



Technical Specifications

WD10G220E21

CODE D000002377

WEICHAI

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发动机参数 Engine parameters

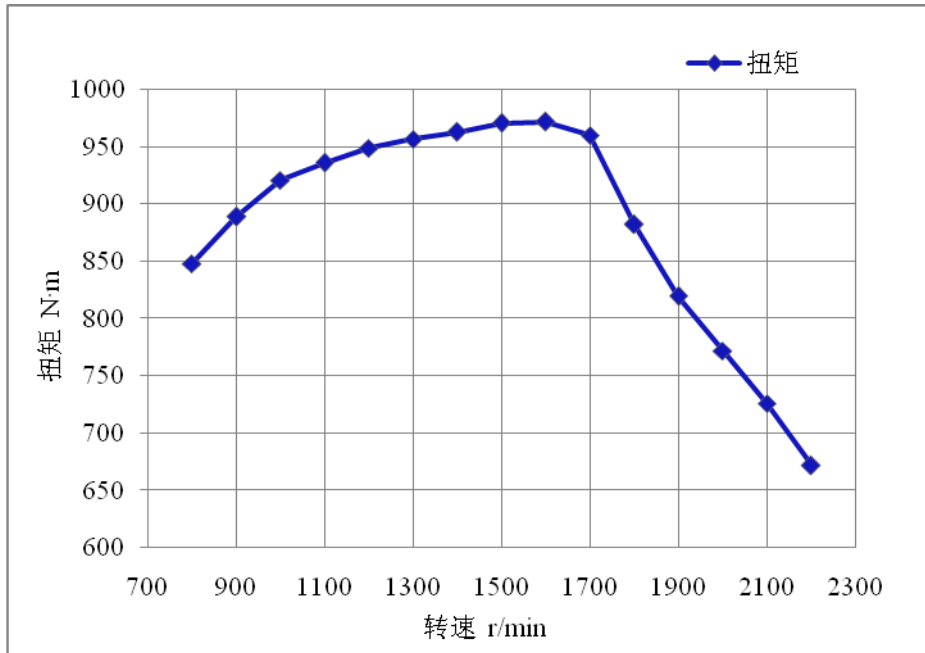
机型 Model	WD10G220E21
额定功率/转速 (kW/ (r/min)) Rated power/ speed	154/2200
大扭矩工况/转速 (N·m/(r/min)) High torque conditions/speed	950/(1500~1700)
气缸数/气门数 Number of cylinders/ Number of valves	6/12
压缩比 Compression ratio	17:1
排量 (L) Displacement	9.726
燃油系统 Fuel System	机械泵 Mechanical pump
吸气方式 Aspiration	增压 Supercharger
排放标准 Emission Standards	非道路 II 阶段经济版 Phase II Non-road of economic version
缸径×行程 Bore x Stroke (mm×mm)	126×130

试验状态 Test status

柴油牌号 Diesel Grade	0 号普通柴油按 GB 252 0 ordinary diesel	
机油牌号 Oil Grade	15W/40 CD-4 级机油按 GB 11122 15W / 40 CD-4 grade oil	
增压器进气 Turbocharger intake	温度 Temperature (°C)	20.4
	压力 Pressure (kPa)	102.0
	湿度 Humidity (%)	28.8
排气背压 Exhaust back pressure (kPa)	6.9	
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: environmental conditions according to GB/T 6072.1 reciprocating internal combustion engine performance part 1: power, fuel consumption and oil consumption of the calibration and test Additional requirement of general engine test method.</p>		

扭矩随发动机转速变化曲线

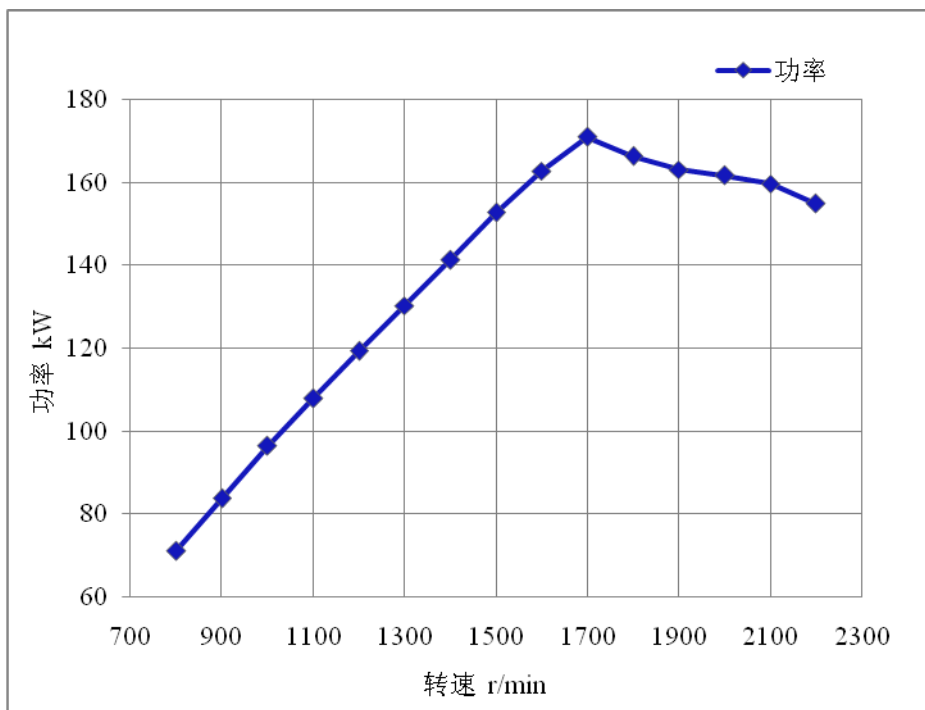
Torque with engine speed curve



转速 speed r/min	扭矩 torque N·m
2200	672
2100	726
2000	772
1900	820
1800	883
1700	960
1600	972
1500	971
1400	963
1300	957
1200	949
1100	936
1000	921
900	889
800	848

功率随发动机转速变化曲线

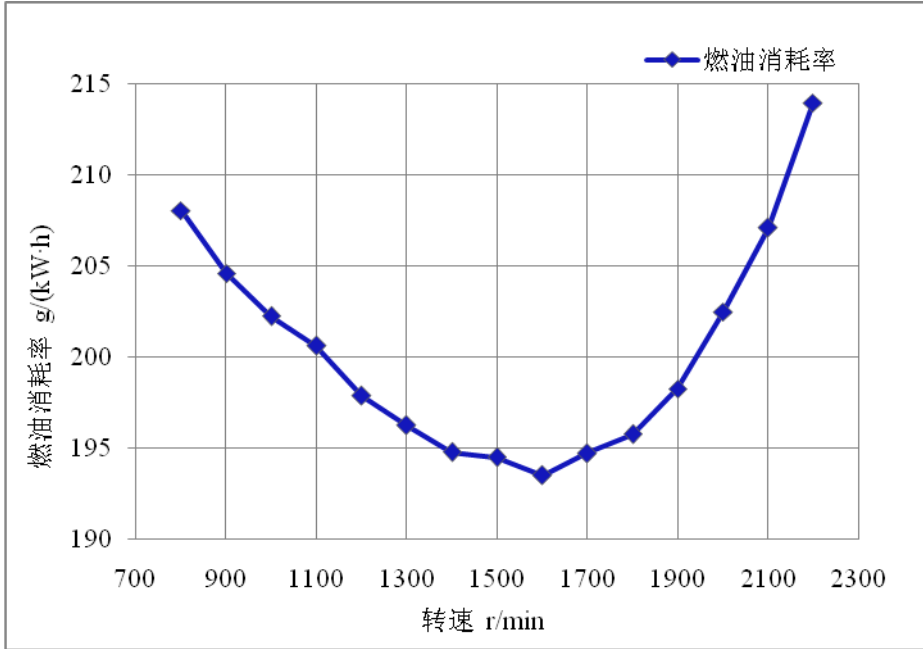
Power with engine speed curve



转速 Speed r/min	功率 Power kW
2200	154.8
2100	159.7
2000	161.7
1900	163.1
1800	166.3
1700	170.9
1600	162.7
1500	152.7
1400	141.2
1300	130.3
1200	119.3
1100	107.8
1000	96.4
900	83.8
800	71.0

燃油消耗率随发动机转速变化曲线

Fuel consumption increases with engine speed curve



转速 Speed r/min	燃油消耗率 Fuel consumption g/ (kW·h)
2200	214.0
2100	207.1
2000	202.5
1900	198.3
1800	195.7
1700	194.7
1600	193.5
1500	194.5
1400	194.8
1300	196.3
1200	197.9
1100	200.6
1000	202.2
900	204.6
800	208.0

进气系统 Intake System

所需空气流量 The required air flow (kg/h)	额定工况 Rated		1270
	大扭矩工况 High torque conditions	1700r/min	965
		1600r/min	874
		1500r/min	786

燃油系统 Fuel System

燃油供油量 (kg/h) Fuel supply amount	额定工况 Rated		32.77
	大扭矩工况 High torque conditions	1700r/min	33.10
		1600r/min	31.37
		1500r/min	29.57

中冷系统 Intercool System

中冷器散热量 (kJ/s) Intercooler heat away	额定工况 Rated		—
	大扭矩工况 High torque conditions	1700r/min	—
		1600r/min	—
		1500r/min	—

噪声 Noise

发动机噪声 Engine noise (dB (A))	测试位置 Test position	噪声值 Noise value
	顶部 Top	99.9
	右侧 Right	101.7
	左侧 Left	101.7
	前端 in front	101.2
	后端 in back	94.1
	声功率级 level	116.6

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: the noise measurement according to GB/T 1859 reciprocating internal combustion engine noise radiation of air measurement engineering method and simple method

冷却系统 Cooling system

热平衡试验数据 Thermal balance test data (环境温度 Ambient temperature: 39.9℃)					
参数 Parameters	单位 Unit	额定工况 Rated	大扭矩工况 High torque conditions		
			1700r/min	1600r/min	1500r/min
发动机进/出水压力 Engine inlet / outlet pressure	(kPa)	1.1/65.4	2.0/66.3	3.9/65.3	7.3/66.8
冷却液流量 Coolant flow	(m ³ /h)	22.1	18.7	17.6	16.5
发动机进/出水温度 Engine inlet / outlet temperature	(°C)	87.1/90.5	86.7/90.7	86.0/89.9	85.6/89.5
增压后温度 After supercharging temperature	(°C)	123.8	118.9	111.4	103.6
增压后压力 After supercharging pressure	(kPa)	127.5	118.6	108.0	96.0
发动机总热量 Engine total calories	(kJ/s)	379.5	384.2	365.0	344.7
冷却液带走的热量 Coolant heat away	(kJ/s)	78.4	79.2	73.3	68.4
排气带走的热量 Exhaust heat away	(kJ/s)	130.9	120.3	115.7	107.8
发动机表面辐射热量 Engine Radiated heat	(kJ/s)	19.0	19.2	18.3	17.2

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 error in measurement, the surface radiation heat engine calculated at 5% of total calories.

排气系统 Exhaust system

排气流量 Exhaust flow (kg/h)	额定工况 Rated		1303
	大扭矩工况 High torque conditions	1700r/min	998
		1600r/min	905
		1500r/min	816
排气温度 Exhaust temperature (°C)	额定工况 Rated		371
	大扭矩工况 High torque conditions	1700r/min	440
		1600r/min	464
		1500r/min	479