CNG filling stations series GC 20-55 are compact and highly reliable devices designed for refueling passenger vehicles and commercial vehicles powered by natural gas or biomethane.

CNG filling station complies with regulation TPG 304 02, eventually TDG G 982 03 with related regulations and standards.

The operator of the filling station must be authorized for filling gas pressure vessels (including pressure stations) according to national rules.

These stations are suitable for premises of medium and large companies with the number of vehicles from about 10 to 30 pieces.

**Description of filling technology**

The inlet of natural gas passes through drying device with a molecular sieve, where is freed of moisture, and filtration device for the final purification of the gas. In the compressor device the gas is compressed to the pressure of 25 MPa. Under this pressure is delivered into storage cylinders and then into the dispensing device (dispenser). The gas is transported to the vehicle pressure tank through the filling hose with nozzle NGV1. After reaching the desired pressure of 20-21 MPa in the vehicle tank, the entire filling process is automatically terminated. Filling hose is disconnected from the vehicle tank and everything is ready for the next filling.

**Model CNG station – building**

Technological container has a self-supporting structure - steel frame filled with a reinforced porous concrete. Standard RAL color is selectable by customer. The container is a single-roomed and has only mechanical-technological part. Switchboard with touch-panel is placed near the filling station separately. Launching of filling is made by unlocking the chip and entering the PIN. The container is fitted with roof at the point where it is performed manipulating and controlling of the touch panel during filling the vehicle. The container is placed on pre-prepared foundation belts or foot. At the request of the investor it is possible to deliver self-supporting steel container.

In the container is mounted all technology of CNG filling station - input connection fittings, pressure regulators, safety valves, gas dryer, blow-down vessel before entering the compressor, compressor, buffer storage tank of compressed gas (divided into two pressure sections) priority panel for optimal and fast filling of vehicles through the dispensing device.

The filling hose with nozzle NGV1 for filling vehicles is directly led out from the container.

For maximum security an area with technology is monitored by a gas leak detector. The entire technology meets all requirements for safe and environmentally friendly operation.

Filling stations can be connected to a service center for possibility of an immediate diagnostics of technology.
Fleet CNG filling station
type GC 20–55

J.A. BECKER & Söhne  Compressors type SV 225/300NG
and SVC 700/300NG

The most important part of the CNG filling station is the compressor. Choice of its performance and type is essential for its reliability, the amount of operating costs and long-term operability. The compressor must be suitable for natural gas or biomethane. German manufacturer of the compressors J.A. BECKER & Söhne fully meets all these requirements which has long been proven.

Technical data

<table>
<thead>
<tr>
<th>Type</th>
<th>GC 20 / GC 35 / GC 55</th>
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</thead>
<tbody>
<tr>
<td>Inlet pressure</td>
<td>0,02 - 0,3 bar</td>
</tr>
<tr>
<td>Supplied quantity</td>
<td>17 Nm³/hod 35 Nm³/hod 55 Nm³/hod</td>
</tr>
<tr>
<td>Electric motor</td>
<td>6,8 kW 15 kW 24 kW</td>
</tr>
<tr>
<td>Working outlet</td>
<td>from 25 až 29 MPa</td>
</tr>
<tr>
<td>Gas storage</td>
<td>840 / 1 680 l*</td>
</tr>
<tr>
<td>Dimensions</td>
<td>2,5 x 4,0 x 2,7 m</td>
</tr>
</tbody>
</table>

* Can be produced on request (multiples of 140 l).