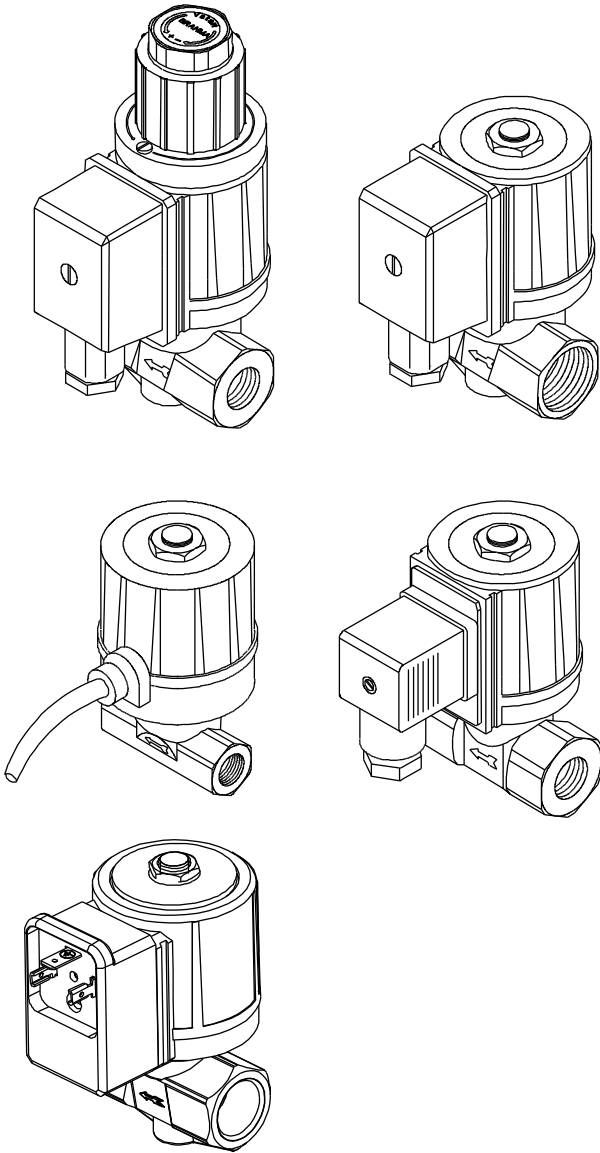


## E6G\* ... SERIES

### 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, 3rd family
Class:	A
Group:	2
Supply voltage (1):	230 Vac / 50-60 Hz 110 Vac / 50-60 Hz 24 Vdc (for E6G*PC only)
Operating temperature:	-10°C / +60°C -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 (Afecor) ([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.

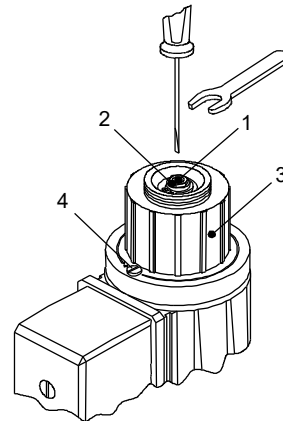


Fig. 1

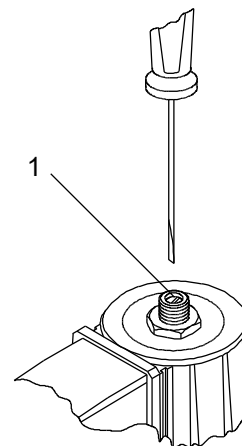
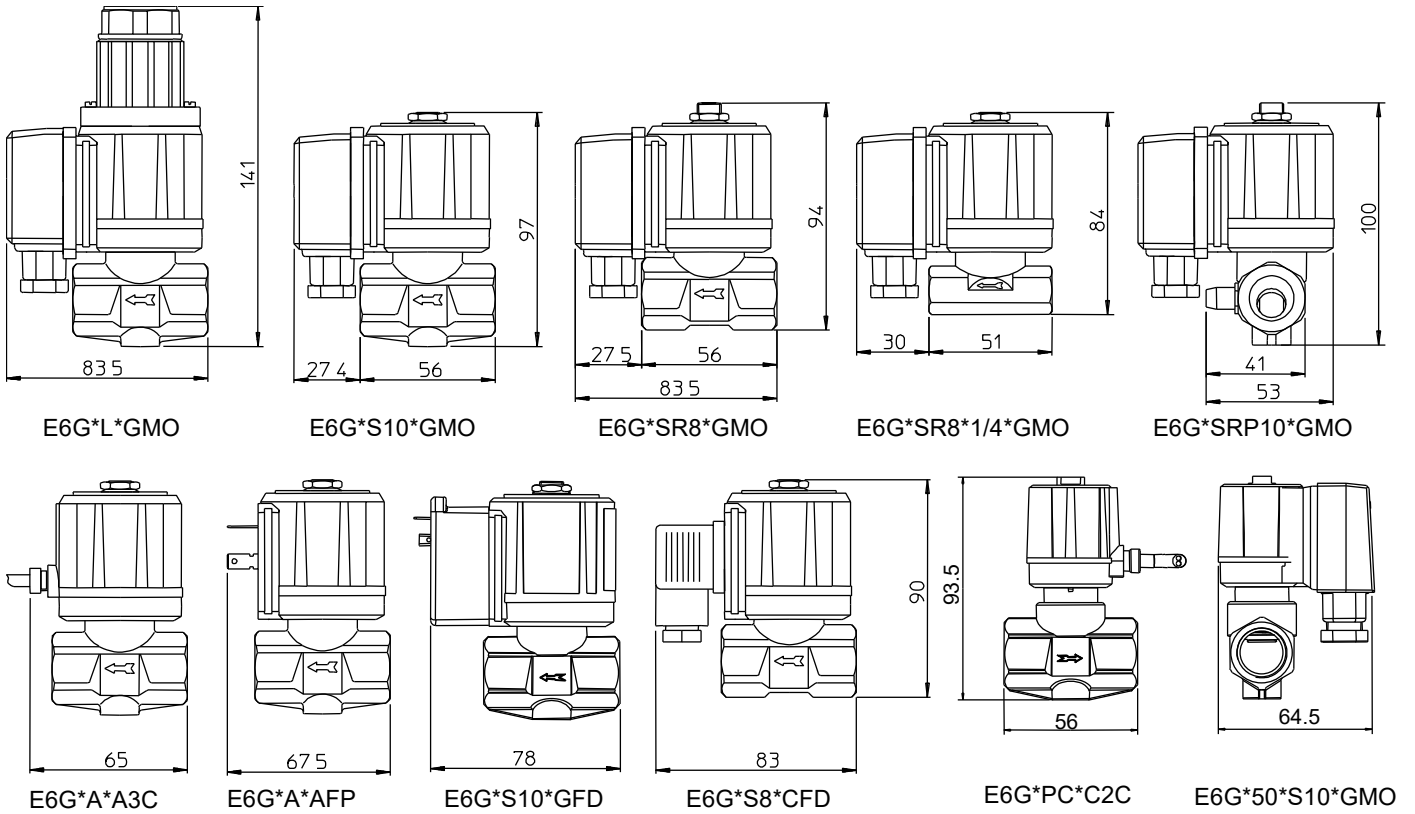


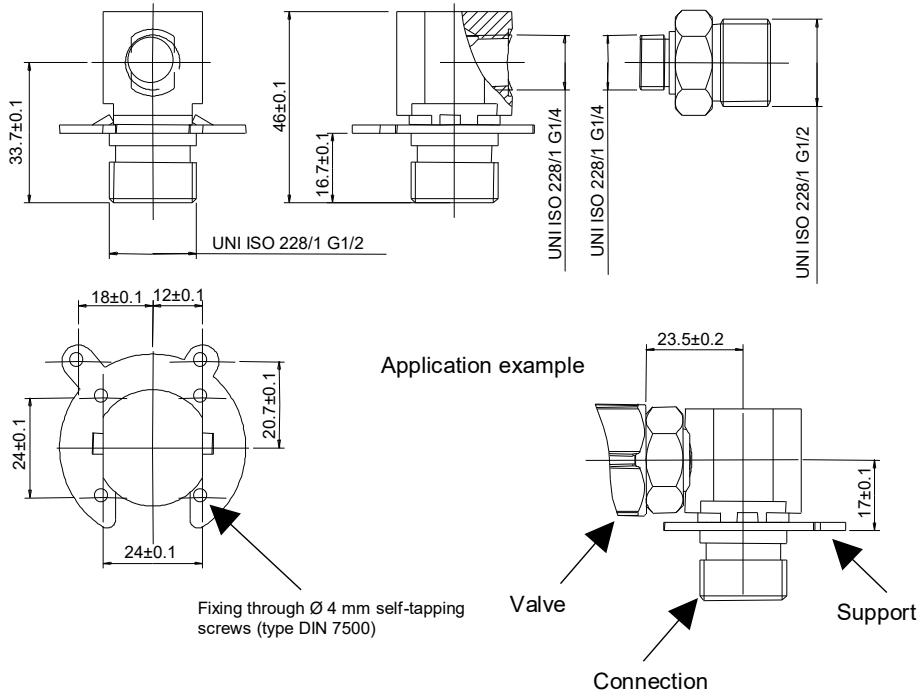
Fig. 2

## OVERALL DIMENSIONS

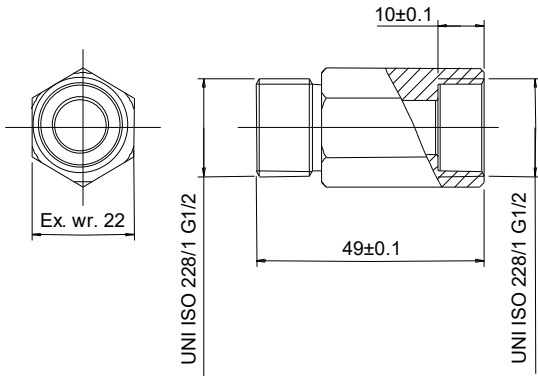


## FIXING ACCESSORIES (for E6G\*PC... versions for gas hobs only)

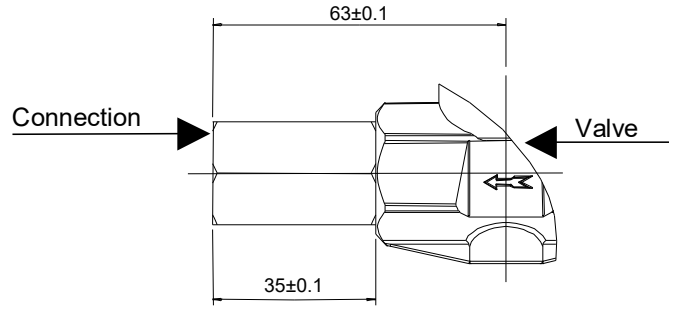
Inlet connection with filter and fixing bracket: "I1"



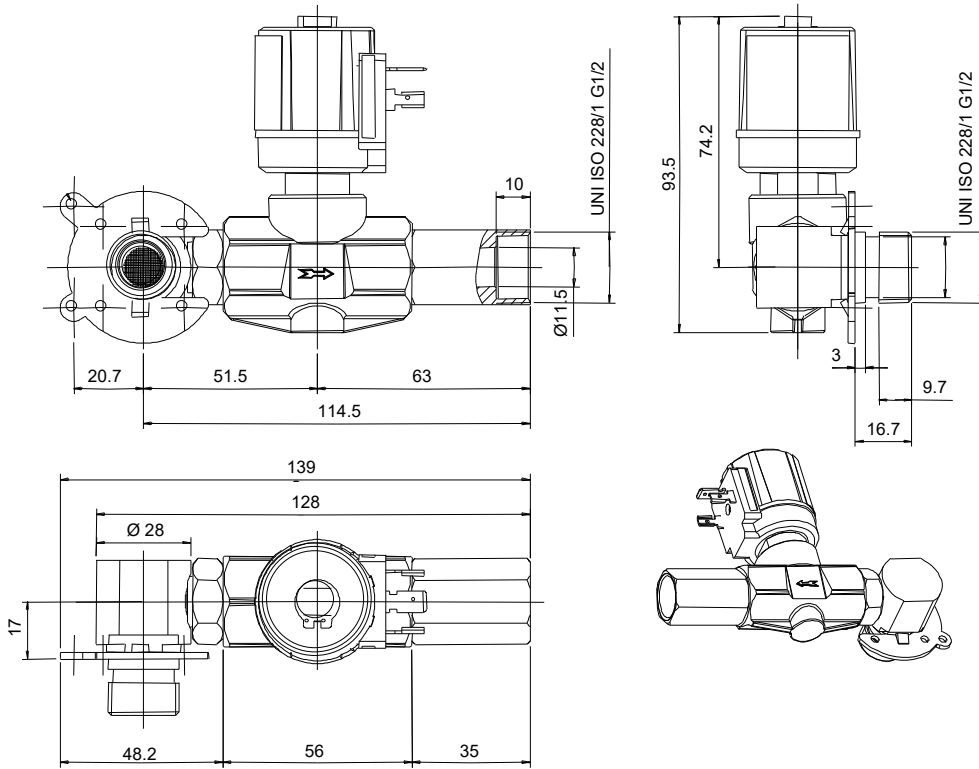
Outlet connection G1/2 – G1/2: “U”



Application example

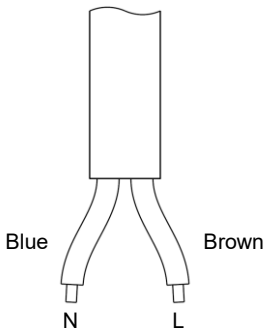


Part reference example “E6G\*SP\*CFD\*11\*U”

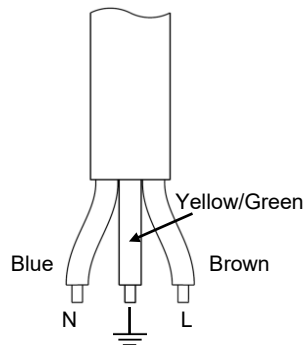


ELECTRICAL CONNECTION

2C

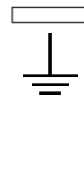


3C

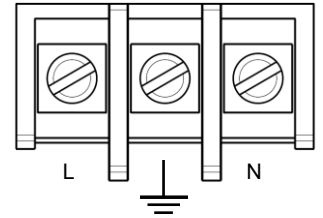


L/N

FD

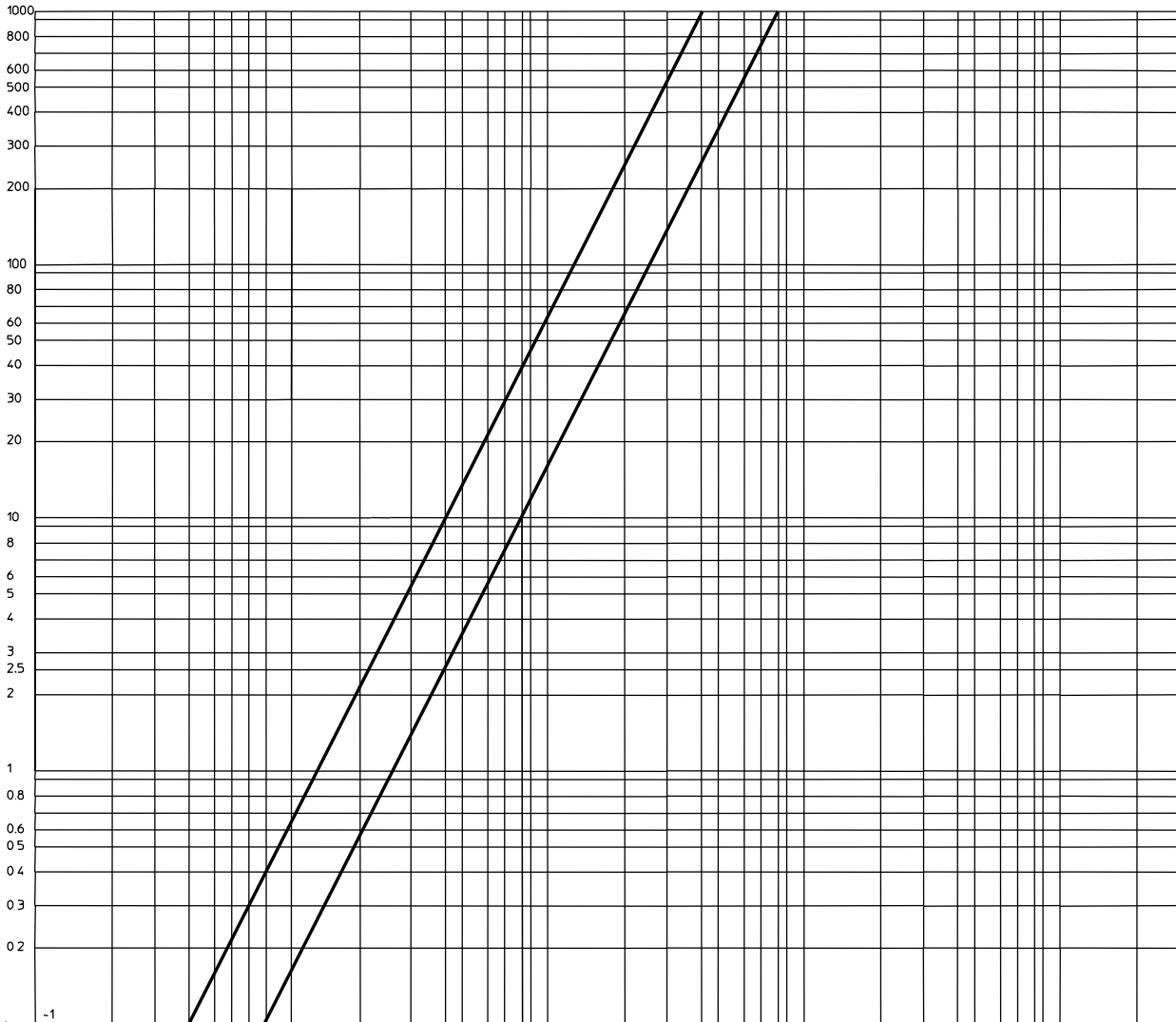


MO

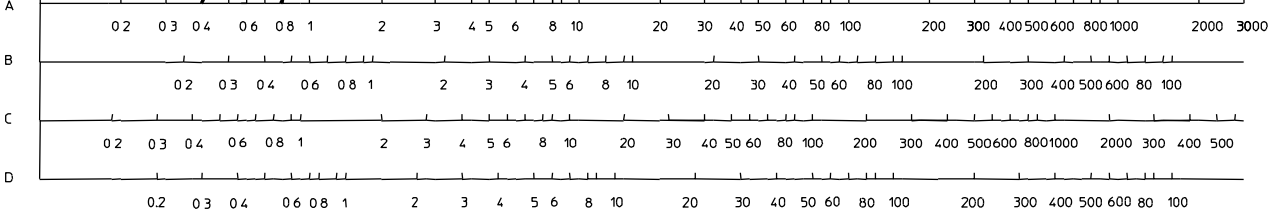


# DIAGRAM

PRESSURE DROP  
mbar



FLOW RATE  
m<sup>3</sup>/h



- 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 (m³/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. (For versions with 10mm body orifice only)
S	Quick opening, noiseless.
L	Slow opening, noiseless. Version inclusive of flow rate adjustment. (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.

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