3 t/h
Permissible Inclination	10°in longitudinal, 15°transversal
Overhaul	10000h

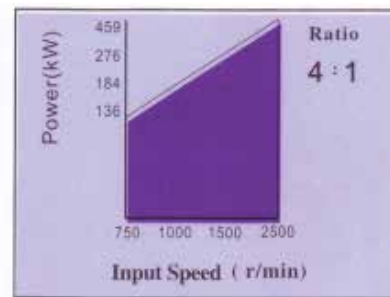


2050 X 950 X 1600mm
Net Weight:1600kg

▶ Propelling characteristic curve



▶ Capacity Chart of Marine Gearbox Model D300A



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