

FUJIAN EPOS ELECTRIC MACHINERY CO., LTD

EMEAN
POWER

WEICHAI
潍柴

ENGINE MODEL: WP10D320E200

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WHATSAPP



WECHAT



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|  | 机型: WP10D320E200 Model: | 日期: 2022/1 Date: |
| | 柴油发动机数据单 Diesel Datasheet | 页码: 1 / 6 Page: |

| 转速 Speed | 发动机功率 Gross Engine Output | | |
|---------------------------|--|-------------------|-------------------|
| | 持续功率 kW COP kW | 常用功率 kW PRP kW | 备用功率 kW ESP kW |
| 1500r/min | / | 291 | 320 |

功率定义解释 Ratings definitions :


| 功率分类 Ratings Definitions | 运行条件 Operating condition |
|---|---|
| 持续功率 COP | <ol style="list-style-type: none"> 1、每年运行时间不限 Unlimited using time per year ; 2、在恒定的 100%负荷下运行 Continuous power is the maximum power available at a constant load factor ; 2、不具备超负荷能力 No overload capability is allowed; |
| 常用功率 PRP | <ol style="list-style-type: none"> 1、每年运行时间不限 Unlimited using time per year ; 2、每250h持续期内，平均负荷率不能超过70% The average load factor should not exceed 70% of the engine' s PRP power rating during any 250 hour period ; 3、每年在100%负荷下运行不超过500h Prime power is the maximum power available within 500 hours per year ; 3、每 12h 内，可超负荷 10%运行 1h，每年累计超负荷运行不超过 25 An overload capability of 10% is available ,which can not exceed 25 hours per year,however ,this is limited to 1 hour within every 12 hour period. |
| 备用功率 ESP | <ol style="list-style-type: none"> 1、每年运行时间不超过200h，包括每年在100%负荷下运行不超过25h； Typical operational hours of the engine is 200 hours per year ,this includes an annual maximum of 25 hours per year at the ESP power rating. 2、每24h运行周期内，平均负荷率不能超过80% |

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| | <p>The average load factor should not exceed 80% during any 24 hour period ;</p> <p>3、不具备超负荷能力 No overload capability is allowed ;</p> <p>4、柴油机启动没有热机过程，由启动加速到标定转速需在 10s 内完成。柴油机环境温度 10°C以下时，需增加预热设施保证柴油机出水温度在 30°C以上；环境温度 10°C以上时，无预热设施。</p> <p>The diesel engine starts without the heating engine process, and the acceleration from the start to the calibration speed needs to be completed within 10s. Diesel engine ambient temperature of 10 °C, the need to increase the preheating facilities to ensure that the diesel engine effluent temperature of more than 30 °C, the ambient temperature of 10 °C or more, no preheating facilities.</p> |
| 备注 Descriptions | <p>1) 所有功率基于标准 ISO 8528-1, ISO 3046, DIN6271，误差范围±5%。 All ratings are based on operating conditions under ISO 8528-1, ISO 3046, DIN6271. Performance tolerance of ±5%.</p> <p>2) 测试条件：大气压力 100kPa，25°C，相对湿度 30%，燃油密度 0.84kg/L；其他环境条件下可能需要进行功率修正，详情请与厂家联系。 Test conditions : 100 kPa, 25°C air inlet temperature, relative humidity of 30%, with fuel density 0.84 kg/L. Derating may be required for conditions outside these; please contact the factory for details.</p> <p>3) 所有的数据均基于发动机带燃油系统、水泵、机油泵时获得的，而不带有交流发电机、风扇、其它选用设备和被驱动的附件。 Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan and optional equipment.</p> |

基础数据 Essential Data

| | |
|-----------------------------------|-------------------|
| 发动机类型 Engine model | 柴油机 Diesel Engine |
| 气缸/气门数量 N° of Cylinders / Valves | 6/24 |
| 气缸分布型式 Cylinders arrangement | 直列 In-line |
| 缸径×行程 (mm) Bore x Stroke (mm) | 126×130 |
| 排量(L) Displacement(L) | 9.726 |

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| 燃油系统型式 Fuel System | 机械泵 mechanical pump |
| 进气形式 Aspiration | 增压中冷 Turbocharged and aftercooled |
| 压缩比 Compression ratio | 17 |
| 飞轮壳尺寸 Flywheel housing | SAE1 |
| 飞轮尺寸 Flywheel | 14' |
| 飞轮齿圈齿数 N° of teeth on flywheel ring gear | 136 |
| 飞轮转动惯量 (kg/m ²) Inertia of flywheel (kg/m ²) | 1.75(带连接盘) |
| 曲轴转动惯量 (kg/m ²) Inertia of crankshaft (kg/m ²) | 0.38 |
| 排放阶段 Emission standard | 无排放 |
| 发动机尺寸(长×宽×高) (mm) Overall Dimensions with radiator (L x W x H) (mm) | 1493×822×1206 (以外形图为准 The outer chart shall prevail) |
| 发动机干重 (kg) Engine dry weight (kg) | 875 |
| 不带辅助启动装置时最低冷启动温度 (°C) Min.cold start temperature without auxiliary starting device(°C) | -10 |
| 带辅助启动装置时最低冷启动温度 (°C) Min. cold start temperature with auxiliary starting device (°C) | -30 |
| 包装尺寸 Packing measurement (mm) | 1873×974×1300 |
| 运输重量 Transport weight (kg) | 910 |


进气系统 Air intake system

| | |
|--|------|
| 在涡轮增压器前允许的最大的进气温升(°C) Air intake temperature rise (°C) | / |
| 清洁滤芯进气阻力 (kPa) Air intake restriction clean filter (kPa) | ≤3.5 |
| 脏滤芯进气阻力 (kPa) Air intake restriction dirty filter (kPa) | ≤7 |
| 额定工况下进气流量 (kg/h) Recommended air flow @ PRP (kg/h) | 1424 |
| 应急备用工况下进气流量 (kg/h) Recommended air flow @ ESP (kg/h) | 1491 |
| 推荐最小进气管直径(mm) Min. diameter of intake pipe (mm) | 100 |

中冷系统 Intercooling system

| | |
|---|-----|
| 25°C环境温度下的最高进气温度 (°C) Max. intake temperature @ 25°C ambient temperature (°C). | 55 |
| 进气温度与环境温度的最大温差 (°C) Max. difference between intake temperature and ambient temperature (°C) | ≤30 |
| 中冷器允许的最大压力降 (kPa) Max. intake pressure drop of intercooler (kPa) | 12 |

冷却系统 Cooling system

| | | | | |
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| 发动机允许的最高使用环境温度 (°C) System designed for ambient temperature up to (°C) | 50 |
| 进出水外部管路的最小内径 (mm) Min. inside diameter of coolant outlet pipe (mm) | 45 |
| 出水管报警温度 (°C) Coolant alarm (shutdown) temperature (°C) | 100 |
| 节温器初开/全开温度 (°C) Thermostat opening temperature/full open temperature (°C) | 76±2/88 |
| 冷却系统内最小保持压力 (kPa) Min. pressure in cooling system (kPa) | 50 |
| 发动机本身冷却液容量 (L) Coolant capacity of the engine (L) | 22 |

排气系统 Exhaust system

| | |
|---|-------|
| 允许最大排气背压 (kPa) Max. exhaust back pressure (kPa) | 10-11 |
| 最大的排气温度 (涡轮前) (°C) Max. exhaust temperature before turbocharger (°C) | ≤720 |
| 最大的排气温度 (涡轮后) (°C) Max. exhaust temperature after turbocharger (°C) | ≤550 |
| 额定工况下排气流量 (kg/h) Exhaust flow @ PRP (kg/h) | 1483 |
| 应急备用工况下排气流量 (kg/h) Exhaust flow @ ESP (kg/h) | 1557 |
| 推荐排气管最小直径(mm) Min. diameter of exhaust pipe (mm) | 100 |
| 涡轮增压器法兰处允许的最大弯矩(Nm) Max. bending moment of exhaust gas exit flange (Nm) | / |


润滑系统 Lubrication system

| | |
|--|---------|
| 油底壳机油最小/最大容量 (L) Oil capacity Low / High (L) | 30 |
| 怠速时机油压力 (kPa) Oil pressure in normal condition idle speed (kPa) | 130-280 |
| 在额定转速下的机油压力 (kPa) Oil pressure in normal condition at rated speed | 380-580 |
| 机油低报警压力 (kPa) Lowest oil pressure alarm (kPa) | 80 |
| 机油低停机压力 (kPa) Lowest oil pressure shutdown(kPa) | 40 |
| 机油最高温度(°C) Max. oil temperature (°C) | 85-105 |
| 机油流量 (L/min) Oil flow (L/min) | / |
| 机油燃油消耗比 Oil fuel consumption ratio based on engine fuel consumption data | ≤0.2% |

噪声 Noise

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|---|-------|
| 发动机噪声 (声功率级) (dB(A)) Diesel engine noise (Acoustic power level) (dB(A)) | 110.8 |
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燃油系统 Fuel system

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| 喷油泵进油口最大进油阻力 (kPa) Max. restriction at fuel pump inlet (kPa) | 18 |
| 喷油泵最大回油阻力 (kPa) Max. fuel return restriction (kPa) | 22 |
| 燃油最高进油温度 (°C) Max. fuel inlet temperature (°C)..... | 70 |
| 供油流量 (kg/h) Fuel supply flow (kg/h)..... | 额定工况 59.2 超负荷 65.7 |
| 输油泵最小压力 (kPa) Min. pressure of fuel pump (kPa)..... | 35 |
| 燃油进油管最小直径 (mm) Min. diameter of inlet pipe (mm)..... | 12 |
| 燃油回油管最小直径 (mm) Min. diameter of return pipe (mm) | 12 |

电器系统 Electrical system

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|--|-----|
| 电气系统电压 (负极接地) (V) Electrical system voltage (negative to ground) (V) | 24 |
| 起动机功率(kW) Starter power (kW) | 5.4 |
| 充电发电机额定电流 (A) Battery charger current (A)..... | 55 |
| 启动回路最大电阻 (mΩ) Max. electric resistance of starting circuit (mΩ)..... | 108 |
| 启动回路导线最小截面积(mm ²) Min. sectional area of wire (mm ²) | 70 |
| 加热格栅工作电压(V)/电流(A) Heat The Grille Voltage(V)/Current(A) | / |

热平衡测试数据 (环境温度 43°C) Heat balance test data (43°C)

| | | |
|--|-------------------------------------|-------------|
| 发动机进/出水压力 Coolant inlet/ output pressure (kPa) | 额定工况 Rated working condition | 19.0/55.1 |
| | 超负荷工况 Overload working condition | 24.1/61.2 |
| 冷却液流量 Coolant flow (m ³ /h) | 额定工况 Rated working condition | 17.3 |
| | 超负荷工况 Overload working condition | 17.3 |
| 发动机进/出水温度 Coolant inlet/output temperature (°C) | 额定工况 Rated working condition | 77.4/84.3 |
| | 超负荷工况 Overload working condition | 80.5/88.0 |
| 中冷器前/后温度 Intercooler inlet/output temperature (°C) | 额定工况 Rated working condition | 207.0/45.5 |
| | 超负荷工况 Overload working condition | 222.1/47.3 |
| 中冷器前/后压力 Intercooler inlet/output pressure (kPa) | 额定工况 Rated working condition | 191.9/187.5 |
| | 超负荷工况 Overload working condition | 215.3/210.1 |
| 发动机总热量 Engine total heat | 额定工况 Rated working condition | 753.6 |
| | 超负荷工况 Overload working | 834.5 |

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| (kJ/s) | condition | |
|--|----------------------------------|-------|
| 中冷器散热量 Intercooler heat dissipating capacity (kJ/s) | 额定工况 Rated working condition | 64.2 |
| | 超负荷工况 Overload working condition | 73.4 |
| 排气带走的热量 The heat taken away by the exhaust (kJ/s) | 额定工况 Rated working condition | 209.3 |
| | 超负荷工况 Overload working condition | 230.0 |
| 冷却液带走的热量 The heat taken away by the coolant (kJ/s) | 额定工况 Rated working condition | 126.8 |
| | 超负荷工况 Overload working condition | 136.7 |
| 发动机表面辐射热量 Radiation heat of the engine surface (kJ/s) | 额定工况 Rated working condition | 37.7 |
| | 超负荷工况 Overload working condition | 41.7 |
| 注：因测量等误差原因，表面辐射热量按发动机总热量的 5% 计算。 Note: Because of test errors and other reasons, the surface radiation heat is 5% of the engine total heat. | | |

性能数据 Performance data

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| 活塞平均速度 (m/s) Mean Piston Speed (m/s) | / |
| 平均有效压力 (MPa) | 2.39 |
| BMEP (MPa) | 2.39 |
| 最高爆发压力(MPa) Maximum Burst Pressure(MPa) | / |
| 最低空载稳定转速(r/min) Minimum No-load Speed(r/min)..... | 600-700 |
| 发火次序 Ignition Order | 1-5-3-6-2-4 |
| 旋转方向 Sense of Rotation | 逆时针 (面对飞轮) Anticlockwise (In the Face of Flywheel) |

备注：所有参数如有更改，恕不另行通知。

Remark: All Parameters If Changed Without Prior Notice.