Gas Control, Measurement and Safety Systems (GRMS)

10.01

DUNGS®
Combustion Controls

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

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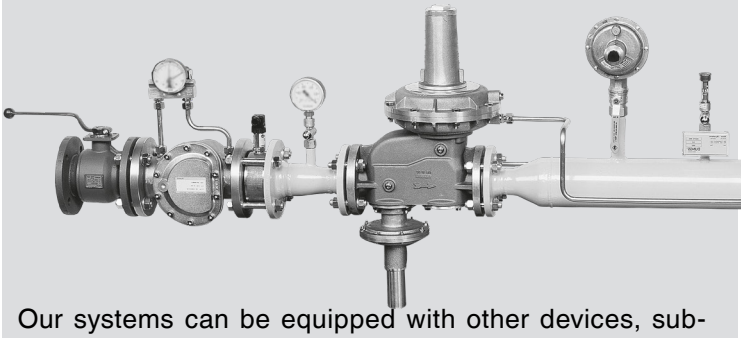
We offer gas trains with the following pressure ranges and nominal widths:

Pressure Range		
Low pressure range	**ND:**	**$p_1 \leq 100$ mbar**
Medium pressure range	**MD:**	**100 mbar < $p_1 \leq 1$ bar**
High pressure range	**HD:**	**$p_1 > 1$ bar**

Nominal widths	
Threaded joint:	**Rp 1/2 - Rp 2**
Flanged joint:	**≥ DN 25**
Maximum nominal diameter:	**According to RL 97/23, category II (PS x DN = 3500**

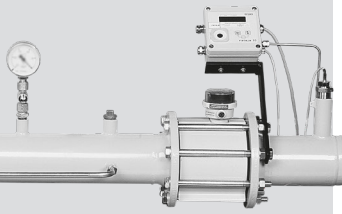
Components and functional sections of a GRMS

Pressure regulation part
Ball valve
Filter
Pressure regulators

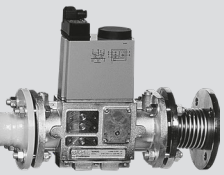


Our systems can be equipped with other devices, sub-assemblies and functional parts to meet specific application requirements.

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

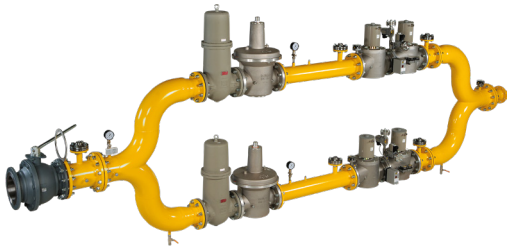
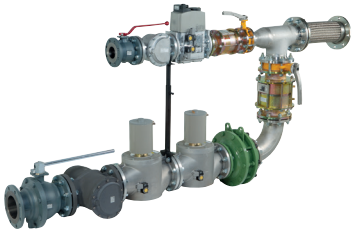
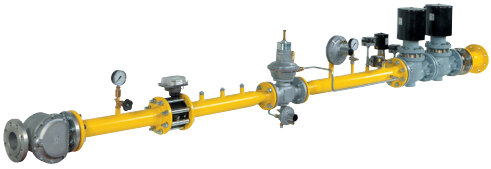


Safety part
Solenoid valves
Bypass valve
Ignition gas valve
Valve inspection systems
Pressure monitor
Closed position signal contact



Data for gas train calculation

Gas type		
Density		[kg/m³]
Calorific value, $H_{u,n}$		[kWh/m³]
Min. Input pressure $p_{e,min.}$		[bar, mbar]
Max. Input pressure $p_{e,max.}$		[bar, mbar]
Outlet pressure at the end of the GRMS		[bar, mbar]
Temperatur range		[°C]
Min. gas volume flow		[m³/h]
Max. gas volume flow		[m³/h]
Electrical voltage		[V]
Electrical degree of protection		[IP]
Other data		

Application			
Combined-Heat & Power	High-performance gas engine operated with low BTU gas equipped with Tecjet		**Technical data GRS** Gas type: Wood gas Input pressure: 100-200 mbar Output pressure: 40 mbar Volume flow: 120-1400 m^3/h
	Cogeneration unit operated with wood gas (GRS with separate connection options for pre-purging with hot nitrogen for temperature control and inertisation)		**Technical data GRS** Gas type: Wood gas Input pressure: 1,0-4,5 bar Output pressure: 0 mbar Volume flow: 200 Nm^3/h
	Gas engine for dual-fuel operation		**Technical data GRS** Gas type: Natural gas / biogas Input pressure: 500 mbar Volume flow: 280 / 540 m^3/h
Process Heat	Glassfurnace		**Technical data GRS** Gas type: Natural gas Input pressure: 0,8-1,0 bar Output pressure: 100 mbar Volume flow: 47-470 Nm^3/h
	Tunnel furnace for firing ceramic building materials		**Technical data GRS** Gas type: Natural gas Input pressure: 3-4 bar Output pressure: 900 mbar Volume flow: 400 m^3/h
	Continuous drying furnace for sanitary engineering		**Technical data GRS** Gas type: Natural gas Input pressure: 3,3-6 bar Output pressure: 100 mbar Volume flow: 52-520 Nm^3/h
	Baking unit for waffle production		**Technical data GRS** Gas type: Natural gas / air Input pressure: 20-50 mbar Output pressure: 10 mbar Volume flow: 17/ 26 m^3/h

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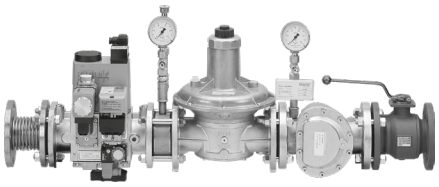
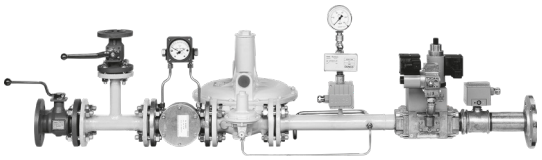
Our Services

- **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**





We reserve the right to make modifications in the interest of technical progress.

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