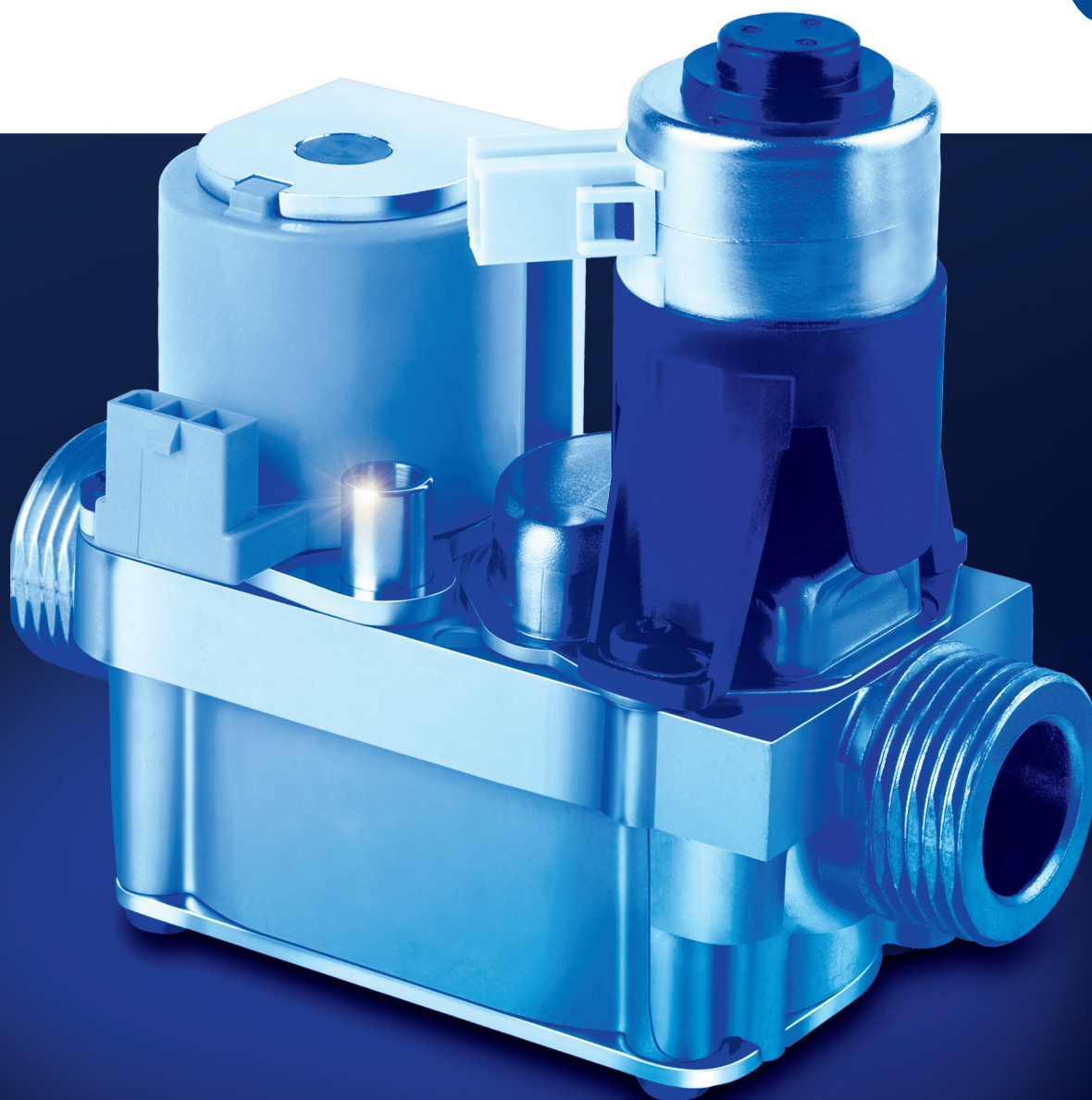


# SIT 877 ELEKTRA

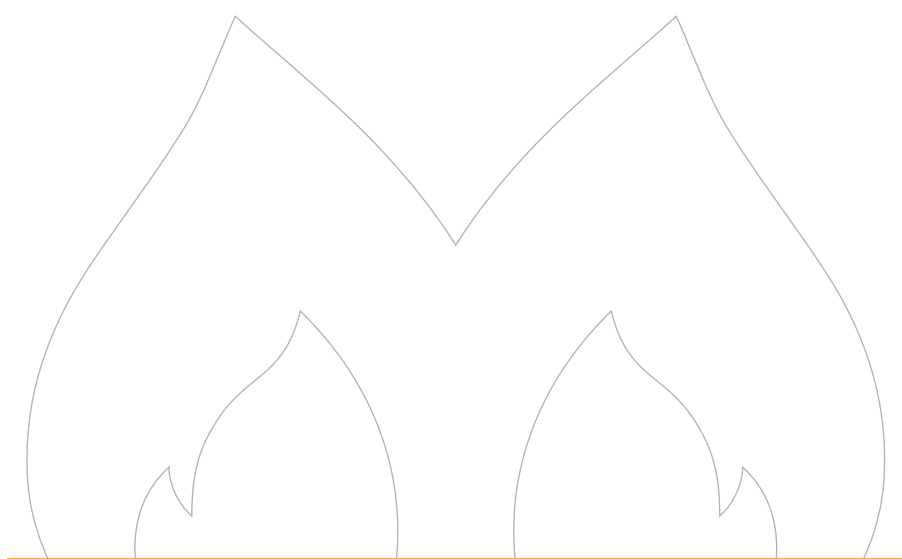
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**M**ULTIFUNCTIONAL CONTROL  
FOR GAS BURNING APPLIANCES

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SIT 877 ELEKTRA





## Multifunctional control for gas burning appliances

### Application

- Gas appliances using premix burner with Elektra Combustion Management System and with automatic ignition
- Central heating boilers
- Combi boilers
- Instantaneous water heaters

### Main features

- Two automatic shut-off valves
- Electrical modulator with low hysteresis
- High modulation range up to 1:50

### Normative reference

EN 126 - Multifunctional controls for gas burning appliances

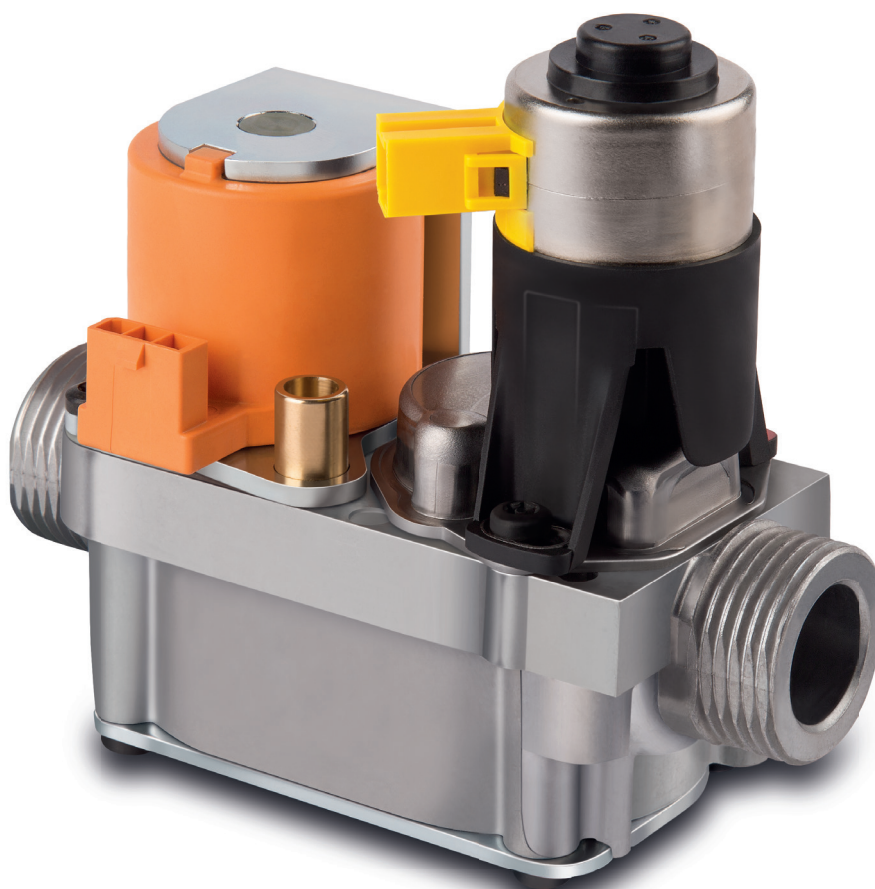
## Functional Description

877 ELEKTRA is a multifunctional gas control with two direct acting automatic shut-off valves, a direct compensated pressure regulator and a modulator driven by linear actuator operated by a stepper motor. The result is a modulating characteristic with low hysteresis, the multifunctional control is therefore particularly suitable to be used in electronic gas-air ratio control systems.

When the shut-off valves are de-energized, it is only possible to measure the inlet pressure on the inlet pressure test point ( $P_{IN}$ ).

When the coil (EV) is energized the first valve (V1) and the second valve (V2) open and allow the gas to flow through the pressure regulator (PR).

The gas flow rate is function of the number of motor steps.





## DESCRIPTION

1. ON-OFF solenoid EV1 and EV2 terminals
2. Stepper motor terminals
3. Inlet pressure test point
4. Gas inlet
5. Gas outlet
6. Pressure regulator calibration screw

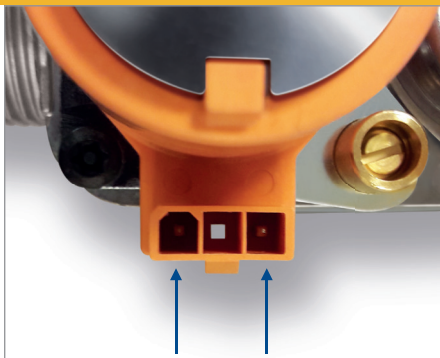
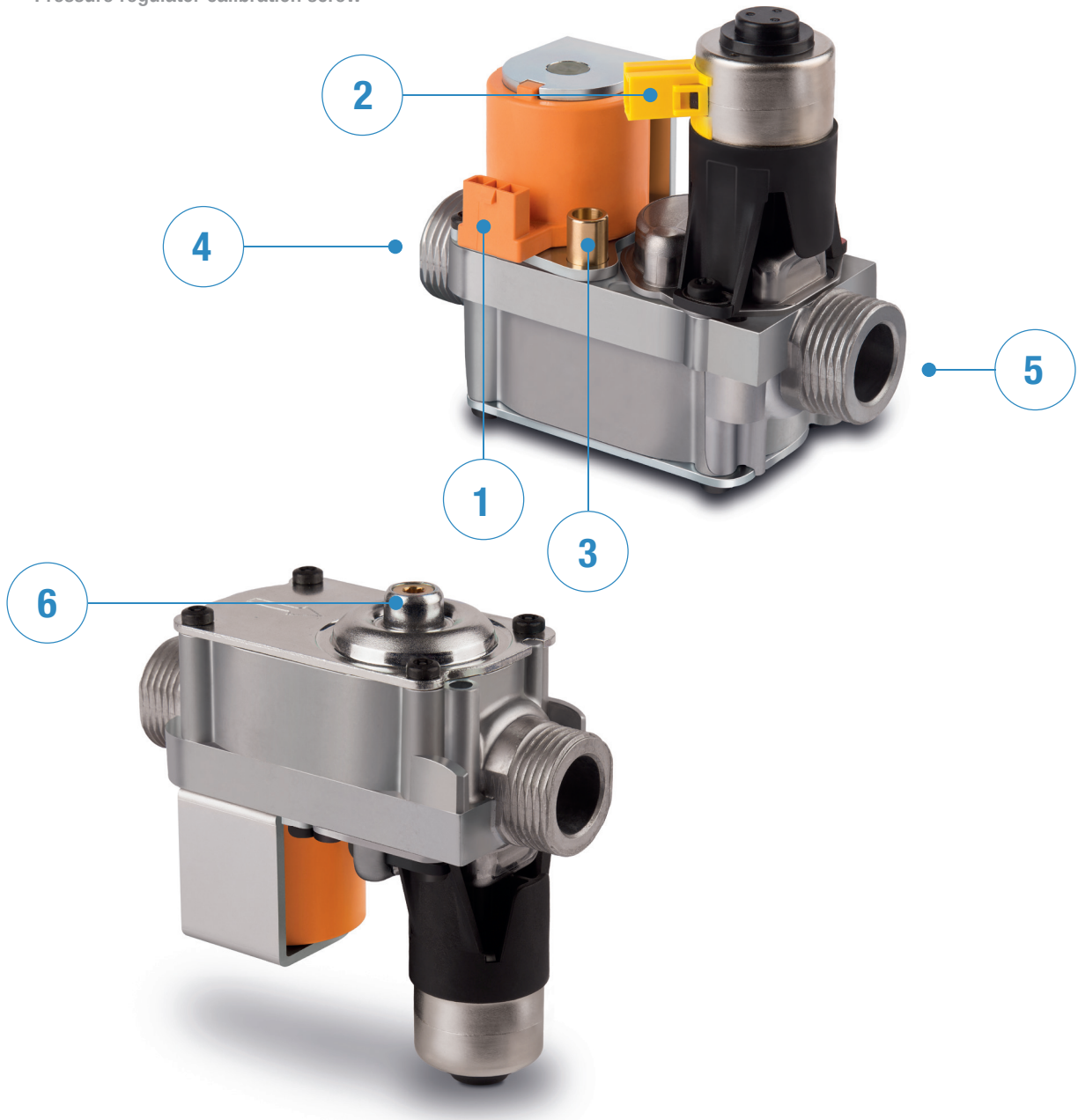


Figure 1 - EV electrical connection

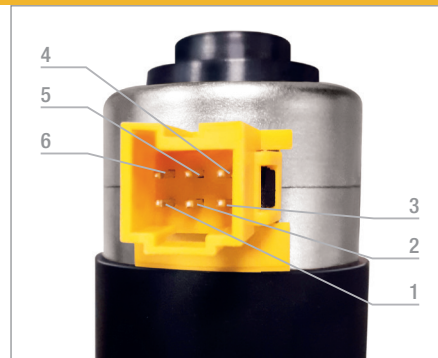


Figure 2 - Motor electrical connection

## Construction Characteristics

- Aluminum body
- Inline inlet and outlet
- Two automatic shut-off gas valves
- Inlet filter
- Inlet pressure test point
- Torsion and bending resistance group 1 according to EN 126

## Use Specification

- Mounting position \_\_\_\_\_ any position except coil upside-down
- Gas families \_\_\_\_\_ 2<sup>nd</sup> and 3<sup>rd</sup>
- Ambient temperature range \_\_\_\_\_ -15 to +70 °C
- Maximum inlet pressure \_\_\_\_\_ 60 mbar

## Mechanical Connections

- Gas inlet and outlet \_\_\_\_\_ G 3/4 ISO 228
- Pressure test point \_\_\_\_\_ Ø 9 mm

## Electrical Connections

- Automatic shut-off valves \_\_\_\_\_ Male connector Molex minifit 3 pin, see Figure 1
- Stepper motor \_\_\_\_\_ Male connector compatible to cable connector Stocko STO-GRID. MH 790-06-001-118, see Figure 2

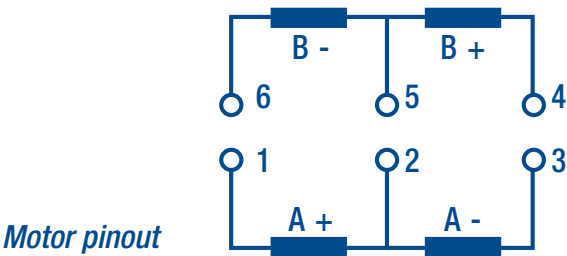
## Electrical Data

### Automatic shut-off valves

- 22 VDC Pick & Hold
- 24 VDC
- 230 VRAC

### Stepper motor

- Unipolar 24 VDC



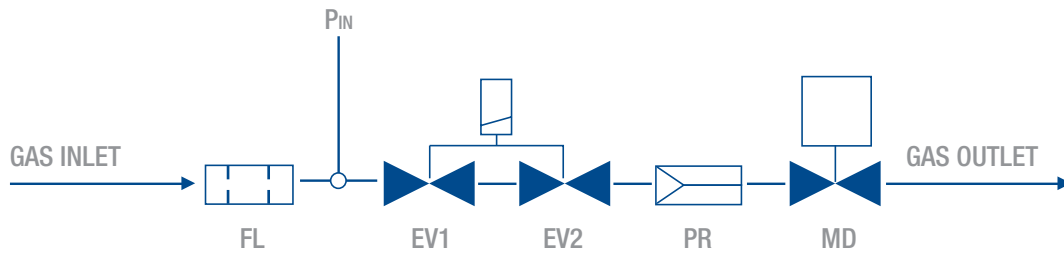
PIN	1	2	3	4	5	6
PHASE	A +	A COM	A -	B +	B COM	B -



## FUNCTIONAL DESCRIPTION

### Main Features

- Two automatic shut-off valves, silent operation (EV1, EV2)
- Pressure regulator (PR)
- Modulating device driven by a stepper actuator (MD)
- Inlet pressure test point ( $P_{IN}$ )
- Inlet filter (FL)



## FUNCTIONS

### Shut-Off

- First automatic shut-off valve (EV1) class C according to EN 126
- Second automatic shut-off valve (EV2) class C according to EN 126

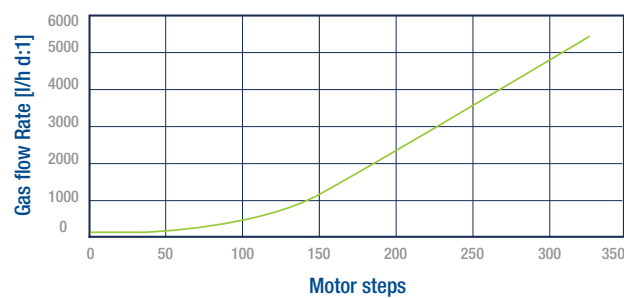
### Modulation

- Continuous outlet flow rate modulation
- Modulating range 100 – 5000 l/h (d=1) @ 20mbar inlet pressure

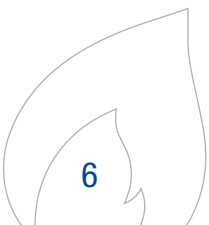
### Pressure Regulation

Direct compensated pressure regulator class C according to EN 126

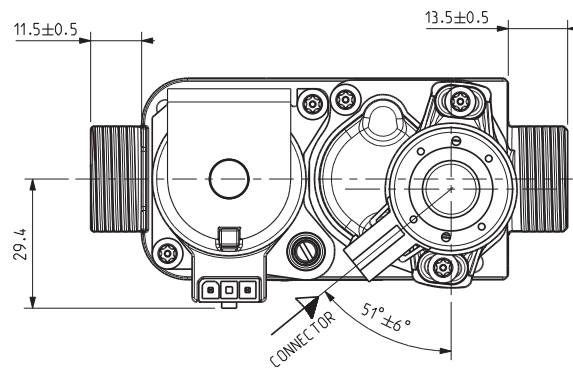
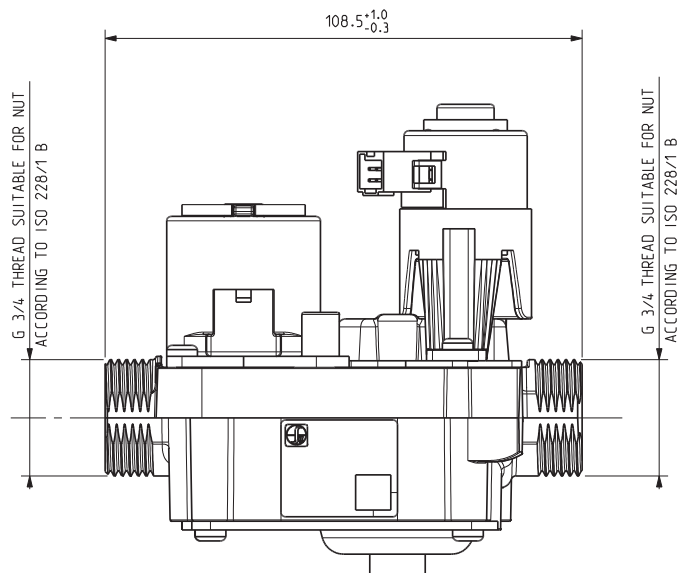
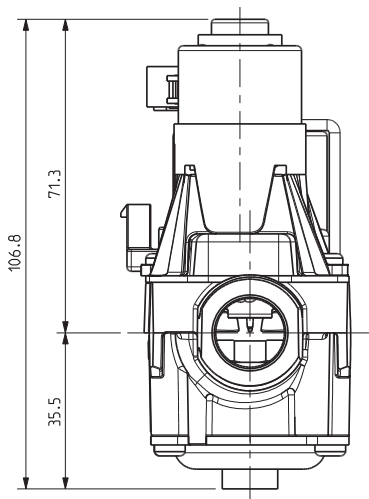
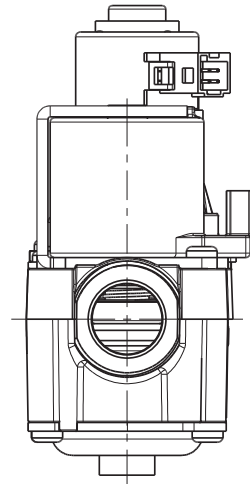
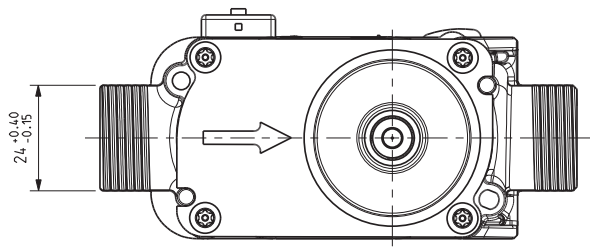
The stepper motor acts the flow adjuster in accordance with the chart below



Flow rate curve with  $P_{in} = 20\text{mbar}$  @  $20^{\circ}\text{C}$









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