

Complete Power Generating System Solutions



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 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 shale gas and other special gas.
- ◆ Designed for intensive use (continuous duty)
- ◆ Capable of working with variable loads.
- ◆ Advanced technology of close-loop control, lean-burn and Mixing before turbo.
- ◆ Adopting highly intelligent gas control system of Woodward EGS or Motortech, the air fuel ratio can be automatically adjusted as per fluctuation of 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.
- ◆ Integrated & modularized unit to facilitate easy transport and quick setup.
- ◆ Easy Maintenance in Low Cost.
- ◆ Ensured annually continuous working over 8000 hours.
- ◆ Longer life span of 15~20 years.



**Main Technical Data of Methane Gas Generator EJ-450NB**

<b>Gas Gen-Set</b>	Genset Model	EJ-450NB
	Rated Power (kW/kVa)	450/563
	Manufacturer/Assembler	ETTES POWER
 <b>Gas Engine</b>	Gas Engine Manufacture	CNPC ENGINES ASSEMBLING PLANT
	Gas Engine Model	12V190ZDT
	Engine Rated Power (kW/hp)	500/680
	Applicable Fuel	Methane Base Gas: Natural Gas, Biogas, Oilfield Gas, Landfill Gas, Sewage Gas, Coalmine Bed Gas and Shale Gas etc.
	Type	Water Cooled, Four Stroke, Spark Ignition, Turbocharger and after-cooled, Outer Mixing
	Cooling Method	Standard: Open Cooling System by Heat Exchanger + Cooling Tower Optional: Closed Water Cooling by Fan Radiator
	Starting Method	24VDC Electrical
	Bore × Stroke (mm)	190×210
	Displacement (L)	71.5
	Compression Ratio	10:1
	Average Speed of Piston (m/s)	10.5
	Cylinder numbers and Type	12.Vee,60° Angle
	Governor/Actuator	Woodward or Heinzmann or Motortech
	Ignition System	Motortech or Altronic or Equivalent
	Rated Speed (r/min)	1000 (50Hz) / 1200(60Hz)
	Idle Speed (RPM)	700
	Direction of Rotation	Counter-clockwise
	Oil Consumption (g/kW.h)	≤0.8
	Lube Oil Capacity (L)	200
	Heat Consumption(kJ/kW.h)	≤9500
Exhaust Gas Temperature	≤550°C	
Intake Gas Pressure Required (kPa)	10~20 (biogas) / 100~400 (natural gas)	
Noise Level (Db)	≤110 (without silencer and soundproof container)	



 <b>Alternator</b>	Alternator Brand	Siemens or Equivalent					
	Alternator Model	1FC6 Series					
	Frequency (Hz)	50/60					
	Rated Voltage (V)	400/230(50Hz), 480/270(60Hz) Other Special Voltages are available					
	Power Factor (Cosφ)	0.8					
	Type	Insulation Class IP23, Protection Class H					
	Excitation Method	Self-excited, Brushless					
	Voltage Regulation	AVR					
<b>Control System</b>	<b>Standard Control System:</b> 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, showing running parameters in LCD Display. Engine SCADA System, Communications protocol RS485						
	<b>Options:</b> Auto parallel synchronization control panel, Remote control system etc.						
<b>Size and Weight</b>	Net Weight (KG)	11800					
	Dimension (L×W×H, mm)	4790*2040*2212 (based on open cooling system)					
Main Electronic Performance Data							
Voltage				Frequency			
Stabilized Regulation	Instantaneous regulation	Recovery Time	Fluctuation	Stabilized Regulation	Instantaneous regulation	Recovery Time	Fluctuation
≤ ±2%	≤ ±5%	1s	≤ 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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