

GENERAL TECHNICAL DATA SYNTESI®

Syntesi® is an important milestone achieved by Metal Work, the result of thirty years' experience producing air-treatment units. It has been studied in minute detail to obtain the best possible performance in a reduced space and with limited weight. The capacity is much higher than that of other units of the same size.

This modular unit features a very simple yet effective system that requires no brackets, stay bolts or yoke for assembling the elements.

The basic version of Syntesi® incorporates numerous functions that are not provided or are only optional with traditional units. Examples are padlockable knobs, additional pneumatic ports on the front and back, flow options from left to right or vice versa, regulators with compensation system - which are accurate even when the upstream pressure changes, with rapid downstream pressure relief - full indelible marking, automatic condensate drain even in size 1, and 360° visual inspection of oil and condensate levels. The basic materials, technopolymer and nickel-plated brass have excellent corrosion resistance. An anti-corrosion version is available with stainless steel components (screws, plates) or Geomet®-treated ones (regulator springs).



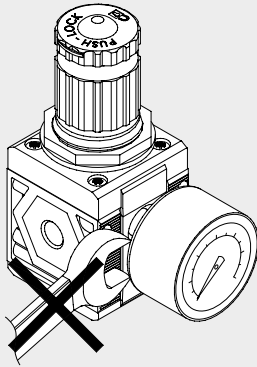
TECHNICAL DATA

TECHNICAL DATA		SIZE 1			SIZE 2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Max. input pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Flow rate		See catalogue of the various elements						
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	from -10 to +50			from -10 to +50			
Padlockable knob		The knobs of the regulators, filter regulators and standard sectioning valves can all be padlocked						
Fluid		Compressed air or other inert gases						
Mounting position		See catalogue of the various elements						
Direction of flow		Flow options right to left or vice versa						
Additional air take-off, for pressure gauges or fittings		1/8", front and rear, on all modules			1/4", front and rear, on all modules			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Certification for potentially explosive atmosphere according to Atex 2014/34/EU rule		 II 3G Ex h IIC T5 Gc -10°C < Ta < 50°C II 3D Ex h IIIC T100 °C Dc						

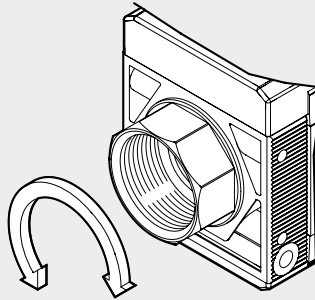
ANTI-CORROSION VERSION

Differences compared to the standard version:

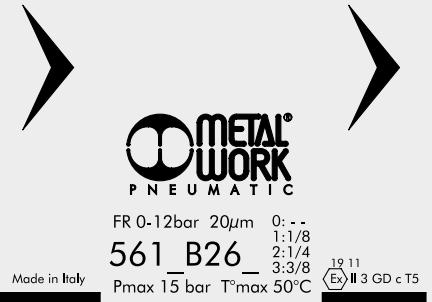
- stainless steel screws
- stainless steel plate for R, FR, V3V knobs
- Geomet®-treated regulator spring and filter-regulator

FIXING TO FRONT PORTS


Do not use a spanner for fixing taper threaded elements to the front ports. Mount by hand and apply a liquid sealant (not teflon®).

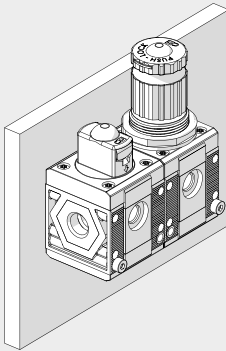
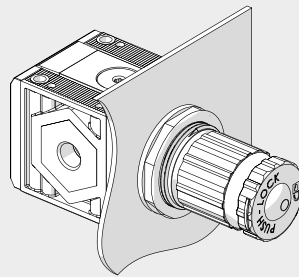
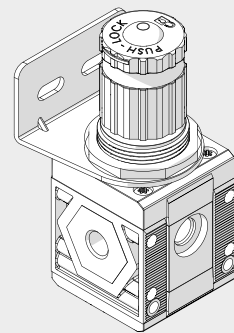
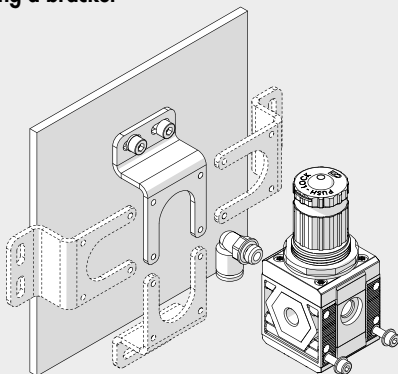
ROTARY BUSHINGS


3/4" and 1" bushings in Size 2 rotate freely to facilitate assembly operations.

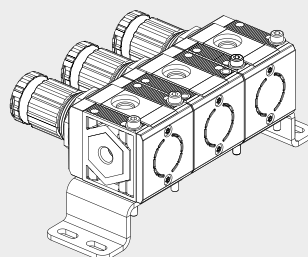
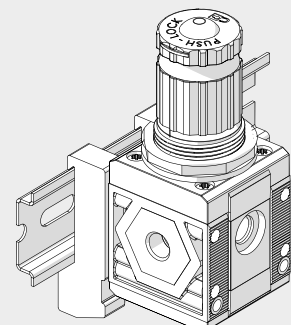
LASER MARKING


The following is marked indelibly on the body:

- Metal Work trademark
- Code
- Maximum pressure and temperature
- Degree of filtration or pressure range, where relevant
- Week and year of manufacture
- Atex category
- Made in Italy

MOUNTING OPTIONS
On the wall, using two screws

On a panel

Using knob bracket

Using a bracket


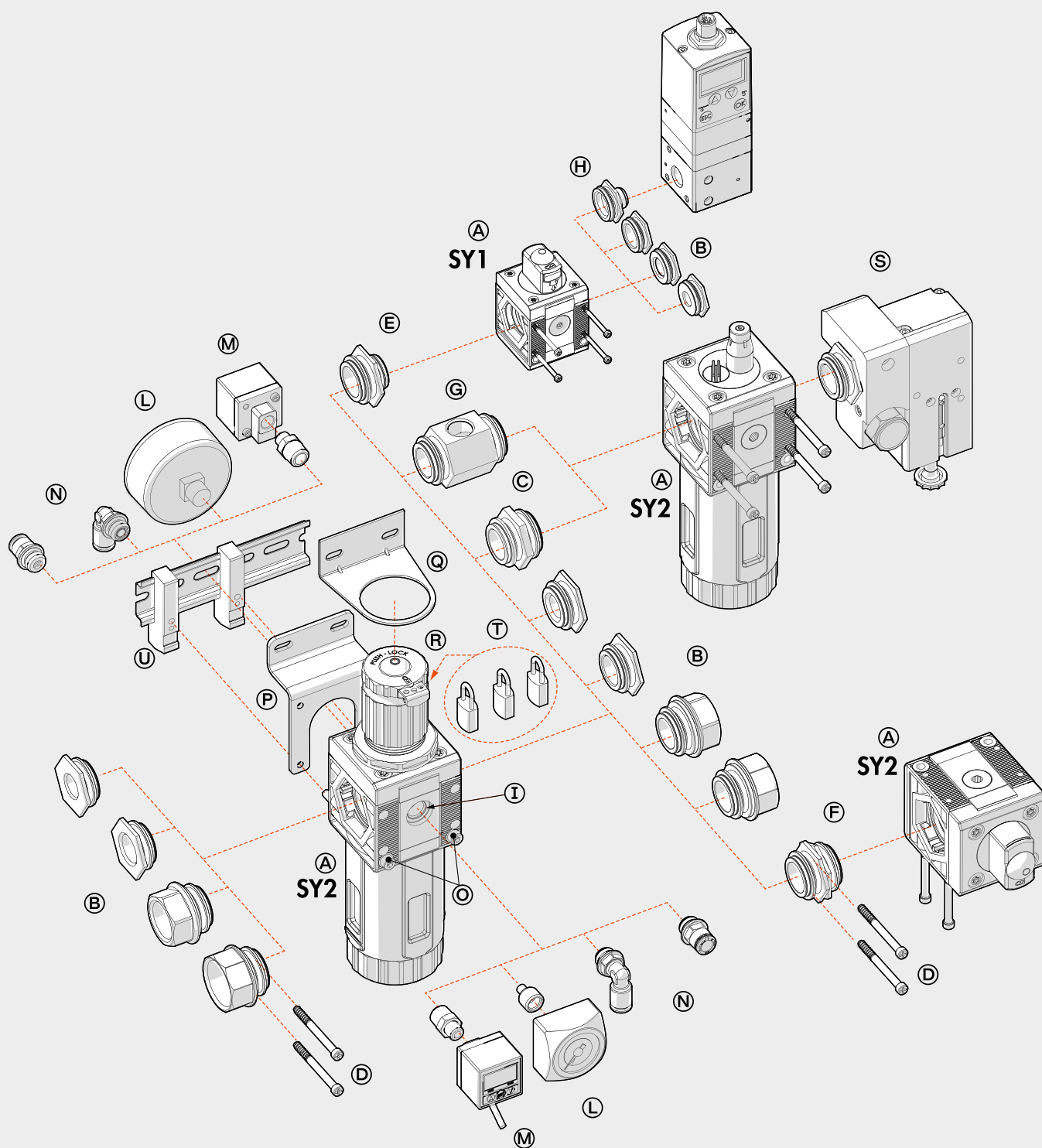
The bracket can be secured in any position, and the fittings can be mounted on the pressure gauge air intake at the back of the unit.


On a DIN EN50022 bar with the apposite adaptor


MODULARITY AND FLEXIBILITY

UNITS

GENERAL TECHNICAL DATA Syntesi®



The various elements of Syntesi® ④ can be connected to the air feed and delivery circuit using pneumatic nickel brass or passivated aluminium ports ⑤ and can be fixed together using nipples ⑥.

The nipples and ports are easy to remove by unscrewing the two front screws ⑦. This solution has numerous advantages:

- Reduced overall dimensions.
- Free composition of multiple elements, without the need for brackets, stay bolts or yoke.
- The threads for the fittings are metallic, allowing high tightening torques, also for tapered threads.
- Maximum flexibility: a unit can be transformed at any time by adding an element or replacing a port with another one, e.g. 1/4" instead of 1/8".
- The air intake port can be the same or different from the outlet port, as desired.

Standard Syntesi® ports are: 1/8", 1/4", 3/8" for size 1; 3/8", 1/2", 3/4", 1" for size 2.

It may be necessary to use a vice to insert the bushes into size 2.

The nipples have different functions:

- Nipple ⑥ joins two elements of the same size together.
- Size adaptor ⑧ can be used to connect an element in the Syntesi® 2 series with one in the Syntesi® 1 series.
- The 90° adaptor ⑨ can be used to connect two 90° angled elements. For example, it can help directing the regulator knob or the control knob of a sectioning valve towards the user.
- The two-way air intake ⑩ is a simple and cost-effective system which, besides connecting two elements together, has 2 opposing threaded air intakes.
- The adaptor for Regtronic ⑪ can be used to fix the Regtronic 1/4" proportional valve to a Syntesi® size 1 element.

Additional ports ⑫. On the front and back of ALL Syntesi® elements there is a port (1/8" for size 1, 1/4" for size 2) that can be used for pressure gauges ⑬, pressure switches ⑭ or, given the high flow rate, as additional air take-off ⑮. These ports are downstream of the element, so, for example, a regulator port can supply air at a set pressure or a filter port can supply filtered air (not valid for activated carbon filter and depurator).

Wall fixing. Only two through screws ⑯ are needed. No bulky brackets or additional flanges are required. The bracket ⑰ can be used to separate the unit from the fixing wall, e.g. to mount a fitting to the rear port.

Fixing on a DIN EN50022 bar. Can be done using the bracket kit ⑱.

Regulator fixing bracket ⑲. Regulators and filter-regulators can also be fixed using a steel bracket ⑲ that embraces the bell.

Padlockable knob ⑳. The knobs of regulators, filter-regulator and sectioning valves can all be padlocked. The steel plate is included in the supply. You can insert up to two 3 mm diameter padlocks ㉑ on size 1 and three padlocks on size 2. As an alternative, the sectioning valve can have a steel plate suitable for a single 6 mm diameter padlock.

Safety valve ㉒. The unit can incorporate a series 70 SAFE AIR® safety valve.

SYNTESI® KEY TO CODES

KEY TO CODES SINGLE ELEMENT

56	1	1	F	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air take-off	Varies from element to element	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

- The anti-corrosion version of this element is only available with manual actuation.
- ▲ Not available in the anti-corrosion version.

KEY TO CODES UNIT COMPOSED OF TWO OR THREE ELEMENTS

56	1	1	V	10	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT 1	TYPE	ELEMENT 2	TYPE	ELEMENT 3	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	1 1/8" port 2 1/4" port 3 3/8" port	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air Take-off	Varies from element to element	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air Take-off	Varies from element to element	F Filter D Depurator C Active carbon filter R Pressure regulator B Filter-regulator L Lubricator ● V Shut off valve ▲ A Progressive starter ▲ S Pressure switches P Air Take-off	Varies from element to element	1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	3 3/8" port 4 1/2" port 5 3/4" port 6 1" port							3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

- The anti-corrosion version of this element is only available with manual actuation.
- ▲ Not available in the anti-corrosion version.

The job of the filter is to retain liquid or solid impurities present in the compressed air. The incoming air is moved by the centrifuge unit, so that liquid particles, which are heavier, are projected against the walls of the container and force to adhere to it. As they accumulate, they create drops that deposit on the bottom by gravity.

The remaining solid particles are held back by the porous filtering element. The condensate is maintained in a quiet state to prevent the deposited impurities from re-entering the circulation. The condensate drains out through the drain cock provided.

The RMSA drain discharges when the pressure in the filter drops to zero. Alternatively the condensate can be drained by hand by pressing the button.

The RA drain discharges condensate from the container automatically whenever necessary, regardless of the pressure level.

The SAC tap drains the condensate only as the result of sudden changes in compressed air requests.

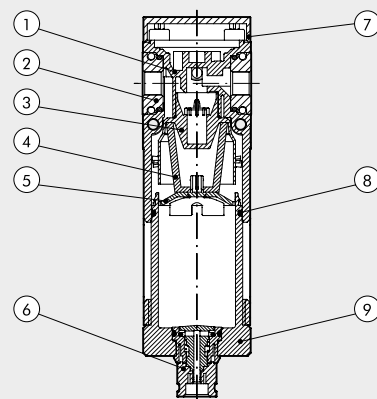
On the front and back there is a port (1/8" for size 1 and 1/4" for size 2) that can be used with pressure gauges, pressure switches or as an additional filtered air intake.



TECHNICAL DATA		FIL SY1			FIL SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Degree of filtration	µm	5 (yellow) - output air purity class ISO8573-1: 3.7.4 20 (white) - output air purity class ISO8573-1: 4.7.4 50 (blue) - output air purity class ISO8573-1: 5.7.4						
Max. input pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	900	1200	1300	3400	3800	3800	
	scfm	32	42	46	120	135	135	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1300	1650	1750	4500	5200	5200	
	scfm	46	58	62	159	184	184	
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Weight	g	178	173	164	488	461	457	445
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. Note: the maximum input pressure for the RA version must not exceed 10 bar						
Fluid		Compressed air or other inert gases						
Condensate bowl capacity	cm³	30			70			
Mounting position		Vertical			Vertical			
Port for additional air take-off		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500			1500			
	scfm	18			53			

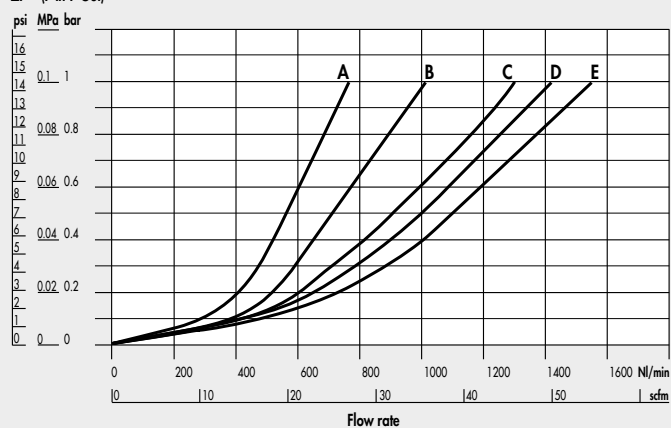
COMPONENTS

- ① Technopolymer filter body
- ② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ③ Technopolymer centrifuge
- ④ Sintered HDPE filter cartridge
- ⑤ Technopolymer screen
- ⑥ Drain (RMSA)
- ⑦ Technopolymer plate
- ⑧ NBR o-ring gaskets
- ⑨ Clear technopolymer bowl

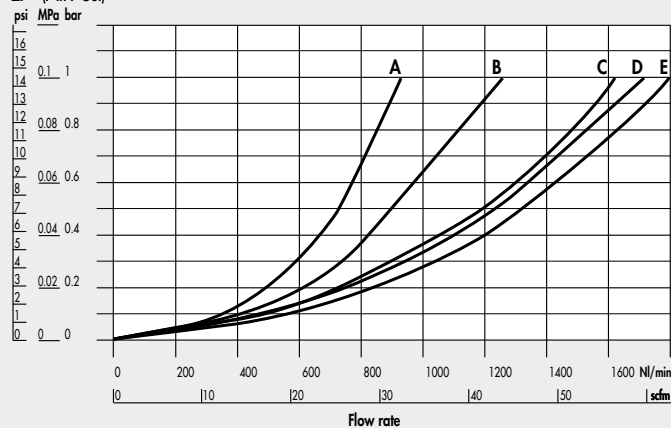


FLOW CHARTS

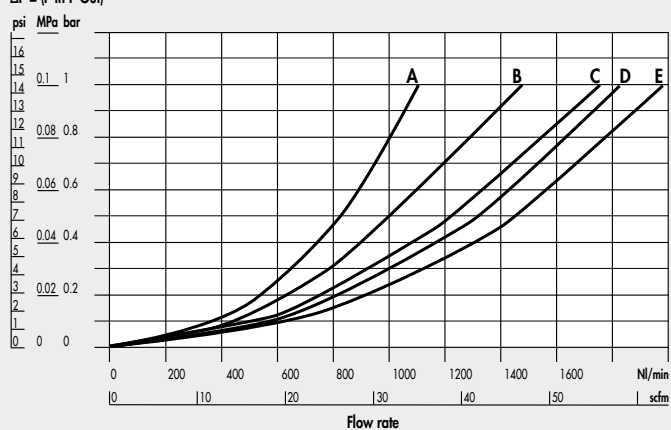
FIL Syntesi® SY1 1/8"

 $\Delta P = (P \text{ In-P Out})$ 

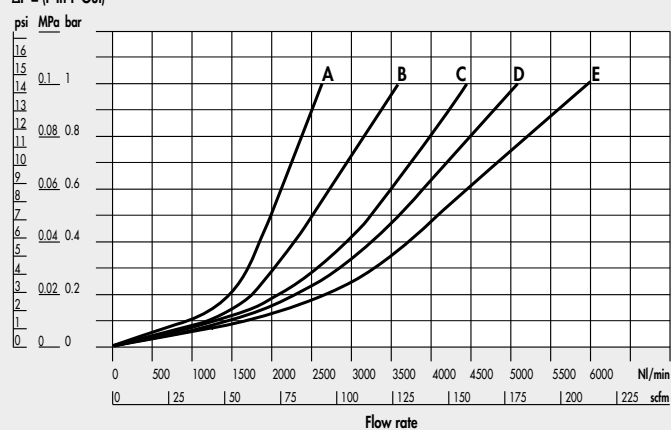
FIL Syntesi® SY1 1/4"

 $\Delta P = (P \text{ In-P Out})$ 

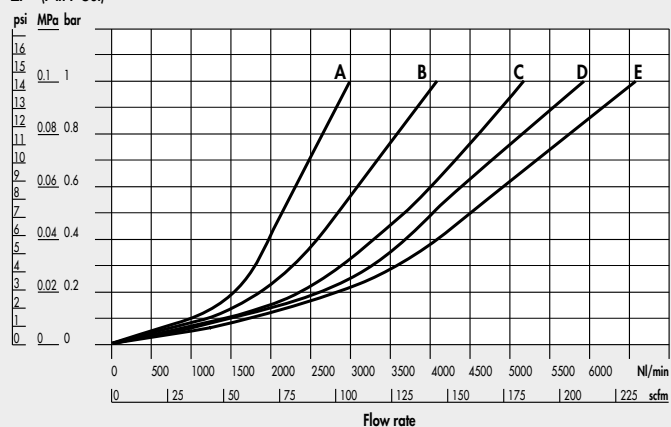
FIL Syntesi® SY1 3/8"

 $\Delta P = (P \text{ In-P Out})$ 

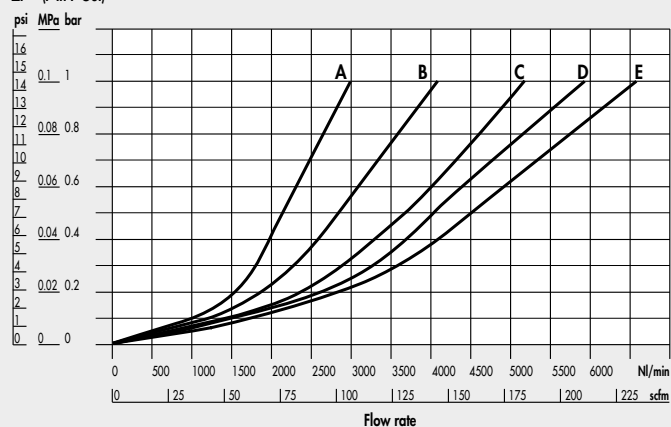
FIL Syntesi® SY2 3/8"

 $\Delta P = (P \text{ In-P Out})$ 

FIL Syntesi® SY2 1/2"

 $\Delta P = (P \text{ In-P Out})$ 

FIL Syntesi® SY2 3/4"-1"

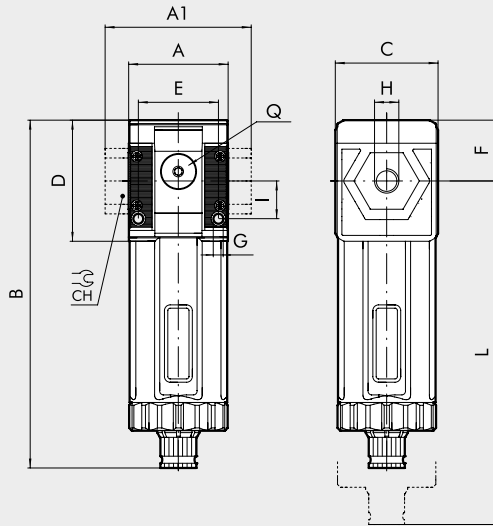
 $\Delta P = (P \text{ In-P Out})$ 

A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi

DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	RMSA 148			178			
	RA/SAC 152			182			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L	RMSA 202			245			
	RA/SAC 206			249			
Q (no. 2 additional air takes-off)	1/8"			1/4"			

KEY TO CODES

56	1	1	F	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	F Filter	10 5 µm, RMSA 20 20 µm, RMSA 30 50 µm, RMSA 40 5 µm, RA 50 20 µm, RA 60 50 µm, RA 11 5 µm, SAC 21 20 µm, SAC 31 50 µm, SAC	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
 RA: automatic drain with condensate discharge, independent of pressure and flow rate.
 Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port.
 SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs.

UNITS

Syntesi® FILTER

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	Code	Description
Syntesi® SY1 FILTER		Syntesi® SY2 FILTER		Syntesi® SY2 FILTER	
5610F100	FIL SY1 5 RMSA without bushings	5620F100	FIL SY2 5 RMSA without bushings	5626F106	FIL SY2 1 5 RMSA
5610F200	FIL SY1 20 RMSA without bushings	5620F200	FIL SY2 20 RMSA without bushings	5626F206	FIL SY2 1 20 RMSA
5610F400	FIL SY1 5 RA without bushings	5620F400	FIL SY2 5 RA without bushings	5626F406	FIL SY2 1 5 RA
5610F500	FIL SY1 20 RA without bushings	5620F500	FIL SY2 20 RA without bushings	5626F506	FIL SY2 1 20 RA
5611F101	FIL SY1 1/8 5 RMSA	5623F103	FIL SY2 3/8 5 RMSA		
5611F201	FIL SY1 1/8 20 RMSA	5623F203	FIL SY2 3/8 20 RMSA		
5611F401	FIL SY1 1/8 5 RA	5623F403	FIL SY2 3/8 5 RA		
5611F501	FIL SY1 1/8 20 RA	5623F503	FIL SY2 3/8 20 RA		
5612F102	FIL SY1 1/4 5 RMSA	5624F104	FIL SY2 1/2 5 RMSA		
5612F202	FIL SY1 1/4 20 RMSA	5624F204	FIL SY2 1/2 20 RMSA		
5612F402	FIL SY1 1/4 5 RA	5624F404	FIL SY2 1/2 5 RA		
5612F502	FIL SY1 1/4 20 RA	5624F504	FIL SY2 1/2 20 RA		
5613F103	FIL SY1 3/8 5 RMSA	5625F105	FIL SY2 3/4 5 RMSA		
5613F203	FIL SY1 3/8 20 RMSA	5625F205	FIL SY2 3/4 20 RMSA		
5613F403	FIL SY1 3/8 5 RA	5625F405	FIL SY2 3/4 5 RA		
5613F503	FIL SY1 3/8 20 RA	5625F505	FIL SY2 3/4 20 RA		

NOTE

Anti-corrosion version

5X-----

Example

5X11F101 FIL SY1 1/8 5 RMSA anti-corrosion

SYNTESI® DEPURATOR

The job of the filter purifier is to separate liquid and solid particles dispersed in the compressed air with a high degree of efficiency. This separation is achieved by means of a special filtering element called a "coalescence cartridge".

It is particularly indicated for eliminating traces of oil present in the compressed air. The air flow rate must remain below the maximum values to achieve the desired degree of purification. Beyond this value, there may be a decline in the quality of air from the purifier.

On the front and back there is a port (1/8" for size 1 and 1/4" for size 2) that can be used with pressure gauges, pressure switches or as an additional air intake. **The air taken from here is not purified.**

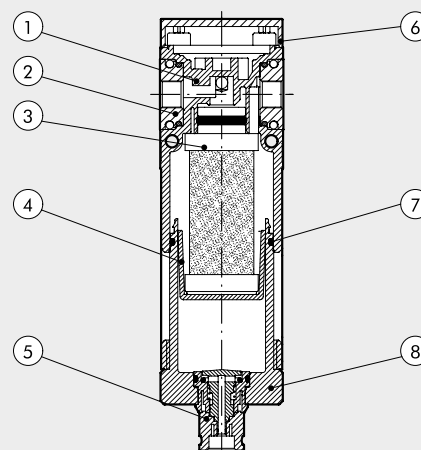


TECHNICAL DATA

TECHNICAL DATA		DEP SY1			DEP SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Degree of filtration	µm	0.01 - output air purity class ISO8573-1: 1.7.2						
Max. input pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	460			620			
	scfm	9			37			
Maximun suggested flow rate		See graph on the next page						
		N.B.: flow rates higher than the recommended value reduces purification efficiency						
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Weight	g	194	189	180	483	456	452	440
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs.						
		Compressed air or other inert gases						
Fluid								
Bowl capacity	cm³	15			40			
Mounting position		Vertical			Vertical			
Port for additional air take-off (not purified air)		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500			1500			
	scfm	18			53			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Notes on use		It is advisable to mount a 5 µm filter upstream of the purifier to retain solid particles						

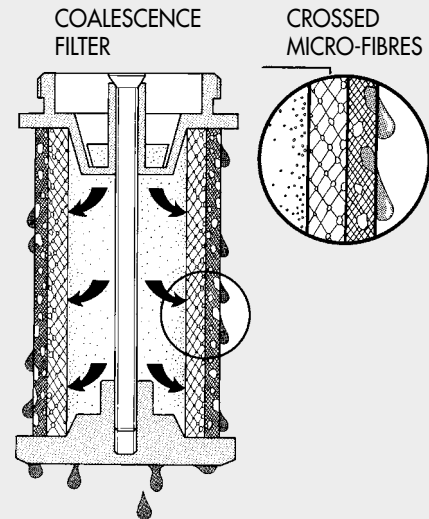
COMPONENTS

- ① Technopolymer depurator body
- ② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ③ Coalescence cartridge
- ④ Technopolymer cartridge support
- ⑤ Drain (RMSA)
- ⑥ Technopolymer plate
- ⑦ NBR o-ring gaskets
- ⑧ Clear technopolymer bowl



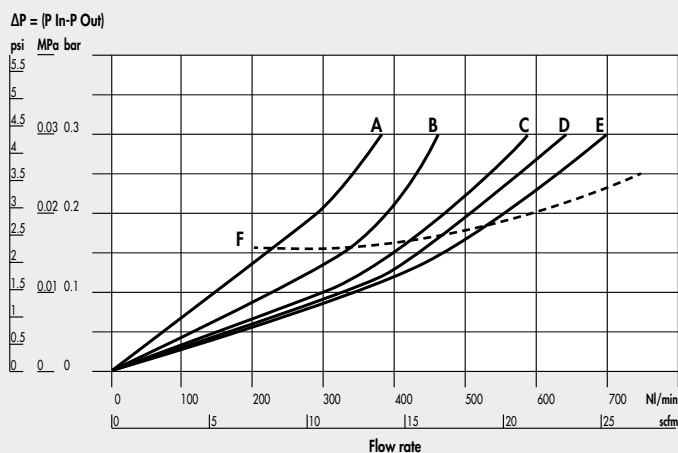
HOW THE COALESCENCE CARTRIDGE WORKS

Air from the mains – full of impurities – flows into the coalescence cartridge and then passes through the crossed micro-fibres that make up the cartridge. During this movement the liquid particles come into contact with the crossed micro-fibres and adhere to them. Due to the air pressure and gravity they join up with other micro-drops at each cross-over point and gradually increase in volume, leading to the physical phenomenon called coalescence. When they stop moving, the drops deposit on the outside of the cartridge, from which they detach and drop to the bottom. Since the volume of liquid leaving the cartridge is exactly the same as the drops arriving, the coalescence cartridge ought to work indefinitely. Solid particles are caught with the same efficiency but, unlike drops, they are not drained out and clog the cartridge. To get round this problem, it is necessary to mount a 5µm prefilter before the fine oil filter to separate the solid particles first.

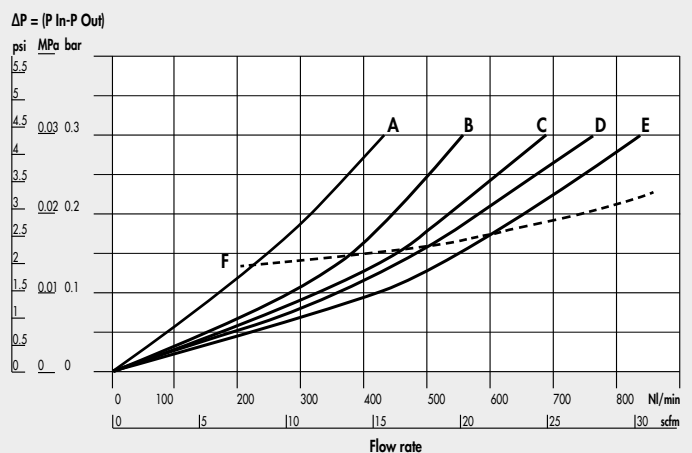


FLOW CHARTS

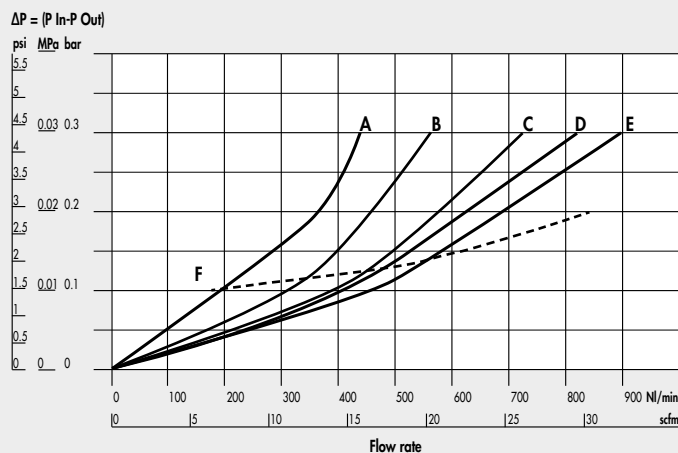
DEP Syntesi® SY1 1/8"



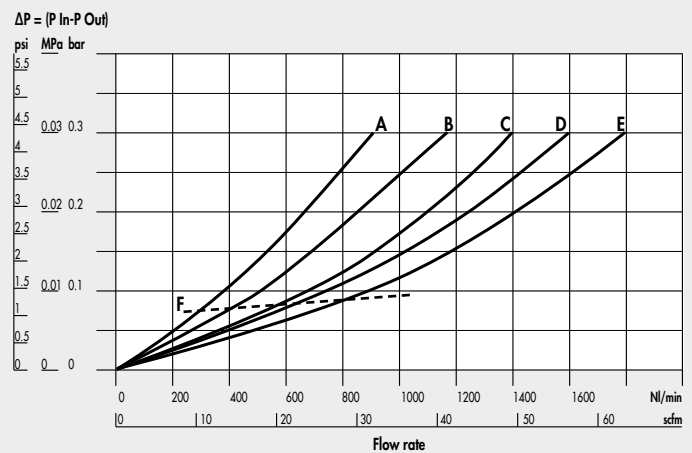
DEP Syntesi® SY1 1/4"



DEP Syntesi® SY1 3/8"



DEP Syntesi® SY2 3/8"

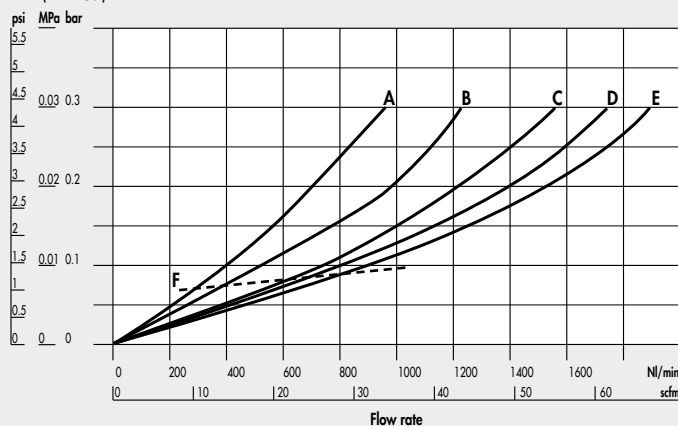


A = 2.5 bar - 0.25 MPa - 36 psi
B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi
F = max suggested flow

DEP Syntesi® SY2 1/2"

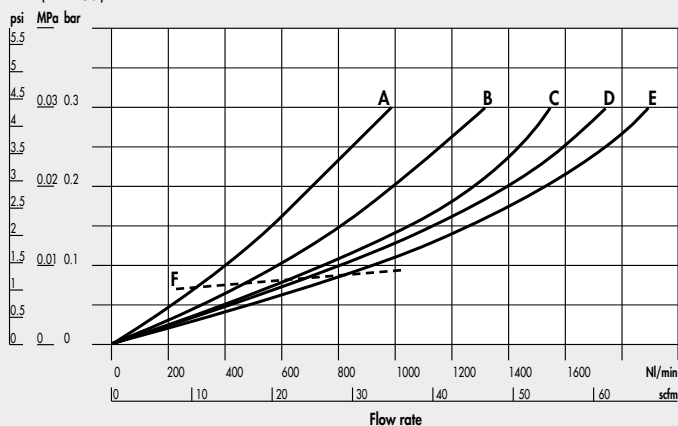
 $\Delta P = (P \text{ In-P Out})$ 

A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

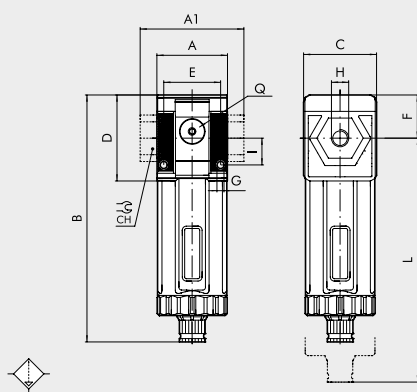
C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi
 F = max suggested flow

DEP Syntesi® SY2 3/4" - 1"

 $\Delta P = (P \text{ In-P Out})$ 

DIMENSIONS



		SIZE 1			SIZE 2			
H (threaded port)		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A		42				60.5		
A1		-	-	44	-	-	95	95
B	RMSA	148				178		
	SAC	152				182		
C		44				61		
CH		-			-	-	32	36
D		51.5				70.5		
E		33.5				47.5		
F		25.8				38.2		
G		Hole for M4 screws			Hole for M5 screws			
I		16				22.5		
L	RMSA	202				245		
	SAC	206				249		
Q (no. 2 additional air takes-off)		1/8"				1/4"		

KEY TO CODES

56	1	1	D	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing	D Depurator	10 RMSA	0 Without bushing
5X Syntesi		1 1/8" port		11 SAC	1 1/8" port
anti-corrosion		2 1/4" port			2 1/4" port
		3 3/8" port			3 3/8" port
	2 Size 2	0 Without bushing			0 Without bushing
		3 3/8" port			3 3/8" port
		4 1/2" port			4 1/2" port
		5 3/4" port			5 3/4" port
		6 1" port			6 1" port

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
 SAC: automatic drain with condensate discharge.
Operates by depression - requires variable air take-offs.

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	NOTE
Syntesi® SY1 DEPURATOR		Syntesi® SY2 DEPURATOR		Anti-corrosion version
5610D100	DEP SY1 RMSA without bushings	5620D100	DEP SY2 RMSA without bushings	5X - - - - -
5611D101	DEP SY1 1/8 RMSA	5623D103	DEP SY2 3/8 RMSA	Example
5612D102	DEP SY1 1/4 RMSA	5624D104	DEP SY2 1/2 RMSA	5X11D101
5613D103	DEP SY1 3/8 RMSA	5625D105	DEP SY2 3/4 RMSA	DEP SY1 1/8 RMSA anti-corrosion
		5626D106	DEP SY2 1 RMSA	

NOTE

Anti-corrosion version

5X - - - - -

Example

5X11D101 DEP SY1 1/8 RMSA anti-corrosion

SYNTESI® ACTIVE CARBON FILTER



Activated-carbon filtering systems achieve the highest standard of purification possible in industrial applications. They eliminate all traces of oils, solvents and hydrocarbons, and remove unpleasant odours. The operating principle uses activated carbon, which absorbs most of the polluting particles in the air thanks to minute holes in the granules of carbon.

On the front and back there is a port (1/8" for size 1 and 1/4" for size 2) that can be used with pressure gauges, pressure switches or as an additional air intake. **The air taken from here is not filtered by the activated-carbon cartridge.**

Cartridge life and efficiency can be increased by using pre-filtered (5µm) and purified (0.01µm) air.

The cartridge must be replaced at set intervals as there is no difference in load loss between an efficient cartridge and a saturated one.

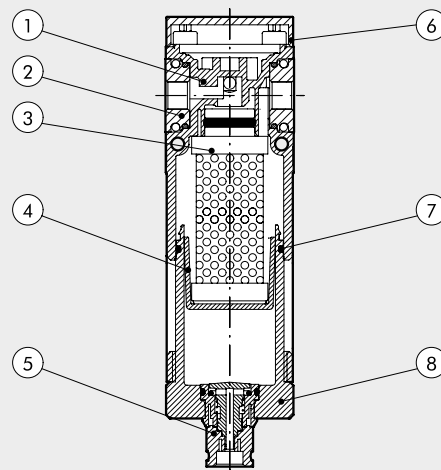
N.B.: to ensure the performance and duration stated on the data sheet, the load loss (ΔP) must not exceed 75 mbar.



TECHNICAL DATA		FIL CA SY1			FIL CA SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Residual oil at 20°C *	mg/m³	0.003 - output air purity class ISO8573-1: 1.7.1						
Duration of cartridge *	hours	4000			4000			
Max. inlet pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	350			800			
	scfm	12			28			
		N.B.: flow rates higher than the recommended value reduces purification efficiency						
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Weight	g	195	190	181	483	456	452	440
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure						
Fluid		0.01 µm filtered and depurated air						
Mounting position		In any position			In any position			
Additional air take-off port (unfiltered air from cartridge CA)		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar	Nl/min	500			1500			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18			53			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Notes on use		Upstream it's necessary to mount a coalescence filter depurator of 0.01 µm.						
* if the load loss of 75 mbar is not exceeded								

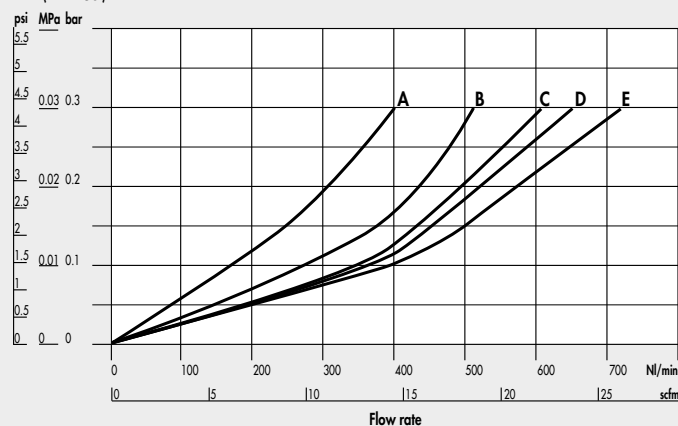
COMPONENTS

- ① Technopolymer depurator body
- ② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ③ Active carbon cartridge
- ④ Technopolymer cartridge support
- ⑤ Drain (RMSA)
- ⑥ Technopolymer plate
- ⑦ NBR o-ring gasket
- ⑧ Clear technopolymer bowl

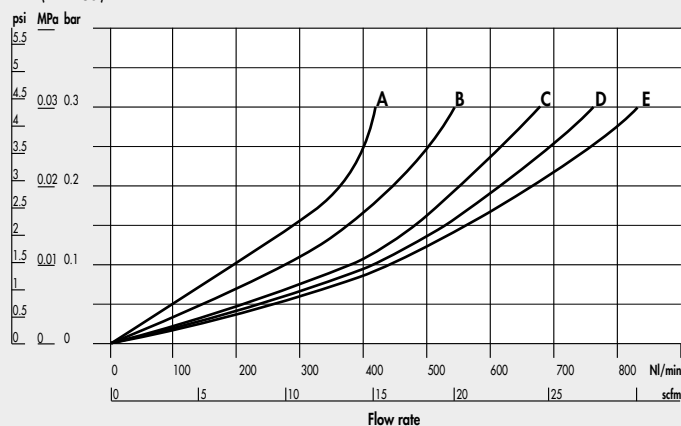


FLOW CHARTS

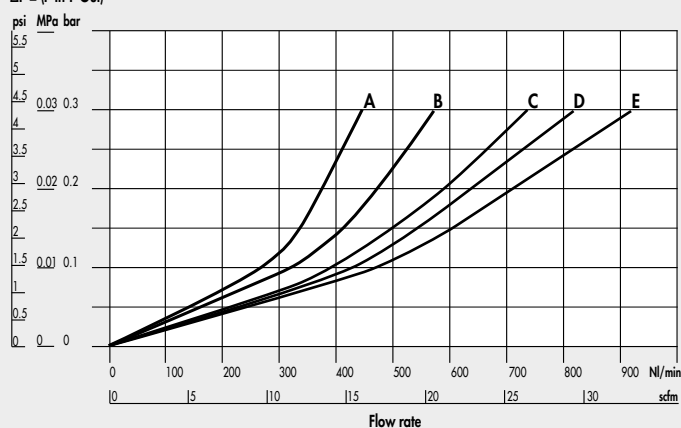
FIL CA Syntesi® SY1 1/8"

 $\Delta P = (P_{In} - P_{Out})$ 

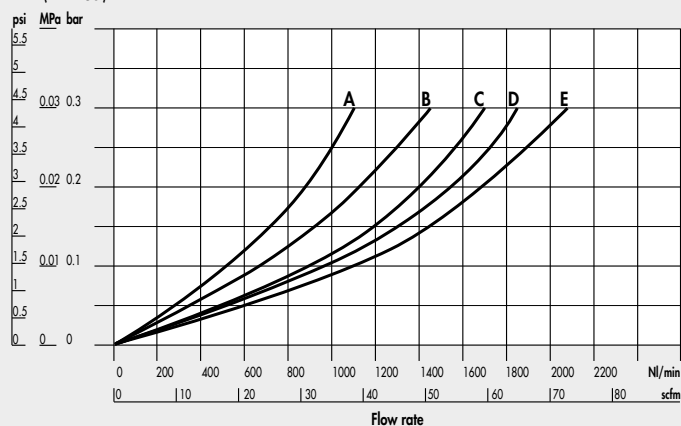
FIL CA Syntesi® SY1 1/4"

 $\Delta P = (P_{In} - P_{Out})$ 

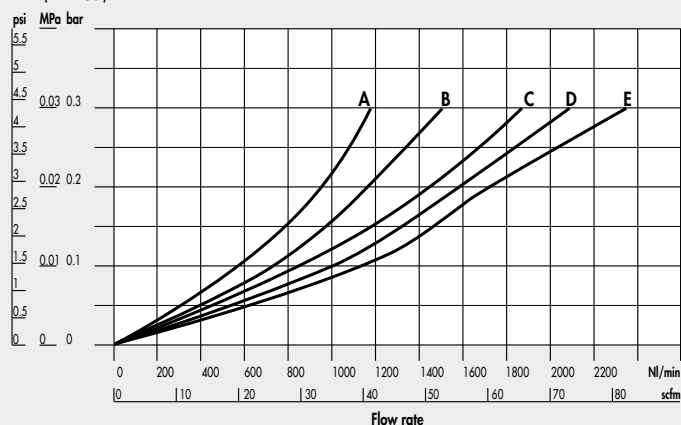
FIL CA Syntesi® SY1 3/8"

 $\Delta P = (P_{In} - P_{Out})$ 

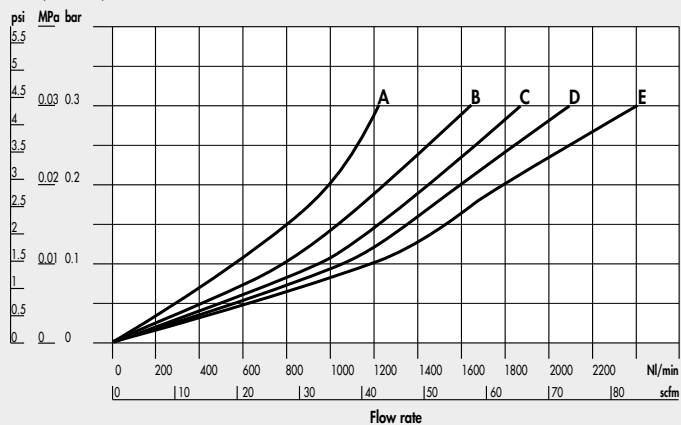
FIL CA Syntesi® SY2 3/8"

 $\Delta P = (P_{In} - P_{Out})$ 

FIL CA Syntesi® SY2 1/2"

 $\Delta P = (P_{In} - P_{Out})$ 

FIL CA Syntesi® SY2 3/4" - 1"

 $\Delta P = (P_{In} - P_{Out})$ 

A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi

Technical drawing of the 1000 Series Ball Valve, showing front and side views with dimensions A through Q.

[illegible]

56	1	1	C	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing	C Active carbon filter	10 RMSA	0 Without bushing
5X Syntesi		1 1/8" port			1 1/8" port
anti-corrosion		2 1/4" port			2 1/4" port
		3 3/8" port			3 3/8" port
	2 Size 2	0 Without bushing			0 Without bushing
		3 3/8" port			3 3/8" port
		4 1/2" port			4 1/2" port
		5 3/4" port			5 3/4" port
		6 1" port			6 1" port

UNITS

Syntesi® ACTIVE CARBON FILTER

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

[illegible]

Syntes® pressure regulator is based on the rolling diaphragm principle, which offers numerous advantages compared to systems using a flat diaphragm:

- Increased stroke, allowing wider valve aperture and hence greater flow rate.
- Decreased dynamic and pick-up friction, and hence quicker response and enhanced sensitivity.
- Greater accuracy in maintaining the pressure setting, both with both variable flow rates and different supply pressures.

The regulator includes a compensation system that keeps the pressure setting virtually constant, even when the upstream pressure changes. This is achieved mainly by the design of the valve, which is pneumatically balanced.

If the downstream pressure rises above the threshold value, the air is discharged (relief valve) until it drops below the maximum value.

A special device relieves downstream pressure rapidly when the upstream pressure drops to zero. This means the regulator can be positioned between a valve and a cylinder because the air can flow in both directions, towards the cylinder with regulated pressure, or return towards the valve during relief.

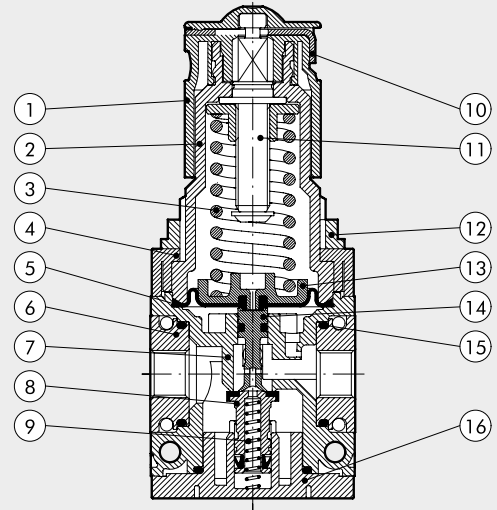
The knob is the push-lock type – once the pressure has been set, press it and it locks in position. In this position you can pull out the plate and attach two padlocks on size 1 or three padlocks on size 2 in order to avoid possible tampering. On the front and back there is a port (1/8" for size 1 and 1/4" size 2) that can be used with pressure gauges, pressure switches or as an additional regulated air intake.



TECHNICAL DATA		
Threaded port		
Max. inlet pressure	bar	
	MPa	
	psi	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	
(inlet pressure 10 bar)	scfm	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	
(inlet pressure 10 bar)	scfm	
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	
	scfm	
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	
Full outflow with zero inlet pressure		
Padlockable knob		
Upstream pressure compensation		
Weight	g	
Fluid		
Mounting position		
Additional air take-off, for pressure gauges or fittings		
Additional air take-off flow rate at 6.3 bar	Nl/min	
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	
Wall fixing screws		
Notes on use		

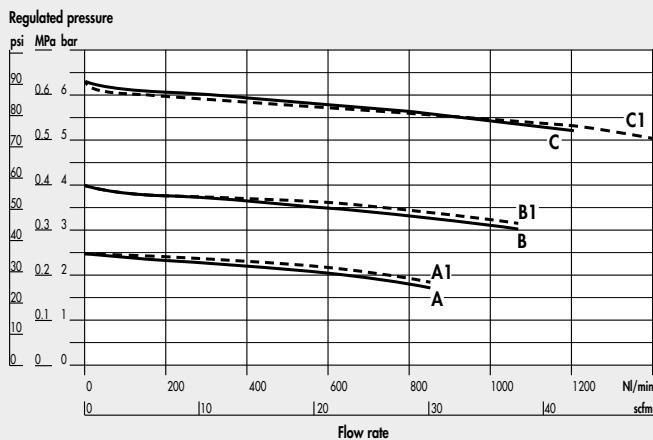
COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring (with Geomet® treatment for anti-corrosion version)
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑦ Technopolymer regulator body
- ⑧ OT58 brass valve, with NBR vulcanized gasket
- ⑨ Stainless steel valve spring
- ⑩ Zinc-plated steel plate for knob locking (stainless steel for anti-corrosion version)
- ⑪ OT58 brass adjusting screw
- ⑫ Technopolymer ring nut
- ⑬ Technopolymer plate
- ⑭ Technopolymer rod
- ⑮ NBR o-ring gasket
- ⑯ Technopolymer plug

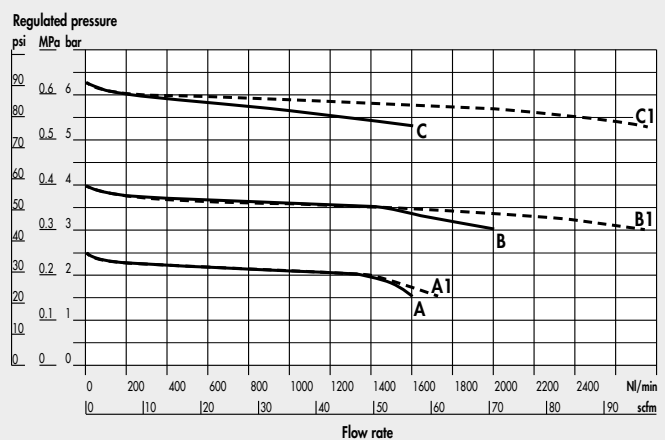


FLOW CHARTS

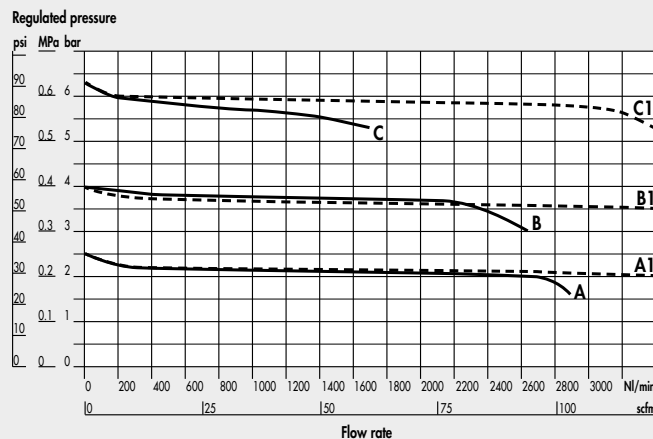
REG Syntesi® SY1 1/8"



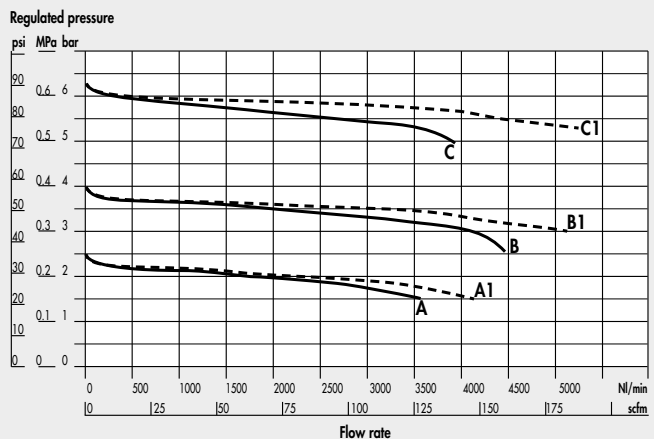
REG Syntesi® SY1 1/4"



REG Syntesi® SY1 3/8"



REG Syntesi® SY2 3/8"



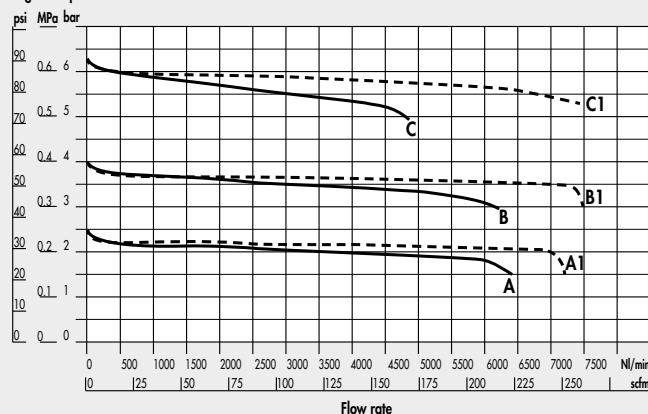
A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar

C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar

B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

REG Syntesi® SY2 1/2"

Regulated pressure

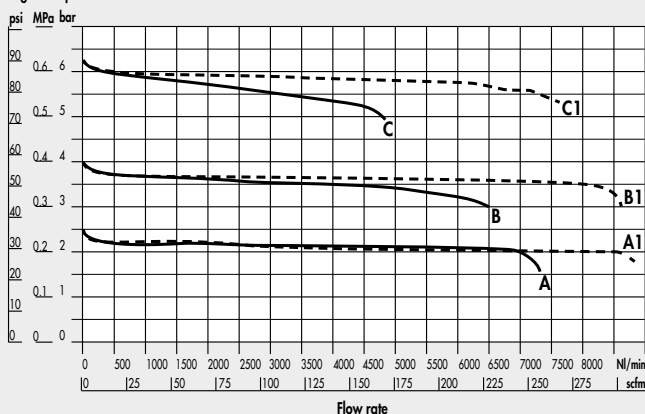


A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar

C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar

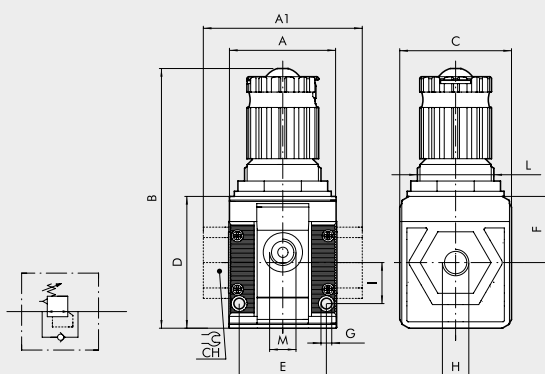
REG Syntesi® SY2 3/4" - 1"

Regulated pressure



B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	102			139			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L	M30x1.5			M38x2			
M (pressure gauge port or air takes-off)	1/8"			1/4"			

KEY TO CODES

56	1	1	R	14	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1 2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	R Pressure regulator	● 10 0 to 2 bar + 12 0 to 4 bar 14 0 to 8 bar 16 0 to 12 bar	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

● Not available in the anti-corrosion version. + Anti-corrosion version available only in size 1.

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	Code	Description
Syntesi® SY1 REGULATOR		Syntesi® SY2 REGULATOR		Syntesi® SY2 REGULATOR	
5610R140	REG SY1 08 without bushings	5620R140	REG SY2 08 without bushings	5626R146	REG SY2 1 08
5610R160	REG SY1 012 without bushings	5620R160	REG SY2 012 without bushings	5626R166	REG SY2 1 012
5611R141	REG SY1 1/8 08	5623R143	REG SY2 3/8 08	NOTE Anti-corrosion version 5X----- Example 5X11R141 REG SY1 1/8 08 anti-corrosion	
5611R161	REG SY1 1/8 012	5623R163	REG SY2 3/8 012		
5612R142	REG SY1 1/4 08	5624R144	REG SY2 1/2 08		
5612R162	REG SY1 1/4 012	5624R164	REG SY2 1/2 012		
5613R143	REG SY1 3/8 08	5625R145	REG SY2 3/4 08		
5613R163	REG SY1 3/8 012	5625R165	REG SY2 3/4 012		

SYNTESI® IN-SERIES REGULATOR



The in-series regulator is used to take air at a set pressure from the ports on the front and back of the body, while the pneumatic inlet and outlet ports are connected directly.

It is possible for instance to assemble several regulators side by side, all supplied at the same pressure, and obtain different regulated pressures, regardless of the pressure of the previous module.

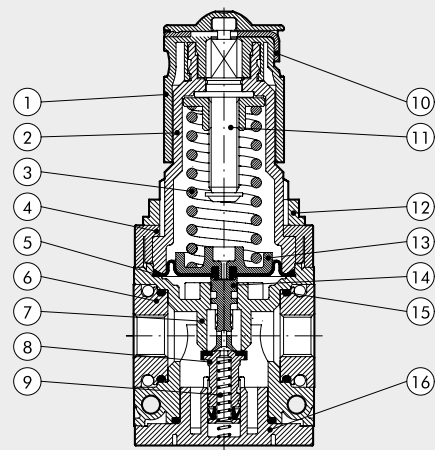
The in-series regulator uses the same construction principles as the standard regulator, so the advantages are the same, such as compensation for upstream pressure changes, relief valve, rapid relief of the downstream pressure and a padlockable push-lock knob.



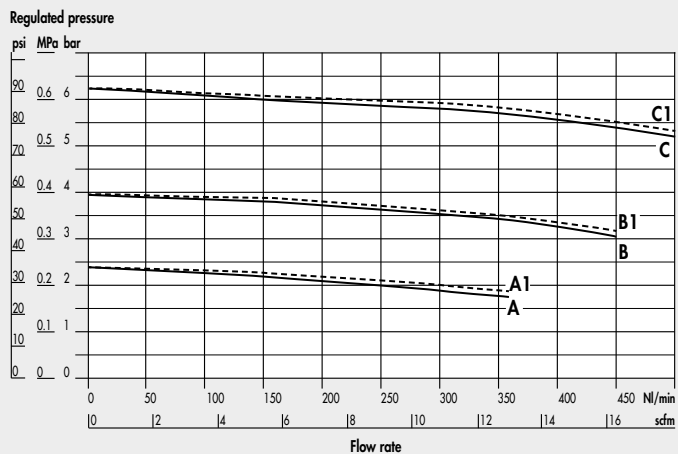
TECHNICAL DATA		IN-SERIES REGULATOR SY1			IN-SERIES REGULATOR SY2				
Threaded inlet port, through		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	
Utility threaded port			1/8"			1/4"			
Max. input pressure		bar	15			13			
		MPa	1.5			1.3			
		psi	217			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)		Nl/min	330			540			
		scfm	12			19			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)		Nl/min	500			1000			
		scfm	18			35			
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)		Nl/min	70			100			
		scfm	2.5			3.5			
Min/max temperature at 10 bar; 1 MPa; 145 psi		°C	From -10 to +50			From -10 to +50			
Full outflow with zero inlet pressure						Included			
Padlockable knob						Included			
Upstream pressure compensation						Included, via balanced valve			
Weight		g	193	188	179	546	519	515	503
Fluid						Compressed air or other inert gases			
Mounting position						In any position			
Wall fixing screws			No. 2 M4 screws			No. 2 M5 screws			
Notes on use			The pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value.						
			On request version without overpressure exhaust						

COMPONENTS

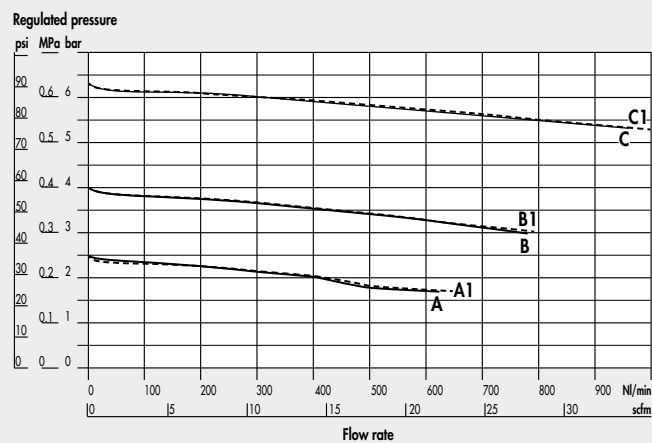
- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring (with Geomet® treatment for anti-corrosion version)
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑦ Technopolymer body
- ⑧ OT58 brass valve, with NBR vulcanized gasket
- ⑨ Stainless steel valve spring
- ⑩ Zinc-plated steel plate for knob locking (stainless steel for anti-corrosion version)
- ⑪ OT58 brass adjusting screw
- ⑫ Technopolymer ring nut
- ⑬ Technopolymer plate
- ⑭ Technopolymer rod
- ⑮ NBR o-ring gaskets
- ⑯ Technopolymer plug



FLOW CHARTS

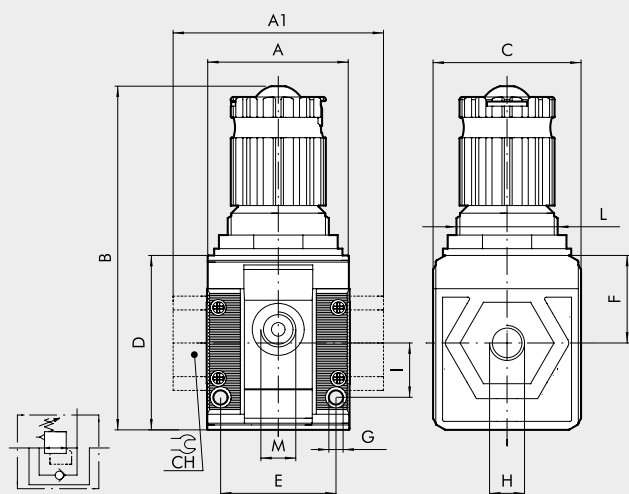
IN-SERIES REGULATOR Syntesi® **SY1** 1/4"-1/8"-3/8"

A = P In 7 bar - P Out 2.5 bar
 B = P In 7 bar - P Out 4 bar
 C = P In 7 bar - P Out 6.3 bar

IN-SERIES REGULATOR Syntesi® **SY2** 3/8" - 1/2" - 3/4" - 1"

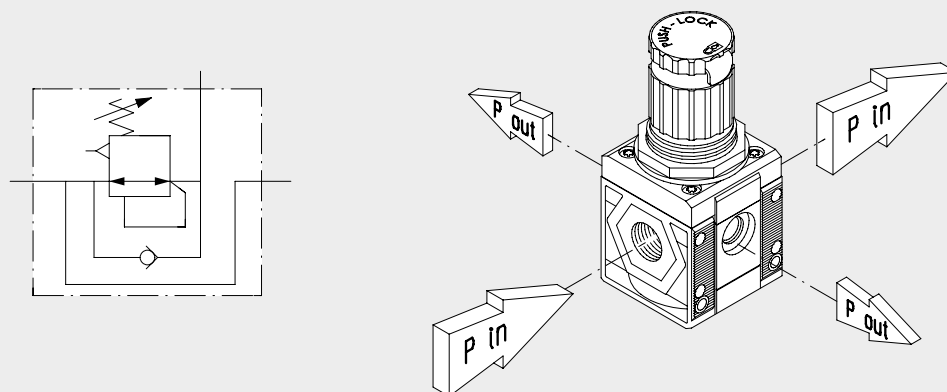
A1 = P In 10 bar - P Out 2.5 bar
 B1 = P In 10 bar - P Out 4 bar
 C1 = P In 10 bar - P Out 6.3 bar

DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A		42				60.5	
A1	-	-	44	-	-	95	95
B		102				139	
C		44				61	
CH		-		-	-	32	36
D		51.5				70.5	
E		33.5				47.5	
F		25.8				38.2	
G	Hole for M4 screws			Hole for M5 screws			
I		16				22.5	
L		M30x1.5				M38x2	
M (use)		1/8"				1/4"	

FUNCTION DIAGRAM



56	1	1	R	24	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	IN-SERIES REGULATOR SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing	R Pressure regulator	● 20 0 to 2 bar	0 Without bushing
5X Syntesi		1 1/8" port		+ 22 0 to 4 bar	1 1/8" port
anti-corrosion		2 1/4" port		24 0 to 8 bar	2 1/4" port
		3 3/8" port		26 0 to 12 bar	3 3/8" port
	2 Size 2	0 Without bushing			0 Without bushing
		3 3/8" port			3 3/8" port
		4 1/2" port			4 1/2" port
		5 3/4" port			5 3/4" port
		6 1" port			6 1" port

- ### PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

Code	Description	Code	Description	NOTE
Syntesi® SY1 IN-SERIES REGULATOR		Syntesi® SY2 IN-SERIES REGULATOR		Anti-corrosion version
5610R240	In-series REG SY1 08 without bushings	5620R240	In-series REG SY2 08 without bushings	5X _____
5610R260	In-series REG SY1 012 without bushings	5620R260	In-series REG SY2 012 without bushings	Example
				5X11R241 In-series REG SY1 1/8 08 anti-corrosion
5611R241	In-series REG SY1 1/8 08	5623R243	In-series REG SY2 3/8 08	
5611R261	In-series REG SY1 1/8 012	5623R263	In-series REG SY2 3/8 012	
5612R242	In-series REG SY1 1/4 08	5624R244	In-series REG SY2 1/2 08	
5612R262	In-series REG SY1 1/4 012	5624R264	In-series REG SY2 1/2 012	
5613R243	In-series REG SY1 3/8 08	5625R245	In-series REG SY2 3/4 08	
5613R263	In-series REG SY1 3/8 012	5625R265	In-series REG SY2 3/4 012	
		5626R246	In-series REG SY2 1 08	
		5626R266	In-series REG SY2 1 012	

NOTES

SYNTESI® PILOT OPERATED REGULATOR

The pilot operated regulator can adjust pressure remotely via a pneumatic command.

The two rolling diaphragms offer several advantages:

- increased stroke, which allows greater opening of the valve and hence increased flow rate;
- reduced dynamic and pickup friction, which results in increased response speed and high sensitivity;
- high precision in maintaining the set pressure, both with variable flow rates and different inlet pressures.

The design features the same construction characteristics as those used for a standard regulator, so the advantages are the same, namely: compensation of the regulated pressure varies with the upstream pressure; presence of a relieving valve and downstream pressure quick relieving.

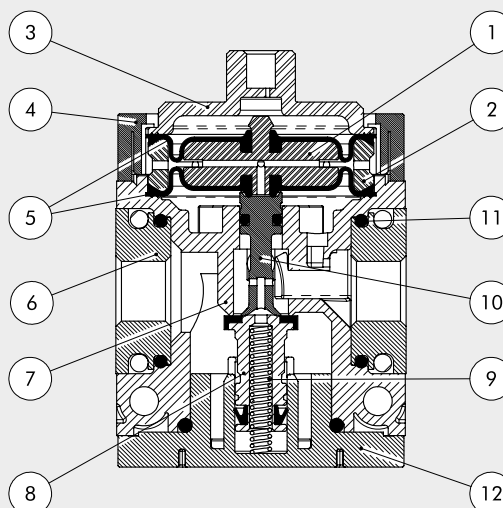


TECHNICAL DATA

TECHNICAL DATA		REG SY1			REG SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Max. inlet pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	900	1700	3300	5500	5500	7300	
(inlet pressure 10 bar)	scfm	32	60	116	194	194	258	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1000	2800	3550	6800	6800	7700	
(inlet pressure 10 bar)	scfm	53	99	120	240	240	272	
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70			100			
	scfm	2.5			3.5			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Full outflow with zero inlet pressure		Included						
Upstream pressure compensation		Included, via balanced valve						
Weight	g	149	144	135	456	429	425	413
Fluid		Compressed air or other inert gases						
Mounting position		In any position						
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar		500			1400			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)		18			50			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Notes on use		The pressure must always be set upwards.						

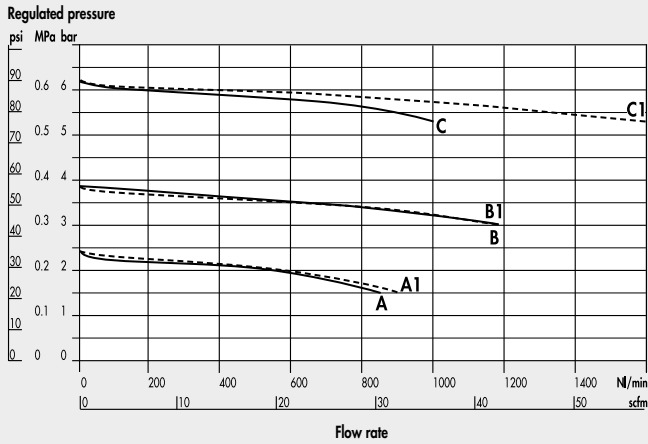
COMPONENTS

- ① Anodized aluminium plate
- ② Anodized aluminium diaphragm washer
- ③ Anodized aluminium upper cap
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑦ Technopolymer regulator body
- ⑧ OT58 brass valve, with NBR vulcanized gasket
- ⑨ Stainless steel valve spring
- ⑩ Technopolymer rod
- ⑪ NBR o-ring gasket
- ⑫ Technopolymer plug

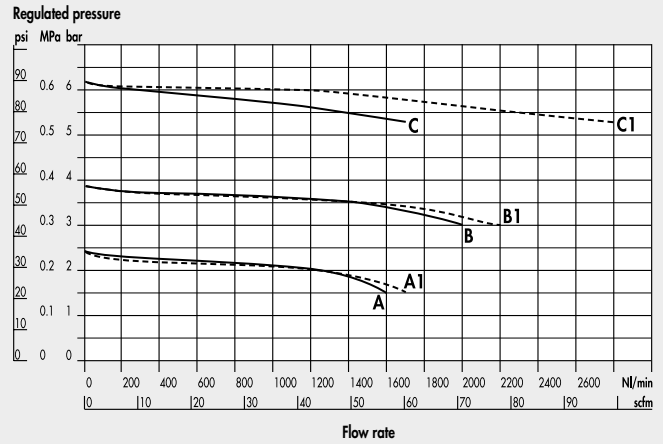


FLOW CHARTS

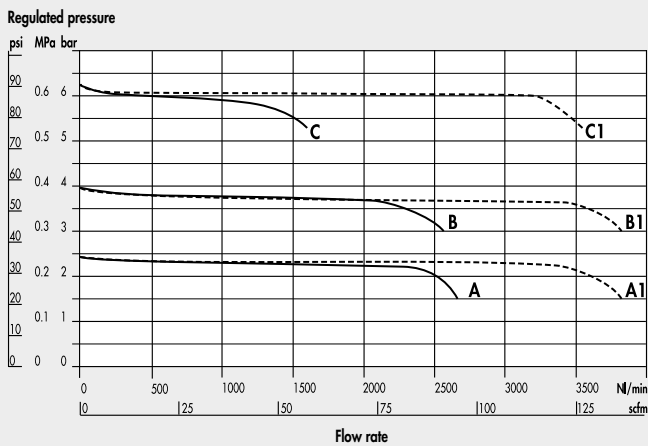
REG PIL Syntesi® SY1 1/8"



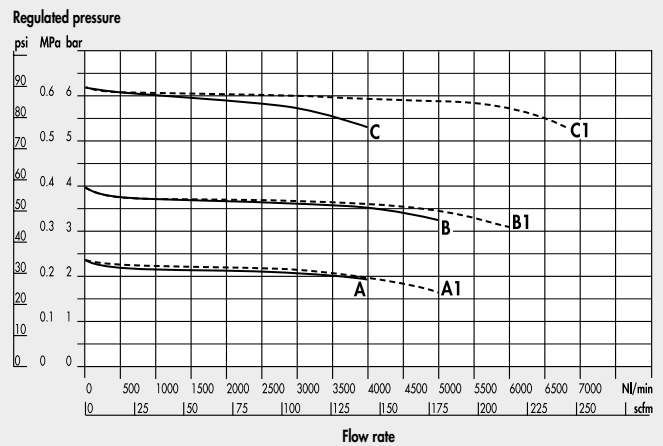
REG PIL Syntesi® SY1 1/4"



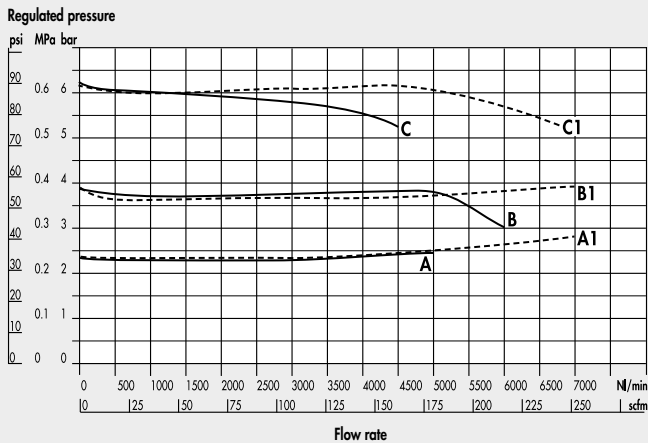
REG PIL Syntesi® SY1 3/8"



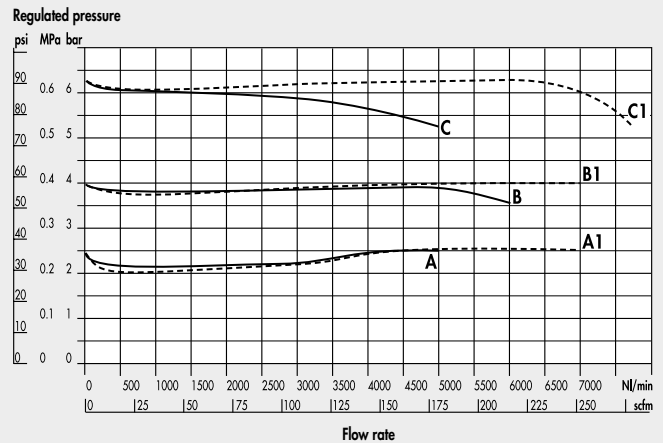
REG PIL Syntesi® SY2 3/8"



REG PIL Syntesi® SY2 1/2"



REG PIL Syntesi® SY2 3/4" - 1"

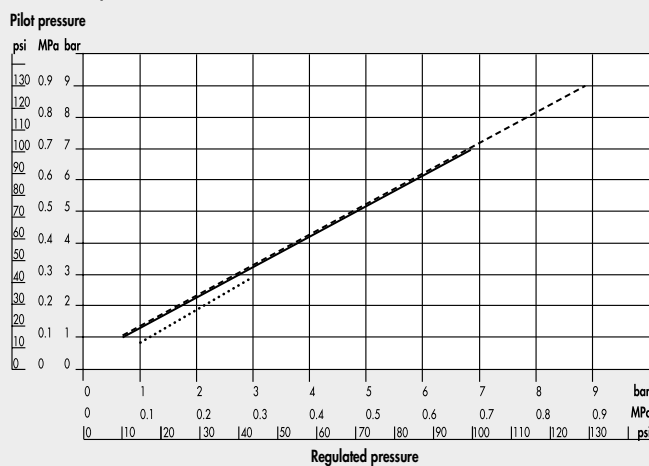


A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar
C = P In 7 bar - P Out 6.3 bar

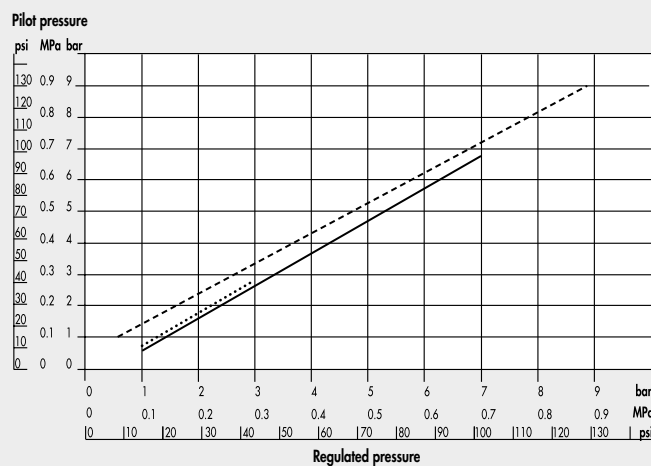
A1 = P In 10 bar - P Out 2.5 bar
B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

PILOTING CURVES

REG PIL Syntesi® SY1



REG PIL Syntesi® SY2

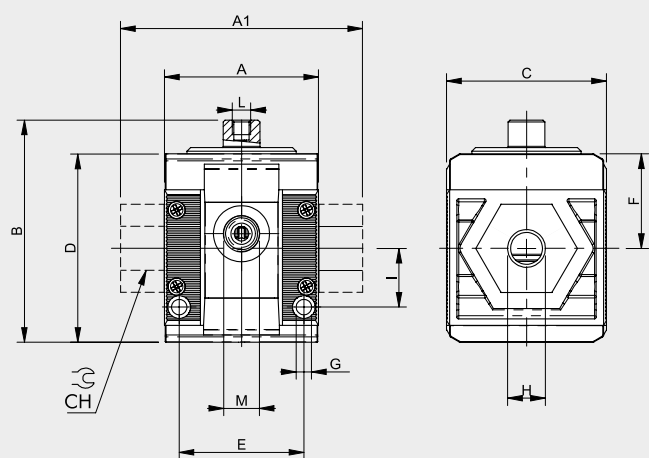


..... P In 4 bar

_____ P In 7 bar

----- P In 10 bar

DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	63			81			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L (pilot)	M5			M5			
M (pressure gauge port or air takes-off)	1/8"			1/4"			

KEY TO CODES

56	1	1	R	00	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1 2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	R Pressure regulator	00 Pilot operated	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

[illegible]

NOTES

SYNTESI® FILTER-REGULATOR

This device combines in a single unit the functions of filtration, condensate separation and pressure regulation.

It is made up of the same elements forming the filter and the regulator, so the performance and advantages are the same:

- Separation of condensate and larger liquid and solid particles by centrifugation.
- Three condensate drain options (RMSA, RA and SAC).
- 360° visually inspection of the condensate level, via transport spy-holes.
- Rolling diaphragm regulator, allowing maximum precision and flow rate, and minimal friction.
- Compensation for upstream pressure changes.
- Pressure relief valve.
- Quick downstream pressure relief.
- Padlockable push-lock knob.
- Front and rear ports for pressure gauges, pressure switches or, considering the high flow rate, for use as additional filtered and regulated air take-off.

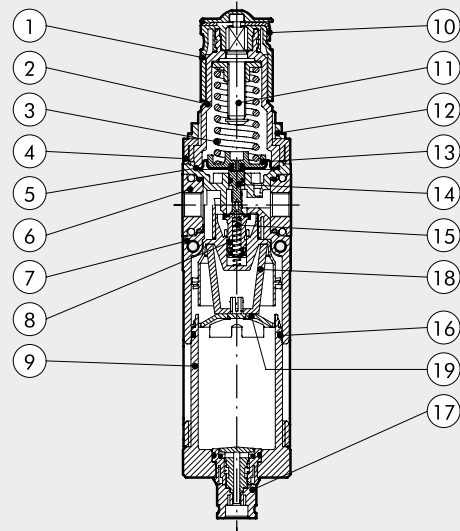


TECHNICAL DATA

TECHNICAL DATA		FR SY1			FR SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Degree of filtration	µm	5 (yellow) - output air purity class ISO8573-1: 3.7.4 20 (white) - output air purity class ISO8573-1: 4.7.4 50 (blue) - output air purity class ISO8573-1: 5.7.4						
Max. inlet pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	500	800	2200	3200	4300	5200	
(inlet pressure 10 bar)	scfm	18	28	78	113	152	184	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1300	2000	3000	5800	7200	7400	
(inlet pressure 10 bar)	scfm	46	71	106	205	255	262	
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70			100			
	scfm	2.5			3.5			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Full outflow with zero inlet pressure		Included						
Padlockable knob		Included						
Upstream pressure compensation		Included, via balanced valve						
Weight	g	244	239	230	623	596	592	580
Fluid		Compressed air or other inert gases						
Mounting position		Vertical						
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar	Nl/min	500			1400			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18			50			
Bowl capacity	cm³	30			70			
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. Nota d'uso: the maximum input pressure for the RA version must not exceed 10 bar No. 2 M4 screws No. 2 M5 screws						
Wall fixing screws		The pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. On request version without overpressure exhaust.						
Notes on use								

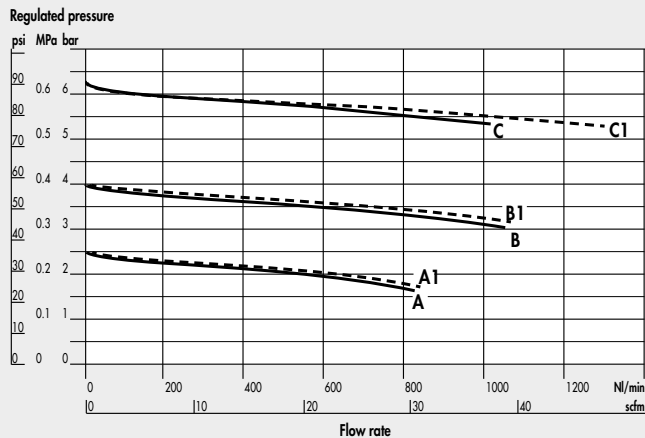
COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring (with Geomet® treatment for anti-corrosion version)
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑦ Technopolymer body
- ⑧ OT58 brass valve, with NBR vulcanized gasket
- ⑨ Clear technopolymer bowl
- ⑩ Zinc-plated steel plate for knob locking (stainless steel for anti-corrosion version)
- ⑪ OT58 brass adjusting screw
- ⑫ Technopolymer ring nut
- ⑬ Technopolymer plate
- ⑭ Technopolymer rod
- ⑮ Stainless steel valve spring
- ⑯ O-ring NBR gaskets
- ⑰ Drain (RMSA)
- ⑱ Sintered HDPE filter cartridge
- ⑲ Technopolymer screen

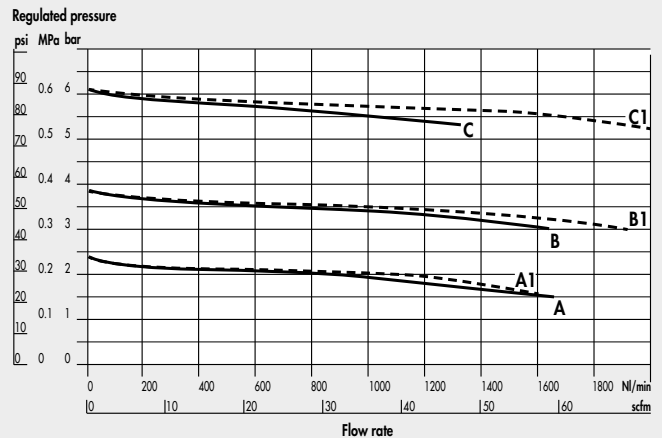


FLOW CHARTS

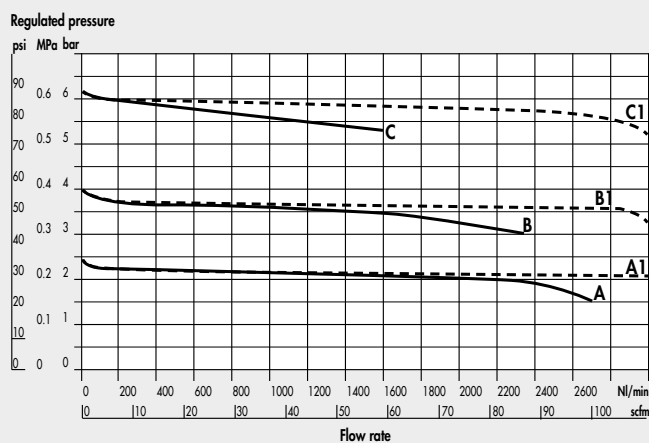
FR Syntesi® SY1 1/8"



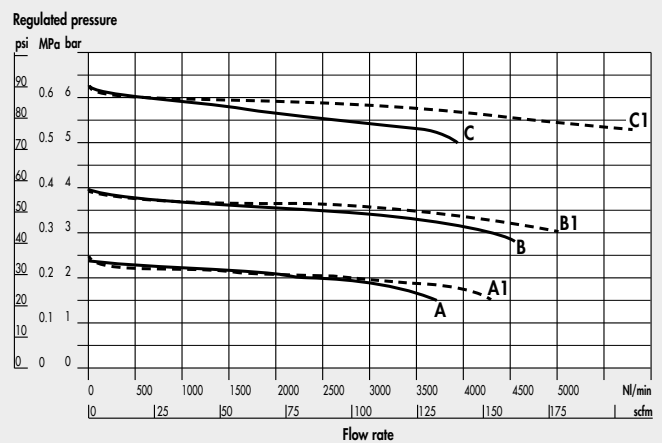
FR Syntesi® SY1 1/4"



FR Syntesi® SY1 3/8"



FR Syntesi® SY2 3/8"

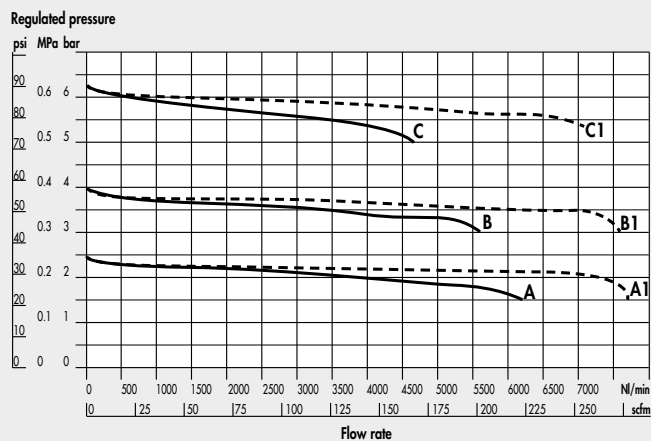


A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar

C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar

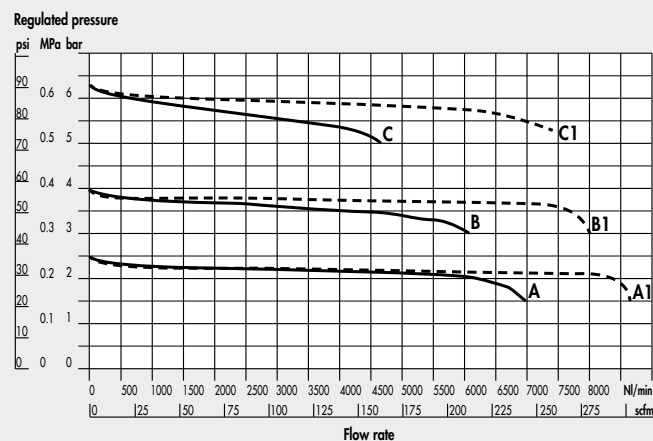
B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

FR Syntesi® SY2 1/2"



A = P In 7 bar - P Out 2.5 bar
 B = P In 7 bar - P Out 4 bar

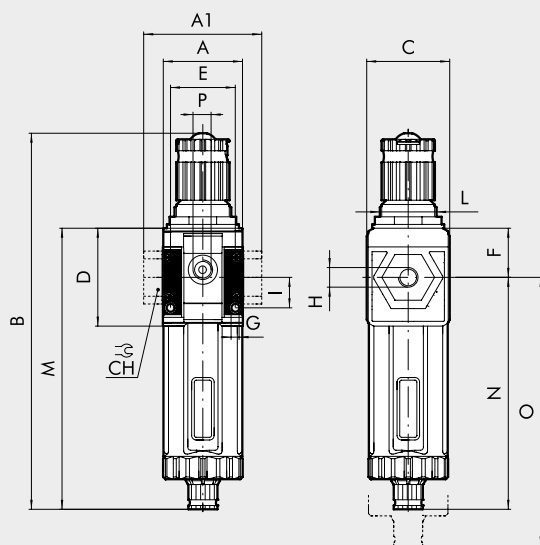
FR Syntesi® SY2 3/4" - 1"



C = P In 7 bar - P Out 6.3 bar
 A1 = P In 10 bar - P Out 2.5 bar

B1 = P In 10 bar - P Out 4 bar
 C1 = P In 10 bar - P Out 6.3 bar

DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	RMSA 198			246			
	RA/SAC 202			250			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L	M30x1.5			M38x2			
M	RMSA 148			178			
	RA/SAC 152			182			
N	RMSA 122.2			139.8			
	RA/SAC 126.2			143.8			
O	RMSA 202			245			
	RA/SAC 206			249			
P (pressure gauge port or additional air takes-off)	1/8"			1/4"			

NOTES

KEY TO CODES

56	1	1	B	24	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	0 Without bushing	B Filter-regulator	● 10 5 µm, RMSA, 0 to 2 bar	0 Without bushing
		1 1/8" port		● 20 20 µm, RMSA, 0 to 2 bar	1 1/8" port
		2 1/4" port		● 30 50 µm, RMSA, 0 to 2 bar	2 1/4" port
		3 3/8" port		● 40 5 µm, RA, 0 to 2 bar	3 3/8" port
	2 Size 2	0 Without bushing		● 50 20 µm, RA, 0 to 2 bar	0 Without bushing
		3 3/8" port		● 60 50 µm, RA, 0 to 2 bar	3 3/8" port
		4 1/2" port		● 11 5 µm, SAC, 0 to 2 bar	4 1/2" port
		5 3/4" port		● 21 20 µm, SAC, 0 to 2 bar	5 3/4" port
		6 1" port		● 31 50 µm, SAC, 0 to 2 bar	6 1" port
				+ 12 5 µm, RMSA, 0 to 4 bar	
				+ 22 20 µm, RMSA, 0 to 4 bar	
				+ 32 50 µm, RMSA, 0 to 4 bar	
				+ 42 5 µm, RA, 0 to 4 bar	
				+ 52 20 µm, RA, 0 to 4 bar	
				+ 62 50 µm, RA, 0 to 4 bar	
				+ 13 5 µm, SAC, 0 to 4 bar	
				+ 23 20 µm, SAC, 0 to 4 bar	
				+ 33 50 µm, SAC, 0 to 4 bar	
				14 5 µm, RMSA, 0 to 8 bar	
				24 20 µm, RMSA, 0 to 8 bar	
				34 50 µm, RMSA, 0 to 8 bar	
				44 5 µm, RA, 0 to 8 bar	
				54 20 µm, RA, 0 to 8 bar	
				64 50 µm, RA, 0 to 8 bar	
				15 5 µm, SAC, 0 to 8 bar	
				25 20 µm, SAC, 0 to 8 bar	
				35 50 µm, SAC, 0 to 8 bar	
				16 5 µm, RMSA, 0 to 12 bar	
				26 20 µm, RMSA, 0 to 12 bar	
				36 50 µm, RMSA, 0 to 12 bar	
				46 5 µm, RA, 0 to 12 bar	
				56 20 µm, RA, 0 to 12 bar	
				66 50 µm, RA, 0 to 12 bar	
				17 5 µm, SAC, 0 to 12 bar	
				27 20 µm, SAC, 0 to 12 bar	
				37 50 µm, SAC, 0 to 12 bar	

● Not available in the anti-corrosion version.

+ Anti-corrosion version available only in size 1.

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate. Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port.

SAC: automatic drain with condensate discharge. **Operates by depression – requires variable air take-offs.**

NOTES

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

NOTES

The pneumatic lubricator is the simplest way of efficiently lubricating the actuators linked to a circuit. As compressed air flows towards the lubricator, it encounters a flexible diaphragm which partially blocks the way, creating a small pressure difference between the inlet and outlet air. Being at the higher pressure, the oil in the bowl is pumped through a tube with a filter towards the regulation pin.

The quantity of oil can be metered accurately since the drops can be viewed through the transparent dome.

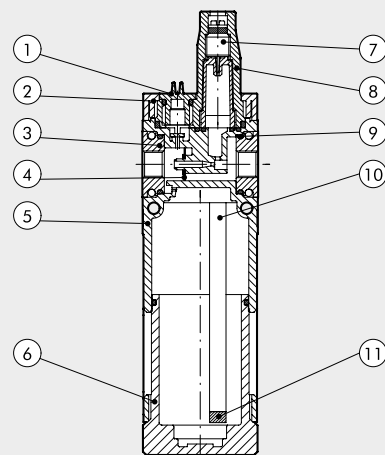
Filling with oil must take place in the absence of pressure, unscrewing the plug next to the dome. On the front and back there is a port (1/8" for size 1 and 1/4" for size 2) that can be used with pressure gauges, pressure switches or as an additional air intake.



TECHNICAL DATA		LUB SY1			LUB SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Type of lubrication		Oil mist						
Version		Manual filling from the top						
Max. input pressure		bar			13			
		MPa			1.3			
		psi			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)		Nl/min	1300	1700	2200	2300	3900	3900
		scfm	46	60	78	81	138	138
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)		Nl/min	1600	3000	3650	3650	6100	6100
		scfm	57	106	129	129	216	216
Min/max temperature at 10 bar; 1 MPa; 145 psi		°C			From -10 to +50			
Weight		g	185	180	171	480	453	449
Fluid		Compressed air or other inert gases						
Quantity of filled oil		cm³	60			130		
Mounting position		Vertical			Vertical			
Port for additional air take-off		1/8", front and rear, lubricated air			1/4", front and rear, lubricated air			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)		Nl/min	450			800		
		scfm	16			53		
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Recommended oils		ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Notes on use		Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil before pressurizing the system. Do not use cleaning oils, brake fluid oils or solvents in general.						
		For the best lubrication results, set the drip rate to one drop for 300-600 Nl.						

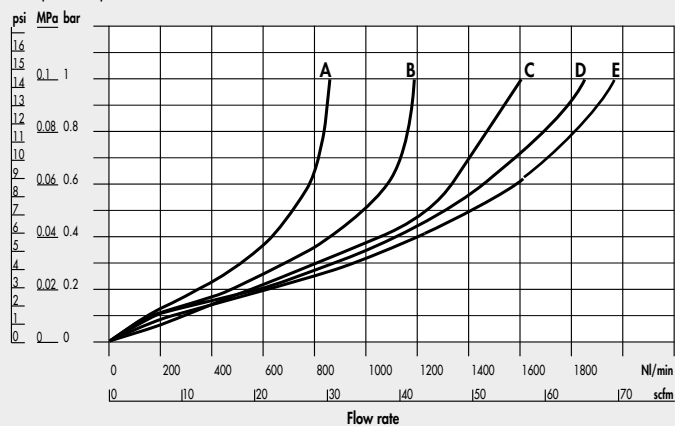
COMPONENTS

- ① Technopolymer oil filling plug
- ② Technopolymer flange
- ③ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ④ Venturi NBR diaphragm
- ⑤ Technopolymer body
- ⑥ Clear technopolymer bowl
- ⑦ OT 58 brass oil flow regulation needle
- ⑧ Clear technopolymer cover
- ⑨ NBR o-ring gasket
- ⑩ Rilsan[®] oil suction pipe
- ⑪ Oil filter

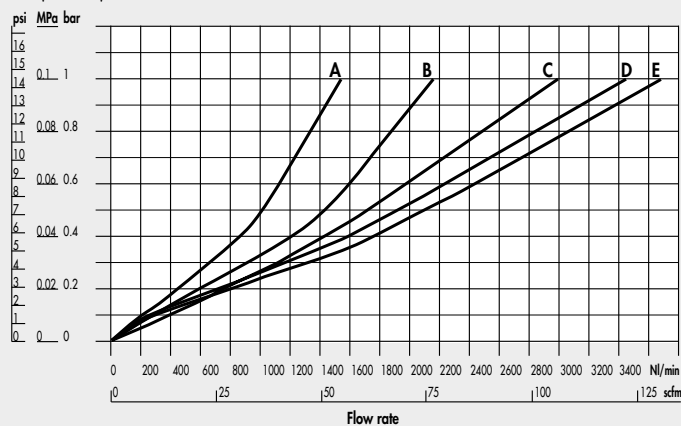


FLOW CHARTS

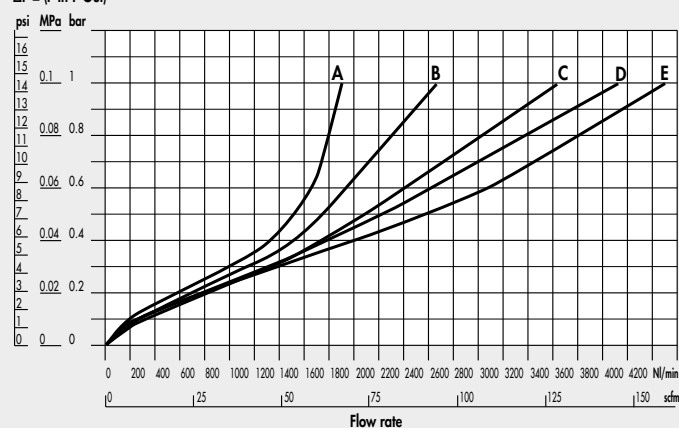
LUB Syntesi® SY1 1/8"

 $\Delta P = (P_{in} - P_{out})$ 

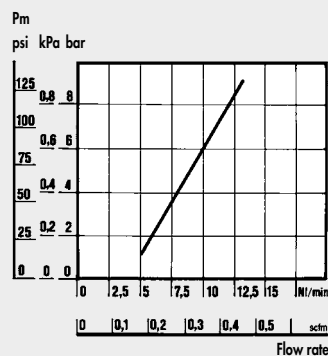
LUB Syntesi® SY1 1/4"

 $\Delta P = (P_{in} - P_{out})$ 

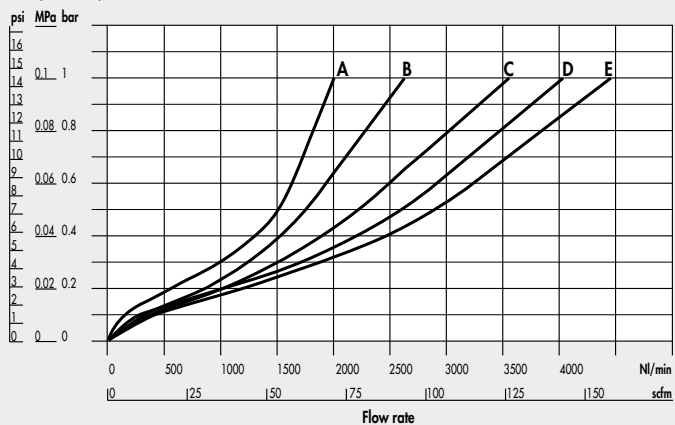
LUB Syntesi® SY1 3/8"

 $\Delta P = (P_{in} - P_{out})$ 

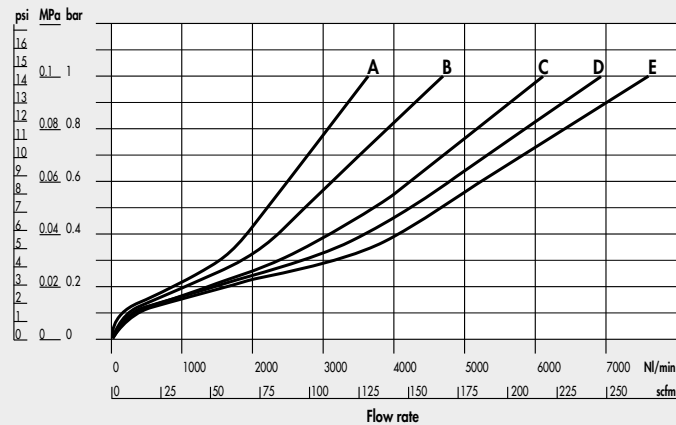
Minimum operating flow chart SY1



LUB Syntesi® SY2 3/8"

 $\Delta P = (P_{in} - P_{out})$ 

LUB Syntesi® SY2 1/2"

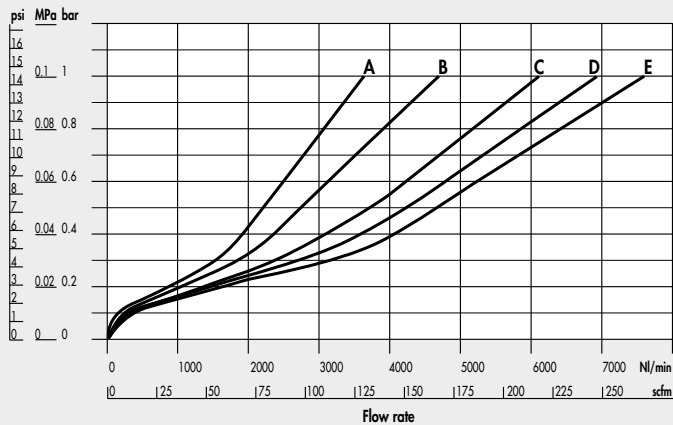
 $\Delta P = (P_{in} - P_{out})$ 

A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi

LUB Syntesi® SY2 3/4" - 1"

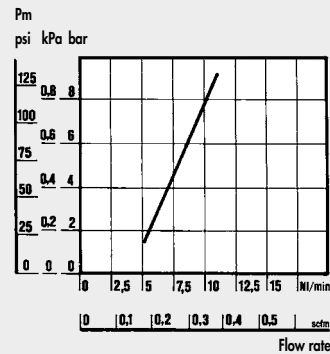
 $\Delta P = (P_{in} - P_{out})$


A = 2.5 bar - 0.25 MPa - 36 psi
B = 4 bar - 0.4 MPa - 58 psi

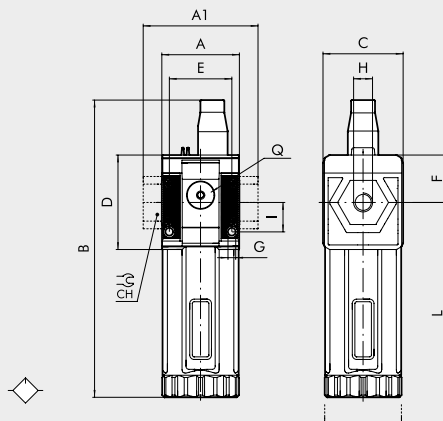
C = 6.3 bar - 0.63 MPa - 91 psi
D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi

Minimum operating flow chart SY2



DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	162			200.5			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L	158			193			
Q (no. 2 additional air takes-off)	1/8"			1/4"			

KEY TO CODES

56 SYNTESI	1 SIZE	1 THREADED INPUT CONNECTION	L ELEMENT	10 OIL FILLING	1 THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	L Lubricator	10 Manual filling from the top	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	NOTE
LUBRIFICATORE Syntesi® SY1		LUBRIFICATORE Syntesi® SY2		Anti-corrosion version
5610L100	LUB SY1 without bushings	5620L100	LUB SY2 without bushings	5X-----
5611L101	LUB SY1 1/8	5623L103	LUB SY2 3/8	Example
5612L102	LUB SY1 1/4	5624L104	LUB SY2 1/2	5X11L101 LUB SY1 1/8 anti-corrosion
5613L103	LUB SY1 3/8	5625L105	LUB SY2 3/4	
		5626L106	LUB SY2 1	

SYNTESI® SHUT-OFF VALVE

This device separates the compressed air circuit from the main air supply. It is a three-way valve that relieves the downstream system in the closed position. This makes it useful for maintenance operations or when the air supply to a machine or piece of equipment needs to be shut off.

Manual, pneumatic, electro-pneumatic and assisted electro-pneumatic control versions are available. The last version must be used if the inlet pressure is outside the electro-pneumatic valve operating range, so for particularly low or high pressures.

The version with manual control can be locked and you can enter up to two padlocks on size 1 and up to three on size 2 when the valve is in the closed position. As an alternative, a version with a single Ø7 hole is available for a single padlock. On the front and back there is a port (1/8" for size 1 and 1/4" size 2) that can be used with pressure gauges, pressure switches or as an additional air intake.

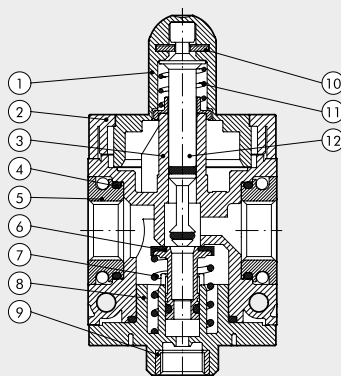


TECHNICAL DATA

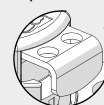
		V3V SY1			V3V SY2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port		1/8"			1/4"			
Threaded discharge port		1/8"			1/4"			
Type of control		Manual - pneumatic - Elpn - Elpn pilot-assisted			Manual - Pneumatic - Cnomo elpn - Cnomo elpn pilot-assisted			
Max inlet pressure for pneumatic and solenoid pilot-assisted versions	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Inlet pressure for solenoid version	bar	3 - 10			3 - 10			
	MPa	0.3 - 1			0.3 - 1			
	psi	43 - 145			43 - 145			
Pilot pressure for pneumatic and solenoid pilot-assisted versions	bar	3 - 10			3 - 10			
	MPa	0.3 - 1			0.3 - 1			
	psi	43 - 145			43 - 145			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	800	1000	1100	2800	3000	3000	
	scfm	28	35	39	99	106	106	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1100	1500	1600	3600	4000	4000	
	scfm	39	53	57	127	141.5	141.5	
Exhaust flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	500			2000			
	scfm	18			71			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Padlockable knob					Included			
Weight	g	197	192	183	476	449	445	433
Fluid		Compressed air or other inert gases						
Mounting position		In any position						
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500			1500			
	scfm	18			53			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Bobbin capacity for electro-pneumatic version	W	12 VDC and 24 VDC = 2W 24 VAC, 110 VAC and 220 VAC = 3.5 VA			12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA 24 VDC = 4W; 24 VAC, 110 VAC, 220 VAC = 4 VA			
Manual control of electro-pneumatic versions		Bistable: horizontal = OFF, vertical = ON						

COMPONENTS

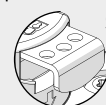
- ① Technopolymer knob
- ② Technopolymer hinge
- ③ Technopolymer body
- ④ NBR o-ring gasket
- ⑤ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑥ OT58 brass valve with NBR vulcanized gasket
- ⑦ Stainless steel valve spring
- ⑧ Technopolymer plug
- ⑨ OT58 brass threaded insert
- ⑩ Zinc-plated steel plate for knob locking (stainless steel for anti-corrosion version)
- ⑪ Stainless steel spring stem recovery
- ⑫ OT58 brass stem



V10 - Steel plate with Ø3.5 holes for locking with 2 padlocks (SY1) or 3 padlocks (SY2).

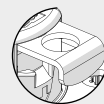


SY1



SY2

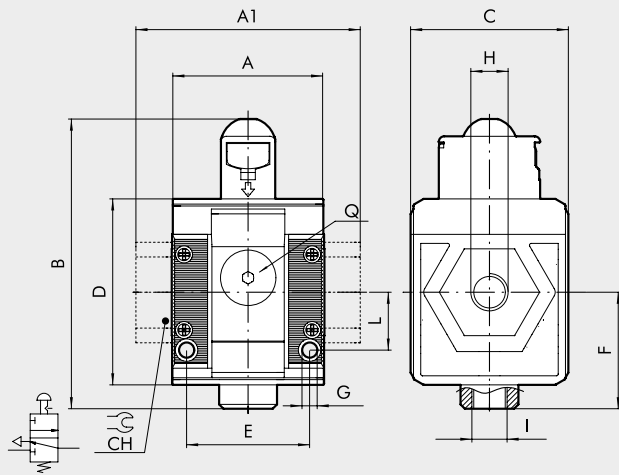
V11 - Steel plate with a single Ø7 hole for docking with a single padlock (compatible with most of the padlocks available from the trade with a Ø5mm arch).



DIMENSIONS

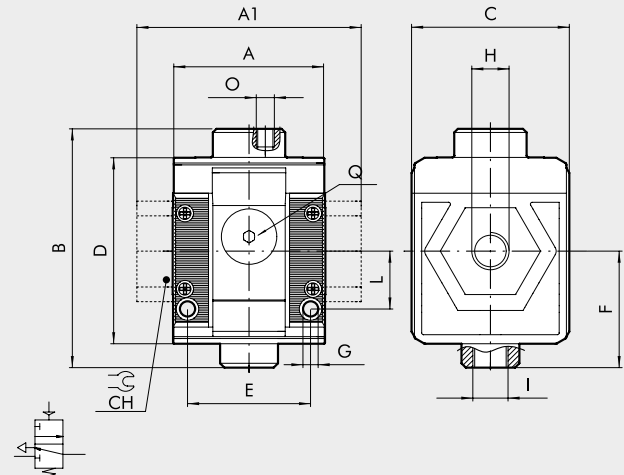
MANUAL

SY1-SY2



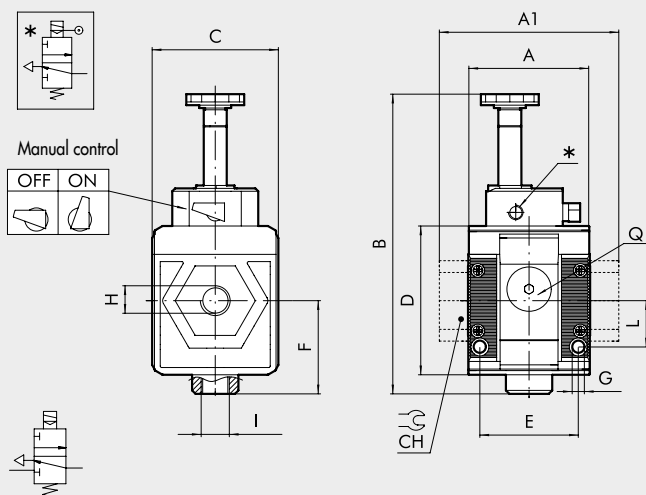
PNEUMATIC

SY1-SY2



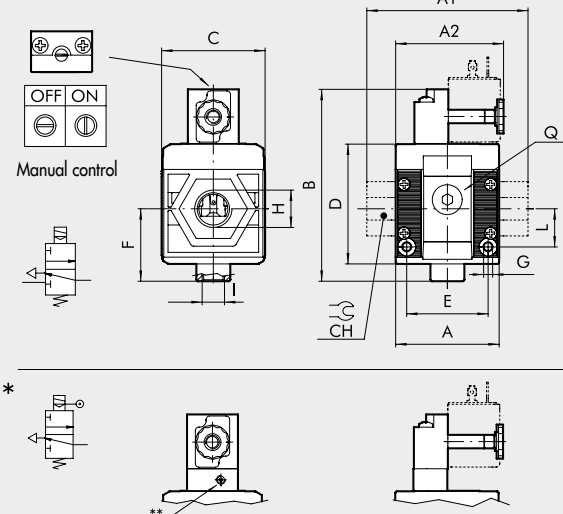
SOLENOID/SOLENOID PILOT-ASSISTED*

SY1



CNOMO SOLENOID / CNOMO SOLENOID PILOT-ASSISTED*

SY2



N.B.: Before assembling other Syntesi elements after the V3V, remember to mount the coil on the V3V itself.

	MANUAL				PNEUMATIC				SOLENOID/SOLENOID PILOT-ASSISTED				CNOMO SOLENOID/CNOMO SOLENOID PILOT-ASSISTED			
	SIZE 1		SIZE 2		SIZE 1		SIZE 2		SIZE 1		SIZE 2		SIZE 1		SIZE 2	
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	1/8"	1/4"
A	-	42	-	-	60.5	-	42	-	-	60.5	-	42	-	-	60.5	-
A1	-	-	44	-	-	95	95	-	-	44	-	-	95	95	-	-
A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-
B	80	-	-	109	-	-	-	66	-	-	94	-	104	-	-	-
C	44	-	-	61	-	-	-	44	-	-	61	-	44	-	61	-
CH	-	-	-	-	32	36	-	-	-	-	32	36	-	-	32	36
D	51.5	-	-	70.5	-	-	-	51.5	-	-	70.5	-	51.5	-	70.5	-
E	33.5	-	-	47.5	-	-	-	33.5	-	-	47.5	-	33.5	-	47.5	-
F	32.2	-	-	42.7	-	-	-	32.2	-	-	42.7	-	32.2	-	42.7	-
G	Hole for M4 screws		Hole for M5 screws		Hole for M4 screws		Hole for M5 screws		Hole for M4 screws		Hole for M5 screws		Hole for M4 screws		Hole for M5 screws	
I (exhaust)	1/8"	-	-	-	1/4"	-	-	1/8"	-	-	1/4"	-	1/8"	-	1/4"	-
L	16	-	-	22.5	-	-	-	16	-	-	22.5	-	16	-	22.5	-
O (pilot)	-	-	-	-	-	-	-	M5	-	-	1/8"	-	-	-	-	-
Q (no. 2 additional air takes-off)	1/8"	-	-	1/4"	-	-	-	1/8"	-	-	1/4"	-	1/8"	-	1/4"	-
** Pilot	-	-	-	-	-	-	-	-	-	-	-	-	M5	-	M5	-

KEY TO CODES

56 SYNTESI	1 SIZE	1 THREADED INPUT CONNECTION	V ELEMENT	10 TYPE	1 THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1 2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	V Shut-off valve	10 Manual with Ø3.5 hole for padlocks * 11 Manual with Ø7 hole for padlock ● 20 Pneumatic ● 30 Solenoid pilot-assisted ● 70 Solenoid	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

- * Compatible with most of the padlocks available from the trade with a Ø5mm arch.
● Not available in the anti-corrosion version.

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	NOTE
Syntesi® SY1 SHUT-OFF VALVE		Syntesi® SY2 SHUT-OFF VALVE		Anti-corrosion version
5610V100	V3V SY1 manual without bushings	5620V100	V3V SY2 manual without bushings	5X-----
5611V101	V3V SY1 1/8 manual	5623V103	V3V SY2 3/8 manual	Example
5612V102	V3V SY1 1/4 manual	5624V104	V3V SY2 1/2 manual	5X11V101 V3V SY1 1/8 anti-corrosion
5613V103	V3V SY1 3/8 manual	5625V105	V3V SY2 3/4 manual	
		5626V106	V3V SY2 1 manual	
5610V200	V3V SY1 pneumatic without bushings			
5611V201	V3V SY1 1/8 pneumatic	5620V200	V3V SY2 pneumatic without bushings	
5612V202	V3V SY1 1/4 pneumatic	5623V203	V3V SY2 3/8 pneumatic	
5613V203	V3V SY1 3/8 pneumatic	5624V204	V3V SY2 1/2 pneumatic	
		5625V205	V3V SY2 3/4 pneumatic	
5610V300	V3V SY1 elpn pilot-assisted without bushings	5626V206	V3V SY2 1 pneumatic	
5611V301	V3V SY1 1/8 elpn pilot-assisted			
5612V302	V3V SY1 1/4 elpn pilot-assisted	5620V300	V3V SY2 elpn pilot-assisted Cnomo without bushings	
5613V303	V3V SY1 3/8 elpn pilot-assisted	5623V303	V3V SY2 3/8 elpn pilot-assisted Cnomo	
		5624V304	V3V SY2 1/2 elpn pilot-assisted Cnomo	
5610V700	V3V SY1 elpn without bushings	5625V305	V3V SY2 3/4 elpn pilot-assisted Cnomo	
5611V701	V3V SY1 1/8 elpn	5626V306	V3V SY2 1 elpn pilot-assisted Cnomo	
5612V702	V3V SY1 1/4 elpn			
5613V703	V3V SY1 3/8 elpn	5620V700	V3V SY2 elpn without bushings	
		5623V703	V3V SY2 3/8 elpn	
		5624V704	V3V SY2 1/2 elpn	
		5625V705	V3V SY2 3/4 elpn	
		5626V706	V3V SY2 1 elpn	

NOTES

SYNTESI® PROGRESSIVE STARTER



The progressive starter is a pneumatic component that allows air enter the circuit gradually, thereby avoiding excessive pressure bursts. A sophisticated system of internal valves allows two separate stages of operation. During the first stage, a quantity of air that can be regulated via a pin flows from the APR. The second stage starts when the downstream pressure reached 40 to 60% of the upstream pressure, during which full-port flow is achieved. When the mechanism is deactivated, the air flow is cut off and the downstream circuit is relieved.

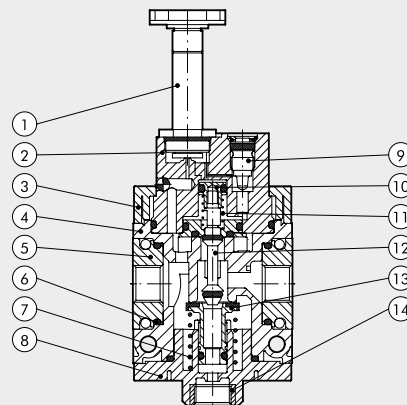
The progressive starter is particularly useful on machinery where it is important to prevent actuators from moving rapidly and out of control, or where, for safety reasons, the air in-feed needs to be gentle and gradual. It, however, there is a major leak in the downstream system, it may never be possible to achieve the pressure required to open the valve completely.



TECHNICAL DATA		APR SY1			APR SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded discharge port		1/8"			1/4"			
Type of control		Solenoid			Solenoid - Cnomo solenoid			
Inlet pressure	bar	3 - 10			3 - 10			
	MPa	0.3 - 1			0.3 - 1			
	psi	43 - 145			43 - 145			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	900	1000	1100	2800	3600	3600	
	scfm	32	39	39	99	127	127	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1250	1500	1600	4400	4800	4800	
	scfm	44	53	57	156	170	170	
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	500			2700			
	scfm	18			96			
Maximum flow rate start-up, at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	170			700			
with regulation pin completely unscrewed	scfm	6			25			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Weight	g	203	198	189	503	476	472	460
Fluid		Compressed air or other inert gases						
Mounting position		In any position						
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar	Nl/min	500			1500			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18			53			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Bobbin capacity for electro-pneumatic version	W	12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA						
		for Cnomo versions: 12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA						
Manual control		24 VDC = 4W; 24 VAC, 110 VAC, 220 VAC = 4 VA						
		Bistable: horizontal = OFF, vertical = ON						

COMPONENTS

- ① Sleeve ø8
- ② Anodized aluminium upper block
- ③ Technopolymer flange
- ④ Technopolymer body
- ⑤ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑥ O-ring NBR gasket
- ⑦ Stainless steel valve spring
- ⑧ Technopolymer bottom plug
- ⑨ OT58 brass progressive start regulation pin
- ⑩ OT58 brass internal valve
- ⑪ Stainless steel spring stem recoveryng
- ⑫ OT58 brass stem
- ⑬ OT58 brass main valve with vulcanized gasket
- ⑭ OT58 brass threaded insert



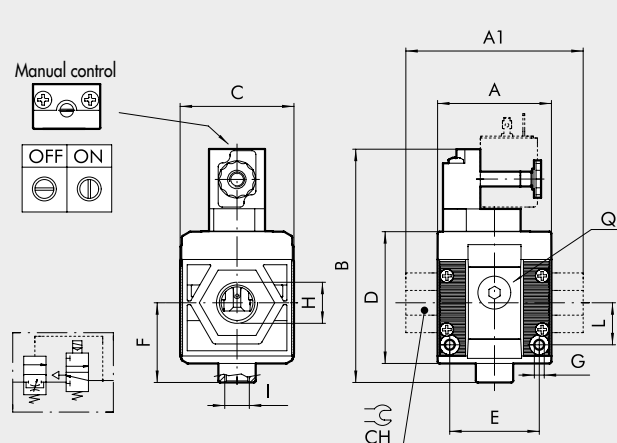
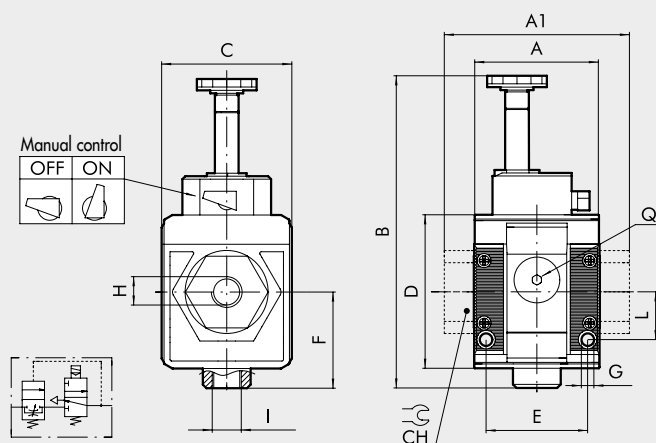
DIMENSIONS

SOLENOID

SY1-SY2

CNOMO SOLENOID

SY2



N.B.: Before assembling other Syntesi elements after the APR, remember to mount the coil on the APR itself.

	SOLENOID SIZE 1			SOLENOID / CNOMO SOLENOID SIZE 2				
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	
H (threaded port)								
A		42			60.5			
A1	-	-	44	-	-	95	95	
B		105			131			
Cnomo		-			125			
C		44			61			
CH		-		-	-	32	36	
D		51.5			70.5			
E		33.5			47.5			
F		32.2			42.7			
G		Hole for M4 screws			Hole for M5 screws			
I (exhaust)		1/8"			1/4"			
L		16			22.5			
Q (no. 2 additional air takes-off)		1/8"			1/4"			

KEY TO CODES

56	1	1	A	70	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	A Progressive starter APR	70 Solenoid * 71 Cnomo solenoid	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

* Only for size 2

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	Code	Description
Syntesi® SY1 PROGRESSIVE STARTER		Syntesi® SY2 PROGRESSIVE STARTER		Syntesi® SY2 PROGRESSIVE STARTER	
5610A700	APR SY1 elpn without bushings	5620A700	APR SY2 elpn without bushings	5620A710	APR SY2 elpn Cnomo without bushings
5611A701	APR SY1 1/8 elpn	5623A703	APR SY2 3/8 elpn	5623A713	APR SY2 3/8 elpn Cnomo
5612A702	APR SY1 1/4 elpn	5624A704	APR SY2 1/2 elpn	5624A714	APR SY2 1/2 elpn Cnomo
5613A703	APR SY1 3/8 elpn	5625A705	APR SY2 3/4 elpn	5625A715	APR SY2 3/4 elpn Cnomo
		5626A706	APR SY2 1 elpn	5626A716	APR SY2 1 elpn Cnomo

SYNTESI® PRESSURE SWITCHES



Syntesi® pressure switches feature a high degree of miniaturisation and a modern attractive design.

As they are extremely modular, the Syntesi® series can be installed facing up or down.

They come ready assembled with a 2-metre cable or an M8 connector with a 300-mm cable.

The contact is the switching type, which means it can be normally open or normally closed.

It can be regulated via a knurled push-lock handle.

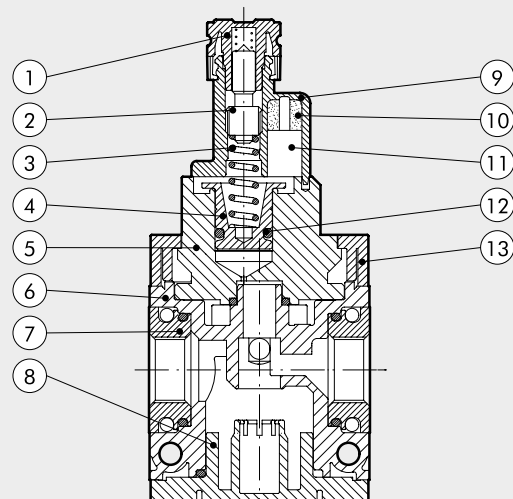
On the front and back there is a port (1/8" for size 1 and 1/4" size 2) that can be used with pressure gauges or as an additional air intake.



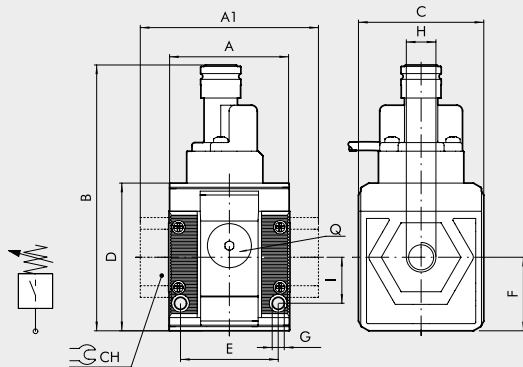
TECHNICAL DATA		SY1 PRESSURE SWITCHES			SY2 PRESSURE SWITCHES			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Adjustable pressure interval	bar	0.5 to 10			0.5 to 10			
Hysteresis (not adjustable)	bar	From 0.4 to 0.8 (See diagram)						
Maximum pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Min/Max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to 50			From -10 to 50			
Maximum current	A	2			2			
Maximum voltage	V	250			250			
Outside diameter of cable	mm	4.9			4.9			
Number of wires and cross section		3 x 0.5 mm ²			3 x 0.5 mm ²			
Contacts		Normally-Open (NO) and Normally-Closed (NC)						
Protection		IP65			IP65			
Number of switchings		5 x 10 ⁶			5 x 10 ⁶			
Fluid		Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous						
Mounting position		In any position						
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar	Nl/min	500			1500			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18			53			
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			
Weight	g	255	250	241	443	416	412	400

COMPONENTS

- ① Technopolymer adjusting "push lock" handle
- ② OT58 brass adjusting screw
- ③ Steel piston spring
- ④ OT58 brass piston
- ⑤ Aluminium top plug
- ⑥ Technopolymer body
- ⑦ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑧ Technopolymer bottom plug
- ⑨ Technopolymer pressure switch body
- ⑩ Resin finish for IP65
- ⑪ Electrical contact
- ⑫ O-ring NBR gasket
- ⑬ Technopolymer flange

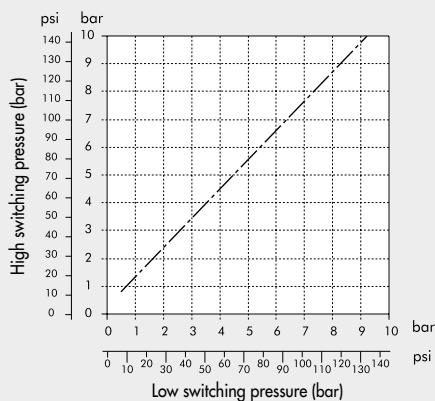


DIMENSIONS



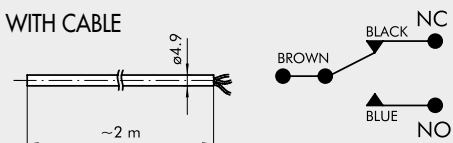
	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	93			101			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.6			32.5			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
Q (no. 2 additional air takes-off)	1/8"			1/4"			

HYSTERESIS GRAPH

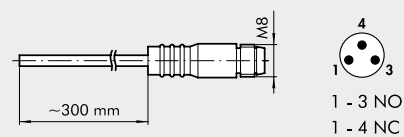


WIRING DIAGRAM

VERSION WITH CABLE



VERSION WITH M8 CONNECTOR



KEY TO CODES

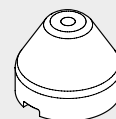
56	1	1	S	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	S Pressure switches	10 2 m cable 20 300 mm cable with M8 connector	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description
Syntesi® SY1 PRESSURE SWITCHES	
5610S100	Pressure switch 2 m cable SY1 without bushings
5611S101	Pressure switch 2 m cable SY1 1/8"
5612S102	Pressure switch 2 m cable SY1 1/4"
5613S103	Pressure switch 2 m cable SY1 3/8"
5610S200	Pressure switch M8 SY1 connector without bushings
5611S201	Pressure switch M8 connector SY1 1/8"
5612S202	Pressure switch M8 connector SY1 1/4"
5613S203	Pressure switch M8 connector SY1 3/8"

Code	Description
Syntesi® SY2 PRESSURE SWITCHES	
5620S100	Pressure switch 2 m cable SY2 without bushings
5623S103	Pressure switch 2 m cable SY2 3/8"
5624S104	Pressure switch 2 m cable SY2 1/2"
5625S105	Pressure switch 2 m cable SY2 3/4"
5626S106	Pressure switch 2 m cable SY2 1"
5620S200	Pressure switch M8 SY2 connector without bushings
5623S203	Pressure switch M8 connector SY2 3/8"
5624S204	Pressure switch M8 connector SY2 1/2"
5625S205	Pressure switch M8 connector SY2 3/4"
5626S206	Pressure switch M8 connector SY2 1"

ACCESSOIRES:
SECURITY KNOB

Code	Description
9200703	Security knob

NOTE: Pull outwards to remove the knob from the pressure switch on the unit. Insert the security knob and regulate the pressure switch. Then press the handle firmly to lock it in position. If the pressure switch needs to be reset, remove the security knob by forcing it laterally with a screwdriver.

The air take-off is a connecting element that is mounted between two Syntesi® modules. The 2-way version, made of metal and having restrained dimensions, has a threaded port upwards and one downwards. The 4-way version, in technopolymer, has a threaded port on each side. This gives or four additional air outlets for use as required. All Syntesi® modules come with two threaded ports, one on the front and one on the back, for use as air take-off.



TECHNICAL DATA

Version	
Flow rate of the air take-off at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi) NI/min	
	scfm
Maximum pressure	bar
	MPa
	psi
Min/Max temperature at 10 bar; 1 MPa; 145 psi	°C
Weight	g
Fluid	

AIR TAKE-OFF, SY1

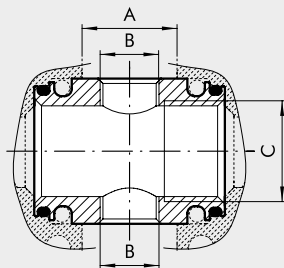
PA 2-way	PA 4-way
1550	500 - 2000
55	18 - 71
15	
1.5	
217	
From -10 to 50	
62	100

AIR TAKE-OFF, SY2

PA 2-way	PA 4-way
7000	1500 - 4500
248	53 - 160
13	
1.3	
188	
From -10 to 50	
75	306

Compressed air or other inert gases

DIMENSIONS AND ORDERING CODES OF THE 2-WAY VERSION



Code	Description	A	B	C
5610P100	PA SY1	15.5	1/8"	3/8"
5620P100	PA SY2	27	3/8"	1/2"

Technical drawing of the CH2 pump assembly, showing front and side views with dimensions.

Front View (Left):

- A:** Overall width.
- A1:** Overall width including mounting flange.
- B:** Overall height.
- D:** Height of the main body.
- D1:** Height of the mounting flange.
- E:** Width of the base.
- G:** Width of the base flange.
- L:** Distance from the centerline to the side mounting points.
- Q:** Distance from the centerline to the side mounting points (indicated by dashed lines).
- CH2:** Label for the central port.

Side View (Right):

- C:** Overall height.
- H:** Height of the central port.
- I:** Width of the base flange.
- F:** Overall width.

	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	58			81			
C	44			61			
CH	-			-	-	32	36
CH2	19			-			
D	51.5			70.5			
D1	3			-			
E	33.5			47.5			
F	32.2			42.7			
G	Hole for M4 screws			Hole for M5 screws			
I	1/8"			1/4"			
I1	1/4"			3/8"			
L	16			22.5			
Q (no. 2 add. air takes-off)	1/8"			1/4"			

56	1	1	P	20	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	P Air take-off	20 4-way	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
5X Syntesi anti-corrosion	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

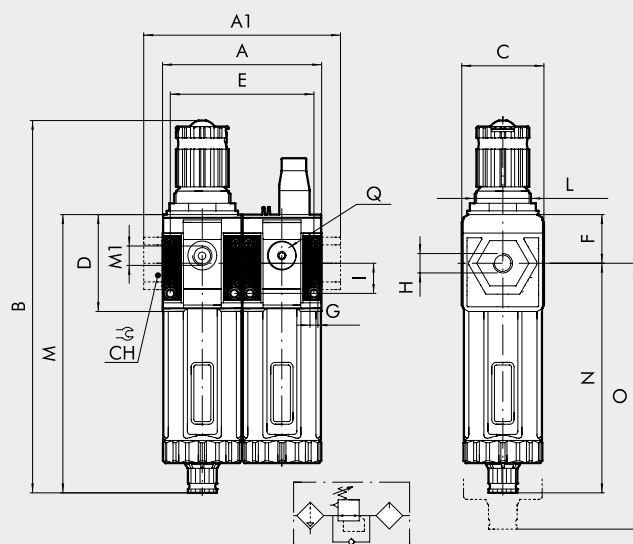
PURCHASE ORDER CODES HAVING A MORE FREQUENT USE CODES

[illegible]

For full details and list of components refer to the sections about filter-regulator and the lubricator.

[illegible]

DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	84			121			
A1	-	-	86	-	-	156	156
B	RMSA 198			246			
	RA/SAC 202			250			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	75.3			108			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L	M30x1.5			M38x2			
M	RMSA 148			178			
	RA/SAC 152			182			
M1 (pressure gauge port)	1/8"			1/4"			
N	RMSA 122.2			139.8			
	RA/SAC 126.2			143.8			
O	RMSA 202			245			
	RA/SAC 206			249			
Q (no. 2 additional air takes-off)	1/8"			1/4"			

KEY TO CODES

56	1	1	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	1 1/8" port	B Filter-regulator	● 10 5 µm, RMSA, 0 to 2 bar	L Lubricator	10 Manual filling from the top	1 1/8" port
5X Syntesi anti-corrosion		2 1/4" port		● 20 20 µm, RMSA, 0 to 2 bar			2 1/4" port
		3 3/8" port		● 30 50 µm, RMSA, 0 to 2 bar			3 3/8" port
	2 Size 2	3 3/8" port		● 40 5 µm, RA, 0 to 2 bar			3 3/8" port
		4 1/2" port		● 50 20 µm, RA, 0 to 2 bar			4 1/2" port
		5 3/4" port		● 60 50 µm, RA, 0 to 2 bar			5 3/4" port
		6 1" port		● 11 5 µm, SAC, 0 to 2 bar			6 1" port
				● 21 20 µm, SAC, 0 to 2 bar			
				● 31 50 µm, SAC, 0 to 2 bar			
				+ 12 5 µm, RMSA, 0 to 4 bar			
				+ 22 20 µm, RMSA, 0 to 4 bar			
				+ 32 50 µm, RMSA, 0 to 4 bar			
				+ 42 5 µm, RA, 0 to 4 bar			
				+ 52 20 µm, RA, 0 to 4 bar			
				+ 62 50 µm, RA, 0 to 4 bar			
				+ 13 5 µm, SAC, 0 to 4 bar			
				+ 23 20 µm, SAC, 0 to 4 bar			
				+ 33 50 µm, SAC, 0 to 4 bar			
				14 5 µm, RMSA, 0 to 8 bar			
				24 20 µm, RMSA, 0 to 8 bar			
				34 50 µm, RMSA, 0 to 8 bar			
				44 5 µm, RA, 0 to 8 bar			
				54 20 µm, RA, 0 to 8 bar			
				64 50 µm, RA, 0 to 8 bar			
				15 5 µm, SAC, 0 to 8 bar			
				25 20 µm, SAC, 0 to 8 bar			
				35 50 µm, SAC, 0 to 8 bar			
				16 5 µm, RMSA, 0 to 12 bar			
				26 20 µm, RMSA, 0 to 12 bar			
				36 50 µm, RMSA, 0 to 12 bar			
				46 5 µm, RA, 0 to 12 bar			
				56 20 µm, RA, 0 to 12 bar			
				66 50 µm, RA, 0 to 12 bar			
				17 5 µm, SAC, 0 to 12 bar			
				27 20 µm, SAC, 0 to 12 bar			
				37 50 µm, SAC, 0 to 12 bar			

- Not available in the anti-corrosion version.
- + Anti-corrosion version available only in size 1.

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure
 RA: automatic drain with condensate discharge, independent of pressure and flow rate. Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port.
 SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs.

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	NOTE
FR + LUB Syntesi[®] SY1		FR + LUB Syntesi[®] SY2		Anti-corrosion version
5611B24L101	FR+LUB SY1 1/8 20 08 RMSA	5623B24L103	FR+LUB SY2 3/8 20 08 RMSA	5X -----
5611B54L101	FR+LUB SY1 1/8 20 08 RA	5623B54L103	FR+LUB SY2 3/8 20 08 RA	Example
5612B24L102	FR+LUB SY1 1/4 20 08 RMSA	5624B24L104	FR+LUB SY2 1/2 20 08 RMSA	5X11B54L101 FR+LUB SY1 1/8 20 08 RA anti-corrosion
5612B54L102	FR+LUB SY1 1/4 20 08 RA	5624B54L104	FR+LUB SY2 1/2 20 08 RA	
5613B24L103	FR+LUB SY1 3/8 20 08 RMSA	5625B24L105	FR+LUB SY2 3/4 20 08 RMSA	
5613B54L103	FR+LUB SY1 3/8 20 08 RA	5625B54L105	FR+LUB SY2 3/4 20 08 RA	
		5626B24L106	FR+LUB SY2 1 20 08 RMSA	
		5626B54L106	FR+LUB SY2 1 20 08 RA	

NOTES

V3V + FR + LUB Syntesi®

For full details and list of components refer to the sections about shut-off valve, filter-regulator and lubricator.

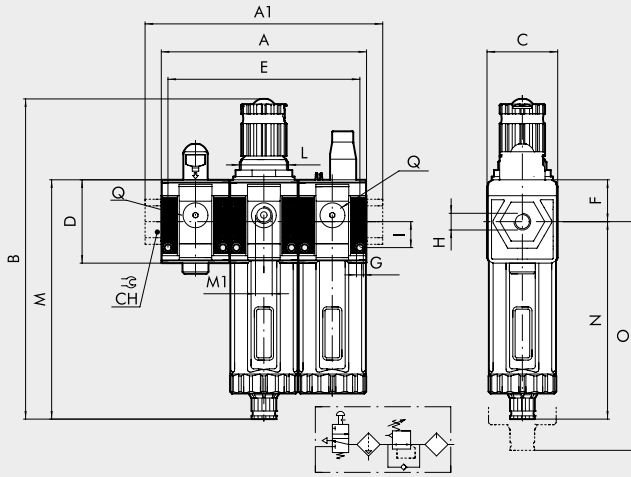


UNITS

V3V + FR + LUB Syntesi®

TECHNICAL DATA		V3V + FR + LUB SY1			V3V + FR + LUB SY2			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Degree of filtration	µm	5 (yellow) - output air purity class ISO8573-1: 3.7.- 20 (white) - output air purity class ISO8573-1: 4.7.- 50 (blue) - output air purity class ISO8573-1: 5.7.-						
Max. inlet pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	250			1200			
(P In=10 bar)	scfm	9			42.5			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1050			4000			
(P In=10 bar)	scfm	37			141.5			
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70			100			
	scfm	2.5			3.5			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -10 to +50			From -10 to +50			
Full outflow with zero inlet pressure		Included			Included			
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	500			2000			
	scfm	18			71			
Padlockable knob		Included with both V3V and regulator						
Upstream pressure compensation		Included, via balanced valve						
Weight	g	598	593	584	1479	1452	1448	1436
Fluid		Compressed air or other inert gases						
Mounting position		Vertical			Vertical			
Additional air take-off, for pressure gauges or fittings		1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar	Nl/min	500 (V3V) - 500 (FR) - 450 (LUB)			1500 (V3V) - 1400 (FR) - 800 (LUB)			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18 (V3V) - 18 (FR) - 16 (LUB)			53 (V3V) - 49.5 (FR) - 28 (LUB)			
Filter bowl capacity	cm³	30			70			
Quantity of filled oil	cm³	60			130			
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port.						
		SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. Note: the maximum input pressure for the RA version must not exceed 10 bar						
Recommended oils		ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Wall fixing screws		No. 2 M4 screws			No. 2 M5 screws			

OVERALL DIMENSIONS



	SIZE 1			SIZE 2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	126			181.5			
A1	-	-	128	-	-	217	217
B	RMSA 198			246			
	RA/SAC 202			250			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	117.1			168.5			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L	M30x1.5			M38x2			
M	RMSA 148			178			
	RA/SAC 152			182			
M1 (pressure gauge port)	1/8"			1/4"			
N	RMSA 122.2			139.8			
	RA/SAC 126.2			143.8			
O	RMSA 202			245			
	RA/SAC 206			249			
Q (no. 2 additional air takes-off)	1/8"			1/4"			

KEY TO CODES

56	1	1	V	10	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	1 1/8" port	V V3V	10 Manual with Ø3.5 hole for padlocks	B Filter-regulator	● 10 5 µm, RMSA, 0 to 2 bar	L Lubricator	10 Manual filling from the top	1 1/8" port
5X Syntesi anti-corrosion		2 1/4" port				● 20 20 µm, RMSA, 0 to 2 bar			2 1/4" port
		3 3/8" port				● 30 50 µm, RMSA, 0 to 2 bar			3 3/8" port
	2 Size 2	3 3/8" port		11 Manual with Ø7 hole for padlock		● 40 5 µm, RA, 0 to 2 bar			3 3/8" port
		4 1/2" port				● 50 20 µm, RA, 0 to 2 bar			4 1/2" port
		5 3/4" port				● 60 50 µm, RA, 0 to 2 bar			5 3/4" port
		6 1" port				● 11 5 µm, SAC, 0 to 2 bar			6 1" port
						● 21 20 µm, SAC, 0 to 2 bar			
						● 31 50 µm, SAC, 0 to 2 bar			
						+ 12 5 µm, RMSA, 0 to 4 bar			
						+ 22 20 µm, RMSA, 0 to 4 bar			
						+ 32 50 µm, RMSA, 0 to 4 bar			
						+ 42 5 µm, RA, 0 to 4 bar			
						+ 52 20 µm, RA, 0 to 4 bar			
						+ 62 50 µm, RA, 0 to 4 bar			
						+ 13 5 µm, SAC, 0 to 4 bar			
						+ 23 20 µm, SAC, 0 to 4 bar			
						+ 33 50 µm, SAC, 0 to 4 bar			
						14 5 µm, RMSA, 0 to 8 bar			
						24 20 µm, RMSA, 0 to 8 bar			
						34 50 µm, RMSA, 0 to 8 bar			
						44 5 µm, RA, 0 to 8 bar			
						54 20 µm, RA, 0 to 8 bar			
						64 50 µm, RA, 0 to 8 bar			
						15 5 µm, SAC, 0 to 8 bar			
						25 20 µm, SAC, 0 to 8 bar			
						35 50 µm, SAC, 0 to 8 bar			
						16 5 µm, RMSA, 0 to 12 bar			
						26 20 µm, RMSA, 0 to 12 bar			
						36 50 µm, RMSA, 0 to 12 bar			
						46 5 µm, RA, 0 to 12 bar			
						56 20 µm, RA, 0 to 12 bar			
						66 50 µm, RA, 0 to 12 bar			
						17 5 µm, SAC, 0 to 12 bar			
						27 20 µm, SAC, 0 to 12 bar			
						37 50 µm, SAC, 0 to 12 bar			

● Not available in the anti-corrosion version.

+ Anti-corrosion version available only in size 1.

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate. Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port.

SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs.