Modular FRL series 1700 Steel line

General

The stainless steel SS1700 air treatment series has been engineered and developed to approach specifically the OIL & GAS industry and more widely for all the severe service applications that require excellent corrosion resistance due to chemical and/or harsh environmental condition.
All external and internal parts (except for the automatic drain version) are AISI 316L stainless steel material in compliance with NACE standard MR0175/ISO 15156/1. The product range includes FILTER, with filtration elements up to 3 filtration degree (5μm-20 μm-50 μm), available in AISI316 stainless steel or HDPE (high density polyethylene), and manual or automatic condensed exhaust; The PRESSURE REGULATOR is supplied with low hysteresis rolling diaphragm and an over-pressure exhaust valve (RELIEVING), available in 4 different adjustment ranges from 0 to 12 bar. As a last the FILTER REGULATOR range, which combines the features of a filter and pressure regulator into a one single device. “CLEAN PROFILE” version is available for all the sizes, featuring a glossy finish on the external surface. The over-pressure exhaust hole (RELIEVING) has a 1/8” NPT threading, and it is protected by an AISI 316 sintered filter series. Note: for CLEAN PROFILE series this is a simple unthread hole.

Construction and operational characteristics

Body, bowl and adjustment mechanism	AISI 316L stainless steel
Caseback regulator	AISI 316L stainless steel
Adjustment screw, locking nut and fastening screws	AISI 316L stainless steel (stainless steel A4-70)
Internal components	AISI 316L stainless steel
Filtering elements	AISI 316 stainless steel or HDPE (High density polyethylene)
Spring	AISI 316 stainless steel
Seals	

NBR (standard versions and automatic drain)	NBR for low temperatures (L versions)	Silicone - PU (Z version)
FPM - HNBR (H versions)	EPDM-FDA (EF versions)	

Automatic drain	Brass, stainless steel AISI 304 and AISI 302, sintered bronze
	Acetal resin , NBR, FPM

Operating Range

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous.
	Inert gases.
	Natural gases

Temperature

-30°C +80°C (standard version)	-5°C +150°C (high temperature H version)	-40°C ÷ +100°C (EPDM-FDA version)
-50°C +80°C (low temperature L version)	-5°C ÷ +70°C (automatic drain S version)	
-60°C +80°C (low temperature version -60 °C Z)	-5°C ÷ +70°C (reduced orifice automatic drain SR version)	

Maximum working pressure

20 bar (standard, low and high temperature versions)	16 bar (automatic drain version)	10 bar (reduced orifice automatic drain version)

Instructions for installation and use

Product shall be installed reducing the distance from inlet point. Check and install the device following the flow direction (clearly marked with an arrow stamped on the body). Vertical position installation with condensed exhaust tap pointing downward is recommended.
Devices must be used in compliance with pressure and temperature operating range. To set the pressure there is an adjustable knob, located on the top of the device. Pneumax recommend selection of pressure regulator adjusting range option in line with client required performance
The condensed exhaust action for the manual drain version shall be performed only in the absence of pressure. To discharge liquid, turn the tap clockwise until the discharge of liquid is triggered, then tighten it all the way.

Maintenance

Filtration elements and filter regulator are reusable through blowing and/or washing and is made of stainless steel or HDPE (high density polyethylene). To replace, remove the cup, loosen the set screw of the support and replace the filter element with a new one or refurbished one. Replace the regulator diaphragm whenever the performance is compromised or if there is a continuous discharge from the relieving hole (over-pressure exhaust). Fully discharge the adjustment spring before removing the adjustment mechanism. For other maintenance activities, due to complexity of assembly and requirement for dedicated **PNEUMAX** testing activities, it is strongly recommended to contact the manufacturer.

Certifications available

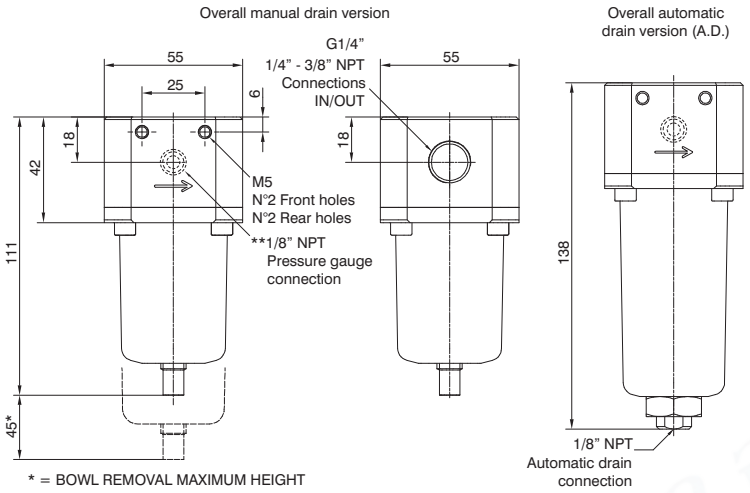
Ex : CE Ex II 2 GD c IIC

CE Ex II 2G Ex h IIC Gb
CE Ex II 2D Ex h IIIC Db

SIL : Suitable up to SIL 3

EAC Ex : CU - TR 012

Filters

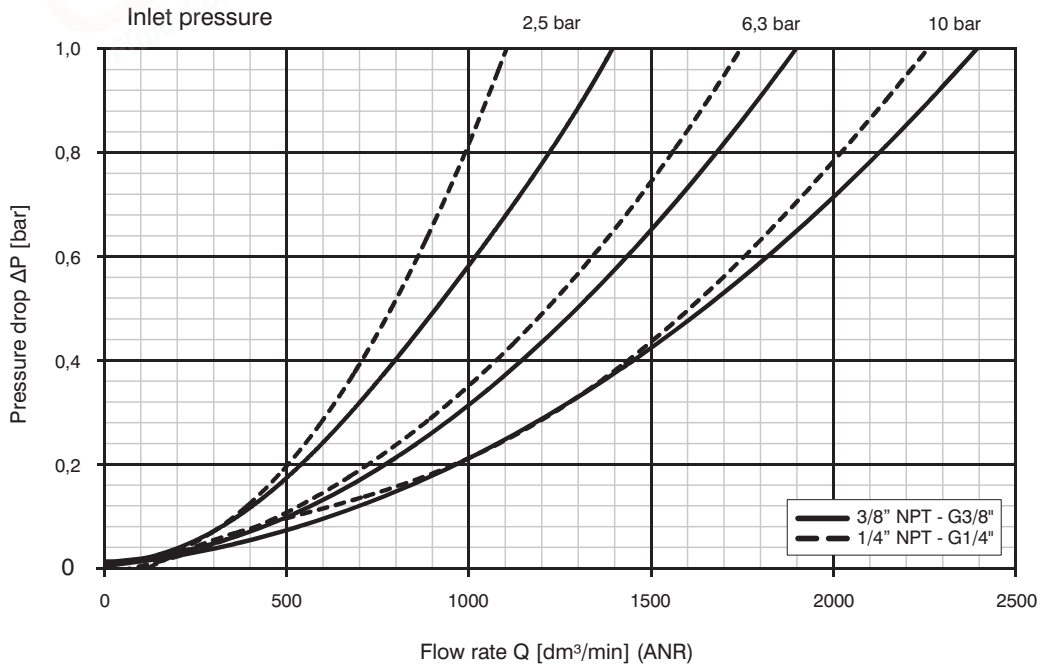


Ordering code	
SV172CFSOZ	
	VERSION
V	S = Standard surface finishing
	F = Clean profile
	CONNECTIONS
C	A = 1/4" NPT
	B = 3/8" NPT
	C = G1/4"
	FILTER PORE SIZE
	A = 5 µm - 316 stainless steel
	B = 20 µm - 316 stainless steel
S	C = 50 µm - 316 stainless steel
	D = 5 µm - HDPE
	E = 20 µm - HDPE
	F = 50 µm - HDPE
	OPTIONS
	= Standard*
	L = Low temperature
	Z = Low temperature (-60 °C)
O	H = High temperature
	S = Automatic drain
	SR = Reduced orifice automatic drain
	EF = EPDM-FDA
	ENCLOSURE OPTIONS
Z	= Standard*
	G = pressure gauge connection
* no additional letter required	

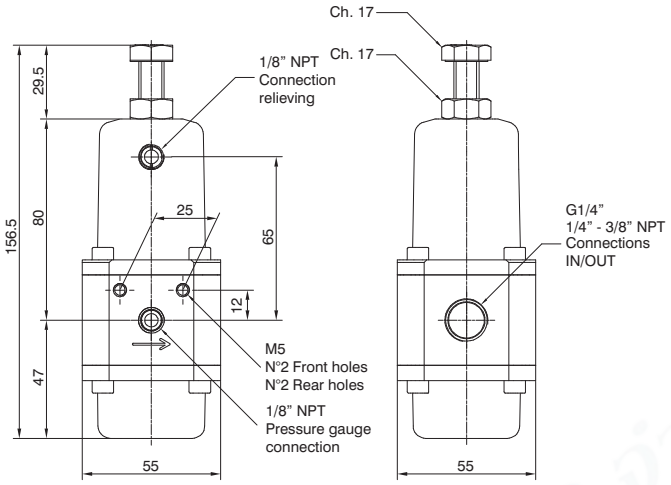
Construction characteristics
- Body, bowl and internal components in AISI 316L stainless steel.
- A4 (AISI 316) stainless steel fixing screws.
- Manual or automatic condensed drain

Technical characteristics	
Maximum inlet pressure (standard version)	20 bar
Maximum inlet pressure (automatic drain version)	16 bar
Maximum inlet pressure (reduced orifice automatic drain version)	10 bar
Temperature (standard version)	-30°C +80°C
Temperature (low temperature version)	-50°C +80°C
Temperature (low temperature version -60°C)	-60°C +80°C
Temperature (high temperature version)	-5°C +150°C
Temperature (automatic and reduced orifice drain version)	-5°C +70°C
Temperature (EPDM-FDA version)	-40°C +100°C
Weight	1070 (gr.)
Bowl capacity	15 cm^3
Assembly position	Vertical

Flow rate chart



Regulators



Ording code	
SV172CRGTO	
V	VERSION
	S = Standard surface finishing
	F = Clean profile
C	CONNECTIONS
	A = 1/4" NPT
	B = 3/8" NPT
	C = G1/4"
G	PRESSURE RANGE
	A = 0-2 bar
	B = 0-4 bar
	C = 0-8 bar
	D = 0-12 bar
T	TYPE
	= Standard*
	N = Without relieving
O	OPTIONS
	= Standard*
	L= Low temperature
	Z = Low temperature (-60 °C)
	H= High temperature
	EF= EPDM-FDA
* no additional letter required	

Construction characteristics

- Body, adjust. mechanism, AISI 316L stainless steel and caseback inter. components
- AISI 316 stainless steel adjustment springs.
- Fixing screws, adjustment screws and locknut in A4 (AISI 316) stainless steel.
- Pressure regulator diaphragm with over-pressure drain (Relieving).
- Low hysteresis rolling diaphragm.
- Balanced system.

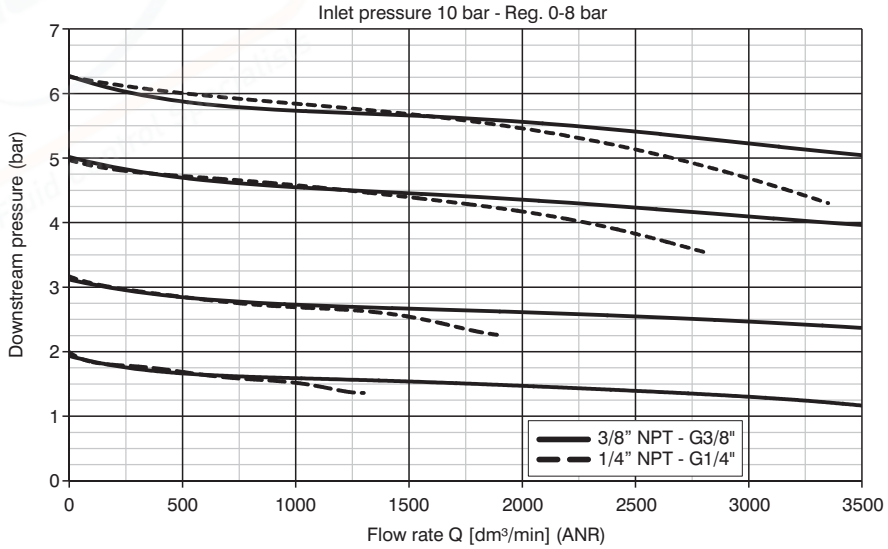
Note

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.

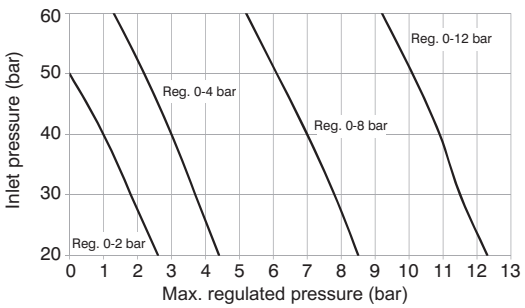
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Temperature (standard version)	-30 °C +80 °C
Temperature (low temperature version)	-50 °C +70 °C
Temperature (low temperature version -60°C)	-60 °C +70 °C
Temperature (high temperature version)	-5 °C +150 °C
Temperature (EPDM-FDA version)	-40 °C +100 °C
Pressure gauge connections	1/8" NPT
Weight	1270 (gr.)
Assembly position	Indifferent

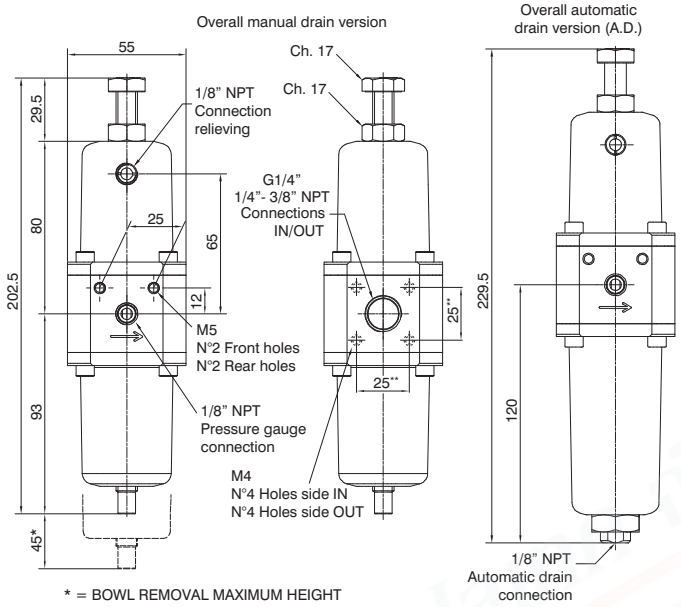
Flow rate chart



Pressure regulator Stainless steel line have been designed to withstand **a 60 Bar** maximum inlet pressure.
Maximum regulated outlet pressure is 20 Bar.
For performance details please refer to diagram alongside.



Filter regulators



Ordering code	
SV172CESGTO	
	VERSION
V	S = Standard surface finishing
	F = Clean profile
	M = Modular assembly version
	CONNECTIONS
C	A = 1/4" NPT
	B = 3/8" NPT
	C = G1/4"
	FILTER PORE SIZE
	A = 5 µm - 316 stainless steel
	B = 20 µm - 316 stainless steel
S	C = 50 µm - 316 stainless steel
	D = 5 µm - HDPE
	E = 20 µm - HDPE
	F = 50 µm - HDPE
	PRESSURE RANGE
	A = 0-2 bar
G	B = 0-4 bar
	C = 0-8 bar
	D = 0-12 bar
	TYPE
T	= Standard*
	N = Without relieving
	OPTIONS
	= Standard*
	L = Low temperature
	Z = Low temperature (-60 °C)
O	H = High temperature
	S = Automatic drain
	SR = Reduced orifice automatic drain
	EF = EPDM-FDA

* no additional letter required

Construction characteristics

- Body, adjust. mechanism, AISI 316L stainless steel and caseback inter. components
- AISI 316 stainless steel adjustment springs.
- Fixing screws, adjustment screws and locknut in A4 (AISI 316) stainless steel.
- Filter-pressure regulator diaphragm with over-pressure drain (Relieving).
- Low hysteresis rolling diaphragm.
- Balanced system.
- Manual or automatic condensed drain.

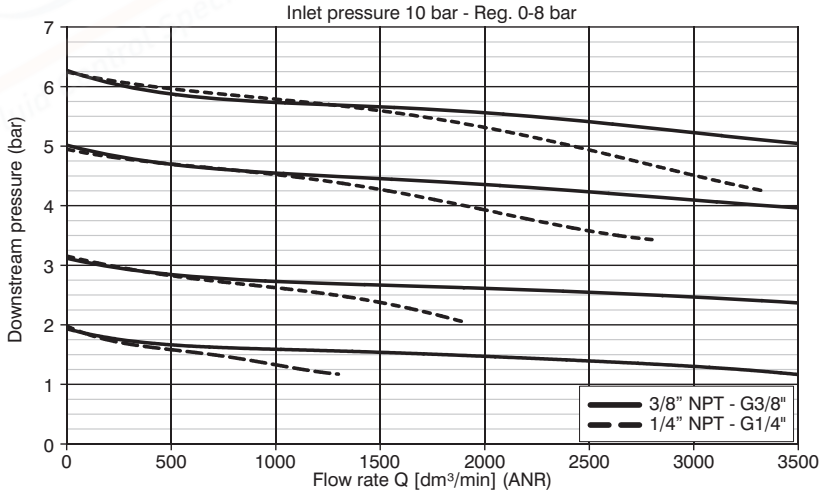
Note

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.

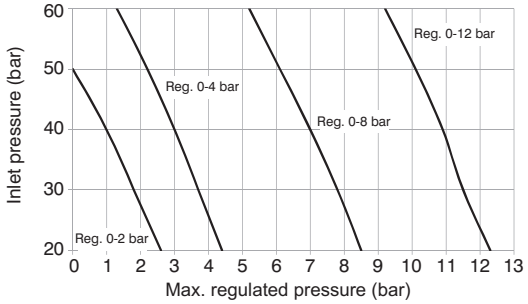
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Maximum inlet pressure (automatic drain version)	16 bar
Maximum inlet pressure (reduced orifice automatic drain version)	10 bar
Temperature (standard version)	-30°C +80°C
Temperature (low temperature version)	-50°C +80°C
Temperature (low temperature version -60°C)	-60°C +80°C
Temperature (high temperature version)	-5°C +150°C
Temperature (automatic and reduced orifice drain version)	-5°C +70°C
Temperature (EPDM-FDA version)	-40°C +100°C
Pressure gauge connections	1/8" NPT
Weight	1470 (gr.)
Bowl capacity	15 cm^3
Assembly position	Vertical

Flow rate chart

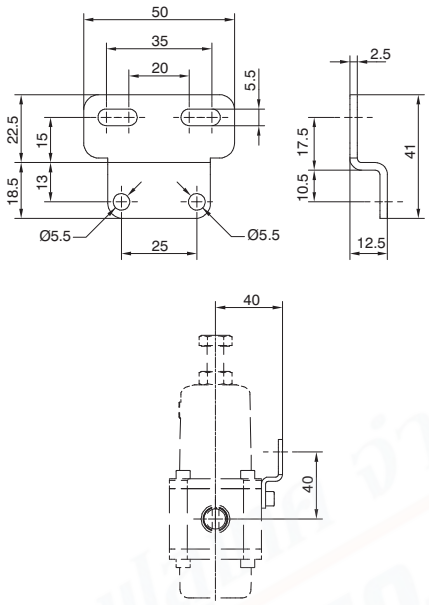


Pressure regulator Stainless steel line have been designed to withstand **a 60 Bar** maximum inlet pressure.
Maximum regulated outlet pressure is 20 Bar.
For performance details please refer to diagram alongside.



Fixing bracket

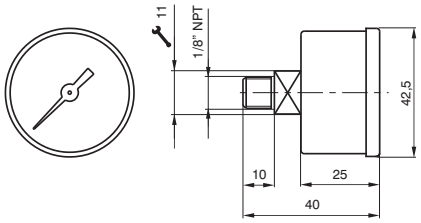
Ordering code
SS17250



Weight 32 gr.
AISI 316L stainless steel material.
Allows wall fixing of individual products.

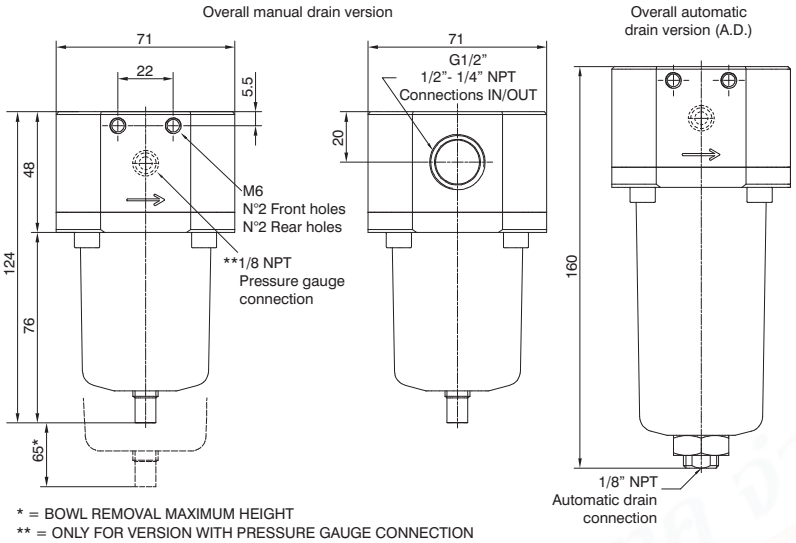
Pressure gauge

Ordering code	
SS17070AⓈ	
Ⓢ	SCALE
	A = 0 - 4 bar
	B = 0 - 12 bar



Weight 60 gr.
AISI 316 stainless steel material.
Glass transparent part with an AISI 316 stainless steel retaining ring.
Available with 0-4 bar and 0-12 bar scale.

Filters



* = BOWL REMOVAL MAXIMUM HEIGHT
** = ONLY FOR VERSION WITH PRESSURE GAUGE CONNECTION

Ordering code

SV173CFSOZ

	VERSION
V	S = Standard surface finishing
	F = Clean profile
	CONNECTIONS
C	A = 1/4" NPT
	B = 1/2" NPT
	D = G1/2"
	FILTER PORE SIZE
	A = 5 µm - 316 stainless steel
	B = 20 µm - 316 stainless steel
S	C = 50 µm - 316 stainless steel
	D = 5 µm - HDPE
	E = 20 µm - HDPE
	F = 50 µm - HDPE
	OPTIONS
	= Standard*
	L= Low temperature
O	Z = Low temperature (-60 °C)
	H= Low temperature
	S= Automatic drain
	SR= Reduced orifice automatic drain
	EF= EPDM-FDA
	ENCLOSURE OPTIONS
Z	= Standard*
	G = pressure gauge connection

* no additional letter required

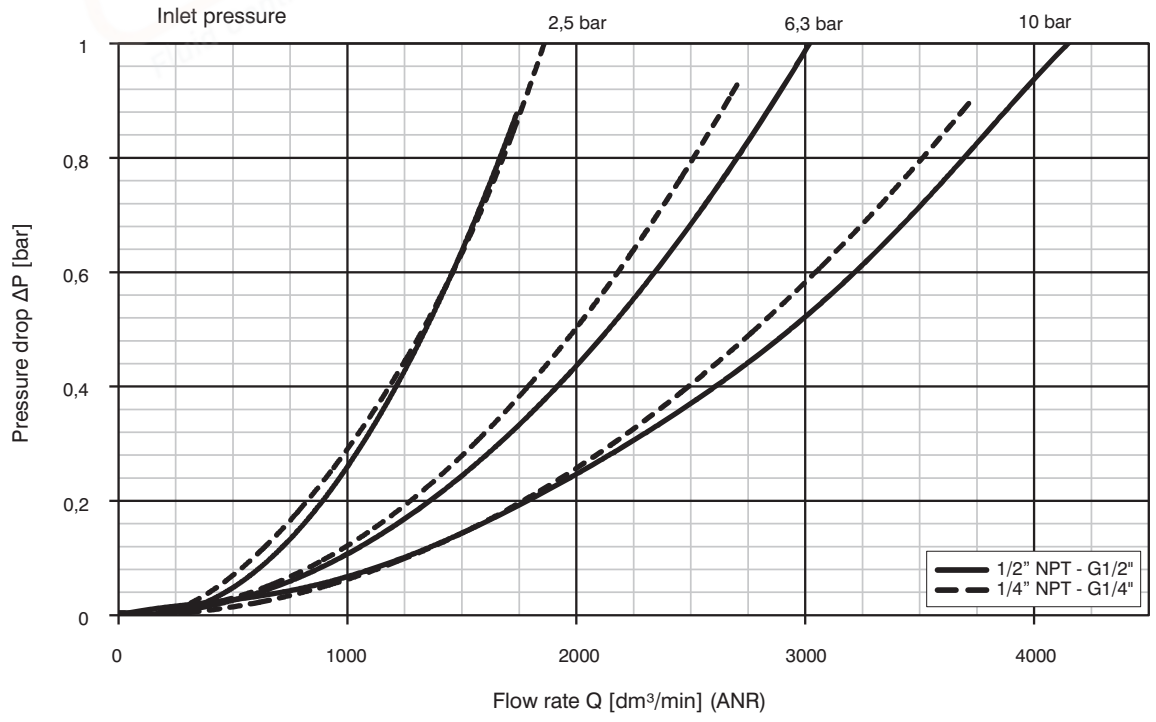
Construction characteristics

- Body, bowl and internal components in AISI 316L stainless steel.
- A4 (AISI 316) Stainless steel fixing screws.
- Manual or automatic condensed drain.

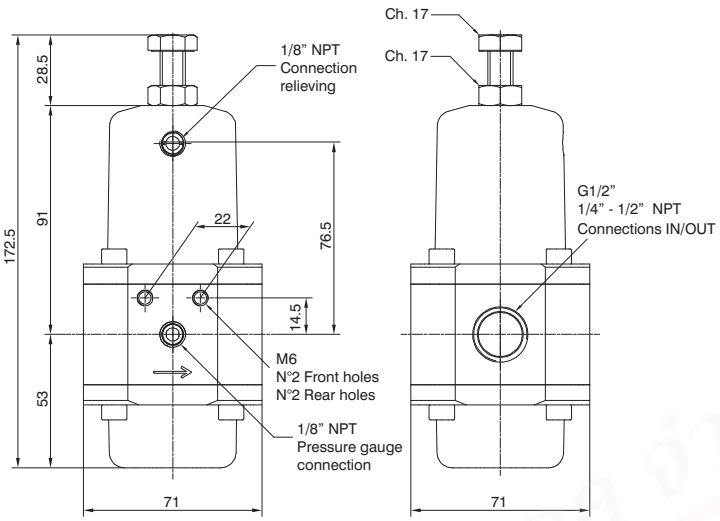
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Maximum inlet pressure (automatic drain version)	16 bar
Maximum inlet pressure (reduced orifice automatic drain version)	10 bar
Temperature (standard version)	-30°C +80°C
Temperature (low temperature version)	-50°C +80°C
Temperature (low temperature version -60°C)	-60°C +80°C
Temperature (high temperature version)	-5°C +150°C
Temperature (automatic and reduced orifice drain version)	-5°C +70°C
Temperature (EPDM-FDA version)	-40°C +100°C
Weight	1650 (gr.)
Bowl capacity	25 cm^3
Assembly position	Vertical

Flow rate chart



Regulators



Ordering code	
SV173CRGTO	
	VERSION
V	S = Standard surface finishing
	F = Clean profile
	CONNECTIONS
C	A = 1/4" NPT
	B = 1/2" NPT
	D = G1/2"
	PRESSURE RANGE
	A = 0-2 bar
G	B = 0-4 bar
	C = 0-8 bar
	D = 0-12 bar
	TYPE
T	= Standard*
	N = Without relieving
	OPTIONS
	= Standard*
O	L= Low temperature
	Z = Low temperature (-60 °C)
	H= High temperature
	EF= EPDM-FDA

* no additional letter required

Construction characteristics

- Body, adjust. mechanism, AISI 316L stainless steel and caseback inter. components
- AISI 316 stainless steel adjustment springs.
- Fixing screws, adjustment screws and locknut in A4 (AISI 316) stainless steel.
- Pressure regulator diaphragm with over-pressure drain (Relieving).
- Low hysteresis rolling diaphragm.
- Balanced system.

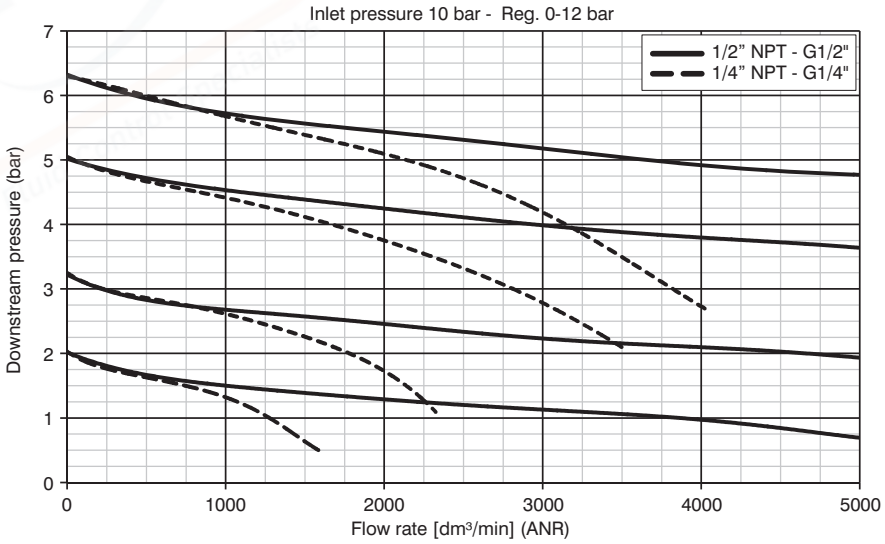
Note

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.

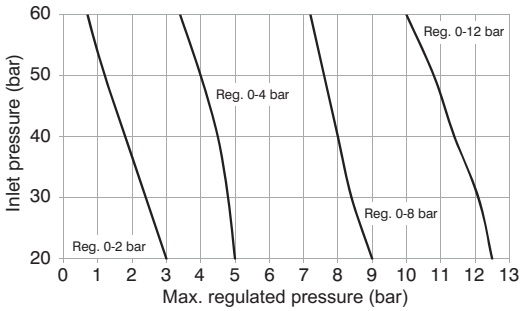
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Temperature (standard version)	-30 °C +80 °C
Temperature (low temperature version)	-50 °C +80 °C
Temperature (low temperature version -60°C)	-60 °C +80 °C
Temperature (high temperature version)	-5 °C +150 °C
Temperature (EPDM-FDA version)	-40 °C +100 °C
Pressure gauge connections	1/8" NPT
Weight	1830 (gr.)
Assembly position	Indifferent

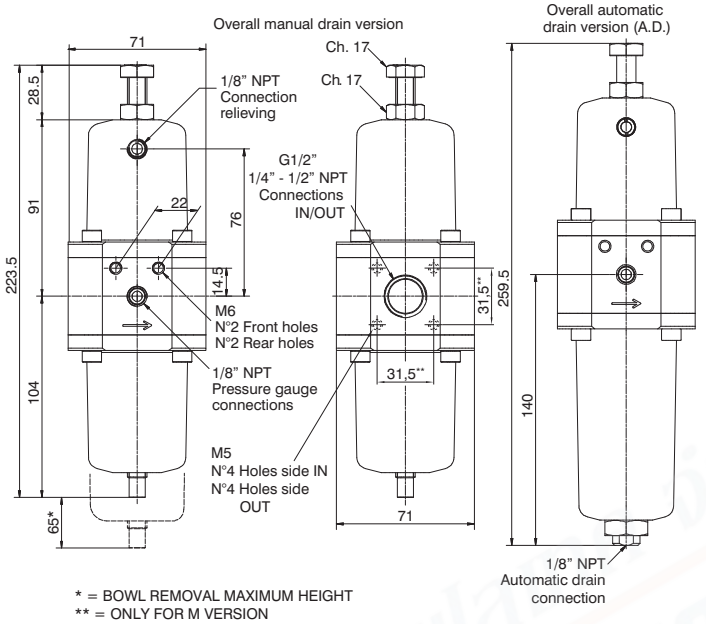
Flow rate chart



Pressure regulator Stainless steel line have been designed to withstand **a 60 Bar** maximum inlet pressure.
Maximum regulated outlet pressure is 20 Bar.
For performance details please refer to diagram alongside.



Filter regulators



* = BOWL REMOVAL MAXIMUM HEIGHT
** = ONLY FOR M VERSION

Ordering code		
SV173CESGTO		
		VERSION
V		S = Standard surface finishing
		F = Clean profile
		M = Modular assembly version
		CONNECTIONS
C		A = 1/4" NPT
		B = 1/2" NPT
		D = G1/2"
		FILTER PORE SIZE
		A = 5 µm - 316 stainless steel
		B = 20 µm - 316 stainless steel
S		C = 50 µm - 316 stainless steel
		D = 5 µm - HDPE
		E = 20 µm - HDPE
		F = 50 µm - HDPE
		PRESSURE RANGE
		A = 0-2 bar
G		B = 0-4 bar
		C = 0-8 bar
		D = 0-12 bar
		TYPE
T		= Standard*
		N = Without relieving
		OPTIONS
		= Standard*
		L = Low temperature
		Z = Low temperature (-60 °C)
O		H = High temperature
		S = Automatic drain
		SR = Reduced orifice automatic drain
		EF = EPDM-FDA

* no additional letter required

Construction characteristics

- Body, adjust. mechanism, AISI 316L stainless steel and caseback intern. components
- AISI 316 stainless steel adjustment springs.
- Fixing screws, adjustment screws and locknut in A4 (AISI 316) stainless steel.
- Filter-pressure regulator diaphragm with over-pressure drain (Relieving).
- Low hysteresis rolling diaphragm.
- Balanced system.
- Manual or automatic condensed drain.

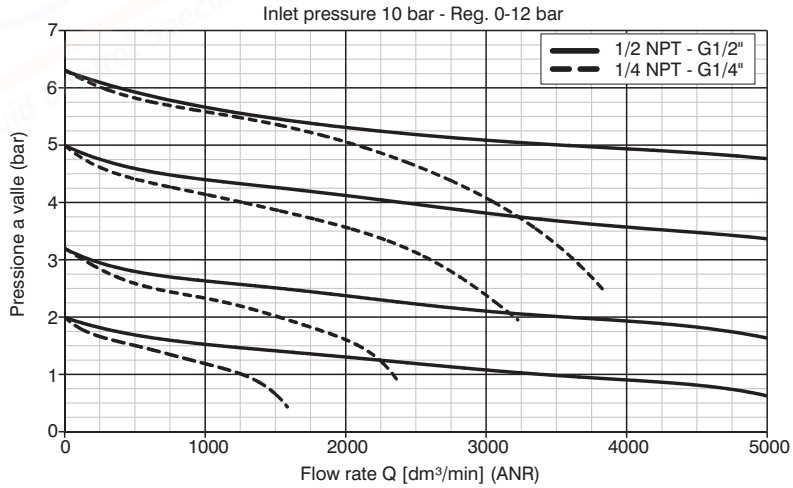
Note

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.

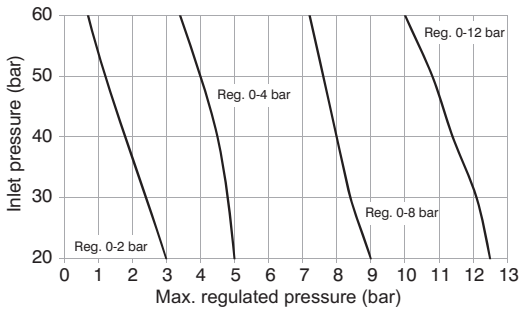
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Maximum inlet pressure (automatic drain version)	16 bar
Maximum inlet pressure (reduced orifice automatic drain version)	10 bar
Temperature (standard version)	-30°C +80°C
Temperature (low temperature version)	-50°C +80°C
Temperature (low temperature version -60°C)	-60°C +80°C
Temperature (high temperature version)	-5°C +150°C
Temperature (automatic and reduced orifice drain version)	-5°C +70°C
Temperature (EPDM-FDA version)	-40°C +100°C
Pressure gauge connections	1/8" NPT
Weight	2110 (gr.)
Bowl capacity	25 cm^3
Assembly position	Vertical

Flow rate chart

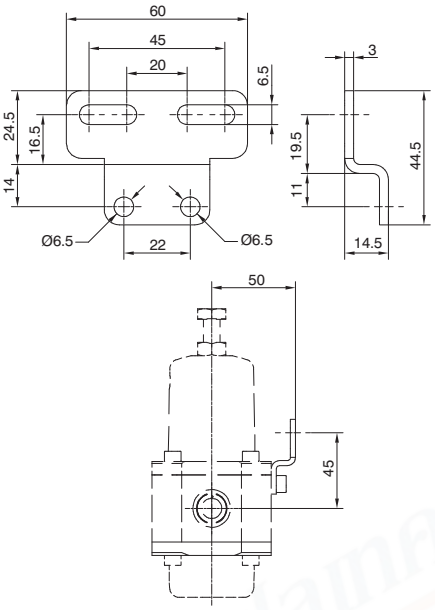


Pressure regulator Stainless steel line have been designed to withstand **a 60 Bar** maximum inlet pressure.
Maximum regulated outlet pressure is 20 Bar.
For performance details please refer to diagram alongside.



Fixing bracket

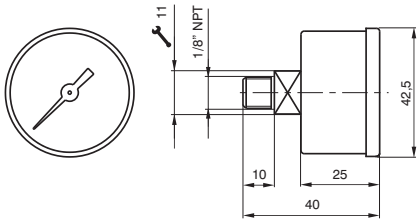
Ordering code
SS17350



Weight 32 gr.
AISI 316L stainless steel material.
Allows wall fixing of individual products.

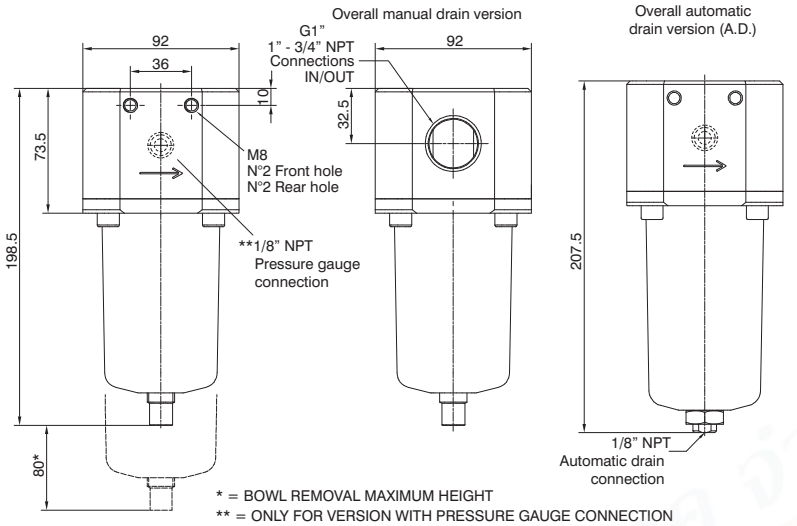
Pressure gauge

Ordering code	
SS17070AⓈ	
Ⓢ	SCALE
	A = 0 - 4 bar
	B = 0 - 12 bar



Weight 60 gr.
AISI 316 stainless steel material.
Glass transparent part with an AISI 316 stainless steel retaining ring.
Available with 0-4 bar and 0-12 bar scale.

Filters



Ordering code	
S Ⓥ 174 Ⓒ F Ⓢ Ⓞ Ⓩ	
	VERSION
Ⓥ	S = Standard surface finishing
	F = Clean profile
	CONNECTIONS
Ⓒ	A = 3/4" NPT
	B = 1" NPT
	D = G1"
	FILTER PORE SIZE
	A = 5 µm - 316 stainless steel
	B = 20 µm - 316 stainless steel
Ⓢ	C = 50 µm - 316 stainless steel
	D = 5 µm - HDPE
	E = 20 µm - HDPE
	F = 50 µm - HDPE
	OPTIONS
	= Standard*
	L= Low temperature
	Z = Low temperature (-60 °C)
Ⓞ	H= High temperature
	S= Automatic drain
	SR= Reduced orifice automatic drain
	EF= EPDM-FDA
	ENCLOSURE OPTIONS
Ⓩ	= Standard*
	G = pressure gauge connection
* no additional letter required	

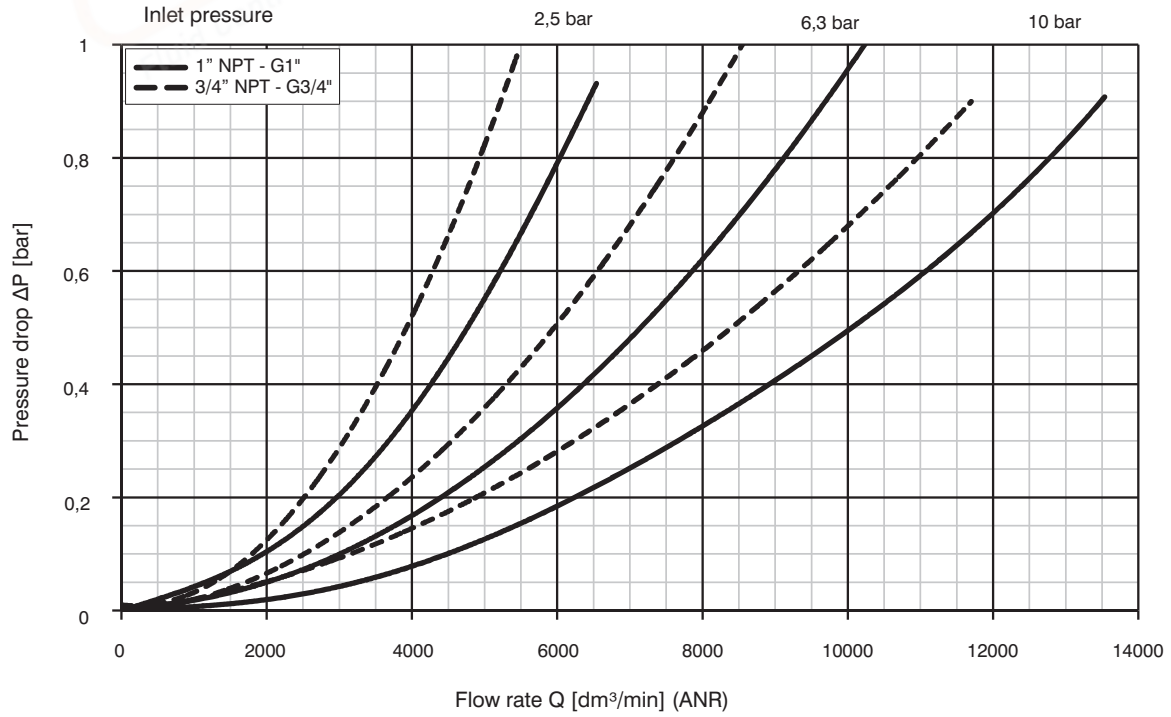
Construction characteristics

- Body, bowl and internal components in AISI 316L stainless steel.
- A4 (AISI 316) stainless steel fixing screws.
- Manual or automatic condensed drain.

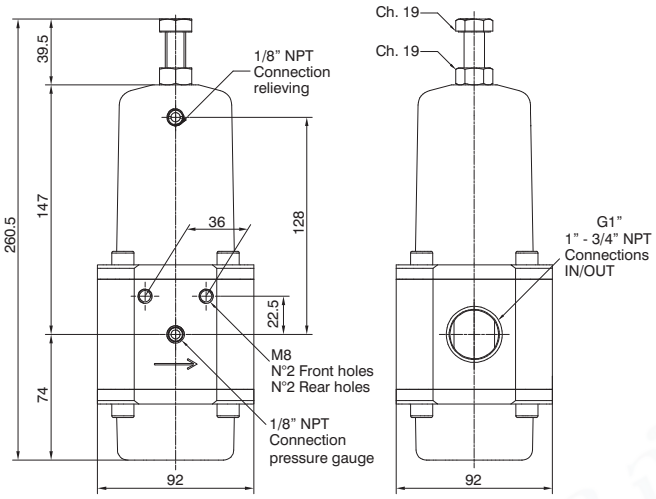
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Maximum inlet pressure (automatic drain version)	16 bar
Maximum inlet pressure (reduced orifice automatic drain version)	10 bar
Temperature (standard version)	-30°C +80°C
Temperature (low temperature version)	-50°C +80°C
Temperature (low temperature version -60°C)	-60°C +80°C
Temperature (high temperature version)	-5°C +150°C
Temperature (automatic and reduced orifice drain version)	-5°C +70°C
Temperature (EPDM-FDA version)	-40°C +100°C
Weight 3/4 NPT - G 3/4"	4700 (gr.)
Weight 1 NPT - G 1"	4600 (gr.)
Bowl capacity	78 cm^3
Assembly position	Vertical

Flow rate chart



Regulators



Ordering code	
SV174CRGTO	
	VERSION
V	S = Standard surface finishing
	F = Clean profile
	CONNECTIONS
C	A = 3/4" NPT
	B = 1" NPT
	D = G1"
	PRESSURE RANGE
	A = 0-2 bar
G	B = 0-4 bar
	C = 0-7 bar
	D = 0-10 bar
	TYPE
T	= Standard*
	N = Without relieving
	OPTIONS
	= Standard*
O	L= Low temperature
	Z = Low temperature (-60 °C)
	H= High temperature
	EF= EPDM-FDA
* no additional letter required	

Construction characteristics

- Body, adjust. mechanism, AISI 316L stainless steel and caseback inter. components
- AISI 316 Adjustment springs.
- Fixing screws, adjustment screws and locknut in A4 (AISI 316) stainless steel.
- Pressure regulator diaphragm with over-pressure drain (Relieving).
- Low hysteresis rolling diaphragm.
- Balanced system.

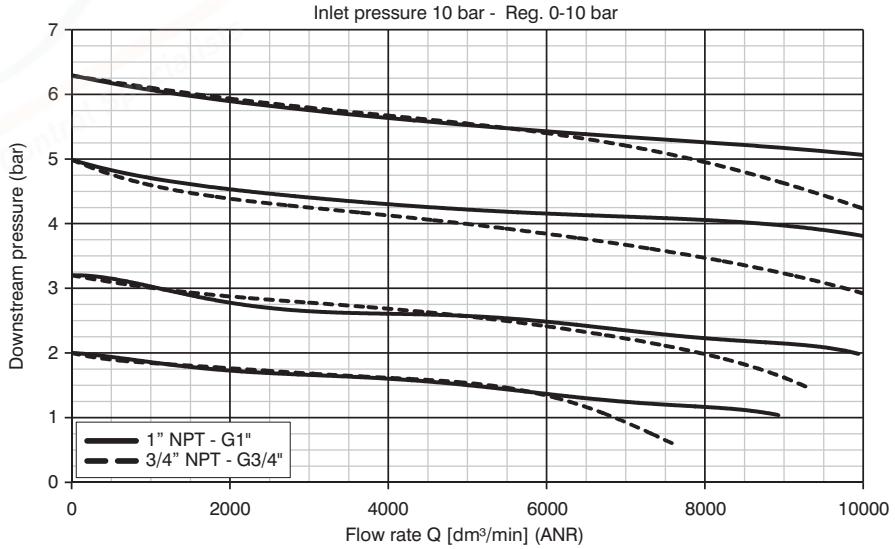
Note

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.

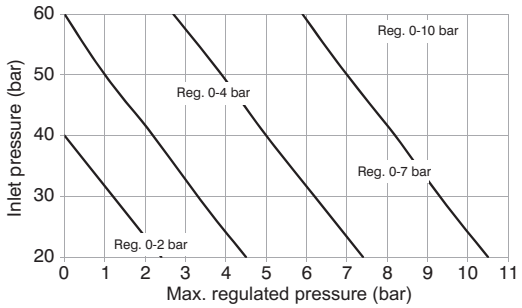
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Temperature (standard version)	-30 °C +80 °C
Temperature (low temperature version)	-50 °C +80 °C
Temperature (low temperature version -60°C)	-60 °C +80 °C
Temperature (high temperature version)	-5 °C +150 °C
Temperature (EPDM-FDA version)	-40 °C +100 °C
Pressure gauge connections	1/8" NPT
Weight 3/4" NPT - G3/4"	5500 (gr.)
Weight 1" NPT - G1"	5400 (gr.)
Assembly position	Indifferent

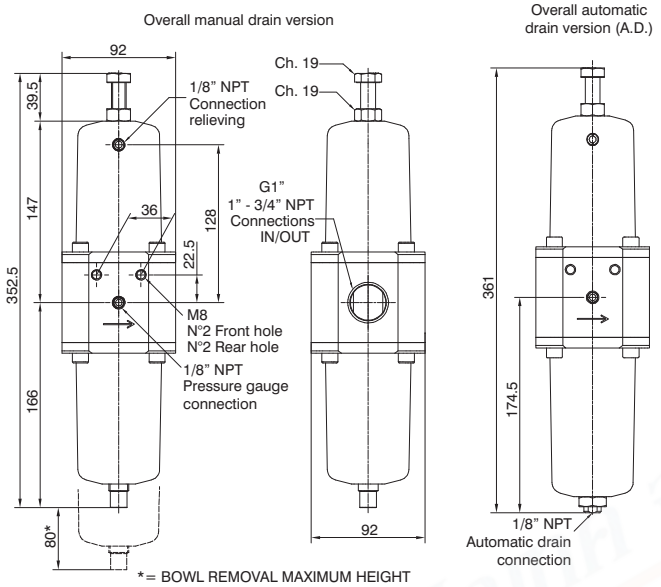
Flow rate chart



Pressure regulator Stainless steel line have been designed to withstand **a 60 Bar** maximum inlet pressure.
Maximum regulated outlet pressure is 20 Bar.
For performance details please refer to diagram alongside.



Filter regulators



Ordering code

SV174CESGTO

V	VERSION
	S = Standard surface finishing
	F = Clean profile
C	CONNECTIONS
	A = 3/4" NPT
	B = 1" NPT
	D = G1"
S	FILTER PORE SIZE
	A = 5 µm - 316 stainless steel
	B = 20 µm - 316 stainless steel
	C = 50 µm - 316 stainless steel
	D = 5 µm - HDPE
	E = 20 µm - HDPE
	F = 50 µm - HDPE
G	PRESSURE RANGE
	A = 0-2 bar
	B = 0-4 bar
	C = 0-7 bar
	D = 0-10 bar
T	TYPE
	= Standard*
	N = Without relieving
O	OPTIONS
	= Standard*
	L= Low temperature
	Z = Low temperature (-60 °C)
	H= High temperature
	S= Automatic drain
	SR= Reduced orifice automatic drain
	EF= EPDM-FDA

* no additional letter required

Construction characteristics

- Body, adjust. mechanism, AISI 316L stainless steel and caseback inter. components
- AISI 316 stainless steel adjustment springs.
- Fixing screws, adjustment screws and locknut in A4 (AISI 316) stainless steel.
- Filter-pressure regulator diaphragm with over-pressure drain (Relieving).
- Low hysteresis rolling diaphragm.
- Balanced system.
- Manual or automatic condensed drain.

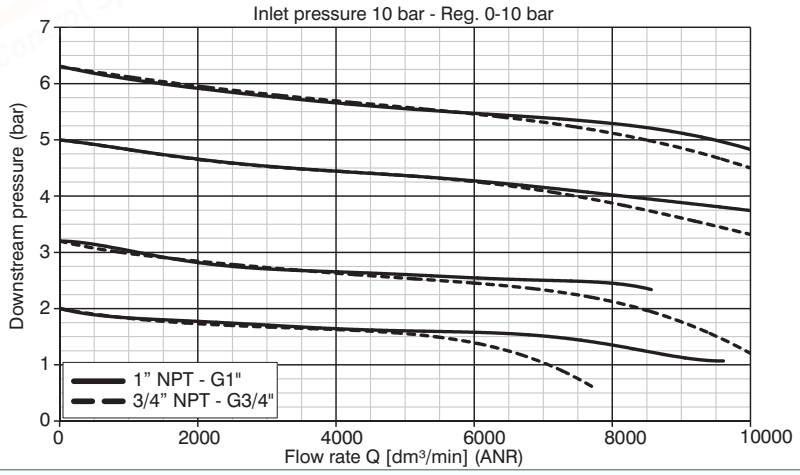
Note

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.

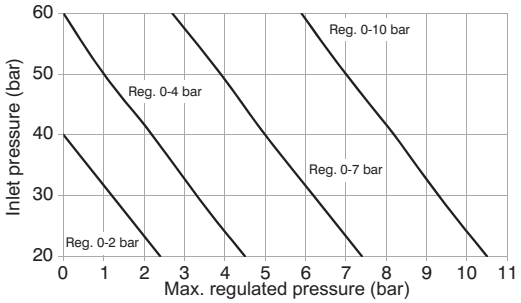
Technical characteristics

Maximum inlet pressure (standard version)	20 bar
Maximum inlet pressure (automatic drain version)	16 bar
Maximum inlet pressure (reduced orifice automatic drain version)	10 bar
Temperature (standard version)	-30°C +80°C
Temperature (low temperature version)	-50°C +80°C
Temperature (low temperature version -60°C)	-60°C +80°C
Temperature (high temperature version)	-5°C +150°C
Temperature (automatic and reduced orifice drain version)	-5°C +70°C
Temperature (EPDM-FDA version)	-40°C +100°C
Pressure gauge connections	1/8" NPT
Weight 3/4" NPT - G3/4"	6300 (gr.)
Weight 1" NPT - G1"	6200 (gr.)
Bowl capacity	78 cm^3
Assembly position	Vertical

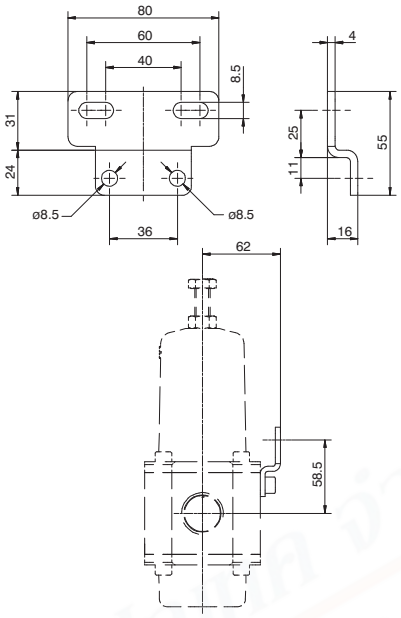
Flow rate chart



Pressure regulator Stainless steel line have been designed to withstand **a 60 Bar** maximum inlet pressure.
Maximum regulated outlet pressure is 20 Bar.
For performance details please refer to diagram alongside.



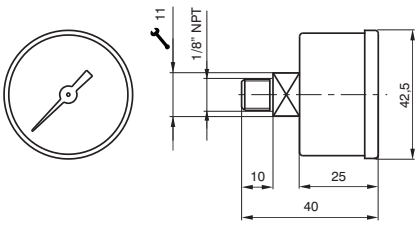
Fixing bracket



Ordering code
SS17450

Weight 32 gr.
AISI 316L stainless steel material.
Allows wall fixing of individual products.

Pressure gauge



Ordering code	
SS17070AⓈ	
Ⓢ	SCALE
	A = 0 - 4 bar
	B = 0 - 12 bar

Weight 60 gr.
AISI 316 stainless steel material.
Glass transparent part with an AISI 316 stainless steel retaining ring.
Available with 0-4 bar and 0-12 bar scale.