YC4A180L-D20

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

Prime power: 120kW @ 1500r/min

Standby power: 132kW @ 1500r/min

For customers in regions where emission regulations have not been implemented



(Image shown may not reflect actual engine)

Introduction

YC4A series engine is a classic power product developed by Yuchai, which gains high brand awareness and market recognition, with a market volume of more than 400,000 sets. Additionally, the engine for YC4A180L-D20 generator set developed on the basis of this engine is reliable, durable, energy saving and environmental protecting, compact in structure, strong in transient loading capacity, and easy to maintain.

Product Features

- The engine body and other main structures are well-tested, ensuring high reliability of the whole engine.
- crankshaft tortional vibration damper optimize，Reduce the torsional vibration of shafting.
- Structural optimization of damping and damping gear and gear chamber，Machine low noise。
- Adopt advanced and mature high efficiency supercharging technology，Air intake enough，Ensure the diesel engine under different loads, full combustion, low fuel consumption, less emissions.
- When adopting electronic speed regulation, it can meet the requirements of G3 grade of generator set performance.

Product Service

- Service: Yuchai has built the largest service network in the industry with the minimum service radius, the most extensive “three guarantees” and the shortest response time. It has also established 49 global offices, including 14 overseas offices covering Europe, Africa and South America .We have established 108 overseas service agencies, more than 3,000 service stations and more than 5,000 parts sales outlets to provide satisfactory service to users..
- 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	125	100	120	163	114	155
	Standby	137	110	132	180	126	171

✧ 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.

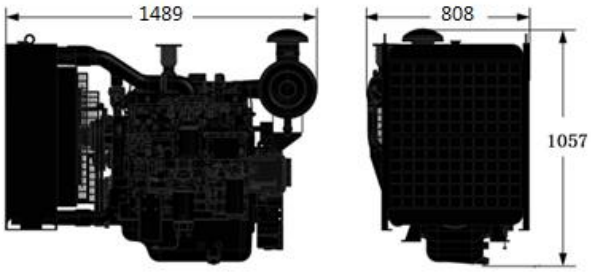
Engine load	1500 r/min	
	g/（kW·h）	L/h
Standby power	213.6	33.8
Prime power	208.2	29.9
75% common power	200.6	21.6
50% common power	201.6	14.5

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

Technical parameters

Type	Vertical, in-line, water-cooled, four-stroke
Induction system	Turbocharged & Intercooled
Type of combustion chamber	Direct-injection reentrant ω combustion chamber
Cylinder quantity - Bore × stroke	4-108×132mm
Number of valve per cylinder.	2
Displacement	4.84L
Compression ratio	17.5:1
Cylinder type	Wet-type cylinder sleeve
Working sequence	1-3-4-2
Fuel supply system	Mechanical pump + electronic speed regulation
Lubrication mode	Combination of pressure and splash
Starting mode	Electronic
Engine oil capacity	17L (dry-type engine)
Engine oil and fuel consumption ratio	≤0.2%
Rotation	Anticlockwise (facing the power delivery end)
Minimum no-load speed.	600～650 r/min
Speed-regulation grade	ISO 8528 G3
Noise *Lp*	≤96dB(A)
Total dry weight	
Engine	465kg
Radiator	75kg

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



Engine Arrangement

Air Intake system

Air filter

Cooling system

Radiator cooler (optional)

Electrical device

24V/12V electrical system

Inlet preheater (optional)

Fuel system

Mechanical pump + electronic speed regulation

Fuel filter

Lubrication system

Oil filter

Flywheel and flywheel housing

SAE 11.5″ flywheel

SAE #3 flywheel housing

Document

Operation and Maintenance Manual

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.