



Technical Specifications

WP12D317E201
(WP12B288E201)

WEICHAI

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





Brief Description

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

WP12D(B)317(288) is type of turbocharger centering structure generating diesel engine, which developed in 2012.

WP: WEICHAI POWER

12: 11.6 LITER ENGINE

D: Generating Set Engine.

B: For Industrial stationary application (eg. Water pumping).

E201: Engine factory setting at 1800RPM

288: Continuous Power for industrial application 288kW (386BHP).

317: StandBy Power for Generating Sets Application 317kW (425BHP).

Manufactured by the WEICHAI POWER CO. , LTD.



WEICHAI

Authorized Distributor and
Service Center for
Ecuador /Southamerica





二、柴油机主要技术参数 (Main technical parameters)

柴油机型号： Diesel Model	WP12D317E201 WP12B288E201
柴油机型式： Type	直列、4冲程、水冷、增压中冷 In-line、4-Stroke、Water cooled、Turbocharged and Intercooled
气缸数/气门数： No. of cylinders / valves	6/12
缸径/行程： Bore/Stroke	126mm/155mm
压缩比： Compression Ratio	17 : 1
排量： Displacement	11.596L
额定功率： Rated Power	288kW
超负荷功率： Overload Power	317kW
额定转速： Rated Speed	1800r/min





怠速 \boxtimes 速: Idle Speed	650 \pm 50 r/min
\boxtimes 火循序: Fire Sequence	1-5-3-6-2-4
曲 \boxtimes 旋 \boxtimes 方向 Crankshaft Rotating Direction	逆 $\boxtimes\boxtimes$ (从 $\boxtimes\boxtimes$ 端看) Counterclockwise facing flywheel
$\boxtimes\boxtimes$ 方式: Starting method	DC24V $\boxtimes\boxtimes\boxtimes$ DC24V Electrical Start
起 \boxtimes 机功率/ $\boxtimes\boxtimes$: Starting motor Power/voltage	5.4kW/24V
\boxtimes 速方式: Governing control	\boxtimes 子 \boxtimes 速/机械 \boxtimes 速 Electrical / Mechanical speed governor
冷却方式: Cooling mode	水冷 water cooled
允 \boxtimes 机体 \boxtimes 行的最低冷却液温度: Min. coolant temperature of engine working	25
$\boxtimes\boxtimes$ 机本身冷却液容量: Coolant capacity	25L





油底容量： The capacity of oil sump	24L (以油尺为准) 24L(follow the oil dipstick)
机重 (kg)： Net weight	1050
外形尺寸 (长×宽×高) (mm)： Size of shape (length× width× height)：	2087× 1080× 1539 (外形图) 2087× 1080× 1539 (outline drawing)

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

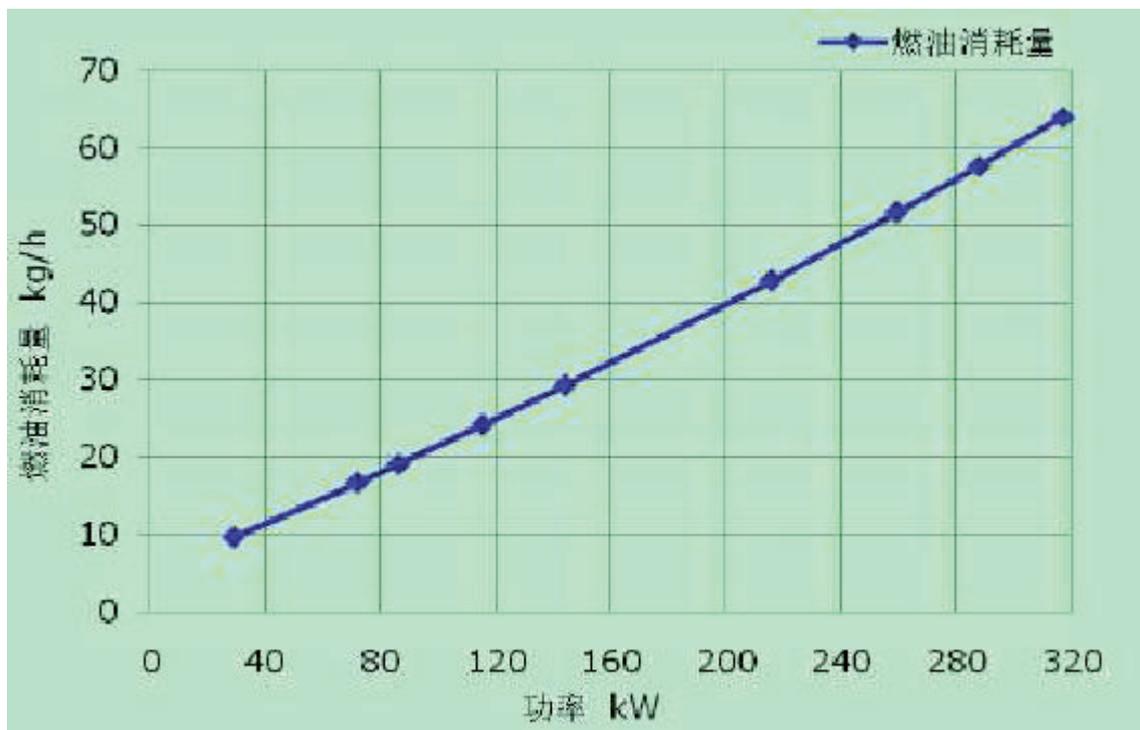
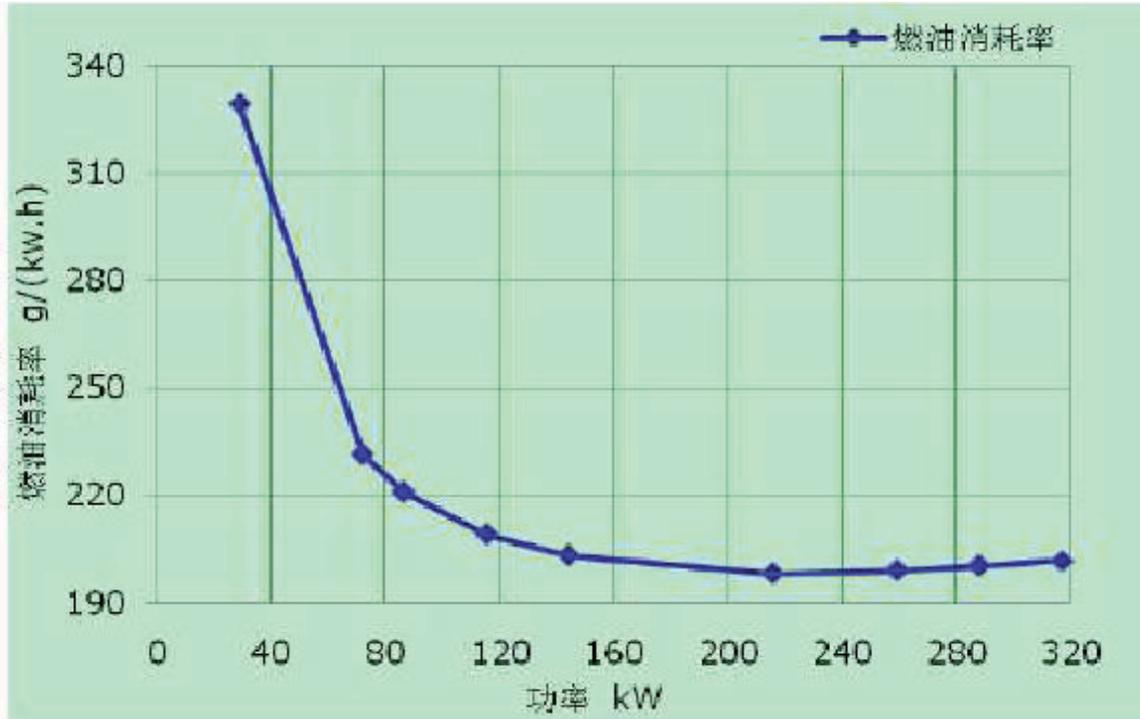
稳速率： Steady governing rate	电子：≤ 3%；机械：≤ 5% Electronic:≤ 3%；mechanical≤ 5%
额定转速波动率： Rated speed fluctuation rate	≤ 0.5%
怠速转速波动率： Idling speed fluctuation rate	≤ 2.5%
额定工况燃油耗： Fuel consumption at rated working condition	≤ 210g/kW· h
机油燃油消耗比： Consume ratio of oil and fuel	≤ 0.2%





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





力出口: Power output:	SAE1 号/11.5 # SAE1 flywheel housing /11.5 # flywheel
空器流量: Air filter flow	$\geq 1987\text{kg/h}$
最小气管直径: Min. diameter of intake pipe	100mm
排气管最小直径: Min. diameter of exhaust pipe	100mm
允最大排气背: Max. exhaust back pressure	$6 \pm 0.5\text{kPa}$
最大排气温度 (后): Max. exhaust temperature (After the turbocharger)	600
增器法允的最大弯矩: Max. bending moment of turbocharger flange	$10\text{N} \cdot \text{m}$
机油力低警: Alarm value of low oil temperature	80 kPa
机油力高警: Alarm value of high oil temperature	120kPa





在机运行 30s 以后始测机油力 Please measure oil pressure after running 30s	
出水管水温警温度: Alarm value of water outlet temperature	97
速高停 Stopping value of high speed	115%定速 115% rated speed
燃油油管最小直径: Min. diameter of fuel inlet pipe	12mm
燃油回油管最小直径: Min. diameter of fuel return pipe	12mm
柴油机外部允的冷却系阻力(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 41.0℃）		
发动机进出水压力（kPa）	额定工况	进水压力：9.8\出水压力：11.9
	超负荷工况	进水压力：10.2\出水压力：12.4
冷却液流量（m ³ /h）	额定工况	15.3
	超负荷工况	15.9
发动机进出水温度（℃）	额定工况	进水温度：86.9\出水温度：92.1
	超负荷工况	进水温度：88.6\出水温度：92.7
中冷器前后温度（℃）	额定工况	中冷前气温：164.3\中冷后气温：51.0
	超负荷工况	中冷前气温：172.7\中冷后气温：56.1
中冷器前后压力（kPa）	额定工况	中冷前气压：155.9\中冷后气压：154.1
	超负荷工况	中冷前气压：172.7\中冷后气压：171.5
冷却液带走的热量（kJ/s）	额定工况	107.0
	超负荷工况	124.4
中冷器散热量（kJ/s）	额定工况	49.3
	超负荷工况	56.6
排气带走的热量（kJ/s）	额定工况	225.7
	超负荷工况	252.8
发动机总散热量（kJ/s）	额定工况	677.4
	超负荷工况	753.2





Data of thermal equilibrium(entrionment temperature:44.2℃)		
the pressure of water into and out aof diesel (kPa)	Declared working condition	9.8/11.9 ⁺
	Overload working condition	10.2/12.4 ⁺
flux of cooling fluid(m ³ /h)	Declared working condition	15.3 ⁺
	Overload working condition	15.9 ⁺
the temperature of water into and out of diesel (℃)	Declared working condition	86.9/92.1 ⁺
	Overload working condition	88.6/92.7 ⁺
the temperature of water into and out of intercooler(℃)	Declared working condition	164.3/51 ⁺
	Overload working condition	172.7/56.1 ⁺
the pressure of waterinto and out of intercooler(kPa)	Declared working condition	155.9/154.1 ⁺
	Overload working condition	172.7/171.5 ⁺
calorie brought out by cooling fluid (Kj/s)	Declared working condition	107 ⁺
	Overload working condition	124.4 ⁺
calorie brought out by intercooler (Kj/s)	Declared working condition	49.3 ⁺
	Overload working condition	56.6 ⁺
calorie brought out by exhaust system (Kj/s)	Declared working condition	225.7 ⁺
	Overload working condition	252.8 ⁺
total calorie brought out (Kj/s)	Declared working condition	677.4 ⁺
	Overload working condition	753.2 ⁺

五、 柴油机使用环境 (Ambiance condition)

1. 柴油机在下列条件下， 能出定功率：

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 humidity Φ_r : 30%。

2. 柴油机在下列条件下, 能连续并可靠地工作:

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% (指该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) 用客户提前加以说明。

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
空器/ Air filter	1 件
机安装支架/ Bracket	4 件
充机/ Charging alternator	1 件
起机/ Starter	1 件
消音器 /Muffler	1 件
散热器 /Radiator	1 件

