

Compressor Systems Holland



Gas compression solutions for
an emission free future



www.compressorsystems.com



Engineering

In-house electrical and mechanical (3D) engineering.



Test facilities

Full flow and pressure test capabilities for gases.



Workshop

Mechanical and electrical workshop with paint booth and dedicated welding area.



Custom-built gas compression solutions

Climate change is an ever increasing problem. Greenhouse gases are the primary driver of climate change. Nearly three quarters of all greenhouse gas (GHG) emissions result from the production of energy for electricity, heat, and transport. To reduce the emission of greenhouse gases, it is vital that these industries become decarbonized. Initially by improving efficiency, followed by low-carbon fuel alternatives, and ultimately by moving to an emission free production.

In all these phases on the way to a carbon neutral future, CSH provides gas compression solutions to control and reduce harmful emissions escaping into the atmosphere.



Nearly 40 years of experience

Established in 1981 Compression Systems Holland B.V. started as a Gardner Denver distributor. Primarily to serve Dutch end users in the Oil & Gas and petrochemical industry with air compression solutions. In the first decade, CSH extended its portfolio with gas and high pressure air compression solutions. Around the turn of the century, the company was re-established as Compressor Systems Holland (CSH). CSH evolved into an independent supplier of custom-built positive displacement compression solutions, serving end users globally in the Oil & Gas, petrochemical, and energy industries.

With a proven track record, CSH is able to support you in controlling and reducing the emission of greenhouse gases originating from your industrial processes.

Custom-built to meet your requirements

We operate from our modern premises in the Netherlands, with advanced engineering, workshop, and

testing facilities. We design, assemble, and supply custom-built solutions in the field of positive displacement compression. After delivery, our team of service engineers provide local commissioning, training, and maintenance at our customer sites globally.

Market standards and specifications

With decades of experience, we have built up knowledge of the markets in which we operate and about the compression solutions to solve your challenges. Whether it is a rotary vane, a screw, or a reciprocating compressor; driven by an electric motor, diesel, or gas engine. All our solutions are designed and manufactured according to customer needs and industry requirements (API/ATEX/PED/ASME) ensuring maximum performance and reliability.

To ensure the highest quality, we manage our projects and processes following our ISO 9001:2015 certified quality management system.



Industries

Most of the GHG emissions consist of carbon dioxide (CO₂), arising from burning fossil fuels, such as coal, hydrocarbon liquid gas, natural gas, and petroleum, for the production of energy. Other harmful emissions are methane (CH₄), nitrous oxide (N₂O), and fluorinated gases (F-gases) that originate from a variety of industrial processes. Emissions can be combustion related or have a fugitive nature resulting from intended and/or unintended leaks and venting.

CSH provides gas compression solutions to control and reduce the emission of these harmful gases for the following industries:

- Oil & Gas
- Power Generation
- Liquid Gas Transfer
- Renewables

Oil & Gas

Fossil fuels are the main contributors to global warming. But the Oil & Gas industry itself also has a significant share in GHG emissions. The industry is responsible for combustion gases, un-combusted fugitive emissions and releases of fluorinated gases arising from firefighting and refrigeration systems. CSH provides solutions to cut down flaring and recover vapors, in order to reduce the emission of harmful gases.



Power Generation

In the transition to carbon-neutral energy production, the power generation industry can reduce its emissions significantly by shifting from coal and heavy fuel oil to natural gas. In addition, gas which would otherwise have been flared or vented, can be used for the production of energy. CSH provides gas compression solutions for fuel gas treatment and pressure boosting to support the power generation industry during the energy transition.

Liquid Gas Transfer

Liquid gas can be transferred over water, road, rail or via a pipeline. During the transfer of liquid cargoes like chemicals and hydrocarbons, harmful fugitive gases such as methane may be emitted

during loading and unloading activities.

CSH provides gas compression solutions that recover vapors and convert these gases back into a liquid chemical or fuel.

Renewables

The journey on the way to a society with net-zero greenhouse gases, based on hydrogen as an energy carrier will require a mix of energy sources. Renewable energy, and more specifically biomass, is one of these pillars in the energy mix. One form of biomass energy is biogas, which is produced by the digestion of organic matter, such as agricultural waste, sewage, food waste or other organic raw materials. CSH provides gas compression solutions for the upgrading of biogas to so-called Green Gas for local consumption or injection into a gas grid.



Solutions

CSH offers gas compression solutions that control the emission of greenhouse gases in existing facilities in the Oil & Gas and Liquid Gas Transfer industries. CSH also supports the energy transition by enabling the Power Generation industry to adapt to fuel sources with a lower carbon footprint. Gas compression for biogas applications will form an important part in the energy mix on the way to a carbon neutral future.

As an independent supplier, CSH can provide positive displacement gas compression solutions to support you in your challenges with regards to:

- **Emission Control**
- **Fuel Gas**
- **Biogas**

Emission Control

Flare Gas Recovery

Flare Gas Recovery is accomplished by a gas compression system retrieving gases that would otherwise be flared. In addition, these recovered gases can be treated so they can be used as fuel for energy production or feedstock for further hydrocarbon processing.

Vapor Recovery

Flash Gas is generated when light hydrocarbons, dissolved in crude oil or condensate, 'flash out' as a result of a pressure drop during hydrocarbon processing or loading/unloading of a storage tank. Typically, a venting apparatus is used in these vessels, to prevent damage arising from pressure fluctuations, with the negative side effect of harmful emissions escaping to the atmosphere. By installing a Vapor Recovery Unit these light hydrocarbons are not vented but converted into more valuable products or fuel for onsite power generation.

Wellhead Gas Gathering

Depleted wells may still produce wellhead gas quantities that are worth recovering. A wellhead gas gathering system is used to collect, treat, and pressurize the gas for



injection into a medium or high-pressure pipeline. With our compression solutions you increase your gas well productivity and profitability.

Tail Gas Recovery

Tail gas is a waste gas stream, originating from hydrocarbon processing or a sulfur recovery process. It typically contains combustible traces and sulfur compounds. Often this tail gas is burned in an incineration unit, but it can also be treated in a Tail Gas Recovery unit for further desulfurization. CSH offers gas compression solutions that are able to withstand the aggressive nature of tail gases.

Fuel Gas

Fuel Gas Boosting

To ensure proper operation of gas turbines and gas engines, it is important that fuel gas of sufficient quality is provided at a constant pressure. Gas recovered from an industrial process or natural gas of insufficient quality needs to be treated before it can be delivered as fuel. Furthermore, when the gas turbine or gas engine requires a gas pressure above the available pipeline pressure, a fuel gas booster is needed. CSH provides compression solutions that pre-treat the fuel gas and boost it to the required pressure to ensure reliable operation of your prime mover.

Biogas

Raw biogas from a digester is produced at low pressure and often contains a lot of carbon dioxide, hydrogen sulfide and water, making these gases acidic and corrosive. Apart from these 'normal' biogas characteristics, the raw biogas is often contaminated with trace elements which have a harmful impact on the installation.

Once the raw gas is upgraded to biogas or biomethane, CSH offers compression solutions for the following applications:

- Fuel Gas Boosting for supply of biogas to a local gas engine or turbine;
- compression of Biogas to Compressed Natural Gas (CNG) for fuel stations;
- low or medium pressure grid injection;
- high pressure grid injection;
- Gas Grid Boosting to increase the pressure of the (Green) Gas in the regional grid to the level required for the national grid.

Our compression solutions for upgraded biogas are proven to be resilient to the biogas characteristics and therefore ensure a reliable operation with a high availability.



More information about our gas compression solutions? Please feel free to contact us or have a look on our website www.compressorsystems.com.

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