Technical Description
We manufacture and install customized GRMS in accordance with relevant EU regulations:

- EC type testing certificate as per:
  - EC-Gas Appliances Regulation
  - EC-Pressure Equipment Directive
  - regulations on occupational safety
  - EU country specific regulations
  - regulations of gas supply companies

Application
DUNGS GRMS are suitable for use in:

- thermal production processes
- gas blower burners
- thermal power stations
- gas motors, block-type thermal power stations
- industrial furnaces
- steam boilers
We offer gas trains with the following pressure ranges and nominal widths:

<table>
<thead>
<tr>
<th>Pressure Range</th>
<th>Nominal widths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low pressure range</td>
<td></td>
</tr>
<tr>
<td>ND: $p_1 \leq 100$ mbar</td>
<td>Threaded joint: Rp 1/2 - Rp 2</td>
</tr>
<tr>
<td>Medium pressure range</td>
<td></td>
</tr>
<tr>
<td>MD: $100$ mbar &lt; $p_1 \leq 1$ bar</td>
<td>Flanged joint: $\geq$ DN 25</td>
</tr>
<tr>
<td>High pressure range</td>
<td></td>
</tr>
<tr>
<td>HD: $p_1 &gt; 1$ bar</td>
<td>Maximum nominal</td>
</tr>
<tr>
<td></td>
<td>diameter: According to RL 97/23, category II (PS x DN = 3500)</td>
</tr>
</tbody>
</table>

Components and functional sections of a GRMS

Pressure regulation part
- Ball valve
- Filter
- Pressure regulators

Volume flow measurement part
- Gas meter
- Volume corrector (converts operating volume flow into standard volume flow).

Safety part
- Solenoid valves
- Bypass valve
- Ignition gas valve
- Valve inspection systems
- Pressure monitor
- Closed position signal contact

Our systems can be equipped with other devices, sub-assemblies and functional parts to meet specific application requirements.

Data for gas train calculation

<table>
<thead>
<tr>
<th>Gas type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>[kg/m³]</td>
</tr>
<tr>
<td>Calorific value, $H_{u,n}$</td>
<td>[kWh/m³]</td>
</tr>
<tr>
<td>Min. Input pressure $p_{e,\text{min.}}$</td>
<td>[bar, mbar]</td>
</tr>
<tr>
<td>Max. Input pressure $p_{e,\text{max.}}$</td>
<td>[bar, mbar]</td>
</tr>
<tr>
<td>Outlet pressure at the end of the GRMS</td>
<td>[bar, mbar]</td>
</tr>
<tr>
<td>Temperatur range</td>
<td>[°C]</td>
</tr>
<tr>
<td>Min. gas volume flow</td>
<td>[m³/h]</td>
</tr>
<tr>
<td>Max. gas volume flow</td>
<td>[m³/h]</td>
</tr>
<tr>
<td>Electrical voltage</td>
<td>[V]</td>
</tr>
<tr>
<td>Electrical degree of protection</td>
<td>[IP]</td>
</tr>
<tr>
<td>Other data</td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| Combined-Heat & Power | High-performance gas engine operated with low BTU gas equipped with Tecjet | Gas type: Wood gas  
Input pressure: 100-200 mbar  
Output pressure: 40 mbar  
Volume flow: 120-1400 m³/h |
| | Cogeneration unit operated with wood gas (GRS with separate connection options for pre-purging with hot nitrogen for temperature control and inertisation) | Gas type: Wood gas  
Input pressure: 1,0-4,5 bar  
Output pressure: 0 mbar  
Volume flow: 200 Nm³/h |
| | Gas engine for dual-fuel operation | Gas type: Natural gas / biogas  
Input pressure: 500 mbar  
Volume flow: 280 / 540 m³/h |
| Process Heat | Glassfurnace | Gas type: Natural gas  
Input pressure: 0,8-1,0 bar  
Output pressure: 100 mbar  
Volume flow: 47-470 Nm³/h |
| | Tunnel furnace for firing ceramic building materials | Gas type: Natural gas  
Input pressure: 3-4 bar  
Output pressure: 900 mbar  
Volume flow: 400 m³/h |
| | Continuous drying furnace for sanitary engineering | Gas type: Natural gas  
Input pressure: 3,3-6 bar  
Output pressure: 100 mbar  
Volume flow: 52-520 Nm³/h |
| | Baking unit for waffle production | Gas type: Natural gas / air  
Input pressure: 20-50 mbar  
Output pressure: 10 mbar  
Volume flow: 17/ 26 m³/h |
Our Services

• Customized engineering

• Production in accordance with relevant standards and regulations

• EC type testing certificate as per:
  • EC-Gas Appliances Regulation
  • EC-Pressure Equipment Directive category II & I

• Lists of parts, documentation and CAD drawings

• Tested functioning and leak-proofness (Factory certificate 2.1 according to EN 10204)

• Welded parts checked for strength with Inspection certificate 3.1 according to EN 10204

• X-ray welded joints

• Sandblasted and stove-enamelled welded parts RAL 1021

• Worldwide shipment including all custom formalities