

# Biomethane grid connection unit

**COMPACT SOLUTION FOR BIOMETHANE INJECTION  
INTO THE GAS GRID OR ITS TRANSPORTATION TO THE  
FINAL POINT OF BIOMETHANE UTILIZATION**

- ✓ Gas grid connection unit is a container-based solution that simply and efficiently injects biomethane produced in a biogas plant into the natural gas grid.
- ✓ Grid connection unit can also be used for pressure reduction in applications other than gas injection. For example, gas can be transported from the natural gas grid to the final point of its utilization. In this case, the grid connection unit adjusts the gas volume and pressure according to the requirements of the final point of gas utilization.

## Compact solution, quick start-up

Biovoima's gas grid connection unit is a standardized factory-made solution. However, piping size and pressure control components are customized based on how the gas is delivered to the grid connection unit, what is the local grid company's requirement for inlet pressure and how much gas will flow through the unit.

Grid connection unit is a compact solution, and it is easy and affordable to ship anywhere in the world. Start-up is also quick, as only input and output gas pipes should be attached to the inlet and outlet flanges.

## Chromatograph tracks gas quality

A grid connection unit can also be equipped with a gas chromatograph which allows accurate measurement and analysis of the quality of the injected gas. A chromatograph is typically needed when a gas upgrading unit has insufficient gas analytics and a poor data acquisition system.





## Gas injection from both the transportation module and the pipeline

Biovoima's gas grid connection unit is designed to allow the gas to be received at very different inlet pressures. If the gas grid connection point is far from the biogas plant, the gas can be pressurized to 200 – 300 bar transportation modules and transported to the grid connection unit. The gas pressure is then decreased through a heated valve set to correspond to the natural gas grid pressure. Finally, the flow of the gas is measured, and the gas is injected into the grid.

If the biogas plant is located directly next to the natural gas grid, the gas can be brought to the grid connection unit along a pipeline. A slightly different valve set is then selected for the pressure control, which fine-tunes the pressure of the gas coming from the upgrading unit to match to the pressure of the natural gas grid.

## Flow measurement of biomethane as a basis for invoicing and/or support

The gas grid connection unit is integrated with a gas flow measurement which accurately measures the amount of gas flowing through the unit. The measurement is connected to the automation of the grid connection unit that enables remote reading and transfer of the gas measurement data to an external system. Flow measurement also enables the natural gas grid owner or the end customer to be invoiced according to the exact amount of gas supplied.

## Gas grid connection unit application tips:

1. Biomethane injection into the natural gas grid directly from the biogas upgrading unit (suitable for biogas plants located in the vicinity of the natural gas grid).
2. Biomethane injection into the natural gas grid from transportation modules (allows for gas injection even when the biogas plant is located far away from the natural gas grid).
3. Biomethane supply directly from the transportation modules to the final point of gas utilization. The grid connection unit manages pressure reduction to a suitable level.
4. Biomethane supply directly from the natural gas grid to the final point of gas utilization, for example to a power plant or a biomethane filling station.
5. Equipping a power plant with a grid connection unit makes it possible to use biomethane as an alternative fuel for example in the production of process heat or district heat.



## Interested? Contact us!

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