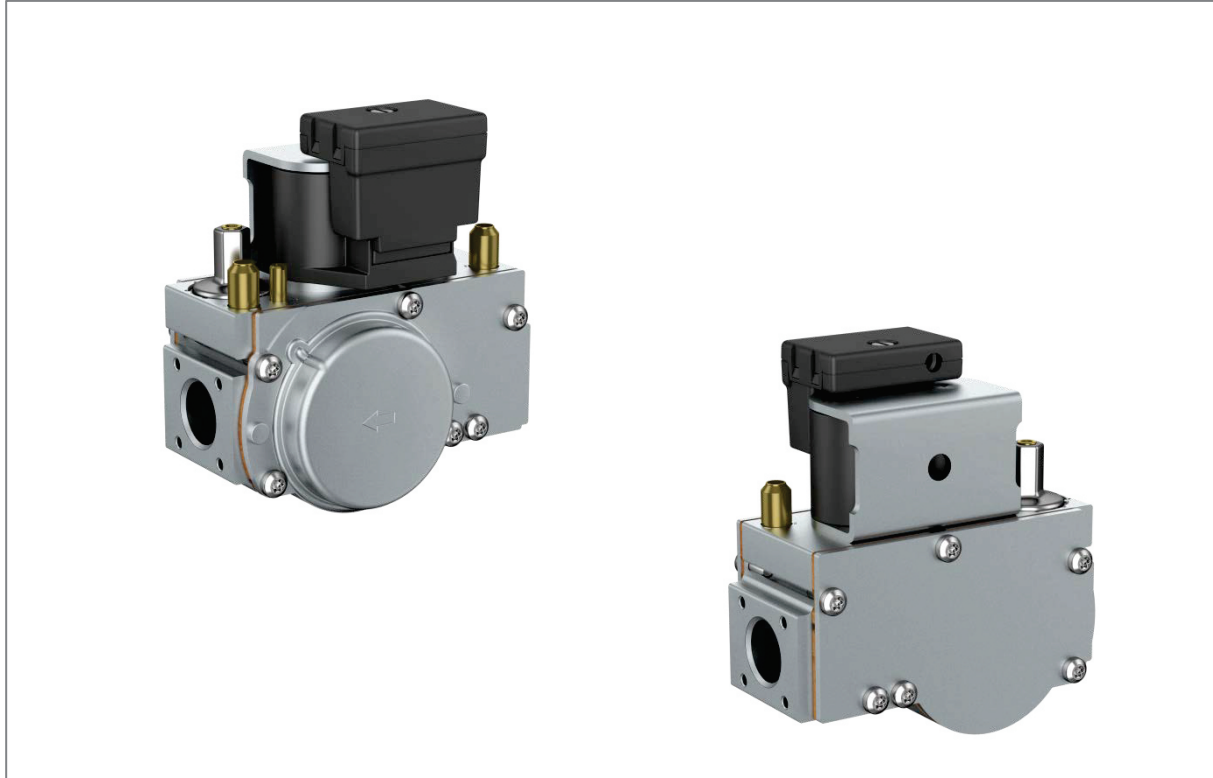


GB-GD 055 D01 for Gas-air composite system
GB-ND 055 D01 Zero pressure regulator



Technology

Multifunctional gas control as per EN 126 for modulating and multi-stage operation.

- Composite pneumatic system with air signal or zero pressure mode
- Offset correction of gas-air ratio at servo-controller
- Limitation of maximum flow by throttle
- Inlet pressure up to max. 65 mbar (6.5 kPa)
- Different device versions possible depending on application

Application

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

Approvals

EU prototype test certificate in accordance with EU gas appliance regulation.

CE-0085 CM 0036
CSA 240 9198

Approvals in other important gas-consuming countries.

GB-GD 055 D01 for Gas-air composite system

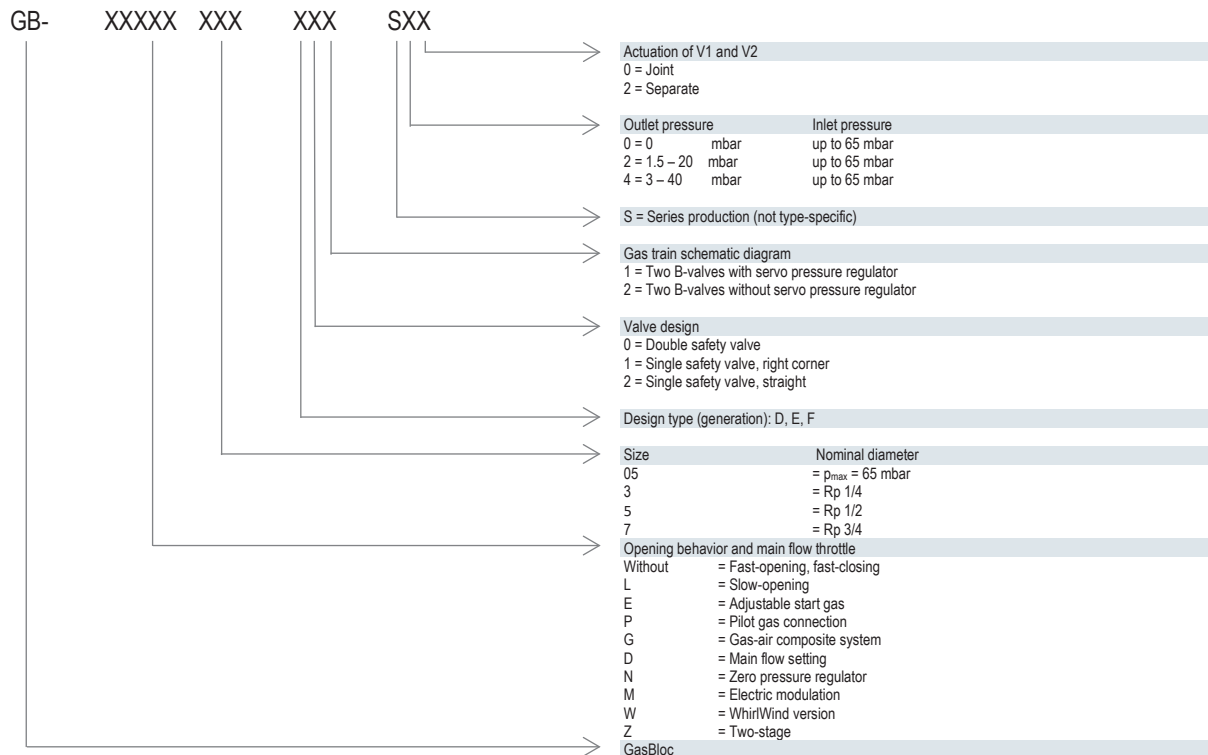
GB-ND 055 D01 Zero pressure regulator

Combinations

Product	Servo pressure regulator	Valve class (acc. to EN 161) V1	Valve class (acc. to EN 161) V2	Gas-air regulator 1:1	Zero pressure regulator	Maximum throttle	Offset correction	Dirt trap	Gas pressure monitor	Socket	MPA 109
GB-GD 055 D01	●	B	B	●	-	●	●	●	○	○	○
GB-ND 055 D01	●	B	B	-	●	●	●	●	○	○	

Key
 ● Standard
 ○ Optional
 - Not available

GasBloc type key



Description of main components

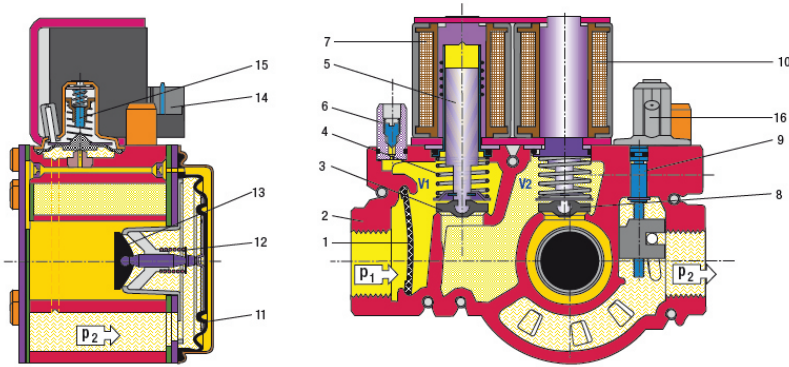
- Pressure regulator:** The pressure regulator with servo-controller provides compensation for pressure fluctuations in the supply network. This ensures a uniform air flow with constant nozzle pressure. With the gas-air composite system valve GB-GD 055, the nozzle pressure follows the signal pressure applied to the servo-diaphragm in a ratio of 1:1. The zero pressure valve GB-ND regulates the nozzle pressure at the valve outlet to zero depending on the vacuum generated.
- Safety valves:** In accordance with EN161, class B. DC coils, protected against voltage peaks
- Safety valve operating modes:** Safety valves V1 and V2 can be actuated and opened jointly or separately.
- Dirt trap:** Fine-meshed strainer to protect the fitting.
- Gas pressure monitor (optional):** Monitors the inlet-side gas pressure to guard against gas failure. The pressure monitor can be pre-set to suit customer requirements and sealed.
- Pressure test nipple:** On inlet and outlet side

Data sheet

GasBloc Multifunctional gas control

GB-GD 055 D01 for Gas-air composite system
 GB-ND 055 D01 Zero pressure regulator

Block diagram of GB-GD 055 D01/GB-ND 055 D01



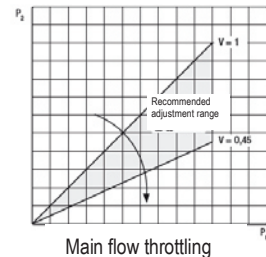
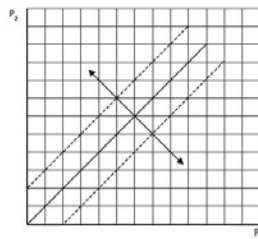
Key

- | | | | | | | | |
|---|---------------------|---|-----------------|----|--------------------|----|------------------------------------|
| 1 | Dirt trap, strainer | 5 | Armature V1 | 9 | Main flow throttle | 13 | Operating valve |
| 2 | Housing | 6 | Test nipple | 10 | Solenoid V2 | 14 | Electrical hookup |
| 3 | Safety valve V1 | 7 | Solenoid V1 | 11 | Working diaphragm | 15 | Servo pressure regulator |
| 4 | Closing spring V1 | 8 | Safety valve V2 | 12 | Return spring | 16 | Connection for signal (GB-GD only) |

Setting instructions – offset and gas-air ratio

Setting

- Offset correction by way of adjusting screw at servo-controller
- Maximum flow by way of throttling screw

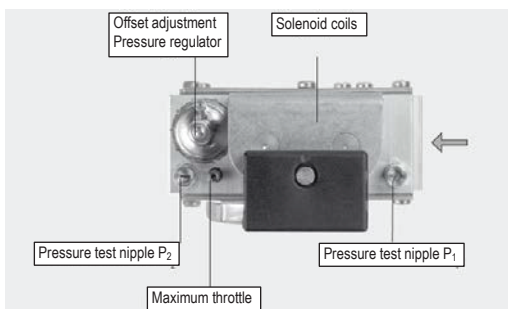


GB-ND adjustment range (zero pressure)

Offset correction ± 20 Pa (± 0.2 mbar)

GB-GD adjustment range (gas-air ratio)

Offset correction ± 20 Pa (± 0.2 mbar)



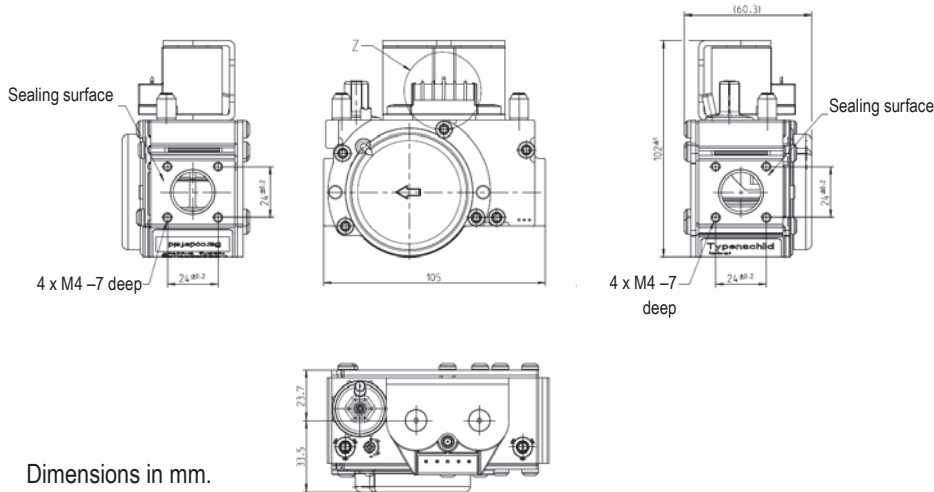
Adjusting device

Data sheet

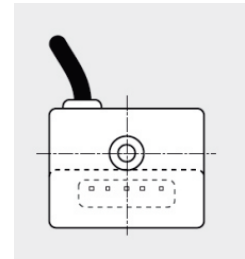
GasBloc Multifunctional gas control

GB-GD 055 D01 for Gas-air composite system
 GB-ND 055 D01 Zero pressure regulator

Engineering drawing

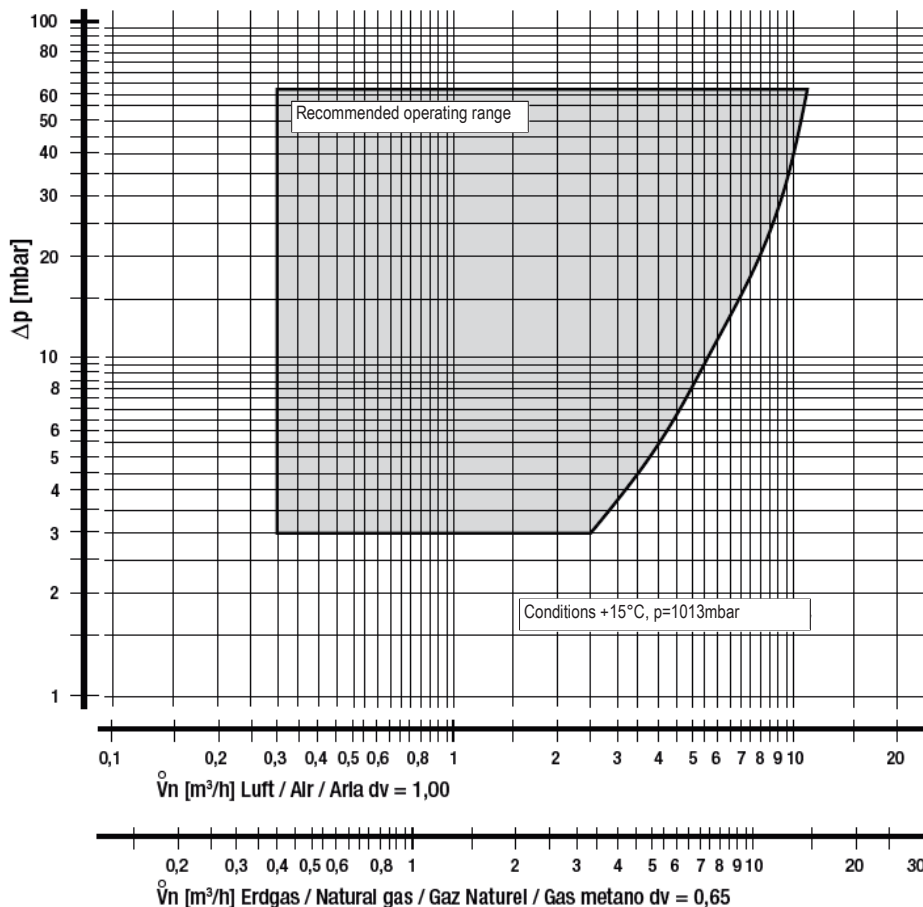


Dimensions in mm.



Electrical hookup:
 Standard:
 Molex Crimp 3001 system
 Optional:
 Box with cable connection IP40

Air flow/pressure gradient curve (GB-...055 D01 – pneumatic in accordance with DIN EN 126)



Data sheet

GasBloc Multifunctional gas control

GB-GD 055 D01 for Gas-air composite system
 GB-ND 055 D01 Zero pressure regulator

Technical data

Nominal diameter	DN 15
Main gas connection (inlet)	Rp 1/2 ISO 7/1 G 3/4 DIN ISO 228 external Rp 1/2 ISO 7/1 internal
Flanges with pipe thread	Rp 1/2 ISO 7/1 internal G 3/4 DIN ISO 228 external
Max. inlet pressure	65 mbar (6.5 kPa)
Nominal flow rate GB-GD 055	3.3 m ³ /h (air) with Δp 5 mbar (0.5 kPa), regulated
Nominal flow rate GB-ND 055	7.2 m ³ /h (air) with Δp 30 mbar (3.0 kPa), regulated
Ambient temperature range	-15°C to +70°C for town or natural gas (family 1 and 2) 0°C to +70°C for LPG (family 3)
Design lifetime	500,000 cycles or 10 years in accordance with EN 126/EN161 (Afecor/VHB) depending on the time/temperature profile
Automatic shut-off valves	Class B in accordance with EN 126
Group	2
Pressure regulator	Class C
Proportional adjustment range V	$V = p_{\text{Gas}} - p_{\text{Air}} = 0.45-1$
Minimum signal pressure	0.3 mbar with $\Delta p_{\text{offset}} = 0$ Pa
Offset correction	± 0.2 mbar (0.02 kPa)
Degree of protection	IP 40
Opening time	Fast-opening < 1 s
Closing time	< 1 s
ON time	100%
Voltage / frequency / activation	230 V RAC / 50/60 Hz / simultaneous (coil color: red) 230 V RAC / 50/60 Hz / separate (coil color: black) 120 V RAC / 50/60 Hz / simultaneous (coil color: yellow) 120 V RAC / 50/60 Hz / separate (coil color: orange) 24 V RAC / 50/60 Hz / simultaneous (coil color: grey) 24 V RAC / 50/60 Hz / separate (coil color: blue) 24 V DC / simultaneous (coil color: green)
Coil load (24 V, 230 V)	2 x 5.5 VA
Electrical hookup	Coil connection Molex system or connection with integrated cable
Optional equipment	Electrical connections in RAST 5 Combustion controller MPA 109x Gas pressure monitor GW...A5
Installation position	Coil from vertically upright to horizontal. Coil facing downwards not permissible
Maximum installation elevation	2,000 m above sea level (EN 60664-1)
Pollution degree	2 (EN 60730-1)