



Technical Specifications

WP10D200E201

WEICHAI

WEICHAI POWER CO., LTD.
www.weichai.com





Brief Description

We compile the technical specifications in order to maximize customer satisfaction.

WP10 series diesel engine was developed based on STEYR series diesel engine .

WP10D200E201 is one type of turbocharger centering structure generating diesel engine, which developed in 2012.

Manufactured by the WEICHAI POWER CO. , LTD.



WEICHAI

Authorized Distributor and
Spare Parts Center for
Ecuador / Southamerica





二、柴油机主要技図参数 (Main technical parameters)

柴油机型号： Diesel Model	WP10D200E201
柴油机型式： Type	直列、4冲程、干式缸套、直図、水冷、 In-line、4-Strokes、Dry-cylinder liner、direct injection、Water cooled、
气缸数/气図数： No. of cylinders / valves	6/12
缸径/行程： Bore/Stroke	126mm/130mm
図比： Compression Ratio	17 : 1
排量： Displacement	9.726L
定功率： Rated Power	182kW
超図荷功率： Overload Power	200kW
定図速： Rated Speed	1800r/min





怠速速:	650± 50 r/min
Idle Speed	
火循序:	1-5-3-6-2-4
Fire Sequence	
曲旋方向	逆 (从端看)
Crankshaft Rotating Direction	Counterclockwise facing flywheel
启动方式:	DC24V 电动
Starting method	DC24V Electrical Start
起机功率/电压:	5.4kW/24V
Starting motor Power/voltage	
速方式:	子速/机械速
Governing control	Electrical / Mechanical speed governor
冷却方式:	水冷
Cooling mode	water cooled
允许机体运行的最低冷却液温度:	
Min. coolant temperature of engine working	40
机本身冷却液容量:	
Coolant capacity	22L





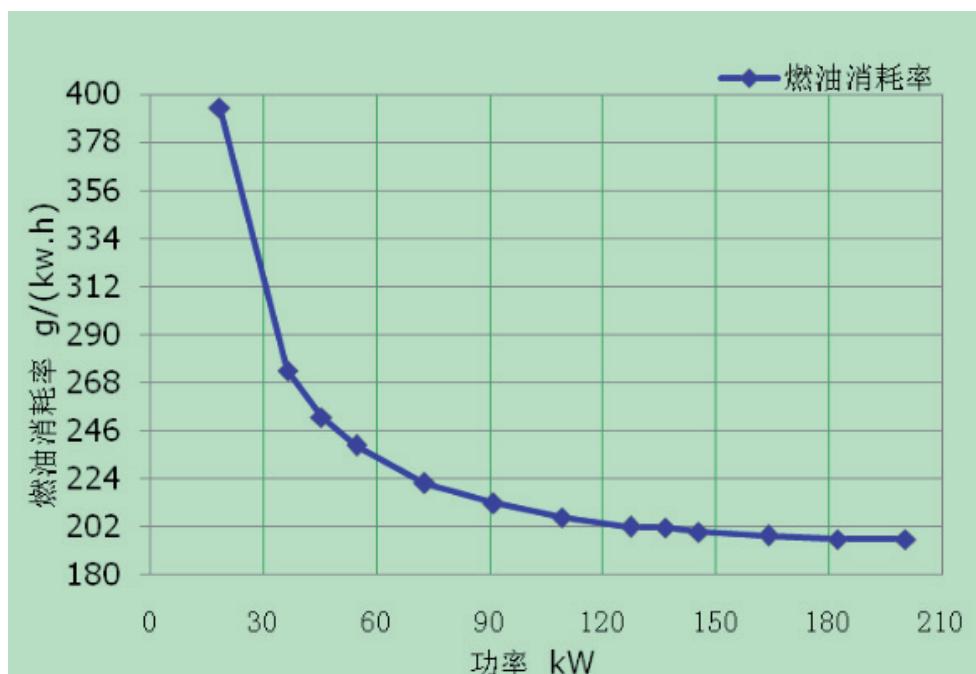
油底口容量： The capacity of oil sump	24L (以油尺为准) 24L(follow the oil dipstick)
口机重 (kg) : Net weight	875
外形尺寸 (长×宽×高) (mm) : Size of shape (length× width× height) :	2088× 1040× 1493 (外形图) 2088× 1040× 1493 (outline drawing)

三、柴油机主要性能参数(Main performance parameters)

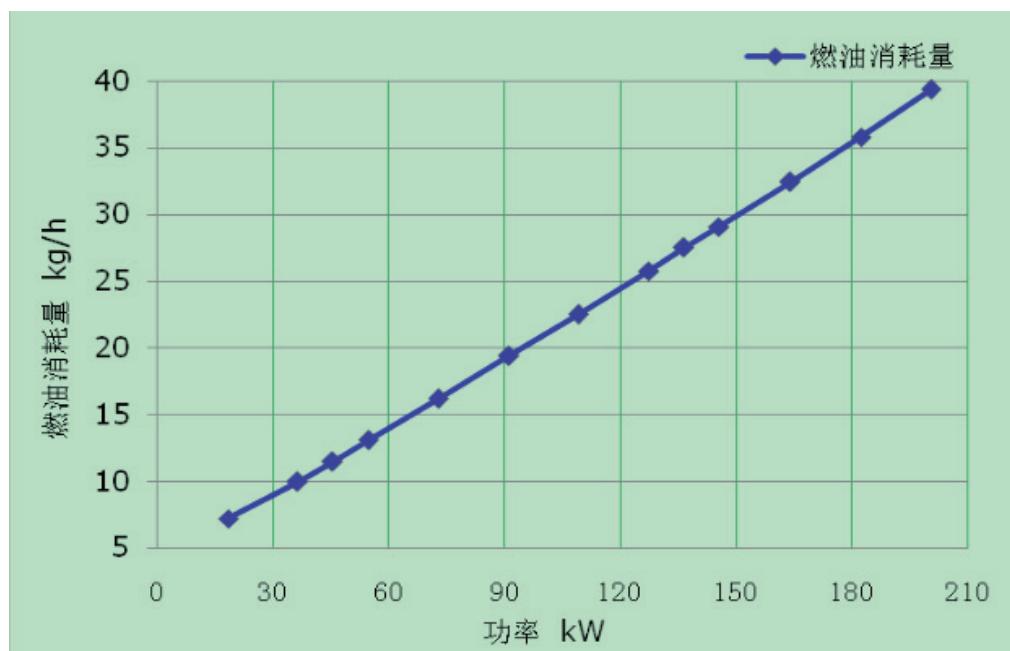
口速率: Steady governing rate	口子:≤ 3%;机械:≤ 5% Electronic:≤ 3%; mechanical≤ 5%
口定速波动率: Rated speed fluctuation rate	≤ 0.5%
怠速波动率: Idling speed fluctuation rate	≤ 2.5%
口定工况燃油耗: Fuel consumption at rated working condition	≤ 215g/kW· h
机油燃油消耗比: Consume ratio of oil and fuel	≤ 0.2%



燃油消耗率/specific fuel consumption



燃油消耗量/fuel consumption





四、 推荐柴油机配套使用参数 (Recommended used diesel engine parameters)

功率出口:	SAE1 号飞轮/11.5 # 飞轮
Power output:	SAE1 flywheel housing /11.5 # flywheel
空滤器流量 :	$\geq 1327 \text{kg/h}$
Air filter flow	
最小气管直径:	100mm
Min. diameter of intake pipe	
排气管最小直径:	100mm
Min. diameter of exhaust pipe	
允许最大排气背压:	$6 \pm 0.5 \text{kPa}$
Max. exhaust back pressure	
最大排气温度 (出口后) :	600
Max. exhaust temperature (After the turbocharger)	
增压器法兰允许的最大弯矩:	10N· m
Max. bending moment of turbocharger flange	





机油压力低报警:	80 kPa
Alarm value of low oil temperature	
机油压力高报警:	1000kPa
Alarm value of high oil temperature	
出水管水温报警温度:	98± 2
Alarm value of water outlet temperature	
速度高报警	110%定速
Alarm value of high speed	110% rated speed
机油压力低停机	40kPa
Stopping value of low oil pressure	
速度高停机	115%定速
Stopping value of high speed	115% rated speed
燃油油管最小直径:	12mm
Min. diameter of fuel inlet pipe	
燃油回油管最小直径:	12mm
Min. diameter of fuel return pipe	
柴油机外部冷却系阻力(定工况):	
Cooling system resistance of engine external (Rated working condition)	50kPa





热平衡试验数据 (环境温度: 试验测量值 42.0°C)		
发动机进出水压力 (kPa)	额定工况	进水压力: 5.3\出水压力: 21.7
	超负荷工况	进水压力: 5.7\出水压力: 21.4
冷却液流量 (m³/h)	额定工况	17.1
	超负荷工况	17.0
发动机进出水温度 (°C)	额定工况	进水温度: 77.2\出水温度: 73.4
	超负荷工况	进水温度: 78.5\出水温度: 74.5
中冷器前后温度 (°C)	额定工况	中冷前气温: 122.0\中冷后气温: 52.4
	超负荷工况	中冷前气温: 131.1\中冷后气温: 51.5
中冷器前后压力 (kPa)	额定工况	中冷前气压: 99.5\中冷后气压: 98.2
	超负荷工况	中冷前气压: 112.7\中冷后气压: 111.2
冷却液带走的热量 (kJ/s)	额定工况	76.2
	超负荷工况	79.4
中冷器散热量 (kJ/s)	额定工况	20.9
	超负荷工况	25.4
排气带走的热量 (kJ/s)	额定工况	126.2
	超负荷工况	138.3
发动机总散热量 (kJ/s)	额定工况	414.3
	超负荷工况	454.9

Data of thermal equilibrium(environment temperature: 42.0 °C)		
the pressure of water into and out of diesel (kPa)	Declared working condition	5.3/21.7
	Overload working condition	5.7/21.4
flux of cooling fluid (m³/h)	Declared working condition	17.1
	Overload working condition	17.0
the temperature of water into and out of diesel (°C)	Declared working condition	77.2 / 73.4
	Overload working condition	78.5 / 74.5
the temperature of water into and out of intercooler (°C)	Declared working condition	122.0 / 52.4
	Overload working condition	131.1 / 51.5
the pressure of water into and out of intercooler (kPa)	Declared working condition	99.5 / 98.2
	Overload working condition	112.7 / 111.2
calorie brought out by cooling fluid (Kj/s)	Declared working condition	76.2
	Overload working condition	79.4
calorie brought out by intercooler (Kj/s)	Declared working condition	20.9
	Overload working condition	25.4
Calorie brought out by exhaust system (Kj/s)	Declared working condition	126.2
	Overload working condition	138.3





total calorie brought out (Kj/s)	Declared working condition	414.3
	Overload working condition	454.9

五、 柴油机使用环境 (Ambiance condition)

1. 柴油机在下列条件下，能输出定功率：

The diesel engine should be able to output rated power in the following conditions.

a) 大气压力, PX : 100kPa (或海拔高度 0 米) ;

Atmospheric pressure, PX: 100kPa (or 0 meter above sea level);

b) 环境温度, Tr : 298K (25) ;

Ambiance temperature , Tr: 298K(25) ;

c) 空气相对湿度Φ r : 30%。

Relative air humidityΦ r : 30%。

2. 柴油机在下列条件下，能可靠地工作：

The diesel engine should be able to work continuously and reliably in the following conditions.

a) 环境温度：下限-30 , 上限 50 ;

Range of ambiance temperature: $-30 \leq T \leq 50$;

b) 空气相对湿度：最湿月平均最高相对湿度 90% (指月的月平均最低温度 25)

Relative air humidity : the max relative humidity is 90% of the wettest month in a year (It means that the lowest average temperature of this month is 25)

d) 工作环境中无爆炸性气体、无尘埃。





The working environment should be without explosive gas and electric mote.

e) 工作环境如有任何特殊的危险条件（如爆炸大气环境和易燃气体）用以说明。

The customer should illuminate in advance if there has any especial and dangerous condition at the working space (for example, explosive and flammable gas).

六、 柴油机供范围 (Scope of supply of diesel engine)

■ 用柴油机/ Generating Diesel engine	1 台
空滤器/ Air filter	1 件
机安装支架/ Bracket	4 件
充气机/ Charging alternator	1 件
起动机/ Starter	1 件
消音器 /Muffler	1 件
散热量器 /Radiator	1 件



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