Tellhow EST Gas Generator Set

About us

Tellhow Energy Solution Technology Co., Ltd. (Hereinafter referred to as Tellhow EST) is a professional gas power generation company. The main business includes the manufacturing of gas genset, the integration, construction and operation of gas power stations, and the integration, construction and operation of bio gasification equipment. The company is affiliated to Tellhow Si-Tech Co., Ltd., a company listed on Shanghai Stock Exchange and one of the largest genset manufacturers in China. The company's main operations in Beijing, Nanchang, Fuzhou, Shenyang and Xi'an have manufacturing plants, offices in Hong Kong are our window of foreign trade, in order to provide customers with more efficient financial services.

We can provide customers with 10-4000kw gas genset, the brand is Tellhow EST. It can use natural gas, biogas, digested gas, coke gas, syngas, LPG and other gaseous fuels. We can provide customers with the integration, construction and operation of 10-100mw gas power station. The scope of supply includes fuel treatment, generator set, waste heat recovery, exhaust treatment, load management, etc.

We can provide customers with the integration, construction and operation of biomass gasification technology. The biomass gas with high calorific value (calorific value can reach 17MJ / Nm^3 or more) produced by the equipment can be used in power generation, boilers, industrial furnaces and other occasions.

The operation team of Tellhow EST has built and operated more than 30 energy station projects, which can provide diesel, heavy oil, gas and biomass gasification power stations for all countries and regions in the world, as well as cogeneration projects based on the power station.

Tellhow EST gas generator set

Tellhow EST adopts Cummins, Liebherr and MWM gas engines, uses high-quality auxiliary equipment made in China and advanced control modules to produce EST brand gas generator sets. It can provide excellent user experience. EST gas generation set can use natural gas, LPG, flare gas, biogas, torch gas, coal bed gas, biomass gas, blue carbon gas, coke oven gas and other complex gases. According to the needs of the project, we can design detailed and comprehensive feasible customized solutions for customers.

Technical parameters

Model	ES 90 N5	ES 130 N5	ES 160 N5	ES 200 N5	ES 300 N5	ES 500 N5
Engine Model	6BTAA5.9G	6LTAA8.3G	6LTAA8.9G	855G	K19G	K38G
Electric power (kW)	90	130	160	200	300	500
Displacement (L)	5.9	8.3	8.9	14	18.9	37.7
Configuration	16l	16	16	16	16	V12
Rated Speed (RPM)	1500/1800	1500/1800	1500/1800	1500/1800	1500/1800	1500/1800
Electrical Efficiency (%)	34.5	35.1	35.2	36.5	36.8	36.9
Genset Length(mm)	2300	2400	2500	3200	4200	4800
Genset Width (mm)	870	1000	1010	1200	1700	2300
Genset Height (mm)	1580	1580	1580	1800	1850	2600
Genset Weight (Kg)	1700	1890	1890	2500	3800	7000

Technical parameters

Model	ES 500 N5A	ES 600N5	ES 800N5	ES 1100N5	ES 1460N5	ES 1800N5
Engine Model	G9512	3016V12	3016V16	12V-170	16V-170	20V-170
Electric power (kW)	500	600	800	1100	1460	1800
Displacement (L)	25	26.3	35	53.1	70.8	88.5
Configuration	V12	V12	V16	V12	V16	V20
Electrical Efficiency (%)	40.1	40.2	40.7	41.2	41.5	41.7
Rated Speed (RPM)	1500	1500	1500	1500	1500	1500
Genset Length(mm)	4900	3690	4090	4090	6150	7320
Genset Width (mm)	2000	2490	1590	1590	1700	1700
Genset Height (mm)	2200	2190	2190	2190	2615	2615
Genset Weight (Kg)	5500	7000	8450	8560	15000	17000

Notes:
1.Tested under 100% full load
2. Tolerance ±5%
3. Emission NOx: 500mg/Nm^3
4. Tellhow EST has the final interpretation

Tellhow EST Low BTU generator set

In the industrial field, there are many factory exhausts with a certain calorific value. For example, biomass pyrolysis gas, coke oven gas, blast furnace gas, ferroalloy tail gas, yellow phosphorus tail gas and blue carbon tail gas. We call it low BTU fuel. These fuels have two characteristics: one is the low calorific value, which is only 20% or even lower than natural gas; the other is the complex composition, including high deflagration H_2 and highly toxic CO in addition to methane. These two characteristics will make it difficult for high-speed engine to run. But the potential of this market is very huge, and it is also the main demand of the energy conservation and emission reduction market.

According to the complexity of this kind of fuel, the team of Tellhow EST united with domestic engine factories to develop a series of products with large cylinder diameter, long piston travel and low rated speed. The key components of the products are carburized, nitride and lined with zinc plate, which greatly improves the tolerance of the engine to complex fuels.

Considering the huge output of low calorific value gas, the products launched by Tellhow EST team are mainly high-power. It includes seven models of 500kW, 800kW, 900KW, 1300KW, 1650kW, 2475KW and 3300kW. Please refer to the table below for specific technical parameters.

Technical parameters

Model	ES 500 X5	ES 800 X5	ES 900 X5	ES 1300 X5	ES 1650 X5	ES 2475 X5	ES 3300 X5
Engine Model	8300	9300	12V-170	16V-170	20V-170	12V-280	16V-280
Electric power (kW)	500	800	900	1300	1650	2475	3300
Displacement (L)	214	241	53.1	70.8	88.5	214	286
Configuration	I8	I9	V12	V16	V20	V12	V16
Rated Speed (RPM)	600	600	1500	1500	1500	1000	1000
Electrical Efficiency (%)	35.5	36	39.7	39.8	40.5	38.2	38.7
Genset Length(mm)	6400	8500	4090	6150	7320	7800	8500
Genset Width (mm)	1600	1900	1590	1700	1700	2150	2400
Genset Height (mm)	2900	3500	2190	2615	2615	3450	3400
Genset Weight (Kg)	22000	42000	8560	15000	17000	51000	58000

Tellhow EST Dual fuel generator set

Tellhow EST, in cooperation with CSSC, can provide the users with a global leading level of dual fuel power generation set. The engine is arranged in line with output power of 405kw per cylinder. We can provide customers with four power generating sets of 6, 7, 8 and 9. In the process of R & D, the engine has been cooperating with AVL in depth and has adopted a lot of advanced technology. The main advantages include:

- Lean burn and Miller cycle technology are adopted in the engine, with engine efficiency up to 47.2%, high power density and BMEP of 19.2bar;
- The engine uses spark plug ignition system with precombustion chamber to realize the whole area ignition at the same time, which makes the ignition more rapid and the combustion more sufficient.
- The dual injector is used, the main injector is used for diesel fuel injection, and micro injector is used for fuel gas mode ignition. The rail pressure is up to 1200bar, and the pilot fuel quantity is only 1%;
- The generator set adopts ECU control system, which can accurately control the air-fuel ratio, combustion pressure and ignition timing of each cylinder, and realize the independent control of each cylinder, so as to effectively improve the performance of each cylinder and the intelligence of the engine.
- The gas and oil switch quickly for 1 second, and the speed fluctuation rate meets the requirements of the specification;
- The closed crankcase respiratory system fully meets the emission index of Tier II, NOx is less than 2.4 g/kW·h;
- The engine adopts the design of gas double wall pipe, explosion-proof valve is installed in the intake and exhaust pipes, and gas leakage monitoring is designed to realize intrinsic safety;
- The design life of parts is long, and the overhaul period is 60000h;
- The engine adopts segmented connecting rod, modular unit, etc., which is easy to disassemble and dismantle.

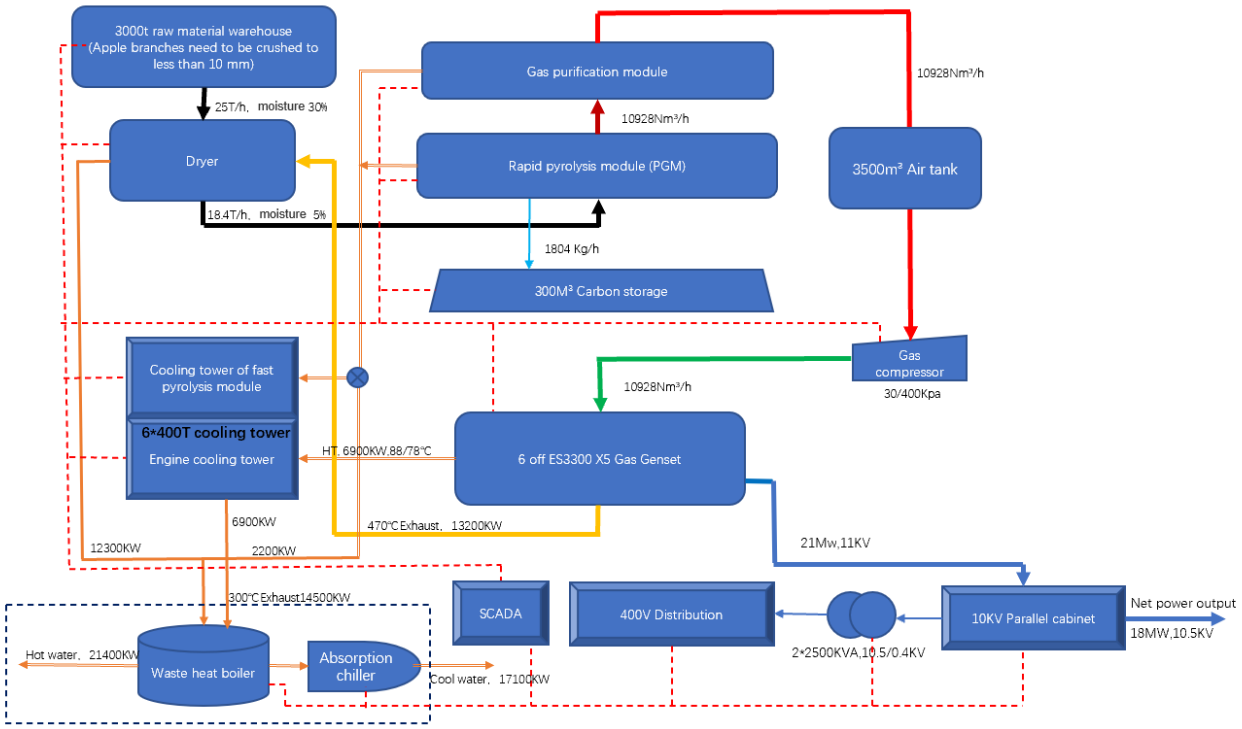
Model	ES 2000 DF5	ES 2340 DF5	ES 2670 DF5	ES 3000 DF5
Engine Model	6ACD320DF	7ACD320DF	8ACD320DF	9ACD320DF
Electric power (kW)	2000	2695	3080	3000
Bore (mm)	320	320	320	320
Stroke (mm)	420	420	420	420
Configuration	I6	I7	I8	I9
Rated Speed (RPM)	750	750	750	750
Electrical Efficiency (%) (Gas model)	46.5%	46.5%	46.5%	46.5%
Electrical Efficiency (%) (Diesel model)	46%	46%	46%	46%
Genset Length(mm)	8137	8955	9710	10450
Genset Width (mm)	2437	2437	2437	2437
Genset Height (mm)	4102	4102	4305	4305
Genset Weight (Kg)	55000	62000	69000	76000

Biomass pyrolysis gasifier / Gas power station

In cooperation with ENN, Tellhow EST can provide gas power stations with solid biomass materials for customers. Including straw, wood chips, tires, fruit shells and other organic waste. Firstly, the biomass raw material is crushed and dried, and then the biomass raw material is pyrolyzed by thermal medium at high temperature to decompose the biomass raw material into combustible gas and carbon. The calorific value of combustible gas can reach more than 17.5MJ/Nm^3, which can be used for power generation, boiler, industrial kiln and other purposes. Carbon can be recycled as fuel or carbon-based fertilizer.

The following is the flow chart of 200,000 tons apple branch fast gasification power plant produced by Tellhow EST.

BMES process flow chart of 200000 tons apple branches in Gansu Province



Due to the use of thermal medium heat conduction technology, the participation of air in the pyrolysis process is avoided. Without O_2 and N_2, the pyrolysis temperature can be increased to 800-900 ℃. Therefore, there is almost no tar and N_2 in the gaseous fuel, and the calorific value of the gas is greatly increased. After gasification, the components of gaseous fuel are as follows:

Component	H_2	CH_4	CO	CO_2	C_2H_6	C_2H_4	C_2H_2	C_3H_8	C_3H_6
Volume content (%)	19.00	18.12	46.55	9.51	1.98	2.15	0.04	0.18	0.76

Gas Power Station (10-100MW)

Tellhow EST team can provide gas power station for customers. The scope of supply includes fuel system, generator set, waste heat recovery, steam boiler, absorption chiller, power transmission and transformation engineering, load management / centralized control, power station design and construction, power station operation and maintenance. It can also provide investment / financing and energy service contracts for customers according to their financial situation. The power range of the power station is 10 - 100MW, and the fuel includes natural gas, low BTU gaseous fuel and dual fuel. The generator set can use the brand of Tellhow EST or the brand designated by the customer, such as Caterpillar, Jenbarcher, Cummins, MWM, MTU etc.

Module gas generator

The ES 1000 M5 modular gas generator set of Tellhow EST has 4 off 250KW gas generator sets arranged side by side in a 40HQ, and the power is combined and output through parallel switch. The output power is 1000kW, 400V, 50Hz. Modular generator set has two main advantages, one is cheap, the other is strong carrying capacity. It is widely used in the field of oil and gas fields, and can provide users with electricity cost much lower than that of diesel generator set.

Project information sheet

Project Name	
Project Address	
Dealer Name	
Dealer Contact Name and Phone No.	
Site Altitude (ASL)(m)	
Site Ambient Temperature Range(Min/Max)(℃)	
Drew Point(℃)	
Emission requirements (Noise, Emissions, etc.)	
Genset Opera on Mode (Island or Grid Parallel)	
Required Power(kWe)	
Required Electrical Efficiency (%)	
Alternator Voltage Required(kV)	
Alternator Frequency Required (50 or 60) (Hz)	
No of Genset Required	
Scope of Dealer's Supply Required (If Include Heat Exchanger, Boiler, absorption chillers; Grounding Resistance, Load Bank, Switchgear, PLC, etc.)	
Site Electrical Load Performance (Power, Staring Method, Power Factor, etc.)	
Required Heat from HT/LT (kW)	
Required Heat from Exhaust(kW)	
Fuel Type (NG/LNG, flare gas, Syngas, Biogas, Coke gas, etc.)	
Gas composition	

Tellhow EST can customize various gas-fired generator sets, mine independent power station, island independent power station, high altitude power station, special fuel power station, etc. No matter what you need, please feel free to contact us.

Beijing Tellhow Energy Solution Technology Co., Ltd.

Office Add: 6F, Tower A, Tellhow Intelligent, No.2 Yuncheng Street, Economic & Technological Development Zone, Beijing, China.

IP：https://www.tellhowest.com

Email：liujuan@tellhow.com

Factory Add: Hui Ren RD., High-Tech Development Zone, Nanchang, Jiangxi China.