



Heating section
Electrical heater



Metering section



Control panels



Reducing section



Analyser section



Condensate vessel

Natural Gas Conditioning Stations



where nature and technology meet

Metering section

The natural gas metering section comprises of quantity measuring for custody transfer and/or quality control. The quantity of gas can be measured with volumetric and mass flow meters. Using flow computers, the measurement can be compensated for temperature and pressure.

Analyser section

Various gas quality measurements can be performed using gas chromatographs, wobbe or calorific value meters, hydrogen sulphide, sulphur & total sulphur, water and hydrocarbon dew point analysers. If required Petrogas will arrange the data communication with the control room.

Control panel

An installation can be controlled with a control panel. This panel can be operated locally, but remote control from another site is also possible. The barriers, flow-computers, PLCs and other computers are built into the control panels. Petrogas can deliver a special container in which the panel can be installed. The container can be supplied with facilities like air-conditioning, UPS and fire fighting equipment. Dimensions may vary according to customer's specifications.

Erection, commissioning and start-up

Petrogas has engineers and supervisors available for erection, commissioning, training and start-up of the natural gas conditioning stations at site.

Earth, the origin of gas. Fire, the point where it releases its energy. Water, the source of life.

And air, the boundary of our familiar world.

Four elements, all partners in nature.



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Inlet section



Knock-out drum section



Filter or filter / separator section
Baffle plate / coalescer separator



Filter or filter / separator section
Cyclone / cellulose separator



Filter or filter / separator section
Horizontal filter separator



Heating section
Shell and tube heat exchanger



Hot water generator package



Heating section
Waterbath heater

Petrogas is a source of inspired solutions where nature and technology meet. We build partnerships with our customers. We take proven engineering and enhance it with innovative technology. We provide service and support to create an environment in which you immediately feel comfortable. Petrogas develops, manufactures and supplies turnkey gas installations such as metering and regulating stations, dehydration units and LPG systems.

Petrogas

where nature and technology meet

Natural gas conditioning stations

Petrogas delivers natural gas conditioning stations to gas distribution companies and other large-scale natural gas users such as power stations on a worldwide basis. Most installations are skid-mounted, which significantly reduces the on-site assembly time. Installations are designed and built to customer's specifications. The stations are assembled from a number of sections, although not all stations require every section. The sequence of sections may vary depending on clients requirements. To increase availability, each section can be executed in 2 x 100% or 3 x 50% or other configurations. The natural gas conditioning stations are designed and built according to national and international regulations. This is valid for both the electrical and the mechanical design. Petrogas has delivered installations to virtually every country in the world. Our stations can be designed according to all local conditions.

Inlet section

The inlet valve section is used to block the gas supply in case of an emergency on the downstream gas treatment plant and is often opened and closed from a central control room. Various makes and types of actuators can be implemented; e.g. electrical operated actuators or operation by instrument air or instrument gas.

Knock-out drum section

In cases where considerable quantities of fluid, like water or hydrocarbon condensates is expected with the natural gas, a knock-out drum with a demister can be installed. Condensates can be drained manually or automatically to a storage facility.

Filter or filter / separator section

Solids and/or fluids can be removed from the gas in the filter separator section. Petrogas has a range of filters and filter separators available. The range consists of dust filters, baffle plate/coalescer separators, cyclone separators, cyclone coalescer separators, cyclone cellulose separators and others. Each filter has a specific application area, separation efficiency and operating range. The filter separators are typically vertically positioned, but horizontal configuration is also possible. The pressure vessels can be designed and manufactured according to various design codes.

Condensate Vessel

The collected fluid can be stored in a condensate vessel. The vessel can be supplied with liquid pumps for forwarding and is available in a wide range of volumes.

Heating section

To heat the natural gas, Petrogas designs and manufactures several types of heating equipment such as:

Water bath heater

In a water bath heater or indirect fired heater, the natural gas is fed through a high-pressure tube bundle that is placed in a hot water boiler. A by-pass valve is used for temperature regulation.

Electrical heater

In an electrical heater, the natural gas is directly heated by heating elements. Thyristor controllers can be used for temperature regulation.

Shell and tube heat exchangers and hot-water boiler

The natural gas is heated in a shell and tube heat exchanger using a heating medium. A control valve is installed in the heating medium for temperature regulation. The heating medium can be supplied by the end-user. Mostly a hot water generator package will be supplied. The package can be supplied in a custom built container or located in an adjacent building.

Reducing section

Reducing sections are used to reduce the gas pressure to the required pressure and is facilitated by using control valves. For safety, every reduction line has one or two safety devices installed according to local regulations. The pressure reduction itself is executed using a control valve. Depending on the flow and pressure reduction, it may be necessary to carry out reduction in two stages.

