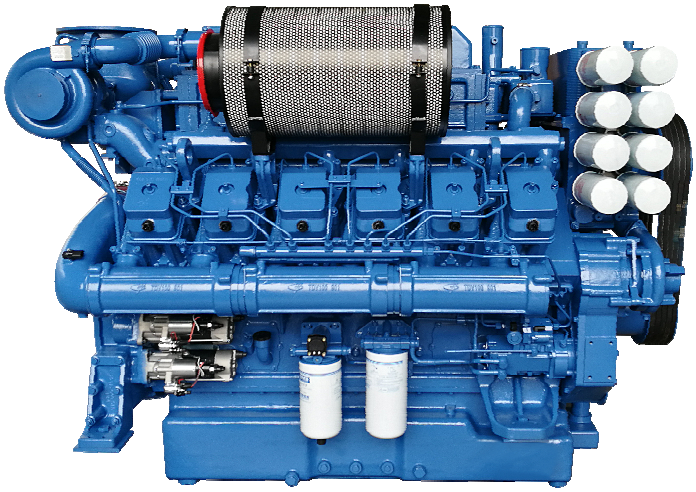
YC12VTD1680-D30

Version No.: 2020V01 Implemented on Apr. 1,2020

Prime power: 1120kW @ 1500 r/min

Standby power: 1230 kW @ 1500 r/min

Emission standards followed: GB 20891-2014 Stage III



Introduction

The YC12VTD-D30 engine is independently developed based on domestic and foreign advanced technologies of large engines.Equipped with the high pressure common rail system, four-valve structure, turbocharger, intercooler, etc. and optimized and verified by the advanced combustion development technology of Yuchai, the engine is characterized by high energy efficiency, reliability, loading capacity and maintainability.

Product Features

- Four-valve design, which ensures adequate intake air; middle fuel injector, which achieves more sufficient fuel-air mixing and more complete combustion.
- Mature turbocharging and intercooling technology, which ensures adequate and stable air intake under each loading condition, and wide working range for economical fuel consumption.
- China III emission, imported ECU and high pressure common rail system, ensuring a great potential for emission upgrade.
- V-shaped cylinder block of mesh reinforcement structure and high-strength alloy crankshaft connecting rod, ensuring high reliability.
- Application of general parts, high serialization degree and "one-cylinder and one-head" structure, ensuring a low overall maintenance cost.

Product Service

- Service: Yuchai has established a service network with the largest scale, smallest service radius, longest warranty mileage and shortest response time in the industry, set up 49 offices including 14 overseas offices in Europe, Africa, South America, etc.,108 overseas service agents as well as more than 3,000 service stations and 5,000 parts sales outlets, and appointed more than 100 electronic control service engineers overseas to provide users with sincere satisfactory services.
- 24h global service hotline: +86 95098.

Engine speed	Application	Standard generator unit output		Engine power			
				Total power		Net power	
r/min		kVA	kW	kW	Ps	kW	Ps
1500	Prime	1250	1000	1120	1524	1060	1442
	Standby	1375	1100	1230	1673	1170	1592

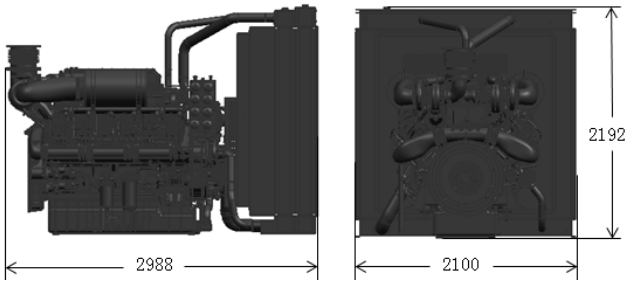
✧ Notes:

1. **Prime Power**: corresponding to the basic power (PRP) described in ISO 8528. The annual operating time of engine will be unrestrictedly the maximum power of continuous output of variable loads when the engine is maintained according to the maintenance interval and method provided by Yuchai. The allowable average output power within 24h shall not be more than 70% of the prime power.

   Standby Power: corresponding to the emergency standby power (ESP) stated in ISO 8528. When the engine is maintained according to the maintenance interval and method provided by Yuchai, the maximum power in a series of variable powers that the engine may achieve in every 200h operation in every year under the condition of failure of the public supply network or under the testing condition. The allowable average output power during the 24h operation period shall be not more than 70% of the standby power.
2. The engine power data stated in the table is the performance parameters measured under the condition stated in ISO 8528-1 and ISO 3046.
3. The power output of the generator set is calculated according to the efficiency of the AC generator. Thus, it is for reference only.
4. The kVA value is calculated as per the standard power factor 0.8.
5. The information mentioned above is the latest; however, the relevant information may be altered after publication.

Engine load	1500 r/min	
	g/（kW·h）	L/h
Standby power	208.5	307.6
Prime power	210.2	281.9
75% common	215.0	216.3
50% common	231.4	143.1

Remarks: the diesel oil density is 0.835g/cm^3.



Technical parameters

Type	Vertical, V-type, water-cooled, four-stroke
Induction system	Turbocharged & Intercooled
Type of combustion chamber	Direct-injection reentrant ω combustion chamber
Cylinder quantity - Bore × stroke	12-152×180mm
Number of valve per cylinder.	4
Displacement	39.2L
Compression ratio	14:1
Cylinder type	Wet-type cylinder sleeve
Working sequence	A(1)-B(2)-A(5)-B(4)-A(3)-B(1)-A(6)-B(5)-A(2)-B(3)-A(4)-B(6)-A(1)(Viewed from the front end: numbered starting from 1, with B for left side, and A for right side)
Fuel supply system	Common Rail
Lubrication mode	Combination of pressure and splash
Starting mode	Electronic
Engine oil capacity	210L
Engine oil and fuel consumption ratio	≤0.3%
Rotation	Anticlockwise (facing the power delivery end)
Minimum no-load speed.	(600～650) r/min
Speed-regulation grade	ISO 8528 G3
Noise *Lp*	/
Total dry weight	
Engine	4200kg
Radiator	860kg

The final weight and sizes of the engine varies according to the specific arrangement.

Engine Arrangement

Air Intake system

Air filter

Cooling system

Intercooler

Radiator (optional)

Electrical device

24 V starter

DC Generator

Fuel system

Common rail system

Fuel filter

Lubrication system

Oil filter

Flywheel and flywheel housing

SAE 18″ flywheel

SAE #0 flywheel housing

Document

Operation Instruction

Installation Guide

Parts Catalog

Fuel grade: Summer: 0# and 10# ordinary diesel oil of GB 252-2015 premium grade or first grade. Winter: 0#, -10#, -20#, and -35# ordinary diesel oil of GB 252-2015 premium grade or first grade.

Oil brand: 15W-40 in summer; 10W-30 or other environmentally suitable diesel engine oils with the quality grade not lower than Grade CH-4 as provided in GB 11122-2006 in winter.