

## 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 unit: filter, pressure regulator and lubricator.

## Construction and working characteristics

The new FRL units AIRPLUS series represents the evolution of the well known and consolidated 1700 series.

The main features are increased performances, reliability, easy and fast assembly and the introduction of the latest technical features.

With the exception of the air intake module and the pressure switch module all elements are available in two configurations: with technopolymer connections (IN and OUT), (T series), or with metal threaded inserts, (N series).

Bowls made of transparent polycarbonate (PC) are fitted with a bowl protection guard which is assembled on the body via a quick coupling mechanism provided with a safety button. The filter, available with three filtration grades (5µm, 20µm and 50µm) is fitted as standard with a drain mechanism which can be operated manually or semi-automatically. The regulator is based on the rolling diaphragm technology with low hysteresis and the system is balanced. The unit can be fitted with integrated flush mounting pressure gauge (0 to 12 bar range).

4 pressure ranges are available going from 0 to 12 bar and the regulating knob can be blocked in position simply by pressing it down. A dedicated version is available for battery mounting, up to a maximum of 6 units. The lubricator is based on the Venturi principle and the oil quantity is regulated via the adjusting screw positioned on the transparent polycarbonate (PC) regulating dome which also ensure clear visibility of the oil flow and regulation. The oil suction pipe is fitted as standard with a sintered filter which ensures that any contaminant that should be present in the oil will reach the downstream circuit. Shoot off valve is available in two versions, one manually operated and one solenoid operated. In both cases the unit is fitted with a threaded connection for depressurising the downstream circuit. On the manually operated version, in the lock position, it is possible to fit up to three locks in order to prevent the accidental pressurization of the pneumatic circuit avoiding accidents or damages.

The solenoid operated version is available with a 15mm or with a 22mm solenoid valve. The soft start valve ensure a progressive pressurization of the downstream circuit avoiding sudden pressure surges which could be dangerous for the devices fitted on the downstream circuit. The filling time can be easily adjusted via a built in flow regulator. The full flow rate is allowed only once the downstream pressure has reached 50% of the value of the inlet pressure. The pressure switch module which can be set between 2 and 10 bar and the air intake module complete the range. The elements are joint together via dedicated quick coupling technopolymer flanges which allows for the units to be panel mounted moreover ensure the possibility to replace any component without disassembling the FRL group from its position.

90° mounting brackets and standard gauges are also available.

## Instruction for installation and operation

The FRL unit must be installed as close as possible to the application.

The air flow direction must follow the directions indicated on the single units in correspondence of the threaded connections. (IN and OUT)

Units provided with bowl must be mounted vertically with the bowl facing down. Single units or groups can be panel mounted via the Y type flanges, regulators and filter-regulators can be mounted via the 90° zinc plated steel bracket. In order to mount the 90° bracket it is necessary to remove the regulating knob and then the locking ring before positioning the bracket. All units must be operated according to the specified pressure and temperature ranges; fittings must be mounted without exceeding the maximum torque allowed. Ensure that the units cover plates are in position before pressure is applied. The cover plates are needed to lock in position the top part of the unit. The condensate level in filter and filter-regulators bowls must never exceed the maximum level indicated on the bowls. With manual or semi automatic drain the condensate can be discharged via a 6/4mm tube directly connected to the drain tap. On the pressure regulator the pressure value must always be set while pressure is rising and ideally the unit pressure range should be chosen based on the pressure value to be regulated. Lubricators must be filled with class FD22 and HG32 oils. Ensure, both on the inlet and on the outlet, that the flow rate is above the minimum flow rate required to operate the unit. Below this value the units does not operate.

The oil quantity can be regulated via the regulating screw on the transparent polycarbonate dome through which it is also clearly visible the oil flow. A drop every 300-600 litres should be allowed. The oil refill can take place only with the bowl not under pressure. This size does not have the dedicated oil re-fill plug.

The manual shot off valve needs, to be operated, a push and turn action (clockwise) in order to close it and discharge the downstream circuit it is necessary to turn anti clockwise the knob. The soft start valve is used to slowly and progressively pressurize the downstream circuit, the time needed to do so can be set by means of the built in flow regulator. The soft start valve on its own does not allow for the downstream circuit to be discharged, in order to do so it is necessary to combine it with a shot off valve (to be mounted upstream).

## Maintenance



**For any maintenance which requires the removal of the top plugs/ supports from the body it is necessary to preventively remove the sides cover plates. If the top plugs/supports are removed with the sides plates still in their position the unit could be permanently damaged.**

Bowls, plugs and supports are assembled with a bayonet type mechanism. In order to remove them rotate anti clockwise until the mechanical stop is reached and then remove from the body (for the bowls firstly press down the green safety button).

Bowls and transparent parts can be cleaned with water and neutral soap. Do not use solvents or alcohol.

Filtering elements (from filters and filter regulators) made of HDPE can be regenerated by washing and blowing them. In order to remove them it is necessary to remove the bowl unscrew the filter element and replace it with a new one or clean it.

The oil refill process can take place only if the bowl is not pressurized. The oil refill plug is not available on this size.

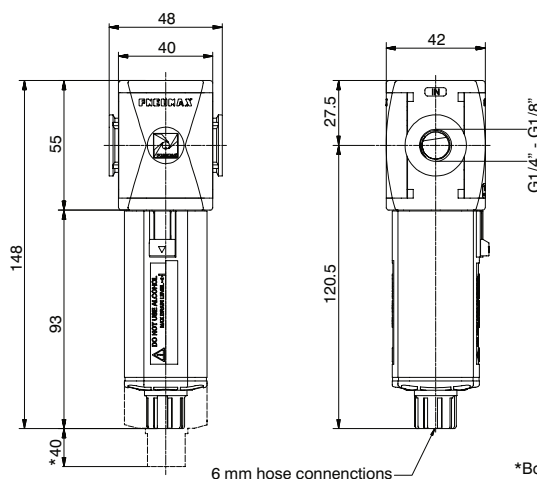
Should the pressure regulator not perform properly or should present a constant leakage from the relieving replaced the diaphragm by unloading completely the regulating spring before removing the regulation support.

Any other maintenance operation, in consideration of the complexity of the assembly, and the need of a through test according to the Pneumax spa specification, should be carried out by the manufacturer.

## Fittings maximum recommended torque applicable

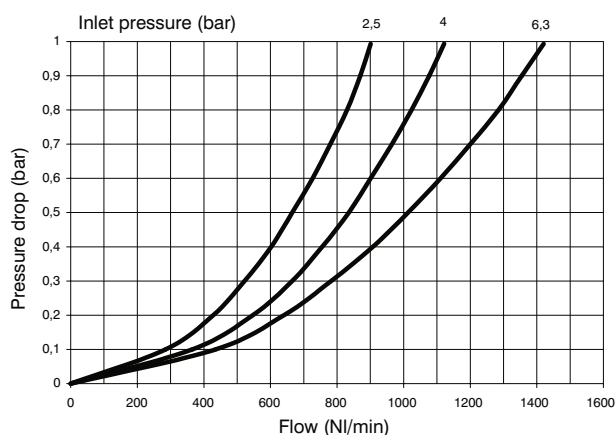
THREAD	Technopolymer version (T)	Metal version (N)
G1/8"	4 Nm	15 Nm
G1/4"	9 Nm	20 Nm
G3/8"	16 Nm	25 Nm
G1/2"	22 Nm	30 Nm

## Filter (F)



Example: T171BFB : size 1, Filter with Technopolymer threads, G1/4" connections, 20  $\mu$ m filter pore size

## Flow rate curves



## Operational characteristics

- Double filtering action: air flow centrifugation and filter element
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request

## Note

In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 120
Weight with threaded inserts	gr. 130
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m
Bowl capacity	18 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G1/4" = 9 Nm
Max. fitting torque (with threaded inserts)	G1/8" = 15 Nm G1/4" = 20 Nm

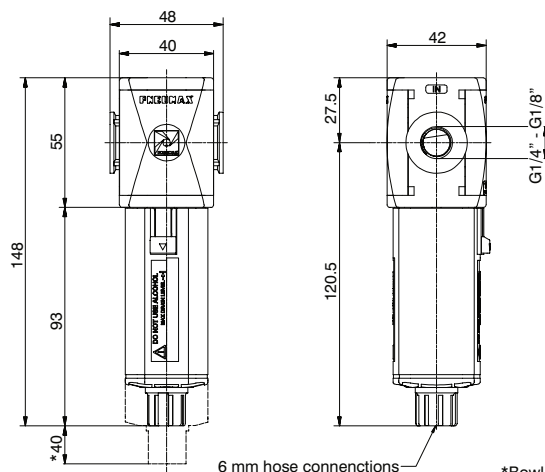
## Ordering code

**V171CF502**

VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/8" (only for "N" version)	
B = G1/4"	
C = 1/4 NPT (only for "N" version)	
FILTER PORE SIZE	
A = 5 $\mu$ m	
B = 20 $\mu$ m	
C = 50 $\mu$ m	
OPTIONS	
= Standard *	
S = Automatic drain	
BOWL OPTIONS	
= Standard *	
N = Nylon bowl	

\* no additional letter required

## Coalescing filter (D)

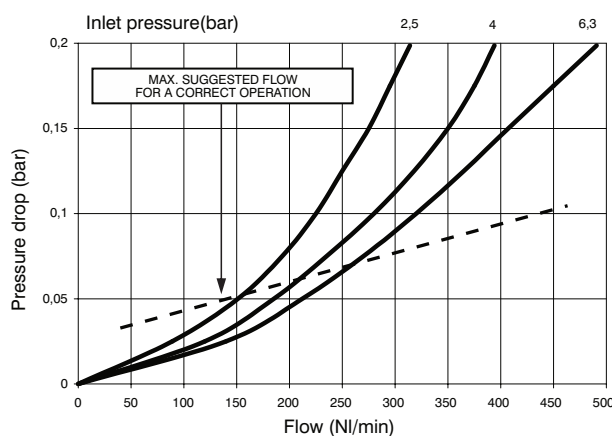


6 mm hose connections

\*Bowl removal maximum height

Example : T171BDA : Coalescing size 1, Filter with Technopolymer threads, G1/4" connections, filter efficiency 99,97%

Flow rate curves



## Operational characteristics

- Coalescing filter element with filtration grade of 0.01  $\mu\text{m}$
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request

## Note

In order to ensure a better grade of filtration it is recommended to use a 5  $\mu\text{m}$  filter before the coalescing filter. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 125
Weight with threaded inserts	gr. 135
Filter efficiency with 0,01 $\mu\text{m}$ particle	99,97%
Bowl capacity	18cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G1/4" = 9 Nm
Max. fitting torque (with threaded inserts)	G1/8" = 15 Nm G1/4" = 20 Nm

## Ordering code

V1710DE02

## VERSION

- V N = Metal inserts
- T = Technopolymer thread

## CONNECTIONS

- A = G1/8" (only for "N" version)
- B = G1/4"
- C = 1/4 NPT (only for "N" version)

## FILTER EFFICIENCY

- A = 99,97%

## OPTIONS

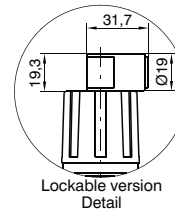
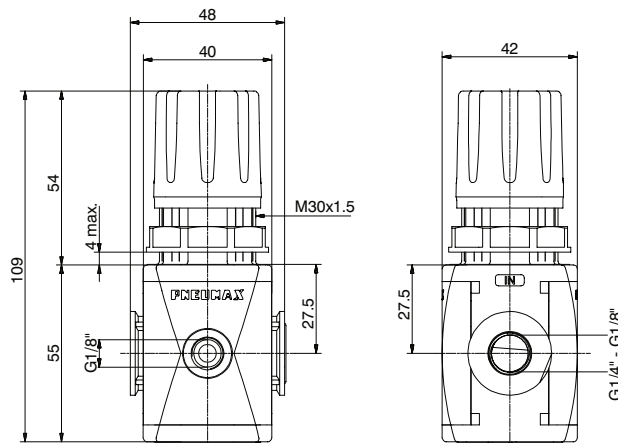
- Standard \*
- S = Automatic drain

## BOWL OPTIONS

- Standard \*
- N = Nylon bowl

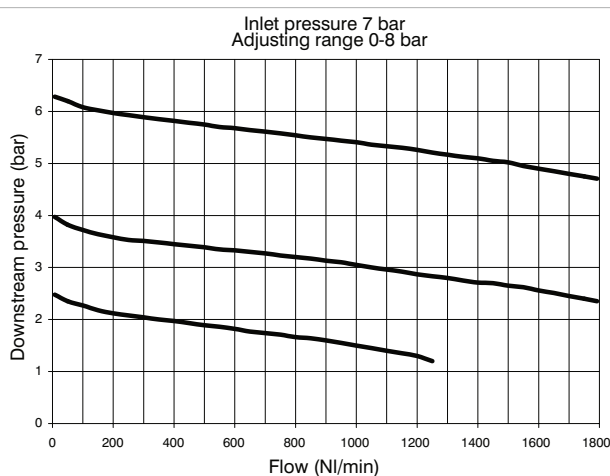
\* no additional letter required

## Regulator (R)

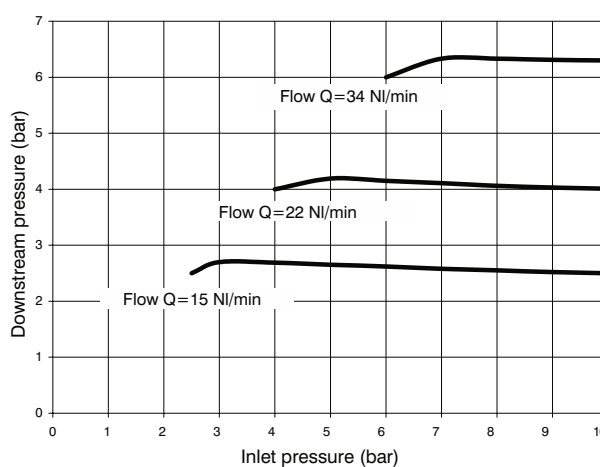


Example: T171BRC : size 1, Regulator with Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range

Flow rate curves



Adjustment characteristics



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Working temperature	-5°C + 50°C
Pressure gauge connections	G 1/8"
Weight with Technopolymer threads	gr. 130
Weight with threaded inserts	gr. 140
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/8" = 4 Nm G1/4" = 9 Nm
Max. fitting torque (with threaded inserts)	G1/8" = 15 Nm G1/4" = 20 Nm

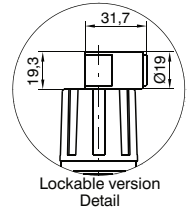
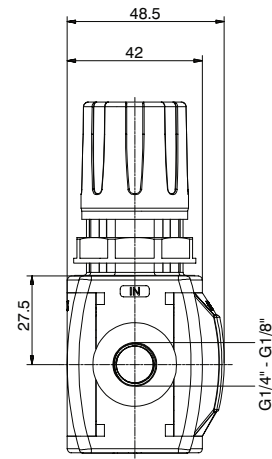
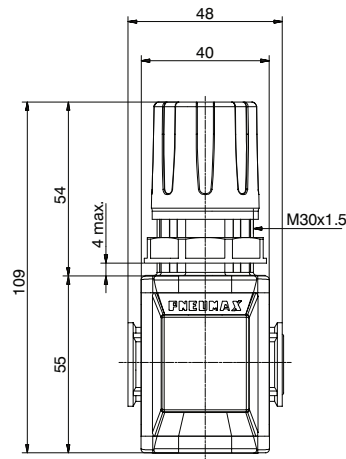
### Ordering code

**V1710RG10**

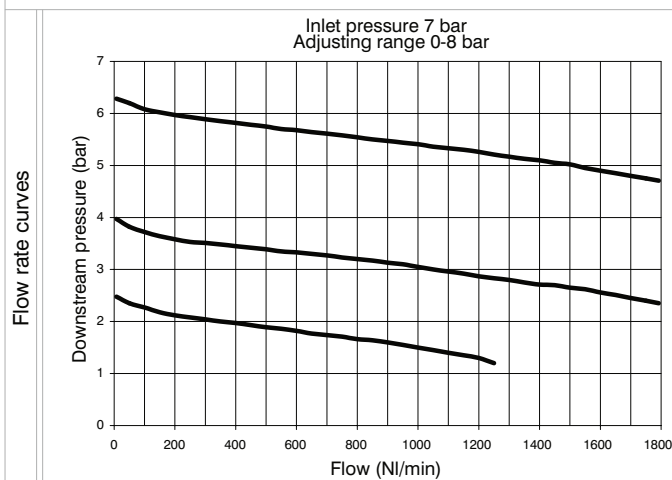
VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/8" (only for "N" version)	
B = G1/4"	
C = 1/4 NPT (only for "N" version)	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
K = Lockable version	

\* no additional letter required

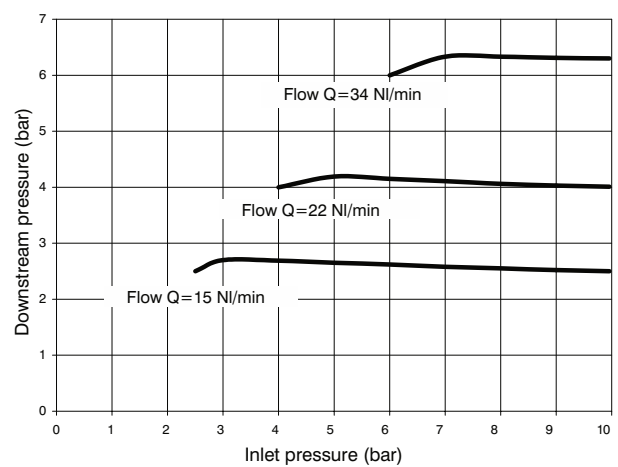
## Regulator including gauge (RM)(RW)



Example : T171BRMC : size 1, Regulator including gauge with Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range



Adjustment characteristics



## Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

## Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 140
Weight with threaded inserts	gr. 150
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/4" = 9 Nm

Max. fitting torque  
(with threaded inserts)

G1/8" = 15 Nm  
G1/4" = 20 Nm

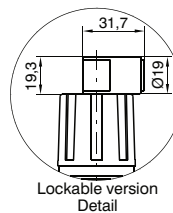
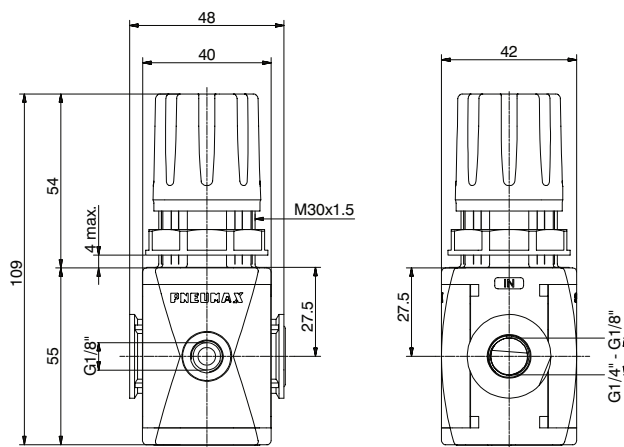
## Ordering code

**V171CRDGT0**

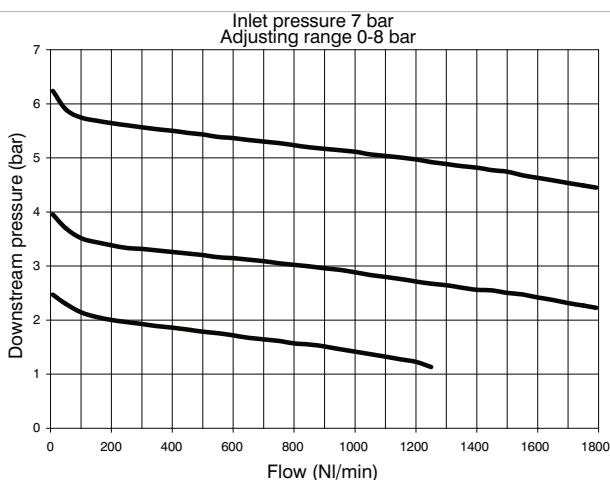
<b>V</b>	VERSION
N	N = Metal inserts
T	T = Technopolymer thread
<b>C</b>	CONNECTIONS
A	A = G1/8" (only for "N" version)
B	B = G1/4"
C	C = 1/4 NPT (only for "N" version)
<b>D</b>	FLOW DIRECTION
M	M = from left to right
W	W = from right to left
<b>G</b>	ADJUSTING RANGE
A	A = 0-2 bar
B	B = 0-4 bar
C	C = 0-8 bar
D	D = 0-12 bar
<b>T</b>	TYPE
=	= Standard *
F	F = Controlled relief + improved relieving
L	L = no relieving
R	R = Improved relieving
<b>O</b>	OPTIONS
=	= Standard *
K	K = Lockable version

\* no additional  
letter required

## Modular pressure regulator (B)



Example: T171BBC : size 1, Regulator with Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- G1/8" output front connection.
- Air supply can be applied by both directions.

#### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Working temperature	-5°C +50°C
Pressure gauge connections	G 1/8"
Weight with Technopolymer threads	gr. 130
Weight with threaded inserts	gr. 140
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/8" = 4 Nm G1/4" = 9 Nm
Max. fitting torque (with threaded inserts)	G1/8" = 15 Nm G1/4" = 20 Nm

### Ordering code

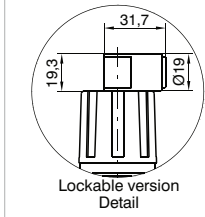
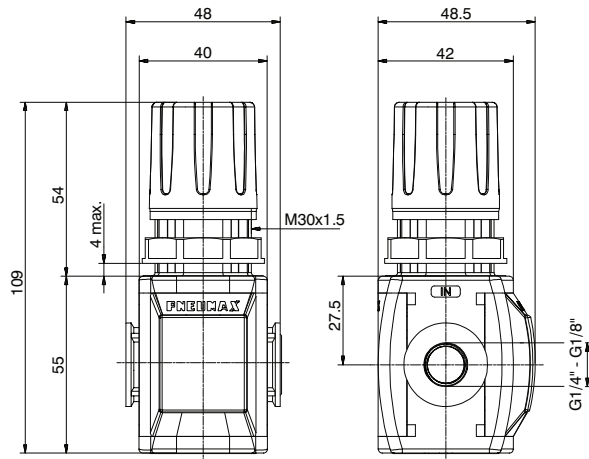
**V1710BCT0**

VERSION	
V N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/8" (only for "N" version)	
B = G1/4"	
C = 1/4 NPT (only for "N" version)	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
K = Lockable version	

\* no additional letter required

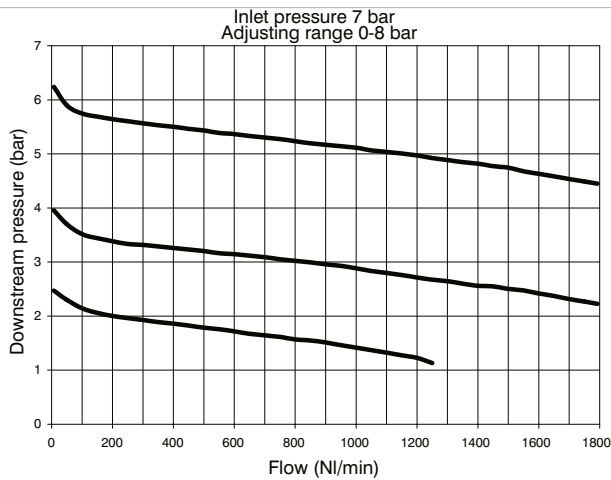


Modular pressure regulator including manometer (M)



Example : T171BMC : size 1, Regulator including gauge with Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range

Flow rate curves

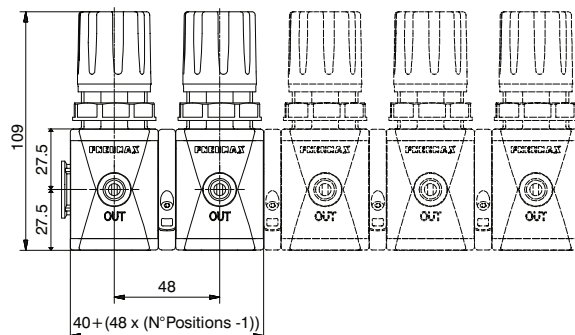


Operational characteristics	Technical characteristics				
<ul style="list-style-type: none"><li>- Diaphragm pressure regulator with relieving.</li><li>- Low hysteresis rolling diaphragm.</li><li>- Balanced system.</li><li>- Available in four pressure ranges up to 12 bar.</li><li>- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.</li><li>- G 1/8" output connection positioned on the opposite side of the built in gauge.</li><li>- Air supply can be applied by both directions.</li><li>- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)</li></ul>	Connections	G 1/8" - G 1/4"	Ordering code		
	Max. inlet pressure	13 bar			
	Working temperature	-5°C + 50°C	<b>V171CMGT0</b>		
	Weight with Technopolymer threads	gr. 140			
	Weight with threaded inserts	gr. 150			
	Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar			
	Assembly positions	Indifferent			
	Max. fitting torque (with Technopolymer threads)	G1/8" = 4 Nm G1/4" = 9 Nm			
	<b>Note</b>  The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.	Max. fitting torque (with threaded inserts)		G1/8" = 15 Nm G1/4" = 20 Nm	VERSION
					<b>V</b> N = Metal inserts T = Technopolymer thread
CONNECTIONS					
<b>C</b> A = G1/8" (only for "N" version) B = G1/4" C = 1/4 NPT (only for "N" version)					
ADJUSTING RANGE					
<b>G</b> A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar					
TYPE					
<b>T</b> = Standard * F = Controlled relief + improved relieving L = no relieving R = Improved relieving					
OPTIONS					
<b>O</b> = Standard * K = Lockable version					

\* no additional letter required

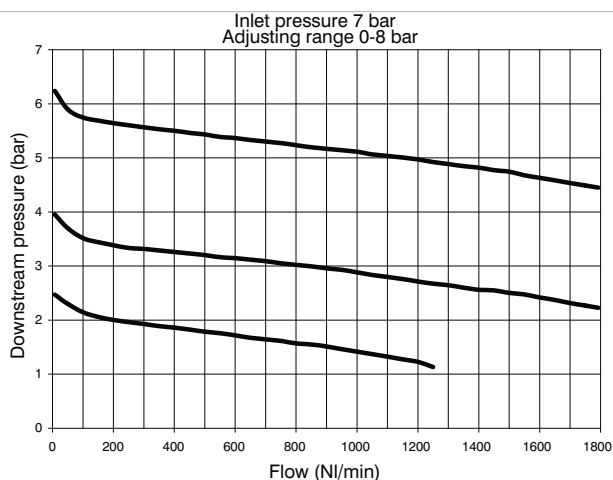


## Manifold pressure regulators



Example: GT171BB4CCCC : Combined group comprising 4 size 1 Regulators Technopolymer threads, G1/4" connections and 0 to 8 bar adjusting range

Flow rate curves



### Operational characteristics

- Inlet pressure common for the whole manifold of regulator.
- A maximum of 6 regulators can be mounted
- Air supply can be applied by both directions.

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

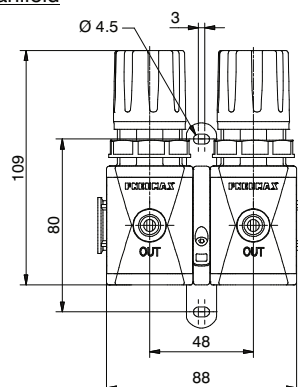
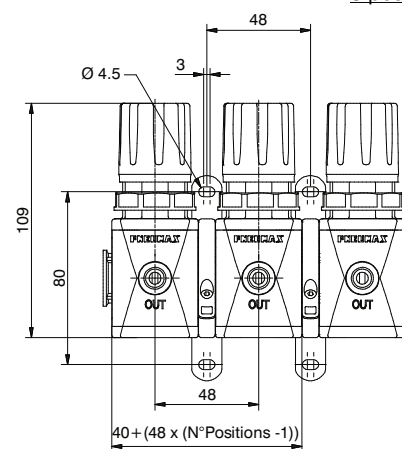
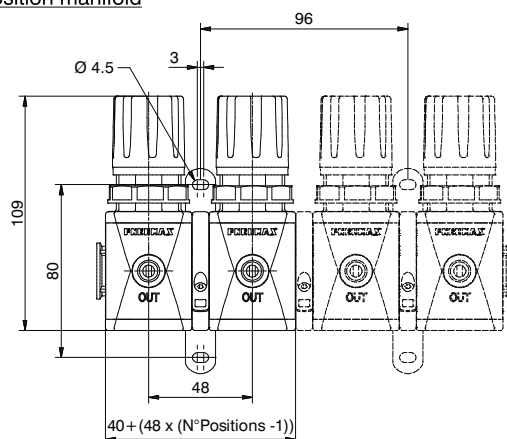
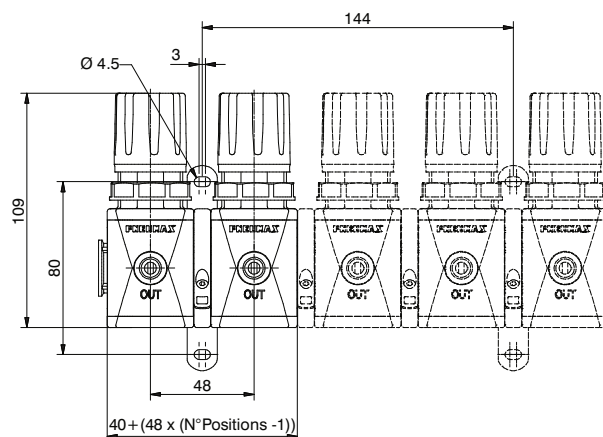
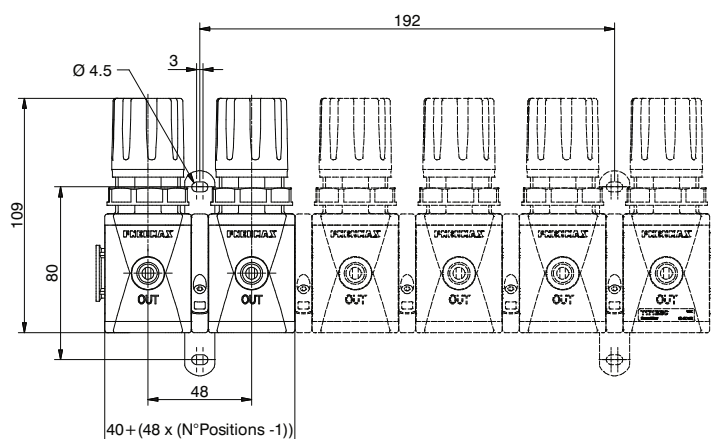
Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Working temperature	-5°C +50°C
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	indifferent
Max. fitting torque (with Technopolymer threads)	G1/8" = 4 Nm G1/4" = 9 Nm
Max. fitting torque (with threaded inserts)	G1/8" = 15 Nm G1/4" = 20 Nm

### Ordering code

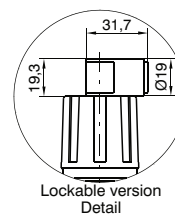
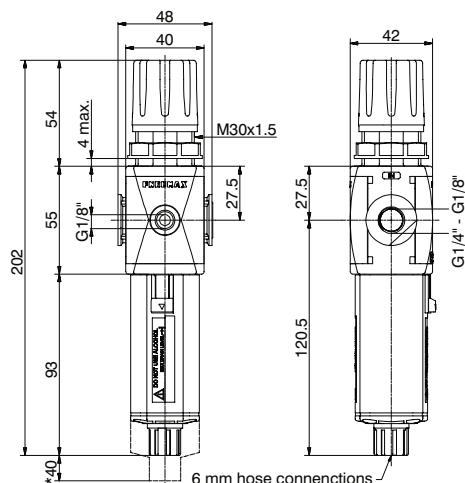
**GV171CTNCGGGGGG**

VERSION	
V	N = Metal inserts T = Technopolymer thread
CONNECTIONS	
G	A = G1/8" (only for "N" version) B = G1/4" C = 1/4 NPT (only for "N" version)
TYPE	
T	B = Standard with flanges X M = Manometer included with flanges X W = Standard with flanges Y Z = Manometer included with flanges Y
NUMBER REGULATORS	
N	2 = 2 regulators 3 = 3 regulators 4 = 4 regulators 5 = 5 regulators 6 = 6 regulators
ADJUSTING RANGE 1	
G	A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
ADJUSTING RANGE 2	
G	A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
ADJUSTING RANGE 3	
G	A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
ADJUSTING RANGE 4	
G	A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
ADJUSTING RANGE 5	
G	A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
ADJUSTING RANGE 6	
G	A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar



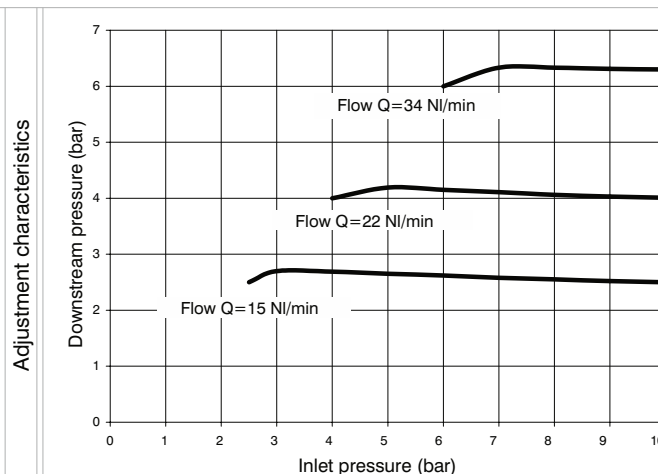
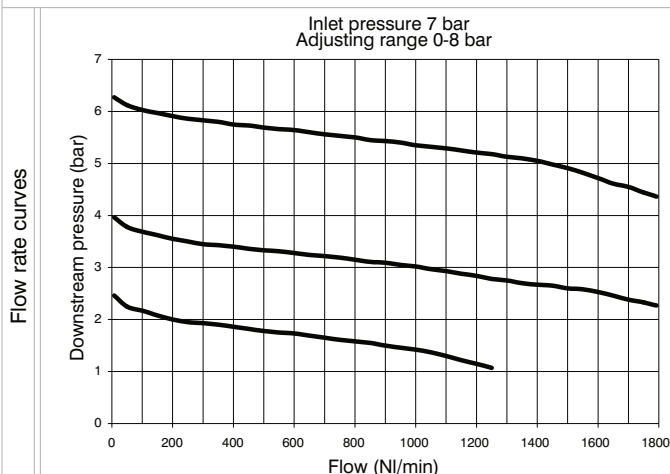
**Dimensions with Y type flanges**2 position manifold3 position manifold4 position manifold5 position manifold6 position manifold

## Filter-Regulator (E)



\*Bowl removal maximum height

Example : T171BEBC : size 1, Filter-regulator with Technopolymer threads, G1/4\" connections, 20  $\mu$ m filtering pore size, 0 to 8 bar adjusting range



### Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

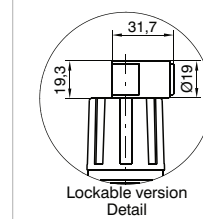
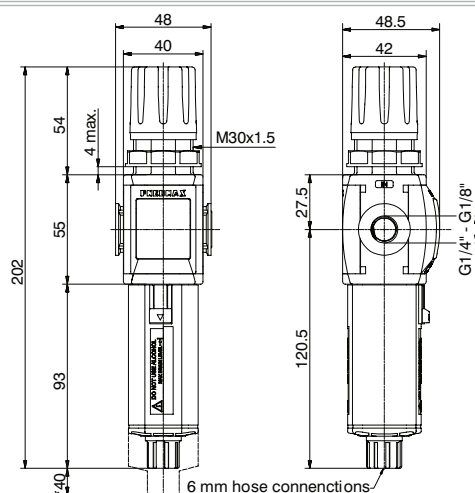
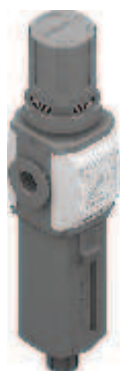
### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

### Technical characteristics

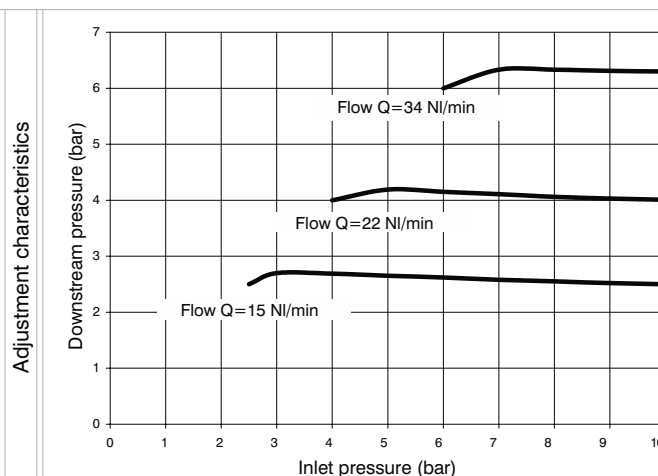
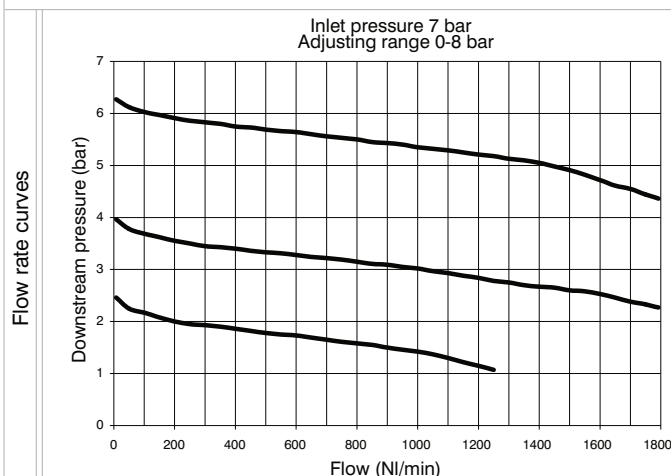
Connections	G 1/8\" - G 1/4\"	Ordering code <b>V171CESCT02</b>
Max. inlet pressure	13 bar	
Minimum working pressure with automatic drain	0,5 bar	VERSION
Maximum working pressure with automatic drain	10 bar	<b>V</b> N = Metal inserts
Working temperature	-5°C +50°C	T = Technopolymer thread
Pressure gauge connections	G 1/8\"	CONNECTIONS
Weight with Technopolymer threads	gr. 190	A = G1/8\" (only for \"N\" version)
Weight with threaded inserts	gr. 200	B = G1/4\"
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar	C = 1/4 NPT (only for \"N\" version)
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m	FILTER PORE SIZE
Bowl capacity	18 cm <sup>3</sup>	A = 5 $\mu$ m
Assembly positions	Vertical	B = 20 $\mu$ m
Max. fitting torque (with Technopolymer threads)	G1/8\" = 4 Nm G1/4\" = 9 Nm	C = 50 $\mu$ m
Max. fitting torque (with threaded inserts)	G1/8\" = 15 Nm G1/4\" = 20 Nm	ADJUSTING RANGE
		A = 0-2 bar
		<b>G</b> B = 0-4 bar
		C = 0-8 bar
		D = 0-12 bar
		TYPE
		<b>1</b> = Standard *
		S = Automatic drain
		OPTIONS
		<b>0</b> = Standard *
		K = Lockable version
		BOWL OPTIONS
		<b>2</b> = Standard *
		N = Nylon bowl
		* no additional letter required

## Filter-regulator including gauge (EM)(EW)



\*Bowl removal maximum height

Example: T171BEMBC : size 1, Filter-Regulator including gauge with Technopolymer threads, G1/4" connections, with 20 µm filtering pore size, 0 to 8 bar adjusting range



## Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm and 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

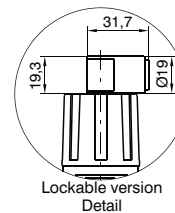
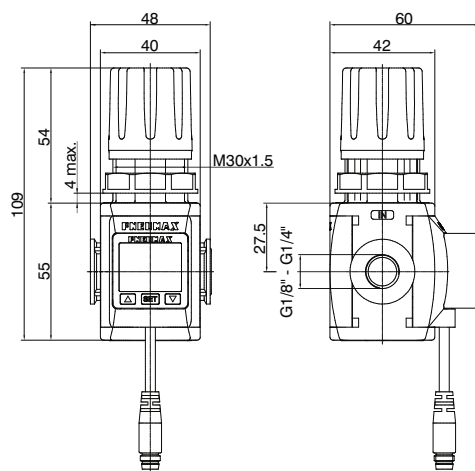
Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Minimum working pressure	0,5 bar
with automatic drain	
Maximum working pressure	10 bar
with automatic drain	
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 200
Weight with threaded inserts	gr. 210
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Filter pore size	5 µm - 20 µm - 50 µm
Bowl capacity	18 cm³
Assembly positions	Vertical
Max. fitting torque	G1/4" = 9 Nm
(with Technopolymer threads)	
Max. fitting torque	G1/8" = 15 Nm
(with threaded inserts)	G1/4" = 20 Nm

## Ordering code

V171CE0SG10Z

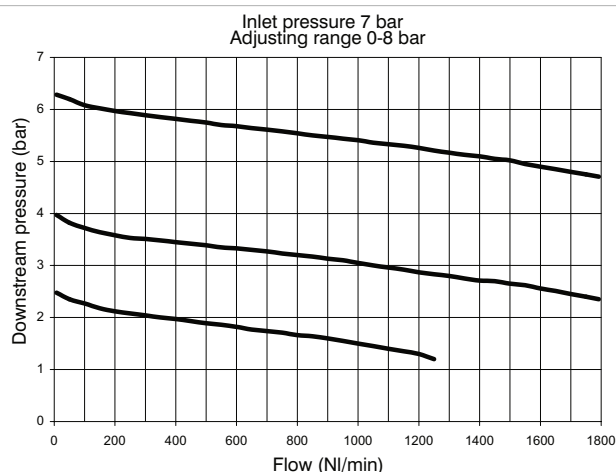
VERSION	
V N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/8" (only for "N" version)	
B = G1/4"	
C = 1/4 NPT (only for "N" version)	
FLOW DIRECTION	
D M = from left to right	
W = from right to left	
FILTER PORE SIZE	
A = 5 µm	
B = 20 µm	
C = 50 µm	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
T = Standard *	
S = Automatic drain	
OPTIONS	
O = Standard *	
K = Lockable version	
BOWL OPTIONS	
Z = Standard *	
N = Nylon bowl	
* no additional letter required	

## Regulator with pressure switch (RP)(RZ)

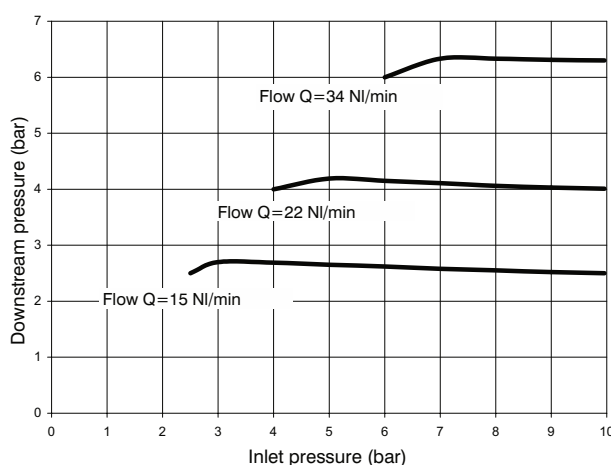


Example : T171BRPCA : size 1, Regulator with Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP

Flow rate curves



Adjustment characteristics



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

#### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Working temperature	0°C +50°C
Weight with Technopolymer threads	gr. 140
Weight with threaded inserts	gr. 150
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/4" = 9 Nm

Max. fitting torque (with threaded inserts)	G1/8" = 15 Nm G1/4" = 20 Nm
--	--------------------------------

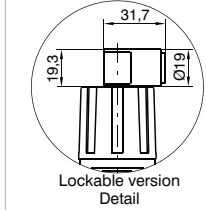
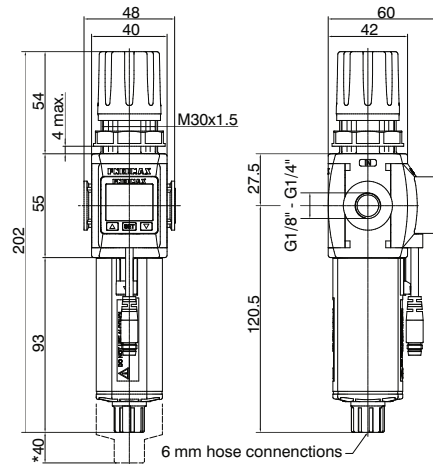
### Ordering code

**V171OROGTOP**

VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/8" (only for "N" version)	
B = G1/4"	
C = 1/4 NPT (only for "N" version)	
FLOW DIRECTION	
P = from left to right	
Z = from right to left	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
K = Lockable version	
PRESSURE SWITCH OPTION	
A = Cable 150 mm + M8 PNP	
B = Cable 150 mm + M8 NPN	
C = Cable 2 mt. PNP	
D = Cable 2 mt. NPN	

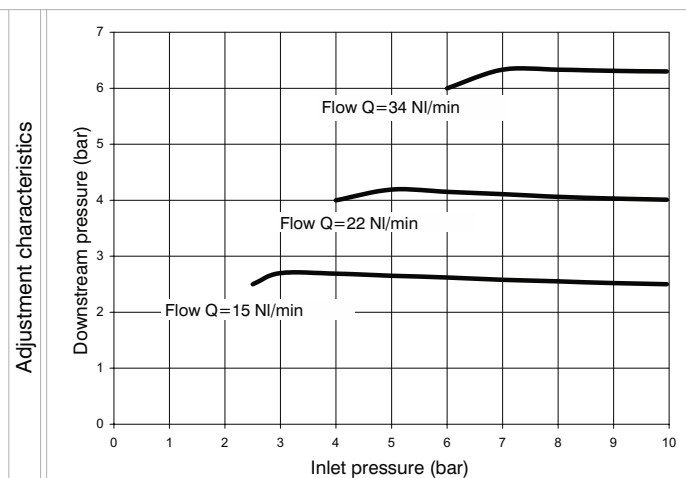
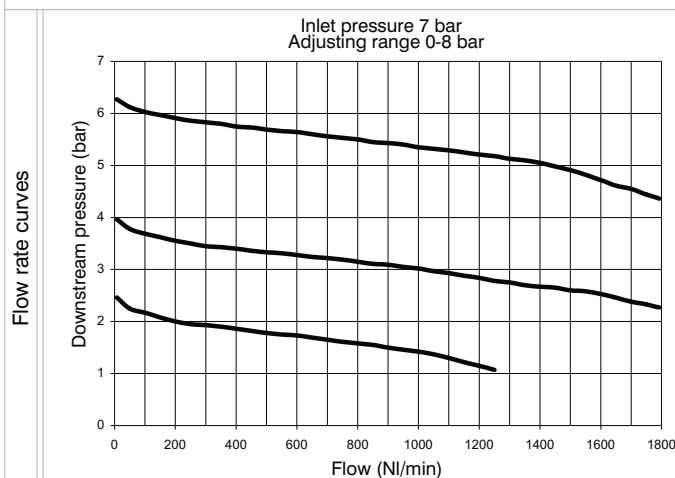
\* no additional letter required

## Filter regulator with pressure switch (EP)(EZ)



\* Bowl removal maximum height

Example: T171BEPBCA : size 1, Filter-regulator with Technopolymer threads, G1/4" connections, 20 µm filtering pore size, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP



## Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm and 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 1/8" - G 1/4"
Max. inlet pressure	13 bar
Minimum working pressure	0,5 bar
Maximum working pressure	10 bar
Working temperature	0°C +50°C
Weight with Technopolymer threads	gr. 200
Weight with threaded inserts	gr. 210
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Filter pore size	5 µm - 20 µm - 50 µm
Bowl capacity	18 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G1/4" = 9 Nm
Max. fitting torque (with threaded inserts)	G1/8" = 15 Nm G1/4" = 20 Nm

## Ordering code

V171CE0SC0TOP2

VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/8" (only for "N" version)	
B = G1/4"	
C = 1/4 NPT (only for "N" version)	
FLOW DIRECTION	
P = from left to right	
Z = from right to left	
FILTER PORE SIZE	
A = 5 µm	
B = 20 µm	
C = 50 µm	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
T = Standard *	
S = Automatic drain	
OPTIONS	
O = Standard *	
K = Lockable version	
PRESSURE SWITCH OPTION	
A = Cable 150 mm + M8 PNP	
B = Cable 150 mm + M8 NPN	
C = Cable 2 mt. PNP	
D = Cable 2 mt. NPN	
BOWL OPTIONS	
N = Standard *	
N = Nylon bowl	

\* no additional letter required

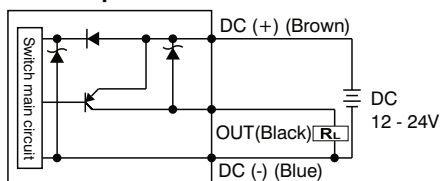


## CHARACTERISTICS

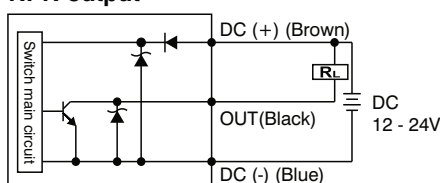
- 3 color digital LCD display, easy readout
- 4 units of measurement for pressure indication
- PNP and NPN output
- N.O. and N.C. output contact
- Not available individually, but only with a Regulator or a Filter-regulator

## OUTPUT CIRCUIT WIRING DIAGRAMS

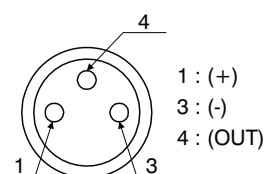
### PNP output



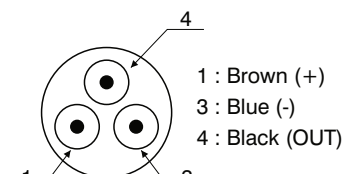
### NPN output



### M8 CONNECTOR PIN LAY OUT



### 3 WIRES CABLE LAY OUT



## Cable ordering code

- MCH1** cable 3 wires l=2,5m with M8 connector  
**MCH2** cable 3 wires l=5m with M8 connector  
**MCH3** cable 3 wires l=10m with M8 connector

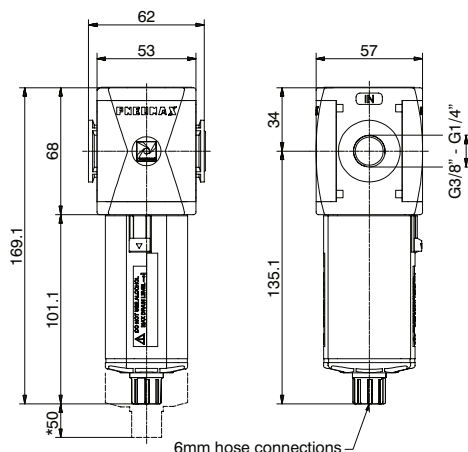
### Connector



## TECHNICAL CHARACTERISTICS

Adjusting range	0 - 10 bar / 0 - 1MPa
Max. inlet pressure	15 bar / 1,5 MPa
Fluid	Filtered and dehumidified air
Display unit of measurement	MPa - kgf/cm <sup>2</sup> - bar - psi
Supply voltage	12 - 24 VDC
Current consumption	≤40mA (without load)
Digital output type	NPN - PNP
Type of contact	Normally Open - Normally Closed
Max. load current	125 mA
Digital output activation mode	single threshold with fixed hysteresis - window with fixed hysteresis - window without hysteresis
Digital output activation time	0.05s - 0.25s - 0.5s - 1s - 2s - 3s (selections for chattering-proof function)
Display characteristics	Double 3 1/2 digit display Digital output status indication Three-pushbuttons touchpad
Indicator accuracy	≤±2% F.S. ± 1 digit
Protection grade	IP 40
Temperature	0 - 50 °C
Cable section	3 x 0,129mm <sup>2</sup> , Ø4 mm, PVC

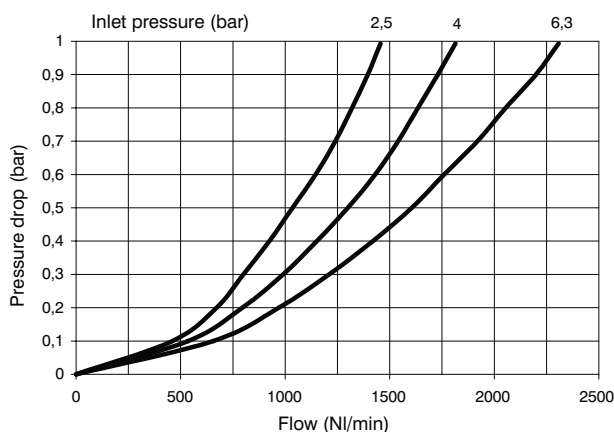
## Filter (F)



\*Bowl removal maximum height

Example: T172BFB : size 2, Filter with Technopolymer threads, G3/8" connections, 20  $\mu$ m filter pore size

## Flow rate curves



## Operational characteristics

- Double filtering action: air flow centrifugation and filter element
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

## Note

In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 220
Weight with threaded inserts	gr. 230
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m
Bowl capacity	34 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G3/8" = 16 Nm
Max. fitting torque (with threaded inserts)	G1/4" = 20 Nm G3/8" = 25 Nm

## Ordering code

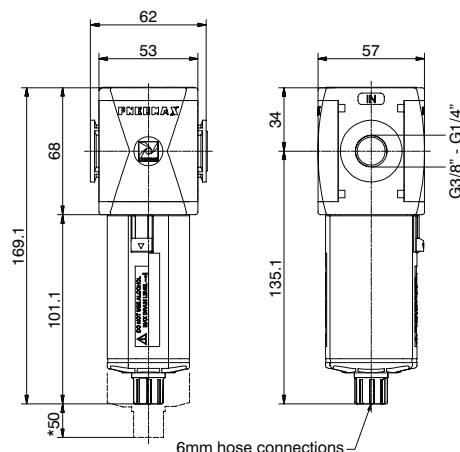
**V172CF502**

VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/4" (only for "N" version)	
B = G3/8"	
C = 3/8 NPT (only for "N" version)	
FILTER PORE SIZE	
A = 5 $\mu$ m	
B = 20 $\mu$ m	
C = 50 $\mu$ m	
OPTIONS	
= Standard *	
S = Automatic drain	
BOWL OPTIONS	
= Standard *	
N = Nylon bowl	

\* no additional letter required



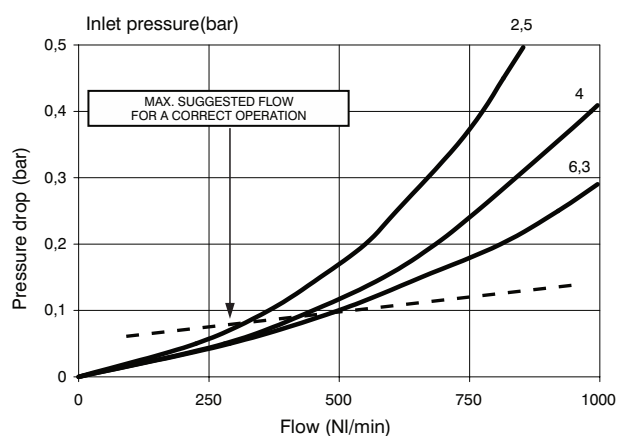
## Coalescing filter (D)



\*Bowl removal maximum height

Example : T172BDA : Coalescing filter size 2, with Technopolymer threads, G3/8" connections, filter efficiency 99,97%

Flow rate curves



## Operational characteristics

- Coalescing filter element with filtration grade of 0.01  $\mu\text{m}$
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

## Note

In order to ensure a better grade of filtration it is recommended to use a 5  $\mu\text{m}$  filter before the coalescing filter. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 225
Weight with threaded inserts	gr. 235
Filter efficiency with 0,01 $\mu\text{m}$ particle	99,97%
Bowl capacity	34 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G3/8" = 16 Nm
Max. fitting torque (with threaded inserts)	G1/4" = 20 Nm G3/8" = 25 Nm

## Ordering code

V1720DE002

## VERSION

- V N = Metal inserts
- T = Technopolymer thread

## CONNECTIONS

- A = G1/4" (only for "N" version)
- B = G3/8"
- C = 3/8 NPT (only for "N" version)

## FILTER EFFICIENCY

- A = 99,97%

## OPTIONS

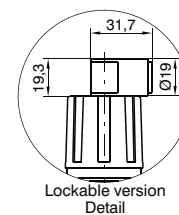
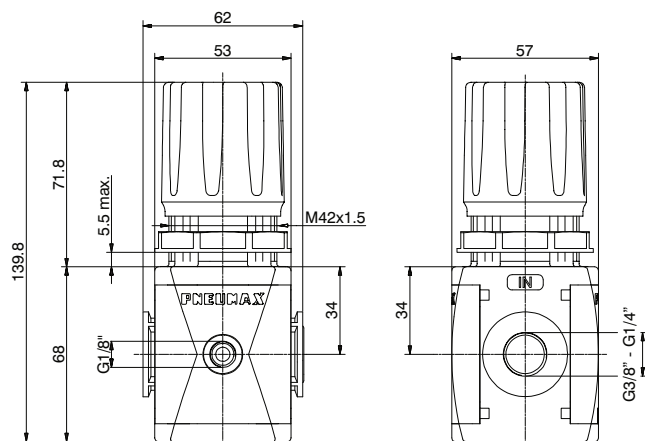
- O = Standard \*
- S = Automatic drain

## BOWL OPTIONS

- Z = Standard \*
- N = Nylon bowl

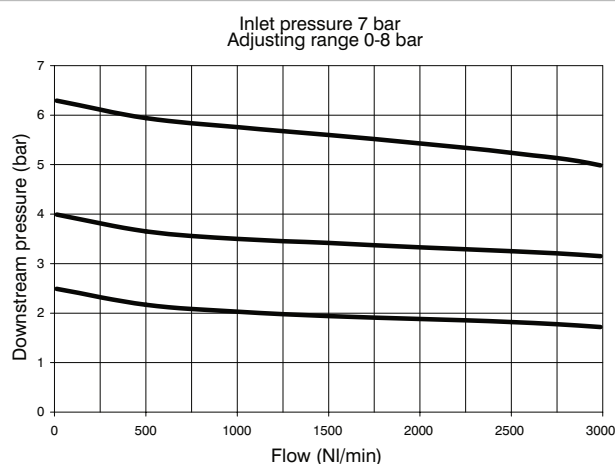
\* no additional letter required

## Regulator (R)

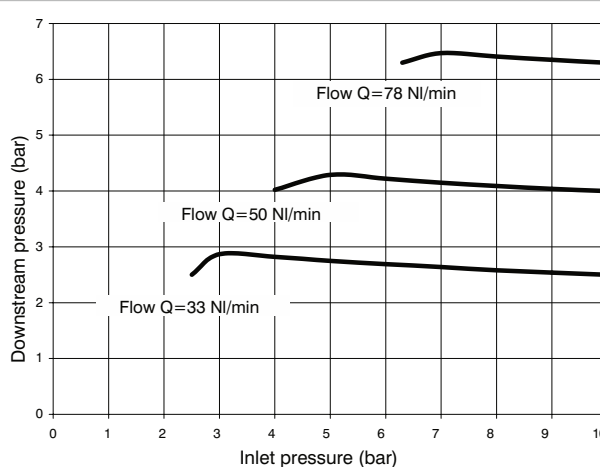


Example: T172BRC : size 2, Regulator with Technopolymer threads, G3/8" connections, 0 to 8 bar adjusting range

Flow rate curves



Adjustment characteristics



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar
Working temperature	-5°C +50°C
Pressure gauge connections	G 1/8"
Weight with Technopolymer threads	gr. 300
Weight with threaded inserts	gr. 310
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/8" = 4 Nm G3/8" = 16 Nm
Max. fitting torque (with threaded inserts)	G1/4" = 20 Nm G3/8" = 25 Nm

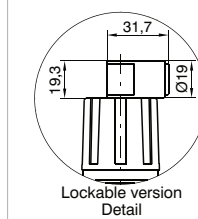
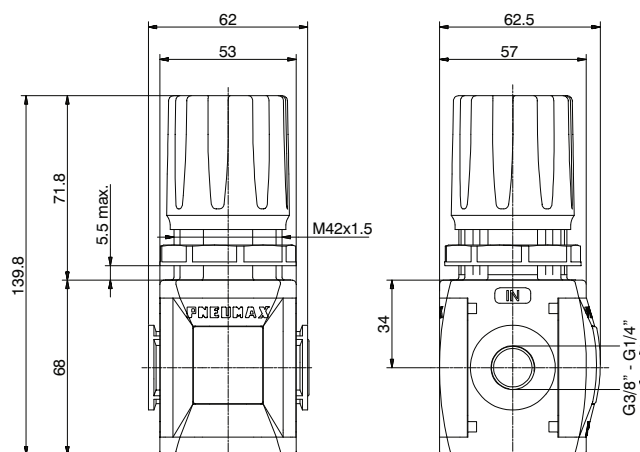
### Ordering code

**V172CRGTO**

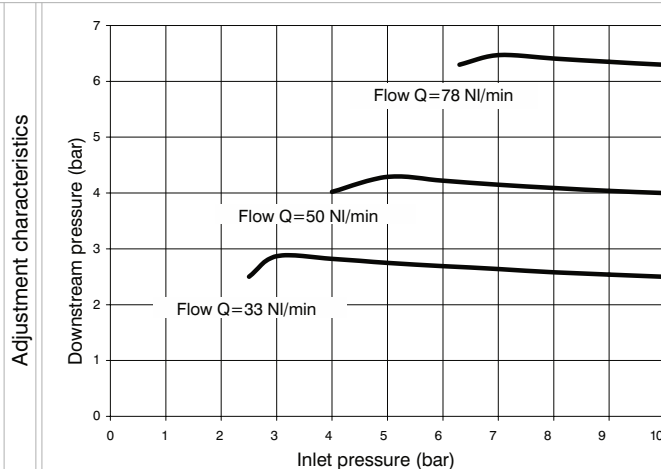
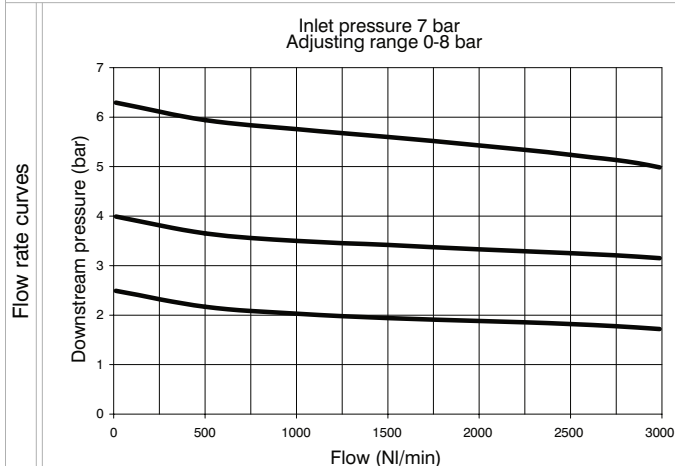
VERSION	
✓ N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
Ⓒ A = G1/4" (only for "N" version)	
B = G3/8"	
C = 3/8 NPT (only for "N" version)	
ADJUSTING RANGE	
Ⓒ A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
Ⓘ F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
Ⓐ K = Lockable version	

\* no additional  
letter required

## Regulator including gauge (RM)(RW)



Example : T172BRMC : size 2, Regulator including gauge with Technopolymer threads, G3/8" connections, 0 to 8 bar adjusting range



## Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

## Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 300
Weight with threaded inserts	gr. 310
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G3/8" = 16 Nm

Max. fitting torque  
(with threaded inserts)

G1/4" = 20 Nm  
G3/8" = 25 Nm

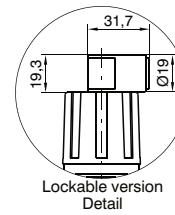
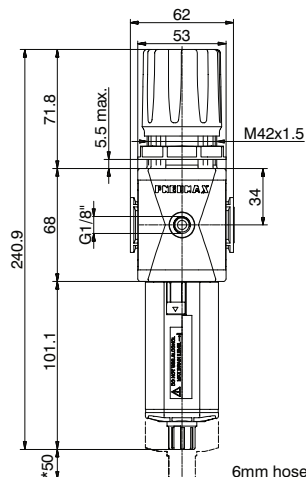
## Ordering code

**V172CRDGT0**

VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/4" (only for "N" version)	
B = G3/8"	
C = 3/8 NPT (only for "N" version)	
FLOW DIRECTION	
M = from left to right	
W = from right to left	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
K = Lockable version	

\* no additional letter required

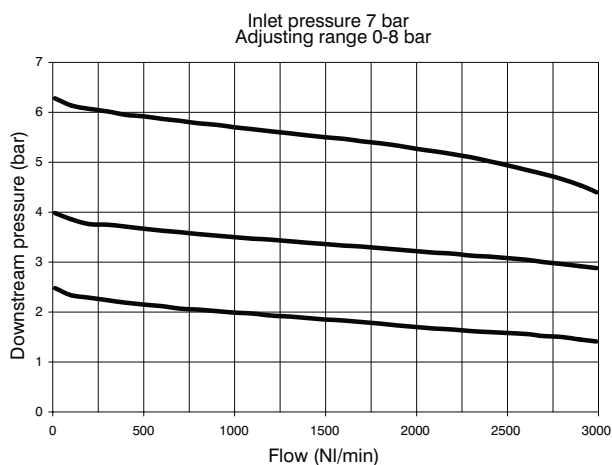
## Filter-Regulator (E)



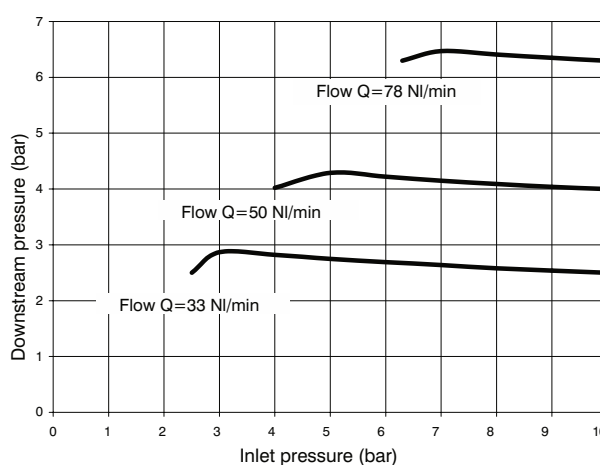
\*Bowl removal maximum height

Example : T172BEBC : size 2, Filter-regulator with Technopolymer threads, G3/8" connections, 20 µm filtering pore size, 0 to 8 bar adjusting range

Flow rate curves



Adjustment characteristics



### Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm and 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

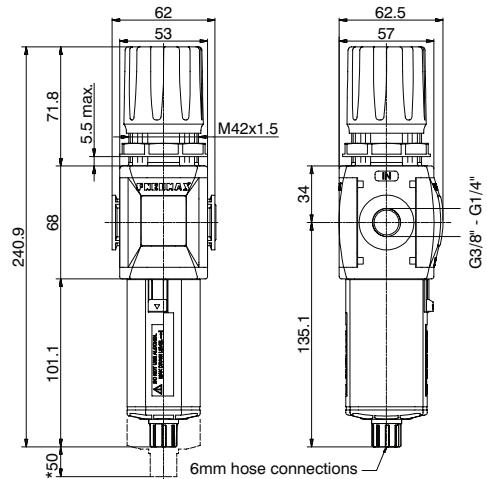
### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

### Technical characteristics

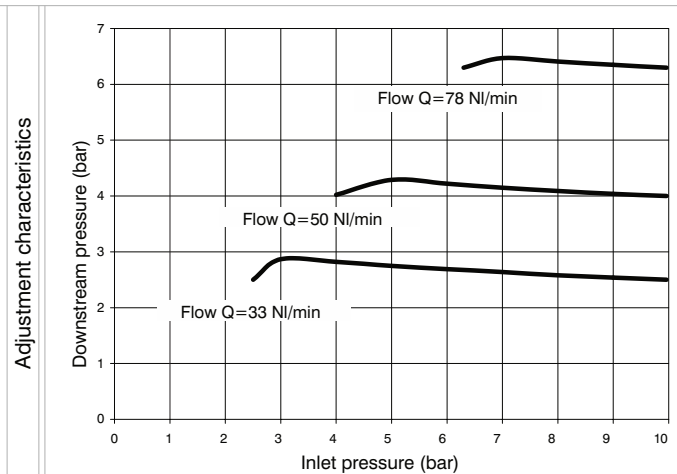
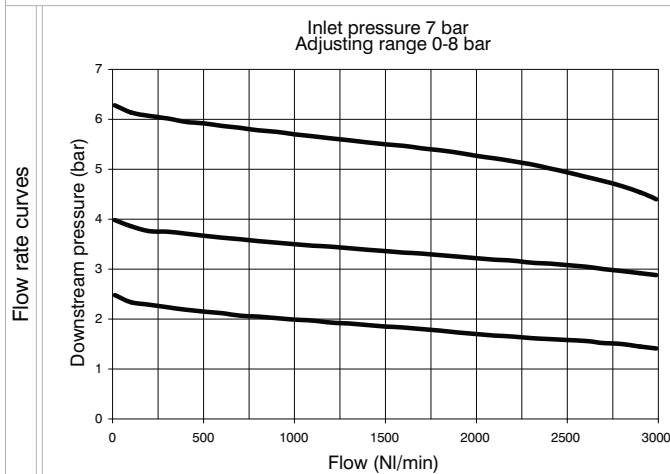
Connections	G 1/4" - G 3/8"	Ordering code
Max. inlet pressure	13 bar	
Minimum working pressure	0,5 bar	V172E S G T O Z
with automatic drain		
Maximum working pressure	10 bar	VERSION
with automatic drain		N = Metal inserts
Working temperature	-5°C +50°C	T = Technopolymer thread
Pressure gauge connections	G 1/8"	CONNECTIONS
Weight with Technopolymer threads	gr. 390	A = G1/4" (only for "N" version)
Weight with threaded inserts	gr. 400	B = G3/8"
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar	C = 3/8 NPT (only for "N" version)
Filter pore size	5 µm - 20 µm - 50 µm	FILTER PORE SIZE
Bowl capacity	34 cm³	A = 5 µm
Assembly positions	Vertical	B = 20 µm
Max. fitting torque	G1/8" = 4 Nm	C = 50 µm
(with Technopolymer threads)	G3/8" = 16 Nm	ADJUSTING RANGE
		A = 0-2 bar
		B = 0-4 bar
		C = 0-8 bar
		D = 0-12 bar
		TYPE
		① = Standard *
		S = Automatic drain
		OPTIONS
		② = Standard *
		K = Lockable version
		BOWL OPTIONS
		= Standard *
		N = Nylon bowl
		* no additional letter required
Max. fitting torque	G1/4" = 20 Nm	
(with threaded inserts)	G3/8" = 25 Nm	

## Filter-regulator including gauge (EM)(EW)



\*Bowl removal maximum height

Example: T172BEMBC : size 2, Filter-Regulator including gauge with Technopolymer threads, G3/8" connections, with 20 µm filtering pore size, 0 to 8 bar adjusting range



## Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm and 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar
Minimum working pressure	0,5 bar
with automatic drain	
Maximum working pressure	10 bar
with automatic drain	
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 400
Weight with threaded inserts	gr. 410
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Filter pore size	5 µm - 20 µm - 50 µm
Bowl capacity	34 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque	G3/8" = 16 Nm
(with Technopolymer threads)	
Max. fitting torque	G1/4" = 20 Nm
(with threaded inserts)	G3/8" = 25 Nm

## Ordering code

**V172CEDSGT02**

## VERSION

- V N = Metal inserts
- T = Technopolymer thread

## CONNECTIONS

- A = G1/4" (only for "N" version)
- B = G3/8"
- C = 3/8 NPT (only for "N" version)

## FLOW DIRECTION

- M = from left to right
- W = from right to left

## FILTER PORE SIZE

- A = 5 µm
- B = 20 µm
- C = 50 µm

## ADJUSTING RANGE

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

## TYPE

- T = Standard \*
- S = Automatic drain

## OPTIONS

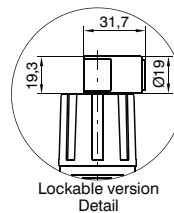
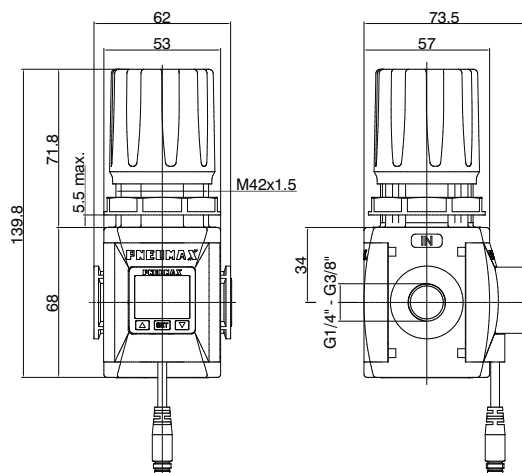
- D = Standard \*
- K = Lockable version

## BOWL OPTIONS

- Z = Standard \*
- N = Nylon bowl

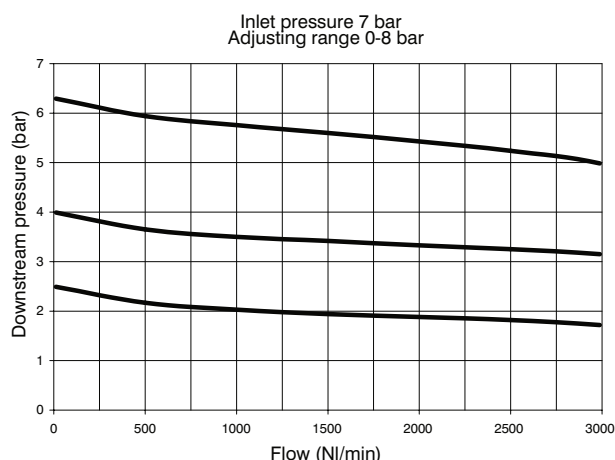
\* no additional letter required

## Regulator with pressure switch (RP)(RZ)

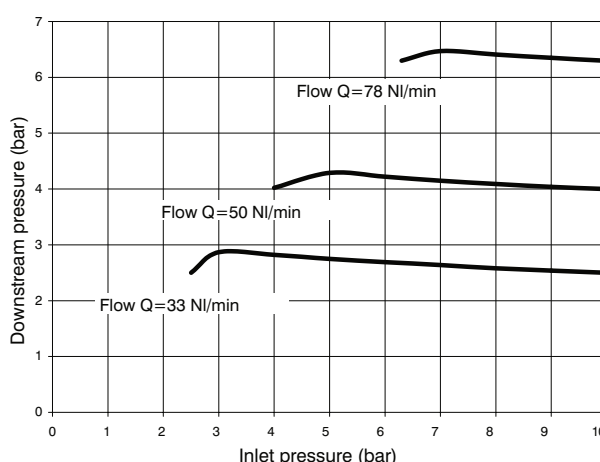


Example : T172BRPCA : size 2, Regulator with Technopolymer threads, G3/8" connections, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP

Flow rate curves



Adjustment characteristics



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar
Working temperature	0°C +50°C
Weight with Technopolymer threads	gr. 300
Weight with threaded inserts	gr. 310
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G3/8" = 16 Nm

Max. fitting torque (with threaded inserts)	G1/4" = 20 Nm G3/8" = 25 Nm
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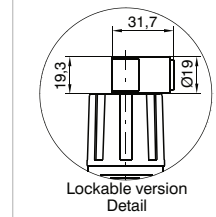
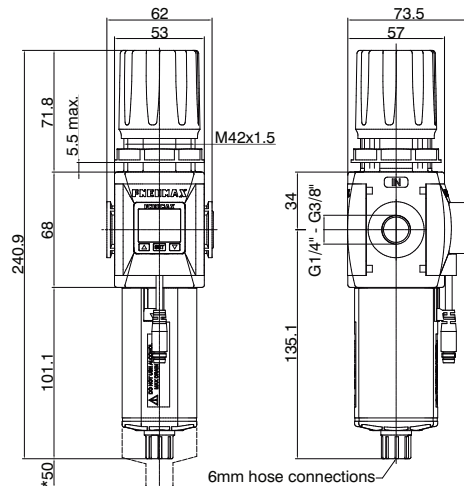
### Ordering code

**V172OROGTOP**

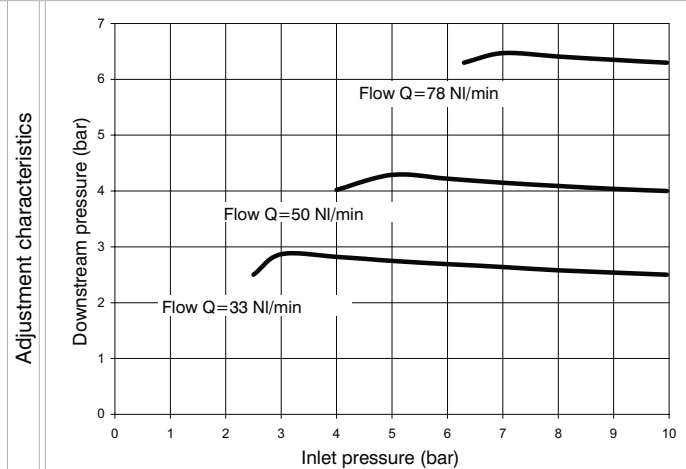
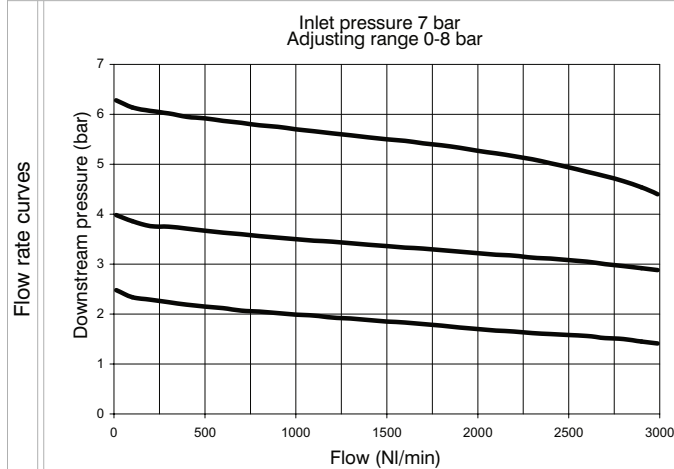
VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G1/4" (only for "N" version)	
B = G3/8"	
C = 3/8 NPT (only for "N" version)	
FLOW DIRECTION	
P = from left to right	
Z = from right to left	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
K = Lockable version	
PRESSURE SWITCH OPTION	
A = Cable 150 mm+M8 PNP	
B = Cable 150 mm+M8 NPN	
C = Cable 2 mt. PNP	
D = Cable 2 mt. NPN	

\* no additional letter required

## Filter regulator with pressure switch (EP)(EZ)



\* Bowl removal maximum height

Example: T172BEPBCA : size 2, Filter-regulator with Technopolymer threads, G3/8" connections, 20  $\mu$ m filtering pore size, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP

## Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 1/4" - G 3/8"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	0°C + 50°C
Weight with Technopolymer threads	gr. 400
Weight with threaded inserts	gr. 410
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m
Bowl capacity	34 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G3/8" = 16 Nm
Max. fitting torque (with threaded inserts)	G1/4" = 20 Nm G3/8" = 25 Nm

## Ordering code

<b>V172CEDSGTOP2</b>	
VERSION	
✓ N	N = Metal inserts
T	T = Technopolymer thread
CONNECTION	
✓ A	A = G1/4" (only for "N" version)
B	B = G3/8"
C	C = 3/8 NPT (only for "N" version)
FLOW DIRECTION	
✓ D	P = from left to right Z = from right to left
FILTER PORE SIZE	
✓ S	A = 5 $\mu$ m B = 20 $\mu$ m C = 50 $\mu$ m
ADJUSTING RANGE	
✓ G	A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
TYPE	
✓ T	= Standard *
S	S = Automatic drain
OPTIONS	
✓ O	= Standard *
K	K = Lockable version
PRESSURE SWITCH OPTION	
✓ A	A = Cable 150 mm + M8 PNP
B	B = Cable 150 mm + M8 NPN
C	C = Cable 2 mt. PNP
D	D = Cable 2 mt. NPN
BOWL OPTIONS	
✓ Z	= Standard *
N	N = Nylon bowl

\* no additional letter required



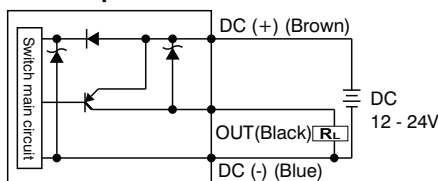


## CHARACTERISTICS

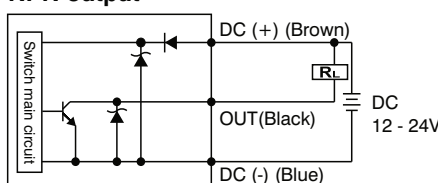
- 3 color digital LCD display, easy readout
- 4 units of measurement for pressure indication
- PNP and NPN output
- N.O. and N.C. output contact
- Not available individually, but only with a Regulator or a Filter-regulator

## OUTPUT CIRCUIT WIRING DIAGRAMS

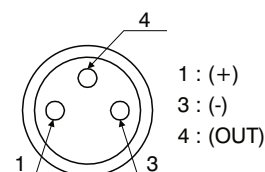
### PNP output



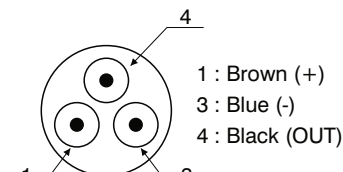
### NPN output



### M8 CONNECTOR PIN LAY OUT



### 3 WIRES CABLE LAY OUT



## Cable ordering code

- MCH1** cable 3 wires l=2,5m with M8 connector  
**MCH2** cable 3 wires l=5m with M8 connector  
**MCH3** cable 3 wires l=10m with M8 connector

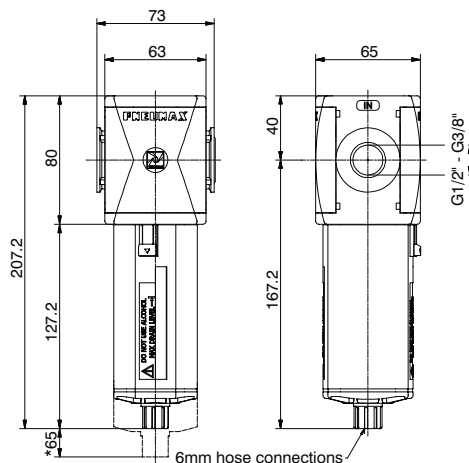
Connector



## TECHNICAL CHARACTERISTICS

Adjusting range	0 - 10 bar / 0 - 1MPa
Max. inlet pressure	15 bar / 1,5 MPa
Fluid	Filtered and dehumidified air
Display unit of measurement	MPa - kgf/cm <sup>2</sup> - bar - psi
Supply voltage	12 - 24 VDC
Current consumption	≤40mA (without load)
Digital output type	NPN - PNP
Type of contact	Normally Open - Normally Closed
Max. load current	125 mA
Digital output activation mode	single threshold with fixed hysteresis - window with fixed hysteresis - window without hysteresis
Digital output activation time	0.05s - 0.25s - 0.5s - 1s - 2s - 3s (selections for chattering-proof function)
Display characteristics	Double 3 1/2 digit display Digital output status indication Three-pushbuttons touchpad
Indicator accuracy	≤±2% F.S. ± 1 digit
Protection grade	IP 40
Temperature	0 - 50 °C
Cable section	3 x 0,129mm <sup>2</sup> , Ø4 mm, PVC

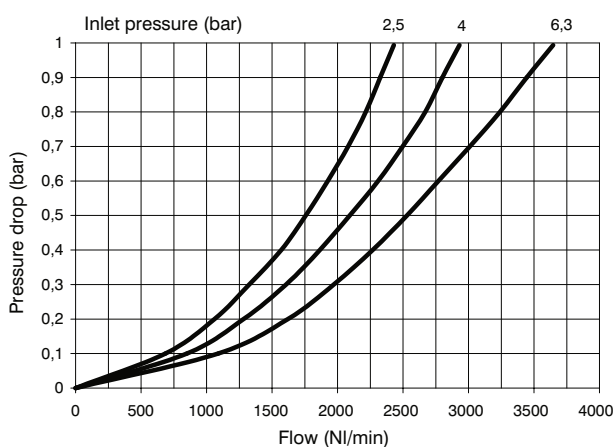
## Filter (F)



\*Bowl removal maximum height

Example: T173BFB : size 3, Filter with Technopolymer threads, G1/2" connections, 20  $\mu$ m filter pore size

## Flow rate curves



## Operational characteristics

- Double filtering action: air flow centrifugation and filter element
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

## Note

In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 3/8" - G 1/2"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 320
Weight with threaded inserts	gr. 340
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m
Bowl capacity	68 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm

## Ordering code

**V173CF502**

## VERSION

- N = Metal inserts
- T = Technopolymer thread

## CONNECTIONS

- A = G3/8" (only for "N" version)
- B = G1/2"
- C = 1/2 NPT (only for "N" version)

## FILTER PORE SIZE

- A = 5  $\mu$ m
- B = 20  $\mu$ m
- C = 50  $\mu$ m

## OPTIONS

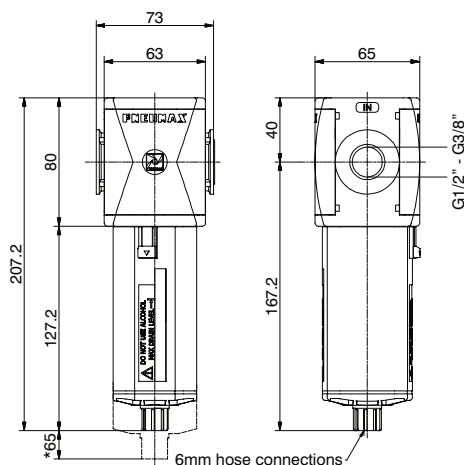
- = Standard \*
- S = Automatic drain

## BOWL OPTIONS

- = Standard \*
- N = Nylon bowl

\* no additional letter required

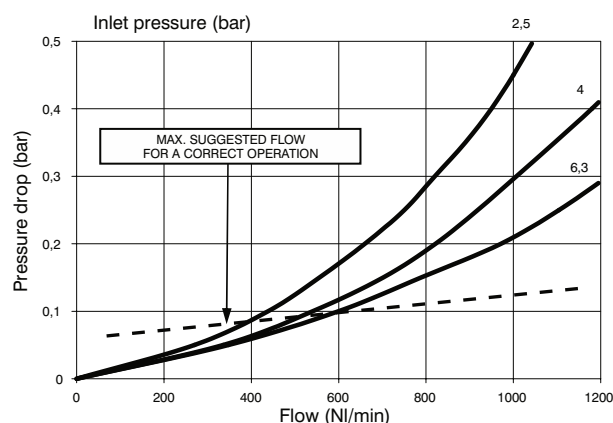
**Coalescing filter (D)**



\*Bowl removal maximum height

Example : T173BDA : Coalescing size 3. Filter with Technopolymer threads. G1/2" connections. filter efficiency 99.97%

## Flow rate curves



### Operational characteristics

- Coalescing filter element with filtration grade of 0,01  $\mu\text{m}$
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

**Note**

In order to ensure a better grade of filtration it is recommended to use a 5  $\mu$ m filter before the coalescing filter. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 3/8" - G 1/2"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 325
Weight with threaded inserts	gr. 345
Filter efficiency with 0,01 $\mu\text{m}$ particle	99,97%
Bowl capacity	68cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm

## Ordering code

V173CDEOZ

VERSION	
---------	--

N = Metal inserts  
 T = Technopolymer thread

## CONNECTIONS

**C**

A = G3/8" (only for "N" version)
B = G1/2"
C = 1/2 NPT (only for "N" version)

	FILTER EFFICIENCY
--	-------------------

**E** A = 99,97%

OPTIONS
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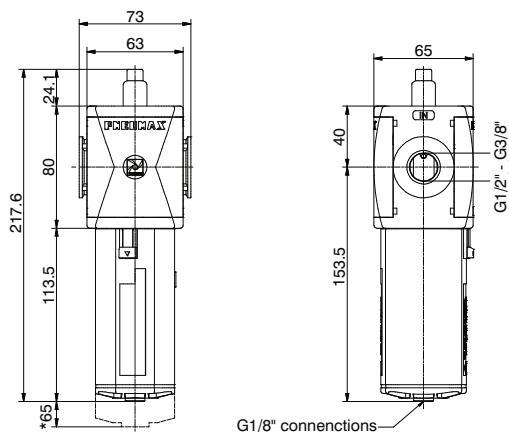
☐ = Standard \*  
☐ S = Automatic drain

	BOWL OPTIONS
--	--------------

Z = Standard \*  
 N = Nylon bowl

\* no additional letter required

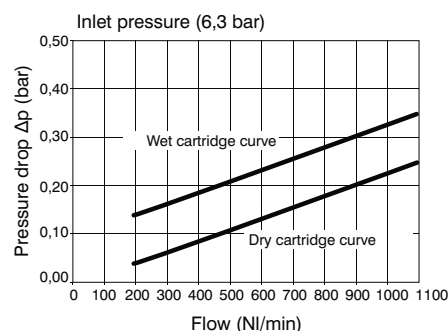
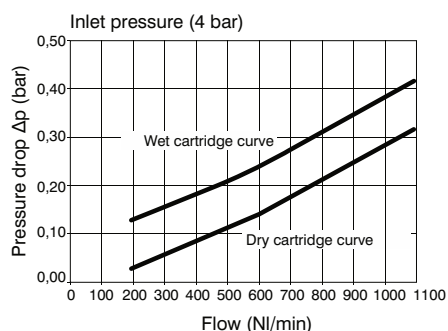
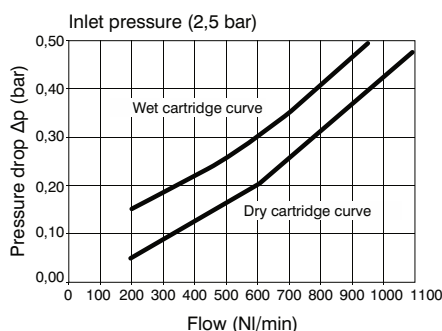
## Oil removal filter (DB)



\*Bowl removal maximum height

Example : T173BDBV : size 3 Oil removal filter, with clogging gauge, Technopolymer threads, G1/2" connections.

3  
Efficiency curve



### Operational characteristics

- Coalescing filtering cartridge  
particle removal 0,01  $\mu\text{m}$   
oil residual 0,01 ppm
- Clogging gauge  
green: proper working  
red: clogged cartridge ( $\Delta p$  0,5 bar)  
we recommend to change the cartridge
- Transparent bowl made off polycarbonate with  
bowl protection guard.
- Bowl assembly via bayonet type quick coupling  
mechanism with safety button.
- Automatic drain mounted as standard.

### Note

We recommend installing a 5  $\mu\text{m}$  filter upstream of the oil removal filter. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

### Technical characteristics

Connections	G 3/8" - G 1/2"
Nominal flow at 6,3 bar	1100 NI/min
Filter efficiency	99,99%
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 440
Weight with threaded inserts	gr. 460
Bowl capacity	30 cm <sup>3</sup>
Assembly positions	Vertical

Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm

### Ordering code

**V173CDBVZ**

#### VERSION

- V N = Metal inserts
- T = Technopolymer thread

#### CONNECTIONS

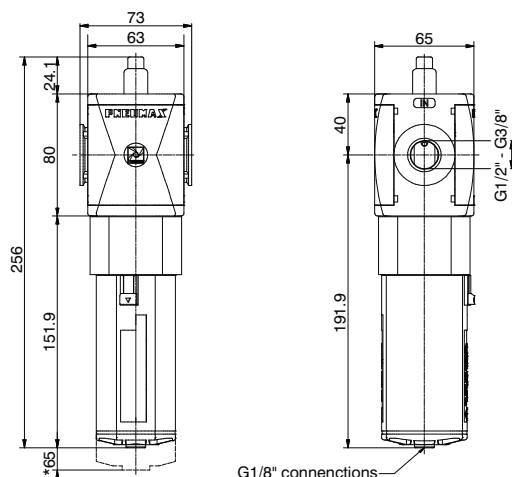
- C A = G3/8" (only for "N" version)
- B = G1/2"
- C = 1/2 NPT (only for "N" version)

#### BOWL OPTIONS

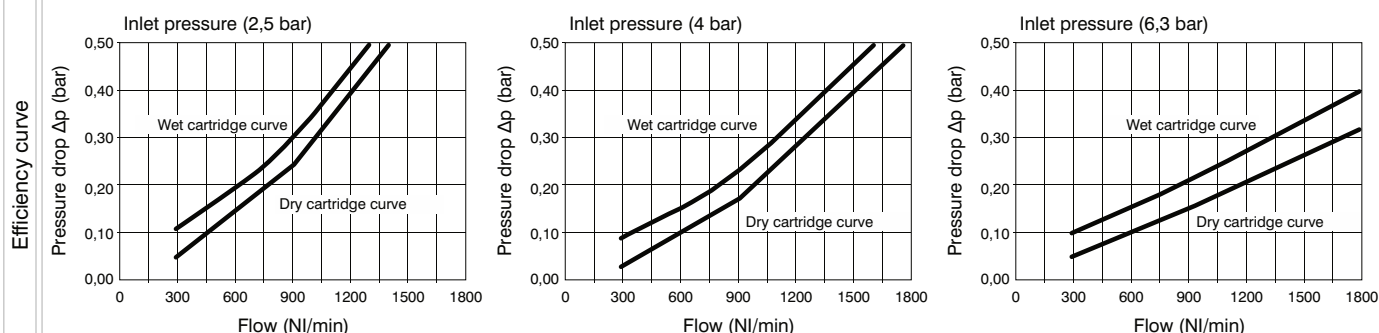
- Z = Standard \*
- N = Nylon bowl

\* no additional  
letter required

## High efficiency oil removal filter (DC)



Example: T173BDCV : size 3 High efficiency oil removal filter, with clogging gauge, Technopolymer threads, G1/2" connections.



## Operational characteristics

- Coalescing filtering cartridge  
particle removal 0,01  $\mu\text{m}$   
oil residual 0,01 ppm
- Clogging gauge  
green: proper working  
red: clogged cartridge ( $\Delta p$  0,5 bar)  
we recommend to change the cartridge
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Automatic drain mounted as standard.

## Note

We recommend installing a 5  $\mu\text{m}$  filter upstream of the oil removal filter. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G 3/8" - G 1/2"
Nominal flow at 6,3 bar	1800 NI/min
Filter efficiency	99,99%
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 640
Weight with threaded inserts	gr. 660
Bowl capacity	30 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm

## Ordering code

**V173CDCVZ**

## VERSION

- V N = Metal inserts
- T = Technopolymer thread

## CONNECTIONS

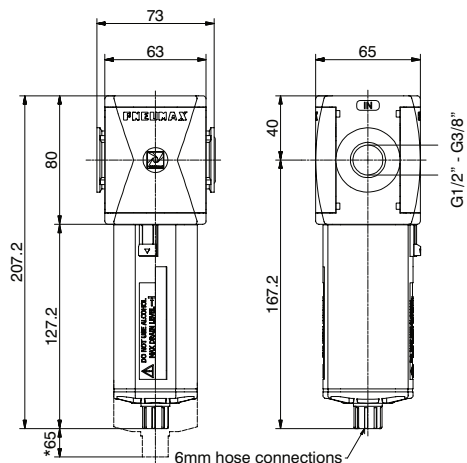
- A = G3/8" (only for "N" version)
- B = G1/2"
- C = 1/2 NPT (only for "N" version)

## BOWL OPTIONS

- Z = Standard \*
- N = Nylon bowl

\* no additional letter required

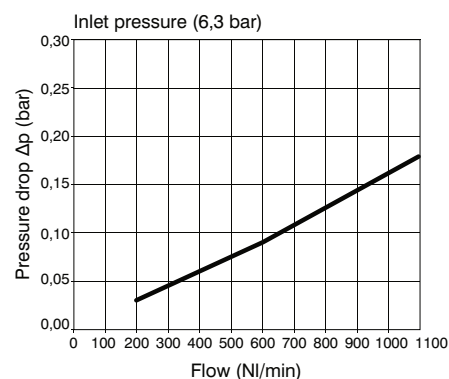
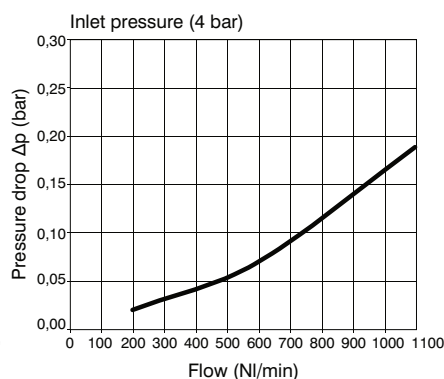
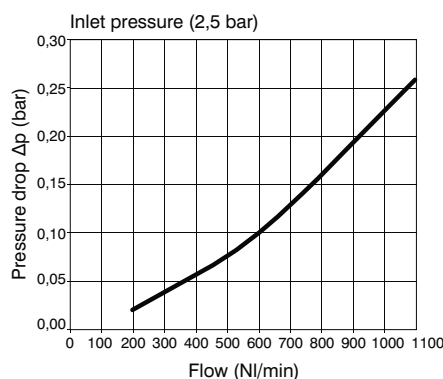
## Carbon filter (DD)



\*Bowl removal maximum height

Example : T173BDD : size 3 Carbon filter, Technopolymer threads, G1/2" connections.

## Efficiency curve



## Operational characteristics

- Active carbon cartridge with built in particulate filter. Used to remove oil vapours, hydrocarbons, odours and particles coming from the compressed air lines or gasses in industrial applications. Oil residue up to <0,003 ppm (max input aerosol 0.01ppm).
- Innovative filtering technology; high absorption capacity, with low differential pressure.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard.

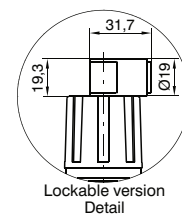
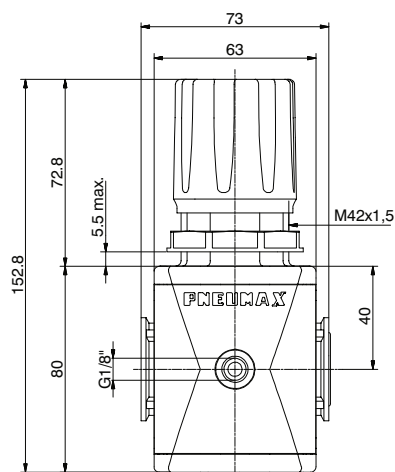
## Note

A 5 micron filter followed by a coalescing filter must be installed before the Oil removal filter in order to ensure the correct functionality of the unit and to safeguard the life of the active carbon cartridge. It is also necessary to preventively replace the cartridges at fixed intervals.

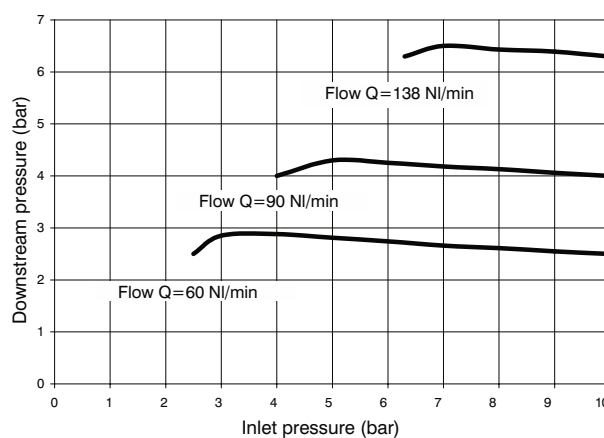
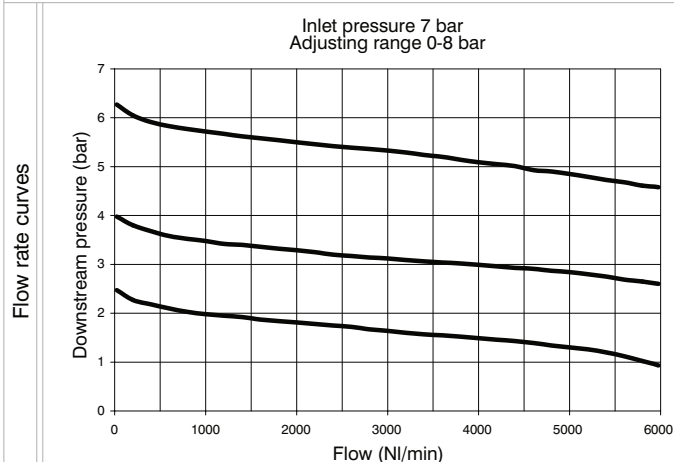
## Technical characteristics

Connections	G 3/8" - G 1/2"	Ordering code
Nominal flow at 6,3 bar	1100 NI/min	
Cartridge life	2000 hours	V173CDDZ
Max. inlet pressure	13 bar	
Working temperature	-5°C +50°C	VERSION
Weight with Technopolymer threads	gr. 440	
Weight with threaded inserts	gr. 460	N = Metal inserts T = Technopolymer thread
Bowl capacity	30 cm <sup>3</sup>	
Assembly positions	Vertical	CONNECTIONS
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm	
		BOWL OPTIONS
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm	* no additional letter required

## Regulator (R)

Lockable version  
Detail

Example: T173BRC : size 3, Regulator with Technopolymer threads, G1/2" connections, 0 to 8 bar adjusting range



## Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

## Technical characteristics

Connections	G 3/8" - G 1/2"
Max. inlet pressure	13 bar
Working temperature	-5°C +50°C
Pressure gauge connections	G 1/8"
Weight with Technopolymer threads	gr. 360
Weight with threaded inserts	gr. 380
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/8" = 4 Nm G1/2" = 22 Nm
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm

## Ordering code

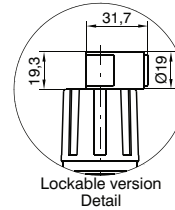
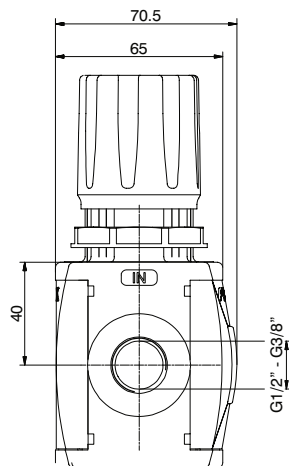
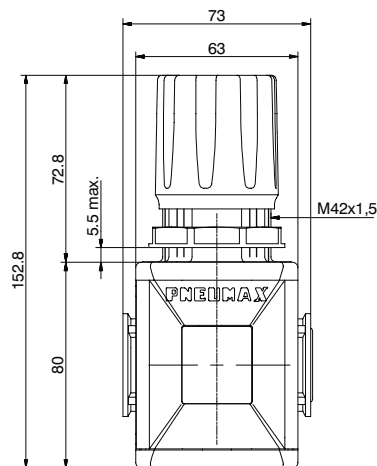
**V173RC10**

<b>V</b>	VERSION
N	N = Metal inserts
T	T = Technopolymer thread
<b>C</b>	CONNECTIONS
A	A = G3/8" (only for "N" version)
B	B = G1/2"
C	C = 1/2 NPT (only for "N" version)
<b>G</b>	ADJUSTING RANGE
A	A = 0-2 bar
B	B = 0-4 bar
C	C = 0-8 bar
D	D = 0-12 bar
<b>T</b>	TYPE
=	= Standard *
F	F = Controlled relief + improved relieving
L	L = no relieving
R	R = Improved relieving
<b>O</b>	OPTIONS
=	= Standard *
K	K = Lockable version

\* no additional letter required

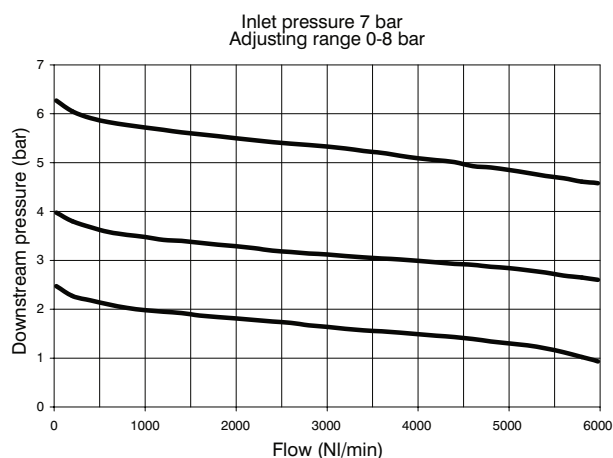


### Regulator including gauge (RM)(RW)

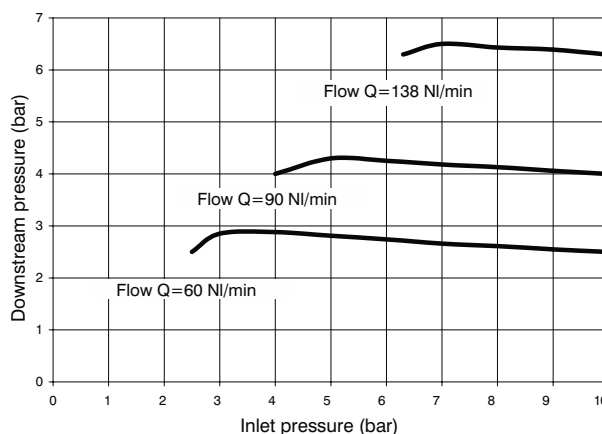


Example : T173BRMC : size 3, Regulator including gauge with Technopolymer threads, G1/2" connections, 0 to 8 bar adjusting range

Flow rate curves



Adjustment characteristics



#### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

#### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

#### Technical characteristics

Connections	G 3/8" - G 1/2"
Max. inlet pressure	13 bar
Working temperature	-5°C +50°C
Weight with Technopolymer threads	gr. 370
Weight with threaded inserts	gr. 390
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm

Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm
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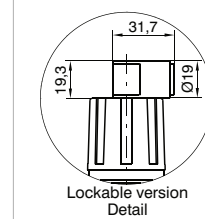
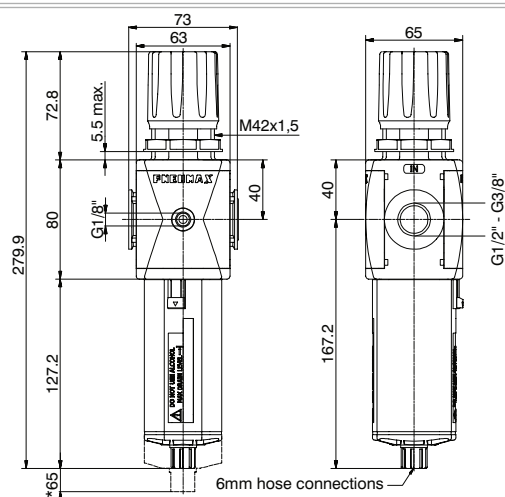
#### Ordering code

**V173CRDGT0**

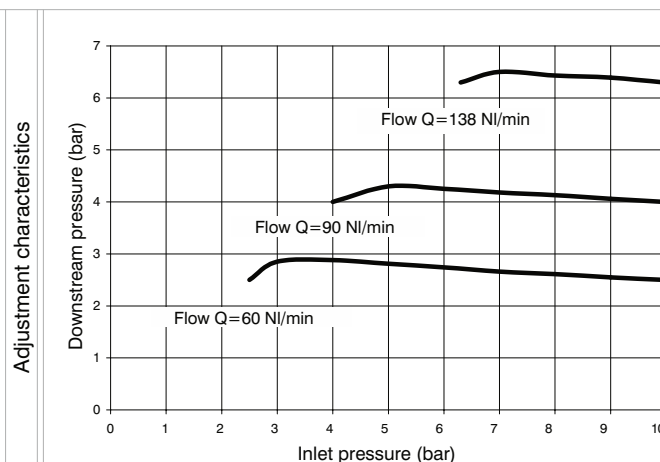
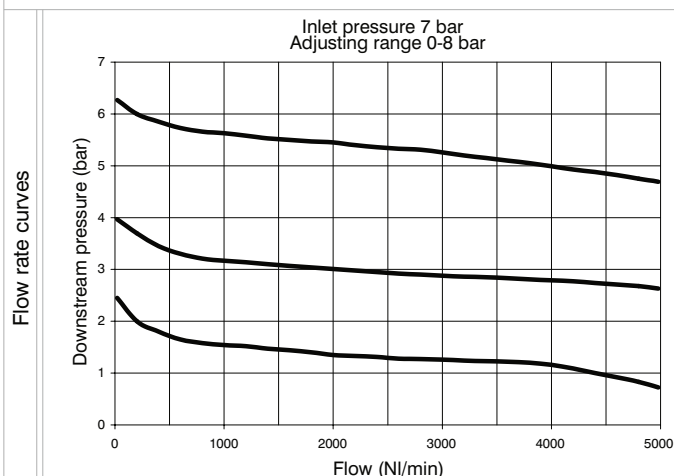
VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G3/8" (only for "N" version)	
B = G1/2"	
C = 1/2 NPT (only for "N" version)	
FLOW DIRECTION	
M = from left to right	
W = from right to left	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
K = Lockable version	

\* no additional letter required

## Filter-Regulator (E)



\*Bowl removal maximum height

Example : T173BEBC : size 3, Filter-regulator with Technopolymer threads, G1/2" connections, 20  $\mu$ m filtering pore size, 0 to 8 bar adjusting range

## Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

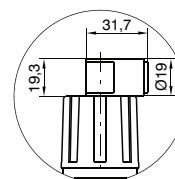
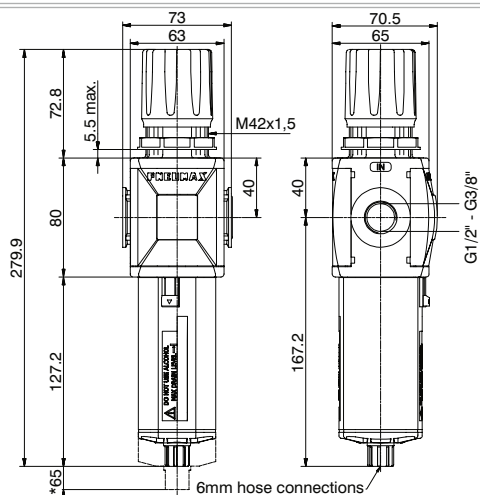
Connections	G 3/8" - G 1/2"
Max. inlet pressure	13 bar
Minimum working pressure	0,5 bar
with automatic drain	
Maximum working pressure	10 bar
with automatic drain	
Working temperature	-5°C +50°C
Pressure gauge connections	G 1/8"
Weight with Technopolymer threads	gr. 470
Weight with threaded inserts	gr. 490
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m
Bowl capacity	68 cm <sup>3</sup>
Assembly positions	Vertical
Max. fitting torque	G1/8" = 4 Nm
(with Technopolymer threads)	G1/2" = 22 Nm
Max. fitting torque	G3/8" = 25 Nm
(with threaded inserts)	G1/2" = 30 Nm

## Ordering code

V173CESG10Z

VERSION	
N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G3/8" (only for "N" version)	
B = G1/2"	
C = 1/2 NPT (only for "N" version)	
FILTER PORE SIZE	
A = 5 $\mu$ m	
B = 20 $\mu$ m	
C = 50 $\mu$ m	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
① = Standard *	
S = Automatic drain	
OPTIONS	
② = Standard *	
K = Lockable version	
BOWL OPTIONS	
= Standard *	
N = Nylon bowl	
* no additional letter required	

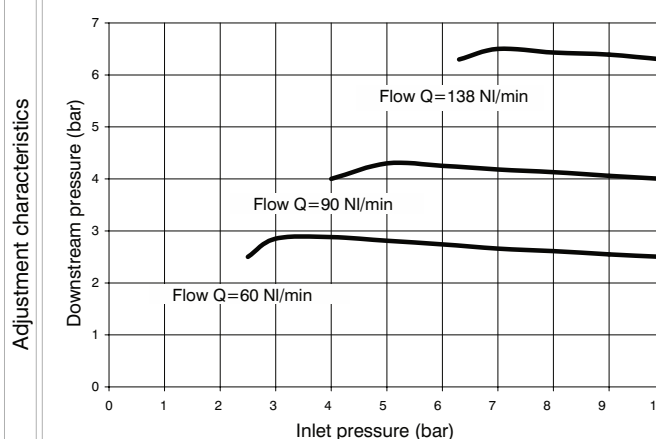
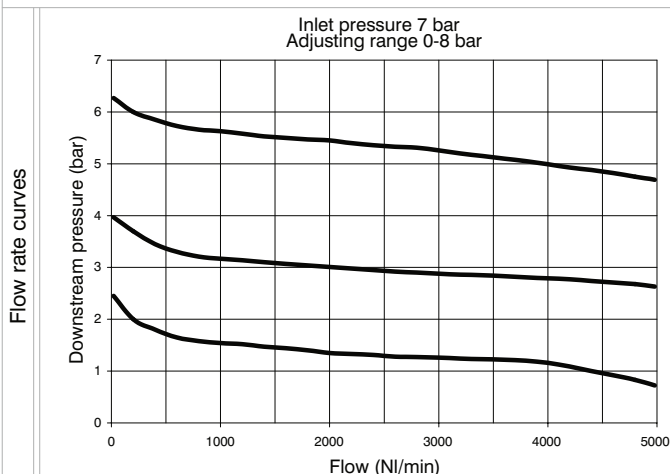
**Filter-regulator including gauge (EM)(EW)**



Lockable version

\*Bowl removal maximum height

Example: T173BEMBC : size 3. Filter-Regulator including gauge with Technopolymer threads. G1/2" connections. with 20  $\mu$ m filtering pore size. 0 to 8 bar adjusting range



### Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades ( $5\mu\text{m}$ ,  $20\mu\text{m}$  and  $50\mu\text{m}$ ) can be regenerated by washing it or replaced.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

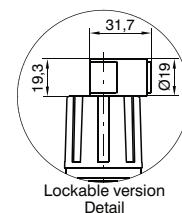
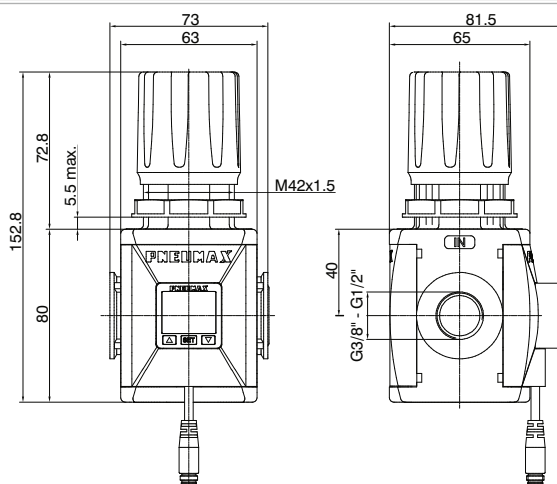
**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

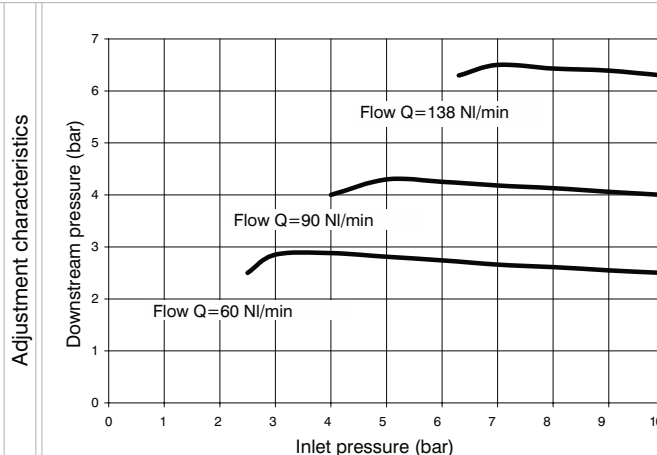
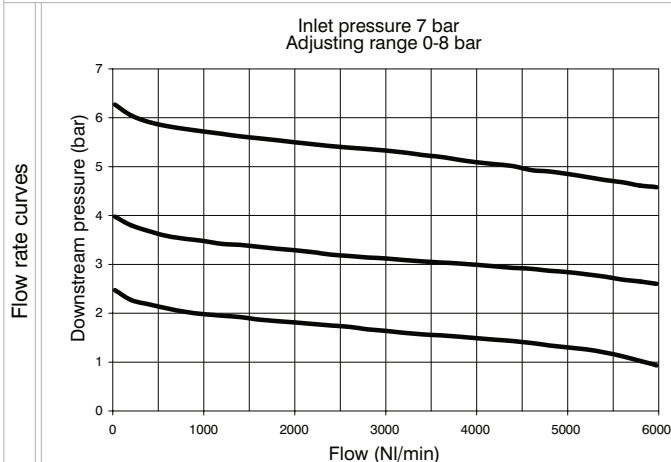
### Technical characteristics

Connections	G 3/8" - G 1/2"	Ordering code
Max. inlet pressure	13 bar	<b>V173CEDSCETOZ</b>
Minimum working pressure with automatic drain	0,5 bar	VERSION
Maximum working pressure with automatic drain	10 bar	<b>V</b> N = Metal inserts T = Technopolymer thread
Working temperature	-5°C +50°C	CONNECTIONS
Weight with Technopolymer threads	gr. 480	<b>C</b> A = G3/8" (only for "N" version) B = G1/2" C = 1/2 NPT (only for "N" version)
Weight with threaded inserts	gr. 500	FLOW DIRECTION
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar	<b>D</b> M = from left to right W = from right to left
Filter pore size	5 µm - 20 µm - 50 µm	FILTER PORE SIZE
Bowl capacity	68 cm³	<b>S</b> A = 5 µm B = 20 µm C = 50 µm
Assembly positions	Vertical	ADJUSTING RANGE
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm	<b>G</b> A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
		TYPE
		<b>T</b> = Standard *
		S = Automatic drain
		OPTIONS
		<b>O</b> = Standard *
		K = Lockable version
		BOWL OPTIONS
		<b>Z</b> = Standard *
		N = Nylon bowl
		* no additional letter required
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm	

## Regulator with pressure switch (RP)(RZ)



Example : T173BRPCA : size 3, Regulator with Technopolymer threads, G1/2" connections, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP



## Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

## Technical characteristics

Connections	G 3/8" - G 1/2"
Max. inlet pressure	13 bar
Working temperature	0°C +50°C
Weight with Technopolymer threads	gr. 370
Weight with threaded inserts	gr. 390
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm

Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm
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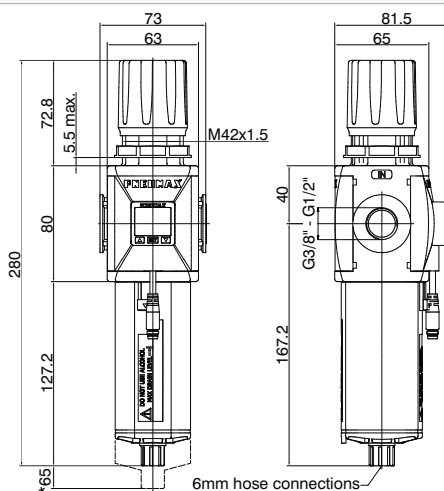
## Ordering code

**V173ORDCTOP**

VERSION	
V N = Metal inserts	
T = Technopolymer thread	
CONNECTIONS	
A = G3/8" (only for "N" version)	
B = G1/2"	
C = 1/2 NPT (only for "N" version)	
FLOW DIRECTION	
P = from left to right	
Z = from right to left	
ADJUSTING RANGE	
A = 0-2 bar	
B = 0-4 bar	
C = 0-8 bar	
D = 0-12 bar	
TYPE	
= Standard *	
T F = Controlled relief + improved relieving	
L = no relieving	
R = Improved relieving	
OPTIONS	
= Standard *	
K = Lockable version	
PRESSURE SWITCH OPTION	
A = Cable 150 mm + M8 PNP	
B = Cable 150 mm + M8 NPN	
C = Cable 2 mt. PNP	
D = Cable 2 mt. NPN	

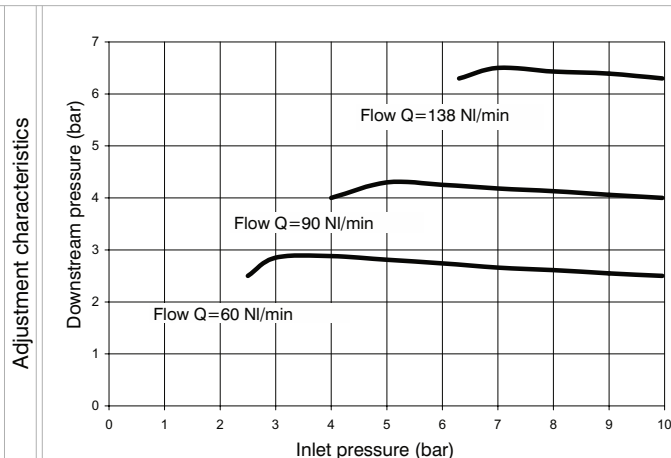
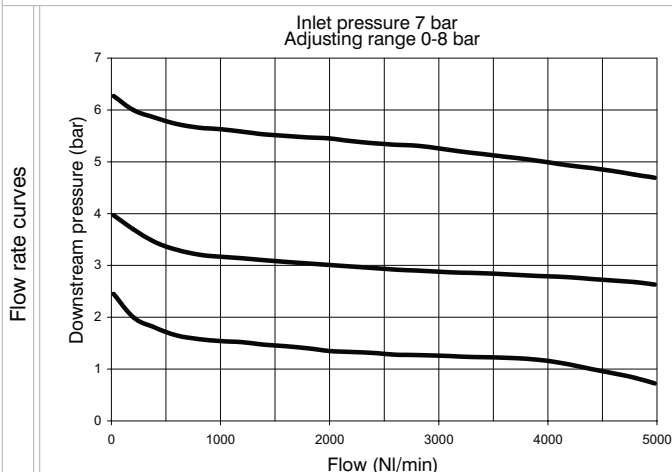
\* no additional letter required

## Filter regulator with pressure switch (EP)(EZ)



\* Bowl removal maximum height

Example: T173BEPBCA : size 3, Filter-regulator with Technopolymer threads, G1/2" connections, 20  $\mu$ m filtering pore size, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP



### Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

### Technical characteristics

Connections	G 3/8" - G 1/2"	Ordering code <b>V173CEDSGTOPZ</b>
Max. inlet pressure	13 bar	
Minimum working pressure with automatic drain	0,5 bar	VERSION V N = Metal inserts T = Technopolymer thread
Maximum working pressure with automatic drain	10 bar	
Working temperature	0°C +50°C	CONNECTIONS A = G3/8" (only for "N" version) B = G1/2" C = 1/2 NPT (only for "N" version)
Weight with Technopolymer threads	gr. 480	
Weight with threaded inserts	gr. 500	FLOW DIRECTION D P = from left to right Z = from right to left
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar	
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m	FILTER PORE SIZE A = 5 $\mu$ m B = 20 $\mu$ m C = 50 $\mu$ m
Bowl capacity	68 cm <sup>3</sup>	
Assembly positions	Vertical	ADJUSTING RANGE A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar
Max. fitting torque (with Technopolymer threads)	G1/2" = 22 Nm	
Max. fitting torque (with threaded inserts)	G3/8" = 25 Nm G1/2" = 30 Nm	TYPE T = Standard * S = Automatic drain
		OPTIONS O = Standard * K = Lockable version
		PRESSURE SWITCH OPTION A = Cable 150 mm+M8 PNP B = Cable 150 mm+M8 NPN C = Cable 2 mt. PNP D = Cable 2 mt. NPN
		BOWL OPTIONS Z = Standard * N = Nylon bowl

\* no additional letter required

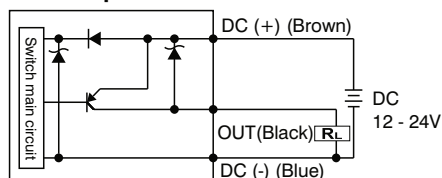


## CHARACTERISTICS

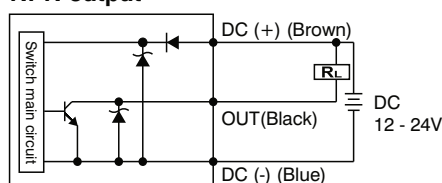
- 3 color digital LCD display, easy readout
- 4 units of measurement for pressure indication
- PNP and NPN output
- N.O. and N.C. output contact
- Not available individually, but only with a Regulator or a Filter-regulator

## OUTPUT CIRCUIT WIRING DIAGRAMS

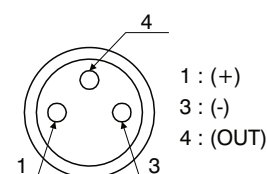
### PNP output



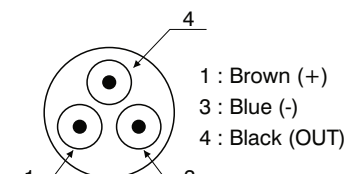
### NPN output



### M8 CONNECTOR PIN LAY OUT



### 3 WIRES CABLE LAY OUT



## Cable ordering code

- MCH1** cable 3 wires l=2,5m with M8 connector  
**MCH2** cable 3 wires l=5m with M8 connector  
**MCH3** cable 3 wires l=10m with M8 connector

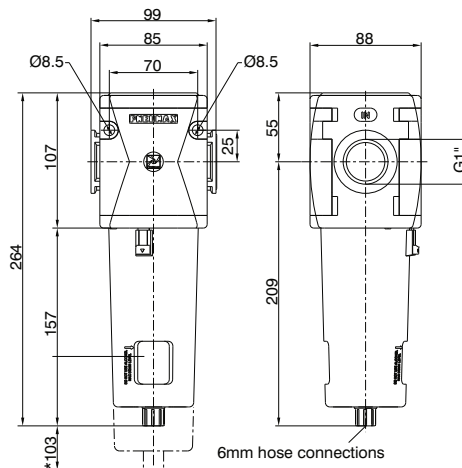
Connector



## TECHNICAL CHARACTERISTICS

Adjusting range	0 - 10 bar / 0 - 1MPa
Max. inlet pressure	15 bar / 1,5 MPa
Fluid	Filtered and dehumidified air
Display unit of measurement	MPa - kgf/cm <sup>2</sup> - bar - psi
Supply voltage	12 - 24 VDC
Current consumption	≤40mA (without load)
Digital output type	NPN - PNP
Type of contact	Normally Open - Normally Closed
Max. load current	125 mA
Digital output activation mode	single threshold with fixed hysteresis - window with fixed hysteresis - window without hysteresis
Digital output activation time	0.05s - 0.25s - 0.5s - 1s - 2s - 3s (selections for chattering-proof function)
Display characteristics	Double 3 1/2 digit display Digital output status indication Three-pushbuttons touchpad
Indicator accuracy	≤±2% F.S. ± 1 digit
Protection grade	IP 40
Temperature	0 - 50 °C
Cable section	3 x 0,129mm <sup>2</sup> , Ø4 mm, PVC

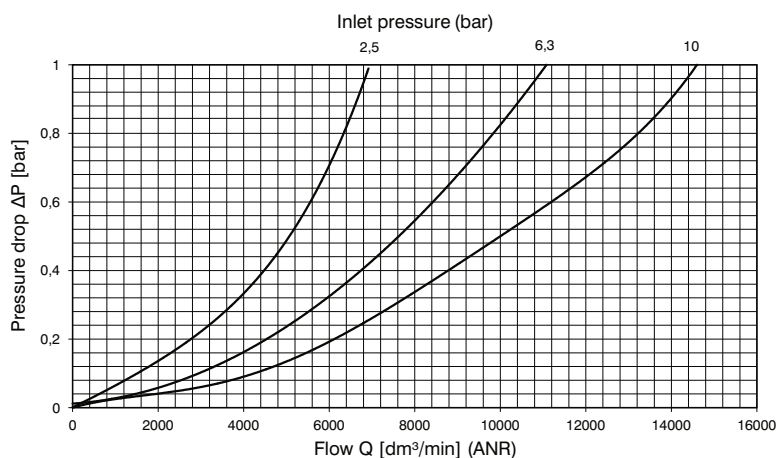
## Filter (F)



\*Bowl removal maximum height

Example : N174BFB : size 4, Filter, G1" connections, 20  $\mu$ m filter pore size

## Flow rate curves



### Operational characteristics

- Double filtering action: air flow centrifugation and filter element
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

### Note

In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

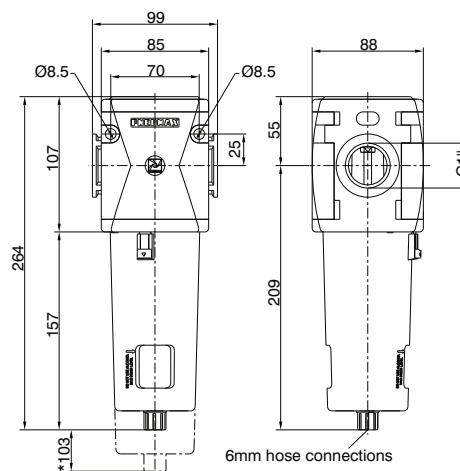
### Technical characteristics

Connections	G1"	Ordering code
Max. inlet pressure	13 bar	
Minimum working pressure with automatic drain	0,5 bar	<b>N174BFS002</b>
Maximum working pressure with automatic drain	10 bar	
Working temperature	-5°C +50°C	FILTER PORE SIZE
Weight	1155 (gr)	
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m	OPTIONS
Bowl capacity	90 cm <sup>3</sup>	
Assembly positions	Vertical	BOWL OPTIONS
Wall fixing screw	M8	

\* no additional letter required



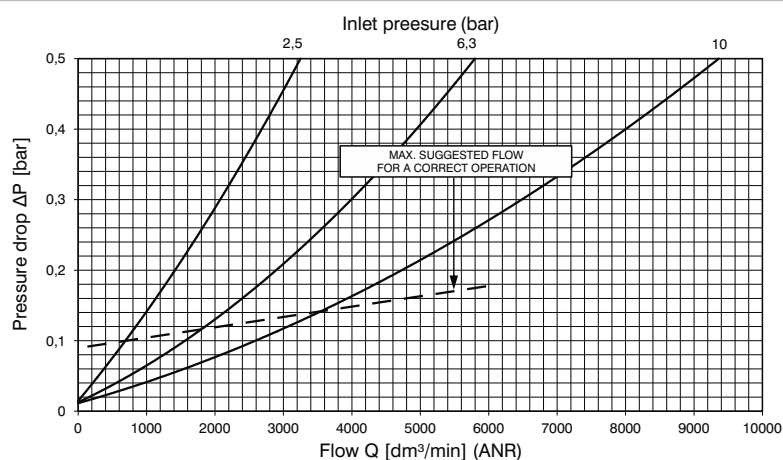
## Coalescing filter (D)



\*Bowl removal maximum height

Example : N174BDA : size 4, Coalescing filter, G1" connections, filter efficiency 99,97%

Flow rate curves



## Operational characteristics

- Coalescing filter element with filtration grade of 0,01  $\mu\text{m}$
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

## Note

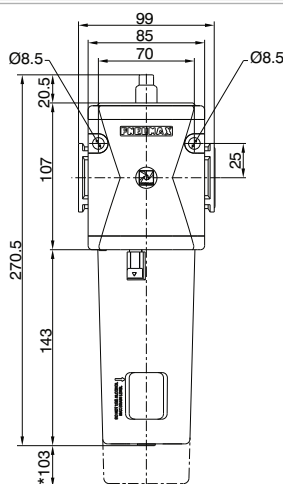
In order to ensure a better grade of filtration it is recommended to use a 5  $\mu\text{m}$  filter before the coalescing filter. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G1"	Ordering code
Max. inlet pressure	13 bar	
Minimum working pressure with automatic drain	0,5 bar	N174BDE002
Maximum working pressure with automatic drain	10 bar	
Working temperature	-5°C +50°C	E FILTER EFFICIENCY
Weight	1235 (gr)	
Filter efficiency with 0,01 $\mu\text{m}$ particle	99,97%	A = 99,97%
Bowl capacity	90 cm <sup>3</sup>	
Assembly positions	Vertical	OPTIONS
Wall fixing screw	M8	
		= Standard *
		BOWL OPTIONS
		= Standard *
		N = Nylon bowl

\* no additional letter required

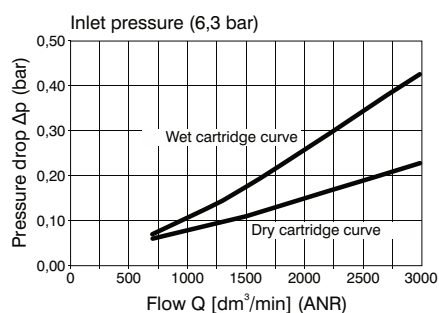
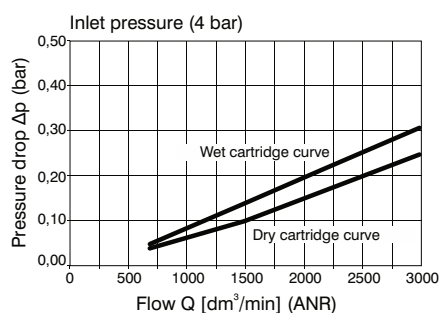
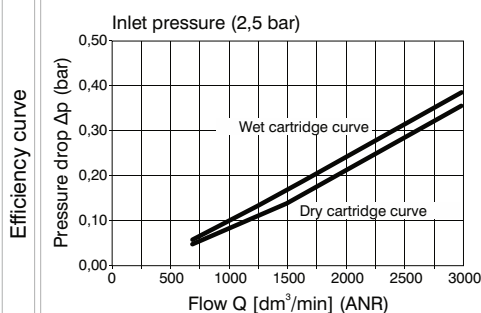
### Oil removal filter (DAV)



G1/8" connections

\*Bowl removal maximum height

Example : N174BDAV : size 4, Oil removal filter, with clogging gauge, G1" connections.



#### Operational characteristics

- Coalescing filtering cartridge particle removal 0,01  $\mu$ m oil residual 0,01 ppm
- Clogging gauge  
green: proper working  
red: clogged cartridge ( $\Delta p$  0,5 bar)  
we recommend to change the cartridge
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Automatic drain mounted as standard.

#### Note

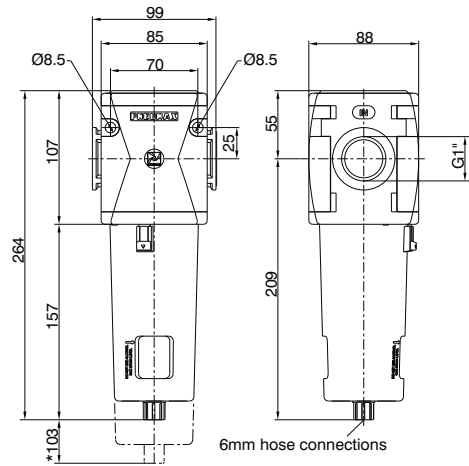
It is recommended to use a 5  $\mu$ m filter before the oil removal filter. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

#### Technical characteristics

Connections	G1"	Ordering code
Nominal flow at 6,3 bar	13 bar	
Filter efficiency	3000 NI/min	<b>N174BDAV</b>
Max. inlet pressure	99,99%	
Minimum working pressure with automatic drain	0,5 bar	BOWL OPTIONS = Standard * N = Nylon bowl
Maximum working pressure with automatic drain	10 bar	
Working temperature	-5°C + 50°C	
Weight	1260 (gr)	
Bowl capacity	90 cm <sup>3</sup>	
Assembly positions	Vertical	
Wall fixing screw	M8	

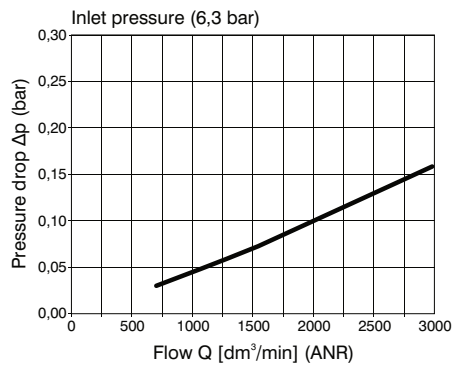
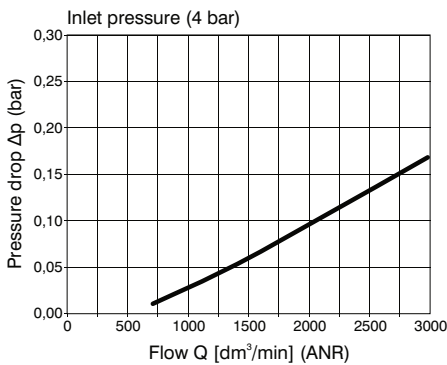
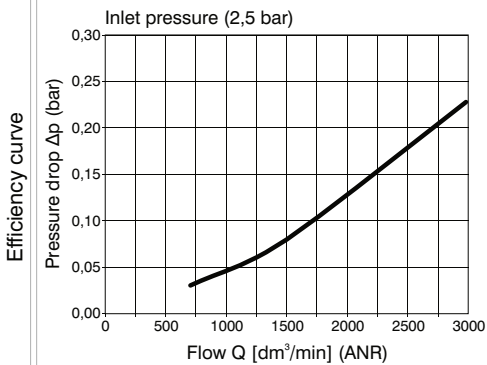
\* no additional letter required

Carbon filter (DD)



\*Bowl removal maximum height

Example : N174BDD : size 4, Carbon filter with Technopolymer threads, G1" connections.



Operational characteristics

- Active carbon cartridge with built in particulate filter. Used to remove oil vapours, hydrocarbons, odours and particles coming from the compressed air lines or gasses in industrial applications. Oil residue up to <0,003 ppm (max input aerosol 0.01ppm).
- Innovative filtering technology; high absorption capacity, with low differential pressure.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard.

Note

A 5 micron filter followed by a coalescing filter must be installed before the Oil removal filter in order to ensure the correct functionality of the unit and to safeguard the life of the active carbon cartridge. It is also necessary to preventively replace the cartridges at fixed intervals.

Technical characteristics

Connections	G 1"
Nominal flow at 6,3 bar	3000 Nl/min
Cartridge life	2000 hours
Max. inlet pressure	13 bar
Working temperature	-5°C ÷ +50°C
Weight	gr. 1260
Bowl capacity	90 cm <sup>3</sup>
Assembly positions	Vertical

Wall fixing screw

M8

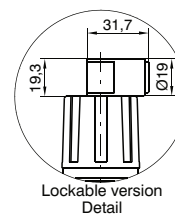
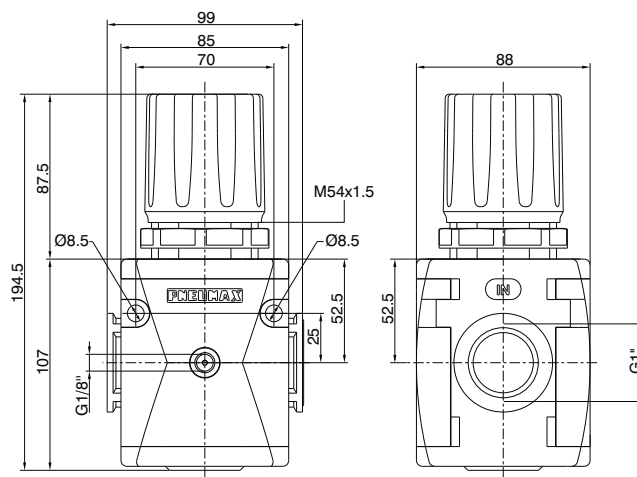
Ordering code

**N174BDD<sup>2</sup>**

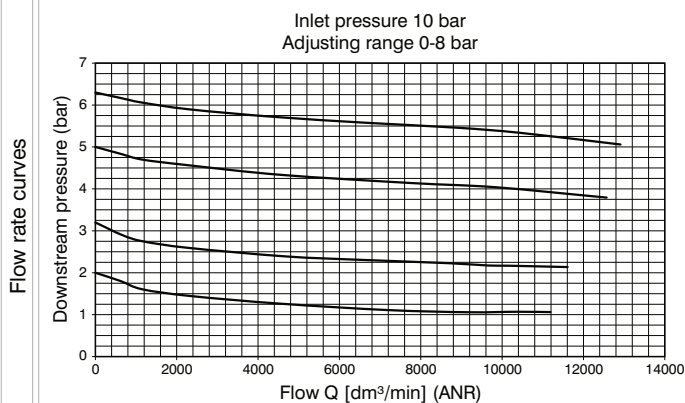
<sup>2</sup> BOWL OPTIONS  
= Standard \*  
N = Nylon bowl

\* no additional letter required

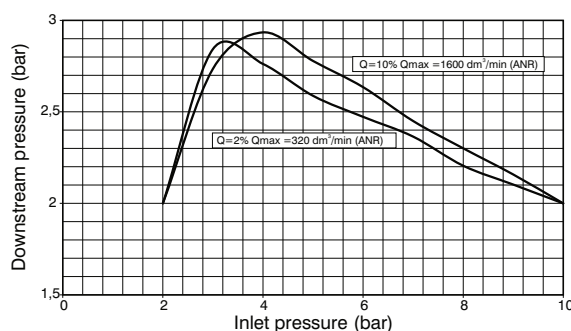
## Regulator (R)



Example: N174BRC : size 4, Regulator, G1" connections, 0 to 8 bar adjusting range



Adjustment characteristics



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

#### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

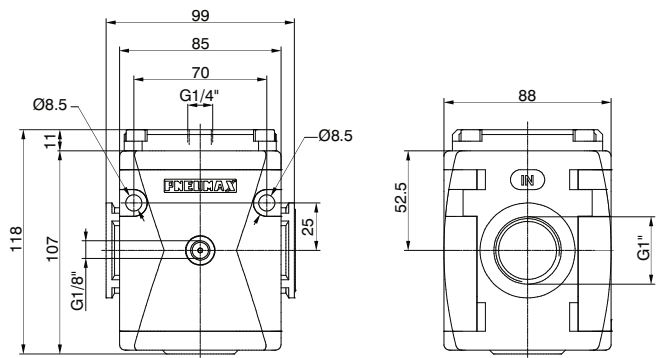
### Technical characteristics

Connections	G1"	<b>Ordering code</b>  <b>N174BR</b> <div> <div>ADJUSTING RANGE</div> <div> A = 0-2 bar  B = 0-4 bar  C = 0-8 bar  D = 0-12 bar </div> </div> <div> <div>TYPE</div> <div> = Standard*  L = no relieving  R = Improved relieving </div> </div> <div> <div>OPTIONS</div> <div> = Standard*  K = Lockable version </div> </div>
Max. inlet pressure	13 bar	
Working temperature	-5°C +50°C	
Pressure gauge connections	G 1/8"	
Weight	1225 (gr)	
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar	<div> <div>ADJUSTING RANGE</div> <div> A = 0-2 bar  B = 0-4 bar  C = 0-8 bar  D = 0-12 bar </div> </div> <div> <div>TYPE</div> <div> = Standard*  L = no relieving  R = Improved relieving </div> </div> <div> <div>OPTIONS</div> <div> = Standard*  K = Lockable version </div> </div>
Assembly positions	Indifferent	
Wall fixing screw	M8	

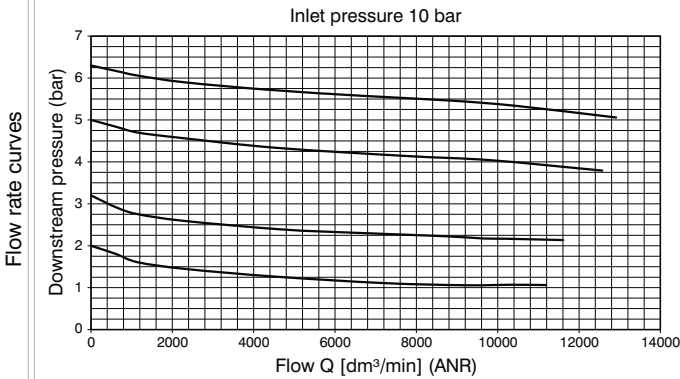
\* no additional letter required



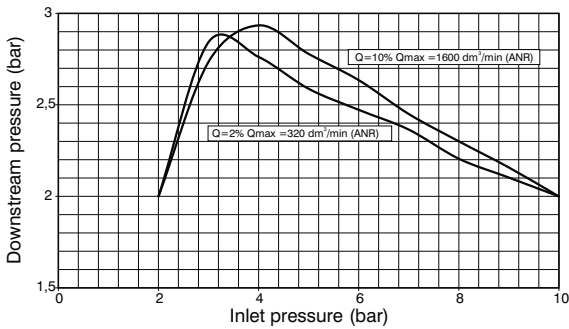
Piloted pressure regulator (R)



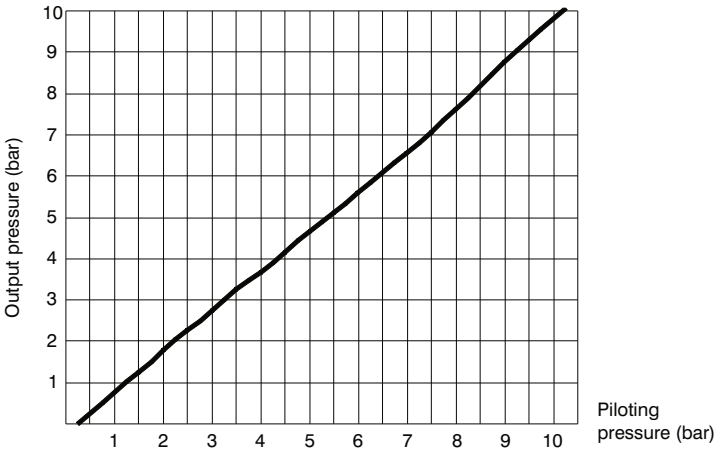
Example: N174BRP : size 4, Piloted pressure regulator with G1" connection



Adjustment characteristics

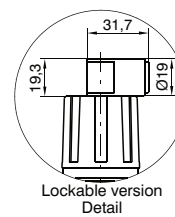
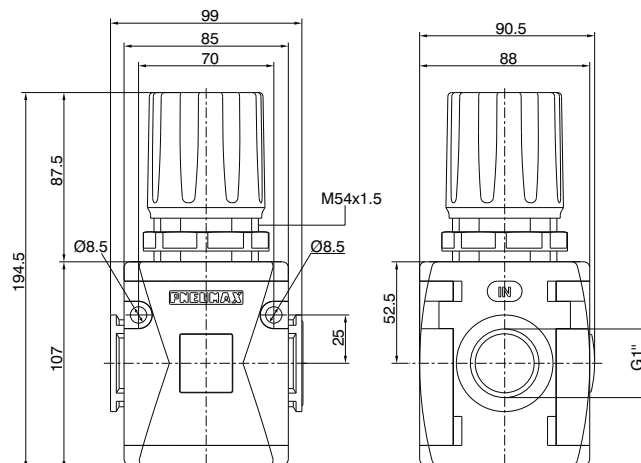


Piloting curves

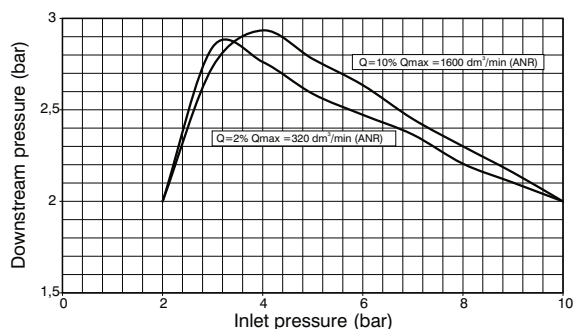
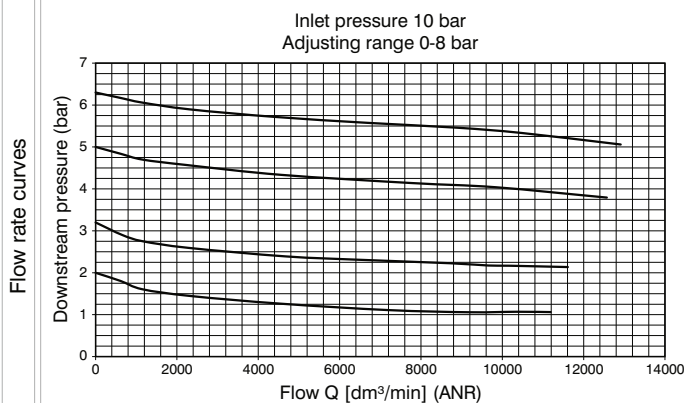


Operational characteristics		Technical characteristics		
- Piston pressure regulator with relieving - Balanced system	Connections	G1"	Ordering code	
	Pilot port size	G1/4"		
<b>Note</b>	Max. inlet pressure	13 bar	<b>N174BRP</b>	
	Working temperature	-5°C +50°C		
Always regulate the rising pressure.	Pressure gauge connections	G 1/8"		
	Weight	1155 (gr)		
	Assembly positions	Indifferent		
	Wall fixing screw	M8		

## Regulator including gauge (RM)(RW)



Example : N174BRMC : size 4, Regulator including gauge, G1" connections, 0 to 8 bar adjusting range



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

#### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

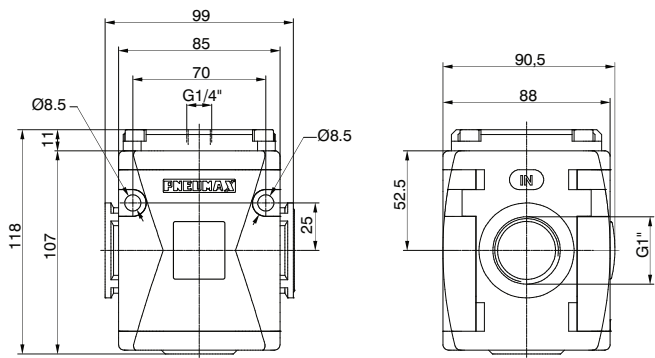
### Technical characteristics

Connections	G1"	<b>Ordering code</b> <b>N174BR0G100</b> <b>FLOW DIRECTION</b> <b>D</b> M = from left to right W = from right to left <b>ADJUSTING RANGE</b> <b>A</b> = 0-2 bar <b>B</b> = 0-4 bar <b>C</b> = 0-8 bar <b>D</b> = 0-12 bar <b>TYPE</b> <b>T</b> = Standard * L = no relieving R = Improved relieving <b>OPTIONS</b> <b>O</b> = Standard * K = Lockable version
Max. inlet pressure	13 bar	
Working temperature	-5°C +50°C	
Weight	1220 (gr)	
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar	
Assembly positions	Indifferent	<b>Wall fixing screw</b> M8

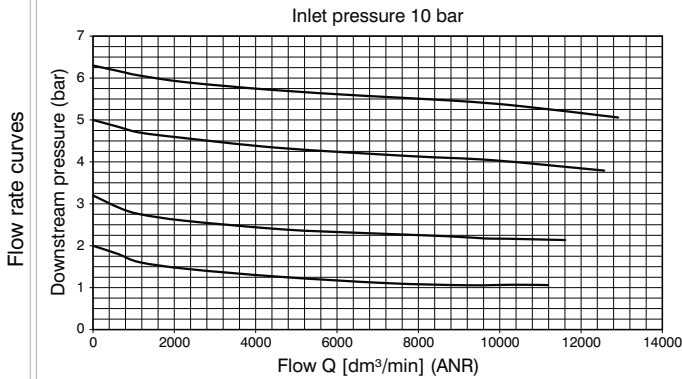
\* no additional letter required



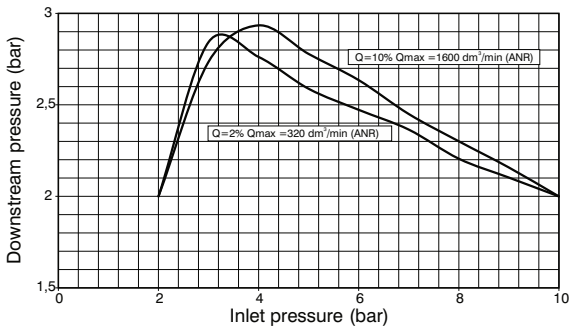
Piloted pressure regulator with integrated manometer (RM)(RW)



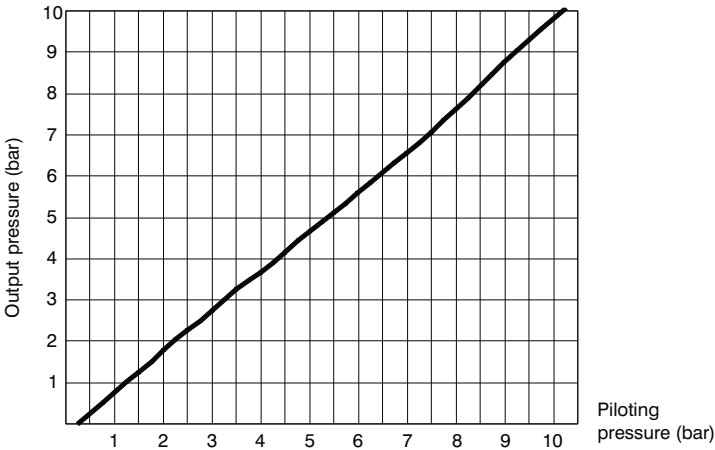
Example: N174BRMP : size 4, Piloted pressure regulator with integrated manometer with G1" connection



Adjustment characteristics



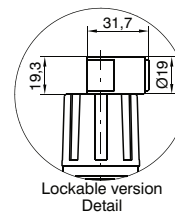
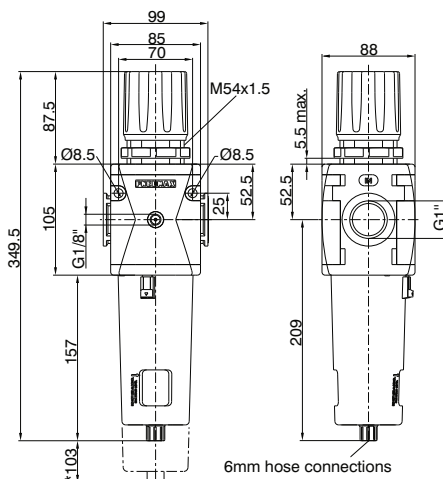
Piloting curves



Operational characteristics		Technical characteristics		
- Piston pressure regulator with relieving - Balanced system - Built in gauge 0-12 bar range as standard.	Connections	G1"	Ordering code  <b>N174BR0P</b>	
	Pilot port size	G1/4"		
	Max. inlet pressure	13 bar		
<b>Note</b> Always regulate the rising pressure.	Working temperature	-5°C + 50°C	<div></div> <div><b>D</b></div>	FLOW DIRECTION
	Pressure gauge connections	G 1/8"		M = from left to right
	Weight	1150 (gr)		W = from right to left
	Assembly positions	Indifferent		
	Wall fixing screw	M8		

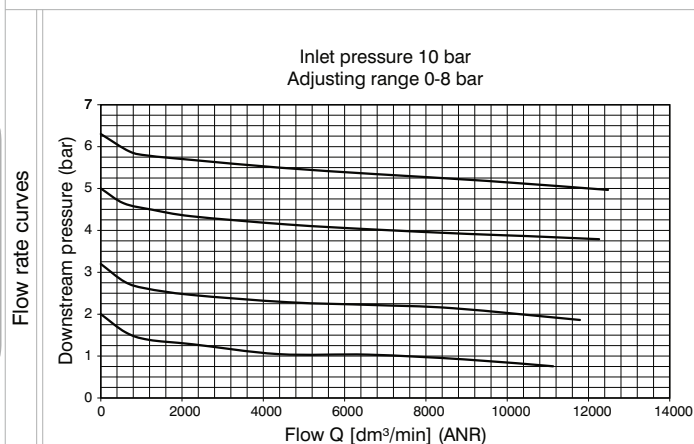


## Filter-Regulator (E)

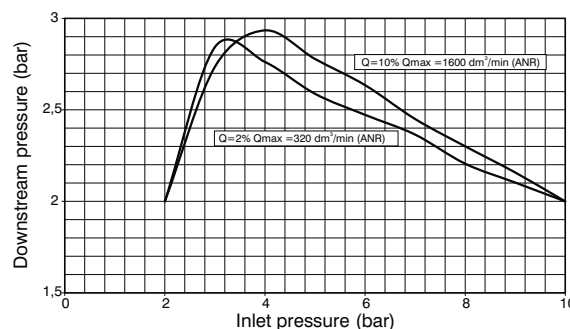


\*Bowl removal maximum height

Example : N174BEBC : size 4, Filter-regulator, G1" connections, 20  $\mu$ m filtering pore size, 0 to 8 bar adjusting range



Adjustment characteristics



### Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

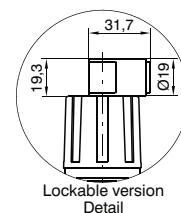
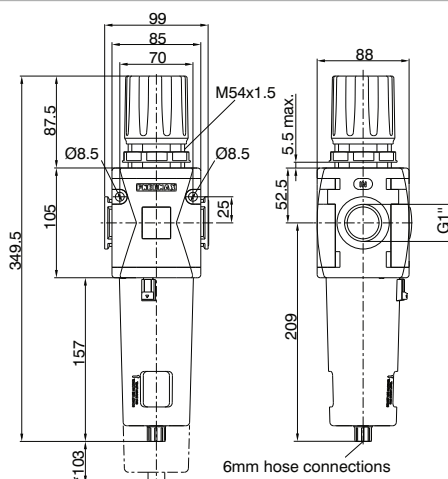
### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

### Technical characteristics

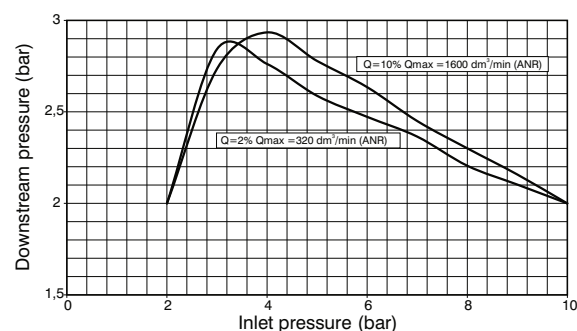
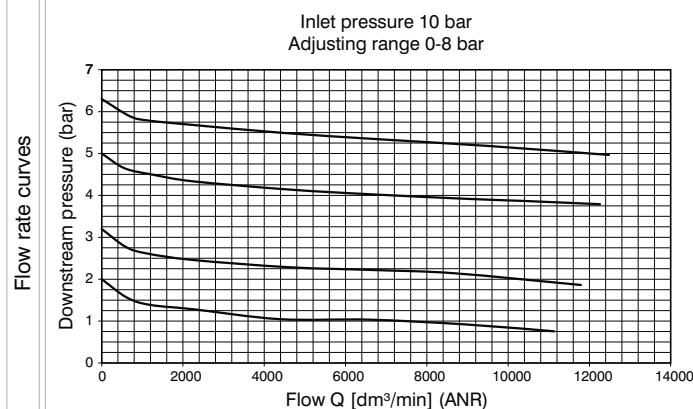
Connections	G1"	<b>Ordering code</b> <b>N174BEBC102</b> <b>FILTER PORE SIZE</b> A = 5 $\mu$ m B = 20 $\mu$ m C = 50 $\mu$ m <b>ADJUSTING RANGE</b> A = 0-2 bar B = 0-4 bar C = 0-8 bar D = 0-12 bar <b>TYPE</b> T = Standard * S = Automatic drain <b>OPTIONS</b> O = Standard * K = Lockable version <b>BOWL OPTIONS</b> = Standard * N = Nylon bowl  * no additional letter required
Max. inlet pressure	13 bar	
Minimum working pressure with automatic drain	0,5 bar	
Maximum working pressure with automatic drain	10 bar	
Working temperature	-5°C +50°C	
Pressure gauge connections	G 1/8"	
Weight	1450 (gr)	
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar	
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m	
Bowl capacity	90 cm³	
Assembly positions	Vertical	
Wall fixing screw	M8	

## Filter-regulator including gauge (EM)(EW)



\*Bowl removal maximum height

Example: N174BEMBC : size 4, Filter-regulator including gauge, G1" connections, with 20 µm filtering pore size, 0 to 8 bar adjusting range



## Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm and 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Integrated manometer 0-12 bar as standard (for 0-8 and 0-12 bar range) and 0-4 bar (for 0-2 and 0-4 range)

## Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

## Technical characteristics

Connections	G1"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	-5°C +50°C
Weight	1440 (gr)
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Filter pore size	5 µm - 20 µm - 50 µm
Bowl capacity	90 cm³
Assembly positions	Vertical

Wall fixing screw

M8

## Ordering code

**N174BE0SG10Z**

## FLOW DIRECTION

M = from left to right

W = from right to left

## FILTER PORE SIZE

A = 5 µm

B = 20 µm

C = 50 µm

## ADJUSTING RANGE

A = 0-2 bar

B = 0-4 bar

C = 0-8 bar

D = 0-12 bar

## TYPE

I = Standard \*

S = Automatic drain

## OPTIONS

O = Standard \*

K = Lockable version

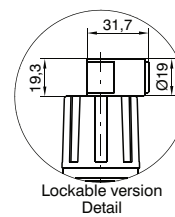
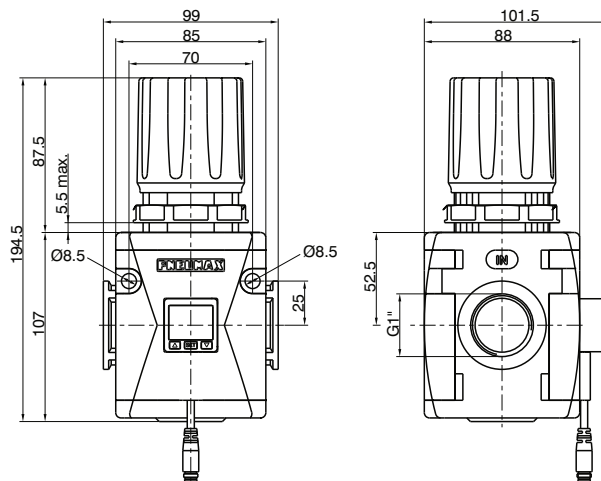
## BOWL OPTIONS

Z = Standard \*

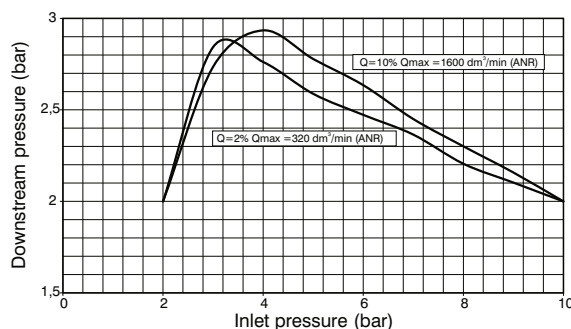
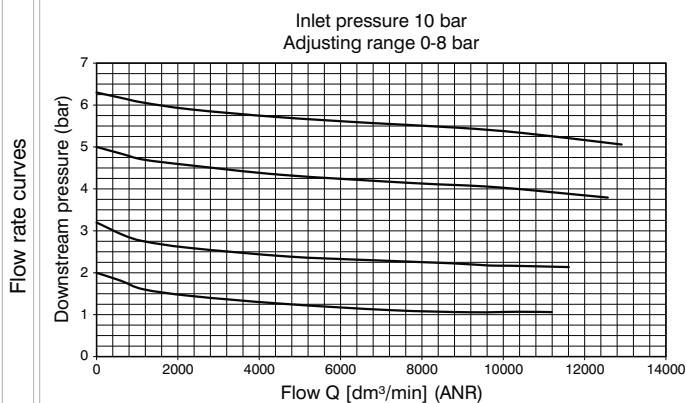
N = Nylon bowl

\* no additional letter required

## Regulator with pressure switch (RP)(RZ)



Example : N174BRPCA : size 4, Regulator, G1" connections, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP



### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

#### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

Connections	G1"
Max. inlet pressure	13 bar
Working temperature	0°C +50°C
Weight	1260 (gr)
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Assembly positions	Indifferent

Wall fixing screw

M8

### Ordering code

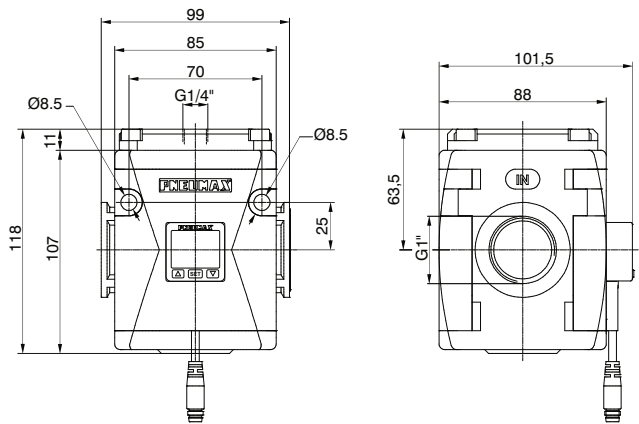
**N174BRDGP**

D	FLOW DIRECTION
	P = from left to right
	Z = from right to left
	ADJUSTING RANGE
G	A = 0-2 bar
	B = 0-4 bar
	C = 0-8 bar
	D = 0-12 bar
T	TYPE
	= Standard *
	L = no relieving
	R = Improved relieving
O	OPTIONS
	= Standard *
	K = Lockable version
	PRESSURE SWITCH OPTION
P	A = Cable 150 mm + M8 PNP
	B = Cable 150 mm + M8 NPN
	C = Cable 2 mt. PNP
	D = Cable 2 mt. NPN

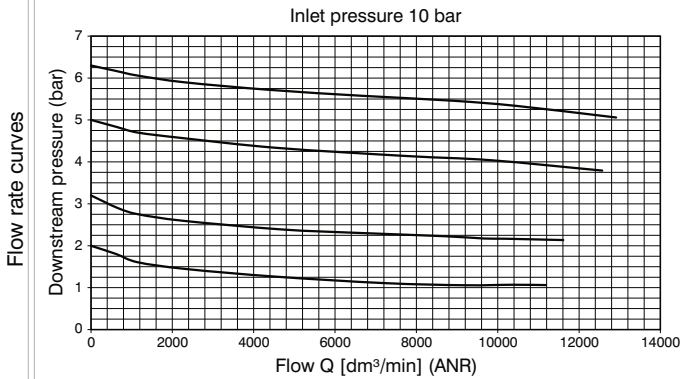
\* no additional letter required



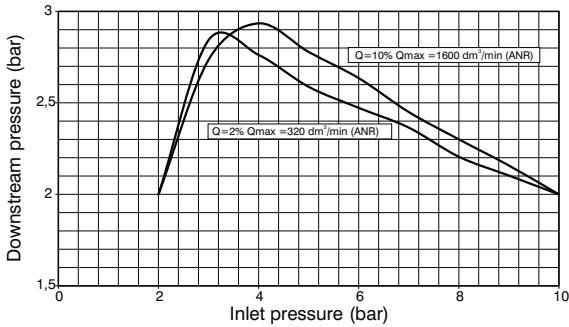
Piloted pressure regulator with digital pressure switch (RP)(RZ)



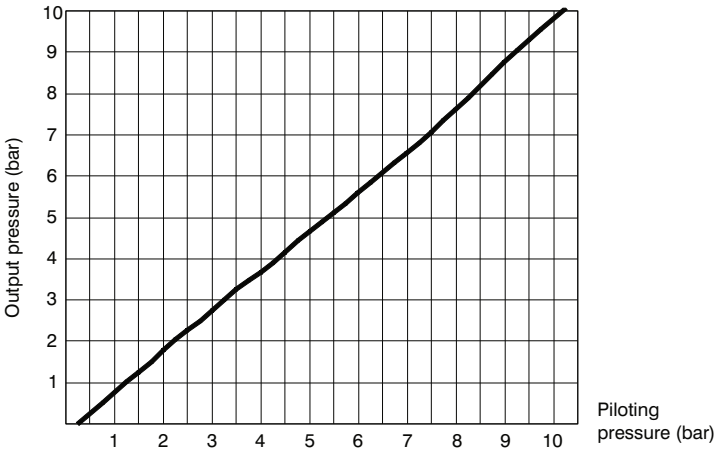
Example: N174BRPAP : size 4, Piloted pressure regulator, G1" connections, with pressure switch with M8 connector PNP



Adjustment characteristics

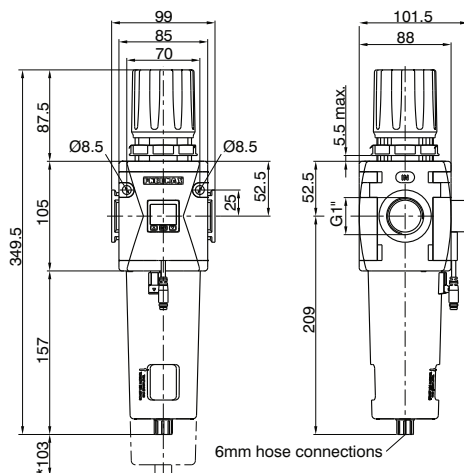


Piloting curves



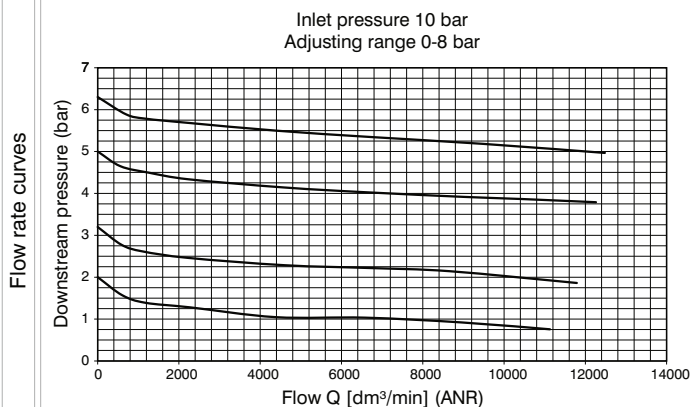
Operational characteristics		Technical characteristics	
- Piston pressure regulator with relieving - Balanced system - Pressure switch as standard		Connections	G1"
		Pilot port size	G1/4"
		Max. inlet pressure	13 bar
<b>Note</b> Always regulate the rising pressure.		Working temperature	-5°C +50°C
		Pressure gauge connections	G 1/8"
		Weight	1190 (gr)
		Assembly positions	Indifferent
		Wall fixing screw	M8
		Ordering code	
		<b>N174BR00P</b>	
		FLOW DIRECTION	
		P = from left to right	
		Z = from right to left	
		PRESSURE SWITCH OPTION	
		A = Cable 150 mm+M8 PNP	
		B = Cable 150 mm+M8 NPN	
		C = Cable 2 mt. PNP	
		D = Cable 2 mt. NPN	

## Filter regulator with pressure switch (EP)(EZ)

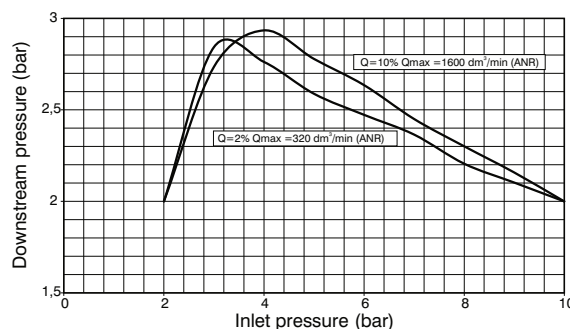


\*Bowl removal maximum height

Example: N174BEPBCA : size 4, Filter-regulator, G1" connections, 20  $\mu$ m filtering pore size, 0 to 8 bar adjusting range, with pressure switch with M8 connector PNP



Adjustment characteristics



### Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5 $\mu$ m, 20 $\mu$ m and 50 $\mu$ m) can be regenerated by washing it or replaced.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Pressure switch as standard

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended. In order to ensure adequate flow on the auto drain version it is recommended to use minimum a 6mm fitting.

### Technical characteristics

Connections	G1"
Max. inlet pressure	13 bar
Minimum working pressure with automatic drain	0,5 bar
Maximum working pressure with automatic drain	10 bar
Working temperature	0°C +50°C
Weight	1490 (gr)
Pressure range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
Filter pore size	5 $\mu$ m - 20 $\mu$ m - 50 $\mu$ m
Bowl capacity	90 cm <sup>3</sup>
Assembly positions	Vertical

Wall fixing screw

M8

### Ordering code

**N174BEDSGTOPZ**

	FLOW DIRECTION
P	= from left to right
Z	= from right to left
	FILTER PORE SIZE
A	= 5 $\mu$ m
B	= 20 $\mu$ m
C	= 50 $\mu$ m
	ADJUSTING RANGE
A	= 0-2 bar
B	= 0-4 bar
C	= 0-8 bar
D	= 0-12 bar
	TYPE
I	= Standard *
S	= Automatic drain
	OPTIONS
O	= Standard *
K	= Lockable version
	PRESSURE SWITCH OPTION
A	= Cable 150 mm+M8 PNP
B	= Cable 150 mm+M8 NPN
C	= Cable 2 mt. PNP
D	= Cable 2 mt. NPN
	BOWL OPTIONS
Z	= Standard *
N	= Nylon bowl
	* no additional letter required

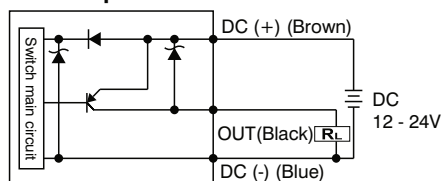


## CHARACTERISTICS

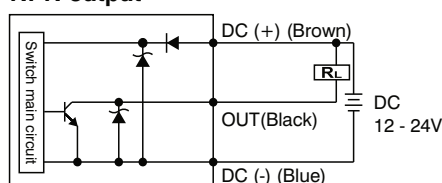
- 3 color digital LCD display, easy readout
- 4 units of measurement for pressure indication
- PNP and NPN output
- N.O. and N.C. output contact
- Not available individually, but only with a Regulator or a Filter-regulator

## OUTPUT CIRCUIT WIRING DIAGRAMS

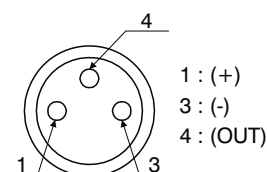
### PNP output



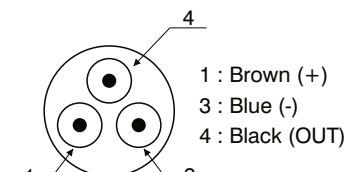
### NPN output



### M8 CONNECTOR PIN LAY OUT



### 3 WIRES CABLE LAY OUT



## Cable ordering code

- MCH1** cable 3 wires l=2,5m with M8 connector  
**MCH2** cable 3 wires l=5m with M8 connector  
**MCH3** cable 3 wires l=10m with M8 connector

Connector



## TECHNICAL CHARACTERISTICS

Adjusting range	0 - 10 bar / 0 - 1MPa
Max. inlet pressure	15 bar / 1,5 MPa
Fluid	Filtered and dehumidified air
Display unit of measurement	MPa - kgf/cm <sup>2</sup> - bar - psi
Supply voltage	12 - 24 VDC
Current consumption	≤40mA (without load)
Digital output type	NPN - PNP
Type of contact	Normally Open - Normally Closed
Max. load current	125 mA
Digital output activation mode	single threshold with fixed hysteresis - window with fixed hysteresis - window without hysteresis
Digital output activation time	0.05s - 0.25s - 0.5s - 1s - 2s - 3s (selections for chattering-proof function)
Display characteristics	Double 3 1/2 digit display Digital output status indication Three-pushbuttons touchpad
Indicator accuracy	≤±2% F.S. ± 1 digit
Protection grade	IP 40
Temperature	0 - 50 °C
Cable section	3 x 0,129mm <sup>2</sup> , Ø4 mm, PVC