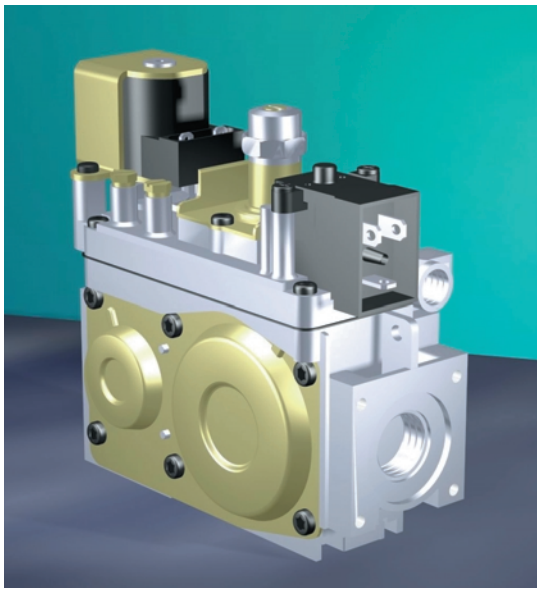
SIT Group

822 NOVAMIX

MULTIFUNCTIONAL GAS CONTROL



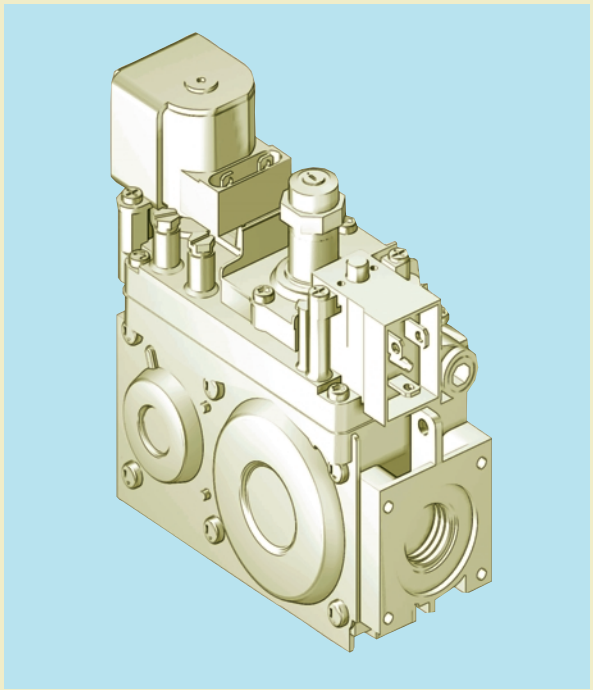
GAS FLOW RATE ADJUSTMENT
AS A FUNCTION OF THE AIR FLOW
GAS/AIR RATIO 1:1

DOUBLE AUTOMATIC SOLENOID SHUT-OFF VALVE

SERVO-CONTROLLED PRESSURE REGULATOR

PIN 63AP7060/2

AUTOMATIC MULTIFUNCTIONAL CONTROL



822 NOVAMIX is suitable for high-efficiency gas appliances with fan in the combustion circuit.

Multifunctional control with two near-silent, automatic shut-off valves and with pneumatic device for gas output flow control as a function of the air flow (gas/air ratio 1:1). Servo-controlled pressure regulator.

MAIN FEATURES

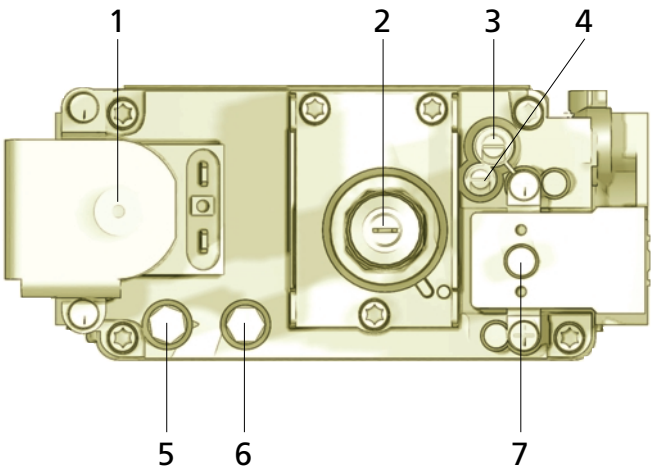
Two near-silent automatic shut-off valves:
-EV1 in class B (on request class A)
-EV2 in class D (on request class C)
Pneumatic device for the proportional adjustment of the gas flow output as a function of the air flow: gas/air ratio 1:1.
Servo-controlled pressure regulator.
Offset adjustment device.
Pilot outlet with gas flow restrictor.
Inlet and pilot filters.
Inlet pressure test point..
Output pressure test point (only on versions without ratio adjustment).
Threaded gas inlet and outlet with provision for flange connection.
Version with lateral outlet for flanged connection only.
Gas/air ratio adjuster (on request; not available on version with lateral outlet).

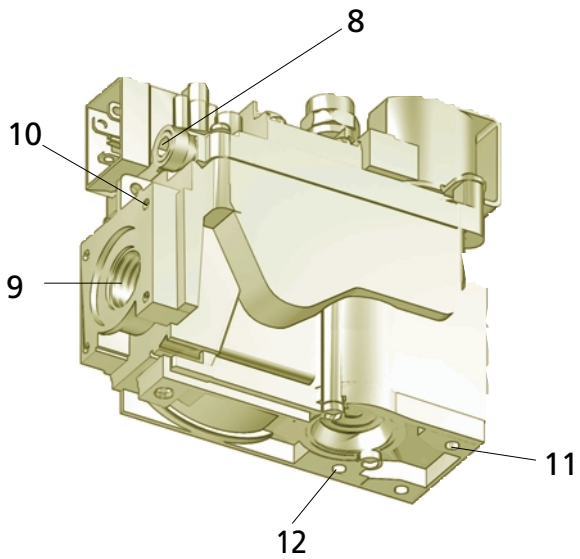
Data refer to EN 126

DESCRIPTION

1 Shut-off solenoid valve EV1
2 Offset adjustment screw
3 Pilot gas flow restrictor
4 Gas/air adjustment screw (on requeste)
5 Inlet pressure test point
6 Outlet pressure test point*
7 Shut-off solenoid valve EV2
8 Pilot outlet
9 Main gas outlet
10 Holes (M5) for fixing flanges
11 Supplementary valve body fixing points
12 Air in signal

* In versions with ratio adjusters, the pressure measured at A does not correspond to the outlet pressure.





TECHNICAL DATA

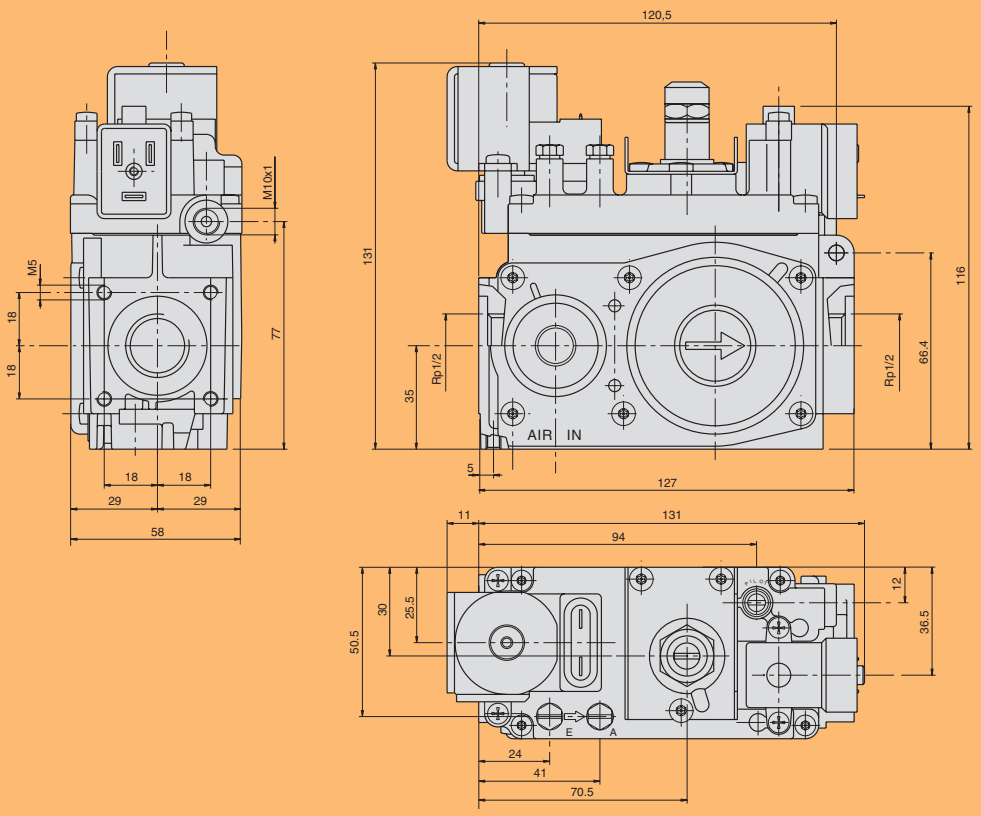
- Gas connections: Rp 1/2 ISO 7
- Installation position: any position
- Nominal gas/air pressure ratio: 1:1
- Gas families: I, II and III
- Maximum gas inlet pressure: 60 mbar
- Maximum air in signal pressure: 12 mbar
- Setting range:
  - of the offset value: ± 2 mbar
  - of the outlet pressure: 0.5...12 mbar
- Working temperature range: 0 ... 60°C
- Pressure regulator: Class B
- Automatic solenoid valve EV1 Class B (on request Class A)
- Automatic solenoid valve EV2 Class D (on request Class C)

ELECTRICAL DATA

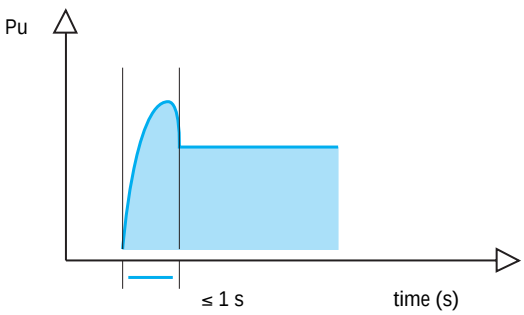
AUTOMATIC VALVES		*EV1 Class B*	*EV2 Class D*
Voltage (AC)	230 V 50 Hz	Consumption (mA) 45	Consumption (mA) 23
	220 V 60 Hz	45	25
	24 V 50 Hz	450	210
	24 V 60 Hz	450	220
Electrical protection rating		*IP54 with 002 type connectors and fixing screw code 0.960.125*	*IP54 with 160 type connectors and screw and gasket code 0.960.104*

Data refer to EN 126

DIMENSIONS



TIME CONSTANT



The outlet pressure (Pu) reaches the working value within one second in correspondence with a pressure variation step of the control signal (Pa).

OPERATION

Reading the inlet pressure

The inlet pressure can be read at the pressure test point E with or without both automatic shut-off valves energized.

Pilot burner ignition

When the automatic shut-off valve EV1 is powered, it permits the gas to supply the pilot burner outlet (applications with intermittent pilot) after passing through the inlet filter, the pilot filter and the pilot flow rate restrictor (PILOT).

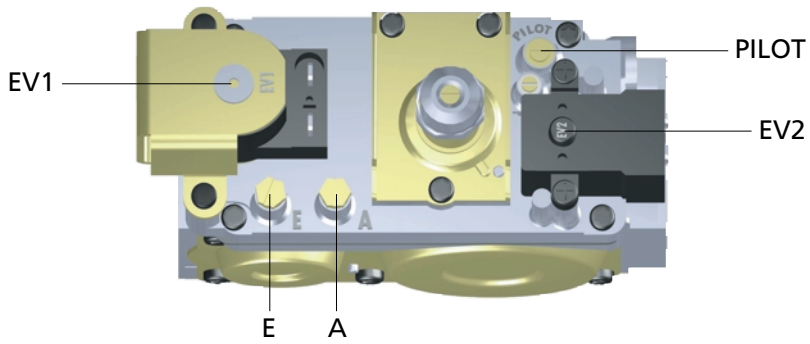
Main burner ignition

When both automatic valves are energized the gas passage to the main burner is opened.

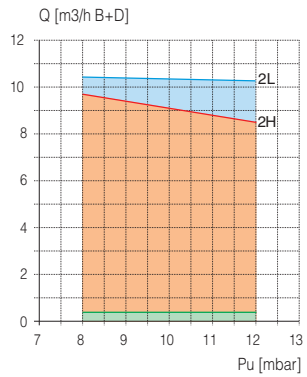
Outlet pressure

The gas outlet pressure is determined by the air-in signal pressure in a ratio of 1:1. The outlet pressure can be measured at test point A*.

* In versions with ratio adjusters, the pressure measured at A does not correspond to the outlet pressure.



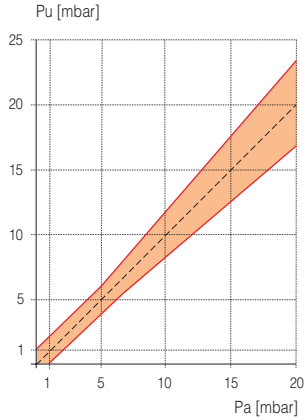
REGULATED FLOW RATE



Gas family: II

Gas type	Inlet pressure range (mbar)		
	Nominal	Max.	Min.
2H	20	25	17
2L	25	30	20
Outlet pressure tolerance	+10% ...-10%		

TOLERANCE



Gas pressure tolerance (Pu) as a function of the gas-in signal pressure (Pa).

Main gas connection

The connection is made using gas pipes with Rp 1/2 ISO 7 threading. Torque: 25 Nm. If, alternatively, flanges (available on request) are used, first screw the pipes onto the flanges and then the flanges to the valve. Recommended torque for the flange fixing screws: 3 Nm.

Connection to the pilot burner

Pipes with a 4 mm, 6 mm or 1/4 Ø can be used. Use a nut and olive of appropriate dimensions. Tighten to 7 Nm torque.

CAUTION: if the pilot outlet is not used, seal it using the accessory, code 0.972.041. Torque: 7 Nm.

Connection to the pneumatic control signal

Fix the hose nipple 0.958.057 to the threaded outlet on the bottom of the multifunctional control. Torque: 1 Nm. Connect the control signal to the nipple using a 6 mm hose (see figure).

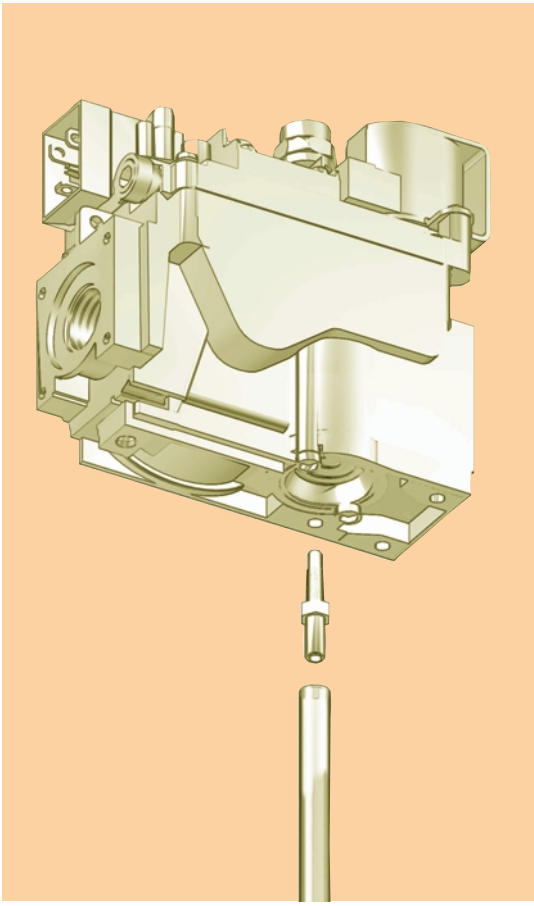
Electrical connections

Use the special connectors for the connection of the mains-powered versions. To ensure that the valve is connected to the earth circuit of the appliance it is necessary for the power connector, which includes the earth terminal, to be used at all times and secured by means of the associated screw.

The 24Vac versions must be powered by means of an isolating transformer (with a very low safety voltage to EN 60742). Use terminals AMP 6.3 x 0.8 mm, DIN 46244 for the connection. Carry out the connections in accordance with the rules for the appliance.

The electrical safety cut-off devices (for example, the flame supervision device, limit thermostat, and the like) must cut off the power supply to both safety solenoid valves simulta neously.

CAUTION: after making the connections, check gas tightness and electrical insulation.



Connection to the pneumatic control signal

Measurement of the inlet and outlet pressure

The inlet and outlet pressures of the gas can be measured by unscrewing the test point* sealing screws provided.
Replace screws with 2.5 Nm torque.

Offset adjustment

With a preset value of the control pressure (Pa), adjust the outlet pressure so that the effective adjustment corresponds the requested theoretical value (1:1). Screw in the adjustment screw (OS) to increase the outlet pressure; screw it out to reduce.

Gas/air ratio adjustment

(versions with ratio adjuster)
With the air-in control signal at the maximum value, screw in the screw (A) to reduce the pressure; screw it out to increase it to the requested value.

Gas flow-rate adjustment to the pilot

(applications with intermittent pilot burner)
Screw in the PILOT screw to reduce the flow or unscrew it to increase flow.

Overriding gas flow-rate adjustment to the pilot

(applications with intermittent pilot burner)
It is sufficient to screw the PILOT screw in flush and then screw it out two complete turns.

Changing the gas family or group

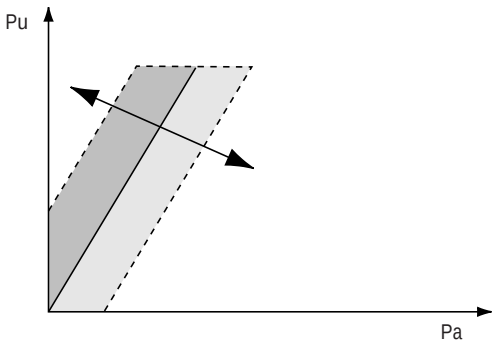
Check suitability for use with the gas family or group of interest.
Following the instructions given above, adjust the outlet pressure to the values indicated in the instruction booklet of the appliance.

* In versions with ratio adjusters, the pressure measured at A does not correspond to the outlet pressure.

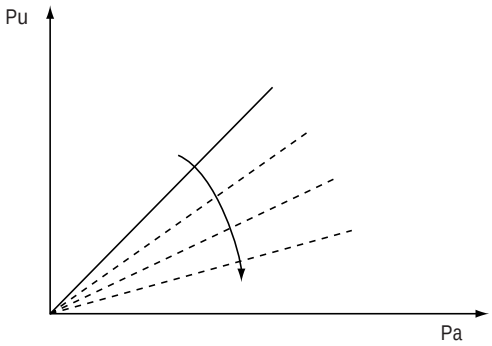
CAUTION:

Check tightness and efficiency and seal the adjustment devices.

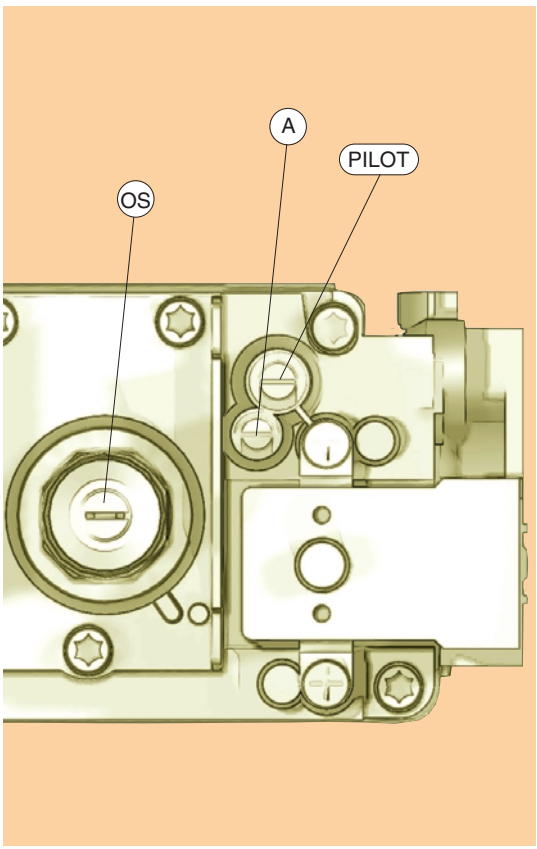
Implement the provisions in the Use and Maintenance manual - code 9.956.823 - for installation, adjustment and use



Offset adjustment



Gas/air ratio adjustment



Setting and adjustments

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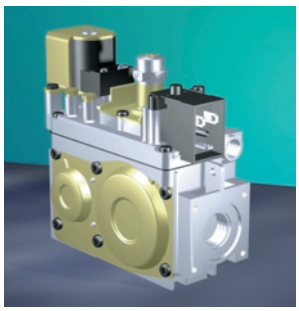

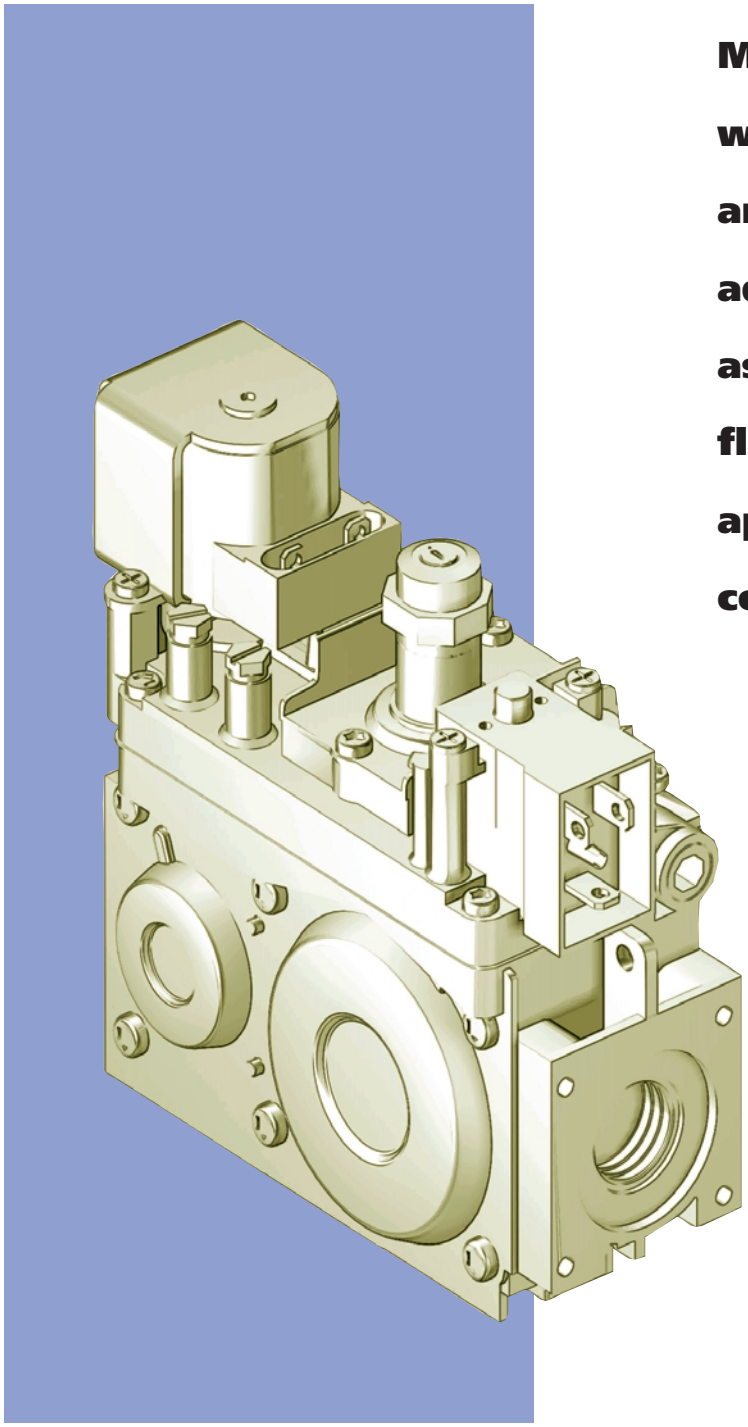

Multifunctional control with double solenoid valve and pneumatic device for adjustment of the gas flow as a function of the air flow, for high-efficiency appliances with ventilated combustion circuit.

GAS/AIR RATIO 1:1

9.955.971 R00 GRAPHIC DESIGN BY START - PD - ITALY