

### 发动机参数 Engine parameters

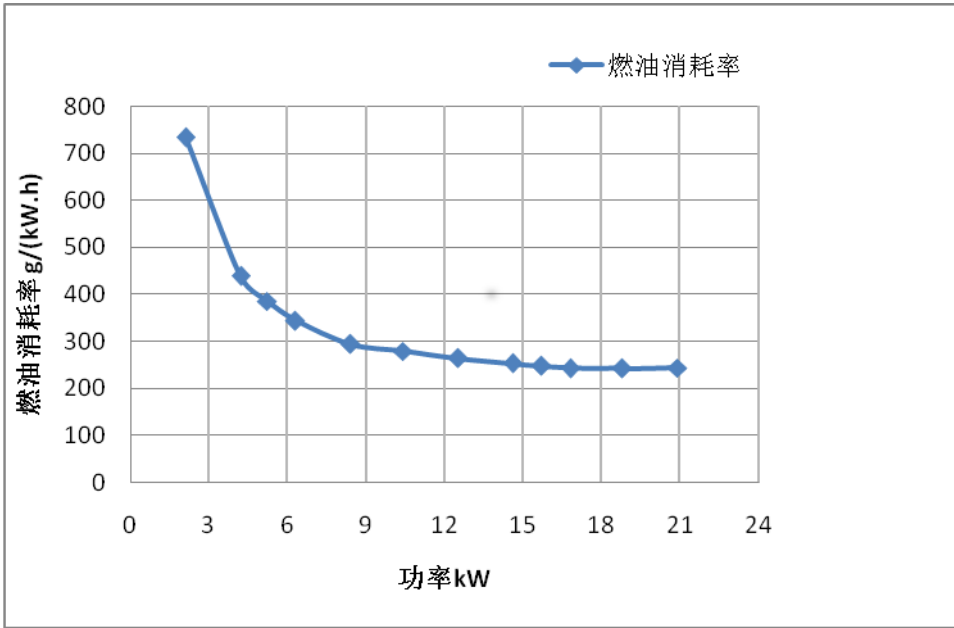
机型 Model	WP2.1D21E2
额定功率/转速 Rated Power/Speed (kW/ (r/min))	21/1800
超负荷工况/转速 Max. Torque/Speed (N m/ (r/min))	123/ (1780)
气缸数/气门数 No. of cylinders/Valves	4/8
压缩比 Compression Ratio	17.5:1
排量 Displacement (L)	2.1
燃油系统 Fuel system	机械
吸气方式 Air intake type	自然吸气
排放标准 Emission standard	国 II
缸径×行程 Bore × Stroke (mm×mm)	85×92

### 试验状态 Test condition

柴油牌号 Type of diesel	国 II 柴油按 GB 20891	
机油牌号 Type of oil	15W/40 CF-4 级机油按 GB 11122	
进气 inlet	温度 Temperature (°C)	28.2
	压力 pressure (kPa)	100.4
	湿度 Humidity (%)	32.2
排气背压 Exhaust back pressure	1.1	
附件 Accessory	无	
<p>注：环境状况按 GB/T 6072.1 往复式内燃机性能第 1 部分：功率燃油消耗和机油消耗的标定及试验方法通用发动机的附加要求。</p> <p>Note: Environment condition refers to the additional requirements for common engines of GB/T 6072.1 "Reciprocating internal combustion engine Performance Part 1: Power The calibration and test method for fuel consumption and oil consumption".</p>		

燃油消耗率随发动机功率变化曲线

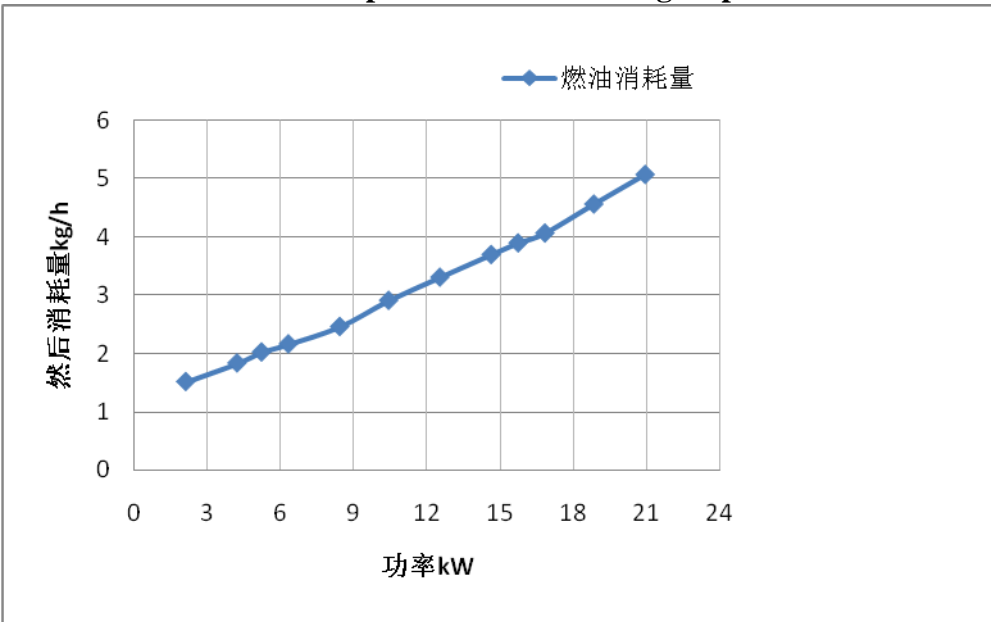
Fuel consumption rate curve versus engine power



功率 Power	燃油消耗率 Fuel consumption rate
Kw	kg/h
20.9	243.3
18.8	242.5
16.8	242.8
15.7	247.7
14.6	252.6
12.5	264.4
10.4	278.8
8.4	293.3
6.3	343.9
5.2	385.9
4.2	438.7
2.1	734.3

功率随发动机转速变化曲线

Fuel consumption curve versus engine power



功率 Speed	燃油消耗量 Fuel consumption
Kw	g/ (kW.h)
20.9	5.08
18.8	4.57
16.8	4.07
15.7	3.9
14.6	3.7
12.5	3.31
10.4	2.91
8.4	2.46
6.3	2.16
5.2	2.02
4.2	1.83
2.1	1.51

### 进气系统 Air intake system

所需空气流量 Air flow requirement (kg/h)	额定工况 Rated working condition	112.0
	超负荷工况 Overloaded working condition	107.5

### 中冷系统 Intercooler system

中冷器散热量 Intercooler heat dissipating capacity (kJ/s)	额定工况 Rated working condition	—
	超负荷工况 Overloaded working condition	—

### 噪声 Noise

	测试位置 Test location	噪声值 Noise Value
发动机噪声 Engine noise (dB (A))	顶部 Up side	95.1
	右侧 Right side	95.3
	左侧 Left side	93.0
	前端 Front side	95.1
	声功率级 Acoustic power level	108.6

注：噪声测量按 GB/T 1859 往复式内燃机辐射的空气噪声测量工程法及简易法。

Note: Noise test refers to GB/T 1859 The noise test method for reciprocating internal combustion engine's radiant air.

## 冷却系统 Cooling system

参数 Parameters	单位 Units	额定工况 Rated working condition	超负荷工况 Overloaded working condition
发动机进/出水压力 Coolant inlet/ output pressure	(kPa)	63.2/66	62.4/68.7
冷却液流量 Coolant flow	(m <sup>3</sup> /h)	3.1	5.4
发动机进/出水温度 Coolant inlet/output temperature	(°C)	65.9/73.1	69.7/74.6
中冷器前/后温度 Intercooler inlet/output temperature	(°C)	—	—
中冷器前/后压力 Intercooler inlet/output pressure	(kPa)	—	—
发动机总热量 Engine total heat	(kJ/s)	59.4	65.3
冷却液带走的热量 The heat taken away by the coolant	(kJ/s)	25.9	30.5
中冷器散热量 Intercooler heat dissipating capacity	(kJ/s)	—	—
排气带走的热量 The heat taken away by the exhaust	(kJ/s)	15.8	17
发动机表面辐射热量 Radiation heat of the engine surface	(kJ/s)	2.97	3.265

排气系统 Exhaust system

排气流量 Exhaust flow (kg/h)	额定工况 Rated working condition	117.1
	超负荷工况 Overloaded working condition	113.1
排气温度 Exhaust temperature (°C)	额定工况 Rated working condition	474.3
	超负荷工况 Overloaded working condition	526.0