

# Spectrotec



**Pressure control panels BT2000  
for industrial gases up to 300 bar**

## Pressure control panels BT2000



BT2000-2x2, two-sided (manual change over), completely assembled with extensions



BT2000-2Lx1 (automatic change over)



BT2000-1x1, single-sided

### Product features

- Wall-mounting pressure control panels
- For non-corrosive industrial gases
- Ergonomically designed
- Modular design (to be extended to 2, 3 etc. cylinders)
- Filter at the process gas inlet valve
- Central filter in the regulator
- Regulator with high control accuracy
- Shut-off-valves with On/Off position indicators
- Process gas and purge valve on the inlet pressure sides
- Safety pressure gauges acc. to DIN EN ISO 5171
- Stainless steel mounting plates
- Designed for easy installation
- Tested for use with oxygen
- Suitable for inlet pressure values up to 300 bar
- Single-sided, manual or automatic change-over models available
- Piston-type regulators for outlet pressure values of up to 50 or 100 bar available

### Technical data

<b>Type</b>	single-stage
<b>Inlet pressure <math>P_1</math></b>	max. 300 bar
<b>Outlet pressure <math>P_2</math></b>	max. 10/20/50/100 bar
for 2L-models:	8-12 bar / 17-23 bar / 46-54 bar / 95-105 bar
<b>Materials</b>	
Bodies:	Brass
Diaphragm ( $P_2$ up to 20 bar):	EPDM
Piston ( $P_2 > 20$ bar):	Brass
Valve seat regulator:	PA
Mounting plate:	Stainless steel
Filter process gas valve:	Sintered bronze
Filter regulator:	Sintered SS 316L
<b>Flow rates</b>	see table
<b>Connectors</b>	Inlets: G 1/2" male
	Outlet: 1/4"-NPT female
	Relief valve: 1/8"-NPT female
<b>Temperature range</b>	-30°C to +60°C
<b>Leak rate</b>	$<10^{-4}$ mbar l/s He
<b>Weight</b>	
BT2000-1/-2/-2L:	3.7 / 5.5 / 7.5 kg
Extensions:	1.1 kg (per piece)

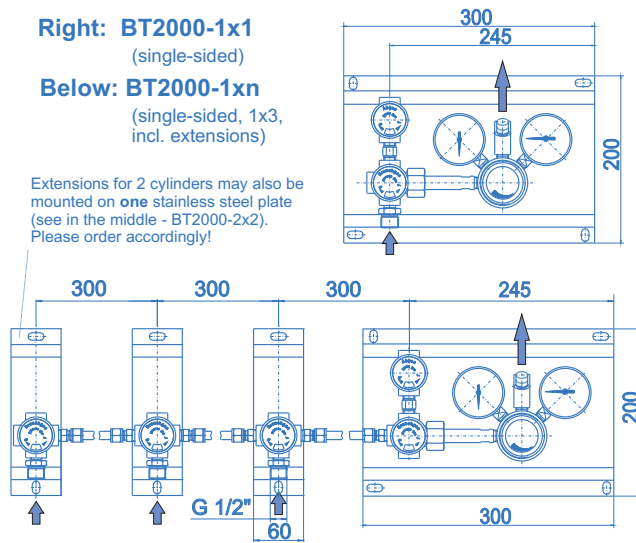
# Pressure control panels BT2000



**Right: BT2000-1x1**  
(single-sided)

**Below: BT2000-1xn**  
(single-sided, 1x3,  
incl. extensions)

Extensions for 2 cylinders may also be mounted on **one** stainless steel plate (see in the middle - BT2000-2x2). Please order accordingly!



## Flow rates pressure regulator BT2000:

Oxygen Inlet pressure (P <sub>1</sub> ) [bar]	Flow rate (V <sub>n</sub> ) [m <sup>3</sup> /h] at outlet press. (P <sub>2</sub> ) [bar]			
	1	2,5	4	10
40	15	30	40	50
20	15	20	25	30
10	15	15	15	--
5	10	10	10	--

The flow rates for other pressure values can be found in the Performance diagram.  
Performance factor  
BT2000: L<sub>10</sub> = 2.5

For other gas types the flow rate must be multiplied with these factors:

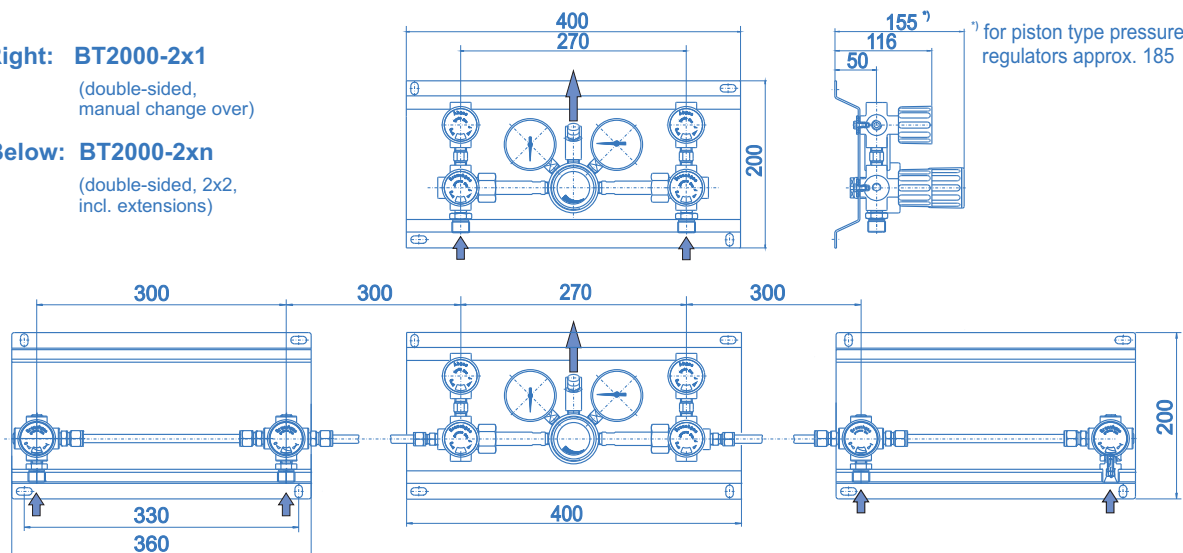
<b>Nitrogen</b>	<b>1.05</b>
<b>Hydrogen</b>	<b>4.00</b>
<b>Argon</b>	<b>0.90</b>
<b>Carbon dioxide</b>	<b>0.85</b>
<b>Helium</b>	<b>2.83</b>

**Right: BT2000-2x1**

(double-sided,  
manual change over)

**Below: BT2000-2xn**

(double-sided, 2x2,  
incl. extensions)

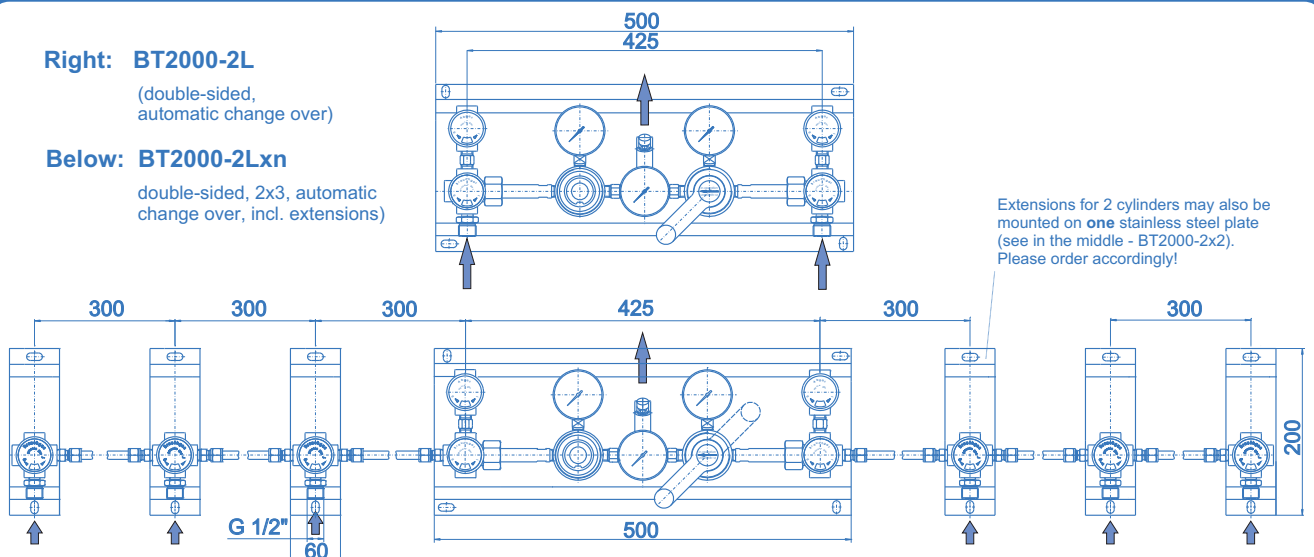


**Right: BT2000-2L**

(double-sided,  
automatic change over)

**Below: BT2000-2Lxn**

double-sided, 2x3, automatic  
change over, incl. extensions)



Ordering information:  
Pressure control panels BT2000

**BT2000 - 1 x 3 - 10 - M - N<sub>2</sub>**

Pressure control panels  
BT2000 for acetylene  
see data sheet  
BT2000AC

## Series

BT2000 series pressure control panels

## Type

- 1x1 - single-sided one-cylinder panel
- 1xn - single-sided n-cylinder panel  
(1x1-panel c/w n extensions \*)
- 2x1 - two-cylinder panel with manual switch-over
- 2xn - n-cylinder panel with manual switch-over  
(2x1-panel c/w 2xn extensions \*)
- 2Lx1 - two-cylinder panel with automatic switch-over
- 2Lxn - n-cylinder panel with automatic switch-over  
(2Lx1-panel c/w 2xn extensions \*)

\*) For n-cylinder panels the block valves on the regulator panels are used as central shut-off- and purge-valves. Therefore one extension per cylinder is required (see example 1x3: regulator panel + 3 extensions).

## Gas type

Please specify gas type with your order (for marking the equipment)

## Inlet press. indication

- M - pressure gauge
- K - contact pressure gauge

## Outlet pressure P<sub>2</sub>

- 10 - up to 10 bar \*
- 20 - up to 20 bar \*
- 50 - up to 50 bar \*\*
- 100 - up to 100 bar \*\*
- 200 bar on request
- \* diaphragm type regulator
- \*\* piston type regulator

## 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 BT2000AC for acetylene
- Pressure control panels BU13 for high flow rates
- Pressure control panels BU13AC for acetylene
- Performance diagram - How to find the right pressure regulator
- Central gas supply for technical gases