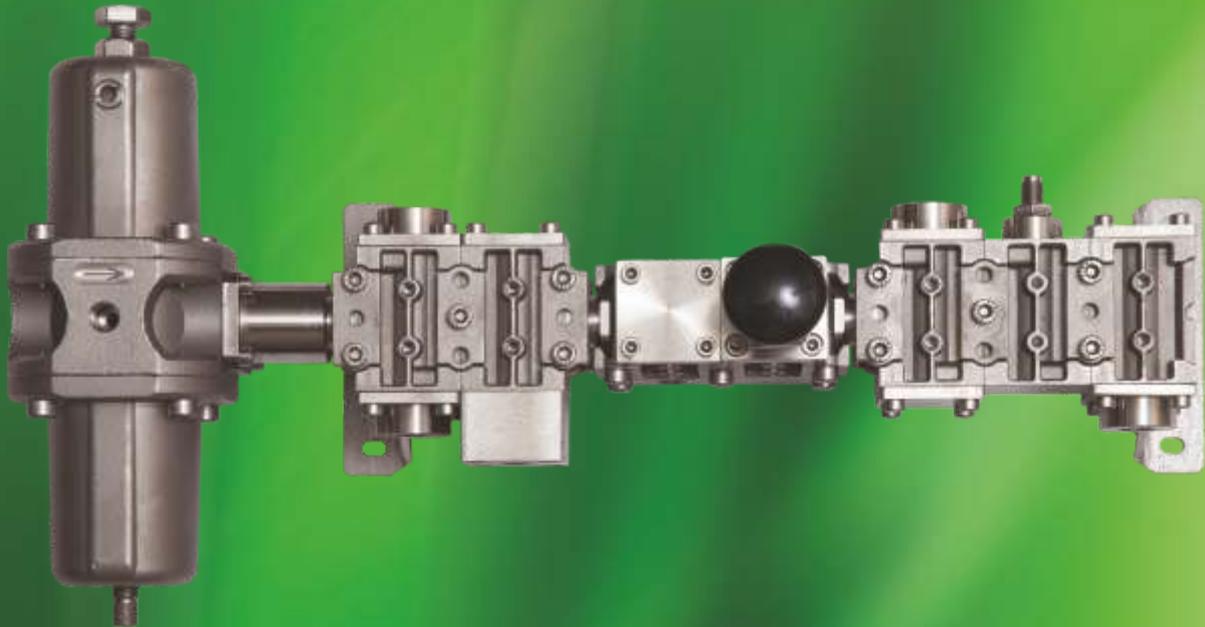


Components for Pneumatic Automation

# VALVES & AIR SERVICE UNITS STEEL LINE Series



PNEUMAX GREEN LINE: TECHNOLOGY & INNOVATION





**General**

The new Steel line valve series was created and developed specifically for the oil and gas industry as well as applications requiring improved resistance to corrosion due to chemical and/or a harsh environment.

**All metal parts (Inside & outside) are manufactured from AISI 316L Stainless Steel, compliant to NACE MR0175/ISO 15156-1.**

The stainless steel range includes 3 ways valves with the following functions:

- Pneumatic, spring return valve
- Double pneumatic valve
- Manual valve
- Non return valve
- Accessories such as unidirectional or bidirectional flow regulator
- Distributor modular elements

All components have 1/4 NPT body ports and a nominal flow rate of 1000NI/min.

The main feature of the range is the flexibility that allows the components to be used and mounted individually or by using the dedicated coupling flanges, the ability to create complete manifold assemblies. This means a compact solution with simple installation.

**Construction characteristics**

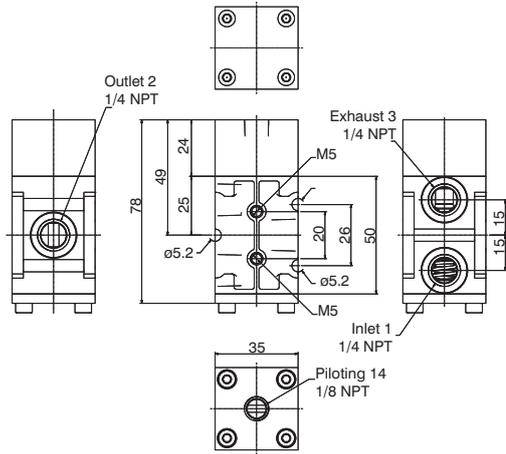
Body	Stainless Steel AISI 316L
Operators	Stainless Steel AISI 316L
Spools	Stainless Steel AISI 316L
Springs	Stainless Steel AISI 316
Screws	Stainless Steel AISI 316 (INOX A4-70)
Seals	FPM (Fluoroelastomers) NBR (for low temperature) (-50°C) Standard

**Working characteristics**

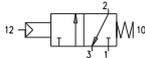
Temperature (low temperature (L) version)	-50°C +70°C
Temperature (high temperature (H) version)	-10°C +150°C
Fluid	- Air, Inert Gases, sweet (natural) gases Filtered lubricated or non-lubricated (If lubricated the lubrication must be continuous).

**Pneumatic-Spring valves**

Ordering code
<b>SS1432C1101T</b>
TYPE
L=low temperature version
H=High temperature version



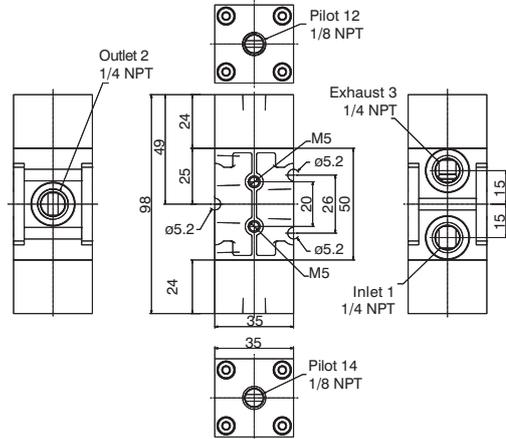
Minimum piloting pressure 2,5 bar (input 6,3 bar)



Operating Characteristics	Fluid	Max working pressure (bar)	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Inlet connections	Pilot ports size	Weight (g.)
	Air, Inert Gases, sweet (natural) gases - Filtered lubricated or non lubricated (If lubricated the lubrication must be continuous)	12	1000	1/4 NPT	1/8 NPT	500

**Pneumatic-Pneumatic valves**

Ordering code
<b>SS1432C1111T</b>
TYPE
L=low temperature version
H=High temperature version



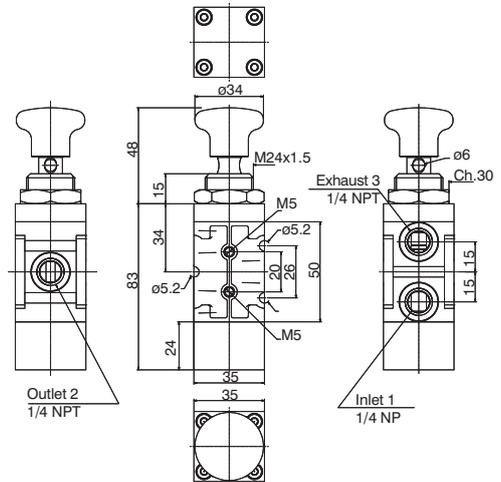
Minimum piloting pressure 1 bar



Operating Characteristics	Fluid	Max working pressure (bar)	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Inlet connections	Pilot ports size	Weight (g.)
	Air, Inert Gases, sweet (natural) gases - Filtered lubricated or non lubricated (If lubricated the lubrication must be continuous)	12	1000	1/4 NPT	1/8 NPT	660

**Push button**

Ordering code
<b>SS1432C08PT</b>
POSITIONS
02=2 stable positions
03=2 positions
TYPE
L=low temperature version
H=High temperature version



Operating force 55N

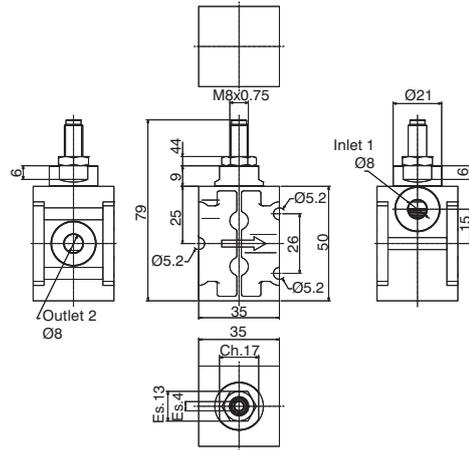


Operating Characteristics	Fluid	Max working pressure (bar)	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Inlet connections	Weight (g.)
	Air, Inert Gases, sweet (natural) gases - Filtered lubricated or non-lubricated (If lubricated the lubrication must be continuous)	12	1000	1/4 NPT	620



**Flow control valves**

Ordering code	
<b>SS14RF<sup>F</sup><sup>T</sup></b>	
FUNCTION	
<sup>F</sup>	U=Unidirectional B=Bidirectional
TYPE	
<sup>T</sup>	L=low temperature version H=High temperature version



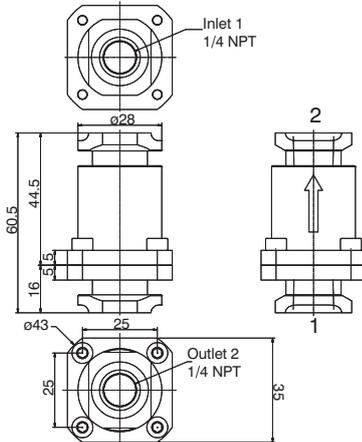
Note: Assembling in group only (see Ø8 connection)



Operating Characteristics	Fluid	Max working pressure (bar)	Flow rate at 6 bar with Δp=1 (NI/min)	Connections	Weight (g.)
	Air, Inert Gases, sweet (natural) gases - Filtered lubricated or non-lubricated (If lubricated the lubrication must be continuous)		12	800	Ø8

**Unidirectional valve**

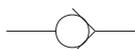
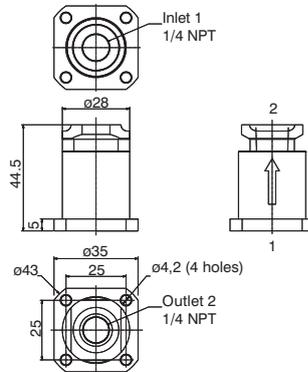
Ordering code	
<b>SS14VUS<sup>T</sup></b>	
TYPE	
<sup>T</sup>	L=low temperature version H=High temperature version



Operating Characteristics	Fluid	Max working pressure (bar)	Flow rate at 6 bar with Δp=1 (NI/min)	Connections	Weight (g.)
	Air, Inert Gases, sweet (natural) gases - Filtered lubricated or non-lubricated (If lubricated the lubrication must be continuous)		12	1400	1/4 NPT

**Unidirectional valve for group**

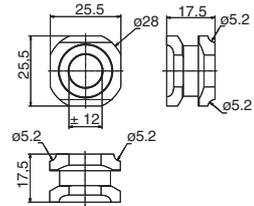
Ordering code	
<b>SS14VUG<sup>T</sup></b>	
TYPE	
<sup>T</sup>	L=low temperature version H=High temperature version



Operating Characteristics	Fluid	Max working pressure (bar)	Flow rate at 6 bar with Δp=1 (NI/min)	Connections	Weight (g.)
	Air, Inert Gases, sweet (natural) gases - Filtered lubricated or non-lubricated (If lubricated the lubrication must be continuous)		12	1400	1/4 NPT

**Adapter to 90°**

Ordering code
<b>SS1490</b>

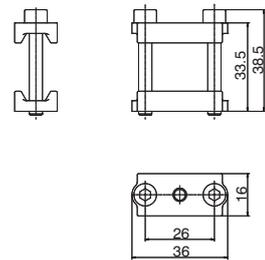


**Operating Characteristics**

Weight (g.)
45

**Fixing kit "A"**

Ordering code
<b>SS14A</b>



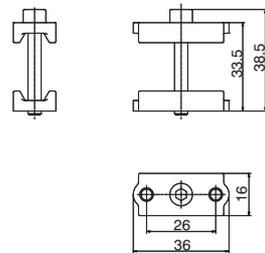
The Kit includes:  
Nr. 1 Front flange, Nr. 1 Rear threaded flange, Nr. 2 M5 screws (AISI 316).

**Operating Characteristics**

Weight (g.)
55

**Fixing kit "B"**

Ordering code
<b>SS14B</b>



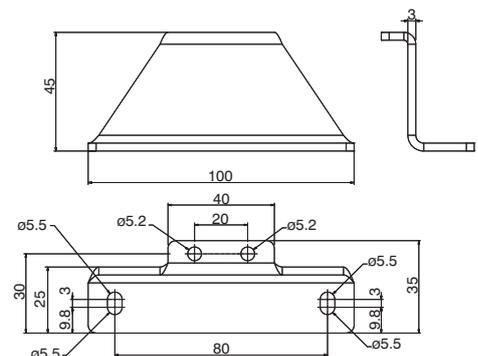
The Kit includes:  
Nr. 1 Front flange, Nr. 1 Rear threaded flange, Nr. 1 M5 screw (AISI 316).

**Operating Characteristics**

Weight (g.)
48

**Fixing bracket**

Ordering code
<b>SS14M5</b>

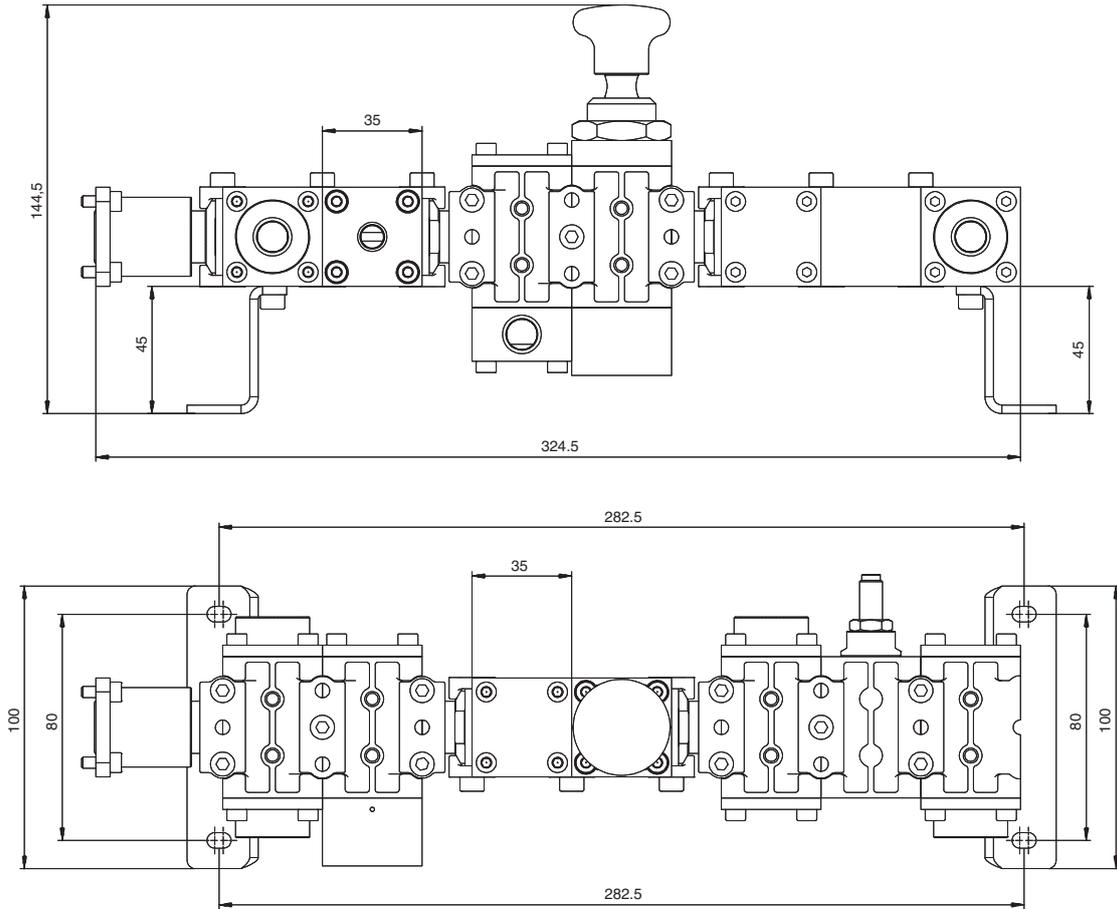


The Kit includes:  
Nr. 2 M5x8 screws (AISI 316).

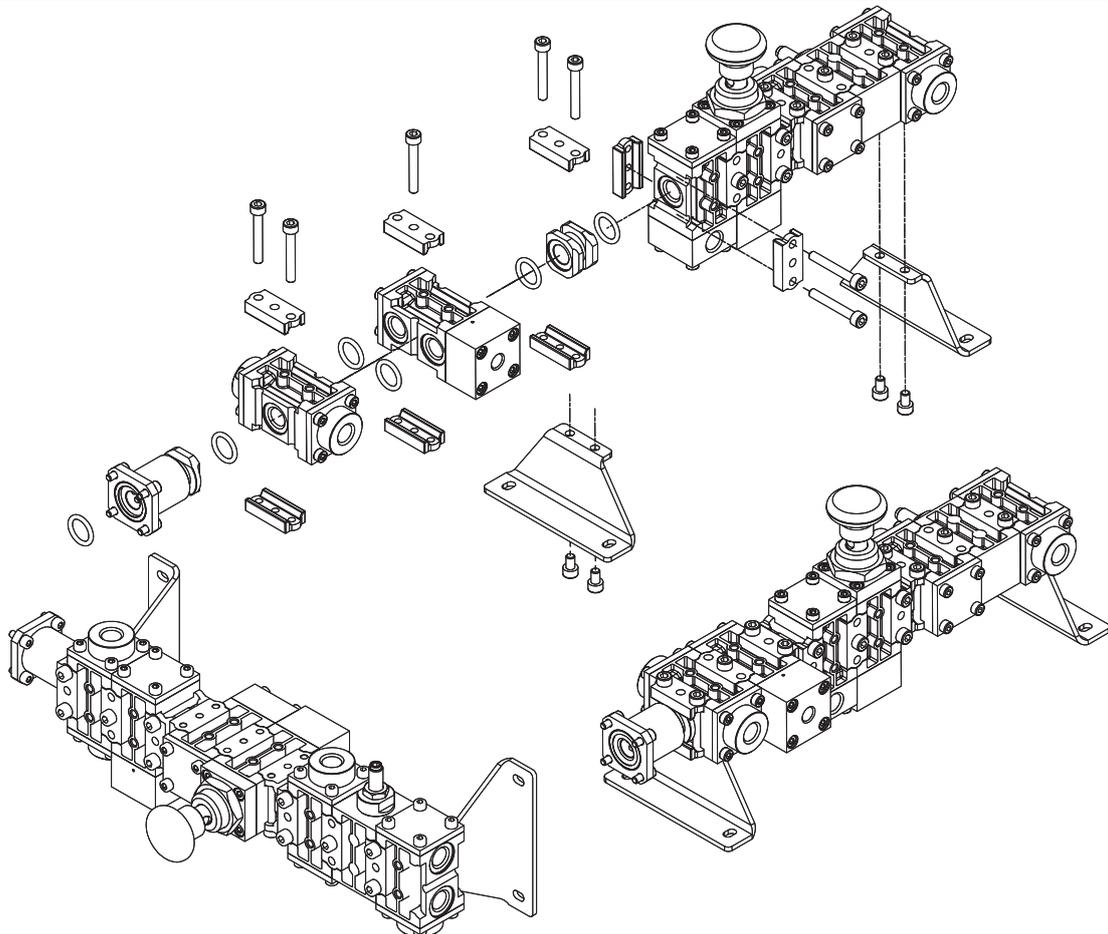
**Operating Characteristics**

Weight (g.)
125

Example of a Manifold



Manifold assembly procedure



## General

The new Stainless Steel air treatment series was created and developed specifically for the oil and gas industry as well as applications requiring improved resistance to corrosion due to chemical and/or a harsh environment.

**All metal parts (Inside & outside) are manufactured from AISI 316L Stainless Steel, compliant to NACE MR0175/ISO 15156-1.**

The new stainless steel air treatment series comprises of a filter (5, 20 and 50 micron) with manual drain, pressure regulator with a rolling diaphragm offering 4 different pressure ranges from 0 – 12 bar and a combination of both units in the filter-regulator assembly.

The new series is available with both 1/4 NPT and 1/2 NPT ports and a flow rate between 2000 dm<sup>3</sup>/min and 4000 dm<sup>3</sup>/min. In the regulators and filter-regulators the relieve port is a 1/8 NPT thread protected by an AISI 316L filter.

## Technical and constructive features

Body, bowl and adjusting support	Stainless Steel AISI 316L
Adjusting end cover and filter plug	Stainless Steel AISI 316L
Adjusting screw, locking nut and fixing screws	Stainless Steel AISI 316 (INOX A4-70)
Internal components	Stainless Steel AISI 316L
Springs	Stainless Steel AISI 316
Seals	NBR FPM (Fluoroelastomers) NBR for low temperature

## Working characteristics

Fluid	- Air, Inert Gases, sweet (natural) gases Filtered lubricated or non-lubricated (If lubricated the lubrication must be continuous) -30°C ÷ +70°C
Temperature (standard version)	-50°C ÷ +70°C
Temperature (low temperature (L) version)	-5°C ÷ +150°C
Temperature (high temperature (H) version)	

## Instruction for Installation and Operation

The air service unit must be installed as close as possible to the application. The air flow must follow the directions indicated on the component body and units fitted with a filter bowl must be mounted vertically with the drain assemble facing downwards. All units must be operated within the specified pressure and temperature ranges.

Pressure regulator: The pressure value must always be set increasing the regulated pressure and ideally the unit should be chosen according to the pressure value to be regulated. The condensate drain is manual and can only be used after exhausting the pressure from within the device.

To exhaust the condensate, rotate the tap clockwise until the condensate begins to flow from the device, after all the condensate has been removed from the bowl, rotate the tap anti-clockwise until it reaches the mechanical stop to close the drain.

## Maintenance

Filter:

The filter elements in the filter and filter-regulator units are manufactured from AISI 316L Stainless steel and can be regenerated by washing and passing air through it.

To change these elements, remove the bowl, unscrew the locking screw of the lower support and exchange the element with a new one or a regenerated unit.

Pressure regulator:

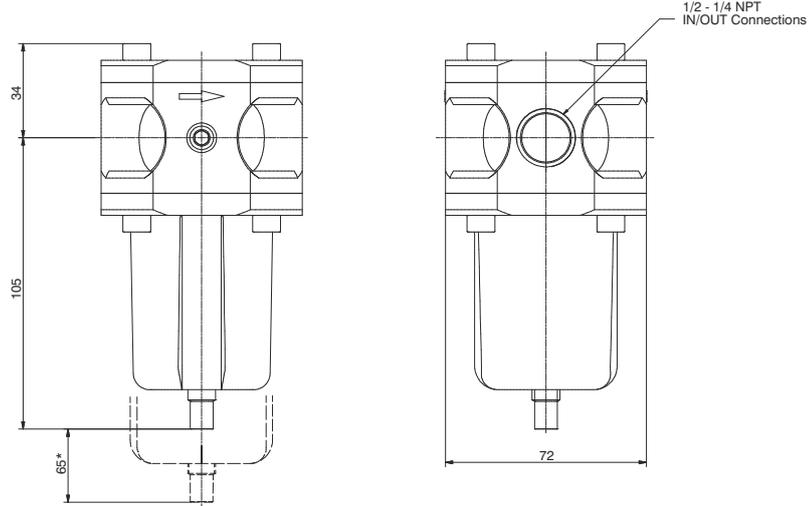
If the pressure regulator no longer regulates the pressure correctly or a continuous leak appears from the relieve port, it might be necessary to replace the diaphragm.

To change the diaphragm, it is necessary to completely unscrew the pressure regulating spring before removing the regulating support.



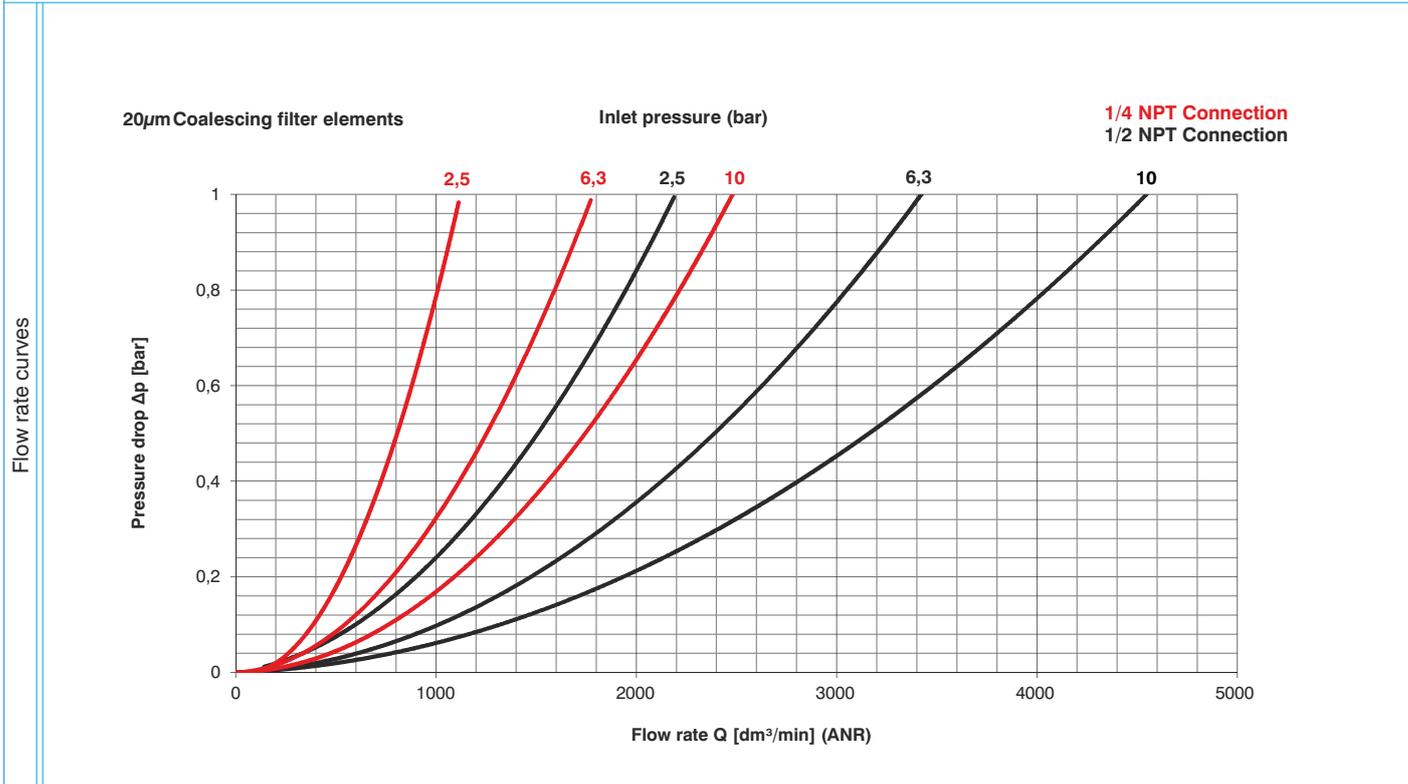
For any other required maintenance and due to the complexity and testing required, we strongly recommending you return the unit to the manufacturer.

Filter



\* = BOWL REMOVAL MAXIMUM HEIGHT

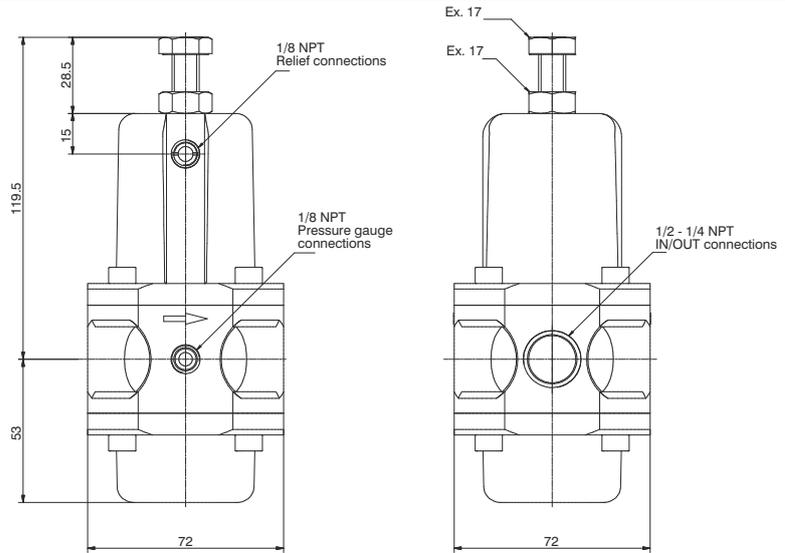
Example: SS173BFB: AISI 316L Filter with G 1/2 NPT connections, filter pore size 20μ



Operational characteristics	Technical characteristics		
<ul style="list-style-type: none"> <li>- Body, bowl and internal components are made in Stainless steel AISI 316L.</li> <li>- Fixing screws are made in A4 Stainless steel (AISI 316).</li> <li>- Filter port made in Stainless steel AISI 316 available in 3 sizes (5μm, 20μm e 50μm).</li> <li>- Manual water drain valve.</li> </ul>	Connections	1/4 NPT - 1/2 NPT	Ordering code
	Maximum Inlet pressure	13 bar	
	Temperature (Standard version)	-30 C° ÷ +70 C°	CONNECTIONS
	Temperature (Low T version)	-50 C° ÷ +70 C°	<b>C</b> A = 1/4 NPT
	Temperature (High T version)	-5 C° ÷ +150 C°	B = 1/2 NPT
	Weight	1650 (gr)	FILTER PORT SIZE
	Filter pore size	5μm - 20μm - 50μm	<b>S</b> A = 5 μm
	Max bowl capacity	25 cm³	B = 20 μm
			C = 50 μm
	Assembly position	Vertical	TYPE
		= Standard*	
		<b>T</b> L=Low temperature version	
		H=High temperature version	

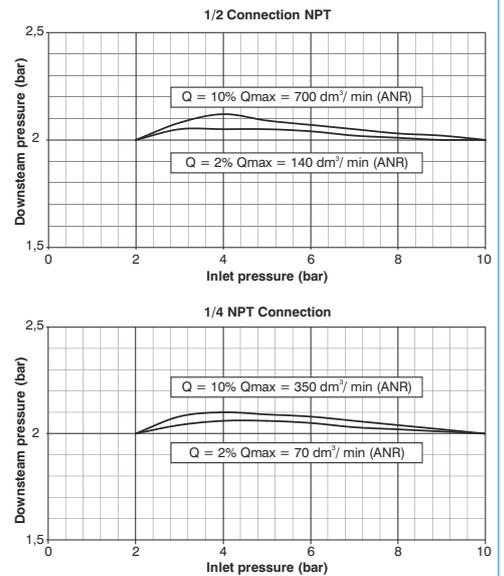
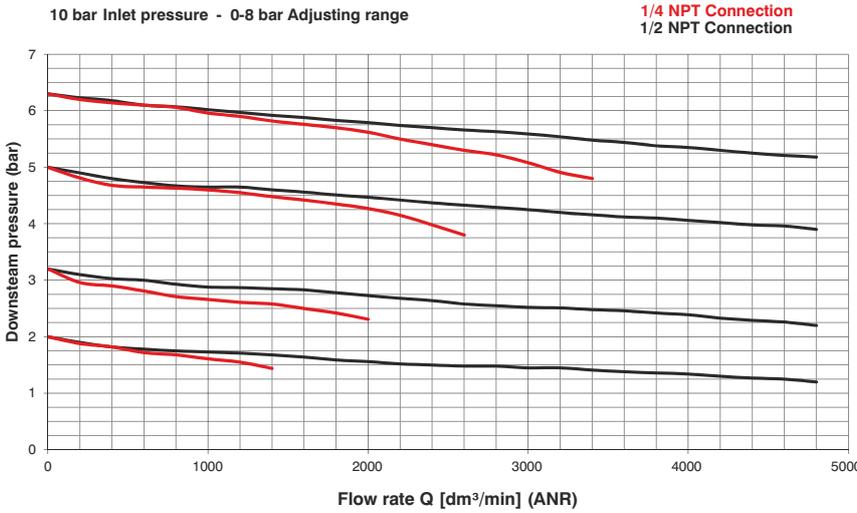
\* no additional letter required

Pressure regulator



Example: SS173BRC: AISI 316L Pressure regulator with 1/2 NPT connections, 0 - 8 bar adjusting range

Flow rate curves - Adjusting characteristics



Operational characteristics

- Body, adjusting support, end cover and internal components are made in Stainless steel AISI 316L.
- Adjusting springs are made in Stainless steel AISI 316L.
- Fixing screws, adjusting screw, locking nut are made in A4 Stainless steel (AISI 316).
- Pressure regulator - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.

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	1/4 NPT - 1/2 NPT
Maximum Inlet pressure	13 bar
Temperature (Standard version)	-30 C° ÷ +70 C°
Temperature (Low T version)	-50 C° ÷ +70 C°
Temperature (High T version)	-5 C° ÷ +150 C°
Pressure gauge connections	1/8 NPT
Weight	1830 (gr)
Pressure adjusting range	0-2 bar / 0-4 bar 0-8 bar / 0-12 bar

Assembly positionAsse

Any

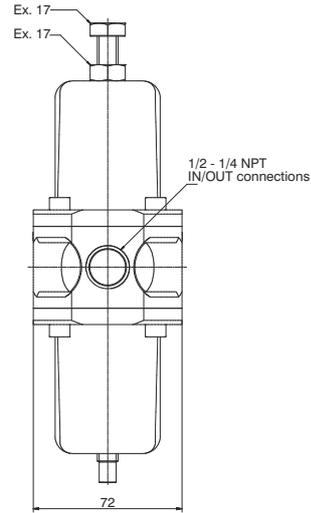
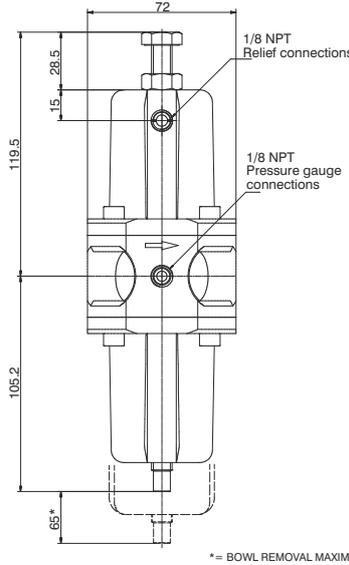
Ordering code

**SS173BRC**

- CONNECTIONS
- C** A = 1/4 NPT
- B = 1/2 NPT
- ADJUSTING RANGE
- A = 0-2 bar
- C** B = 0-4 bar
- C = 0-8 bar
- D = 0-12 bar
- TYPE
- T** = Standard\*
- L = Low temperature version
- H = High temperature version

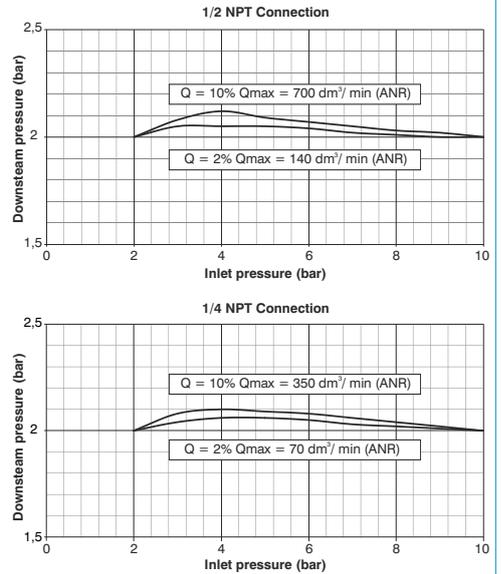
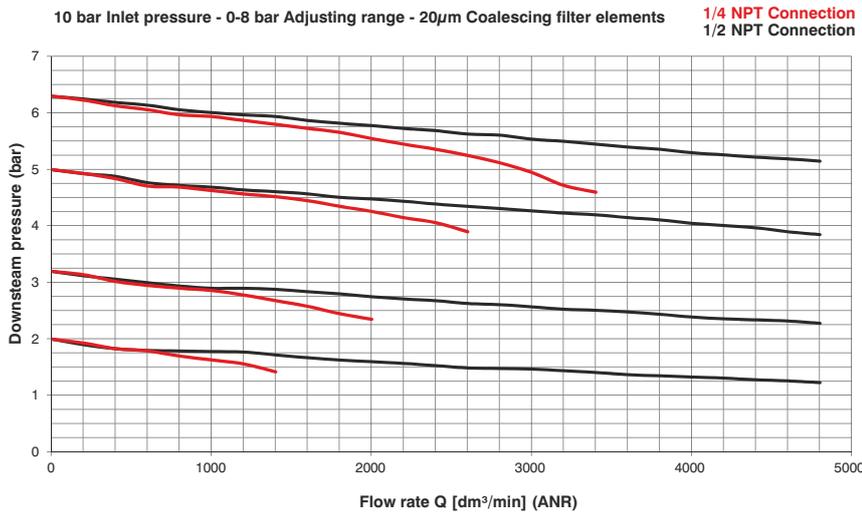
\* no additional letter required

**Filter - Pressure regulator**



Example: SS173BEBC: AISI 316L Filter pressure regulator with 1/2 NPT connections, filter pore size 20µ and 0 - 8 bar adjusting range.

Flow rate curves - Adjusting characteristics



**Operational characteristics**

- Body, adjusting support, end cover and internal components are made in Stainless steel AISI 316L.
- Adjusting springs are made in Stainless steel AISI 316L.
- Fixing screws, adjusting screw, locking nut are made in A4 Stainless steel (AISI 316).
- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Filter port made in Stainless steel AISI 316 available in 3 sizes (5µm, 20µm e 50µm).
- Manual water drain valve.

**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	1/4 NPT - 1/2 NPT
Maximum Inlet pressure	13 bar
Temperature (Standard version)	-30 C° ÷ +70 C°
Temperature (Low T version)	-50 C° ÷ +70 C°
Temperature (High T version)	-5 C° ÷ +150 C°
Pressure gauge connections	1/8 NPT
Weight	2110 (gr)
Pressure	0-2 bar / 0-4 bar
Adjusting range	0-8 bar / 0-12 bar
Filter pore size	5 µm - 20 µm - 50 µm
Max bowl capacity	25 cm³

Assembly position

Vertical

**Ordering code**

**SS173CESG1**

**CONNECTIONS**

- A = 1/4 NPT
  - B = 1/2 NPT
- FILTER PORT 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**

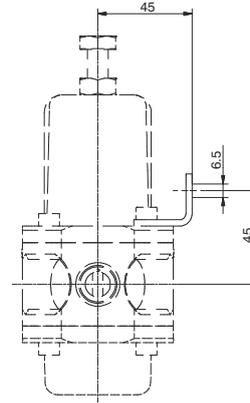
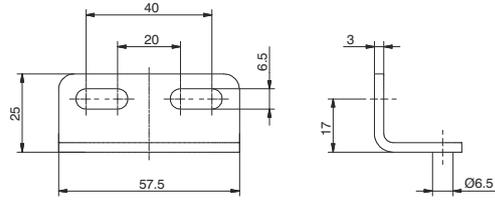
- =Standard\*
- L=Low temperature version
- H=High temperature version

\* no additional letter required

**Fixing bracket**

Ordering code

**SS17350**



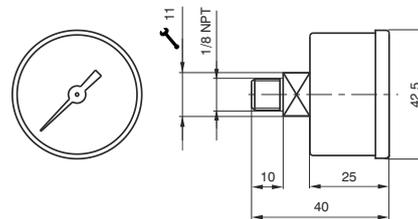
Weight 32 g.  
 - Made in Stainless steel AISI 316L.  
 - Allows the simple components to be wall mounted.  
 - Fixing bracket is complete with Nr. 2 fixing screws (use this screws to replace those originally mounted on the unit)

**Pressure gauge**

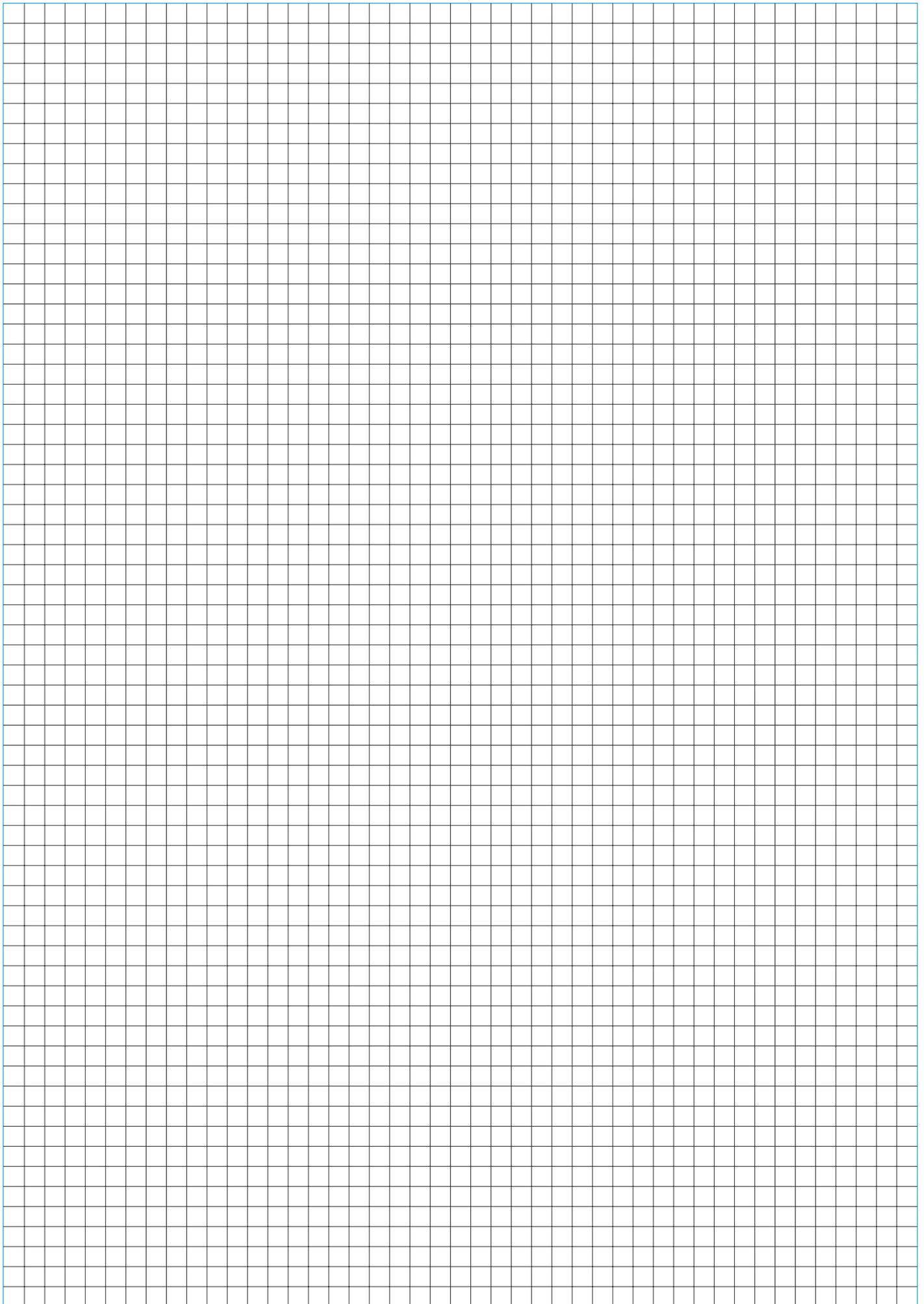
Ordering code

**SS17070A**

SCALE  
 A = 0 ÷ 4 bar  
 B = 0 ÷ 12 bar



Weight g. 60  
 - Made in Stainless steel AISI 316.  
 - Sight glass retained by a Stainless steel AISI 316 ring.  
 - Available with 0-4 bar and 0-12 bar scale.



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