

GV/GVC15... GV/GVC25... GV/GVC30... GV/GVC40... SERIES

COMBINED VALVE UNITS FOR GAS WITH 1/2" 3/4" 1" 1-1/2" CONNECTIONS AND DIFFERENT OPERATING PRESSURE



GENERAL DESCRIPTION

This series of combined valve units usually consists of a quick opening valve and a slow opening valve, which are mechanically connected by an O-Ring and a suitable fixing bracket. These devices can be fitted with a by-pass valve and/or a gas pressure switch with fixed or adjustable setting, and with an inlet pressure regulator to adjust the gas pressure and keep it constant. The electrical connections between the components of the system are carried out by means of a printed circuit board placed in a plastic casing. The valve system is electrically connected to the control unit by means of a four-pin MPM plug enabling a very easy wiring in any applications.

The presence of supply voltage is signalled by a LED indicator useful during installation and maintenance operations.

For information about the features of each solenoid valve used in these combined valve units, please refer to the corresponding technical leaflets (EG15, EG25, EG30 and EG40 series of quick, slow or by-pass valves).

- **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

- Class:	A
- Group:	2
- Supply voltage (1):	
types GV/GVC15	220-240 Vac / 50-60 Hz 110 Vac / 50-60 Hz
types GV/GVC25-GV/GVC30	230 Vac / 50-60 Hz 110 Vac / 50-60 Hz
types GV/GVC40	230 Vac / 50-60 Hz
- Operating temperature range:	-10°C / +60°C
- Closing time:	≤1s
- Opening time:	≤1s (for quick opening versions only)
- Protection rating:	IP40
- Mounting position:	horizontal and vertical (not upside-down)
- Valve bodies:	die-cast aluminium

(1) Versions with different supply voltage are available (except for types GV/GVC40).

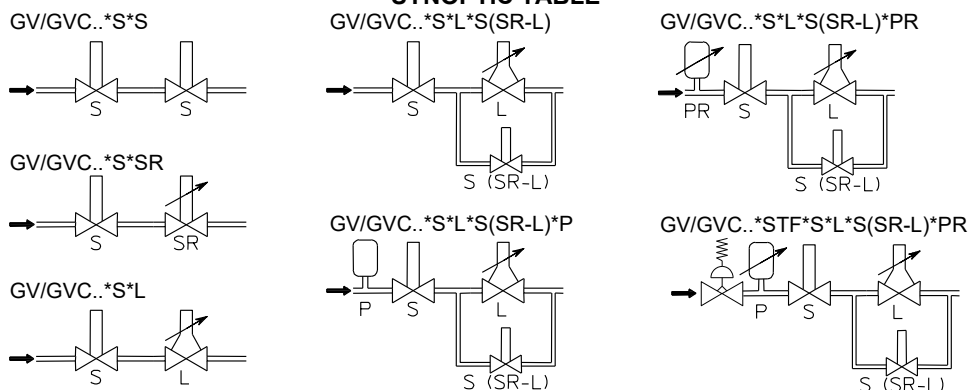
DIRECTIONS FOR INSTALLATION AND MAINTENANCE

- 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). 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.

TABLE OF THE CONNECTIONS

Module combination	Module position according to the type								
GV/GVC..*S*S		1 - 2							
GV/GVC..*S*SR		1	2						
GV/GVC..*S*L		1		2					
GV/GVC..*S*L*S(SR-L)		1		2	5 - 6	5 - 6	5 - 6		
GV/GVC..*S*L*S(SR-L)*P		1		2	5 - 6	5 - 6	5 - 6	3 - 4	
GV/GVC..*S*L*S(SR-L)*PR		1		2	5 - 6	5 - 6	5 - 6		3 - 4
GV/GVC..STF*..*	7								

SYNOPTIC TABLE



N.B.: The versions appearing in the Table of the connections and in the Synoptic table are available for any type of GV/GVC15, GV/GVC25, GV/GVC30 and GV/GVC40 and for any operating pressure.

The "Pressure Regulator" module is applicable to any version of GV/GVC25, GV/GVC30 and GV/GVC40.

MODULES

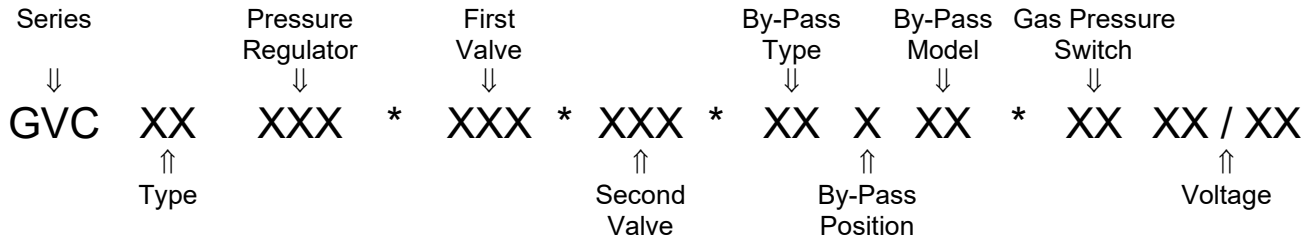
	ON-OFF QUICK OPENING SOLENOID VALVE		ON-OFF QUICK OPENING BY-PASS WITH FLOW ADJUSTER
	ON-OFF QUICK OPENING SOLENOID VALVE WITH FLOW ADJUSTER		ON-OFF SLOW OPENING BY-PASS WITH FLOW ADJUSTER
	ON-OFF SLOW OPENING SOLENOID VALVE WITH FLOW ADJUSTER		GAS PRESSURE SWITCH
	ON-OFF QUICK OPENING BY-PASS		ADJUSTABLE GAS PRESSURE SWITCH
	PRESSURE REGULATOR (Available for versions GV/GVC25, GV/GVC30 and GV/GVC40 only)		

SUMMARY TABLE

Type	DN	Operating pressure (mbar)	Orifice diameter (mm)	Connection	Consumption (for each valve) 230Vac	Consumption (for each valve) 110Vac
GV/GVC15*S*S GVC15*S*L	15	0 ÷ 500 (1) 0 ÷ 250 (1)	15	G1/2"	20VA	18VA
GV/GVC25*S1*S1 GV/GVC25*S1*L1 GV/GVC25*S3*S3 GV/GVC25*S3*L3	20	0 ÷ 100 0 ÷ 50 0 ÷ 500 0 ÷ 350	25	G3/4"	25VA 25VA 36W 36W	18VA <i>in progress</i> 33W 33W
GV/GVC30*S2*S2 GV/GVC30*S2*L2 GV/GVC30*S5*S5 GV/GVC30*S5*L5	25	0 ÷ 350 (2) 0 ÷ 200 0 ÷ 500 (2) 0 ÷ 350 (2)	30	G1"	36W 36W 36W 36W	33W 33W 33W 33W
GV/GVC40*S*S GV/GVC40*S*L	40	0 ÷ 200 0 ÷ 200	40	G1 1/2" G1 1/2"	start 70W running 20W (30VA) start 138W running 37W	not available not available

- (1) In the version equipped with by-pass valve the standard operating pressure range is 0÷100 mbar
- (2) In the version equipped with by-pass valve type "L" the standard operating pressure range is 0÷250 mbar

PART REFERENCES



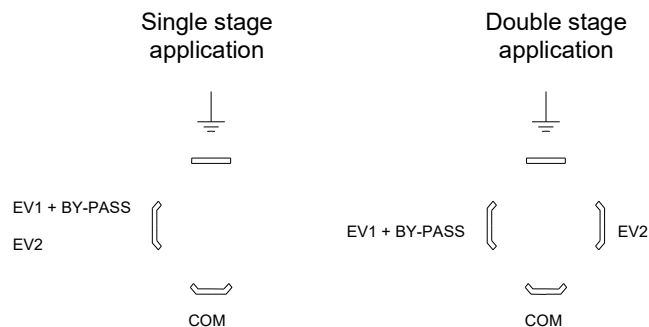
Series:	GVC = combined valve unit <u>with</u> connection GV = combined valve unit <u>without</u> connection
Type:	type of valve composing the combined unit (e.g. EG15:15, EG25:25, EG30:30, EG40:40)
Pressure Regulator:	ST= Pressure regulator <u>without</u> inlet filter STF= Pressure regulator <u>with</u> inlet filter
First valve:	S: quick opening SR: quick opening with flow adjuster L: slow opening with flow adjuster operating pressure range (see value appearing in the summary table) pressure test point position: X: downstream left Y: downstream right Z: upstream left W: upstream right
Second valve:	see "First valve" above
By-pass type:	S: quick opening SR: quick opening with flow adjuster L: slow opening with flow adjuster
By-pass position:	D: right S: left
By-pass model:	: standard by-pass (no letter) 15: by-pass made with EG15 valve body (for GVC30 GV/GVC30 versions only) 25: by-pass made with EG25 valve body (for GVC40 GV/GVC40 versions only)
Gas pressure switch:	: no gas pressure switch (no letter) P: fixed setting (*) PR: adjustable setting (*)
Voltage:	230/50-60: 230 Vac 50-60 Hz 220-240/50-60: 220-240 Vac 50-60 Hz (for GV/GVC15 versions only) 110/50-60: 110 Vac 50-60 Hz

(*) The gas pressure switch position is always the same as the by-pass position; in case the by-pass is not available, the gas pressure switch position is Right.

Example: GVC 25*S1*SR1Z*SRD*P 230/50-60

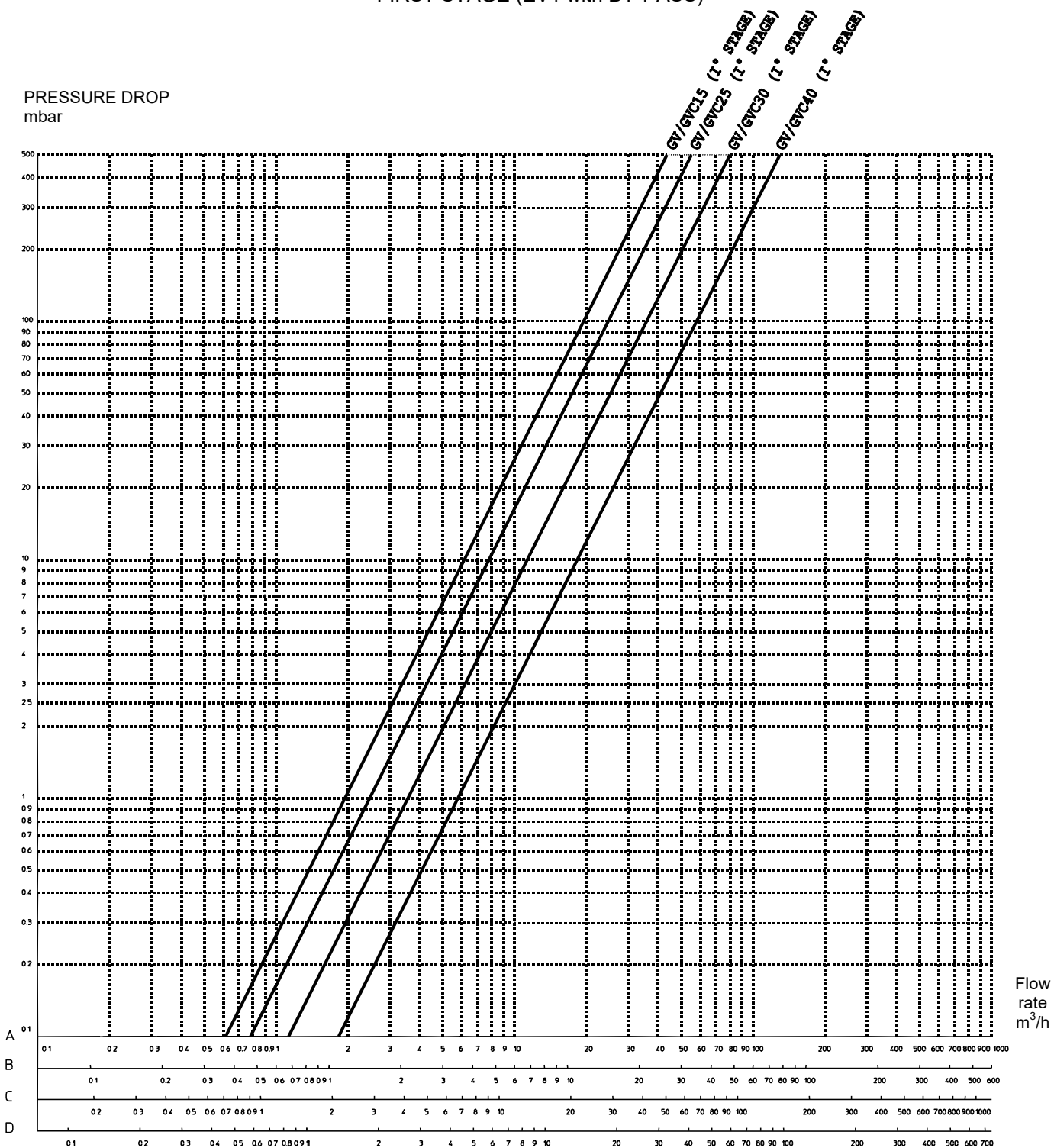
GVC:	combined valve unit with connection
25:	valve type EG25
S1:	quick opening with operating pressure between 0÷100 mbar
SR1Z:	quick opening with flow adjuster, with operating pressure between 0÷100 mbar and pressure test point upstream left
SRD:	quick opening by-pass with flow adjuster on the right side
P:	fixed-setting gas pressure switch (on the right side like the by-pass)
230/50-60:	power supply 230 Vac 50-60 Hz

ELECTRICAL CONNECTION FOR TYPES GVC15, GVC25, GVC30, GVC40 WITH OR WITHOUT BY-PASS



DIAGRAM

FIRST STAGE (EV1 with BY-PASS)

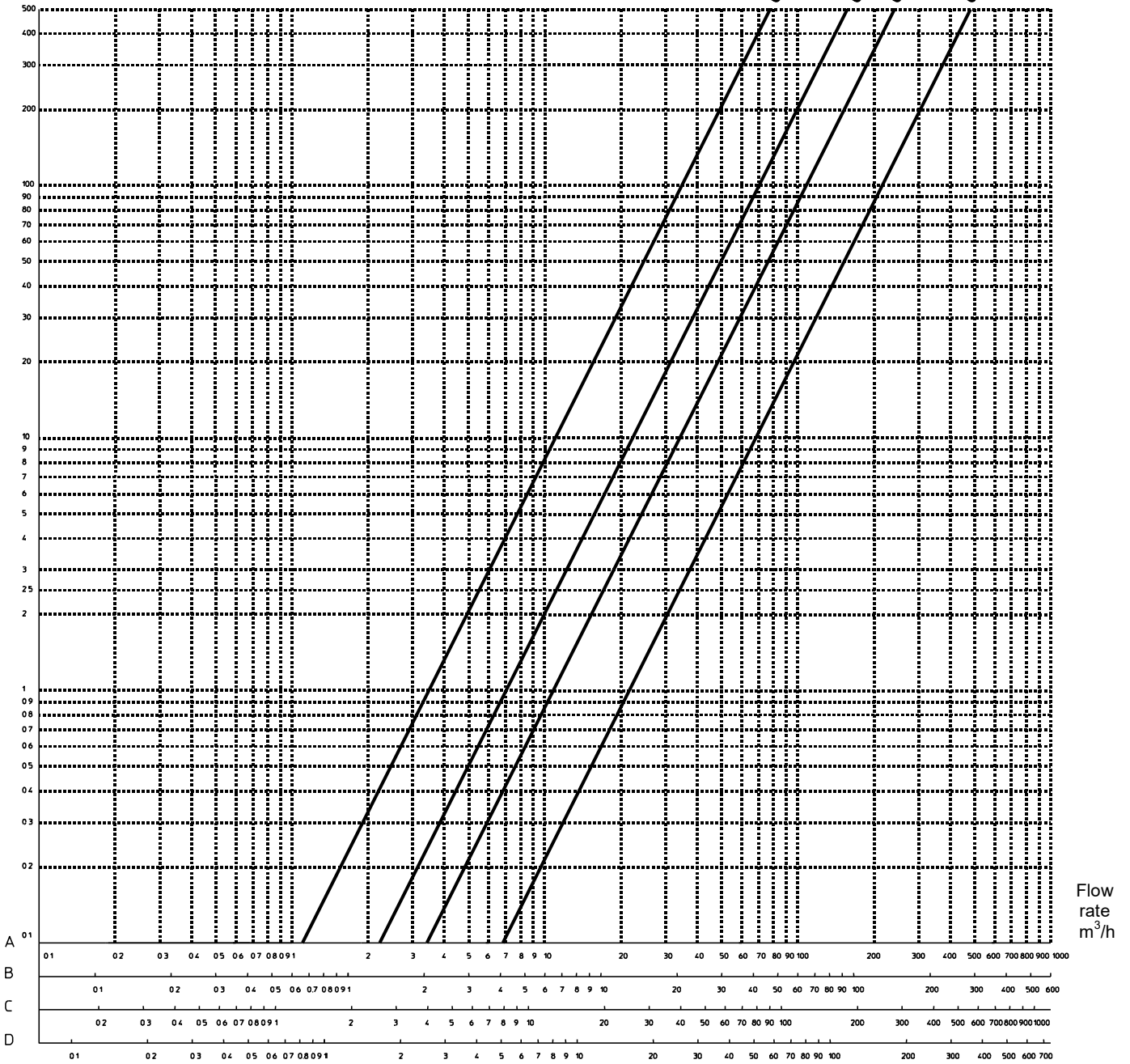


- A : Standard flow rate m³/h of NATURAL GAS relative density 0.554
- B : Standard flow rate m³/h of LPG relative density 1.54
- C : Standard flow rate m³/h of TOWN GAS relative density 0.411
- D : Standard flow rate m³/h of AIR relative density 1

DIAGRAM

SECOND STAGE (EV1 with BY-PASS+EV2) and (EV1+EV2)

PRESSURE DROP
mbar

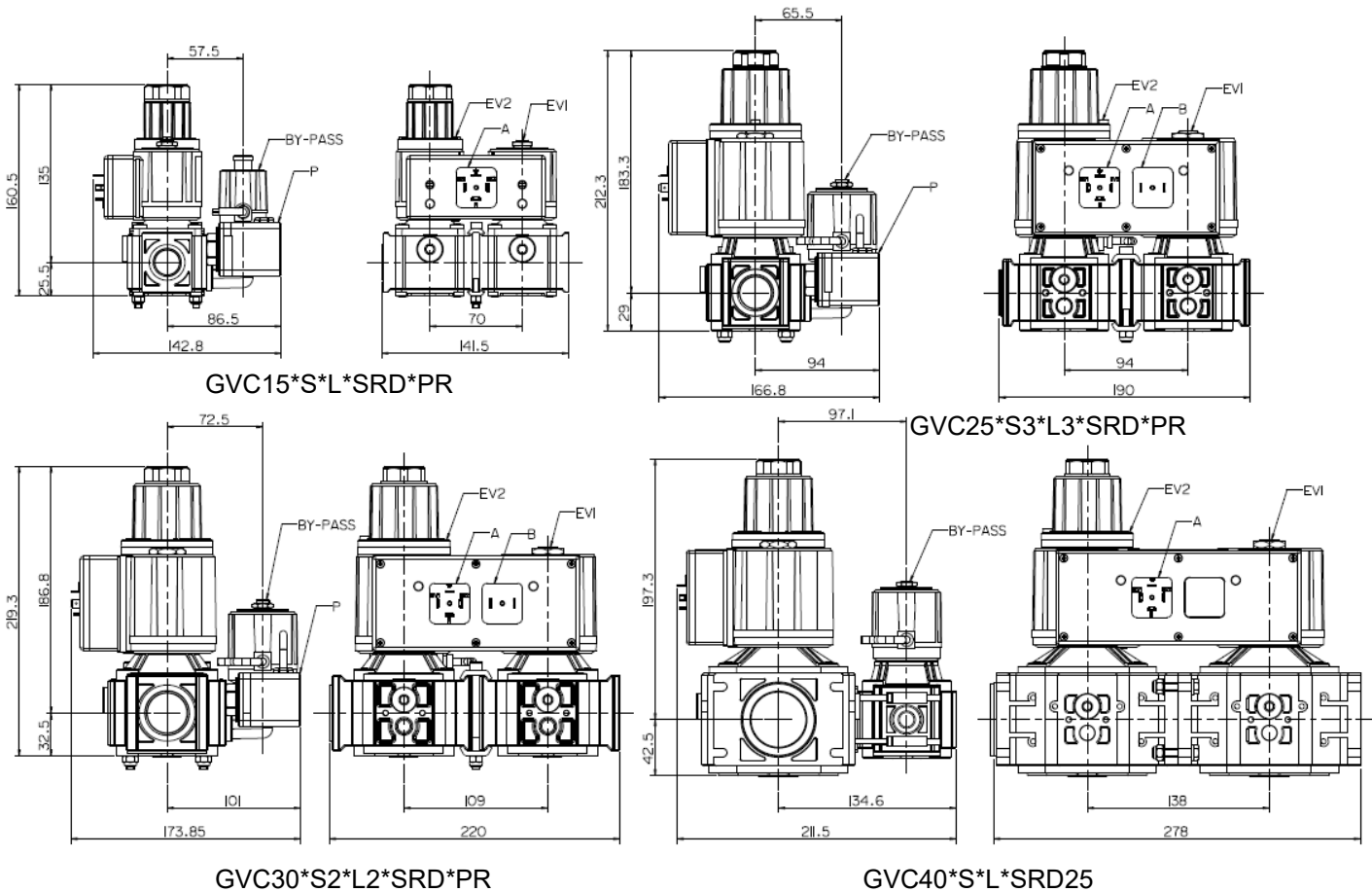


Flow rate
m³/h

- A : Standard flow rate m³/h of NATURAL GAS relative density 0.554
- B : Standard flow rate m³/h of LPG relative density 1.54
- C : Standard flow rate m³/h of TOWN GAS relative density 0.411
- D : Standard flow rate m³/h of AIR relative density 1

N.B.: In case of a combined valve unit without by-pass, the max. flow rate is equivalent to 70% of the single valve flow rate.

OVERALL DIMENSIONS



KEY TO SYMBOLS

EV1: ON - OFF quick opening solenoid valve

EV2: ON - OFF slow opening solenoid valve

BY-PASS: ON – OFF quick opening solenoid valve

P: gas pressure switch

A: solenoid valve power supply connection plug (4 pins)

B: gas pressure switch connection plug (2 pins), available for GVC25, GVC30 and GVC40 with gas pressure switch only. **The connection for the pressure switch must be carried out using wired cable with Fast-on 6,3x0,5.**

NOTES

- The (a/m) dimensions of GVC versions can be considered valid for GV versions too, as the latter ones differ in the separate electrical wiring only.
- For the versions equipped with pressure regulator, add the length of this one as shown below:
 In GV/GVC25 length of the pressure regulator "120 mm".
 In GV/GVC30 length of the pressure regulator "120 mm".
 In GV/GVC40 length of the pressure regulator "180 mm".



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.

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