



Ettes Power is the leading manufacturer and supplier for diesel & gas generators from 20kW upto 4500kW. We use world top engines (Cummins, MAN, CAT-MWM, CNPC 190 Series and Low speed 300 Series etc.) to ASSEMBLE into complete-generator-set and CHP units. Ettes gensets enjoy hot markets in more than 70 countries all over the world including Latin America, Africa, Middle East, Europe and Asia markets.

190 Series gas engines are developed by cooperation with AVL from Germany and Austria. The engine assembling plant is affiliated to CNPC (China National Petroleum & Oil Corporation), those engines work extensively in 90% of China oil fields and coal mines, and enjoy hot markets in global.

Benefits of ETTES-CNPC 190 Series gas engines & Genset

- The engine performance is "Leading China" and "First class Global"
- Long history: produced by engines plant under control by CNPC (China National Petroleum & Oil Corporation), it is the first and the largest engine ٠ manufacture in China since 1953.
- Proven Technology: widely used in 90% of China Oil & Gas Fields, Coalmines, Vessels and other areas under severe working conditions.
- Fuel flexibility: designed for operation on a wide range of methane based gases including natural gas, biogas, oilfield gas, coal mine methane and ٠ shale gas and other special gas.
- Designed for intensive use (continuous duty)
- Capable of working with variable loads. ٠
- Advanced technology of close-loop control, lean-burn and Mixing before turbo. ٠
- Adopting highly intelligent gas control system of Woodward EGS or Motortech, the air fuel ratio can be automatically adjusted as per fluctuation of ٠ gas components.
- Adopting intelligent & digital ignition system from Motortech or Altronic.
- Adopting super-turbocharged technology from ABB.
- Heat Recovery system to realize CHP, Cogeneration and Distribution Energy. ٠
- ٠ Integrated & modularized unit to facilitate easy transport and quick setup.
- Easy Maintenance in Low Cost. ٠
- Ensured annually continuous working over 8000 hours. ٠
- Longer life span of 15~20 years.

WOODWARD		WE UPGRADE GAS ENGINES	altropic
		MOTORTECH	

Main Technical Data of Natural Gas Generator EJ-1500N									
	Genset Model	EJ-1500N							
Gas Gen-Set	Rated Power (kW/kVa)	1500/1875							
	Suggested COP (Continuous Output Power)	1200~133kW							
	Manufacturer/Assembler	ETTES POWER							
	Gas Engine Manufacture	CNPC ENGINES ASSEMBLING PLANT							
	Gas Engine Model	H16V190ZLT							
	Engine Rated Power (kW/hp)	1650/2211 (1200rpm)							
	Applicable Fuel	Natural Gas: PNG, CNG,LNG, Oilfield Gas, Coalmine Bed Gas and Shale Gas etc.							
		Advanced close loop electrically controlled;							
	Typical Features	Lean Burn Technology;							
		Mixing Before Turbocharger;							
		Water Cooled, Four Stroke, Spark Ignition, Turbocharger and							
	Туре	after-cooled, Outer Mixing							
	Cooling Motherd	Standard: Open Cooling System by Heat Exchanger + Cooling Tower							
	Cooling Method	Optional: Closed Water Cooling by Fan Radiator							
	Starting Method	24VDC Electrical							
	Bore × Stroke (mm)	190×215							
	Displacement (L)	97.53							
Gas Engine	Compression Ratio	11:1							
	Average Speed of Piston (m/s)	10.5							
	Cylinder numbers and Type	16.Vee, 60° Angle							
	Governor/Actuator	Woodward or Heinzmann or Motortech							
	Ignition System	Motortech or Altronic or Equal							
	Air-Fuel Control	EGS Automatic A/F Control							
	Rated Speed (r/min)	1200(60Hz)							
	Idle Speed (RPM)	700							
	Direction of Rotation	Counter-clockwise							
	Oil Consumption (g/kW.h)	≤0.8							
	Lube Oil Capacity (L)	460							
	Heat Consumption(kJ/kW.h)	≤9500							
	Exhaust Gas Temperature	≤550°C							
	Intake Gas Pressure Required (kPa)	100~400							
	Noise Level (Db)	≤110 (without silencer and soundproof container)							



		Alternator Brand			Siemens or Equivalent					
	Alternator Model			1FC6 Series						
		Frequency (Hz)			60					
CIENTEN	C				480/270(60Hz)					
SIEMENS	3	Rated Voltage (V)		Other Special Low Voltages and						
					High Voltage of 6.3kV, 6.6kV, 10.5kV, 13.8kV are available					
Alternator	Power Factor (Cosф)			0.8						
		Туре			Insulation Class IP23, Protection Class H					
			Excitation Meth	od	Self-excited, Brushless					
	Voltage Regulation			on	AVR					
		Standard Control System: advanced SIVAC control panel by Siemens Technology, adopting control module of								
		ComAp Intelilite Series, with functions including manual keys, alarms, protections, auto start and shut down,								
Control System		showing running parameters in LCD Display.								
		Engine SCADA System, Communications protocol RS485								
		Options: Auto parallel synchronization control panel, Remote control system etc.								
		Net Weight (KG)			22000					
Size and Weight		Dimension (L×W×H, mm)			6070×2380×2776 (based on open cooling system)					
Main Electronic Performance Data										
Voltage			Frequency							
Stabilized Regulation	Instanta regula		Recovery Time	Fluctuation	Stabilized Regulation	Instantaneous regulation	Recovery Time	Fluctuation		
≤ ±2%	≤ ±5	5%	<b>1</b> s	≤ 0.5%	≤ 0.5%	≤±10%	<5s	≤ 0.5%		

★ Above values are provided for information purpose only and are non-binding. The data given in official offer is decisive.



## Knowing it is Ettes Power-The Key Supplier for Complete Power Generating System-

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