

FUJIAN EPOS ELECTRIC MACHINERY CO., LTD

EMEAN
POWER

WEICHAI
潍柴

ENGINE MODEL: WP10D238E200

EMEAN POWER


www.emeanpower.com
Email: sale5@fjepos.com
Phone: +86 19890349907

WHATSAPP



WECHAT




	机型: WP10D238E200 Model:	日期: 2021/2 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	/	216	238

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	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; 3、不具备超负荷能力。 No overload capability is allowed.
常用功率 PRP	1、每年运行时间不限； Unlimited using time per year; 2、运行24h上平均负荷率不能超过70%； The average load rate is no more than 70% over 24 hours; 3、每 12h 内，可超负荷 10%运行 1h。 Overloading 10% for 1h within 12 hours of operation is allowed.
备用功率 ESP	1、每年运行时间不超过200h; The annual operating time shall not exceed 200h; 2、运行24h以上，平均负荷率不超过70%； The average load rate shall not exceed 70% over24h operation cycle; 3、不具备超负荷能力; No overload capability is allowed; 4、柴油机启动加速按照 Q/WCG136.13 进行，没有热机过程，由启动加速到标定转速需在 10s 内完成。自然吸气柴油机，环境温度在 5℃以下时，需增加预热设施保证柴油机出水温度在 30℃以上；环境温度 5℃以上时，无需预热设施。增压柴油机环境温度 10℃以下时，需增加预热设施保证柴油机出水温度在 30℃以上；环境温度 10℃以上时，无预热设

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	<p>施。</p> <p>The acceleration of starting of diesel engines are carried out in accordance with Q/WCG136.13, and there' s no engine process. From acceleration of starting to calibration speed shall be completed within 10s. Natural aspirated diesel engine, when the environment temperature is below 5°C , need to increase preheat facilities to ensure that diesel engine water temperature above 30 °C. When environment temperature over 5°C, no preheating facilities are required.</p> <p>Supercharged diesel engine, when the environment temperature is below 10°C, need to increase preheat facilities to ensure that diesel engine water temperature above 30°C. When environment temperature over 10°C, no preheating facilities are required.</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, without 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 6/12
 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
 燃油系统型式 Fuel System 机械泵 mechanical pump

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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	11.5' /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)	0.95
曲轴转动惯量 (kg/m ²) Inertia of crankshaft (kg/m ²)	0.35
排放阶段 Emission standard	无排放 Non
发动机尺寸(长×宽×高) (mm) Overall Dimensions with radiator (L x W x H) (mm)	1525×730×1063 (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)	980

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)	1041
应急备用工况下进气流量 (kg/h) Recommended air flow @ ESP (kg/h)	1147
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

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

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出水管报警温度 (°C) Coolant alarm (shutdown) temperature (°C).....	98
节温器初开/全开温度 (°C) Thermostat opening temperature/full open temperature (°C).....	71/82
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).....	6±0.5
最大的排气温度 (涡轮前) (°C) Max. exhaust temperature before turbocharger (°C).....	≤700
最大的排气温度 (涡轮后) (°C) Max. exhaust temperature after turbocharger (°C).....	≤600
额定工况下排气流量 (kg/h) Exhaust flow @ PRP (kg/h).....	1084
应急备用工况下排气流量 (kg/h) Exhaust flow @ ESP (kg/h).....	1195
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).....	10

润滑系统 Lubrication system

油底壳机油最小/最大容量 (L) Oil capacity Low / High (L).....	24
怠速时机油压力 (kPa) Oil pressure in normal condition idle speed (kPa).....	100-250
在额定转速下的机油压力 (kPa) Oil pressure in normal condition at rated speed.....	330-550
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).....	80
机油最高温度 (°C) Max. oil temperature (°C).....	85-105
机油流量 (L/min) Oil flow (L/min).....	118
机油燃油消耗比 Oil fuel consumption ratio based on engine fuel consumption data.....	≤0.2%


噪声 Noise

发动机噪声 (声功率级) (dB(A)) Diesel engine noise (Acoustic power level) (dB(A)).....	101.5
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燃油系统 Fuel system


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).....	50
供油流量 (kg/h) Fuel supply flow (kg/h).....	42.76~47.65
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).....4
 启动回路导线最小截面积(mm²) Min. sectional area of wire (mm²)50
 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 42°C)Heat balance test data (42°C)

发动机进/出水压力 Coolant inlet/ output pressure (kPa)	额定工况 Rated working condition	6.7/15.8
	超负荷工况 Overload working condition	6.9/15.7
冷却液流量 Coolant flow (m ³ /h)	额定工况 Rated working condition	14.0
	超负荷工况 Overload working condition	14.1
发动机进/出水温度 Coolant inlet/output temperature (°C)	额定工况 Rated working condition	70.7/76.2
	超负荷工况 Overload working condition	72.4/78.1
中冷器前/后温度 Intercooler inlet/output temperature (°C)	额定工况 Rated working condition	149.0/52.2
	超负荷工况 Overload working condition	162.5/51.0
中冷器前/后压力 Intercooler inlet/output pressure (kPa)	额定工况 Rated working condition	143.9/142.7
	超负荷工况 Overload working condition	163.0/161.8
发动机总热量 Engine total heat (kJ/s)	额定工况 Rated working condition	506.3
	超负荷工况 Overload working condition	560.7
中冷器散热量 Intercooler heat dissipating capacity (kJ/s)	额定工况 Rated working condition	30.7
	超负荷工况 Overload working condition	38.6
排气带走的热量 The heat taken away by the exhaust (kJ/s)	额定工况 Rated working condition	155.7
	超负荷工况 Overload working condition	173.0
冷却液带走的热量	额定工况 Rated working condition	87.8

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The heat taken away by the coolant (kJ/s)	超负荷工况 Overload working condition	94.1
发动机表面辐射热量 Radiation heat of the engine surface (kJ/s)	额定工况 Rated working condition	/
	超负荷工况 Overload working condition	/
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

活塞平均速度 (m/s) Mean Piston Speed (m/s)	6.5
平均有效压力 (MPa)BMEP (MPa)	1.78
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.