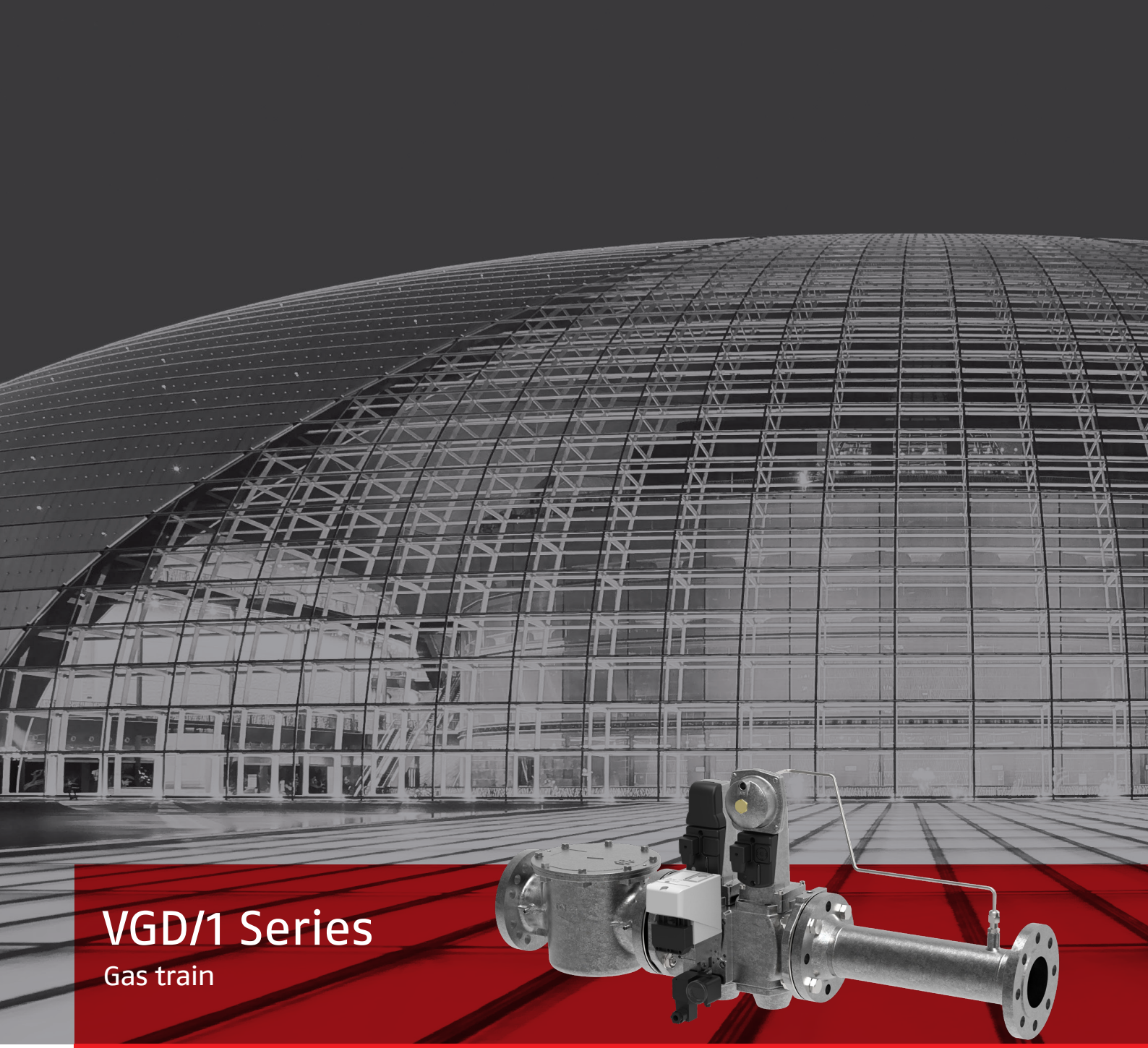


VGD/1 Series

Gas train

Product Overview

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RIELLO
Energy For Life

VGD/1 Series

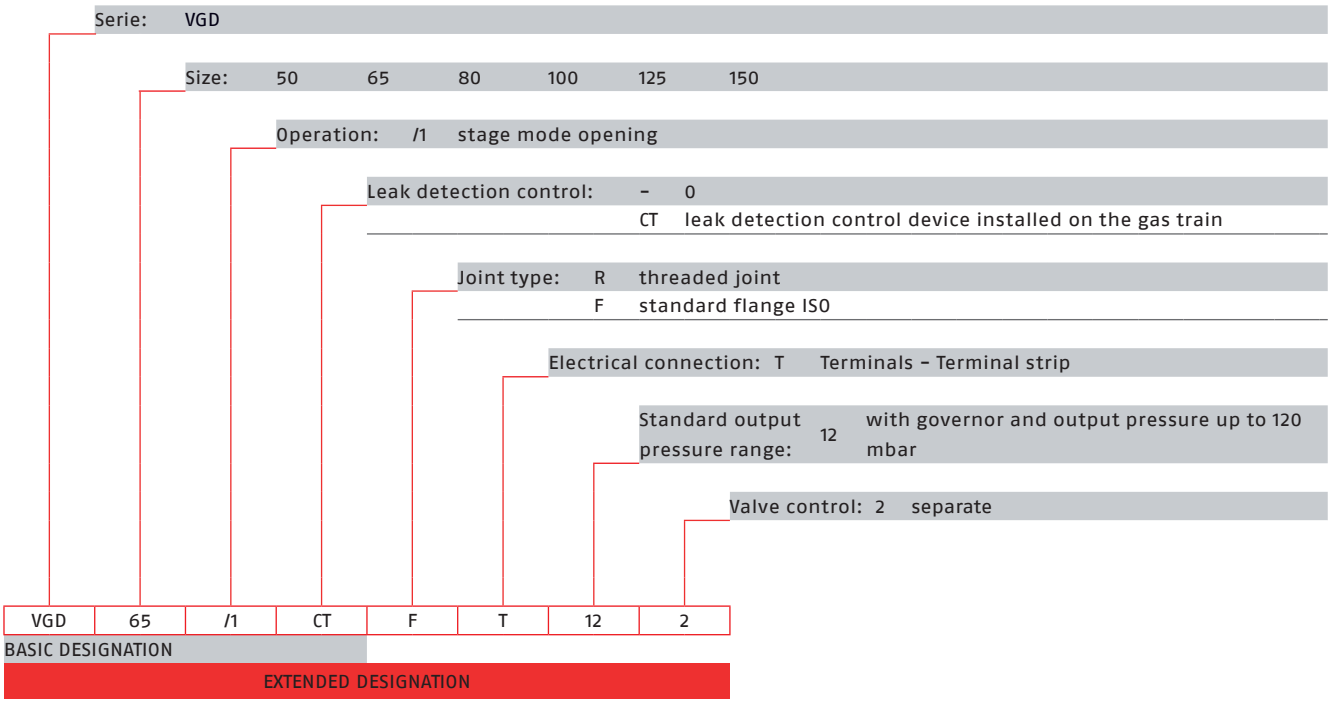
Pressure reduction and regulation units allow to bring gas pressure available in the line to values suited to the specific application.
The gas train range includes a series of safety and control devices for gas feeding to the burner.

VGD/1 gas trains series represents the ideal solution for installations in industrial environments; the gas trains are available:
- with threaded ports (diameter of 2") or with flanged ports (diameter from DN65 to DN125);
- with or without the seal control unit (230V/50Hz version).

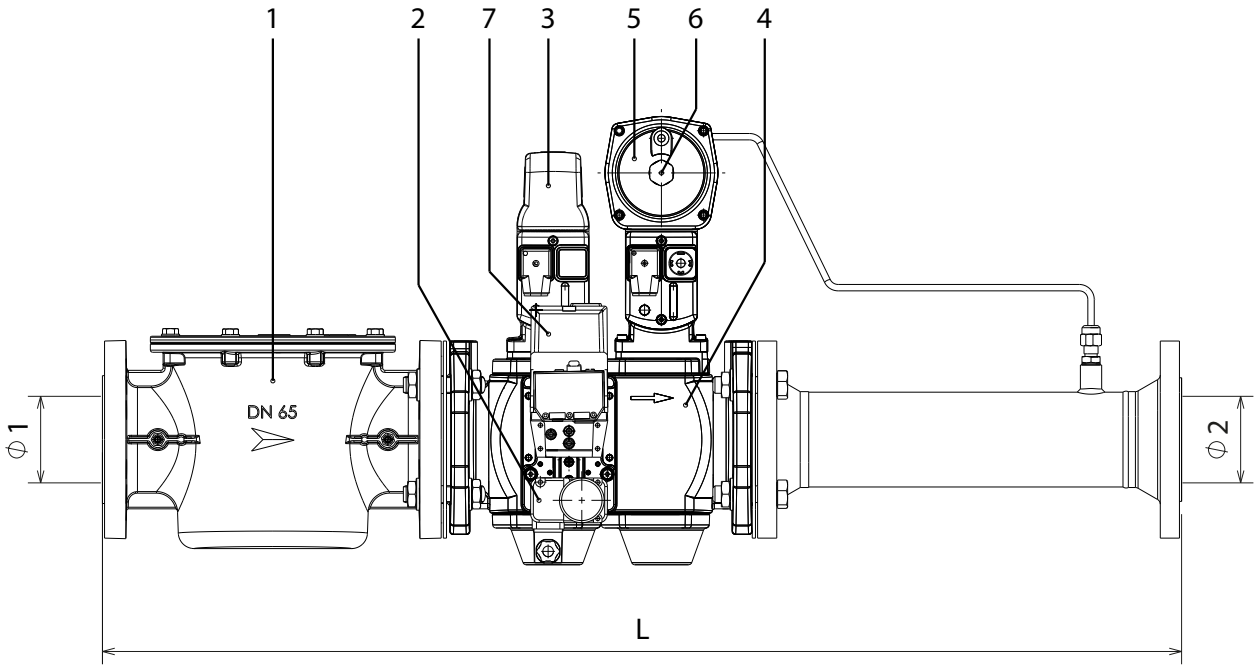
The seal control unit is available also as an accessory, both in the 230V/50Hz and 220V/60Hz versions.

The use of pre-assembled units, tested in the factory according with the existing norms and designed for an easy installation, allows to reach the best flexibilty.
The gas train selection has to be made based on the specific application (available pressure, installation chances,...).

Gas train designation



Main components



1 Filter
2 Minimum gas pressure switch
3 Safety valve
4 Valve body
5 Adjusting valve
6 Screw for gas pressure adjustment
7 Leak detection control (if present)

Available models

Code	Model	Ø1	Ø2	L [mm]	P in [mbar]	P out – 1 (*) [mbar]	P out – 2(**) [mbar]	Notes
20137718	VGD 50/1 – RT 122	G2"	G2"	890	< 500	15 ÷ 120	0 ÷ 22	(1)
20169190	VGD 50/1 CT RT 122	G2"	G2"	890	< 500	15 ÷ 120	0 ÷ 22	(2)(3)
20140762	VGD 65/1 – FT 122	DN 65	DN 80	1013	< 500	15 ÷ 120	0 ÷ 22	(1)
20169191	VGD 65/1 CT FT 122	DN 65	DN 80	1013	< 500	15 ÷ 120	0 ÷ 22	(2)(3)
20140763	VGD 80/1 – FT 122	DN 80	DN 80	1033	< 500	15 ÷ 120	0 ÷ 22	(1)
20169192	VGD 80/1 CT FT 122	DN 80	DN 80	1033	< 500	15 ÷ 120	0 ÷ 22	(2)(3)
20169193	VGD 100/1 – FT 122	DN 100	DN 100	1330	< 500	15 ÷ 120	0 ÷ 22	(1)
20169194	VGD 100/1 CT FT 122	DN 100	DN 100	1330	< 500	15 ÷ 120	0 ÷ 22	(2)(3)
20169195	VGD 125/1 – FT 122	DN 125	DN 125	1580	< 500	15 ÷ 120	0 ÷ 22	(1)
20169196	VGD 125/1 CT FT 122	DN 125	DN 125	1580	< 500	15 ÷ 120	0 ÷ 22	(2)(3)

(*) With stabilizer spring mounted in factory
(**) With second stabilizer spring supplied with the gas train (to be installed on field)
(1) Electrical supply: 230V 50Hz / 220V 60Hz
(2) Electrical supply: 230V 50Hz
(3) Seal control unit (230V 50Hz version) included

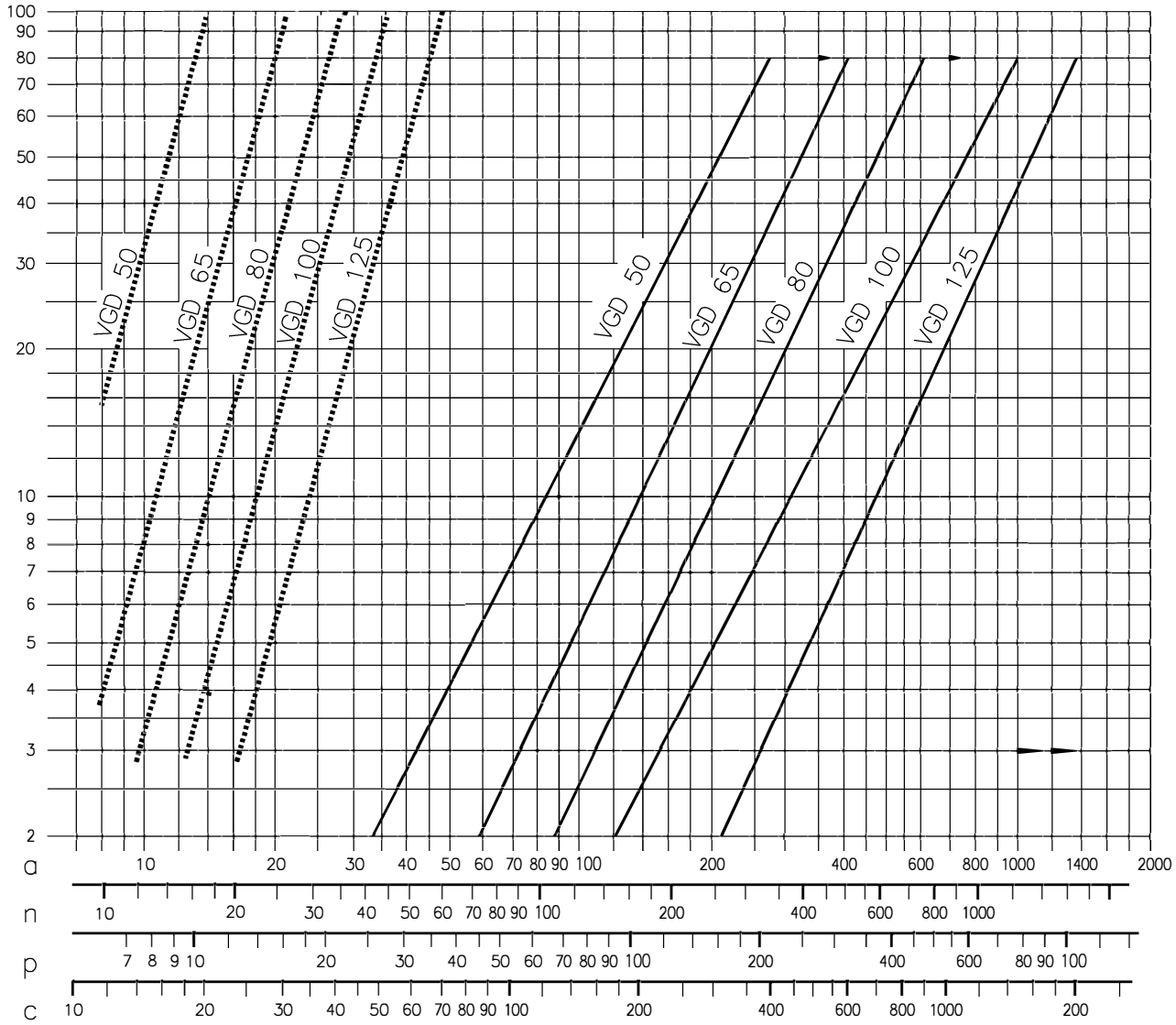
Pressure losses

The gas trains pressure losses Δp are provided from the diagram; the scales of the volumetric output $\mathring{V}$ are valid respectively for:
a = air
n = methane (G20)
p = propane (G30)
c = town gas (G140).
The minimum necessary pressure in the network can be obtained by adding the pressure of the diagram to the burner pressure losses (see the burner technical instruction) and the back pressure of the combustion chamber (see the technical instruction of the heat generator).

$$\mathring{V}_{gas\ used} = V_{air} \times f$$

$$f = \sqrt{\frac{\text{Air spec. weight}}{\text{Spec. weight of gas used}}}$$

Gas type	Spec. weight [Kg/m]³	dv	f
Methane	0.81	0.65	1.24
Town gas	0.58	0.47	1.46
LPG	2.08	1.67	0.77
Air	1.24	1.00	1.00



——— Maximum flow characteristic (for fully open VGD)

– – – – – Minimum flow characteristic

Gas train accessories

Seal control kit



Model	Kit code for 50 Hz operation	Kit code for 60 Hz operation
All models	3010123	20050030

Springs for pressure regulator



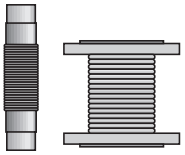
Code	Model	P out [mbar]	Color
20181839	AGA29	0 ÷ 22	Neutral
20141900	AGA22	15 ÷ 120	Yellow
20141901	AGA23	100 ÷ 250	Red

Manual valves



Code	Model	Size	Max operating pressure [bar]
3090968	GBV 2"	2"	5
3090947	GBV DN65	DN65	16
3090969	GBV DN80	DN80	16
3090962	GBV DN100	DN100	16
3091065	GBV DN125	DN125	16

Anti-vibrating joints



Code	Model	Size	Max operating pressure [mbar]
3891053	GA 50	2"	500
3891013	GAF 65	DN65	500
3891003	GAF 80	DN80	500
3891023	GAF 100	DN100	500
3091092	GAF 125	DN125	500

Specification

State of supply

Safety/regulating gas train for gas of 1st – 2nd – 3rd family, with max supply pressure of 500 mbar composed from:
- n.1 gas filter with filtering degree < = 50 µm
- n.1 double valve unit composed from two automatic closing valves EN 161, class A, group 2, realized with double diaphragm technology, comprised in a single body and featured by:
    - fast closing and slow opening with adjustable fast stroke for initial gas volume
    - adjustable main delivery and proportional regulation
    - ant-dust filter with net
- n.1 On/Off actuator electrohydraulically operated for safety shutoff valve
- n.1 actuator with pressure regulator electrohydraulically operated for adjusting valve
- n.1 minimum gas pressure switch at simple action
- n.1 automatic seal control unit (CT version only)
- nipples (in threaded version)
- gaskets (in flanged version)
- fixing screws (in flanged version).

Riello Burners a world of experience in every burner we sell.

07/2020

P00041UK02



[1]



[2]

[1] BURNERS PRODUCTION PLANT
S. PIETRO, LEGNAGO (VERONA) – ITALIA

[2] HEADQUARTER BURNERS DIVISION
S. PIETRO, LEGNAGO (VERONA) – ITALIA

Across the world, Riello sets the standard in reliable and high efficiency burner technology.

With burner capacity from 5 kW to 48 MW, Riello gas, oil, dual fuel and Low Nox burners deliver unbeatable performance across the full range of residential and commercial heating applications, as well as in industrial processes.

With headquarter in Legnago, Italy, Riello has been manufacturing premium quality burners for over 90 year.

The manufacturing plant is equipped with the most innovative systems of assembling lines and modern manufacturing cells for a quick and flexible response to the market.

Besides, the Riello Combustion Research Centre, located in Angiari, Italy, represents one of the most modern facility in Europe and one of the most advanced in the world for the development of the combustion technology.

Today, the company's presence on worldwide markets is distinguished by a well-constructed and efficient sales network, alongside many important Training Centres located in various countries to meet its customers' needs.

Riello has 13 operational branches abroad (in Europe, America and Asia), with customers in over 60 countries.

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