



## Size 1

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## General

The operational safety and durability of a pneumatic circuit depends on the quality of the compressed air. The compressed air and the moisture increase the rate of wear of the surfaces and seals, reducing the efficiency and the life of the pneumatic components. Furthermore the pressure fluctuation due to a discontinuous demand of air, adversely effect the correct operation of the circuit.

To eliminate these disadvantages it is essential to install the service units: filter, pressure regulator and lubricator.

## Construction and working characteristics

The great advantage of these Air Service Unit's components is their Modular Design which allows their assembly without the use of additional devices.

Two different version have been designed for this size: one made with zinc alloy body and the other with reinforced technopolymer body and threaded brass connections.

The bowls are made of transparent technopolymer and are also available with shock resistant technopolymer protection on request, always allowing the moisture and oil level control from any angle.

The filter can be equipped with manual or semiautomatic water drain valve; furthermore it's possible to install the automatic draining device inside the bowl.

The pressure regulator handle is lockable in the desired position by simply pressing it downwards.

The lubricator oil flow is adjustable with proper handle and it is visibly checked through the sight dome.

The shut-off valve can be equipped with pad-lock to prevent accidents or damages due to unauthorized operation.

The progressive start-up valve, pneumatically or electropneumatically controlled, allows air supply to the circuit progressively and with adjustable time.

The accessories like the wall fixing brackets, pressure gauges with different scales and diameters and the air intake blocks are completing the range. They are assembled between the elements to get filtered or filtered non-lubricated air in the system.

## Instruction for installation and operation

Pay attention to install a group or a single component with air flow direction according to the arrows and to the following sequence: filter, pressure regulator, lubricator and with bowls downwards. The group can be fixed to the wall by removing the covers, which can be installed again after fixing for covering the screws.

Do not exceed the recommended torque while assembling the connectors.

Do not exceed the recommended air pressure and temperature limits.

The moisture should not exceed the level marked on the bowl and it can be drawn off and carried by a flexible tube of Ø 6/4 directly connected to the discharge valve handle.

The pressure should be set from minimum to maximum, rotating the adjusting handle clockwise.

As lubricant, we suggest to use oil class FD22 or HG32. Verify that the lubricator is not fed with a flow lower than the minimum operational.

To set the oil flow rotate the proper adjusting handle in order to get one drop of oil every 300-600 liters of air.

The oil flow will be kept automatically and proportionally to the air flow.

The oil can be refilled by mean of proper plug or directly into the bowl after having de-pressurized the system. Do not exceed the maximum level indicated on the bowl.

## Maintenance

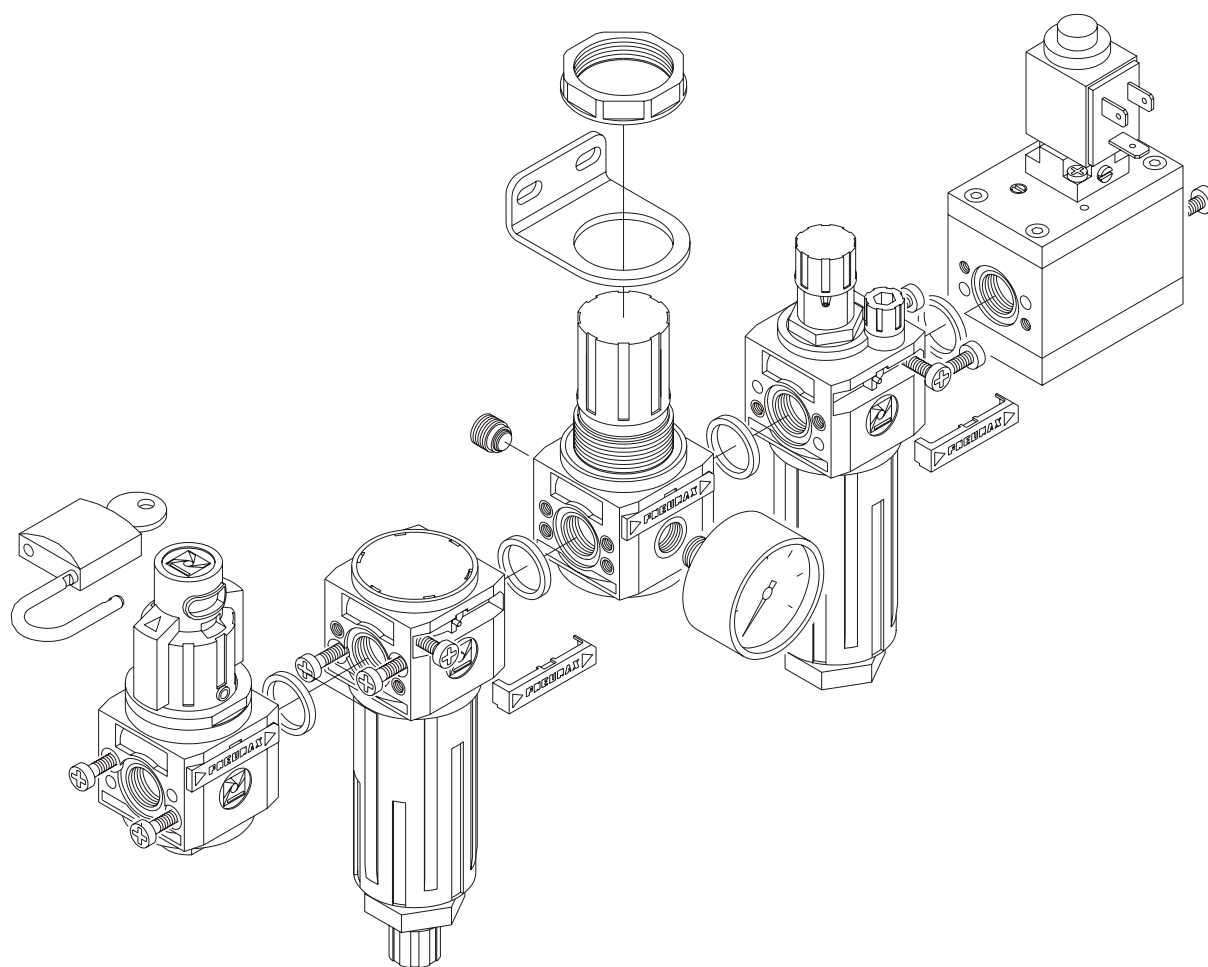
Clean the bowls with water and detergent. Do not use alcohol.

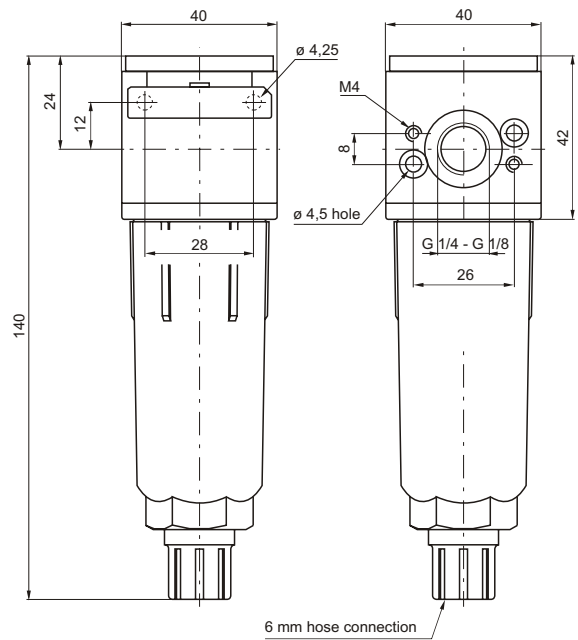
The filter element made with HPDE is reusable by blowing and cleaning it with proper detergent. For replacing or cleaning it, remove the bowl and unscrew the baffle spins.

Replace the pressure regulator diaphragm whenever the operation is not correct or there is a continuous air leaking through the relieving (over pressure discharge); reinstall the adjusting mechanism support, locking it with about 8 Nm torque. In case it is necessary to replace the lubricator transparent dome, tight it at 5 Nm torque maximum.



## Assembling





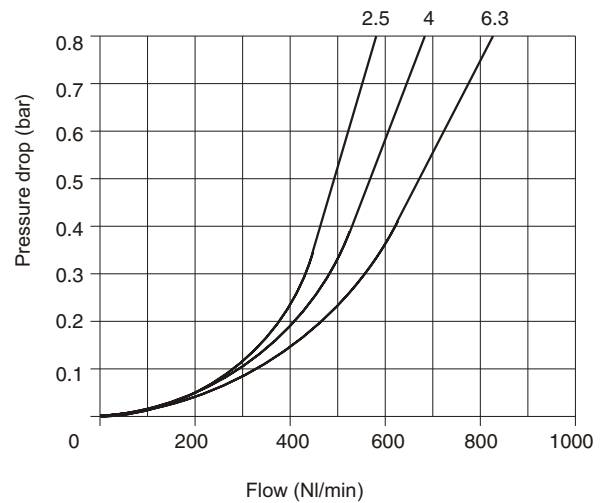
### Construction and working characteristics

- Double filtering action: by air centrifuging and by replaceable and reusable HDPE porous filter element.
- Zinc alloy body or reinforced technopolymer body with threaded brass insert connections.
- Wall mounting possibility with M4 screws protected by covers.
- Transparent technopolymer bowl screwed to the body.
- Shock resistant bowl technopolymer protection.
- Manual and semi-automatic water drain valve; in the semi-automatic version the drainage happens when there is no pressure or by pushing the valve up-wards.
- Possibility to see the water level on 360° also with bowl protection assembled.
- Automatic water drainage bowl available on request.

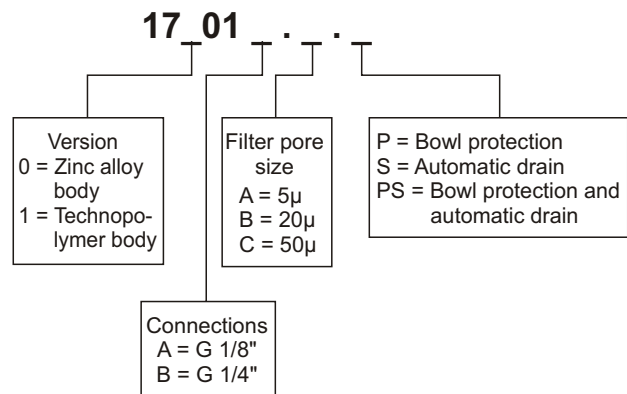
### Technical characteristics

Connections	G 1/8" - G 1/4"
Max. Inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature(at 10 bar)	50°C
Weight with technopolymer body	gr. 103
Weight with zinc alloy body	gr. 218
Filter pore size	5µ
	20µ
	50µ
Bowl capacity	17 cm <sup>3</sup>
Assembly position	Vertical
Wall fixing screw	M4
Max. fitting torque on zinc alloy body	30 Nm
Max. fitting torque on technopolymer body	15 Nm

Flow rate curves  
Inlet pressure (bar)

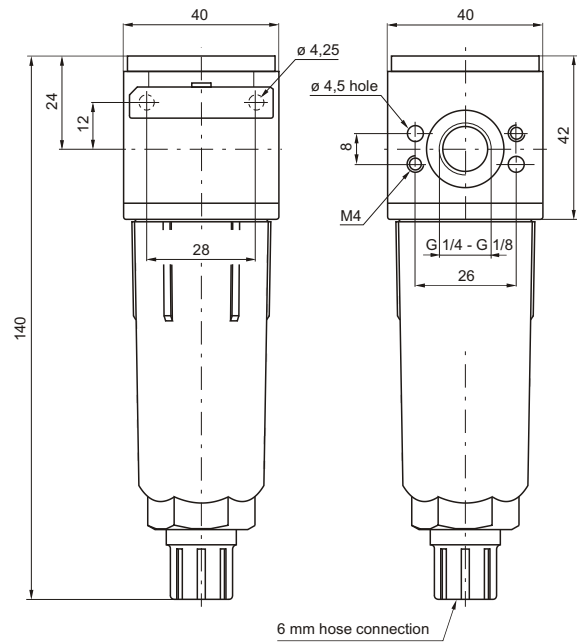


### Ordering code



Example: **17101A.B.P**

Filter size 1 with G 1/8" connections, filter pore size 20µ and bowl protection with technopolymer body.



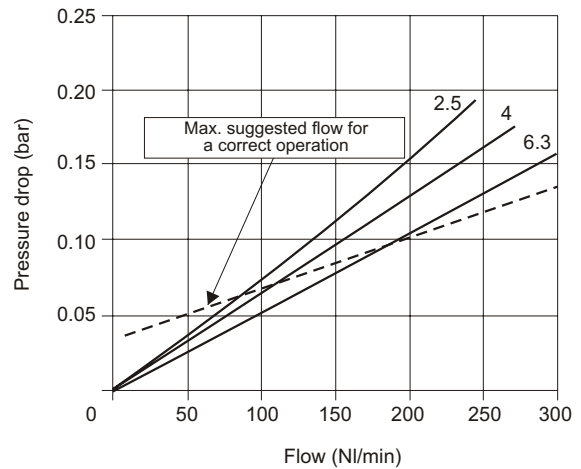
### Construction and working characteristics

- Coalescing filter element remove 0,1 $\mu$  particle equivalent to 99,97%.
- Zinc alloy body or reinforced technopolymer body with threaded brass insert connections.
- Wall mounting possibility with M4 screws protected by covers.
- Transparent technopolymer bowl screwed to the body.
- Shock resistant bowl technopolymer protection.
- Manual and semi-automatic water drain valve; in the semi-automatic version the drainage happens when there is no pressure or by pushing the valve up-wards.
- Possibility to see the water level on 360° also with bowl protection assembled.
- Automatic water drainage bowl available on request.

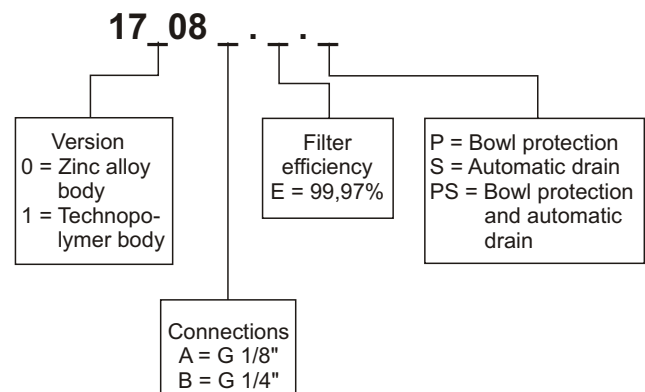
### Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature (at 10 bar)	50°C
Weight with technopolymer body	gr. 110
Weight with zinc alloy body	gr. 225
Filter efficiency with 0,1 $\mu$ particle	99,97%
Bowl capacity	17 cm <sup>3</sup>
Assembly position	Vertical
Wall fixing screws	M4
Max. fitting torque on zinc alloy body	30 Nm
Max. fitting torque on technopolymer body	15 Nm

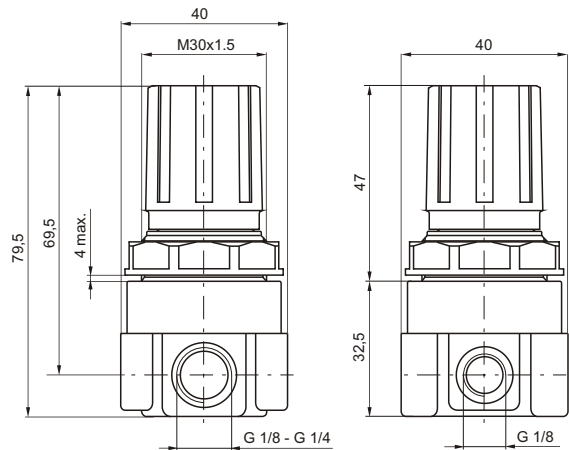
Flow rate curves  
Inlet pressure (bar)



### Ordering code



Example: **17108A.E.P**  
Filter size 1 with G 1/8" connections. Filter efficiency 99,97% and bowl protection with technopolymer body.



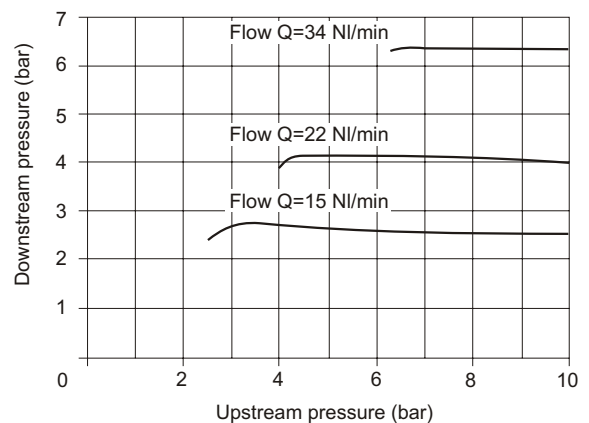
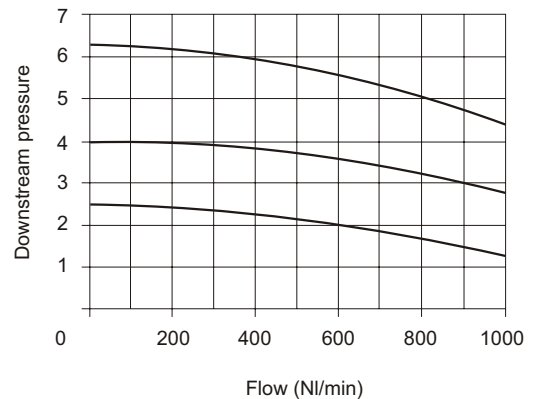
### Construction and working characteristics

- Diaphragm pressure regulator with relieving.
- Balanced poppet.
- Technopolymer body with metal reinforced threaded connections.
- Handle lockable in the desired position by simply pressing it downwards.
- Two pressure gauge connections with plug complete of seal.
- Panel mounting bracket.

### Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature	50°C
Pressure gauge connections	G 1/8"
Weight	gr. 110
Pressure range	0 - 2 bar 0 - 4 bar 0 - 8 bar 0 - 12 bar
Assembly position	Any
Max. fitting torque	15 Nm

Flow rate curves  
Inlet pressure (7 bar)



### Ordering code

**17109**

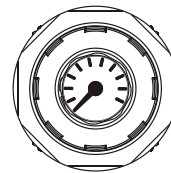
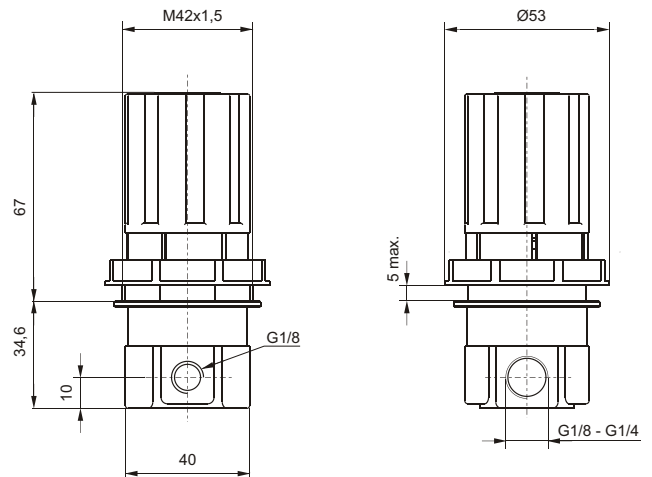
Connections  
A = G 1/8"  
B = G 1/4"

Adjusting range  
A = 0 - 2 bar  
B = 0 - 4 bar  
C = 0 - 8 bar  
D = 0 - 12 bar

L = No relieving  
SM = Improved relieving  
SR = Unbalanced valve  
SRM = Unbalanced valve with improved relieving  
SMF = Improved relieving with controlled relief

Example: **17109A.C**

Panel mounting pressure regulator size 1 with G 1/8" connections, 0 - 8 bar adjusting range with relieving.



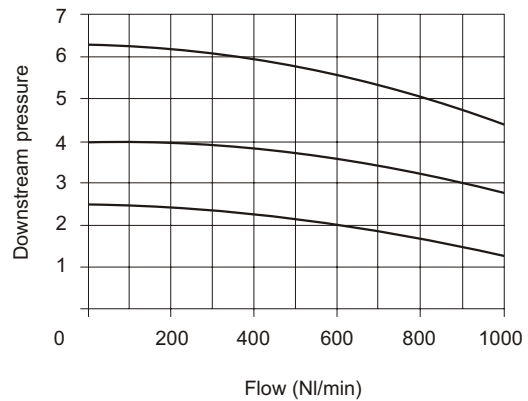
**Construction and working characteristics**

- Diaphragm pressure regulator with relieving.
- Balanced poppet.
- Technopolymer body with metal reinforced threaded connections.
- Handle lockable in the desired position by simply pressing it downwards.
- Including manometer in the handle upper surface.
- Panel mounting bracket.

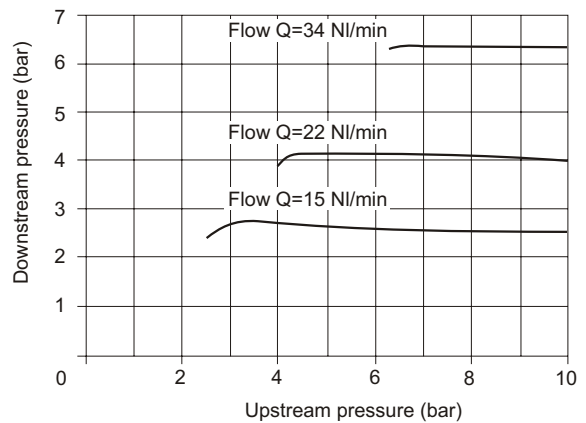
**Technical characteristics**

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature	50°C
Pressure gauge connections	G 1/8"
Weight	gr. 250
Pressure range	0 - 2 bar 0 - 4 bar 0 - 8 bar 0 - 12 bar
Assembly position	Any
Max. fitting torque	15 Nm

Flow rate curves  
Inlet pressure (7 bar)

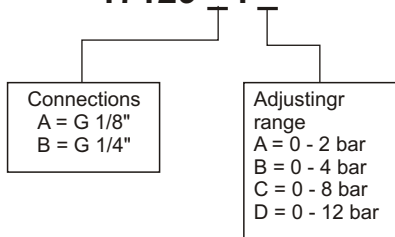


Adjustment characteristics



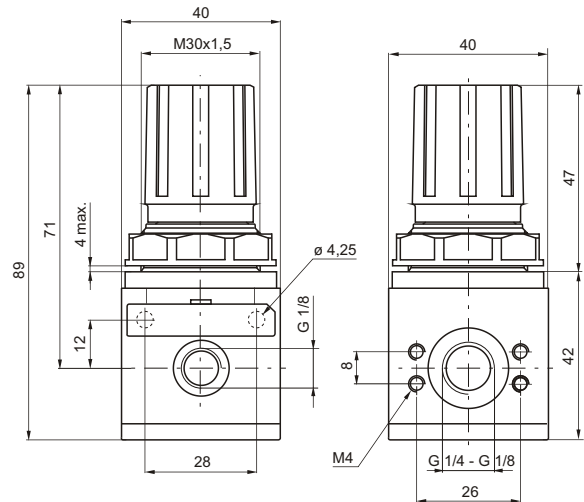
Ordering code

**17129**



Example: **17129A.C**

Panel mounting pressure regulator size 1 with G 1/8" connections, 0 - 8 bar.



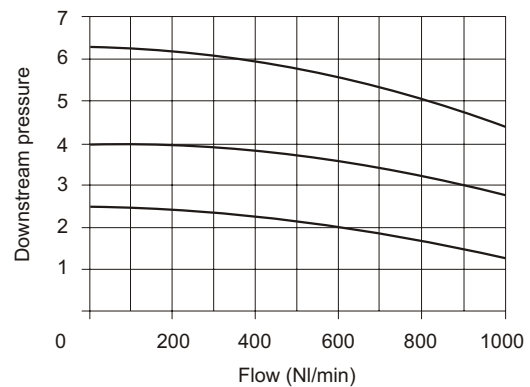
### Construction and working characteristics

- Diaphragm pressure regulator with relieving.
- Balanced poppet.
- Zinc alloy body or reinforced technopolymer body with threaded brass insert connections.
- Wall mounting possibility with M4 screws protected by covers.
- Handle lockable in the desired position by simply pressing it downwards.
- Two pressure gauge connections with plug complete of seal.
- Panel mounting bracket.

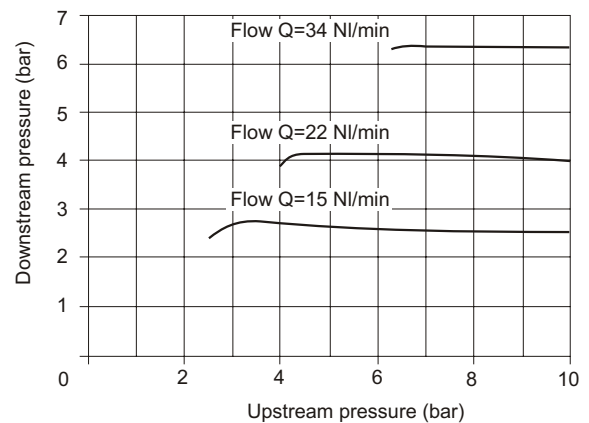
### Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature	50°C
Pressure gauge connections	G 1/8"
Weight with technopolymer body	gr. 135
Weight with zinc alloy body	gr. 250
Pressure range	0 - 2 bar 0 - 4 bar 0 - 8 bar 0 - 12 bar
Assembly position	Any
Wall mounting screws	M4
Max. fitting torque on zinc alloy body	25 Nm
Max. fitting torque on technopolymer body	15 Nm

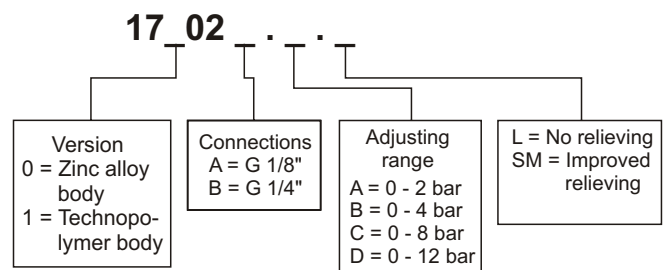
Flow rate curves  
Inlet pressure (7 bar)



Adjustment characteristics



### Ordering code



Example: **17102A.C**

Pressure regulator size 1 with G 1/8" connections and 0 - 8 bar adjusting range with relieving with technopolymer body.