

**USE  
RELIABLE  
INNOVATIVE  
COST EFFICIENT**

**GAS EQUIPMENTS  
AND  
GAS SYSTEMS**

**Gastech**

**CORPORATION**

*Air & Gas Technology People*

ISO 9001-2015 QMS certified Company

Opp. Pudumjee Paper Mills,  
Thergaon, Chinchwad, Pune,  
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## Gastech CORPORATION

**Gastech CORPORATION** is involved in manufacturing of equipment related to the production / generation of various industrial gases, gas systems and providing cost effective solutions.

Since 1989, **Gastech CORPORATION** has been involved with design, consultation and manufacturing of various industrial and medical gases systems, using Pressure Swing Adsorption (PSA) as an air separation process.

**Gastech CORPORATION** has placed in operation several systems. The main characterization that can be made is **Gastech CORPORATION** has a capability of custom design and made any system that customer needs to suit specific requirements.

**Gastech CORPORATION** has to its credit a team of dedicated, experienced, qualified Engineers & technicians to carry out specialized assignments. The company, located in PUNE industrial area and is, equipped with Pipe Cutting & bending equipment's, TIG Welding & Brazing out fits, Assembly & Pressure Testing facilities.

**Gastech CORPORATION** has several technical achievements to its credit, including the first Indigenous Gas Mixer, the first Pre-heater less CO2 regulation, first indigenous NO2 Scrubber, first indigenous Medical Oxygen Concentrator & only manufacturer of energy less LPG Vaporizers.

**For the customers Gastech CORPORATION now represents a reliable source of cost effective & innovative Gas Equipment's & systems**

For more details regarding our products please contact us on,

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## Gastech CORPORATION PRODUCT RANGE

- ❖ PSA Industrial Oxygen Generator.
- ❖ **PSA Medical Oxygen Concentrator.**
- ❖ PSA Nitrogen Generator
- ❖ **Gas Mixing Systems for welding & heat treatment.**
- ❖ Gas Mixing Systems for Ethylene Oxide Sterilization.
- ❖ **Gas Cylinder manifold.**
- ❖ Gas flow control system
- ❖ **Energy less LPG Vaporizer**
- ❖ **Energy efficient CO2 & LPG regulation equipment.**
- ❖ **Metal Pickling Equipment with air pollution control.**
- ❖ Dry Compressed Air systems.
- ❖ **Vacuum Systems.**
- ❖ Compressed Air Dryer.
- ❖ **Gas & Liquid Dryers.**
- ❖ Gas Purification & Dehydration systems.
- ❖ **Turnkey engineering, & piping assignments.**
- ❖ PLC based Master Alarm Panel for Industrial & Medical Gases.
- ❖ **PLC based Area Alarm Panel for Industrial & Medical Gases.**
- ❖ PLC based PSA Plant Controllers.
- ❖ **PLC based process control systems for Industrial applications.**
- ❖ PLC based Air Compressor & Vacuum Pump Control Panels.
- ❖ **PLC based Cylinder Manifold Controllers.**

**Gastech Corporation has several technical achievements to its credit, including only manufacturer of our PATENTED ENERGY LESS LPG VAPORIZERS, the first Indigenous Gas Mixer, the first Pre-heater less CO2 regulation, first indigenous NO2 Scrubber & first indigenous Medical Oxygen Concentrator.**

**For the customers Gastech now represents a reliable source of cost effective & innovative Gas Equipment's & systems.**

**SAVE**

**EXPENSIVE**



**USE**

**ENERGYLESS LPG VAPORISER**

**Gastech**

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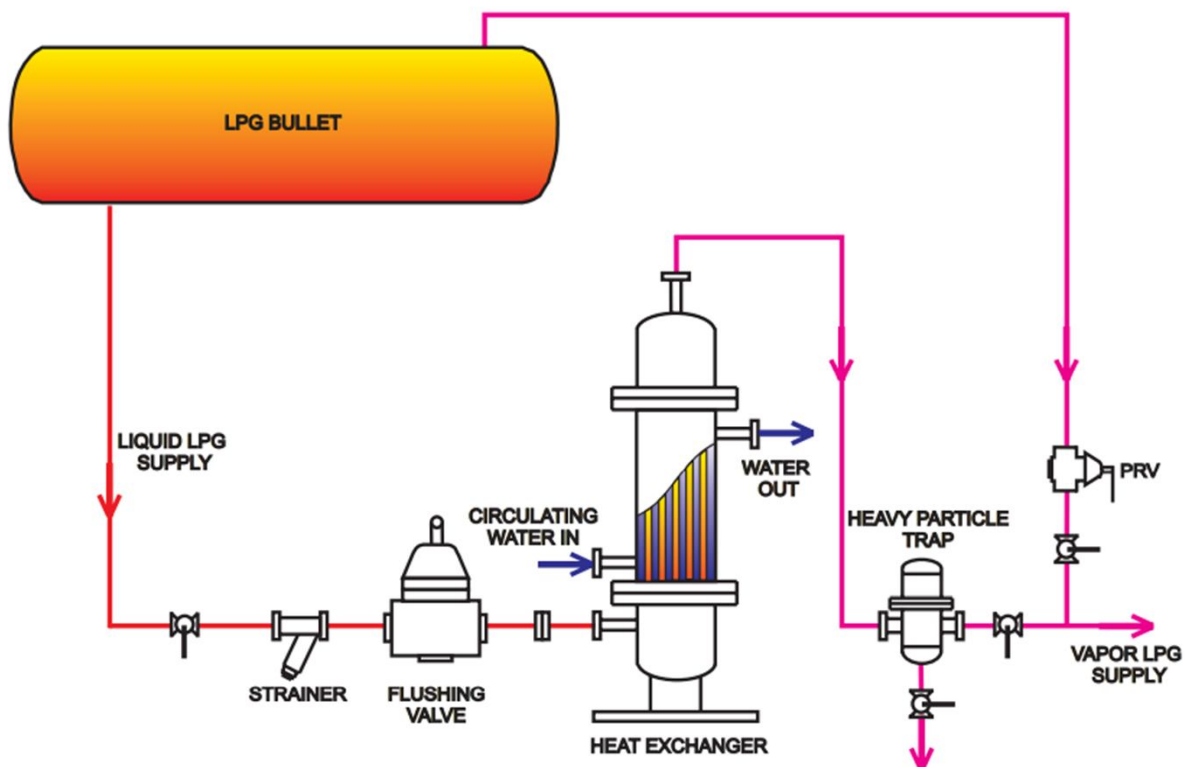
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## Gastech ENERGYLESS LPG VAPORISER PRINCIPLE OF OPERATION



Gastech has designed the LPG vaporizer optimizing the thermodynamic properties of LPG to achieve the best results.

Liquid LPG from the tank/ bullet is allowed to flash in a controlled manner by specially designed Gastech flashing valve which is very similar to an expansion valve used in refrigeration applications. Flashing valve reduces the temperature & pressure of liquid LPG. This Flashed, cool LPG is brought back to ambient temperature by a specially designed Gastech shell and tube type heat exchanger wherein the required heat is extracted from water at ambient temperature. LPG vapor at ambient temperature and reduced pressure is then supplied for the plant usage.

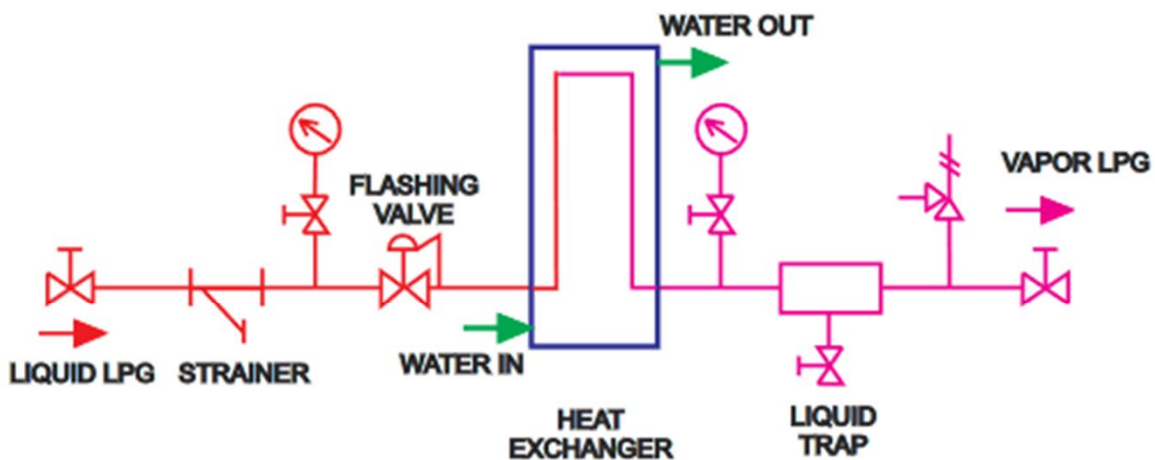
## PRINCIPLE OF OPERATION

The required water can be taken from the normal plant cooling water line and returned to the return line. You may also be able to take advantage of the cooling of water in the Gastech Vaporizer and reduce the load on your cooling tower. The heat transfer surfaces of the Gastech Vaporizer are entirely of SS with brass baffles, eliminating corrosion and subsequent maintenance expense and headache.

Gastech Technology ensures complete flashing and vaporization thus eliminating the possibility of Liquid LPG in your house lines. The flashing parameters are carefully chosen to take into account the climatic variations at your site, composition of LPG and other use requirements.

For trapping the heavy components of LPG, which are sometimes encountered, Gastech provides a residue separator and a trap, which allows LPG vapor to flow without any hindrance.

**SINCE EXPENSIVE ELECTRICAL ENERGY IS NOT REQUIRED,  
YOUR INVESTMENT IS PAID BACK WITHIN A FEW MONTHS AT MOST.**



**SCHEMATIC OF Gastech LPG VAPORISER**

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## SAVE YOUR MONEY AND HEADACHE

The Gastech Ambient Water bath type LPG Vaporizer uses ambient water for vaporization and doesn't require any heat source, hence problems such as heater burnout, scaling of coils is completely eliminated.

Negligible energy consumption in Gastech Vaporizer, practically gives total investment payback in few months.

Gastech technology ensures complete flashing and vaporization thus eliminating liquid LPG in the house lines. Residue separator and trap is provided for trapping heavy components of LPG, this allows LPG Vapor to flow without any hindrance.

## MAIN FEATURES OF Gastech VAPORISER

### ❖ **ECONOMICAL**

Complete saving of expensive electrical energy

### ❖ **RELIABLE**

Continuous operation, Gastech proven technology.

### ❖ **EASE SIMPLICITY**

Lower temperature and pressure working gives trouble free operation.

### ❖ **SAFE**

No electricals involved for vaporization.

### ❖ **CORROSION & SCALING**

No corrosion and minimum scaling due to low operating temperature and SS contact parts.

### ❖ **BENEFICIAL**

Extra cooling water free of cost, reduces heat load on cooling tower.

### ❖ **MAINTENANCE**

Negligible maintenance, if required is only for servicing of valves, can be done without stopping process.

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### SPECIFICATIONS

MODEL	CAPACITY (Kg/Hr)	WATER REQUIRED (M3/Min)
ZEE-50	50	0.05 to 0.06
ZEE-100	100	0.1 to 0.12
ZEE-200	200	0.2 to 0.22
ZEE-300	300	0.3 to 0.31
ZEE-500	500	0.5 to 0.51
ZEE-1000	1000	1.00 to 1.20
ZEE-1200	1200	1.10 to 1.30

### BASICS OF VAPORISATION





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## BASICS OF VAPORISATION

To Vaporized the liquid LPG heat equivalent to the latent heat of vaporization of a liquid LPG (depending on composition of Butane & Propane) is required.

In the conventional electrical vaporiser the liquid LPG at ambient temperature (20 – 30°C) is passed through a coil immersed in a hot water bath at about 55-70 °C temperature. Heat is absorbed by the liquid LPG because the liquid LPG is at ambient temperature which is lower than the surrounding hot water temperature by about 30 °C (Delta 'T').

In the Gastech Vaporization system, the temperature of liquid LPG drops down to (-) 6 to (-) 70 °C, by a specially design Gastech Flashing valve. This Liquid LPG at (-) 6 to (-) 70 °C is then passed through the SS tubes of specially designed Gastech Shell & Tube type heat exchanger where the water at ambient temperature is circulating through the shell. Hence the liquid LPG at (-) 6 to (-) 70 °C absorbs heat from the circulating water at ambient temperature (20 – 30 °C) due to temperature difference, which is about 30 °C (Delta 'T').higher than the liquid LPG temperature.

The boiling point of LPG having minimum 20% Propane is much below 0 °C at 1 Kg/CM 2 (g) pressure & hence possibility of Vapour condensation & formation of liquid does not exist even when the ambient temperature drops below 10 °C.