



## Size 2

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## Construction and working characteristics

The modular air service units groups size 2, as the ones of size 1, allow a wide selection of combinations.

The threaded connections are machined directly on the valve body made with light alloy, so that each components can be used individually.

They can be wall mounted with head-guard screws masked by covers.

The bowls are made of transparent technopolymer, always supplied with shock resistant technopolymer protection, 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.

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.

Some accessories like the wall fixing bracket, pressure gauges with different scales and diameters, air intake block that assembled between the elements allows to get in the system filtered or filtered non-lubricated air, are completing the range.

## 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. It's possible to fix the group to the wall by removing the covers, which can be installed again for covering the screw after fixing.

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 away by a flexible tube of  $\varnothing 6/4$  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.

For opening the shut-off valve push and rotate clockwise the operating handle. For closing it and consequently discharging the down stream line, rotate the handle counter-clockwise.

## Maintenance

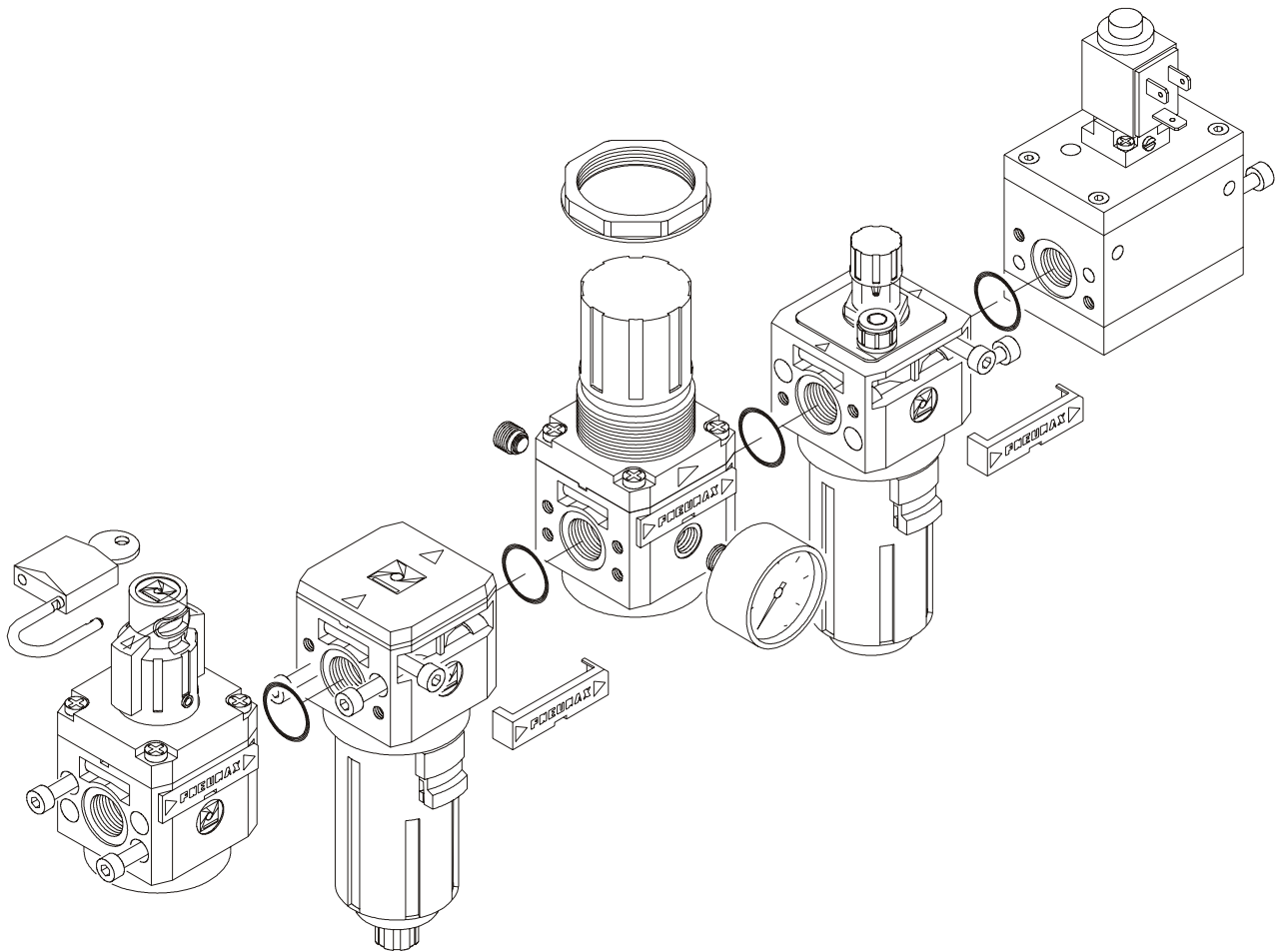
Clean the bowls with water and detergent. Do not use alcohol.

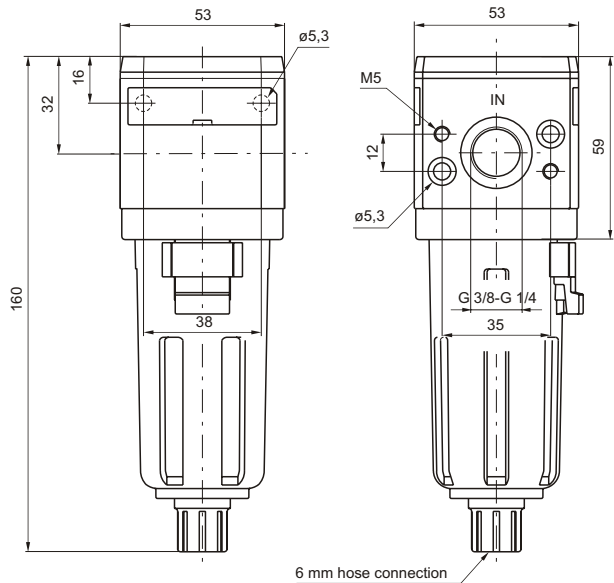
The filter element made with HPDE is reusable by blowing and cleaning it with proper detergent. For replacing or cleaning it, remove the bowl and unscrew the baffle spins.

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





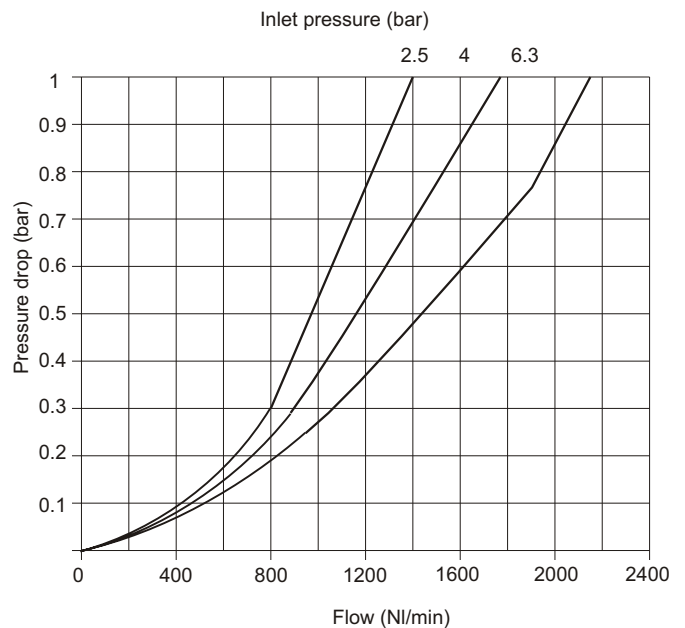
### Construction and working characteristics

- Body made with light alloy.
- Wall mounting possibility with M5 screws protected by covers.
- Double filtering action : by air centrifuging and by replaceable and reusable HDPE porous filter element.
- Transparent technopolymer bowl with shock resistant technopolymer protection connected to the body with bayonet cap and safety button.
- 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°.
- Automatic water drainage bowl available on request.

### Technical characteristics

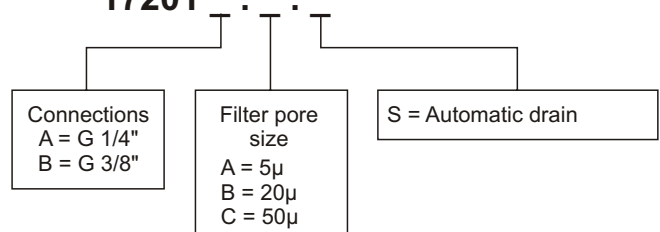
Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature (at 10 bar)	50°C
Weight	gr. 255
Filter pore size	5µ
	20µ
	50µ
Bowl capacity	28 cm <sup>3</sup>
Assembly position	Vertical
Wall fixing screws	M5
Max. fitting torque	25 Nm.

Flow rate curves

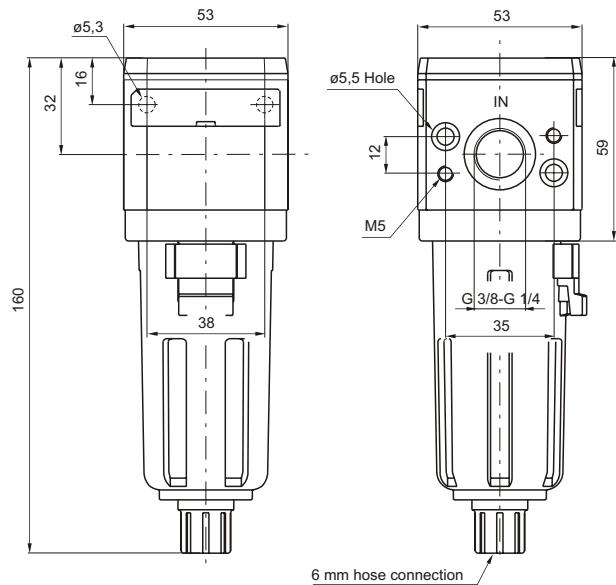


Ordering code

**17201**



Example: **17201A.B**  
Filter size 1 with G 1/8" connections and filter pore size 20µ.



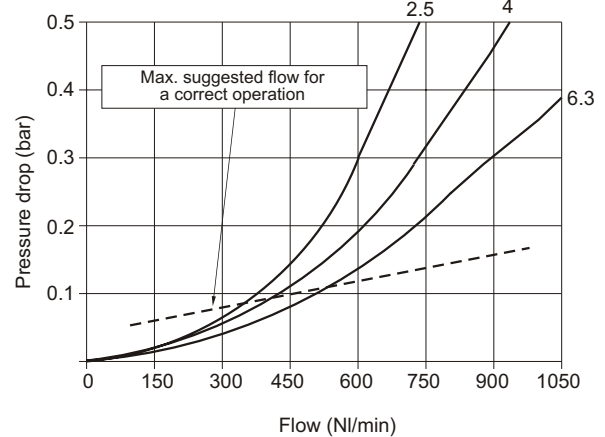
### Construction and working characteristics

- Coalescing filter element remove  $0,1\mu$  particles equivalent to 99,97%.
- Body made with light alloy.
- Wall mounting possibility with M5 screw protected by covers.
- Transparent technopolymer bowl with shock resistant technopolymer protection connected to the body with bayonet cap and safety button.
- 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  $360^\circ$  also with Bowl protection assembled.
- Automatic water drainage bowl available on request.

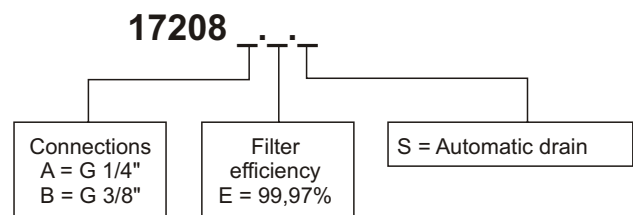
### Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature (at 10 bar)	50°C
Weight	gr. 255
Filter efficiency with $0,1\mu$ particle	99,97%
Bowl capacity	28 cm <sup>3</sup>
Assembly position	Vertical
Wall fixing screws	M5
Max. fitting torque	25 Nm

Flow rate curves  
Inlet pressure (bar)

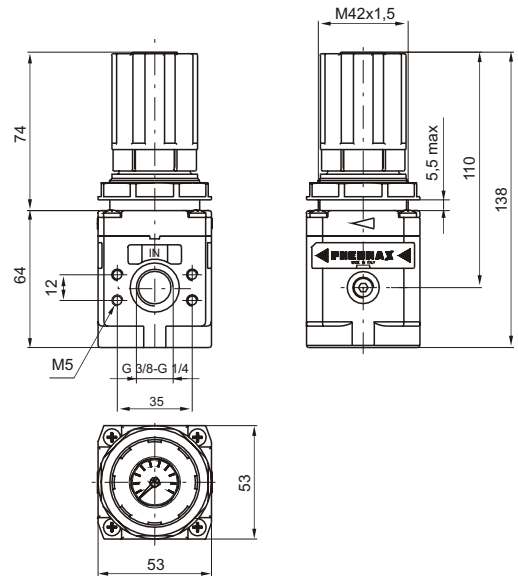


### Ordering code



Example: **17208A.E**  
Coalescing filter size 2 with G 1/4" connections and filter efficiency of 99,97%.





**Construction and working characteristics**

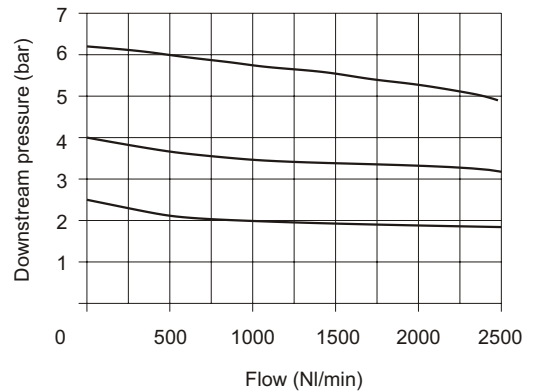
- Diaphragm pressure regulator with relieving.
- Pressure gauge included on the top of adjusting knob.
- Balanced poppet.
- Lockable handle by simply pressing it downwards in the desired position.
- Body made with light alloy.
- Wall mounting possibility with M5 screws protected by covers.
- Panel mounting bracket.

**Technical characteristics**

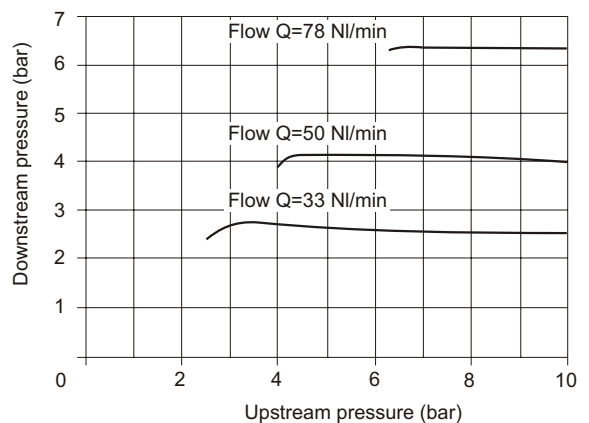
Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature	50°C
Pressure gauge connections	G 1/8"
Weight	gr. 440
Pressure range	0 - 2 bar
	0 - 4 bar
	0 - 8 bar
	0 - 12 bar
Assembly position	Any
Wall fixing screws	M5
Max. fitting torque	25 Nm

Flow rate curves

Inlet pressure (7 bar)

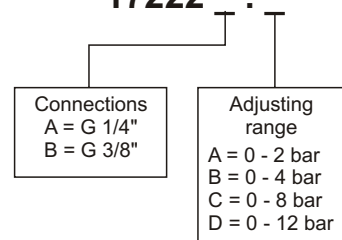


Adjustment characteristics

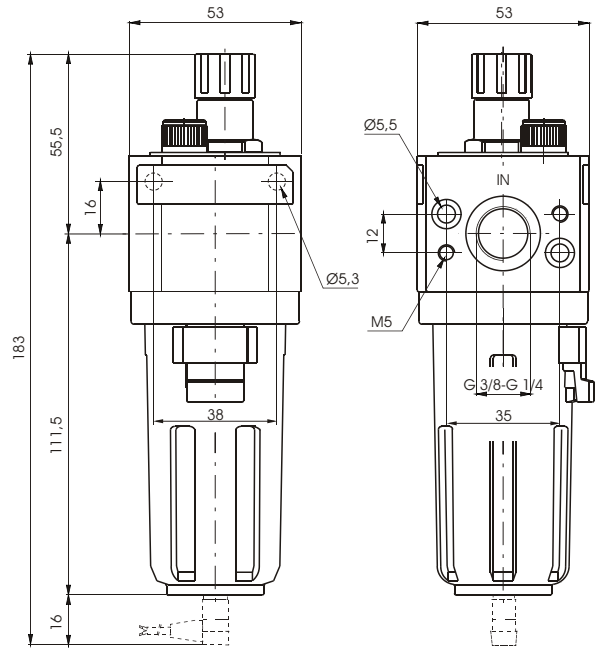


Ordering code

**17222**



Example: **17222A.C**  
 Pressure regulator with G 1/4" connections, adjusting range 0 - 8 bar with relieving.



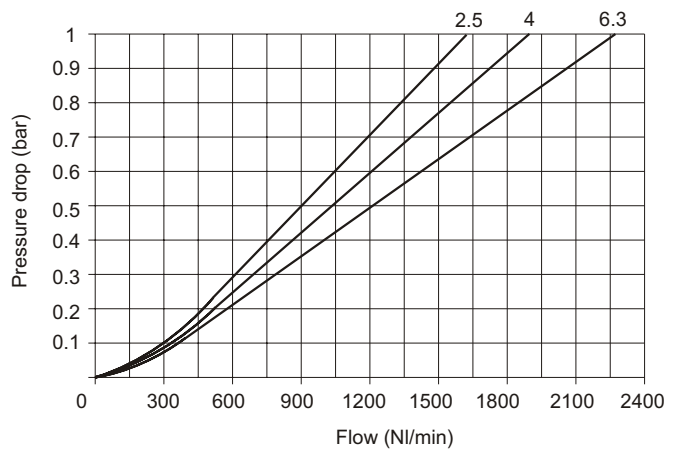
### Construction and working characteristics

- Fog type lubrication with variable section orifice according to the flow.
- Body made with light alloy.
- Wall mounting possibility with M5 screws protected by covers.
- Transparent technopolymer bowl with shock resistant technopolymer protection
- Possibility to see the min. and max. level on 360° also with bowl protection assembled.
- Bowl assembled to the body with bayonet cap and safety button.
- Transparent technopolymer sight dome with adjusting handle.
- Oil filling plug.
- Electrical connector for low level indication. Use the C1, C2 or C3 lead for connection ( see section 8, catalogue 4 "Cylinders").

### Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature (at 10 bar)	50°C
Weight	gr. 280
Indicative oil drip rate	1 drop every 300/600 NI
Oil type	FD22 - HG32
Bowl capacity	50 cm <sup>3</sup>
Assembly position	Vertical
Wall mounting screws	M5
Min. operational flow	20 NI/min
Max. fitting torque	25 Nm

Flow rate curves  
Inlet pressure (bar)



### Ordering code

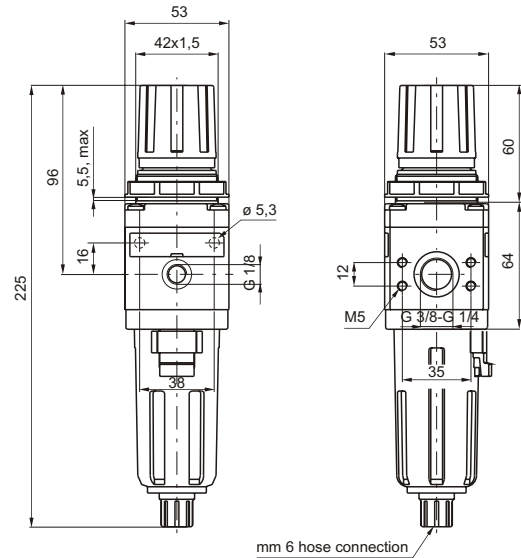
**17203**

Connections  
A = G 1/4"  
B = G 3/8"

MA = Minimum oil level indicator N.O.  
with plug connector  
MC = Minimum oil level indicator N.C.  
with plug connector

Note: on MA version the contact is open when the bowl is filled  
on MC version the contact is closed when the bowl is filled

Example: **17203A**  
Lubricator with G 1/4" connections.



### Construction and working characteristics

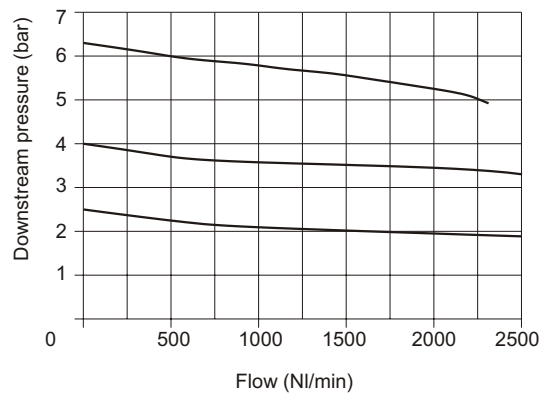
- Filter - diaphragm pressure regulator with relieving.
- Balanced poppet.
- Lockable handle by simply pressing it downwards in the desired position.
- Body made with light alloy.
- Wall mounting possibility with M5 screws protected by covers.
- Double filtering action: by air centrifuging and by replaceable and reusable HDPE porous filter element.
- Transparent technopolymer bowl with shock resistant technopolymer protection connected to the body with bayonet cap and safety button.
- 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.
- Two pressure gauge connections with plug complete of seal.

### Technical characteristics

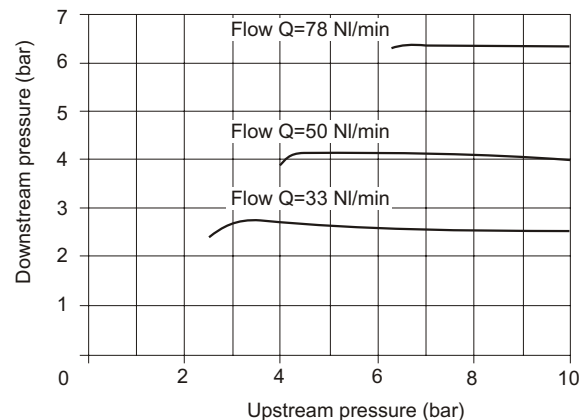
Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature (at 10 bar)	50°C
Pressure gauge connections	G 1/8"
Weight	gr. 450
Pressure range	0 - 2 bar
	0 - 4 bar
	0 - 8 bar
	0 - 12 bar
Filter pore size	5µ
	20µ
	50µ
Bowl capacity	28 cm <sup>3</sup>
Assembly position	Vertical
Wall mounting screws	M5
Max. fitting torque	25 Nm

Flow rate curves

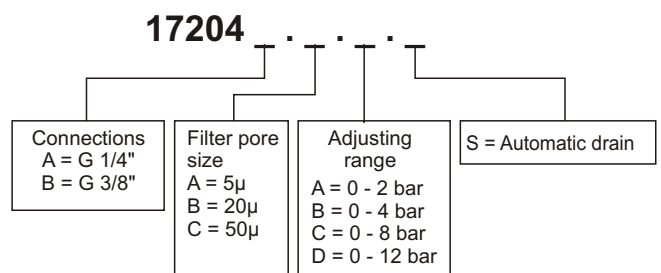
Inlet pressure (7 bar)



Adjustment characteristics

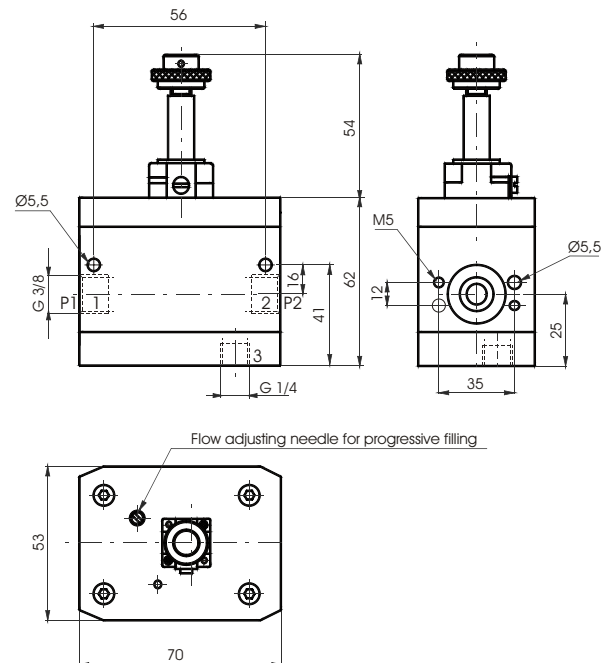
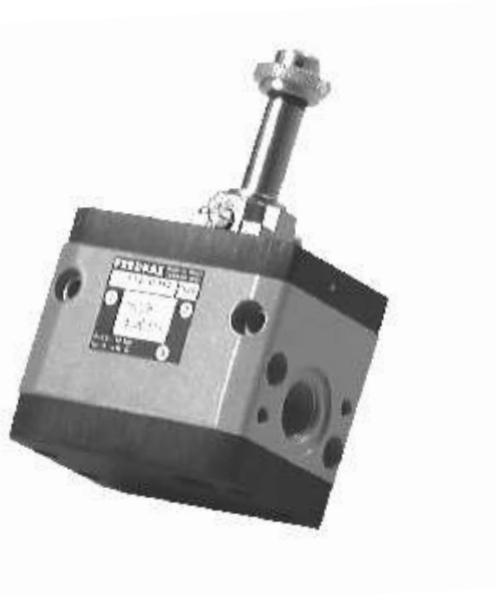


Ordering code



Example: **17204A.B.C**

Filter - pressure regulator size 2 with G 1/4" connections, filter pore size 20µ and adjusting range 0-8 bar.



### Construction and working characteristics

- 3-way valve with double poppet.
- Possibility to adjust the down stream circuit filling time by the enclosed adjustable metering screw.
- Quick down stream circuit discharge.
- Possibility for a pneumatic or electric piloting control.
- Body made with anodized 2011 aluminum alloy.
- Wall mounting possibility with M5 screws.

### Technical characteristics

Connections	G 3/8"
Max. inlet pressure	10 bar - 1 MPa
Max. ambient temperature	50°C
Weight	gr. 595
Assembly position	Any
Wall mounting screws	M5
Min. operating pressure	2.5 bar - 0.25 Mpa
Nominal flow at 6 bar with $\Delta p=1$	1700 NI/min.
Flow with adjustable metering screw fully open	340 NI/min

**Important note:** the preventive or programmed maintenance of this product is not foreseen considering the elaborated assembling and the specific "PNEUMAX" testing; therefore, call the producer or its representative in case of necessity.

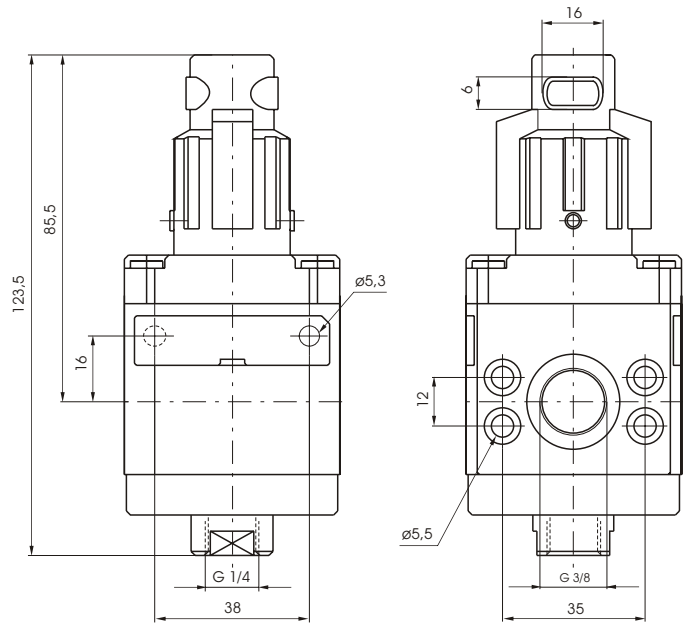
### Ordering code

#### 17210.M2

Electrically controlled progressive start-up valve size 2, complete with mechanic for M2 microsolenoid valve.

#### 17220

Progressive start-up valve size 2 with pneumatic control.



2

**Construction and working characteristics**

- 3 ways poppet valve.
- Body made with anodized aluminum alloy 2011.
- Wall mounting possibility with M5 screws protected by covers.
- Double handle action for valve opening: pushing and rotating (clockwise).
- Simple rotate the valve handle counter clockwise for valve closing and down stream circuit discharging.
- Possibility to lock the valve in the discharging position by fitting in a padlock in the proper seat.

**Important note:** the preventive or programmed maintenance of this product is not foreseen considering the elaborated assembling and the specific "PNEUMAX" testing; therefore, call the producer or its representative in case of necessity.

**Technical characteristics**

Connections	G 3/8"
Max. inlet pressure	13 bar - 1.3 MPa
Max. ambient temperature	50°C
Weight	gr. 380
Assembly position	Any
Nominal flow at 6 bar with Δp=1	2100 NI/min.
Wall mounting screws	M5
Handle opening and closing angle	90°
Max. fitting torque	25 Nm

Ordering code

**17230 .**

- A = Not lockable handle
- B = Lockable handle
- M2 = Electric with M2
- M2/9 = Electric with M2/9
- PN = Pneumatic

Example: **17230.B**  
Shut-off valves size 2 complete with lockable handle.



### Construction and working characteristics

- Filter - diaphragm pressure regulator with relieving.
- Balanced poppet.
- Double filtering action: by air centrifuging and by replaceable and reusable HDPE porous filter element.
- Body made with light alloy.
- Wall mounting possibility with M5 screws protected by covers.
- Lockable handle by simply pressing it downwards in the desired position.
- Transparent technopolymer bowl with shock resistant technopolymer protection connected to the body with bayonet cap and safety button.
- 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.
- Two pressure gauge connections with plug complete of seal.
- Fog type lubrication with variable section orifice according to the flow.
- Transparent technopolymer sight dome with adjusting handle.
- Oil filling plug.

### Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature (at 10 bar)	50°C
Pressure gauge connections	G 1/8"
Weight	gr. 750
Pressure range	0 - 2 bar 0 - 4 bar 0 - 8 bar 0 - 12 bar
Filter pore size	5µ 20µ 50µ
Bowl capacity	28 cm <sup>3</sup>
Oil type	FD22 - HG32
Indicative oil drip rate	1 drop every 300/600 NI
Bowl capacity	50 cm <sup>3</sup>
Min. operational flow at 6,3 bar	20 NI/min
Assembly position	Vertical
Wall mounting screws	M5
Max. fitting torque	25 Nm



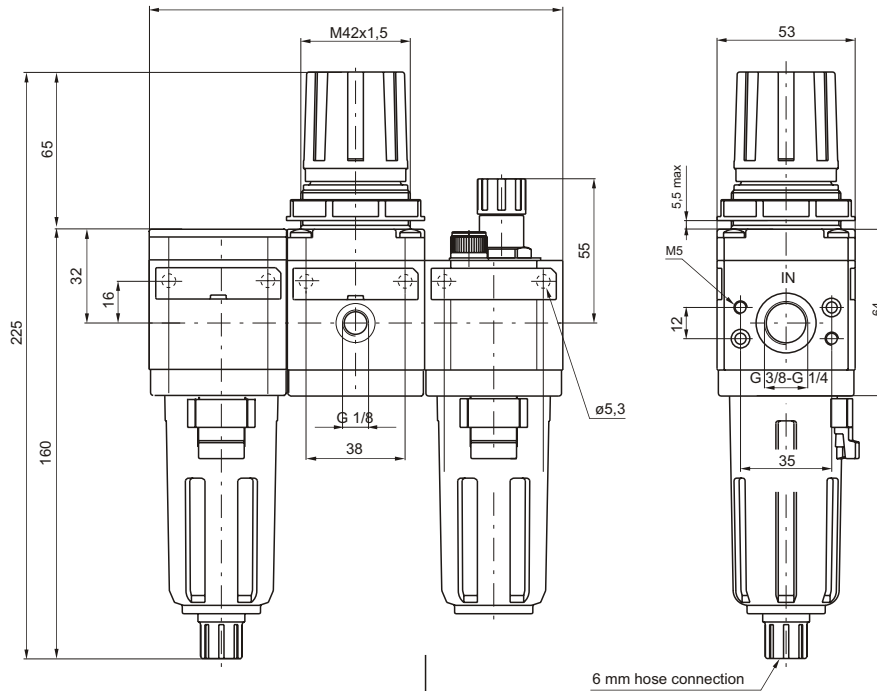


### Construction and working characteristics

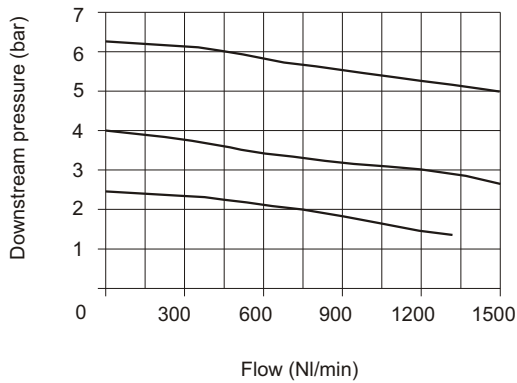
- Filter - diaphragm pressure regulator with relieving.
- Double filtering action: by air centrifuging and by replaceable and reusable HDPE porous filter element.
- Body made with light alloy.
- Wall mounting possibility with M5 screws protected by covers.
- Pressure adjusting lockable handle by simply pressing it downwards in the desired position.
- Transparent technopolymer bowl with shock resistant technopolymer protection connected to the body with bayonet cap and safety button.
- 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.
- Automatic water drainage bowl available on request.
- Possibility to see the water level on 360° also with bowl protection assembled.
- Two pressure gauge connections with plug complete of seal.
- Fog type lubrication with variable section orifice according to the flow.
- Transparent technopolymer sight dome with adjusting handle.
- Oil filling plug.

### Technical characteristics

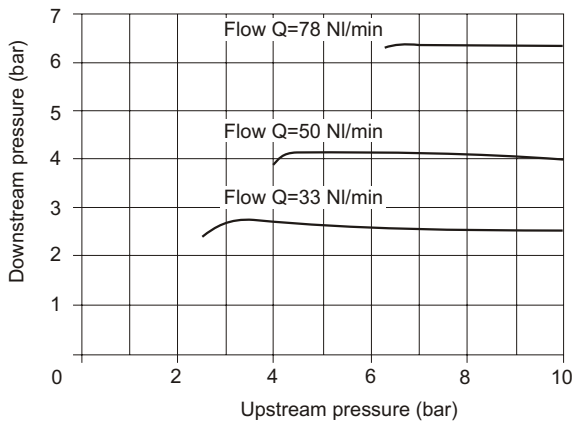
Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar - 1,3 MPa
Max. ambient temperature (at 10 bar)	50°C
Pressure gauge connections	G 1/8"
Weight	gr. 960
Pressure range	0 - 2 bar 0 - 4 bar 0 - 8 bar 0 - 12 bar
Filter pore size	5µ 20µ 50µ
Bowl capacity	28 cm <sup>3</sup>
Oil type	FD22 - HG32
Indicative oil drip rate	1 drop every 300/600 NI
Bowl capacity	50 cm <sup>3</sup>
Min. operational flow at 6,3 bar	20 NI/min
Assembly position	Vertical
Wall mounting screws	M5
Max. fitting torque	25 Nm



Flow rate curves  
 Inlet pressure (7 bar)



Adjustment characteristics



Ordering code

**17207**

Connections  
 A = G 1/4"  
 B = G 3/8"

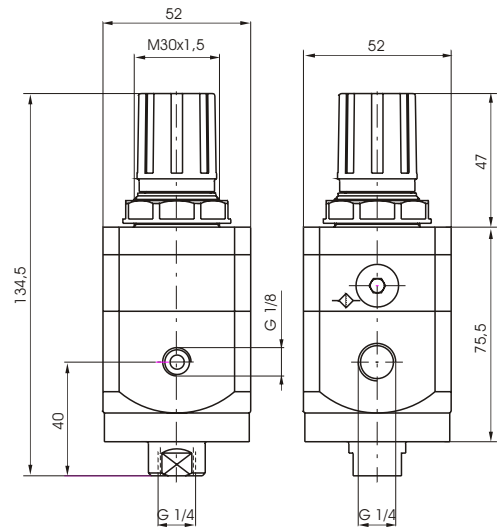
Filter pore size  
 A = 5µ  
 B = 20µ  
 C = 50µ

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

S = Automatic drain

Example: **17207A.B.C.S**

Service unit combination complete with filter - pressure regulator and lubricator size 2, G 1/4" connections, filter pore size 20µ, adjusting range 0-8 bar and automatic drain.



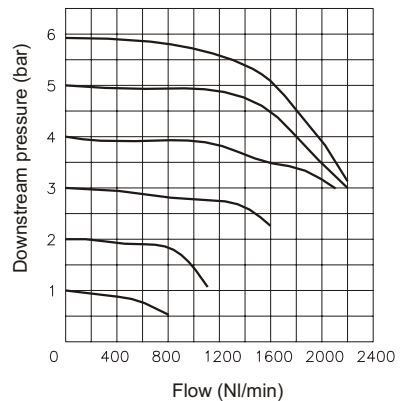
**Construction and working characteristics**

- Accurate capacity to maintain set pressure.
  - Sensitivity combined with high relieving rates.
  - High flow rate with extremely low pressure drop.
  - Pressure adjusting lockable handle by simply pressing it downwards in the desired position.
  - Body made with anodized zoll aluminium alloy
  - Two pressure gauge connections with plug complete of seal.
  - Ring nut for panel mounting.
  - Once set, a constant bleed of air maintains the accuracy of the regulator.
- This controlled release is a charasteric, not a fault.

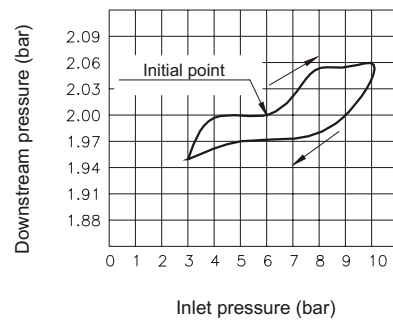
**Technical characteristics**

Connections	G 1/4"
Max. inlet pressure	10 bar - 1 MPa
Max. ambient temperature	50°C
Pressure gauge connections	G 1/8"
Weight	gr. 520
Pressure range	0,1 - 2 bar
	0,1 - 4 bar
	0,1 - 7 bar
Assembly position	Any
Air flow (inlet pressure 10 bar)	5 NI/min
Max. fitting torque	40 Nm
Fluid	20µm filtered air and preferably non lubricated

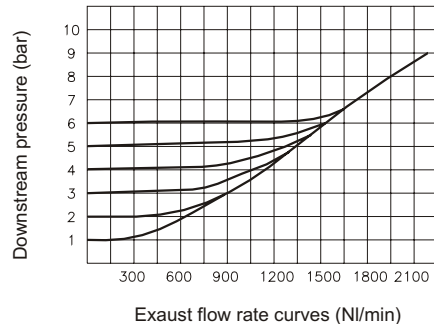
Flow rate curves (17212A.C)  
Inlet pressure (7 bar)



Adjustment characteristics (17212A.C)



Exhaust flow rate curves (17212A.C)



Ordering code

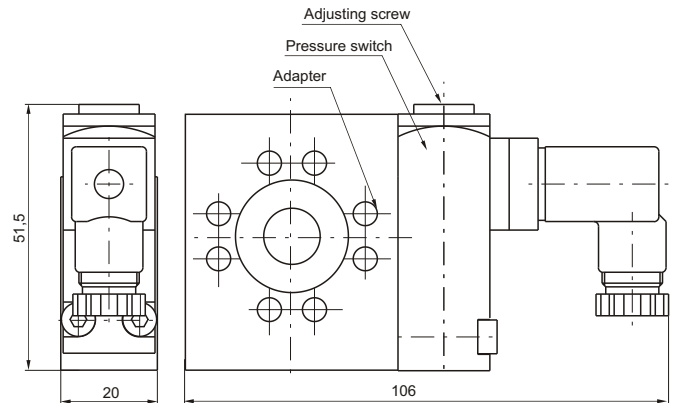
**17212A .**

Adjusting range  
A = 0,1 - 2 bar  
B = 0,1 - 4 bar  
C = 0,1 - 7 bar

Example: 17212A.C  
Pressure regulator with G 1/4" 0,1 - 7 bar



**Pressure switch complete with adapter**



2

**Construction and working characteristics**

The pressure switch complete of adapter has to be assembled between two elements of the FRL group. It cannot be utilized separately or at the end of the FRL group.

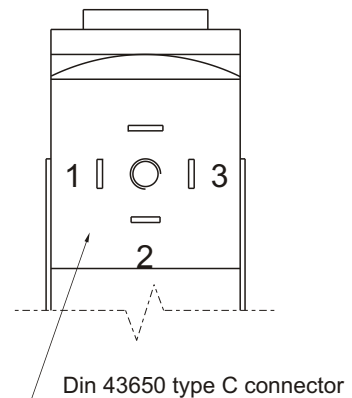
The pressure switch can be set at desired pressure (pressure range from 2 to 10 bar) by rotating the adjusting screw.

The electrical connection is made by mean of a 15 connector DIN 43650 type C.

The microswitch contact could be normally closed or open (change over switch).

Connection

- 1 = Neutral
- 2 = N.C. contact
- 3 = N.O. contact



**Technical characteristics**

Max. inlet pressure	13 bar 1.3 MPa
Max. temperature	50°C
Weight	gr. 200
Microswitch capacity	5A
Grade of protection (with connector assembled)	IP 65
Adjusting range	2 - 10 bar
Assembly position	Any

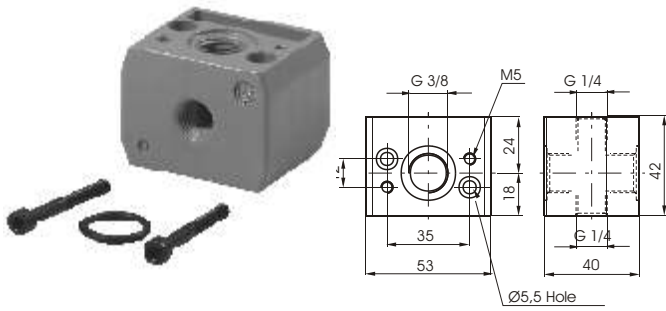
Ordering code

17

- 24A = Pressure switch adapter
- 14B = Pressure switch
- 24C = Pressure switch complete with adapter

Example: **1724C**  
Pressure switch complete with adapter.

**Air Intake**

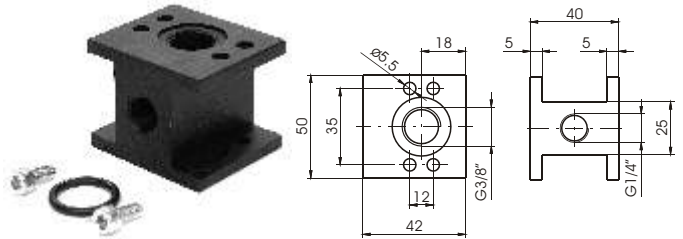


Ordering code

**17240**

Weight gr. 160

**Air Intake - "H" profile**

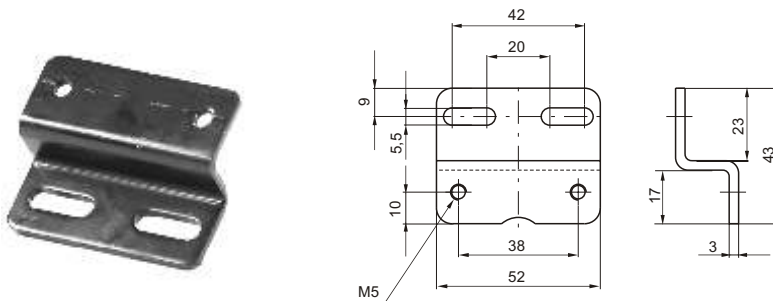


Ordering code

**17240H**

Weight gr. 116

**Fixing bracket**



Ordering code

**17250**

Weight 65 gr.

**Pressure gauge**



Ordering code

**17070**

DIMENSIONS							
CODE	A	B	C	D	E	G	Weight gr.
17070A	44	10	26	41	14	G1/8"	60
17070B	45	10	27	49	14	G1/8"	80

Connections  
A = Dial ø40  
B = Dial ø50

A = Scale 0-4 bar  
B = Scale 0-6 bar  
C = Scale 0-12 bar

**Assembling kit**



Ordering code

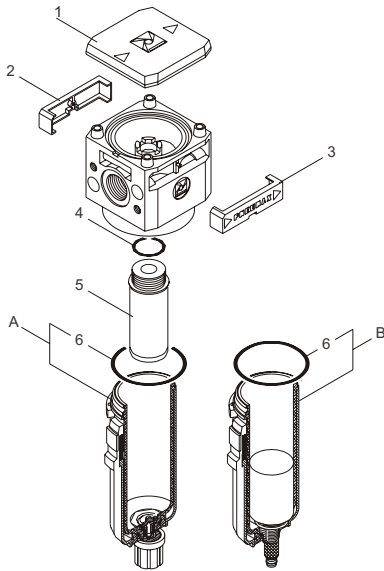
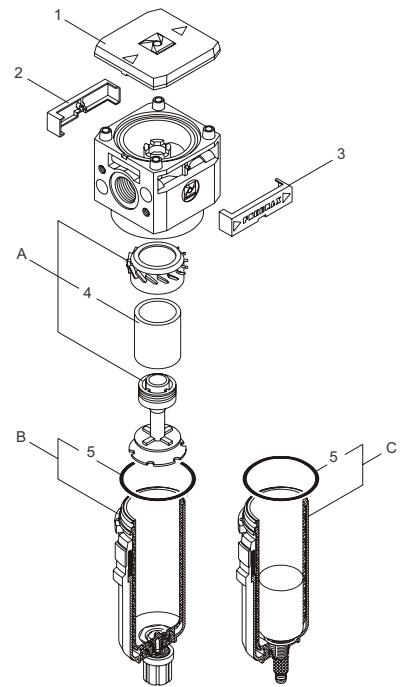
**17260**  
(standard)

**17265**  
(for progressive start-up valve)

Weight 20 gr.

**Filtro**

Pos.	Code	Description
1	RS/1702/30	Cover
2	RS/1702/11	Rear tab
3	RS/1702/10	Front tab
4	RS/1702/13	Porous filter element 20µ
4	RS/1702/41	Porous filter element 5µ
4	RS/1702/42	Porous filter element 50µ
5	RS/OR 36x2.5	Seal
A	RK1702A/004	Filter group assembly 20µ
A	RK1702A/009	Filter group assembly 5µ
A	RK1702A/010	Filter group assembly 50µ
B	RK1702A/002	Filter bowl c/w drain valve
C	RK1702A/007	Filter bowl c/w automatic drain

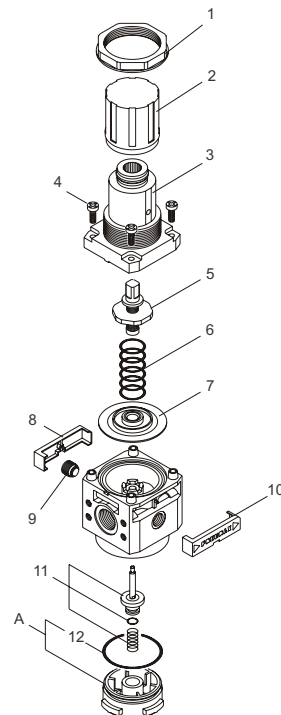


**Filtro - depuratore**

Pos.	Code	Description
1	RS/1702/30	Cover
2	RS/1702/69	Rear tab
3	RS/1702/68	Front tab
4	RS/OR 3056	Seal
5	RK1702A/017	Coalescent group 0,1µ
6	RS/OR 36x2.5	Seal
A	RK1702A/002	Filter bowl c/w drain valve
B	RK1702A/007	Filter bowl c/w automatic drain

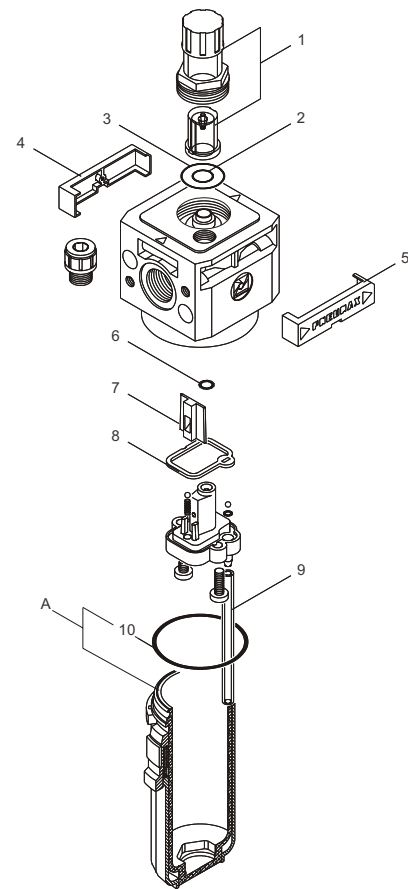
**Riduttore**

Pos.	Code	Description
1	RS/1702/12	Lock nut
2	RS/1702/3	Adjusting knob
3	RS/1702/2	Adjusting support
4	RS/TCTCR 4x12	Screw
5	RK1702A/005	Adjusting screw assembly
6	RS/1702/38	Spring 0- 2 bar range
6	RS/1702/37	Spring 0- 4 bar range
6	RS/1702/36	Spring 0 - 8 bar range
6	RS/1702/39	Spring 0 - 12 bar range
7	RK1702A/001	Diaphragm assembly
7	RK1702A/011	Diaphragm ass. w/o relieving
8	RS/1702/11	Rear tab
9	RK1701A/020	Plug c/w seal G 1/8"
10	RS/1702/10	Front tab
11	RK1702A/016	Poppet c/w spring
12	RS/OR 36x2.5	Seal
A	RK1702A/014	Plug



### Lubricator

Pos.	Code	Description
1	RK1701A/026	Lubricator sight dome assembly
2	RS/OR 106	Seal
3	RS/OR 2075	Seal
4	RS/1702/11	Rear tab
5	RS/1702/10	Front tab
6	RS/OR 5X1.5	Seal
7	RS/1702/28	Venturi diaphragm
8	RS/1702/31	Seal
9	RS/1702/40	Oil tube
10	RS/OR 36x2.5	Seal
A	RK1702A/003	Lubricator bowl



### Filtro - riduttore

Pos.	Code	Description
1	RS/1702/12	Lock nut
2	RS/1702/3	Adjusting knob
3	RS/1702/2	Adjusting support
4	RS/TCTCR 4x12	Screw
5	RK1702A/005	Adjusting screw assembly
6	RS/1702/38	Spring 0 - 2 bar range
6	RS/1702/37	Spring 0 - 4 bar range
6	RS/1702/36	Spring 0 - 8 bar range
6	RS/1702/39	Spring 0 - 12 bar range
7	RK1702A/001	Diaphragm assembly
7	RK1702A/011	Diaphragm ass. w/o relieving
8	RS/1702/11	Rear tab
9	RK1701A/020	Plug c/w seal G 1/8"
10	RS/1702/10	Front tab
11	RK1702A/016	Poppet c/w spring
12	RS/1702/13	Porous filter element 20µ
12	RS/1702/41	Porous filter element 5µ
12	RS/1702/42	Porous filter element 50µ
13	RS/OR 36x2.5	Seal
A	RK1702A/004	Filter group assembly 20µ
A	RK1702A/009	Filter group assembly 5µ
A	RK1702A/010	Filter group assembly 50µ
B	RK1702A/002	Filter bowl c/w drain valve
C	RK1702A/007	Filter bowl c/w automatic drain

