

Fuel Gas Skids

Fuel gas skids (also named Fuel gas conditioning systems, Fuel gas systems or Fuel gas filtration packages) are used to treat combustion turbine and engine fuel gas, as well as process & treat wellhead gas prior to transmission & distribution.

In gas turbine applications, conditioning of the feed gas is critical because it increases the longevity and performance of the turbine. In pipeline applications, conditioning of natural gas is required to meet stringent pipeline specifications for transmission of the treated gas to the market.

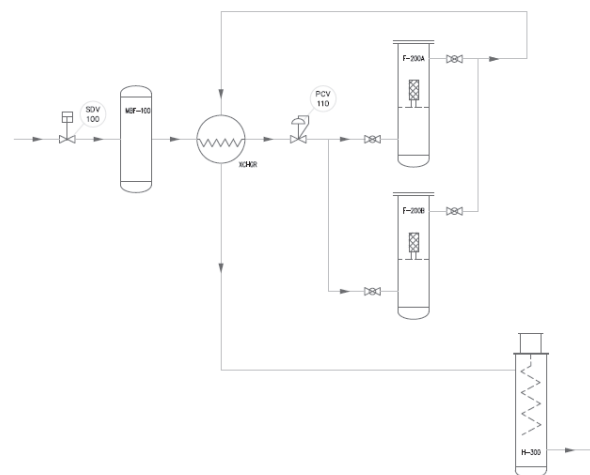
The Fuel gas packages are designed to supply clean and treated gas to gas-driven equipment such as turbines, generators and process heaters. The treated gas can also be used as seal gas, blanketing gas or utility gas.

Description

Gas conditioning systems enhance fuel gas quality by eliminating condensate, filtering particulates, regulating pressure and controlling temperature.

Untreated gas can cause premature combustion component distress, erosion of components, and nozzle plugging.

Fuel gas skids are intended and designed to condition the entering gas flow and as such protect these gas-fueled engines and turbines from over-pressure, liquids and solids. In addition, the gas will often be heated above the dew point of the water and hydrocarbon which will prevent liquid condensation in the downstream equipment.



Example Process Diagram

Process Description

A typical Fuel gas system consists of a scrubber vessel (or knockout drum), filter-coalescer units, (electric) heaters, pressure reduction valves, emergency and operational valves, and (flow) metering. Depending on the fuel gas inlet conditions, fuel gas systems may be equipped with heaters or coolers. Generally fuel gas conditioning systems use pressure control valves to reduce the pressure of the production gas to a constant level required by the user. The resulting adiabatic cooling effect may result in formation of condensates.

Liquids entrained in the gas will be routed through a scrubber vessel to avoid any liquid carry-over in the downstream equipment. The gas is fed into a filter-coalescer unit to further remove any liquid carry-over as well as solid particles.

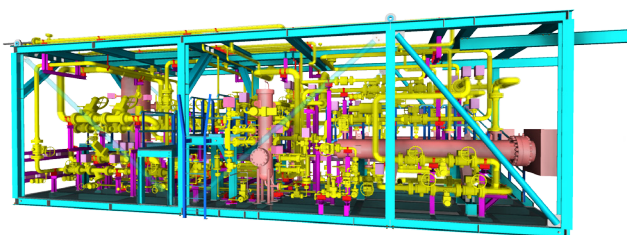
In some cases, pre-heating is required before the gas is reduced in pressure. Ultimately the gas can be superheated to ensure temperatures will remain above the dew point suitable for entering the turbine or generator downstream.

FB Group

FB Group has supplied an extensive amount of Fuel gas systems to various clients worldwide.

We design, manufacture and assemble these fuel gas packages custom made to our client's specific requirements. Completed systems can be tested to the maximum extend in our workshops.

We offer standard and custom designed systems to meet the requirements of each application, including fine filtration, coalescing filtration, process heating, pressure regulating, J-T gas conditioning, and cooling. Our systems are built modular, skid mounted, with instrumentation and controls for local or remote operation.



3D-model of skid design

Technical Details

- Materials ranging from carbon steel to alloys, such as super duplex, Hastelloy and Inconel.
- Process piping designed to code, such as ANSI, fabrication to ASME Section IX.
- Vessels designed to code, such as ASME and PED or else when required.
- Instrumentation, tubing.
- Wiring of instrumentation to junction boxes.
- Valves including control and operation (ESD, PSD, switch-over autodrain).
- Electric process heaters including thyristor control system.
- Certified for use in various hazardous area zones.
- Compact duplex configuration filter-coalescer units for continuous operation.
- Filtration fineness down to 1 micron and efficiencies up to 99.9%.
- Pressures up to 400 bar(g) or higher upon request.
- Control Panel.



Stainless Steel Package

Please contact our offices for any further information or to receive a quotation:

FB Group Projects B.V.
Sluisweg 17
4794 SW Heijningen
Netherlands

Tel.: +31 167 525000
E-mail: sales@fbgroup.nl