



## **FUJIAN EVERSTRONG LEGA POWER EQUIPMENTS CO., LTD**

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**Lega**

**Power**

**Gas**

**Generator**

**Catalog**



## About Lega Power

Fujian Everstrong LEGA Power Equipments Co., Ltd. (LEGA POWER for short), founded in 2000 with a registered capital of USD 14.90 million, is one of the leading generator sets manufacturer in China. It produces both diesel generators ranged from 0.5kva to 3000kva, and natural gas generators ranged from 105kw to 2200kw. The company is located in Fujian Fuqing City Hongkuan Industrial Zone, with an area of 200000 square meters, over 800 employees and an annual sales of over RMB 500 million.

With so many years development, Lega Power have been important authorized OEM partner for Cummins G-Drive, Cummins, Perkins, MTU, Doosan etc., and the NG gensets have been widely used in Island Mode, Grid Parallel, Higher Ambient Temps, Poor Quality Fuel, Moderate Altitude&Temperature. And Lega Power not only provide the gensets, but also Combined Cooling Heating and Power, to output a better energy cycle use and environment.

And the acceptable fuel types are Natural Gas, Oilwell Gas, Landfill Gas, Biogas, CMM.

## Our Services

Lega Power provides products & sourcing, engineering contracting and technical services for power and energy, transport and logistics, environmental infrastructure, and a full range of building applications including commercial, industrial and residential.

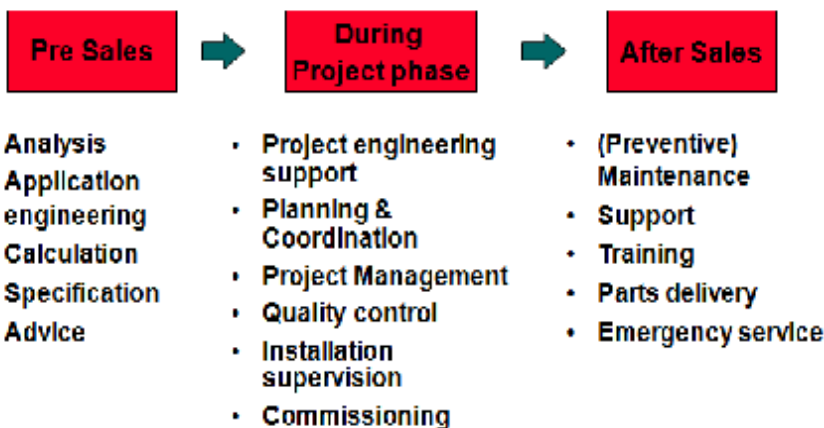
## Our Aim

Lega Power aims to enhance Asia's built environment by utilizing engineering, sourcing and project management best practices to deliver electrical, mechanical and building products, services and projects to business and Government institutions, so as to enable them to operate their facilities to world class standard.

Our Principle: provide value to customers and staffs, to ensure us win-win dreams together

Our Style: Initiative、 Devoted、 Persist、 Conscientious、 Responsible

## What Can You Expect From LEGA POWER?





# Lega Power---Cummins important partner in China



## About Cummins

Cummins Inc., a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems.

Cummins was founded in February 1919. Headquartered in Columbus, Indiana, (USA) Cummins employs approximately 44000 people worldwide and serves customers in approximately 190 countries and territories through a network of more than 600 company-owned and independent distributor locations and approximately 6500 dealer locations. Cummins earned \$1.85 billion on sales of \$18.0 billion in 2011.

## ESB Energy Solutions Business

ESB is a unit of Cummins that specialized in Cummins HHP power generation and power station business.

## Gas Fueled Genset CCHP Introduction

CCHP: use the natural gas and the main fuel drive the gas turbine or internal combustion engine generator and gas power generation equipment operation. CCHP produce power to meet the user's power demand. The waste heat from system through waste that recycling equipment, such as: waste heat boiler or direct combustion engine provide heating, cooling to users. After the comprehensive user, make the energy efficiency of the conventional power generation system from about 40% increase to 80% a large of energy are saved.

## CCHP Basic Principle

As the OEM distributor for selling Cummins gas genset in Mainland China, Lega Power participate in a lot of cogeneration projects. We can provide various forms of cogeneration system for the customer, such as: power-hot water, power-steam, Combined Cooling, Heating and power type. We can not only provide system design, equipment selection and supply, but also provide energy efficiency management, system operation management, traditional system transformation and other services. By now, Cummins have successfully operated many projects in China, such as: South Beijing Railway Station, Huanghua Airport no.5 spaceflight research institute, West Tianjin Railway Station, Shandong Zhenlong Biochemistry Company. Lega Power hope with the enthusiasm for servicing more customers with the same type of products and services.





## Cummins G-Drive Series-50hz

**50HZ,0.8PF, 3P4W,brushless, self-excitation, IP23、H level, Fuel: PNG、LNG、CNG、associated gas、 coal mine gas、 shale gas and**

Model	Standby Power (KW)	Prime Power (KW)	Continuous Power (KW)	Engine	Displacement / cylinder	Consumption @full load (KW/h)	Electric efficiency (%)	Stamford	Measurement, open type (mm)	Heavy for reference (Kg)	Burn Technology
C105N5C	N/A		105	G855	14(L6)	35m³/h	32.00	Stamford,CN	2900*1160*1900	2900	Technology
C143N5C	143		N/A	GTA855e	14(L6)	47m³/h	33.00	Stamford,CN	2900*1160*1900	3000	Stoichiometric
315 GFBA**	N/A		315	QSK19	19(L6)	879	36.1	Stamford,UK	3500*1300*1800	4000	Lean Burn
C320N5C	N/A		320	GTA28	28(V12)	105.6m³/h	35.50	Stamford,CN	4267*2413*2489	6913	Lean Burn
C467N5C	N/A		467	GTA38	38(V12)	154m³/h	35.00	Stamford,CN	3900*2100*2250	9000	Lean Burn
575GFBA**	N/A		575	QSK38	38(V12)	1599	36	Stamford,UK	3900*2100*2250	9000	Lean Burn
C600N5C	N/A		600	GTA50	50(V16)	198m³/h	35.00	Stamford,CN	5189*2400*3030	9885	Lean Burn
C995N5C*	N/A		995	QSK60G-HiE-NEW	60(V16)	2425	41.00	Stamford,UK	5120*2320*2770	14440	Lean Burn
C1160N5C*	N/A		1160	QSK60G-NEW	60(16)	2955	39.30	Stamford,UK	5000*2330*2970	13924	Lean Burn
C1200N5C*	N/A		1200	QSK60G	60(16)	2857	42.00	Stamford,UK	5120*2320*2770	15450	Lean Burn
C1400N5C*	N/A		1400	QSK60G-HiE-NEW	60(16)	3348	41.80	Stamford,UK	5120*2320*2770	15625	Lean Burn
C1540N5C*	N/A		1540	QSV91G	91.6(18)	4021	38.30	Stamford,UK	5603*1720*3136	17057	Lean Burn
C1750N5C*	N/A		1750	QSV91G	91.6(18)	4485	39.00	Stamford,UK	5921*1720*3136	19633	Lean Burn
C2000N5C*	N/A		2000	QSV91G	91.6(18)	4888	40.90	Stamford,UK	6065*2158*2772	20457	Lean Burn
C2200N5C*	N/A		2200	QSV91G	91.6(18)	5117	43.00	Stamford,UK	6065*2158*2790	20477	Lean Burn

## Cummins G-Drive Series-60hz

**60HZ,0.8PF,3P4W,brushless, self-excitation, IP23、H level, Fuel: PNG、LNG、CNG、associated gas、 coal mine gas、 shale gas and**

Model	Standby Power (KW)	Prime Power (KW)	Continuous Power (KW)	Engine	Displacement / cylinder	Consumption @full load (KW/h)	Electric efficiency (%)	Stamford	Measurement, open type (mm)	Heavy for reference (Kg)	Burn Technology
C126N6C	N/A		126	G855	14(L6)	41.6m³/h	33.00	Stamford,CN	2900*1160*1900	2900	Stoichiometric
C172N6C	257		172	GTA855e	14(L6)	84.8m³/h	34.00	Stamford,CN	2900*1160*1900	3000	Stoichiometric
C257N6C	257		N/A	GTA855	14(L6)	84.8m³/h	36.00	Stamford,CN	2900*1160*1900	3000	Lean Burn
C355N6C	355		N/A	KTA19	19(L6)	117m³/h	33.00	Stamford,CN	3500*1300*1800	4000	Stoichiometric
C355N6C**	N/A		331	QSK19G	19(L6)	879	36.1	Stamford,UK	3500*1300*1800	4000	Lean Burn
C380N6C/	470		380	GTA28	28(V12)	155m³/h	36.00	Stamford,CN	4267*2413*2489	6913	Lean Burn
C495N6C	495		N/A	GTA28	28(V12)	164m³/h	33.00	Stamford,CN	4267*2413*2489	6913	Stoichiometric
C451N6C/ C570N6C	570		451	GTA38	38(V12)	188m³/h	35.00	Stamford,CN	3900*2100*2250	9000	Stoichiometric
C700N6C/ C543N6C	700		543	GTA38	38(V12)	231m³/h	36.00	Stamford,CN	3900*2100*2250	9000	Lean Burn
575GFBA**	N/A		575	QSK38	38(V12)	1599	36	Stamford,UK	3900*2100*2250	9000	Lean Burn
C740N6C	740		N/A	GTA50	50(V16)	244m³/h	35.00	Stamford,CN	5189*2400*3030	9885	Stoichiometric
C895N6C/ C692N6C	895		692	GTA50	50(V16)	296m³/h	36.00	Stamford,CN	5189*2400*3030	9885	Lean Burn
C1000N6C	N/A		1000	QSK60G-HiE-NEW	60(16)	2325	43	Stamford,UK	5120*2320*2770	14440	Lean Burn
C1250N6C	N/A		1250	QSK91G	91.6(18)	3294	37.9	Stamford,UK	5603*1720*3136	17057	Lean Burn
C1400N6C	N/A		1400	QSK60G-HiE-NEW	60(16)	3348	41.8	Stamford,UK	5120*2320*2770	15625	Lean Burn
C1540N6C	N/A		1540	QSV91G	91.6(18)	4021	38.3	Stamford,UK	5603*1720*3136	17057	Lean Burn
C1750N6C	N/A		1750	QSV91G	91.6(18)	4485	39	Stamford,UK	5921*1720*3136	19633	Lean Burn
C2000N6C	N/A		2000	QSV91G	91.6(18)	4888	40.9	Stamford,UK	6065*2158*2772	20457	Lean Burn
C2200N6C	N/A		2200	QSV91G	91.6(18)	5117	43	Stamford,UK	6065*2158*2790	20477	Lean Burn

1、Voltage Option : 440/254V,415/240V,380/220V,220/115,200/115V, above 900Kw high voltage is optional.

2、Alternator Stamford

3、Prime Power: In unstable load, genset could be running continuously,It allows one hour of 10% overload in 12 hours.Standard:ISO8528)

4、Standby Power: For emergency power.

5、Continuous Power: In the variable load,the power of genset continuous running.

6、This table is convenient for customer choosing model, just for reference. If any update, pls contact our engineer.

7、\* mean CUMMINS engine from UK, \*\* means CUMMINS engine from India, and the other model without \* or \*\* means gensets assembled b

8、Emission standard: \* and \*\* means Nox less than 500mg, and the other models are in line with USA EPA emission standard.

9、Genset dimension and weight is for reference, and the data is accord to true goods after order.

### Original Perkins Series-50hz

50HZ,0.8PF, 3P4W,brushless, self-excitation, IP23、H level, Fuel: PNG、LNG、CNG、associated gas、coal mine gas、shale gas and

Lega Model	Standby Power (KW)	Prime Power (KW)	Continuous Power (KW)	Engine Model	Displacement /Cylinder	Gas consumption 100% load (m³/h)	Electrical efficiency (%)	Stamford Alternator	Dimension Of Genset Open Data(mm)	Weight (KG)
LG383PN	N/A	306	N/A	4006-23TRS1	22.921(6)	85	37.4	HCI 444FS	4646*1992*2189	6056
LG468PN	N/A	374	N/A	4006-23TRS2	22.921(6)	101	38.4	HCI 544C	4646*1992*2189	6056
LG531PN	N/A	425	N/A	4008-30TRS1	30.561(8)	116	37.9	HCI 544D	5540*1992*2283	7485
LG625PN	N/A	500	N/A	4008-30TRS2	30.561(8)	135	38.5	HCI 544F-S	5540*1992*2283	7485
LG1094PN	N/A	875	N/A	4016-61TRS1	61.123(16)	237	38.4	LVI 634F	4641*1836*2148	10120
LG1250PN	N/A	1000	N/A	4016-61TRS1	61.123(16)	268	38.6	LVI 634G	4641*1836*2148*	10120

### Cummins Modified Series-50hz



50HZ,0.8PF, 3P4W,brushless, self-excitation, IP23、H level, Fuel: PNG、LNG、CNG、associated gas、coal mine gas、shale gas and

Lega Model	Standby Power (KW)	Prime Power (KW)	Continuous Power (KW)	Engine Model	Displacement /Cylinder	Gas consumption 100% load (m³/h)	Electrical efficiency (%)	STAMFORD	Dimension Of Genset Open Data(mm)	Weight(KG)
LG35CN	27.5	25	N/A	M4B3.9-N	3.9(4)	8	31.00	PI 144H	1850*1000*1350	900
LG41CN	33	30	N/A	M4BT3.9-N	3.9(4)	9.6	31.00	PI 144J	1850*1000*1350	980
LG50CN	40	36	N/A	M4BTA3.9-N	3.9(4)	11.2	33.00	UCI 224C	1850*1000*1350	1010
LG55CN	44	40	N/A	M4BTAA3.9-N	3.9(4)	12.4	33.00	UCI 224D	1850*1000*1350	1080
LG83CN	66	60	N/A	M6BTA5.9-N	5.9(6)	19.8	30.00	UCI 224G	2350*1000*1400	1200
LG104CN	83	75	N/A	M6BTAA5.9-N	5.9(6)	23.2	32.00	UCI 274C	2200*1000*1400	1400
LG118CN	93	84	N/A	M6BTAA5.9-N	5.9(6)	25.2	33.00	UCI 274D	2200*1000*1400	1450
LG131CN	105	95	N/A	M6CTAA8.3-N	8.3(6)	29.45	32.00	UCI 274D	2400*1150*1500	1650
LG144CN	115	104	N/A	M6CTAA8.3-N	8.3(6)	31.2	33.00	UCI 274E	2400*1150*1500	1860
LG165CN	132	120	N/A	M6CTAA8.3-N	8.3(6)	36	33.00	UCI 274F	2350*1000*1500	2000
LG220CN	175	160	N/A	MNTA855-N	8.9(6)	56	29.00	UCI 274H	2900*1160*1900	2420
LG247CN	200	182	N/A	MNTAA855-N	14(6)	58.5	33.00	UCD 274J	2900*1160*1900	3300
LG275CN	220	200	N/A	MNTAA855-N	14(6)	64	33.00	UCD 274K	2900*1160*1900	3650
LG344CN	275	250	N/A	MKTAA19-N	18.9(6)	82.5	32.00	HCI 444ES	3800*1550*2000	3850
LG385CN	308	280	N/A	MKTAA19-N	18.9(6)	90	36.00	HCI 444E	4000*1550*2000	4000
LG413CN	330	300	N/A	MKTAA19-N	18.9(6)	96	36.00	HCI 444FS	4000*1550*2000	4000
LG525CN	440	400	N/A	MKTAA38-N	38(12)	132	34.00	HCI 544C	4510*1850*2400	7500
LG619CN	495	450	N/A	MKTAA38-N	38(12)	144	35.00	HCI 544F	4510*1850*2400	8000
LG688CN	550	500	N/A	MKTAA38-N	38(12)	160	35.00	HCI 544F-S	4510*1850*2400	8500

- Also available in the following voltages: 440/254V,415/240V,380/220V,220/115,200/115V,
- According to customer needs, can choose other brand generator: Stamford, leroy somer, etc
- Prime Power: Under variable load, continuous operation,Overload of 10% permitted for 1 hour in every 12 hours operation. (Test meets ISO8528)
- Standby Power: Under emergency state, he max output of varying load, No overload is permitted.
- Under the condition of Standard Natural Gas test, every degree electricity gas consumption about 0.26-0.35m³,the sets power higher,the unit consumption lov
- This information to help customers choose model establishment, for reference only, such as technical parameters are subject to change, without prior notice, please contact with engineering and technical personnel.
- S: Soundproof sets, open type sets without"S".
- LG: Leag Power; P: Perkins; C: CUMMINS; N: NATURAL GAS

## Applications

### South Beijing Railway Station

Then total construction area is around 1.7 million square metres including office building, hotels, shopping malls, and exhibition centers. This will be the first low-carbon economic development in Shanghai, which is a demonstration project in response to the government policy of energy efficiency and emission reduction. This will be one of the largest scale CCHP system in Mainland China.

The projects requested eight sets of Cummins gas engine generator sets, absorption chillers, exhaust gas heat exchangers, ancillary equipment and distributed generation control and monitoring system.



### Huanghua Airport

The project requested energy efficient powering solution for the Changsha Huanghua International Airport, located 30kilometres from the city centre in the town of Huanghua in Changsha Country Hunan Province. Changsha Airport Terminal 3 is one of the first airports in China to used the Combined Cooling Heat and Power(CCHP) system.

Cummins provided two sets of Cummins gas generators with acoustic enclosures and a cooling system with remote radiators. The system uses waste heat from the water jacket and exhaust to be recovered by two absorption chillers, similar to the one provided at the Beijing South Railway Station.



## Shandong Zhenlong Biochemistry Company

Zhenlong Biochemistry Company is one of the largest manufacturers of alcohol in Shandong province, China. The company can produce 100000 tons alcohol yearly.



Along with the new factory's production, the methane also increases. Methane cannot be consumed with the traditional processing method. New factory also cannot solve the increased demand for power in manufacture process.

Cummins provided 2 sets of C2000N5C Cummins methane generating sets, 2 sets of absorption chillers. They are constituted a CCHP combined heat and power generation system. CCHP system can provided 4MW electrical power.

## Moranbah, Queensland, Australia

8 off 1570GQMB generator sets each rated at 1570kWe

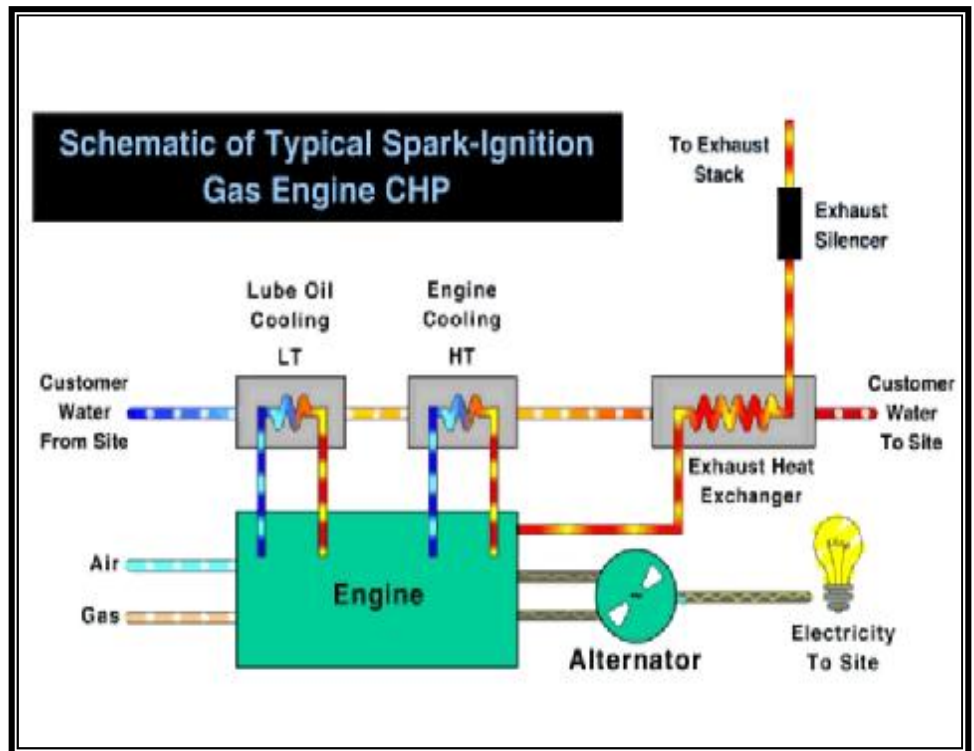
First batch commissioned August 2004, Second batch commissioned March 2005

All sets running at rated load at emissions target.

Required to run base load operation – grid parallel and emergency island mode



- Power Generation
  - Short term Peaking
    - Baseload
    - Load following
  - Baseload
- Turboexpansion
- Co-generation
  - Hot Water
  - Steam
  - Hot Water and Steam
  - Heat
  - CO<sub>2</sub>
  - Absorption Chilling



## CCHP process drawing

