

Spectrotec



**Pressure control panels BU13
for technical gases up to 300 bar**

BU13 series pressure control panels



Pressure control panel
BU13-1x1



Pressure control panel
BU13-1x2



Pressure control panel
BU13-2x1



Pressure control panel
BU13-2x2

Product features

- Pressure control panels for high flow rates
- For non-corrosive technical gases
- Ergonomically designed
- Modular design (to be extended to 1x2, 1x3, 2x2, 2x3 etc. cylinders)
- Filter at the process gas inlet valve
- Central filter in the regulator
- Pressure regulator with compensated main valve
- Regulator with high control accuracy and integrated relief valve
- Shut-off valves with On/Off-position indicators
- Process gas and purge valve in the inlet
- Safety pressure gauges acc. to DIN-EN-ISO 5171: 2010
- Optional safety devices acc. to DIN EN 730
- Designed for easy installation
- Approved for use with oxygen
- Suitable for inlet pressure values of up to 300 bar
- Single-sided and double-sided models available
- Automatic change-over models please refer to data sheet BU13&15-2U

Technical Data

Type	single-stage
Inlet pressure P_1	max. 300 bar
Outlet pressure P_2	max. 10 / 20 / 35 bar Oxygen: max. 30 bar

Materials

Body:	Brass
Bonnet:	Aluminium, coated
Diaphragm regulator:	NBR
Valve seat regulator:	PA 11
Filter process gas valve:	Sintered bronze
Filter regulator:	Nickel
Mounting plates:	Stainless steel

Flow rates	see tables on page 3
-------------------	----------------------

Connectors

Inlets:	G 1/2" male
Outlet relief valve:	G 3/8" male
Outlet:	1/2"-NPT female

Temperature range	-30°C up to +60°C
--------------------------	-------------------

Leak rate	$<10^{-3}$ mbar l/s He
------------------	------------------------

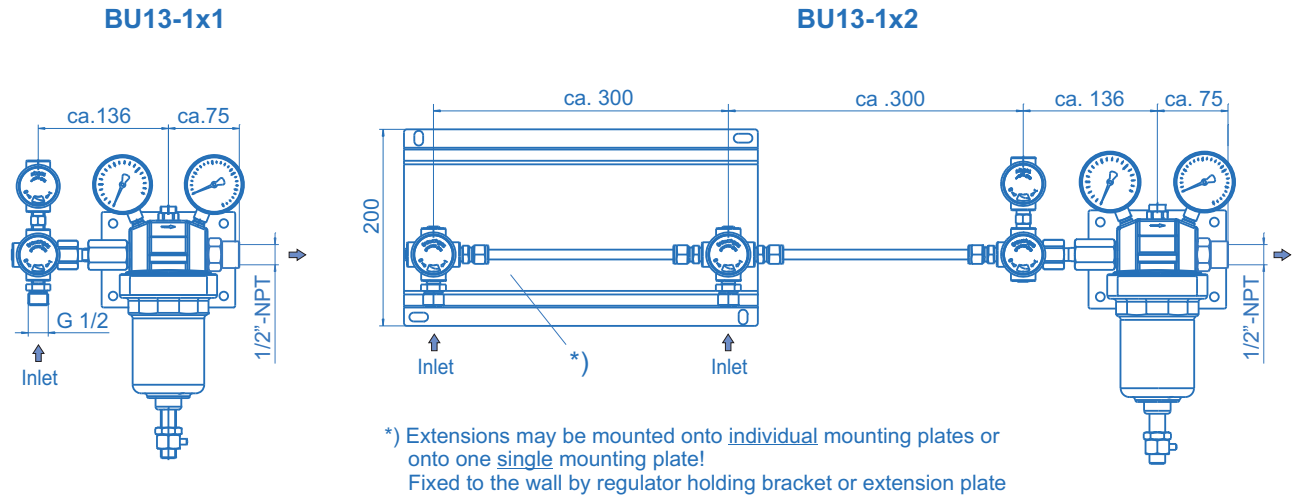
Weight

BU13-1x1/1x2/1x3:	6.5 / 7.6 / 8.7 kg
BU13-2x1/2x2/2x3:	8.1 / 10.3 / 12.5 kg

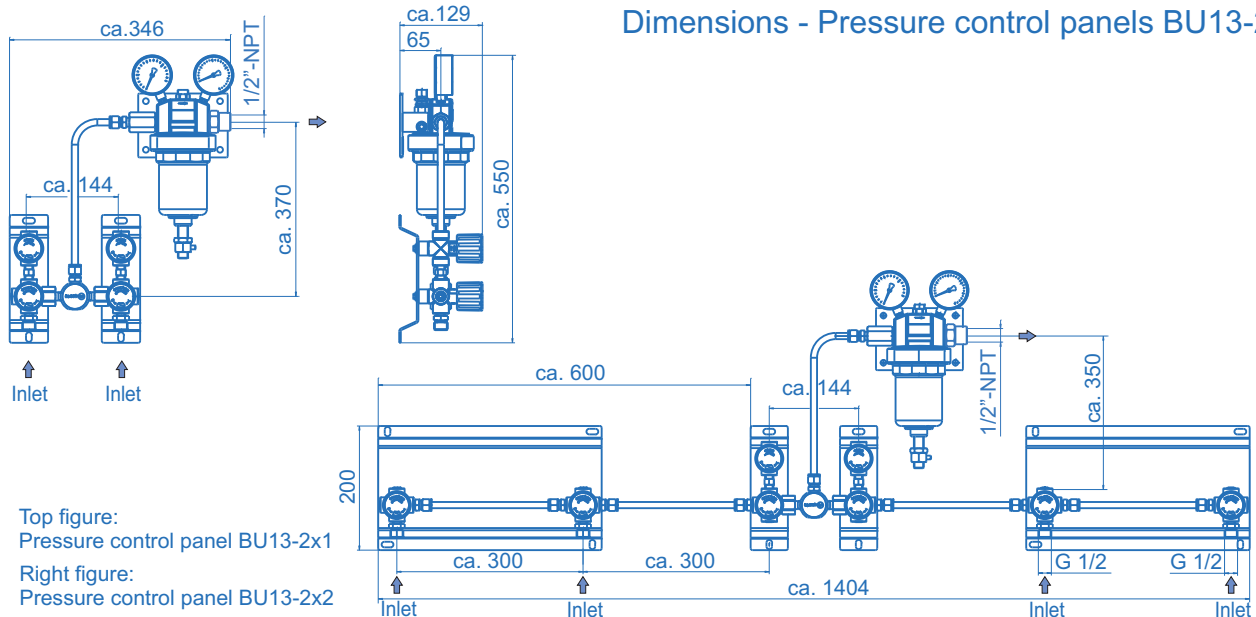
Pressure control panels BU13-1 / -2



Dimensions - Pressure control panel BU13-1



Dimensions - Pressure control panels BU13-2



Flow rates pressure control panel BU13:

The tables below provide approximate values for the flow rate in standard cubic meters of compressed air at the indicated operating conditions. The flow rates for other gas types may be estimated using the conversion factors from the table on the right.

The outlet pressure values indicated in the table take the pressure losses of approx. 10% of the nominal outlet pressure at the given flow rates into account.

For detailed flow rate calculations please refer to our data sheet "Performance diagram".

Conversion factors

Gas type	factor
Oxygen	0.95
Nitrogen	1.02
Hydrogen	3.79
Argon	0.85
Carbon dioxide	0.81
Helium	2.69

Table 1: Pressure regulator models **W6/G**
Outlet pressure adjustable up to **10 or 20 bar**
Performance factor $L_{10} = 7$

Inlet press. [bar]	Flow rate [m³/h] at outlet press. P_2 [bar]		
	6	12	18
40	350	320	340
20	180	170	105
10	85	-	-

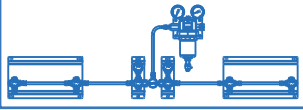
Table 2: Pressure regulator models **W5/D**
Outlet pressure adjustable up to **28 bar**
Performance factor $L_{10} = 6$

Inlet press. [bar]	Flow rate [m³/h] at outlet press. P_2 [bar]			
	6	12	18	24
60	320	300	300	310
40	220	200	215	210
20	105	110	70	-
10	55	-	-	-

Table 3: Pressure regulator models **W4/D**
Outlet pressure adjustable up to **35 bar**
Performance factor $L_{10} = 4.5$

Inlet press. [bar]	Flow rate [m³/h] at outlet press. P_2 [bar]				
	6	12	18	24	30
70	170	165	160	180	190
40	110	105	105	105	95
20	55	50	30	-	-
10	25	-	-	-	-

Ordering example:
BU13-2x2-10-M-0-N₂



Ordering information:
BU13 series pressure control panels

BU13 - 2 x 2 - 10 - M - 0 - N₂

Type

- 1x1 - single-sided 1x1-cylinder/bundle control panel
- 1xn - single-sided 1xn-cylinder/bundle control panel (1x1-panel with n extensions *)
- 2x1 - double-sided 2x1-cylinder/bundle control panel
- 2xn - double-sided 2xn-cylinder/bundle control panel (2x1-panel with 2xn extensions *)

Outlet pressure P₂

- 10 - up to 10 bar
- 20 - up to 20 bar
- 30 - up to 30 bar
- 35 - up to 35 bar (only for non flammable gases)

Gas type

Please specify the gas type with your order!

Flashback arrestor

- 0 - without flashback arrestor
- FS - flashback arrestor mounted in the outlet (e.g. for H₂)

Inlet press. indication

- M - pressure gauge
- K - contact pressure gauge

*) For n-cylinder panels the block valves on the regulator panel are used as central shut-off-valves. Therefore one extension per cylinder/bundle is required (see example 2x2: 2 extension panels + 2 extensions).

Specifications

- SPECTROTEC - components guarantee maximum quality by using high grade materials and a quality assurance program acc. to DIN ISO 9001.
- All components which come into contact with the medium are cleaned free of oil and grease before the assembly.
- SPECTROTEC - components undergo a 100% leak- and function test.

Applications

- Central gas supply systems for one or more tapping points for a maximum cylinder pressure of 300 bar
- For all gases compatible with the materials used in the products, e.g. compressed air, oxygen, nitrogen, carbon dioxide, forming gas, hydrogen, methane and rare gases

Pressure indication

- All pressure control panels may be equipped with contact pressure gauges for indication and monitoring of the inlet pressure .

Important note regarding component selection

- In order to assure safe operation it is essential to take the configuration of the whole system into account when selecting a control panel.
- The function of the components, the compatibility of the materials, correlating temperature ranges, correct installation, operation and maintenance in accordance with the relevant regulations are the responsibility of the system designer and the user.

For further information we recommend the following brochures:

- Pressure control panels BU13AC for acetylene
- Pressure control panels BT2000
- Pressure control panels BT2000AC for acetylene
- Performance diagram
- Central Gas Supply for technical gases