



Vaporizers

The vaporizer is an heat exchanger specially designed in order the liquified petroleum gas to enter in a liquid state and come out in a gaseous state, ready to be used in civil, industrial and commercial plant applications.

Pegoraro Gas Technologies designed the vaporizer by bringing together a heat exchanger and a **inlet liquid control and safety valve totally mechanical**.

LPG is pre-heated by an intermediate fluid (water), that comes from an external boiler (hot water version) or pre-heated by an EExd electrical resistance (electric version) with two thermostats, one of regulation and one of safety. On board the electric version is assembled an open water expansion vessel.

Why should you use our wet vaporizers

Why should use Pegoraro Gas Technologies indirect heating vaporizers (water bath) against direct heating:

- same functionality of direct fired vaporizer – vaporizer external heat source can be fueled by LPG that itself produces
- higher working safety level
- few liquid inside the vaporizer in case of system failure
- high reliability components and low maintenance required
- cheap spare parts
- plant is modular: each single component may be replaced if necessary
- moderate gas over heating

CERTIFICATIONS



APPROVED

2014/68/EU PED
2014/34/EU ATEX



MALAYSIA APPROVED

WORKSAFE
NEW ZEALAND | MAHI HAUMARU
ADTKARUA

NEW ZEALAND APPROVED

Main characteristics and advantages

QUALITY

Wide range of capacity

After-sale support guaranteed

Certified by relevant third party

100% made in Italy

SAFETY

Control system doesn't require electrical power supply

Control valve is normally closed and it interrupts the flow in case the operating conditions are not respected

WORKING - MAINTENANCE

Simple and easy-to-conduct plant

Quick installation: control system does not require any electrical or pneumatic supply

Control valve does not need manual reset

Easy setting of control system

Control system, instruments and electrical heater are separately replaceable

Low maintenance and cheap spare parts



Optional control valve "with viewer".
It is possible to see immediately if the valve is open or closed.

Reasons why our LPG vaporizers are exclusive and innovative

1ST ADVANTAGE

Actually most of countries have norms to use safety devices to avoid LPG liquid phase in grid distribution. Normally the solution is to use solenoid or pneumatic valves:

- Solenoid valve have to be EExd certified, they need specific plant and electric switchboard;
- Pneumatic valve need air compressor and specific plant.

Our LPG vaporizers don't need it

2ND ADVANTAGE

Most of our competitors produce LPG vaporizers with a gas chamber built-in that can be filled by LPG in LIQUID phase: a float valve is necessary to avoid LPG liquid phase in grid distribution.

Our LPG vaporizers don't need it

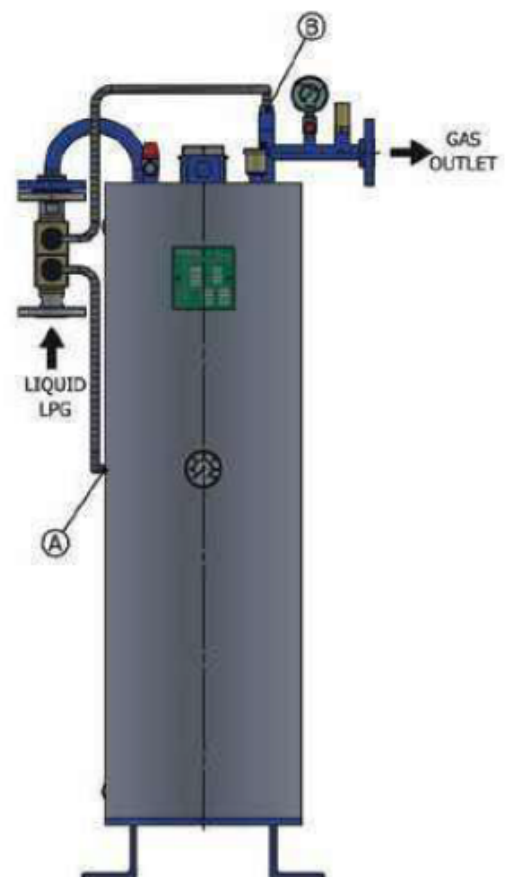
3RD ADVANTAGE

All our LPG vaporizers have installed an **exclusive and control regulation valve totally mechanical**. The flow of gas happens by our control regulation valve, mounted at the inlet of the vaporizer (liquid phase). It works on the basic concept that, reaching a certain temperature, the LPG enters in gaseous state. The liquid LPG:

1. Coming from the tank
2. Enters into the valve
3. Passes through the filter
4. Comes to the shutter which is closed

If the temperature of the water leaving the exchanger is recorded as being $> 50-55^{\circ}\text{C}$, the expansion of the bellows will make the shutter open and let the liquid enter into the heat exchanger. As the user's requirements vary so does the temperature of the water and consequently also the opening of the shutter.

- A. Water temperature control
- B. Gas temperature control



ECOVAP



COIL TYPE HEAT EXCHANGER

VERTICAL EXECUTION

EASY SERVICING

**ALL ONE SETUP FOR
ALL LPG MIXTURES**

**WITH CONTROL VALVE
TOTALLY MECHANICAL**

**HIGH EFFICIENCY
INSULATION**

LPG SOLUTIONS
VAPORIZERS



ECOVP electric version with EExd control box on board
100E/150E



ECOVP electric version
200E/300E



ECOVP hot water version
500A

MAIN FEATURES AND DIMENSIONS

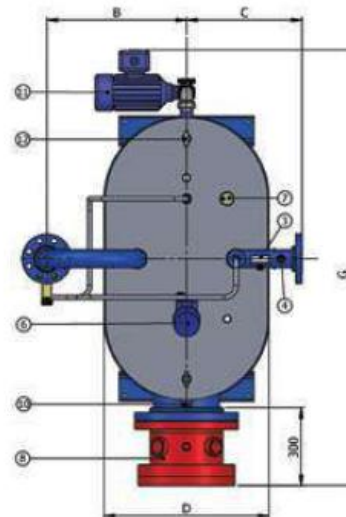
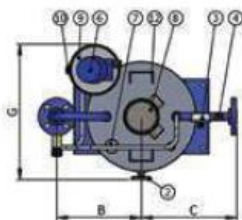
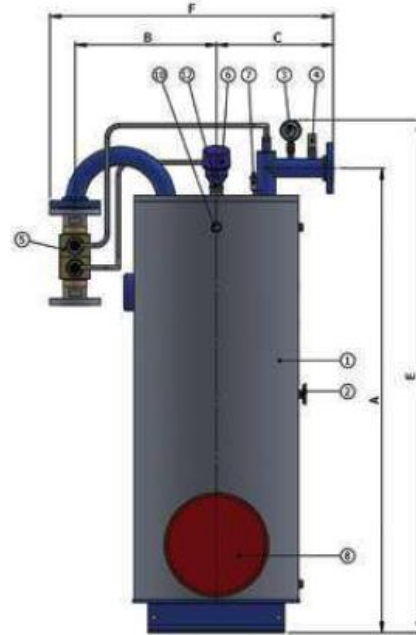
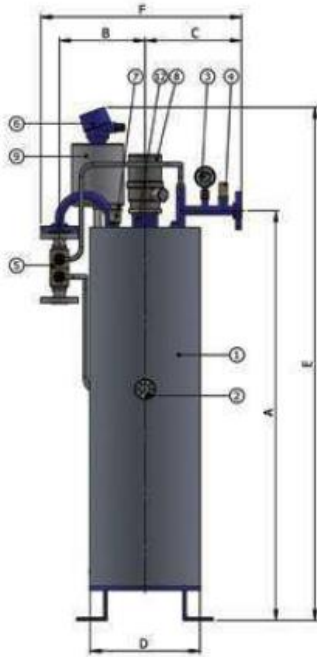
Tipo / Type	50E	100E	150E	200E	300E	500E	750E	50A	100A	200A	300A	500A	750A	1000A
Flow rate [Kg/h]	50	100	150	200	300	500	750	50	100	200	300	500	750	1000
A [mm]	850	1350	1350	1350	1350	1530	1530	850	1350	1350	1230	1200	1300	1300
B [mm]	282	282	282	374	374	345	465	282	282	282	294	380	490	490
C [mm]	318	318	318	410	410	385	385	318	318	318	330	390	420	420
D [mm]	324	365	365	550	550	540	540	365	365	365	410	550	750	750
E [mm]	1000	1675	1675	1700	1700	1655	1655	1000	1460	1460	1335	1320	1420	1420
F [mm]	660	660	660	850	850	791	932	660	660	660	680	830	990	990
G [mm]	405	450	450	640	640	1340	1450	370	390	390	440	630	940	940
Dn Gas In (Rating Ansi300)	1"	1"	1"	1"	1"	1"	2"	1"	1"	1"	1"	1"	2"	2"
Dn Gas Out (Rating Ansi300)	1"	1"	1"	1"	1"	2"	2"	1"	1"	1"	1"	2"	2"	2"
Water In/out	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1 1/2"	1 1/2"	1 1/2"
Gas Volume [Lt]	2	4.1	4.1	13.3	13.3	27.7	32	2	4.1	4.1	6.5	13.4	33	33
Volume Acqua Water Volume [Lt]	47	98	98	201	201	400	510	50	98	98	87	180	340	340
Electric Power [KW]	8	16	24	16+16	24+24	80	120	-	-	-	-	-	-	-
Voltage [V]*	400 3ph	400 3ph	400 3ph	400 3ph	400 3ph	400 3ph	400 3ph	-	-	-	-	-	-	-
Boiler Power [KW]	-	-	-	-	-	-	-	8	15	30	45	76	113	151
Indicative Weight [Kg]	110	125	125	240	250	390	425	100	115	115	120	220	430	430
Gas Side [Bar]	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Water Side [Bar]	1	1	1	1	1	1	1	3	3	3	3	3	3	3
Gas Side [°C]	-40 / +120													
Water Side [°C]	-10 / +105													
ATEX / ATEX Hazardous area classification	II -/zG Ex db IIC -/Gb Ex tb IIC -/Db													

ECOVAP ELECTRIC HOT WATER VAPORIZER

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50E/100E/150E/200E/300E

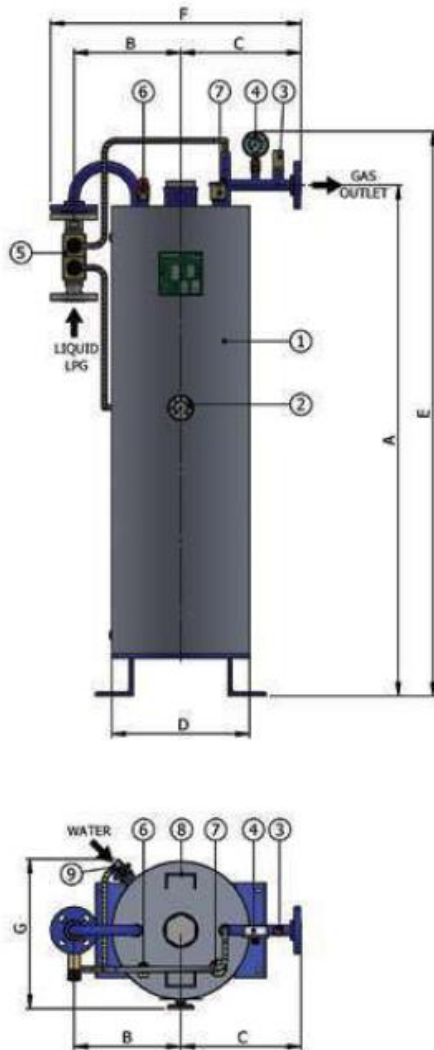
500E/750E



1. Vaporizer
2. Water thermometer
3. Gas pressure gauge
4. Gas safety control valve
5. Inlet liquid control valve
6. EExd level switch (optional)
7. Air vent
8. Electrical heater
9. Open expansion tank
10. Water level visual indicator
11. H₂O circulation pump (only for 750E)
12. Handling hooks

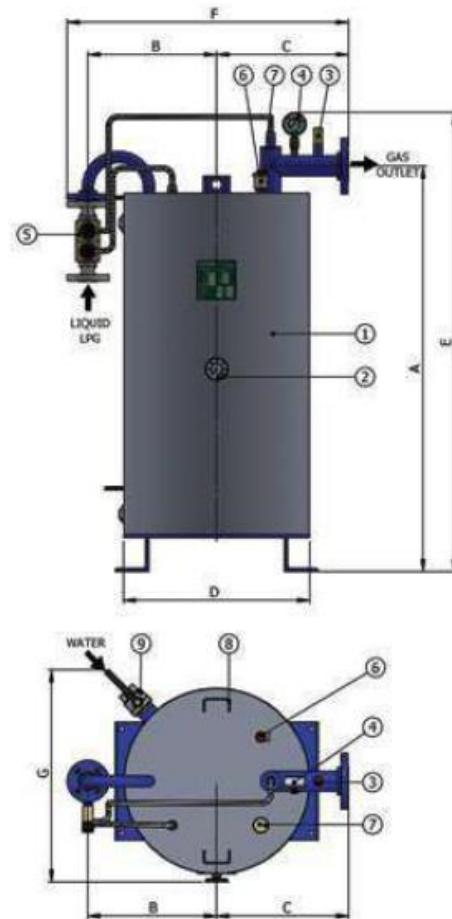
ECOVAP HOT WATER VAPORIZER

50A/100A/200A



ECOVAP HOT WATER VAPORIZER

300A/500A/750A/1000A



1. Vaporizer
2. Water thermometer
3. Gas safety valve
4. Gas pressure gauge
5. Inlet liquid control valve
6. Water safety valve
7. Air vent
8. Hanging for handling
9. Inlet/outlet water ball valves