



NEW SPECIAL TECHNOLOGY

- VAPORIZER
- SNG BLENDER(LPG & AIR MIXER) SYSTEM
- NH₃ STORAGE & SUPPLY SYSTEM FOR DE-NOX FACILITY

JINU DEV CO.,LTD.

New special technology

We promise that "JINU" will do best to supply best quality products and plant.

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Vaporizer

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Ammonia storage & Supply system for DE-NO_x Facility

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3. Ammonia(NH_3) system package
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Vaporizer Jinu

1. Electric type LPG Vaporizer
2. Hot water circulating type LPG Vaporizer
3. Steam type LPG Vaporizer
4. Burner Type LPG Vaporizer
5. Special gas vaporizer
(Fluid : NH_3 , CO_2 , Cl_2 , SO_2 , Etc.)
6. Electric type LPG Vaporizer
troubleshooting



Vaporizer

1

Electric Type LPG Vaporizer

MODEL **JEVS** (10~100kg/hr)

Feature

- **Complete function and control system with digital program.**
- **Self diagnosis function**
Display provides easier detection and solution of errors.
- **Complete liquid leak overflow prevention device**
using a differential pressure type liquid leak outflow prevention device.
- **Easy and convenient maintenance**
When changing heater, no need to empty water in tank.
- **Equipped with safety and economic device.(C-Type)**
Minimization of discharge gas to the outside when reactivating vaporizer.
- **The water overflow valve is installed**
Water management is convenient as it minimizes the water evaporation.

JEVS Specifications

Type	Water bath, Vertical
Heat mass	Water
LPG Part	Water bath outside(Carbon steel) & Heat exchanger(SUS304)
Water bath	SS275
Design pressure	1.8 MPa
Test pressure	2.3 MPa
Working temperature	Water 60℃~75℃
Set pressure of safety valve	1.76MPa
Explosion proof classification	Ex db IIA T6 Gb
Power	220V, 380V, 440V

Part description



Digital display
(Displays operation status and error code)



Differential pressure type
(Liquid gas overflow prevention device)



Water overflow valve
(Prevent the water evaporation)



Safety valve
(Discharge device of abnormal pressure)



Gas Pressure Gauge

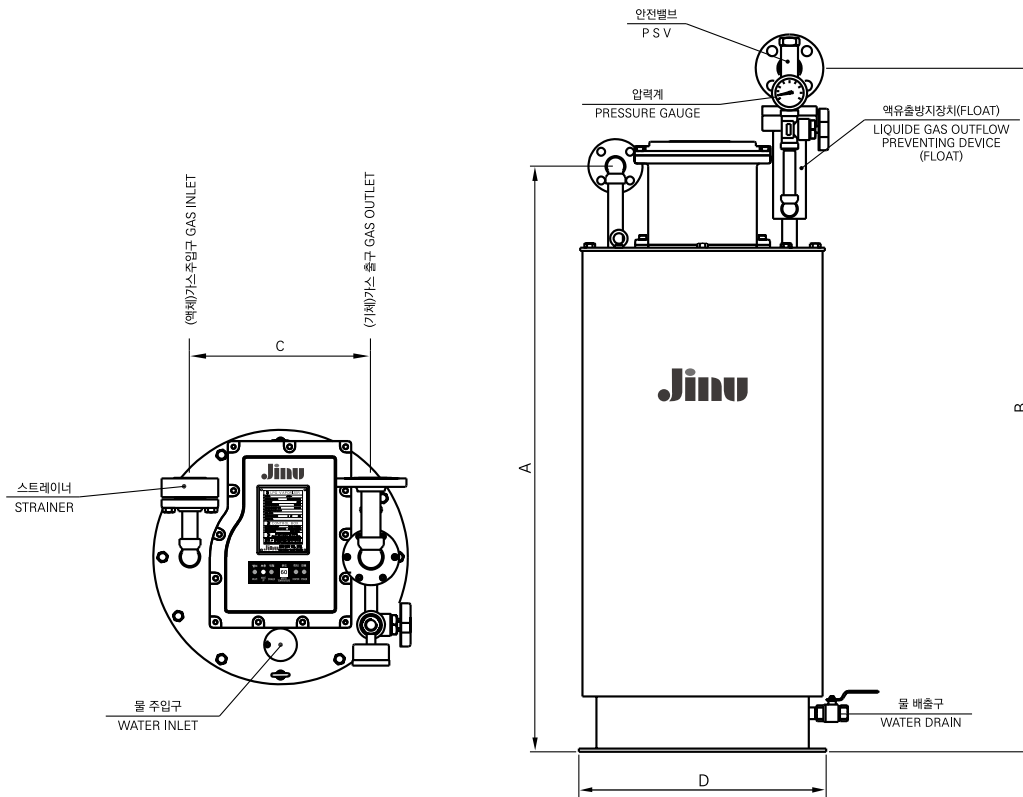


Water Drain Valve

Vaporizer

1 Electric Type LPG Vaporizer

MODEL **JEVS** (10~100kg/hr)



JEVS

Dimensions of electric vaporizers

Model	Capacity (kg/hr)	Gas inlet	Gas outlet	Dimensions (mm) (JEVS)							
				A	B	C	D	Safety v/v	Empty weight	Water volume	Antifreeze (-20℃)
JEVS-010	10	15A	15A	507	702	320	455	15A	60kg	30 L	9 L
JEVS-030	30	15A	15A	758	953	320	455	15A	76kg	50 L	15 L
JEVS-050	50	15A	15A	758	953	320	455	15A	76kg	50 L	15 L
JEVS-100	100	20A	25A	1078	1258	320	455	15A	104kg	80 L	24 L

Electrical specifications of electric vaporizers (Wire : CV or CVV 600V)

Model	Heater(KW/hr)		Conduit size	220V/1P		220V/3P		380V3P~440V/3P	
	Capacity	Quantity		Wire	ELCB	Wire	ELCB	Wire	ELCB
JEVS-010	1.5kw	1EA	22C	2.5SQ	10A	2.5SQ	5A	2.5SQ	3A
JEVS-030	4.5kw	1EA	22C	4.0SQ	30A	4.0SQ	20A	2.5SQ	10A
JEVS-050	7.5kw	1EA	22C	6.0SQ	50A	4.0SQ	30A	4.0SQ	20A
JEVS-100	15kw	1EA	22C	-	-	10SQ	50A	6.0SQ	30A

Vaporizer

1

Electric type LPG Vaporizer

MODEL **JEVM**(150~300kg/hr)

Feature

- **Complete function and control system with digital program.**
- **Self Diagnosis function**
Display provides easier detection and solution of errors.
- **Complete liquid leak overflow prevention device**
Using a differential pressure type liquid leak outflow prevention device.
- **Easy and convenient maintenance**
When changing heater, no need to empty water in tank.
- **Equipped with safety and economic device.(C-Type)**
Minimization of discharge gas to the outside when reactivating vaporizer.
- **The water overflow valve is installed**
Water management is convenient as it minimizes the water evaporation.

JEVM Specifications

Type	Water bath, Vertical
Heat mass	Water
LPG Part	Water bath outside(Carbon steel) & Heat exchanger(SUS304)
Water bath	SS275
Design pressure	1.8 MPa
Test pressure	2.3 MPa
Working temperature	Water 60℃~75℃
Set pressure of safety valve	1.76MPa
Explosion proof classification	Ex db IIA T6 Gb
Power	220V, 380V, 440V

Part description



Digital display
(Displays operation status and error code)



Differential pressure type
(Liquid gas overflow prevention device)



Water overflow valve
(Prevent the water evaporation)



Safety valve
(Discharge device of abnormal pressure)



Gas pressure gauge



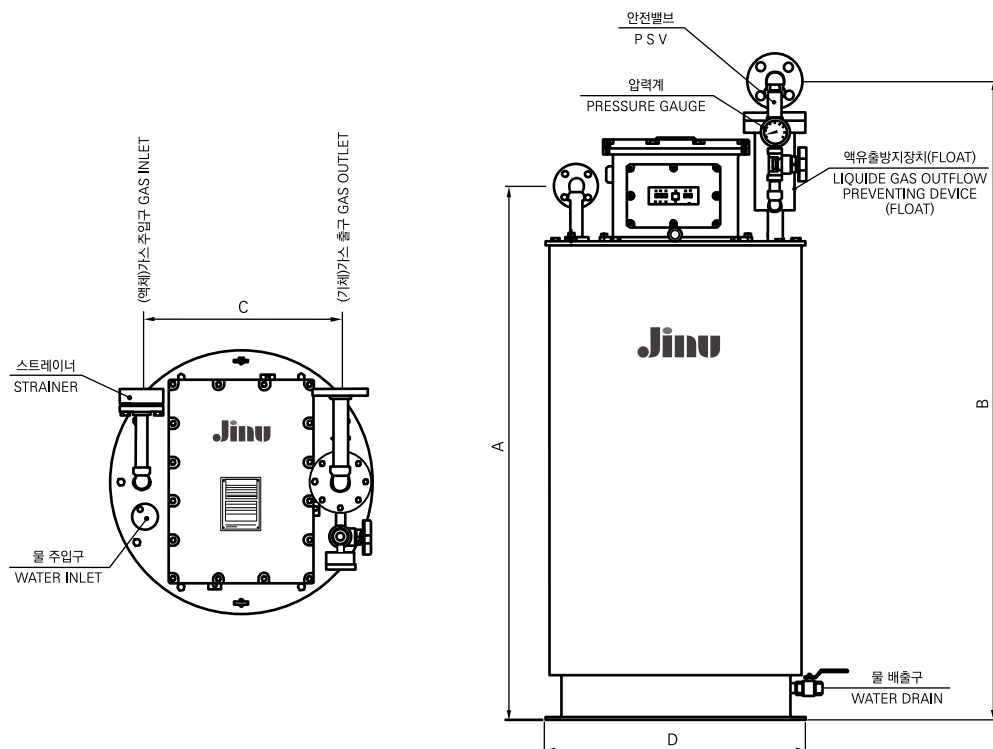
Water drain valve

Vaporizer

1

Electric type LPG Vaporizer

MODEL **JEVM**(150~300kg/hr)



JEVM

Dimensions of electric vaporizers

Model	Capacity (kg/hr)	Gas inlet	Gas outlet	Dimensions (mm) (JEVM)							
				A	B	C	D	Safety v/v	Empty weight	Water volume	Antifreeze (-20℃)
JEVM-150	150	20A	25A	1054	1290	450	590	15A	175kg	190 L	60 L
JEVM-200	200	20A	25A	1204	1440	450	590	15A	199kg	200 L	60 L
JEVM-300	300	20A	25A	1204	1440	510	650	15A	225kg	250 L	80 L

Electrical specifications of electric vaporizers (Wire : CV or CVV 600V)

Model	Heater(KW/hr)		Conduit size	220V/3P		380V3P~440V/3P	
	Capacity	Quantity		Wire	ELCB	Wire	ELCB
JEVM-150	22.5kw	7.5kw-1EA 15kw-1EA	36C	16SQ	75A	10SQ	50A
JEVM-200	30kw	15kw-2EA	36C	25SQ	100A	16SQ	75A
JEVM-300	45kw	15kw-3EA	36C	35SQ	150A	25SQ	100A

Vaporizer

1

Electric type LPG Vaporizer

MODEL **JEVL**(400~1,000kg/hr)

JEVL Specifications

Type	Water Bath, Vertical
Heat mass	Water
Heating source	Electrical heater
LPG Part	Water bath outside(Carbon steel) & Heat exchanger(SUS304)
Water bath	SS275
Design pressure	1.8MPa
Test pressure	2.3MPa
Working temperature	Water 60℃~75℃
Set pressure of safety valve	1.76MPa
Explosion proof classification	Ex d IIA T6
Power	220V, 380V, 440V

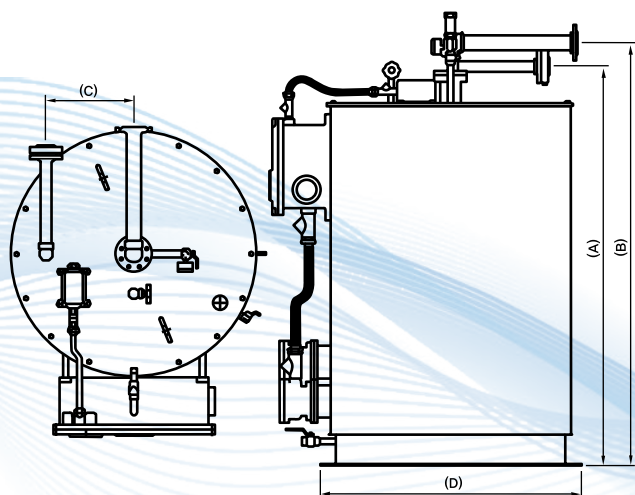


JEVL

Electrical specifications of electric vaporizers (Wire : CV or CVV 600V)

Model	Heater(KW/hr)		Conduit size	220V/3P		380V3P~440V/3P	
	Capacity	Quantity		Wire	ELCB	Wire	ELCB
JEVL-400	60KW	30KW x 2	54C	50SQ	200A	35SQ	100A
JEVL-500	75KW	25KW x 3	54C	70SQ	225A	50SQ	150A
JEVL-600	90KW	30KW x 3	54C	70SQ	250A	50SQ	175A
JEVL-700	105KW	25KW x 3 30KW x 1	82C			70SQ	200A
JEVL-800	120KW	30KW x 4	82C			70SQ	225A
JEVL-900	135KW	25KW x 3 30KW x 2	82C			95SQ	250A
JEVL-1000	150KW	30KW x 5	82C			120SQ	250A

Specification can be changed in order to upgrade function without notice in advance.



Dimensions of electric vaporizers

Model	Capacity (kg/hr)	Gas inlet	Gas outlet	Dimensions(mm) (JEVL)				Empty weight (kg)	Water volume (ℓ)	Antifreeze (-20℃)
				A	B	C	D			
JEVL-400	400	25A	40A	1395	1460	315	915	400	480	144ℓ
JEVL-500	500	25A	40A	1605	1675	315	915	450	570	171ℓ
JEVL-600	600	25A	40A	1695	1765	315	915	470	600	180ℓ
JEVL-700	700	40A	50A	1580	1680	375	1115	620	860	258ℓ
JEVL-800	800	40A	50A	1580	1680	375	1115	640	850	255ℓ
JEVL-900	900	40A	50A	1700	1800	375	1115	650	910	273ℓ
JEVL-1000	1000	40A	50A	1700	1800	375	1115	670	900	270ℓ

Vaporizer

1

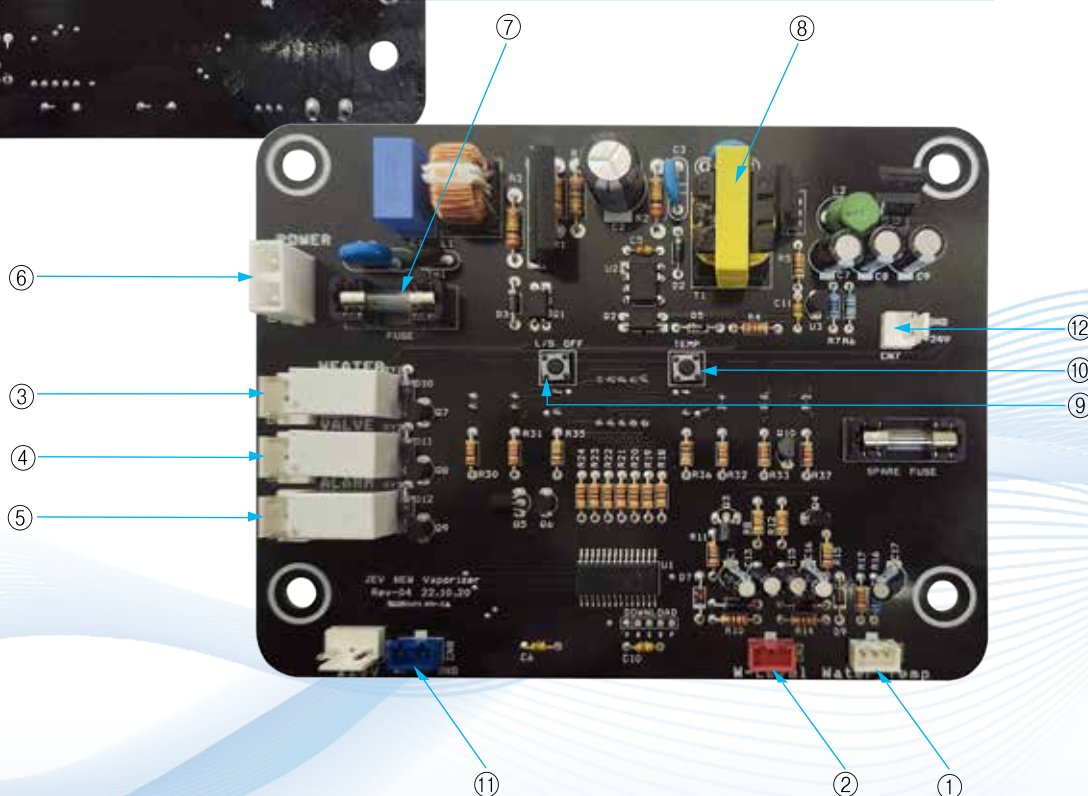
Electric type LPG Vaporizer

Controller function and display(10~1,000 kg/hr)

[PCB Front]



[PCB Back side]



- ① Water temperature sensor : Detect current water temperature
- ② Water level switch : Detect normal, make up, danger signal on vaporizer
- ③ Connection for heater : Power on and off by vaporizer temperature setting
- ④ Electronic valve (Liquid prevent device) : Electronic valve at gas inlet Open/Close(Optional)
- ⑤ Alarm output : When abnormal, alarm at outside.
- ⑥ Power supply : 220V/1P
- ⑦ Fuse : 250V/1A
- ⑧ Transformer : DC24V
- ⑨ Water level off switch : Water level switch off function
- ⑩ Water temperature setting switch : A switch for adjust water temperature
- ⑪ Connector for communication
- ⑫ Power supply for communication : DC24V

Vaporizer

2

Hot water circulating type LPG Vaporizer

MODEL **JWV**(100~30,000kg/hr)



JWV

JWV specifications

Type	Water bath, Vertical
Heat mass	Water
Heating source	Hot water
LPG Part	Water bath outside(Carbon steel) & Heat exchanger(SUS304)
Water bath	SS275
Design pressure	LPG 1.8MPa / Water 0.1MPa
Test pressure	LPG 2.3MPa / Water 0.13MPa
Working temperature	Water 60℃~75℃
Set pressure of safety valve	1.76MPa(LPG)

This vaporizer is made to order



JWV-C

Feature

- Excellent vapor efficiency
Supplying the hot water, discharged from exclusive boiler, by using circulation pump.
- Saving the vaporizer maintenance cost
- Option(C-Type)
Available on equipping solenoid valve or On/Off valve additionally in gas inlet.

3

Steam type LPG Vaporizer

MODEL **JSV**(100~30,000kg/hr)

Feature

- Available on selection between a direct steam injection type and a steam circulation type
- Option(C-Type)
Available on equipping solenoid valve or On/Off valve additionally in gas inlet.

JSV Specifications

Type	Water bath, Vertical, Steam injection type / Steam circulation type
Heat mass	Water
Heating source	Saturated steam/Superheated steam
LPG Part	Water bath outside(Carbon steel) & Heat exchanger(SUS304)
Water bath	SS275
Design pressure	LPG 1.8MPa
Test pressure	LPG 2.3MPa
Working temperature	Water 60℃~75℃
Set pressure of safety valve	1.76MPa(LPG)

This vaporizer is made to order



JSV-C



JSV

Vaporizer

4

Burner type LPG Vaporizer

MODEL **JBV**(500~20,000kg/hr)

Feature

- Safety with fired indirect heating system
- Excellent efficiency of heat exchange
- Using LPG Burner
- Suitable for high capacity

JSV specifications

Type	Water bath, Vertical / Gas fired indirect type
Heat mass	Water
Heating source	LPG Burner
LPG Part	Water bath outside(Carbon steel) & Heat exchanger(SUS304)
Water bath	SS275
Design pressure	LPG 1.8MPa
Test pressure	LPG 2.3MPa
Working temperature	Water 60℃~75℃
Set pressure of safety valve	1.76MPa
Power	380V/3P



This vaporizer is made to order



5

Special gas vaporizer

MODEL (Fluid : NH₃, CO₂, Cl₂, SO₂, Etc.)

Optimal solution for various gases!
Special gas vaporizer

Feature

- Gas type: Ammonia(NH₃), Carbon dioxide(CO₂) & Etc.
- Heating system: Electric type, Hot water circulation, Steam type, Burner type
- Customizable to your design requirements



Feature

If any trouble occurs while in using, refer to the following.

If no cause is known or any correction can not be made, please call our customer service dept.

MODEL JEVS, JEVM, JEVL

Error display specification on display panel

Error code	Status	Vaporizer status	Action
E1	Over 81℃ on water temperature	shot down on heater power supply	Check PCB Board and replacement
E2	High difference between actual water temperature	Failure on temperature sensor	Replace temperature sensor
E3	Water level is normal but indicate make-up or danger	Failure on water level switch	Replace water level switch
E4	Does not increase water temperature	Failure on heater on PCB failure	Replace heater or PCB

- When it happened the above situation occurs, turn off the power and after checking each sensor's connection condition, If everything is OK, process with above action.
- Error signal blinks every 2 seconds. Indicates that one time is error and other time is present hot water temperature.
- When the same error occurs, the most significant error will be displayed, and after the error mentioned is solved, the second most significant error will be displayed when activated again. (The most significant error : E1, The lowest significant error : E4)
- If error mode (E1~E4) happen and do not know the reason, please contact our A/S department



SNG Blender(LPG & Air mixer) system

- 1.High pressure mixer (Ratio control type & Calorie control type)
- 2.Low pressure mixer (Venturi type)
- 3.SNG Blender (LPG + Air mixer) package system
- 4.SNG Supply system plant
- 5.Gas package system



SNG Blender(LPG & Air mixer)system

1

High pressure mixer

MODEL **JHM**(Ratio control type & Calorie control type)

Feature

- Available on selection between automatic control type and manual control type.
- Easy to control according to using calorie change
- Available on the trend checking with PLC control type.

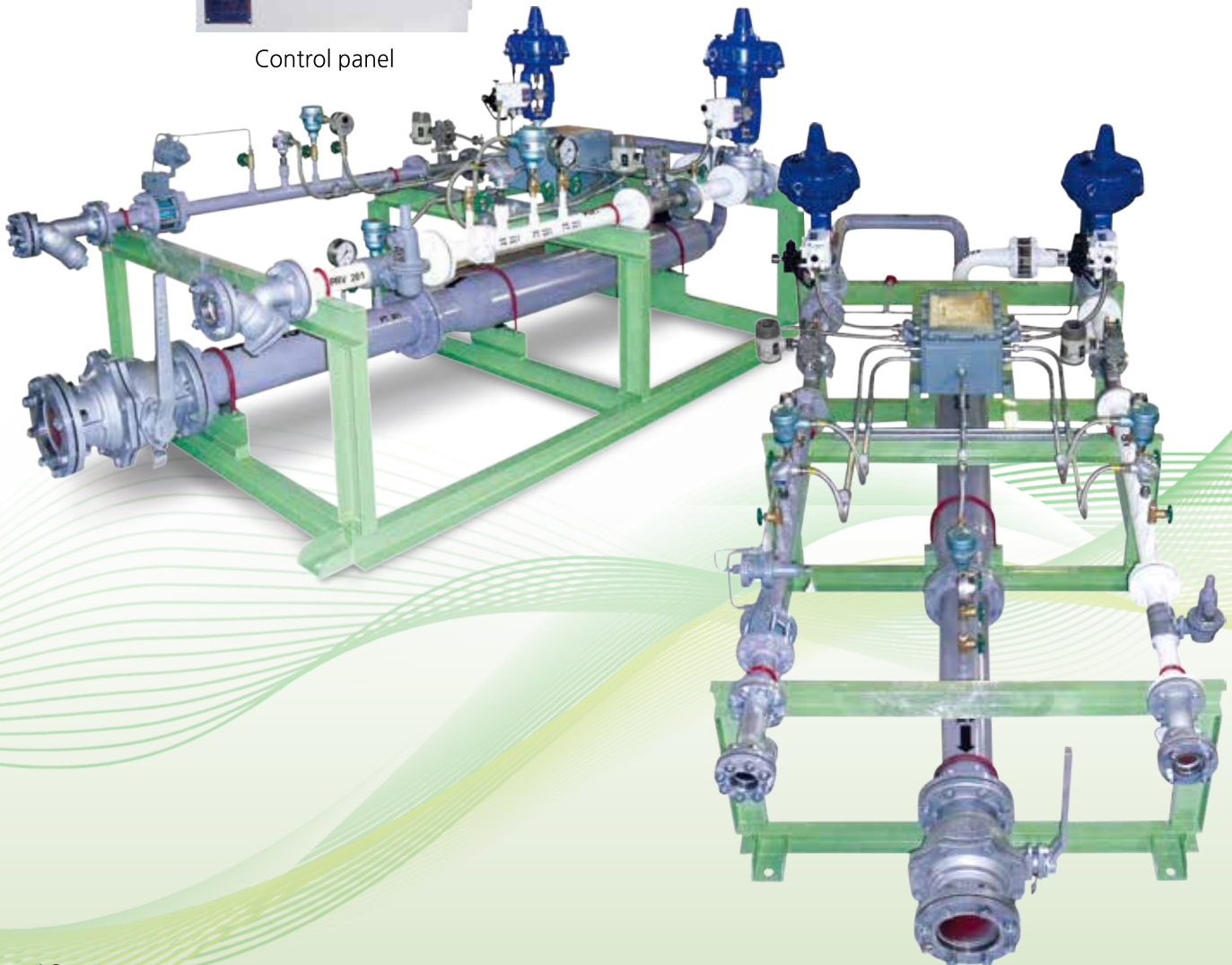


Control panel

JHM Specifications

Type	High pressure / Horizontal
Fluid	LPG & Air
Design pressure	0.99MPa
LPG Inlet pressure	0.1~0.6MPa
Air inlet pressure	0.1~0.6MPa
Mixed gas outlet pressure	0.1~0.5MPa
Calorie range	5,000~23,000kcal/Nm ³

This SNG Blender is made to order



1

High pressure mixer(SNG Blender)

MODEL **JHM**(Ratio control type) / **JHMC**(Manual control type)



Control panel

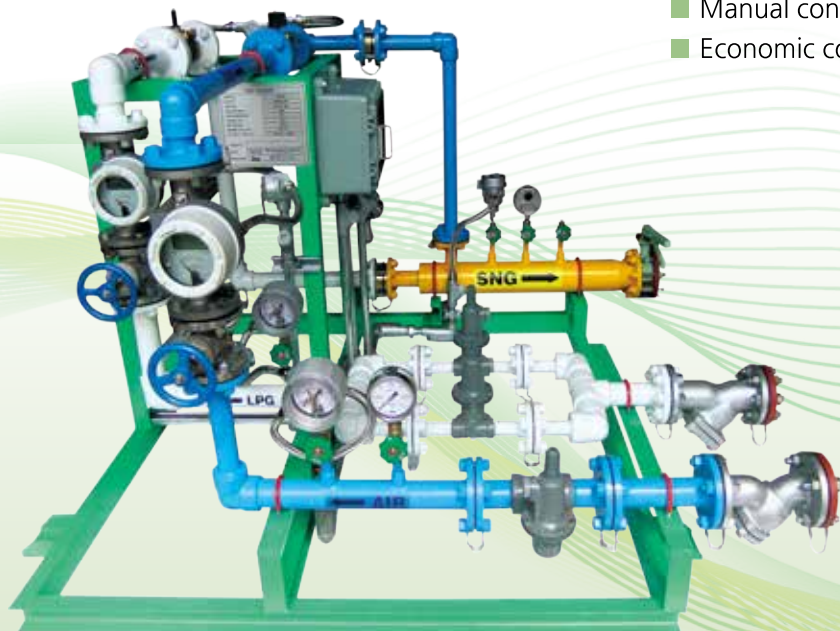


Feature

- Manual control type
- Economic cost

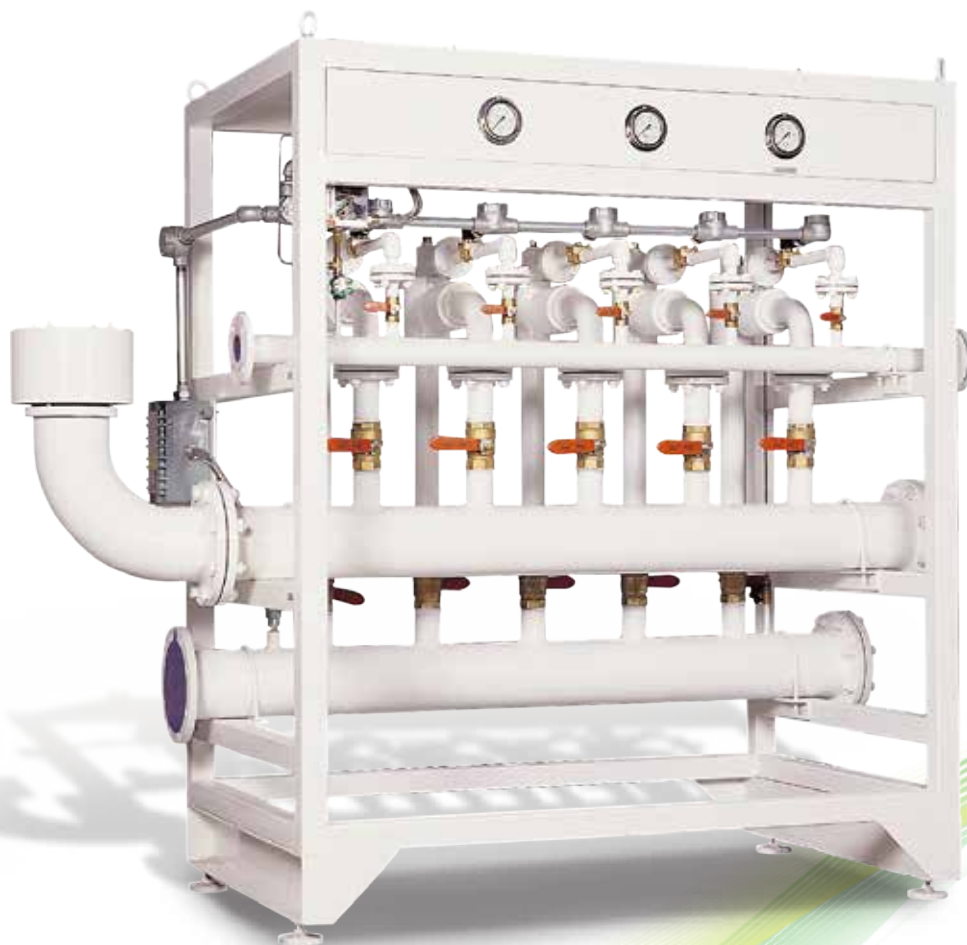


Control panel



2

Low pressure mixer

MODEL **JLM** (Venturi type)

Control panel

Feature

- Easy to use in low pressure
- No need air compressor
- Easy to use in small calorie change
- Convenience of maintenance

JLM Specifications

Type	Venturi
Fluid	LPG & Air
Design pressure	0.99MPa
LPG Inlet pressure	0.2~0.3MPa
Air inlet pressure	ATM
Mixed gas outlet pressure	Max. 35KPa
Calorie range	12,500~15,000kcal/Nm ³

This low pressure mixer is made to order

3 SNG Blender package system

- A Package system** (Applied low pressure mixer)
(Vaporizer + Mixer+ Surge tank) & Control panel



Control panel

- B Package system** (Applied low capacity)
(Air compressor +Mixer+ Surge tank + Control panel)



4 SNG Supply system plant

JEJU Energy LPG & Air mixed gas supply system

Facilities to supply city gas before NG is supplied. Back up system for NG supply facilities.



LPG storage facilities



Mixed gas supply equipment



LPG vaporization and mixed equipment



Odorant injection equipment



Main control room



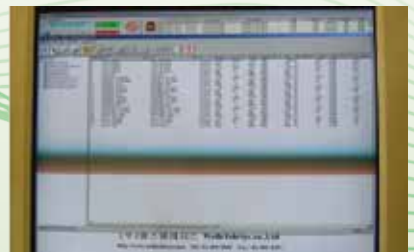
SNG blender



High and low pressure mixer & vaporizer



Air supply system



Computer monitoring

5

Gas package system



A Truck transfer unloading facility

B Pump package



C Metering station



D Emergency shutdown station



NH₃ Storage & Supply system for DE-NO_x Facility

1. Ammonia(NH₃) plant
2. Aqueous ammonia(25% NH₃) / UREA Plant
3. Ammonia(NH₃) system package
4. Ammonia injection system

Feature

- A system that reduces NO_x emissions to the atmosphere with using ammonia
- Fluid : Anhydrous NH₃, Aqueous ammonia (NH₃ 25%), Urea

NH₃ Storage & Supply system for DE-NO_x Facility

1

Ammonia(NH₃) plant Taeon thermal power station



Ammonia storage tank



Ammonia unloading compressor



Ammonia vaporizer



Accumulator



N₂ Purge system



Dilution tank

NH₃ Storage & Supply system for DE-NO_x Facility

1

Ammonia(NH₃) plant Samcheonpo thermal power station



Ammonia system



Ammonia vaporizer



Accumulator



Ammonia unloading compressor



Dilution tank



N₂ Purge system



N₂ Purge system

2 Aqueous ammonia(NH_3 25%) UREA Plant



Aqueous ammonia storage tank



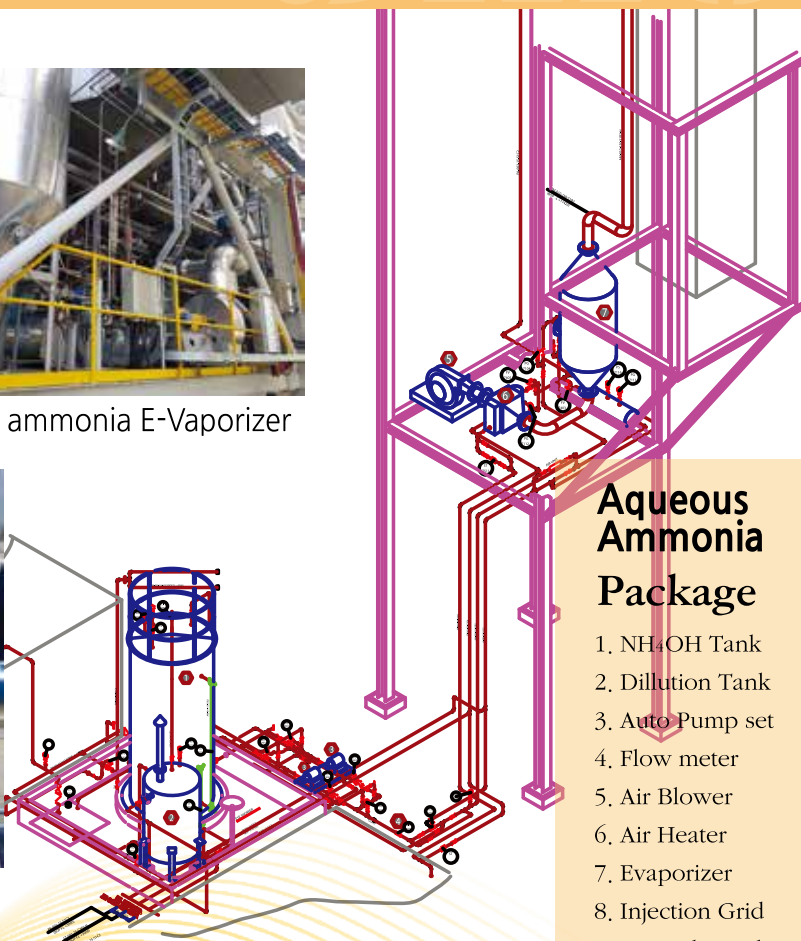
Aqueous ammonia E-Vaporizer



Aqueous ammonia supply system



Aqueous ammonia supply pump



3 Ammonia system package



4 Ammonia injection system





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