

# 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).

### TECHNICAL FEATURES

|                                |                                              |
|--------------------------------|----------------------------------------------|
| - Class:                       | A                                            |
| - Group:                       | 2                                            |
| - Supply voltage (1):          |                                              |
| types GV/GVC15                 | 220-240 Vac / 50-60 Hz<br>110 Vac / 50-60 Hz |
| types GV/GVC25-GV/GVC30        | 230 Vac / 50-60 Hz<br>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<br>(not upside-down) |
| - Valve bodies:                | die-cast aluminium                           |

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

### INSTALLATION

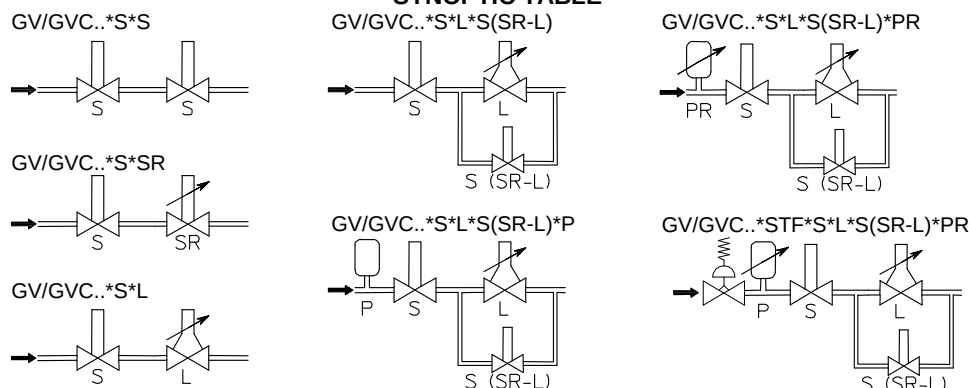
- Respect the applicable national and European standards (e.g. EN60335-1) regarding electrical safety.
- Assemble the valve to the installation in such a way that the arrow on the valve body has the same direction as the fuel flow.
- When assembling the valve to the installation piping, avoid twisting on the sheath but always use a hexagonal key on 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 product label.

# 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<br>(Available for versions GV/GVC25, GV/GVC30 and GV/GVC40 only) |  |                                                 |

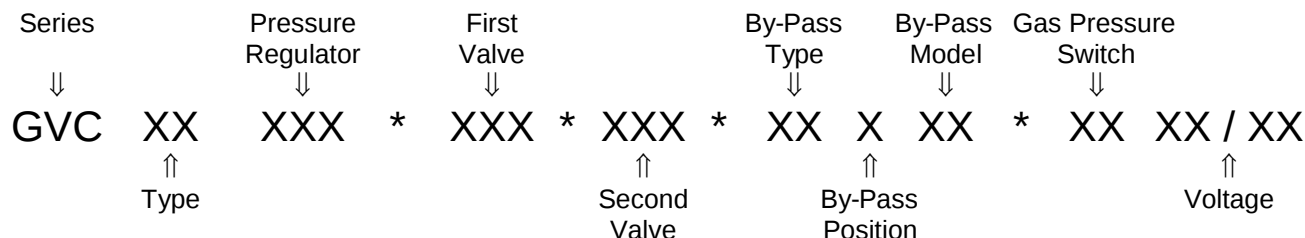
## SUMMARY TABLE

| Type           |                 | Operating pressure (mbar) | Orifice diameter (mm) | Connection | Consumption (for each valve) 230Vac | Consumption (for each valve) 110Vac |
|----------------|-----------------|---------------------------|-----------------------|------------|-------------------------------------|-------------------------------------|
| GV/GVC15*S*S   | GV/GVC15*S*SR   | 0 ÷ 500 (1)               | 15                    | G1/2"      | 20VA                                | 18VA                                |
| GVC15*S*L      |                 | 0 ÷ 250 (1)               | 15                    | G1/2"      | 20VA                                | 18VA                                |
| GV/GVC25*S1*S1 | GV/GVC25*S1*SR1 | 0 ÷ 100                   | 25                    | G3/4"      | 20VA                                | 18VA                                |
| GV/GVC25*S1*L1 |                 | 0 ÷ 50                    | 25                    | G3/4"      | 25VA                                | <i>in progress</i>                  |
| GV/GVC25*S3*S3 | GV/GVC25*S3*SR3 | 0 ÷ 500                   | 25                    | G3/4"      | 36W                                 | 33W                                 |
| GV/GVC25*S3*L3 |                 | 0 ÷ 350                   | 25                    | G3/4"      | 36W                                 | 33W                                 |
| GV/GVC30*S2*S2 | GV/GVC30*S2*SR2 | 0 ÷ 350 (2)               | 30                    | G1"        | 36W                                 | 33W                                 |
| GV/GVC30*S2*L2 |                 | 0 ÷ 200                   | 30                    | G1"        | 36W                                 | 33W                                 |
| GV/GVC30*S5*S5 | GV/GVC30*S5*SR5 | 0 ÷ 500 (2)               | 30                    | G1"        | 36W                                 | 33W                                 |
| GV/GVC30*S5*L5 |                 | 0 ÷ 350 (2)               | 30                    | G1"        | 36W                                 | 33W                                 |
| GV/GVC40*S*S   | GV/GVC40*S*SR   | 0 ÷ 200                   | 40                    | G1 1/2"    | start 70W<br>running 20W (30VA)     | not available                       |
| GV/GVC40*S*L   |                 | 0 ÷ 200                   | 40                    | G1 1/2"    | start 138W<br>running 37W           | 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



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

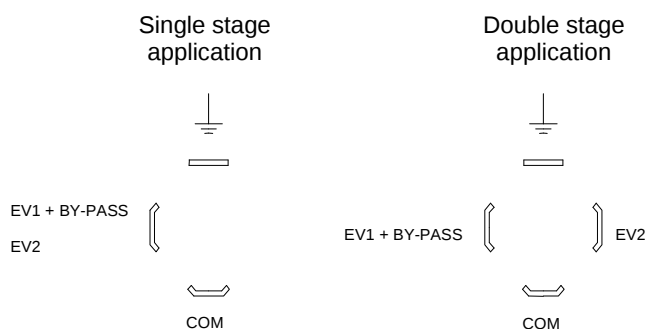
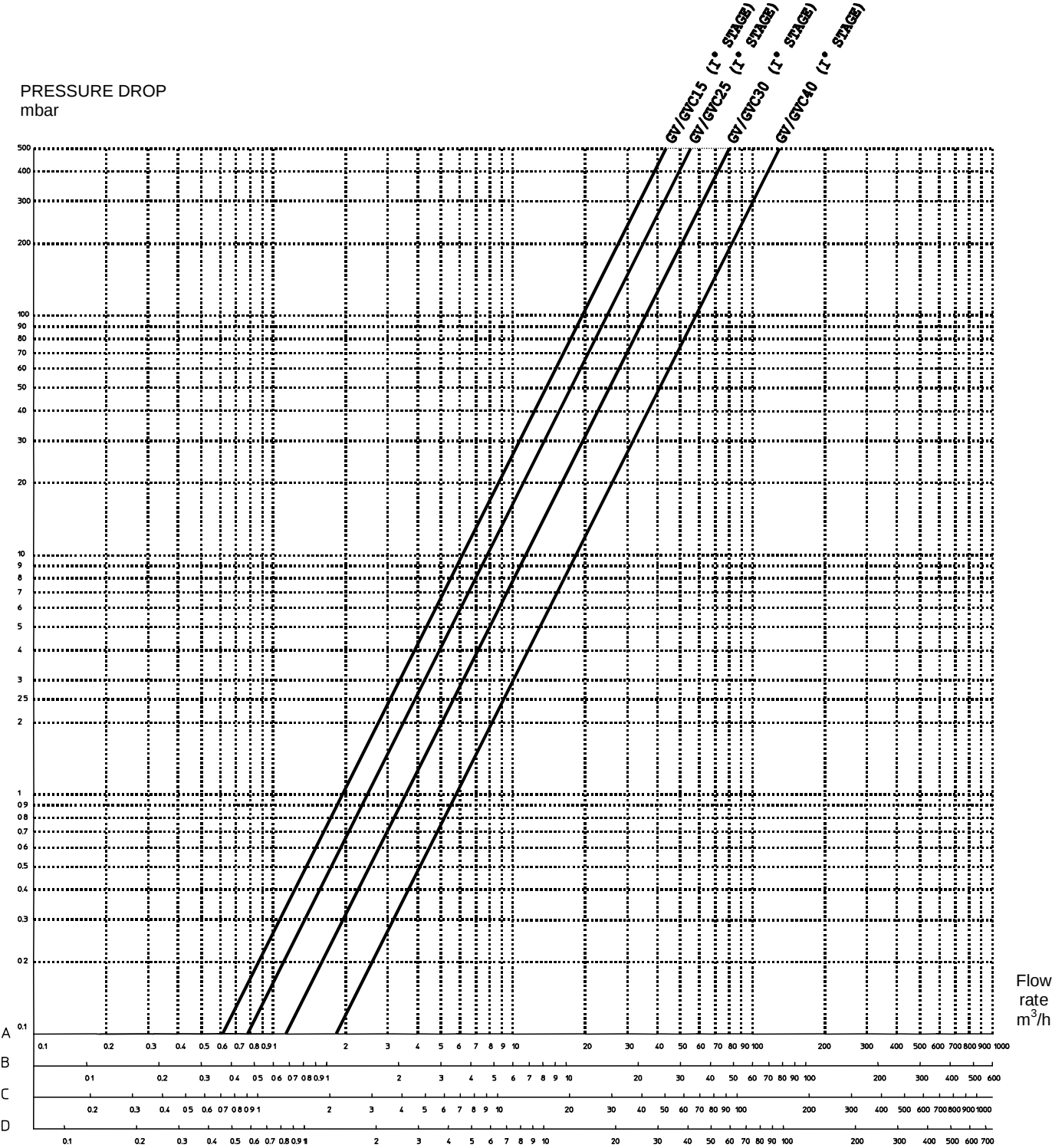
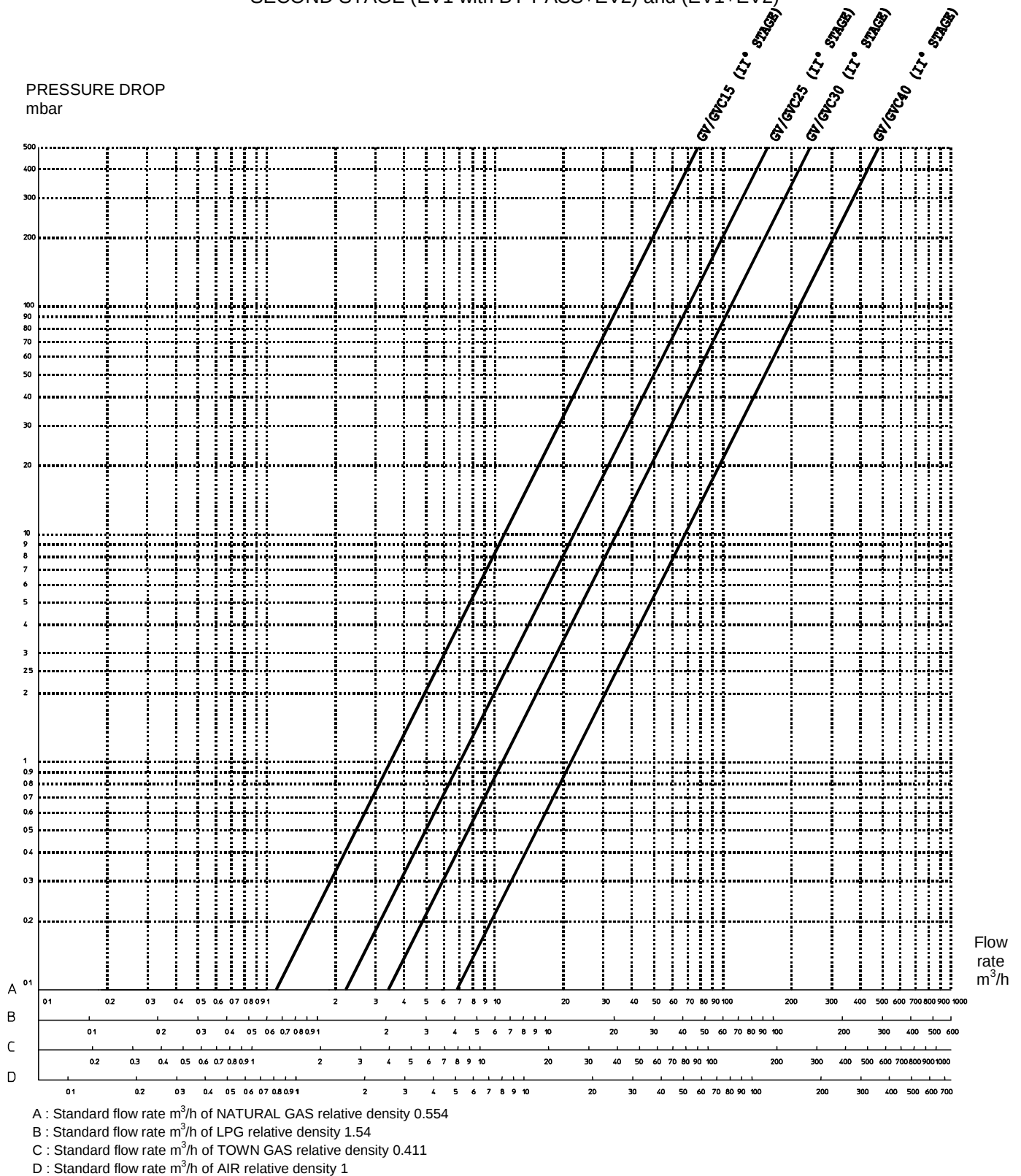


DIAGRAM  
FIRST STAGE (EV1 with BY-PASS)



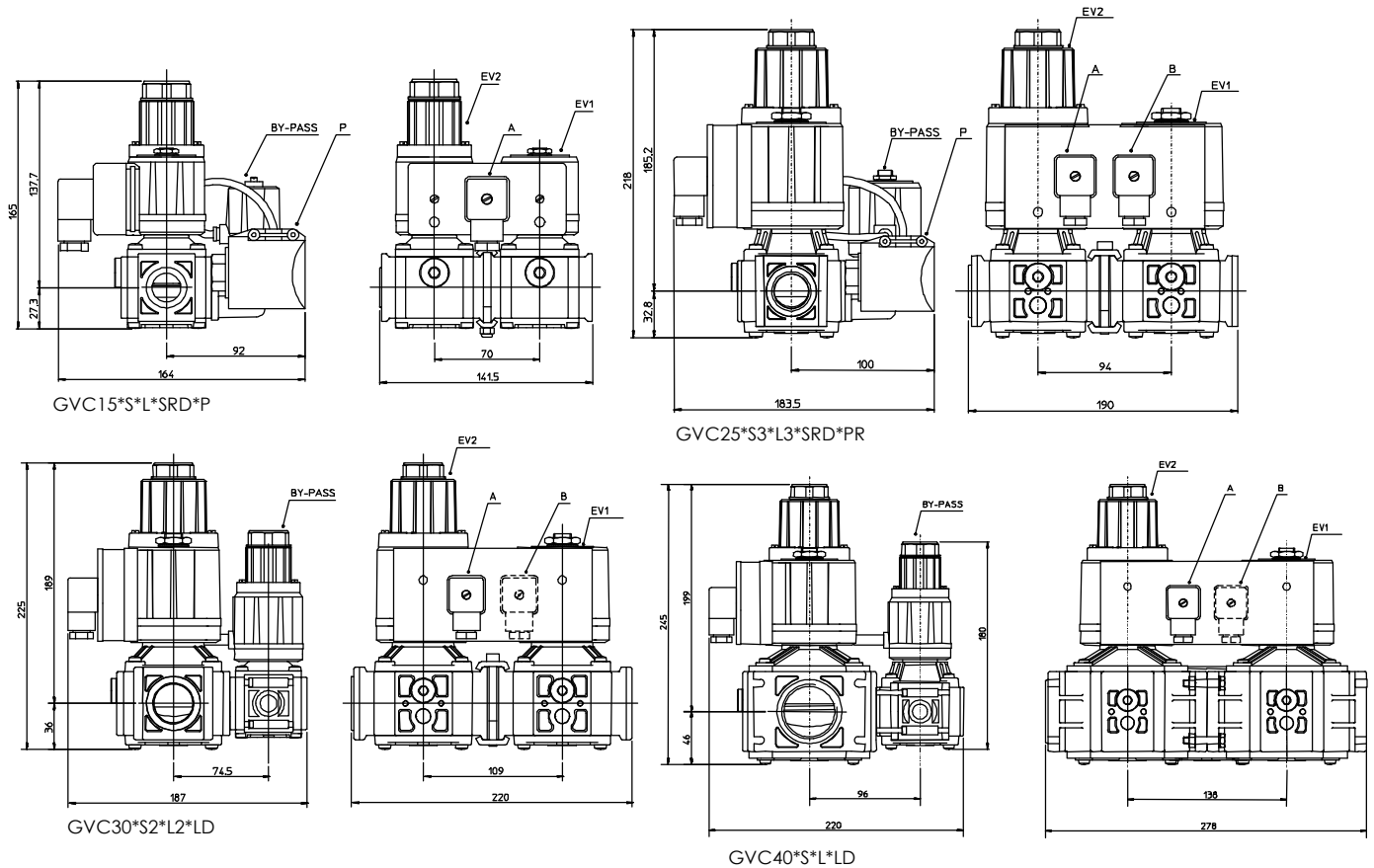
- A : Standard flow rate m<sup>3</sup>/h of NATURAL GAS relative density 0.554  
B : Standard flow rate m<sup>3</sup>/h of LPG relative density 1.54  
C : Standard flow rate m<sup>3</sup>/h of TOWN GAS relative density 0.411  
D : Standard flow rate m<sup>3</sup>/h of AIR relative density 1

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



**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.

### 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".