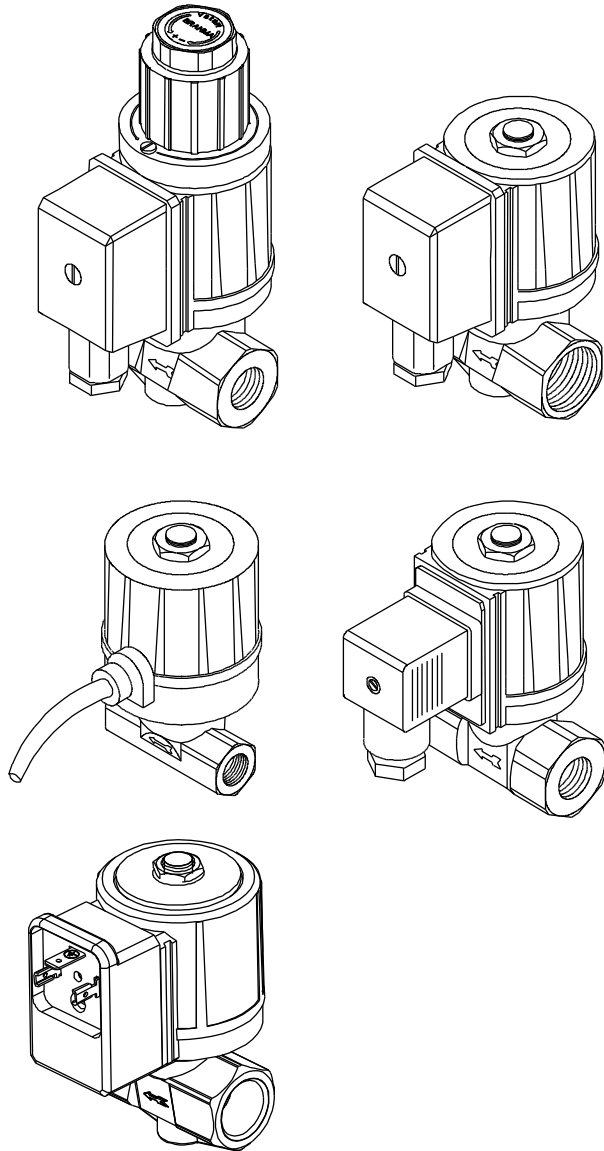


## E6G\* ... SERIES

### SOLENOID GAS VALVES WITH 1/4", 3/8" AND 1/2" CONNECTIONS AND OPERATING PRESSURE UP TO 1bar



#### GENERAL DESCRIPTION

This series of solenoid valves is of normally closed type, suitable for civil and industrial applications, supplied with alternate or direct current. These valves are divided into two groups: with 8 mm or 10 mm orifice.

The valves marked with "S" or "L" after their type reference have a coil operating in direct current, which has enabled to make their actions as noiseless as possible.

It is possible to have valves provided with upstream or downstream pressure test point (excluding the ones with G1/4" connection) and, for 10 mm orifice versions only, valves equipped with hydraulic brake unit, enabling slow opening; in this case it is also possible to have an adjustable quick opening initial flow.

The valves of this series, conforming to EN161, have a CE type Certificate (CE Reg. N° 63AQ0626) in accordance to the European Directives 90/396 and 93/68.

- **EC-** type certification in accordance with the new European Gas Appliances Regulation (EU) 2016/426 (GAR);
- conformity to **EC** Low-voltage directive 2014/35/EU
- **AGA-** type certification (Certificate no. 4314 rev. 10) in accordance to standard requirements AS 4629-2005 (Incorporating Amdt 2);

#### TECHNICAL FEATURES

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| Gas type:              | 1st family, 2nd family,<br>3rd family                                |
| Class:                 | A<br>B (for E6G*PC version only)                                     |
| Group:                 | 2                                                                    |
| Supply voltage (1):    | 230 Vac / 50-60 Hz<br>110 Vac / 50-60 Hz<br>24 Vdc (for E6G*PC only) |
| Operating temperature: | -10°C / +60°C<br>-10°C / +125°C (for E6G*PC only)                    |
| Closing time:          | ≤ 1s                                                                 |
| Opening time:          | ≤ 1s (for quick opening versions only)                               |
| Mounting:              | vertical and horizontal                                              |
| Body:                  | die-cast brass                                                       |

(1) Versions with different supply voltage are available.

## DIRECTIONS FOR INSTALLATION AND MAINTENANCE

- This valve is a safety appliance and should not be modified. The manufacturer's responsibility and guarantee are invalidated in case the device is tampered with by the user.
  - The applicable national regulation and European standards (Ex. EN 60335-1 and EN 60335-2-102) related to the electrical safety must be respected;
  - Assemble the valve to the installation so that the arrow on the valve body has the same direction as the fuel flow.
  - During the assembly of the valve to the installation piping, avoid twisting on the sheath and always use an hexagonal wrench to be fitted to the valve body.
  - Make sure that no foreign matters have entered the valve body.
  - Make sure that the max. fuel input pressure never exceeds the value appearing on the label.
  - All operations (installation, maintenance, etc.) must be carried out by a qualified technician.
  - Before any connection operation, completely isolate the system from power supply (multi-pole disconnection). Place the system safely to avoid accidental switch-on and make sure there is no voltage. If the system is not switched off, there is a risk of electric shock.
  - During and after any operation (installation, maintenance, etc.), make sure that the type and code are the ones provided, check the correct functioning and the internal and external thickness of the valve.
  - In the event of a fall or impact, the valves must not be started, as safety functions may be compromised even if no damage is visible to the outside.
  - Faulty valves or damaged must be unplugged from power supply and cannot be used.
  - The valve has a designed lifetime\* based on the endurance tests in the standard EN 161. A summary of the conditions has been published by the European Control Manufacturers Association (Afecon) ([www.afecor.org](http://www.afecor.org)). The designed lifetime is based on use of the valve according to the manufacturer's technical notes. After reaching the designed lifetime in terms of the number of burner startup cycles, or the respective time of usage, the valve has to be replaced by authorized personnel.
- \* The designed lifetime is not the warranty time specified in the Terms of Delivery.

## DIRECTIONS FOR E6G\*L... VALVES ADJUSTMENT

### Flow adjustment

To adjust the gas flow, remove one of the two screws used to fasten the hydraulic brake unit (the non-enamelled one, marked with 4 in Fig.1) and rotate the whole brake unit clockwise to reduce the flow or in the opposite direction to increase it.

### Opening time adjustment

After removing the top protection by rotating it anticlockwise, act on the adjustment screw marked with 1 in Fig.1; by rotating it clockwise, the opening time becomes longer, by rotating it in the opposite direction, the opening time becomes shorter.

### Quick opening initial flow adjustment

After removing the top protection by rotating it anticlockwise, if you rotate the nut marked with 2 in Fig.1 clockwise, the initial flow will be reduced; if you rotate the same nut anticlockwise, the initial flow will be increased.

## DIRECTIONS FOR E6G\*SR... VALVES ADJUSTMENT

### Flow adjustment

Rotate the screw marked with 1 in Fig.2 clockwise to reduce the flow, rotate it in the opposite direction to increase the same.

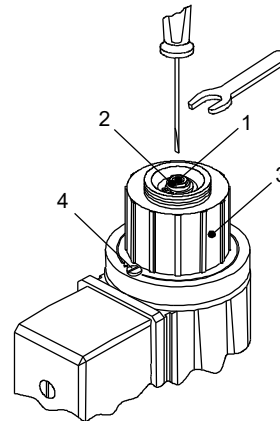


Fig. 1

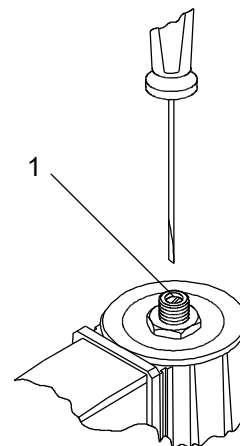
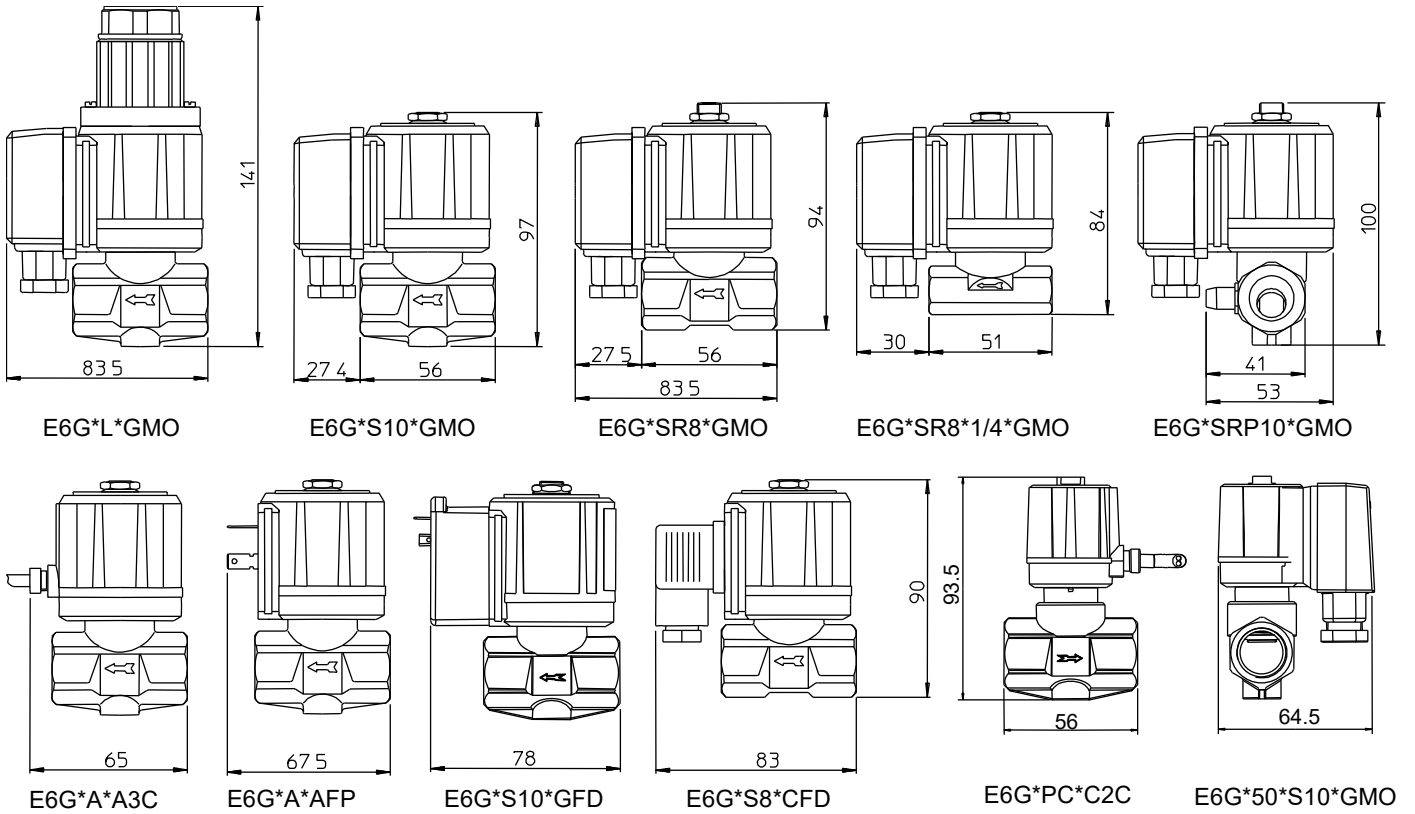


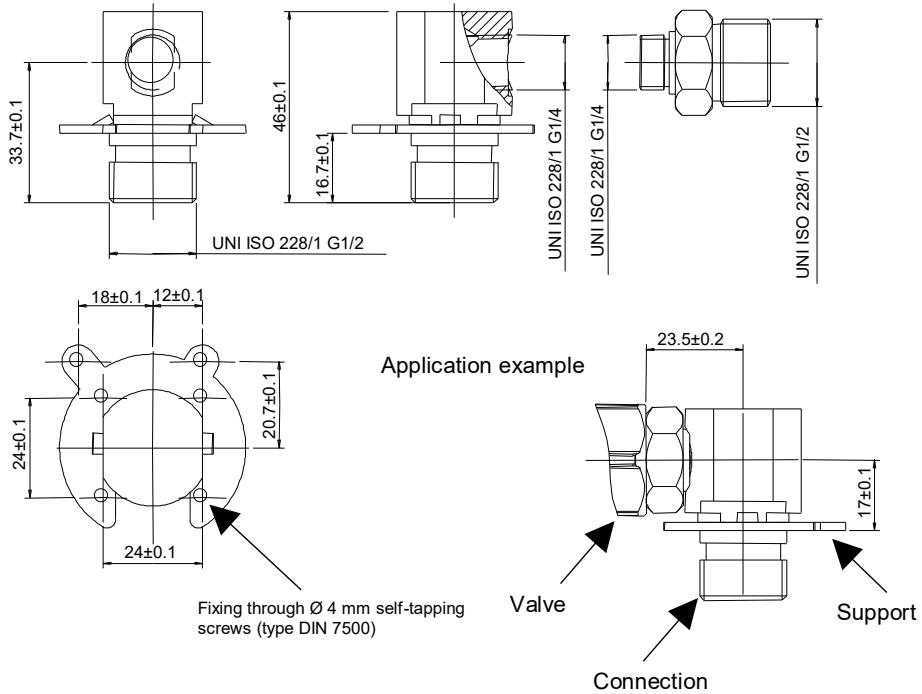
Fig. 2

## OVERALL DIMENSIONS

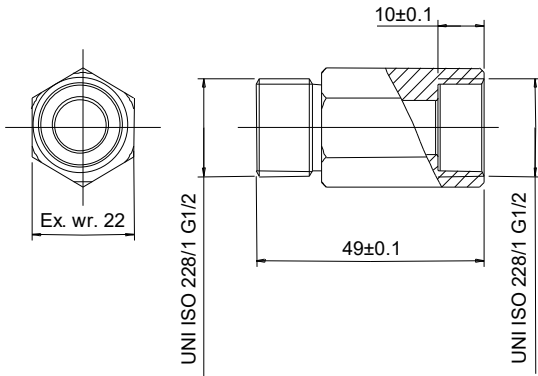


## FIXING ACCESSORIES (for E6G\*PC... versions for gas hobs only)

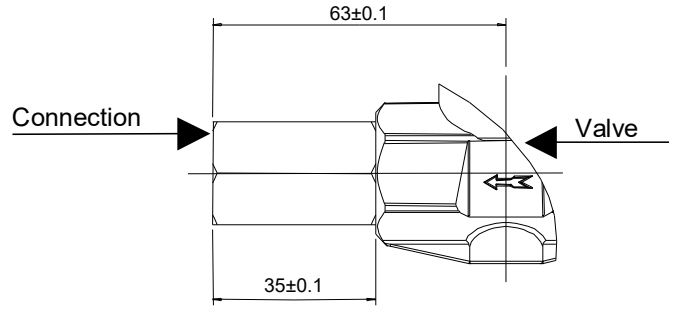
Inlet connection with filter and fixing bracket: "I1"



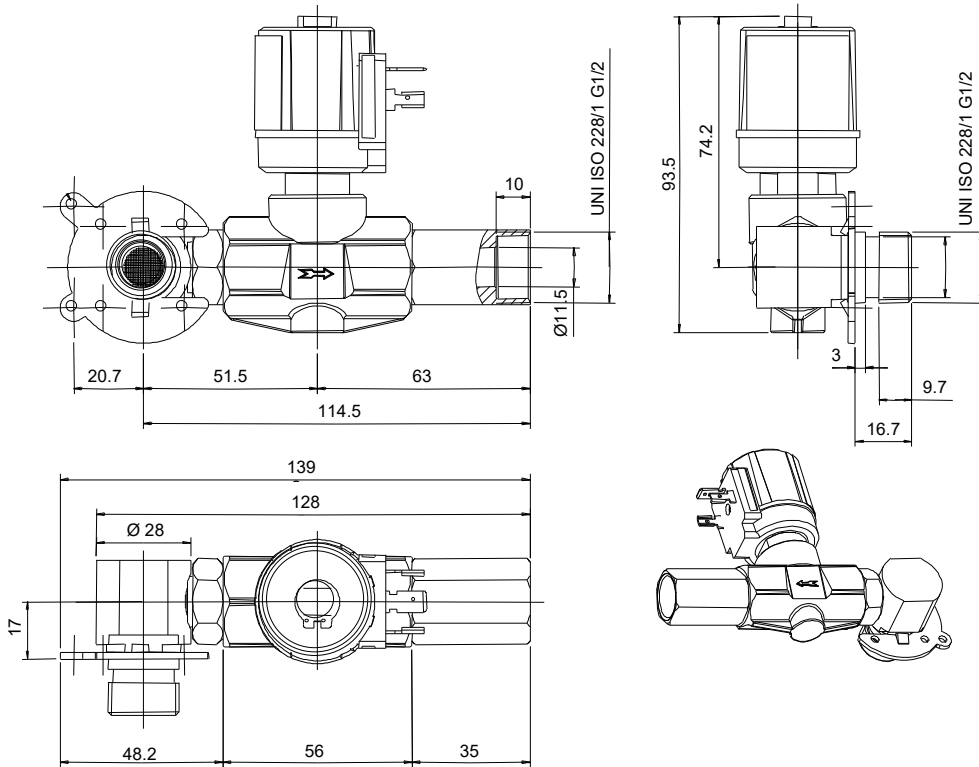
Outlet connection G1/2 – G1/2: “U”



Application example

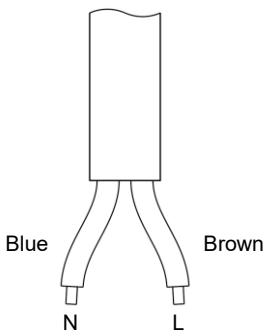


Part reference example “E6G\*SP\*CFD\*11\*U”

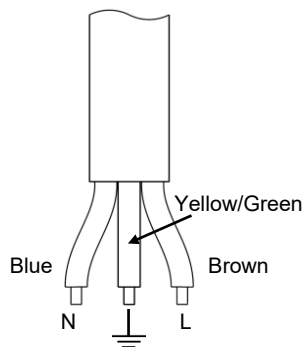


ELECTRICAL CONNECTION

2C

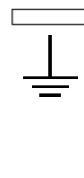


3C

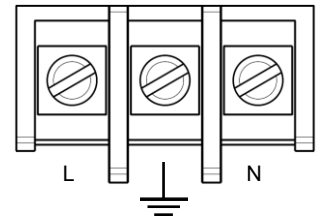


L/N

FD

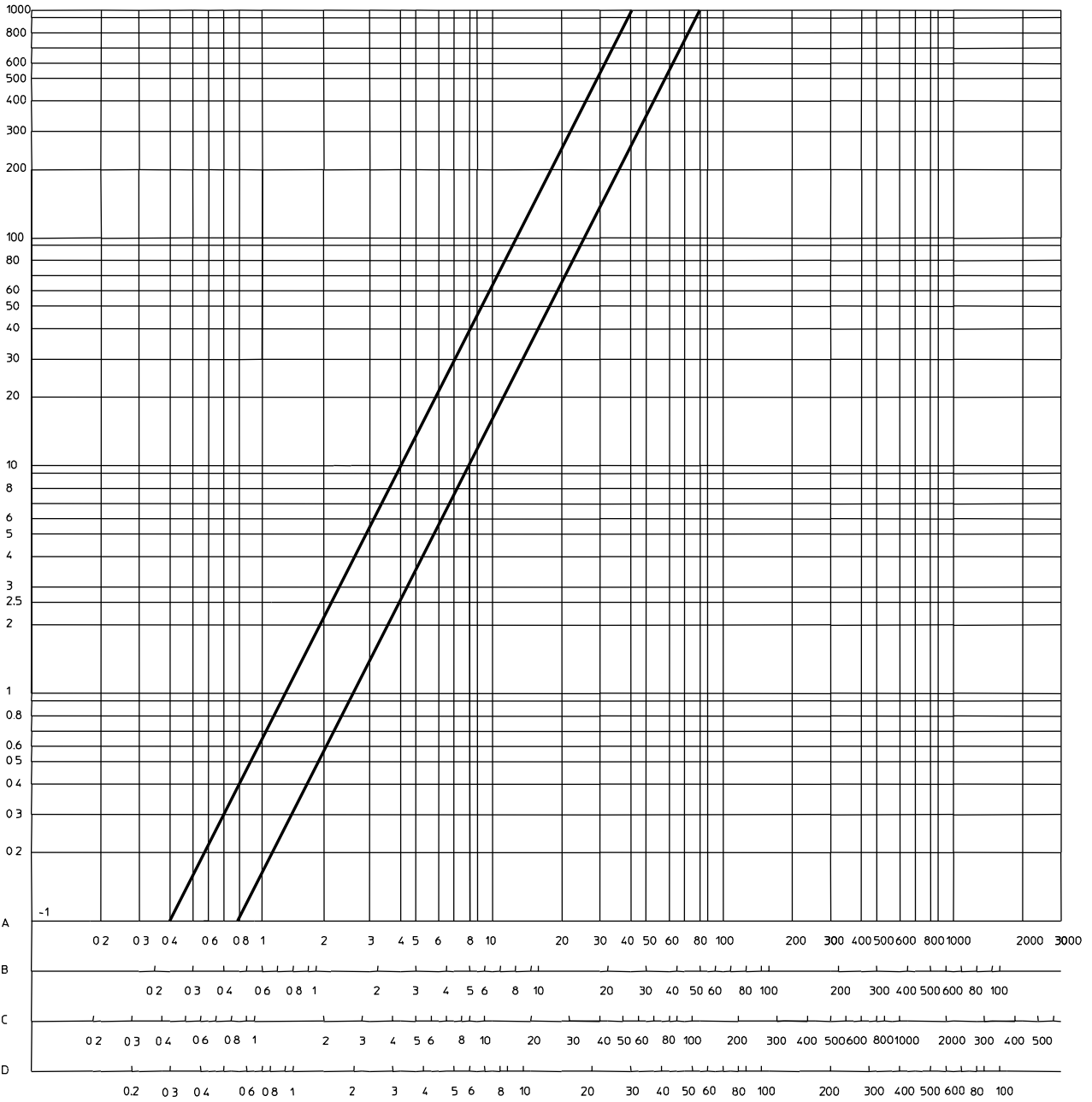


MO



# DIAGRAM

PRESSURE DROP  
mbar



- A : Standard flow rate m<sup>3</sup>/h of NATURAL GAS relative density 0.554
- B : Standard flow rate m<sup>3</sup>/h of LPG relative density 1.54
- C : Standard flow rate m<sup>3</sup>/h of TOWN GAS relative density 0.411
- D : Standard flow rate m<sup>3</sup>/h of AIR relative density 1

## SUMMARY TABLE

| Type        | DN | Operating pressure (mbar) | Orifice ø (mm) | Connections | Weight (g) | Coil     | Consumption (VA) 230V | Consumption (VA) 110V | Flow rate (m <sup>3</sup> /h natural gas with ΔP2.5mbar) | Pressure test point option |
|-------------|----|---------------------------|----------------|-------------|------------|----------|-----------------------|-----------------------|----------------------------------------------------------|----------------------------|
| E6G*S10     | 10 | 0 ÷ 500                   | 10             | G3/8"       | 760        | BE6*G..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*S10     | 15 | 0 ÷ 500                   | 10             | G1/2"       | 730        | BE6*G..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*S10     | 10 | 0 ÷ 500                   | 10             | G3/8"       | 740        | BE6*C..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*S10     | 15 | 0 ÷ 500                   | 10             | G1/2"       | 710        | BE6*C..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*50*S10  | 10 | 0 ÷ 50                    | 10             | G3/8"       |            | BE7*G..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*50*S10  | 15 | 0 ÷ 50                    | 10             | G1/2"       |            | BE7*G..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*50*S10  | 10 | 0 ÷ 50                    | 10             | G3/8"       |            | BE7*C..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*50*S10  | 15 | 0 ÷ 50                    | 10             | G1/2"       |            | BE7*C..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*SR10    | 10 | 0 ÷ 500                   | 10             | G3/8"       | 765        | BE6*G..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*SR10    | 15 | 0 ÷ 500                   | 10             | G1/2"       | 735        | BE6*G..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*SR10    | 10 | 0 ÷ 500                   | 10             | G3/8"       | 745        | BE6*C..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*SR10    | 15 | 0 ÷ 500                   | 10             | G1/2"       | 715        | BE6*C..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*50*SR10 | 10 | 0 ÷ 50                    | 10             | G3/8"       |            | BE7*G..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*50*SR10 | 15 | 0 ÷ 50                    | 10             | G1/2"       |            | BE7*G..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*50*SR10 | 10 | 0 ÷ 50                    | 10             | G3/8"       |            | BE7*C..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*50*SR10 | 15 | 0 ÷ 50                    | 10             | G1/2"       |            | BE7*C..  | 7                     | 7                     | 3.9                                                      | yes                        |
| E6G*L       | 10 | 0 ÷ 200                   | 10             | G3/8"       | 865        | BE6*G..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*L       | 15 | 0 ÷ 200                   | 10             | G1/2"       | 835        | BE6*G..  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*S8      | 8  | 0 ÷ 1000                  | 8              | G1/4"       | 620        | BE6*G..C | 20                    | 18                    | 2                                                        | no                         |
| E6G*S8      | 10 | 0 ÷ 500                   | 8              | G3/8"       | 725        | BE6*G..C | 20                    | 18                    | 2                                                        | yes                        |
| E6G*S8      | 15 | 0 ÷ 500                   | 8              | G1/2"       | 695        | BE6*G..C | 20                    | 18                    | 2                                                        | yes                        |
| E6G*S8      | 8  | 0 ÷ 1000                  | 8              | G1/4"       | 640        | BE6*G..  | 20                    | 18                    | 2                                                        | no                         |
| E6G*S8      | 10 | 0 ÷ 1000                  | 8              | G3/8"       | 745        | BE6*G..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*S8      | 15 | 0 ÷ 1000                  | 8              | G1/2"       | 715        | BE6*G..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*S8      | 8  | 0 ÷ 1000                  | 8              | G1/4"       | 620        | BE6*C..  | 20                    | 18                    | 2                                                        | no                         |
| E6G*S8      | 10 | 0 ÷ 1000                  | 8              | G3/8"       | 725        | BE6*C..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*S8      | 15 | 0 ÷ 1000                  | 8              | G1/2"       | 695        | BE6*C..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*SR8     | 8  | 0 ÷ 1000                  | 8              | G1/4"       | 625        | BE6*G..C | 20                    | 18                    | 2                                                        | no                         |
| E6G*SR8     | 10 | 0 ÷ 500                   | 8              | G3/8"       | 730        | BE6*G..C | 20                    | 18                    | 2                                                        | yes                        |
| E6G*SR8     | 15 | 0 ÷ 500                   | 8              | G1/2"       | 700        | BE6*G..C | 20                    | 18                    | 2                                                        | yes                        |
| E6G*SR8     | 8  | 0 ÷ 1000                  | 8              | G1/4"       | 645        | BE6*G..  | 20                    | 18                    | 2                                                        | no                         |
| E6G*SR8     | 10 | 0 ÷ 1000                  | 8              | G3/8"       | 750        | BE6*G..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*SR8     | 15 | 0 ÷ 1000                  | 8              | G1/2"       | 720        | BE6*G..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*SR8     | 8  | 0 ÷ 1000                  | 8              | G1/4"       | 625        | BE6*C..  | 20                    | 18                    | 2                                                        | no                         |
| E6G*SR8     | 10 | 0 ÷ 1000                  | 8              | G3/8"       | 730        | BE6*C..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*SR8     | 15 | 0 ÷ 1000                  | 8              | G1/2"       | 700        | BE6*C..  | 20                    | 18                    | 2                                                        | yes                        |
| E6G*A10     | 10 | 0 ÷ 950                   | 10             | G3/8"       | 675        | BE6*A3C  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*A10     | 15 | 0 ÷ 950                   | 10             | G1/2"       | 645        | BE6*A3C  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*A10     | 10 | 0 ÷ 950                   | 10             | G3/8"       | 695        | BE6*AFD  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*A10     | 15 | 0 ÷ 950                   | 10             | G1/2"       | 665        | BE6*AFD  | 20                    | 18                    | 3.9                                                      | yes                        |
| E6G*PC      | 10 | 0 ÷ 30                    | 10             | G3/8"       |            | BE7*C..  |                       |                       | 3.9                                                      | no                         |
| E6G*PC      | 15 | 0 ÷ 30                    | 10             | G1/2"       |            | BE7*C..  |                       |                       | 3.9                                                      | no                         |

## TYPE REFERENCE

**E6G \*50\* S R P 10\*1/2 \* G FD 7 230/50-60**

Type \_\_\_\_\_

Version \_\_\_\_\_

| Type           | Description               |
|----------------|---------------------------|
| Without letter | Standard                  |
| 50             | Version with Pmax. 50mbar |

Type of opening (quick/slow) \_\_\_\_\_

| Type | Description                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------|
| A    | Quick opening.<br>(For versions with 10mm body orifice only)                                                         |
| S    | Quick opening, noiseless.                                                                                            |
| L    | Slow opening, noiseless.<br>Version inclusive of flow rate adjustment.<br>(For versions with 10mm body orifice only) |

Flow adjustment \_\_\_\_\_

Valve fitted with equipment for flow adjustment.

Pressure test point \_\_\_\_\_

Valve fitted with pressure test point excluding the models with G1/4" connections.

Type of body \_\_\_\_\_

| Type   | Connections | Orifice diameter |
|--------|-------------|------------------|
| 8*1/4  | G1/4"       | 8 mm             |
| 8*3/8  | G3/8"       | 8 mm             |
| 8*1/2  | G1/2"       | 8 mm             |
| 10*3/8 | G3/8"       | 10 mm            |
| 10*1/2 | G1/2"       | 10 mm            |

Supply voltage \_\_\_\_\_

| Type      | Description        |
|-----------|--------------------|
| 110/50-60 | 110 Vac / 50-60 Hz |
| 230/50-60 | 230 Vac / 50-60 Hz |

Pressure test point position \_\_\_\_\_

| Type | Description      |
|------|------------------|
| 5    | Downstream left  |
| 6    | Downstream right |
| 7    | Upstream left    |
| 8    | Upstream right   |

Type of connection \_\_\_\_\_

| Type | Description                                                                        |
|------|------------------------------------------------------------------------------------|
| 2C   | Connection by two-core cable - IP65.                                               |
| 3C   | Connection by three-core cable - IP65.                                             |
| FD   | Connection by fast-on for DIN43650 plug - IP65 (GFD IP40).                         |
| MO   | Connection by terminal board - IP54.                                               |
| MOC  | Connection by terminal board (short conveyors) - IP54 (except for 50mbar version). |

Type of power supply \_\_\_\_\_

| Type | Description                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A    | Supply in alternate current (except for 50mbar version).                                                                                                                   |
| C    | Supply in direct current.                                                                                                                                                  |
| G    | Supply in alternate current, but the valve operates in direct current thanks to an inbuilt rectifier bridge (for versions with connection type "MO", "MOC" and "FD" only). |

**E6G \*PC\* C**

Type \_\_\_\_\_

Version \_\_\_\_\_

Valve exclusively prearranged for use as safety valve in gas hobs. Valve in class "B".

Type of power supply \_\_\_\_\_

| Type | Description                                                                                                                                                |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C    | Supply in direct current.                                                                                                                                  |
| G    | Supply in alternate current, but the valve operates in direct current thanks to an inbuilt rectifier bridge (for versions with connection type "MO" only). |

**2C 24Vdc**

Supply voltage \_\_\_\_\_

| Type  | Description |
|-------|-------------|
| 24Vdc | 24 Vdc      |

Type of connection \_\_\_\_\_

| Type | Description                                               |
|------|-----------------------------------------------------------|
| 2C   | Connection by two-core cable - IP65.                      |
| 3C   | Connection by three-core cable - IP65.                    |
| FD   | Connection by fast-on terminals for DIN43650 plug - IP65. |
| MO   | Connection by terminal board - IP54.                      |



### NOTES FOR PRODUCT DISPOSAL

The device contains electronic components and cannot therefore be disposed of as normal household waste. For the disposal procedure, please refer to the local rules in force for special waste.

**ATTENTION --> Company Brahma S.p.A. declines any responsibility for any damage resulting from Customer tampering with the device.**

### BRAHMA S.p.A.

Via del Pontiere, 31  
37045 Legnago (VR) - ITALY  
Tel. +39 0442 635211 - Fax +39 0442 25683  
<http://www.brahma.it>  
E-mail: [brahma@brahma.it](mailto:brahma@brahma.it)

20/06/2023 Subject to amendments without notice