

Zhuhai Evergrow Gas Equipment Co.,Ltd

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Support Your Success on Industrial Gases



Our work shop with National Production License of Special Equipment (low & medium Pressure vessel 0-100bar); Installation License of Industrial Pressure Pipeline (GC2); ISO 9001; ISO 14001; ISO45001.etc to meet international standard of pressure vessels and quality control license & certificate.

Our Multilayer Insulation Cryogenic tanks and pressure vessels, with National Performance Type Test Certificate, ASME or PED third party conformity certificate if required.

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Company Profile

Zhuhai Evergrow Gas Equipment Co., Ltd

Located in Zhuhai City, a subsidiary company of Senbo Cryogenic Group.

We engage in design, manufacture, installation of gas system and equipments used from the beginning to the end in the liquid industrial gas supply chain, including: Air Separation Plant for Oxygen, Nitrogen and Argon, Co2 Recovery & Generation Plant, Cryogenic Storage Tanks and Mobile Trailers, Cylinder Filling Station and other Ancillary equipment.

A historied team has been working in industrial gas field together for over 20 years, the professional Design, Manufacture and Installation team with significant experience of successful performing EPC projects for Coca cola, Pepsi-Cola, Linde gas, Air Liquide, Messer and many great companies all over the world.

With more than 15 years cooperating with international band suppliers of compressor, refrigerator, expander, pumps, cylinder, valves and instruments, make us partners and ensure our customer get best price and most reliable equipment and spare parts.

Our experts provide all-around consulting service all the time and deliver customized design to meet specific requirements of our client to save cost and create value.

Evergrow is committed to grow together with our customers, provide customer with Economical and Optimal Product with Convenient Service. We not only provide cost effective equipment, but also supporting the customer at every stage to make their own gas business successful.



1. Experienced Work Team

Perfessional Design, Manufacture and Installation teams with more than 30 nos of successful projects experience for Coca cola, Linde gas, Air Liquide, Messer and many great company at home and abroad



Simplify unnecessary equipment in flow to save investment and running cost. customized design on actual demand and budget choose the right equipments at right cost.



5. Own Factory

As one of the founders of a licensed pressure vessel factory, pressure vessel and skid assembly are build here under strict quality control system.GB,ASME,PED and international standards are available.

We regard "Economical", "Convenient", "Optimal" as our pursuing concept of product quality, price, and service, offering our customer flexible gas solutions and reliable





Single Source Advantages 2.

Broad and proven execution expertise covering the full technology, engineering, procurement, construction and commis sioning lifecycle.



Careful selected genuine spare parts and common spare parts on stock help our customers to get maximum efficiency of your product.



Brand Supplier Partners 6

More than 15 years cooprating with international band suppliers of compressor, refrigerator, expander, pumps ,valves and instruments, make us partners and ensure our customer get bottom price and genuine spare parts.

Fconomical

Deliver customized design on actual demand and budget investment of our customers to save their investment cost and equipment running cost.Also our own pressure vessel factory and brand supplier partners makes our price more competitive.

Convenient

With Single Source Advantages, our experienced engineers can provide our customer convenient and comfortable one-stop service, from design, procurement, construction, commissioning and maintenance lifecycle, especially makes our After-Sales Service fast and effective.

Optimal

Optimal Design from our experienced enginner, optimal selection of our brand suppliers and optimal quality control of our own workshop, these enable an optimal qualified system on operation, efficency, safty, consumption and reliability.





Carbon Dioxide Plant

Carbon Dioxide Plant

is a full set of equipment of collecting pure CO2 from a variety of sources, with methods of filtration, washing, adsorption, reaction, separation and rectification etc. The CO2 Plant turns the waste into treasure, making the CO2 widely used in beverage, welding, firefighting, oil field, fresh keeping and many other field.

Our CO2 Systems are classified into 4 types as below:

No.	Equipment Name	Feed Gas Source	CO2 in Feed gas	Technical Description				
1	Industrial By-Product CO2 Recovery Plant (BPR)	from Fermentation process (e.g. breweries, ethanol operations or distilleries)or Industrial sources (e.g. soda, ammonia ,ethylene oxide production , chemical plant, hytrogen plant) or Natural sources (e.g. from natural underground wells).	80%-99%	Most Popular, Most Ecnomical				
2	Stack Gas CO2 Recovery Plant (SGR)	from Flue gases after coal, gas or oil combustion (e.g. power generator, boiler, lime kiln or cement plant)	8%-35%	Easy to find source				
3	CO2 Production Plant (CPS)	run from combustion of low sulphur content diesel, kerosene or natural gas.	8%-11%	No Source required				
4	CO2 Revert Recovery System for Dry Ice Machines (RRS)	Dryice Machine	Same as Dryice	Dry ice production costs are reduced up to 50 %.				
	Remarks: The purity of product CO2 can meet Industrial/Food Grade , up to ISBT or Coca cola standard.							





CO2 Recovery Plant From Fertilizer Plant



CO2 Recovery Plant From Tail Gas of Fuel Boiler

Features:

1, Customized design for various sources of tail gases, minimize equipment investment and energy consumption while ensuring product function;

2, DCS automatic monitoring control system effectuates nobody-duty, minimizing labor cost and error probability substantially, monitoring on the key points for high safety;

3, Skid-mounted, small area and easy erection;

4, Full stainless steel for equipment connect to CO2 to ensure the safety and stability of the whole system;

5, Multiple energy-saving design for cool & heat recycling, minimizing the running cost;

6, Final liquid CO2 quality meet specifications of ISBT, food and beverage, and customer final liquid quality specifications.



CO2 Recovery Plant From Ammonia Process



CO2 Production Plant From Diesel Combustion





Air Separation Plant

Cryogenic Air Separation Plant (ASU)

Basis on the boiling points of gases in air, to separate the air into pure Oxygen, Nitrogen and Argon.

- O2 atmospheric boiling point: -183°C
- N2 atmospheric boiling point: -196°C
- Ar atmospheric boiling point: -186°C
- Separate temperature:-170°C~ -192°C
- Separate pressure: 0.6~0.06Mpa.

Features:

1,Broad and proven execution expertise covering the full technology, engineering, procurement and construction life cycle;

2, Low pressure flow design and proven technology for reliable operation and low power consumption;

3, Trusted partner ecosystem combining global procurement capabilities with local market advantages;

4, The application of activated alumina-molecular sieve with double-layer structure of air purification system prolongs the durability of molecular sieve;

5,DCS automatic monitoring control system effectuates nobody-duty, minimizing labor cost and error probability substantially.

	Production Specification							
Model	Oxy	gen	Nitro	gen	Arg	on	Interval	Area(M2)
model	Output Nm3/h	Purity %	Output Nm3/h	Purity %	Output Nm3/h	Purity %	(Year)	
KDON-100/250	100	99.6	250	99.999	/	1	1	20×12
KDON-170/400	180	99.6	400	99.999	/	/	1	25×12
KDON-350/700	350	99.6	700	99.999	/	1	1	35×24
KDON-550/1000	550	99.6	1000	99.999	/	/	1	35×24
KDON-1000/1000	1000	99.6	1000	99.999	/	1	2	40×50
KDON-1500/1500	1500	99.6	1500	99.999	/	1	2	40×50
KDON-2000/2000	2000	99.6	2000	99.999	/	1	2	40×50
KDON-3000/3000/90	3000	99.6	3000	99.999	90	99.999	2	60×80
KDON-4500/4500/135	4500	99.6	4500	99.999	135	99.999	2	60×80
KDON-6000/6000/180	6000	99.6	6000	99.999	180	99.999	2	60×80
KDON-10000/10000/320	10000	99.6	10000	99.999	320	99.999	2	60×120
KDON-15000/15000/540	15000	99.6	15000	99.999	540	99.999	2	60×120
KDON-16000/16000/550	16000	99.6	16000	99.999	550	99.999	2	60×120
KDON-20000/20000/720	20000	99.6	20000	99.999	720	99.999	2	60×120



Air Separation Plant KDONAr-6000/6000/180



Air Separation Plant KDONAr-3000/3000/90



Air Separation Plant KDON-180/400



Air Separation Plant KDON-2000/2000



Cryogenic Liquid Tank

Cryogenic Liquid Tanks are available in vertical or horizontal orientation for cryogenic service from Liquid Oxygen, Nitrogen, Argon, Natural Gas to Co2.

Models in size from 2 m3 to 200m3 (525 to 52,800 gallons) with pressures up to 25 barg.



Multilayer Vacuum Installation

-With our Multilayer Vacuum Insulation technology and Automatic Vacuum Pump unit , our vacuum value of tanks can stable less than 0.05 Pa, with better heat preservation and guaranty of 3 years maintenance free;

-Compare with perlite vacuum insulation tanks, the advantages are visible: Better insulation, lighter and the insulation layer will never sink after long period.

Container Shipment Available

-Customized design for normal 20ft or 40ft ocean container. -Ensure the economical shipment and cargo safety.





Skid Mounted

-The tank can mounted with cryogenic pump, vaporizer, pressure regulator, weighting cell and other ancillary to become a skid for Gas Supply Unit or Cyliner Filling Unit.

-Free of installation and foundation, easy transportation.

Fabrication Procedure & Quality Control



Cutting



Welding



Multilayer Insulation

Outer Layer Assembly



Helium Leak Detection

Rolling

Polishing

NDE Test(Radiographic)

Pressure Test and Cleaning



Parts Assembly



Heating and Vacuuming

Shipment



Cryogenic Transportation

Cryogenic Liquid Mobile Tank.

Our mobile delivery equipment is double layer with multilayer vacuum insulation, combine lighter weight, safety and lowest evaporation rate for better payload and maximum holding time.

Customized dimension design to fit your truck chassis or semitrailer;

Storage Medium: liquid Oxygen, Nitrogen, Argon, Natural Gas, CO2.

We offer a wide range of Cryogenic Mobile Tanks for road, rail, and sea distribution, our mobile tanks provide the flexible extended reach solution for cryogenic gas supply.





Liquid Oxygen Mobile tank for Chassis

Mobile Tank Container



Liquid CO2 Mobile tank for Semitrialer



Mobile Tank Control Cabinet

Microbulk Storage Tank

Free Foundation ! Free Installation ! Easy Transportation



Specification

Capacity: 1m³~5m³ Working pressure: ≤3.5MPa Medium: LOX, LIN, LAr, LCO2 Insulation: Multilayer High Vacuum

Flow Chart



Feature

Microbulk solutions - an innovative gas storage platform, specially designed for substitutes of industrial cylinder users in cutting, welding, lab, hospital, etc. The system allows packaged gas distributors and users to enjoy the benefits of on-site gas delivery.

1	TOP FILL VALVE	V-9	VALVE BALL DIV	в	LIQUID PHASE VALVE
2	BOTTOM FILL VALVE	V-10	VENT	5V1	INNER VESSEL SAFETY VALVE
-3	LIQUID OUTLET VALVE	V-11	RESIDUAL DISCHARGE VALVE	sv2	PIPELINE SAFETY VALVE
8/1	LIQUID USE VALVE	V-12	VACUUM PROBE	u	LIQUID LEVEL GAUGE
3/2	GAS USE VALVE	u	VAPOR PHASE VALVE	Pt	PRESSURE GAUGE
-8	FULL TEST & RETURN FLOW VALVE	12	EQUALIZATION	ιT	TELETRANSMISSION LEVEL GAUGE
-1	VACUUM PROBE	VP-1	VACUUM PUMPOUT	PB-2	VAPORIZER
a:	FILL CONNECTION	A	TOP FILL	B	BOTTOM FILL
Ē	FULL TEST/RETURN FLOW	E	LIQUID PHASE	F	VAPOR PHASE
e i	VENT	P8	LIQUID OUTLET	Τ	VACUUM GAUGE
ş		J/ANTI-	EXPLOSION VEN		1 - See



Flat Bottom Storage Tank

Cryogenic Liquid Tank (Flat bottom Tank)

The Flat Bottom Cryogenic Liquid Storage Tanks are available for large amount of liquid Oxygen, Nitrogen, Argon, Natural Gas storage in atmospheric temperature. Models range in size from 400 m3 to 30000m3 with pressures 10kpa ~50kpa.



International Experience Team

Perfessional Design, Manufacture and Installation teams with more than 30 successful projects experience for Linde gas, Air Liquide, Messer and many great company at home and abroad.



Cryogenic Storage Tank Flat Bottom Tank for LOX, LIN

Cryogenic Storage Tank LNG Storagne Tank

Unique Technique

efficiency by 50%





Professional Design

The structure are calculated and simulated to resist to high winds and earthquakes in accordance with the GB or API on the geographies. deformation and strap damage test, drawstring pre-burry test, NDE test .etc on tanks to quality control





Large storage tank upside-down construction, reduce crane costs by 90%, Increase









Ancillary

Industrial Gas Supply or Cylinder Filling Station

The industrial gas supply unit or cylinder filling unit for Oxygen, Nitrogen, Argon, Carbon Dioxide, supply to user or filling in cylinders,

We offer skid mounted or static system from standard to specialty and custom engineered.



Cylinder Filling Skid

Gas Filling Skid Modular Oxygen Filling Unit Gas Supply Skid Modular CO2 Supply Unit (for Beverage)

We support our customers building up their gas business and supply various gas ancillary equipment, such as cryogenic liquid pump, Vaporizer, Filling manifold, Dewar flask, Cylinders etc.





Cryogenic Piston Pump LOX.LIN.LAR Capacity: 30-5000 L/h Capacity: 100-4000 L/h Pressure: 10 MPa

OCLINEA Cryogenic Piston Pump Capacity: 306-70000 L/h Pressure: 3.0-8.0 MPa



Vaporizer



LOX LIN LAR LCO2, LND Capacity: 175L, 198L, 210L, 575L, 410L, 450L Pressure: 263-460 Pag



Cylinder







STANDARD SPECIFICATION FOR LPG VAPORIZER

Design Parameter						
Model					Z	PEX
Туре					Electric - wa	iter bath t
Installation	Unit	Wall m	nounting			
	Kg/h	20	30	50	100	150
Capacity	US Gal/h	10	15	25	50	75
	MMBTU/h	0.9	1.3	2.2	4.5	6.7
Design & Mfg. Code					Designed pe	r GB or A
Voltage	V	2	20			
Power	KW	2	3	8	15	21
Design Pressure	MPa					1.76
Test Pressure	MPa					3.3
Operating Pressure	Mpa					1.7
Operating Temperature	0 C				-	50~80

Safety Devices	
Explosion Proof Electric box	Ex d IIB T4
Safety Float Valve	to protect the liquid gas
Water Temperature Switch	to prevent excessive water
LPG Pressure safety valve	1.76MPa(17.6ba

Installation dimension						
Length	mm	400	500	530	620	660
Width	mm	230	280	310	390	460
Height	mm	660	800	1080	1160	1250
Liquid Inlet Connection	in	1/2	1/2	3/4	1	1¼
Vapor Outlet Connection	in	1/2	1/2	3/4	1	1¼





• Typical Flow for LPG gasification and supply unit

> We also provide engineering design and relevant accessories for whole set of LPG supply system

LPG VAPORIZER



