

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:

- EU Gas Appliance Directive
- EU 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:

Druckbereiche

Low pressure range	ND: $p_1 \leq 100 \text{ mbar}$
Medium pressure range	MD: $100 \text{ mbar} < p_1 \leq 1 \text{ bar}$
High pressure range	HD: $p_1 > 1 \text{ bar}$

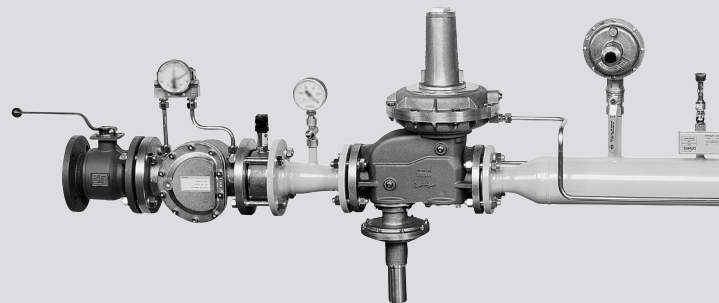
Nominal widths

Threaded joint:	Rp 1/2 - Rp 2
Flanged joint:	$\geq \text{DN } 25$
Maximum nominal diameter:	According to RL 97/23, category II (PS x DN = 3500)

Components and functional sections of a GRMS

Pressure regulation part

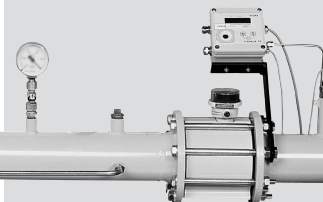
Ball valve
Filter
Pressure regulators



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

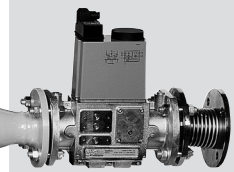
Volume flow measurement part

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



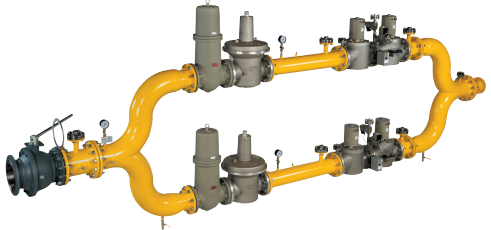
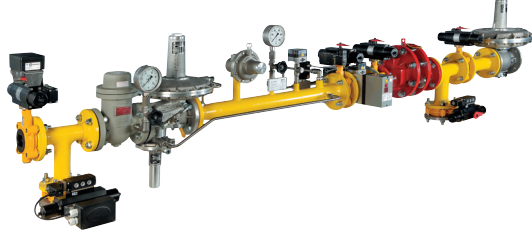
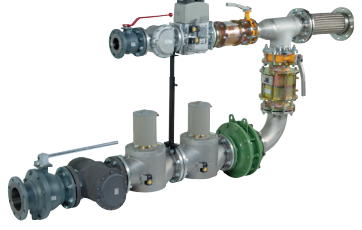

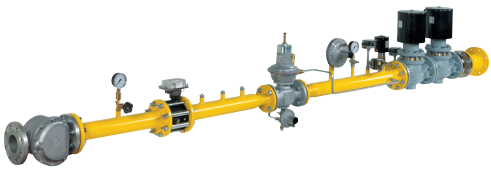


Safety part

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



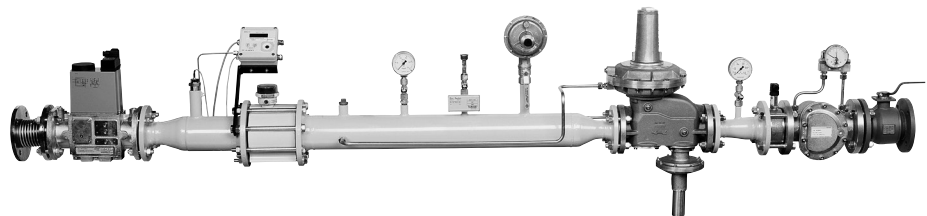
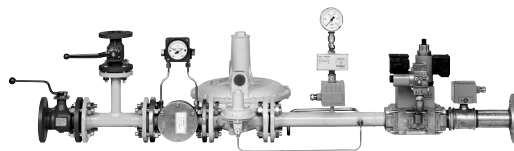
Data for gas train calculation

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

Anwendungsbeispiele			
Kraft-Wärme-Kopplung	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 m³/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 Nm³/h
	Gas engine for dual-fuel operation		Technical data GRS Gas type: Natural gas / biogas Input pressure: 500 mbar Volume flow: 280 / 540 m³/h
Prozesswärme	Glassfurnace		Technical data GRS 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		Technical data GRS Gas type: Natural gas Input pressure: 3-4 bar Output pressure: 900 mbar Volume flow: 400 m³/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 Nm³/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 m³/h

Our Services

- ✓ Customized engineering
- ✓ Production in accordance with relevant standards and regulations
- ✓ Gas Appliance Directive
- ✓ 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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