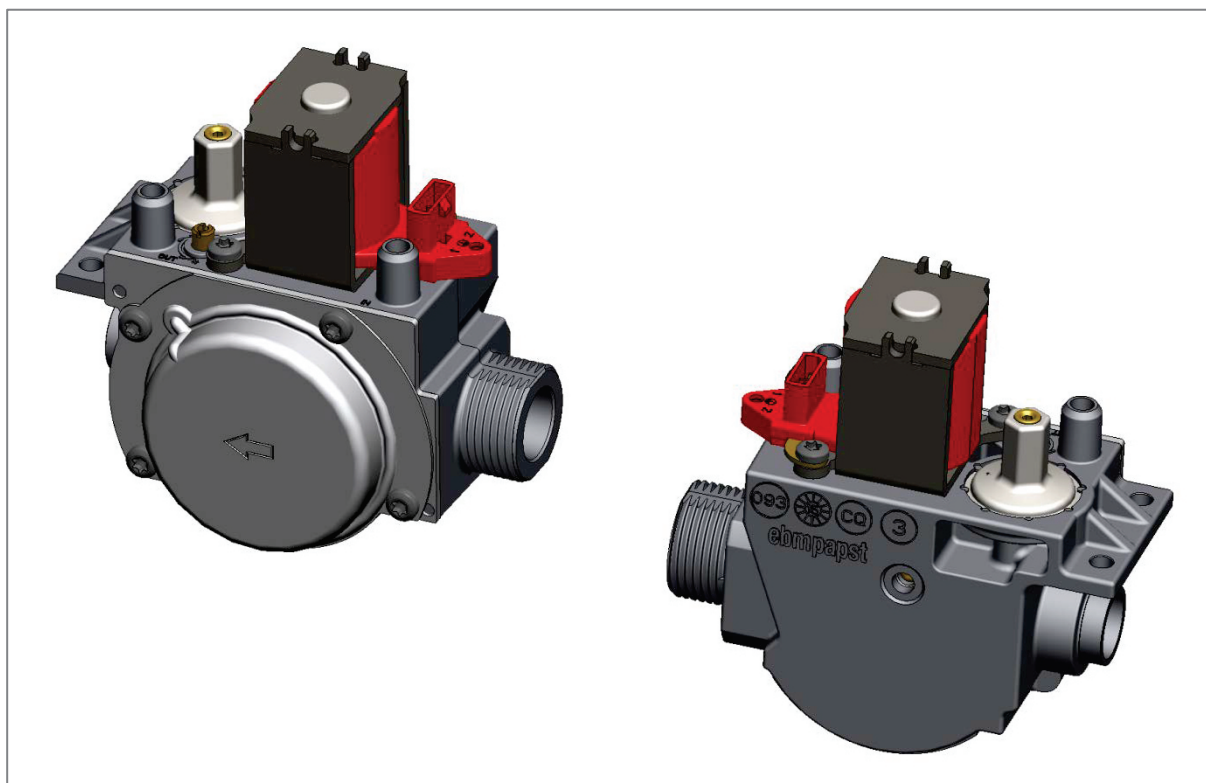


Data sheet

GasBloc Multifunctional gas control

GB-GD 055 E01 Gas/air ratio system
 GB-ND 055 E01 Zero pressure regulator



Technology

Multifunctional gas control valve according to EN 126 for fully automatic operation.

- Pneumatic integrated system comprising air signal or zero pressure mode
- Offset correction of gas/air ratio at servo regulator
- Setting the flow by the main flow throttle
- Input pressure up to max. 65 mbar (6.5 kPa)
- Different device variants according to application possible

Applications

- For premixing and fan-assisted burners
- Suitable for gases as per EN 437 and other neutral gaseous media

Approvals

Type test approval according to EC Gas Appliances Directive

CE-0085 CM 0036
 CSA 240 9198

Approvals in other important gas-consuming countries

Data sheet

GasBloc Multifunctional gas control

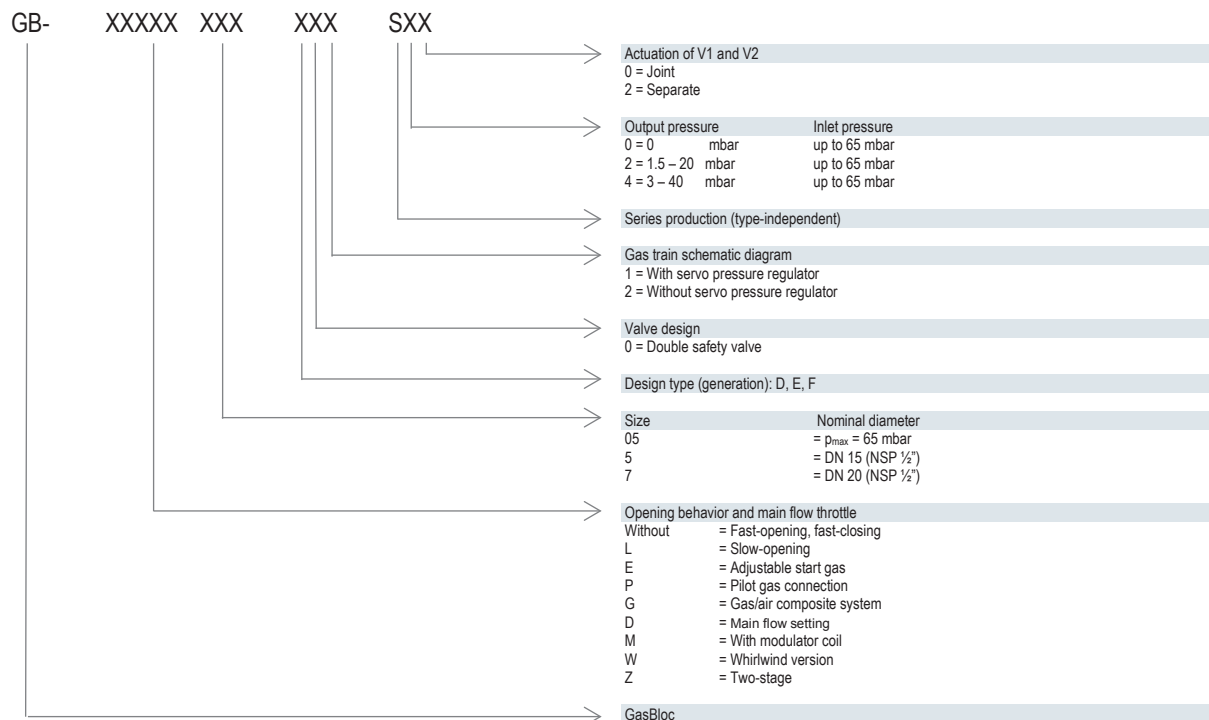
GB-GD 055 E01 Gas/air ratio system
 GB-ND 055 E01 Zero pressure regulator

Combinations

Product	Servo-pressure controller	Valve class (acc. to EN 161) V1	Valve class (acc. to EN 161) V2	Gas-air regulator 1:1	Zero-pressure regulator	Main flow throttle	Offset correction	Fine-mesh strainer
GB-ND 055 E01	●	B	C	●	●	●	●	●

Key
 ● Standard
 ○ Optional
 - Not available

GasBloc type key



Description of main components

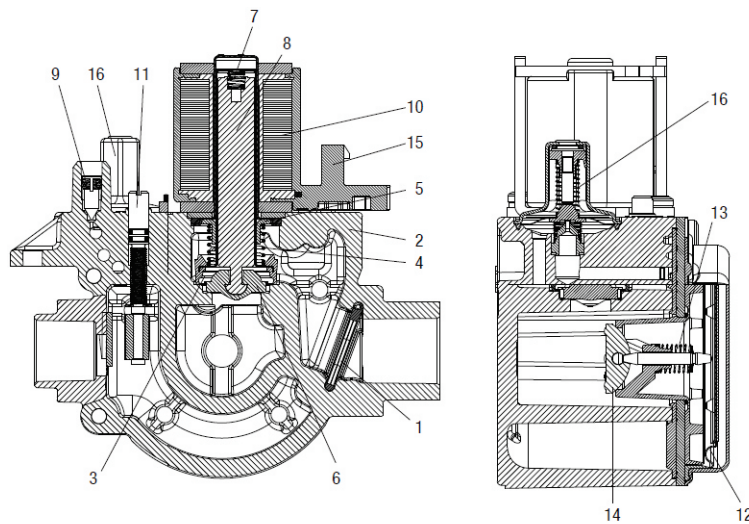
- **Pressure regulator:** The servo regulator provides regulates pressure fluctuations in the mains supply. This ensures a constant air flow and constant nozzle pressure. The zero pressure valve GB-ND regulates the injector pressure at the valve outlet dependent on the generated suction pressure towards zero.
- **Safety valves:** As per EN161, Class B/C
- **Dirt trap:** Fine-mesh strainer to protect the fitting against particles and other dirt > 125 µm
- **Safety valve operating modes:** The safety valves V1 and V2 are jointly actuated and opened
- **Pressure test nipple:** On inlet and outlet sides

Data sheet

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Functional diagram of GB-ND 055 E01

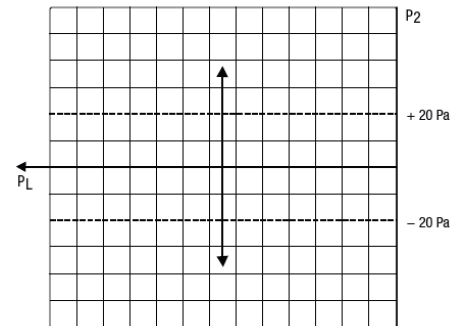


Key

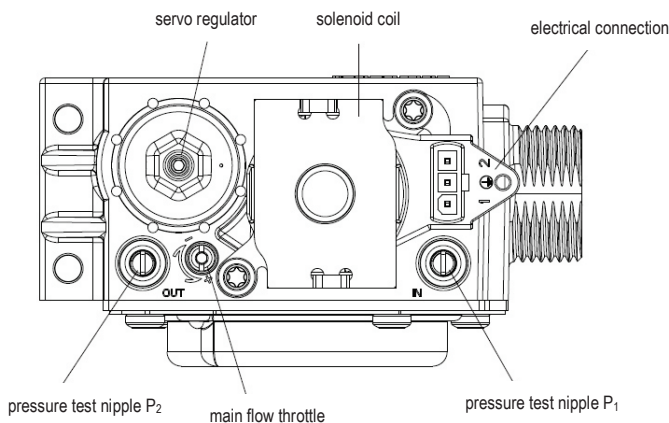
- 1 Dirt trap, strainer
- 2 Housing
- 3 Safety valve V1
- 4 Closing spring V1
- 5 Armature V1
- 6 Safety valve V2
- 7 Closing spring V2
- 8 Armature V2
- 9 Test nipple
- 10 Solenoid
- 11 Main injection throttle
- 12 Working diaphragm
- 13 Return spring
- 14 Operating valve
- 15 Electrical connection
- 16 Servo pressure regulator

Adjustment instructions – offset and gas/air ratio

Offset – by using setting screw on servo regulator
Maximum flow – by using main flow throttle screw



Adjustment range offset correction:
 $\pm 20\text{Pa}$ ($\pm 0.2\text{mbar}$)



Adjusting devices

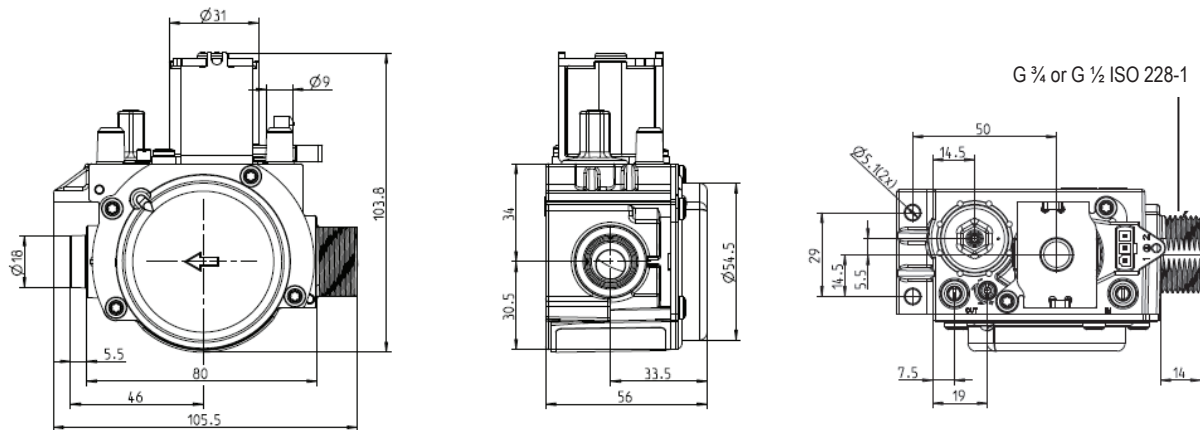
Data sheet

GasBloc Multifunctional gas control

GB-GD 055 E01 Gas/air ratio system
 GB-ND 055 E01 Zero pressure regulator

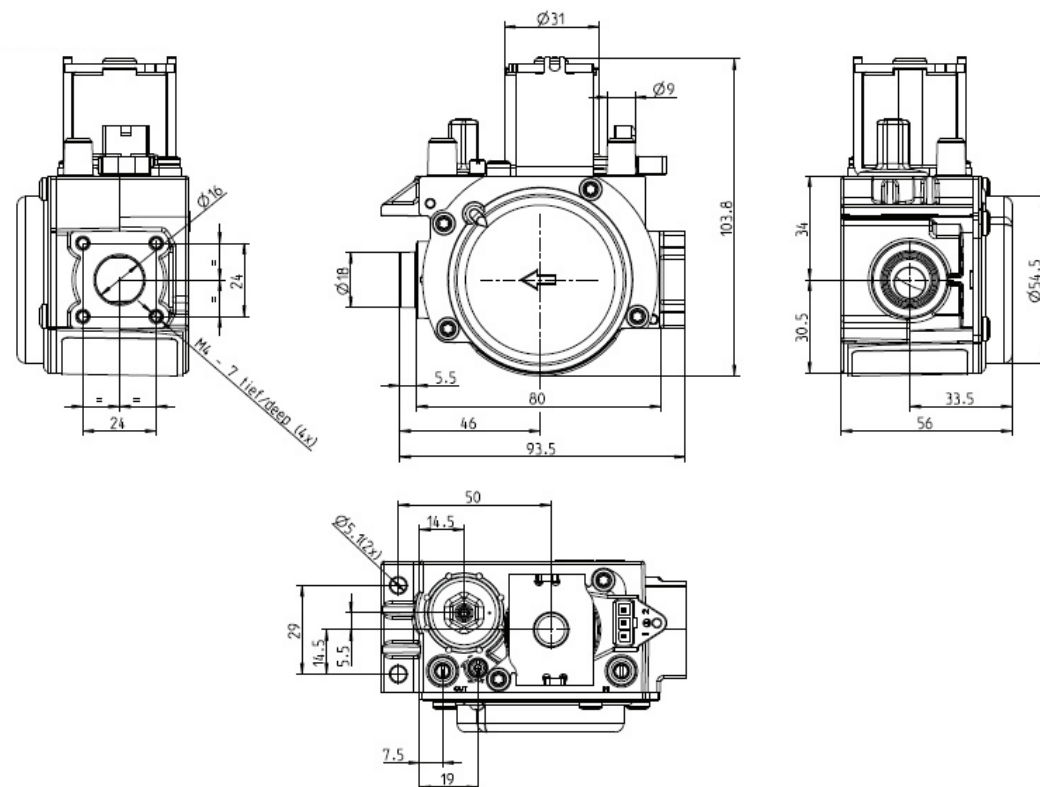
Version with G 3/4 connection (optionally also G 1/2)

Dimensions in mm.



Version with 4 x M4 connection (suitable for NPT 1/2 flange)

Dimensions in mm

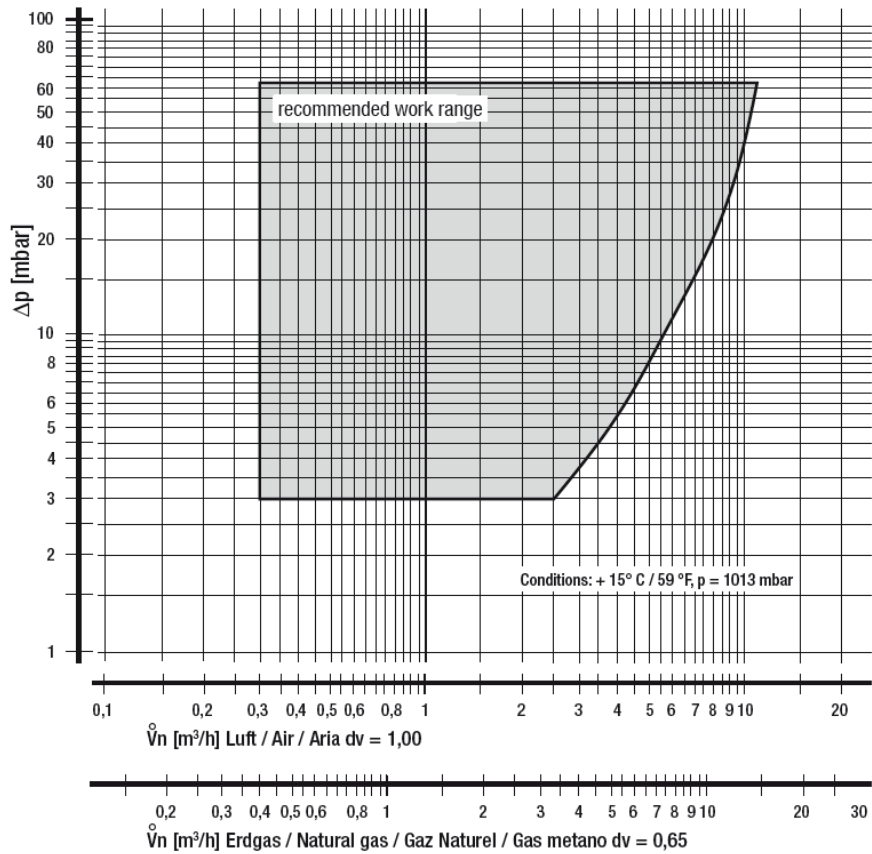


Data sheet

GasBloc Multifunctional gas control

GB-GD 055 E01 Gas/air ratio system
 GB-ND 055 E01 Zero pressure regulator

Capacity curve



Data sheet

GasBloc Multifunctional gas control

GB-GD 055 E01 Gas/air ratio system
 GB-ND 055 E01 Zero pressure regulator

Technical data

Nominal diameter	DN 15
Main gas connection (inlet)	G ¾ and G ½ (DIN EN ISO 228) 4 x M4 holes (suitable for NPT ½ flange)
Outlet	Special ebm-papst quick connector, integrated Optional: G ¾ (DIN EN ISO 228)
Maximum inlet pressure	65 mbar (6.5 kPa)
Nominal flow rate GB-ND 055	3.4 m³/h (air) at Δp 5 mbar
Ambient temperature	-15° C to 70° C with NG or SNG (family 1 and 2) 0° C to 70° C with LPG (family 3)
Designed Lifetime	500,000 cycles or 10 years according EN 126/EN161 (Afecor/VHB) depending on the time temperature profile
Automatic shut-off valves	Class B/C as per EN126
Group	2
Pressure regulator	Class C
Minimum signal pressure	30 Pa at Δp _{offset} = 0 Pa
Maximum signal pressure (with valve closed)	1000 Pa (max. 15 s)
Offset correction	± 0,2 mbar (20 Pa)
Degree of protection	IP 40 in combination with suitable connector
Opening time	Fast opening < 1 s
Closing time	< 1 s
ON time	100 %
Safety module: Voltage/frequency/load	230 V RAC/50/60 Hz/9.8 VA (coil color: red) 120 V RAC/50/60 Hz/9.8 VA (coil color: yellow) 24 V RAC/50/60 Hz/9.8 VA (coil color: gray) 24 V DC/9.8 VA (coil color: blue) 22 V DC/9.7 VA (coil color: green)
Electrical connection	Suitable for connector housing with pitch 4.20 mm (e.g. Stocko STO-FIT System, EH 705-103; Würth WR-MPC4 series, article no. 649 003 013 322)
Installation position	Coil from vertically upright to horizontal. Coil facing downwards not permissible.
Maximum attitude of site	4,000m above sea level (EN 60664-1)
Degree of contamination	3 (EN 60730-1)