Technical Specifications
WP6-B144

WEICHAI

WEICHAI POWER CO., LTD.
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Brief Description

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

WP6-B144E201 is one type of turbocharger centering structure generating diesel engine， which developed in 2012.

WEICHAI
Authorized Distributor and
Spare Parts Center for
Ecuador / Southamerica

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

柴油机型号： Diesel Model	WP6-B144 (WP6D158E201)
柴油机型式： Type	直列、4 冲程、水冷、湿式缸套、增□中冷 In-line、4-Strokes、Water cooled、Wet cylinder liner、Turbocharged and Intercooled
气缸数/气□数： No. of cylinders / valves	6/12
缸径/行程： Bore/Stroke	105mm/130mm
□□比： Compression Ratio	18 ：1
排量： Displacement	6.75L
□定功率： Rated Power	144kW
超□荷功率: Overload Power	158kW
□定□速: Rated Speed	1800r/min

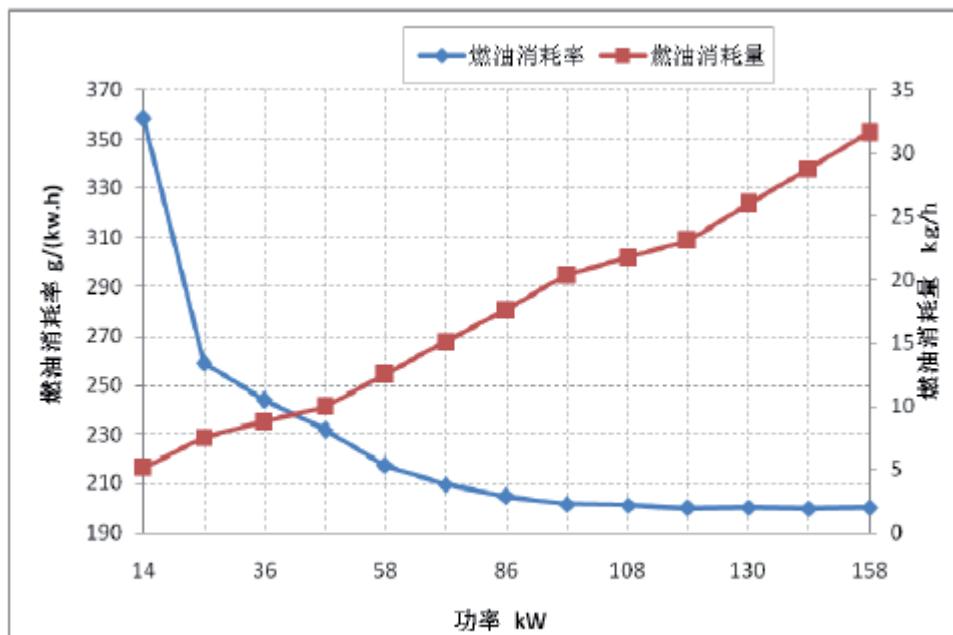| 怠速□速: Idle Speed	650± 25 r/min
□火循序: Fire Sequence	1-5-3-6-2-4
曲□旋□方向 Crankshaft Rotating Direction	逆□□（从□□端看） Counterclockwise facing flywheel
□□方式： Starting method	DC24V □□□ DC24V Electrical Start
起□机功率/□□: Starting motor Power/voltage	6kW/24V
□速方式： Governing control	□子□速/机械□速 Electrical / Mechanical speed governor
冷却方式： Cooling mode	□式水冷 Closed water cooled
允□机体□行的最低冷却液温度: Min. coolant temperature of engine working	50
□□机本身冷却液容量: Coolant capacity	8L

油底壳容量： The capacity of oil sump	18L（以油标尺为准） 18L(follow the oil dipstick)
发动机净重（kg）： Net weight	630± 50
外形尺寸（长×宽×高）（ mm）： Size of shape (length× width× height) :	1802× 803× 1264（见外形图） 1802× 803× 1264 (outline drawing)

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

稳定调速率: 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	≤ 205g/kW· h± 3%
机油燃油消耗比: Consume ratio of oil and fuel	≤ 0.2%

四、推荐柴油机配套使用参数

动力输出: Power output:	SAE1 号飞轮壳/11.5＃飞轮 SAE1 flywheel housing /11.5＃flywheel
空滤器流量： Air filter flow	≥ 910kg/h
最小进气管直径: Min. diameter of intake pipe	65mm
消音器流量: Muffler flow	≥ 948 kg/h

排气管最小直径: Min. diameter of exhaust pipe	65mm
允许最大排气背压: Max. exhaust back pressure	6.5kPa
最大排气温度（增压后）: Max. exhaust temperature（After the turbocharger）	550
废气增压器法兰面允许的最大弯矩: Max. bending moment of turbocharger flange	10N· m
机油压力低报警值: Alarm value of low oil temperature	120 kPa
机油压力高报警值: Alarm value of high oil temperature	1000 kPa
请在发机运行 30s 以后开始测量机油压力 Please measure oil pressure after running 30s	
出水管水温报警温度: Alarm value of water outlet temperature	96
机油温度高报警值 Alarm value of high oil temperature	120

□速高□警□ Alarm value of high speed	115%□定□速 115% rated speed
机油□力低停□□ Stopping value of low oil pressure	80kpa
□速高停□□ Stopping value of high speed	120%□定□速 120% rated speed
燃油□油管最小直径: Min. diameter of fuel inlet pipe	10mm
燃油回油管最小直径: Min. diameter of fuel return pipe	10mm
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44.2℃）		
发动机进出水压力（kPa）	额定工况	进水压力：-3.4\出水压力：6.4
	超负荷工况	进水压力：-3.2\出水压力：6.6
冷却液流量（m³/h）	额定工况	13.3
	超负荷工况	13.6
发动机进出水温度（℃）	额定工况	进水温度：83.0\出水温度：86.9
	超负荷工况	进水温度：84.2\出水温度：88.6
中冷器前后温度（℃）	额定工况	中冷前气温：137.2\中冷后气温：51.7
	超负荷工况	中冷前气温：145.2\中冷后气温：52.1
中冷器前后压力（kPa）	额定工况	中冷前气压：104.9\中冷后气压：104.5
	超负荷工况	中冷前气压：119.8\中冷后气压：119.2
冷却液带走的热量（kJ/s）	额定工况	59.3
	超负荷工况	66.6
中冷器散热量（kJ/s）	额定工况	16.7
	超负荷工况	19.3
排气带走的热量（kJ/s）	额定工况	97.9
	超负荷工况	106.4
发动机总散热量（kJ/s）	额定工况	193.7
	超负荷工况	213.3

Data of thermal equilibrium（entironment temperature：44.2 ）		
The pressure of water into and out of diesel（kPa）	Declared working condition	-3.4/ 6.4
	Overload working condition	-3.2/6.6
Flux of cooling fluid（m³/h）	Declared working condition	13.3
	Overload working condition	13.6
The temperature of water into and out of diesel（℃）	Declared working condition	83.0/86.9
	Overload working condition	84.2/88.6
The temperature of air into an out of intercooler（℃）	Declared working condition	137.2/51.7
	Overload working condition	145.2/52.1

The pressure of air into an out of intercooler（kPa）	Declared working condition	104.9/104.5
	Overload working condition	119.8/119.2
Calorie brought out by cooling fluid（kJ/s）	Declared working condition	59.3
	Overload working condition	66.6
Calorie brought out by intercooler（kJ/s）	Declared working condition	16.7
	Overload working condition	19.3
Calorie brought out by exhaust system（kJ/s）	Declared working condition	97.9
	Overload working condition	106.4
Total calorie brought out（kJ/s）	Declared working condition	193.7
	Overload working condition	213.3

五、 柴油机使用⬜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⬜力，PX：100kPa（或海拔高度 0 米）；

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

b）⬜境温度，Tr：298K（25 ）；

Ambiance temperature , Tr: 298K(25)；

c）空气相⬜湿度Φr：30%。

Relative air humidityΦr：30%。

2．柴油机在下列条件下，⬜能⬜⬜并可靠地工作：

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

a）海拔高度不超□ 2000m；

The altitude does not exceed 2000 m.

b）□境温度：下限□-30 ，上限□　50 ；

Range of ambiance temperature: -30 ≤　T≤ 50 ；

c）空气相□湿度：最湿月平均最高相□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□境中□无爆炸性气体、无□□□埃。

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

e)工作□□如有任何特殊的危□条件（如爆炸大气□境和易燃气体）用□□提前加以□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□ (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

☐扇/ Fan   1 件

冷却水☐出水管/   Cooling water inlet/outlet pipe   2 件

消音器 /   Muffler   1 件

散☐器 /   Radiator   1 件

七、 柴油机可☐配件 (diesel engine optional accessories)

13021962 停☐☐磁☐ (Electromagnetic valve for stopping)

13057165 泄油☐☐成 (Oil Draining Pump)