GENERAL TECHNICAL DATA SYNTESI®

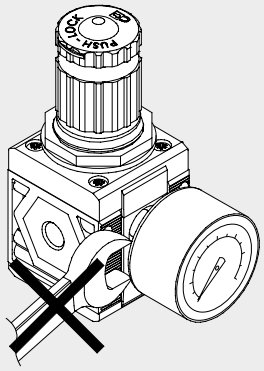
Syntesi® is an important milestone achieved by Metal Work, the result of thirty years' experience producing air-treatment units. It has been studied in minute detail to obtain the best possible performance in a reduced space and with limited weight. The capacity is much higher than that of other units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

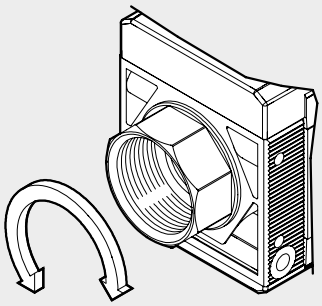
Differences compared to the standard version:
- stainless steel screws
- stainless steel plate for R, FR, V3V knobs
- Geomet®-treated regulator spring and filter-regulator

FIXING TO FRONT PORTS



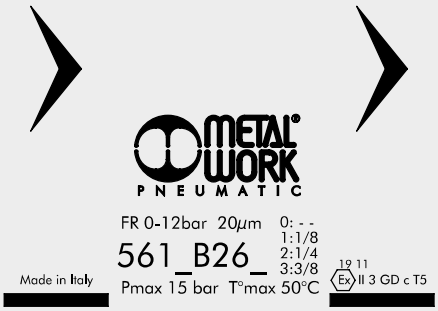
Do not use a spanner for fixing taper threaded elements to the front ports. Mount by hand and apply a liquid sealant (not teflon®).

ROTARY BUSHINGS



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

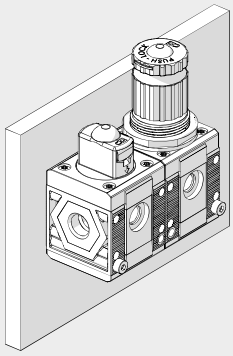
LASER MARKING



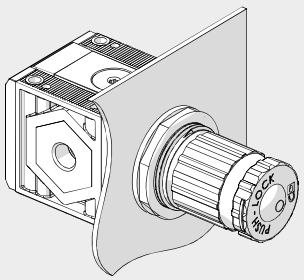
The following is marked indelibly on the body:
- Metal Work trademark
- Code
- Maximum pressure and temperature
- Degree of filtration or pressure range, where relevant
- Week and year of manufacture
- Atex category
- Made in Italy

MOUNTING OPTIONS

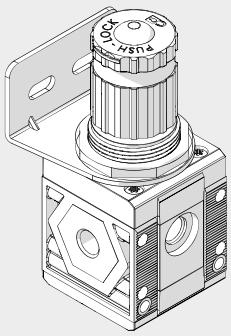
On the wall, using two screws



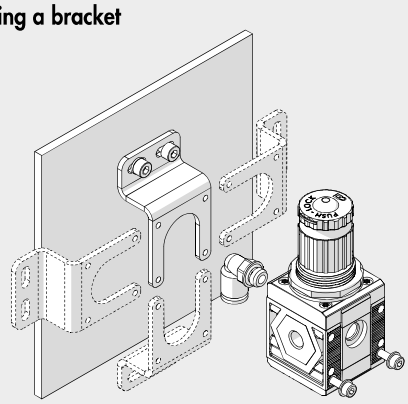
On a panel

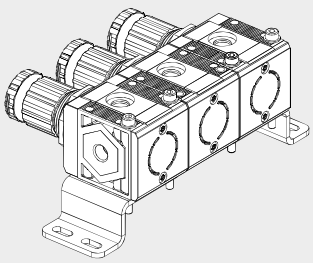


Using knob bracket



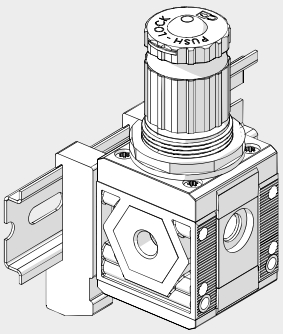
Using a bracket



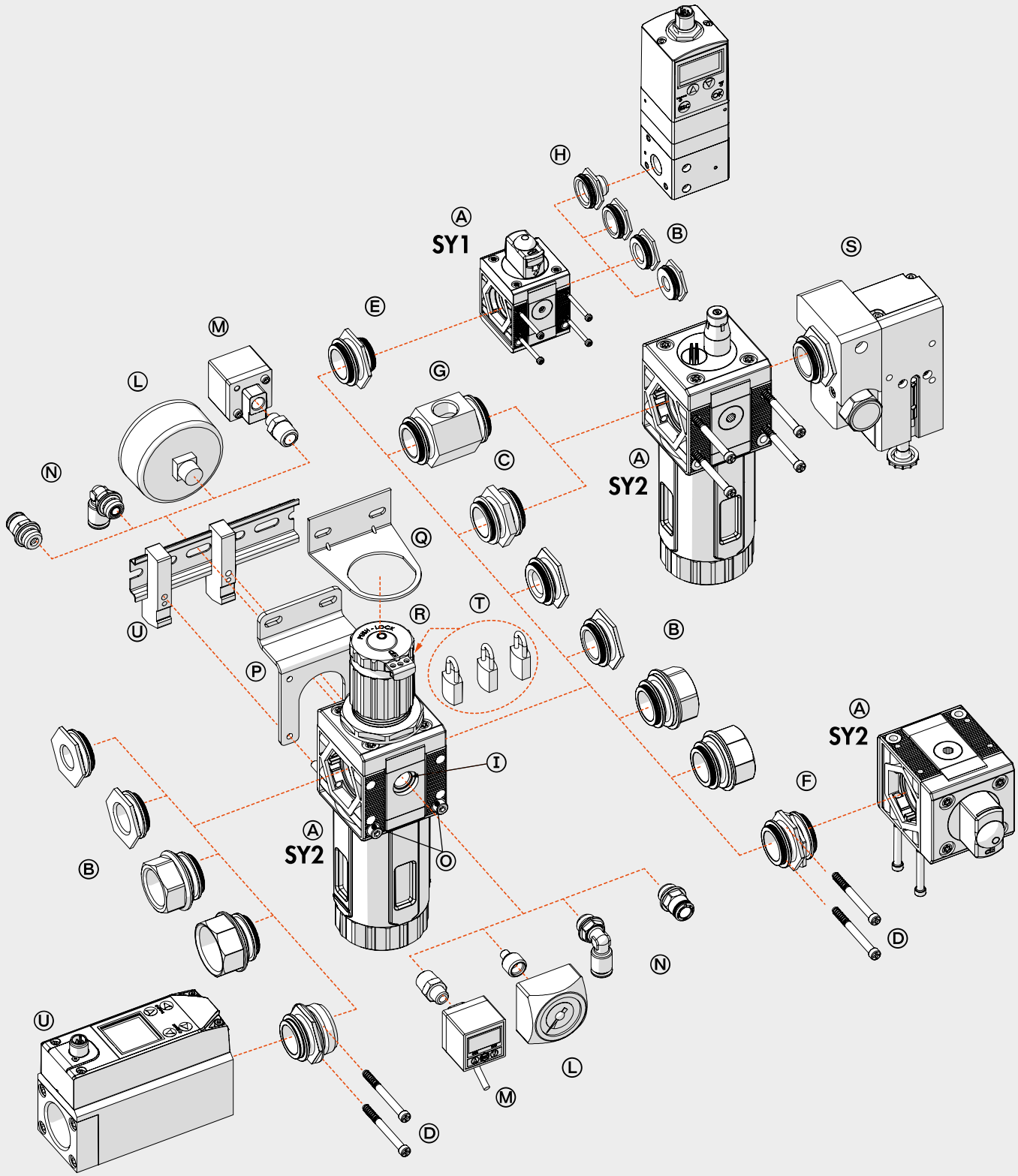


The bracket can be secured in any position, and the fittings can be mounted on the pressure gauge air intake at the back of the unit.

On a DIN EN50022 bar with the apposite adaptator



MODULARITY AND FLEXIBILITY



The various elements of Syntesi® Ⓐ can be connected to the air feed and delivery circuit using pneumatic nickel brass or passivated aluminium ports Ⓑ and can be fixed together using nipples Ⓒ.
The nipples and ports are easy to remove by unscrewing the two front screws Ⓓ. 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 Ⓒ joins two elements of the same size together.
- Size adaptor Ⓔ can be used to connect an element in the Syntesi® 2 series with one in the Syntesi® 1 series.
- The 90° adaptor Ⓕ 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 Ⓖ is a simple and cost-effective system which, besides connecting two elements together, has 2 opposing threaded air intakes.
- The adaptor for Regtronic Ⓗ can be used to fix the Regtronic 1/4" proportional valve to a Syntesi® size 1 element.

Additional ports Ⓘ. 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 Ⓛ, pressure switches Ⓜ or, given the high flow rate, as additional air take-off Ⓝ. 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 Ⓞ are needed. No bulky brackets or additional flanges are required. The bracket Ⓟ 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 Ⓤ.
Regulator fixing bracket Ⓠ. Regulators and filter-regulators can also be fixed using a steel bracket Ⓠ that embraces the bell.
Padlockable knob Ⓡ. 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 Ⓣ 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 Ⓢ. The unit can incorporate a series 70 SAFE AIR® safety valve.
Flowmeter series FLUX 1-2 Ⓤ. The unit can incorporate a series FLUX 1 or FLUX 2 flow meter.

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 **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	**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 ▲■ **G** Syntronic	Varies from element to element	**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

● The anti-corrosion version of this element is only available in manual or pneumatic type.
▲ Not available in the anti-corrosion version.
■ Not available in size 2.

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 **2** Size 2	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ port **3** 3/8″ port **4** 1/2″ port **5** 3/4″ port **6** 1″ 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 ▲■ **G** Syntronic	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 ▲■ **G** Syntronic	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 ▲■ **G** Syntronic	Varies from element to element	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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 in manual or pneumatic type.
▲ Not available in the anti-corrosion version.
■ Not available in size 2.

SYNTESI® FILTER

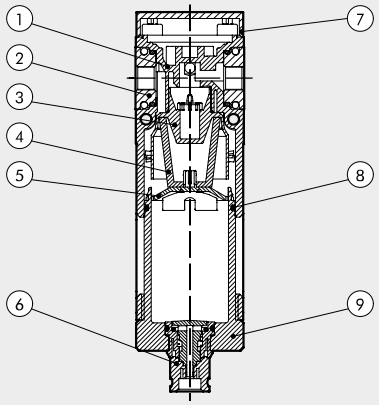
METAL WORK PNEUMATIC

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, the 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" forsize 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 pressure drop – 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	cm^3	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	Nl/min	500			1500			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18			53			

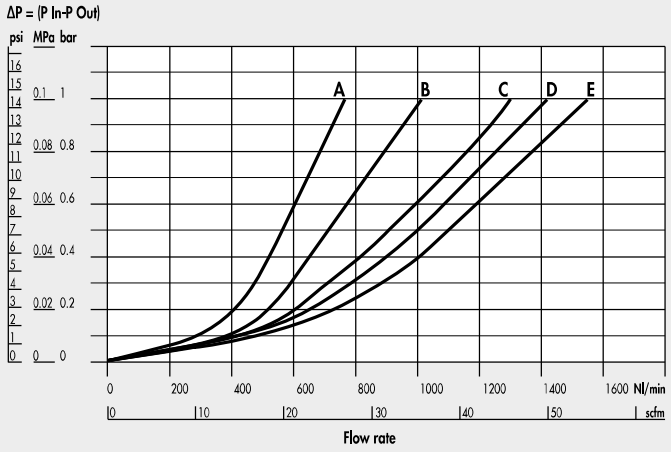
COMPONENTS

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

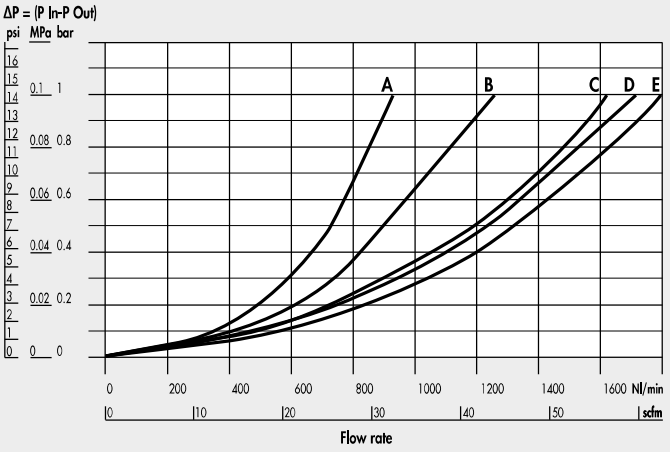


FLOW CHARTS

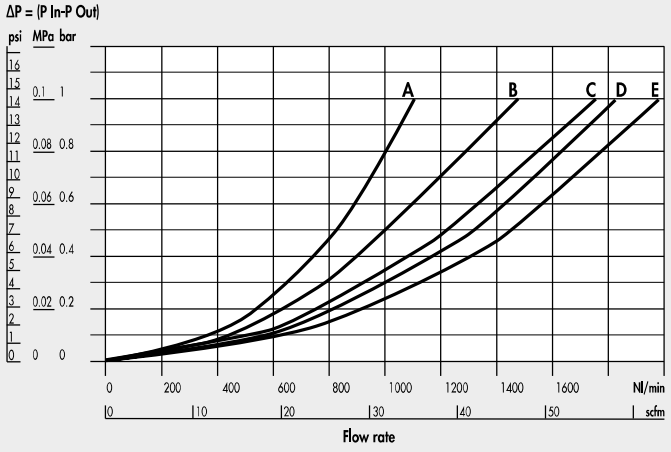
FIL Syntesi® **SY1** 1/8"



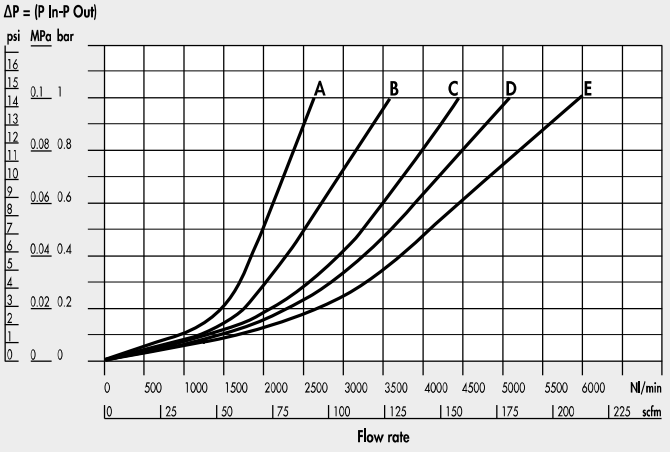
FIL Syntesi® **SY1** 1/4"



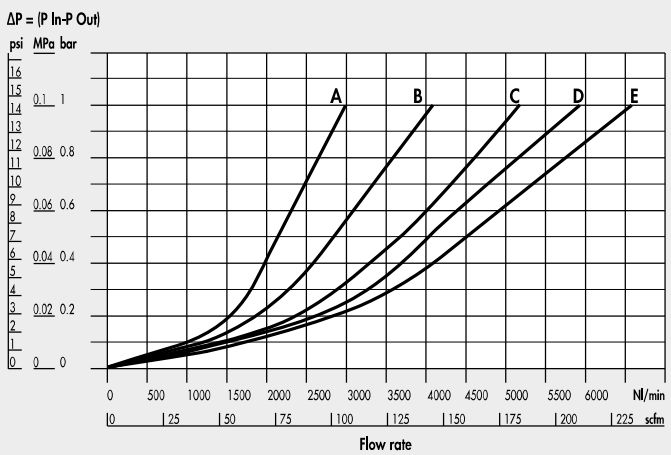
FIL Syntesi® **SY1** 3/8"



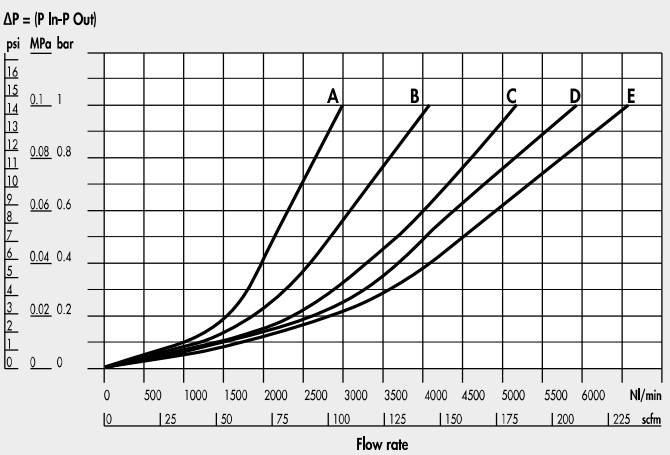
FIL Syntesi® **SY2** 3/8"



FIL Syntesi® **SY2** 1/2"



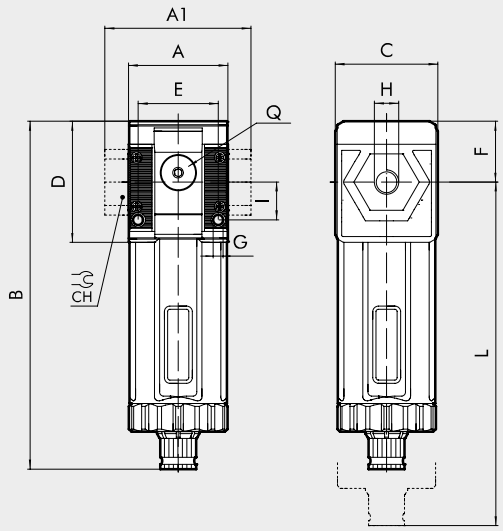
FIL Syntesi® **SY2** 3/4"-1"



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

METAL WORK PNEUMATIC

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	**1** Size 1	**0** Without bushing	**F** Filter	**10** 5 µm, RMSA	**0** Without bushing
5X Syntesi anti-corrosion		**1** 1/8" port		**20** 20 µm, RMSA	**1** 1/8" port
		2 1/4" port		**30** 50 µm, RMSA	**2** 1/4" port
		3 3/8" port		**40** 5 µm, RA	**3** 3/8" port
	2 Size 2	**0** Without bushing		**50** 20 µm, RA	**0** Without bushing
		3 3/8" port		**60** 50 µm, RA	**3** 3/8" port
		4 1/2" port		**11** 5 µm, SAC	**4** 1/2" port
		5 3/4" port		**21** 20 µm, SAC	**5** 3/4" port
		6 1" port		**31** 50 µm, SAC	**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 pressure drop – 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	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	**NOTE**	
5613F203	FIL SY1 3/8 20 RMSA	**5625F205**	FIL SY2 3/4 20 RMSA	**Anti-corrosion version**	
5613F403	FIL SY1 3/8 5 RA	**5625F405**	FIL SY2 3/4 5 RA	**5X**_ _ _ _ _ _	
5613F503	FIL SY1 3/8 20 RA	**5625F505**	FIL SY2 3/4 20 RA	**Example**	
				5X11F101	FIL SY1 1/8 5 RMSA anti-corrosion

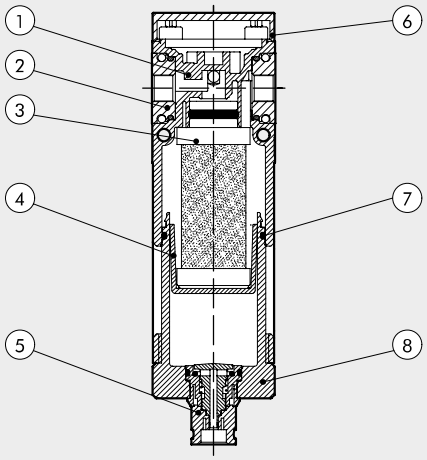
SYNTESI® DEPURATOR

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		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						
		1 - output air purity class ISO8573-1: 3.7.3						
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 pressure drop – requires variable air take-offs.**						
Fluid		Compressed air or other inert gases						
Bowl capacity	cm^3	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	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		It is advisable to mount a 5 µm filter upstream of the purifier to retain solid particles						

COMPONENTS

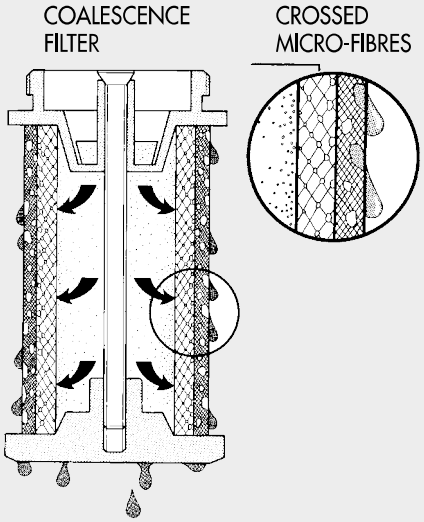
① Technopolymer depurator body
② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
③ Coalescence cartridge
④ Technopolymer cartridge support
⑤ Drain (RMSA)
⑥ Technopolymer plate
⑦ NBR o-ring gaskets
⑧ Clear technopolymer bowl



METAL WORK PNEUMATIC

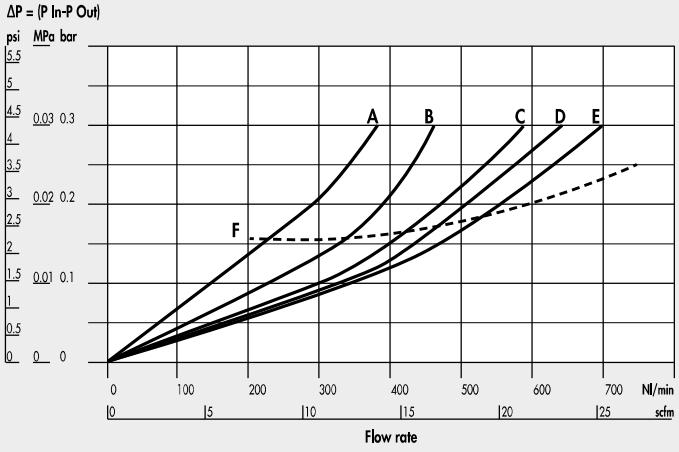
HOW THE COALESCENCE CARTRIDGE WORKS

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.

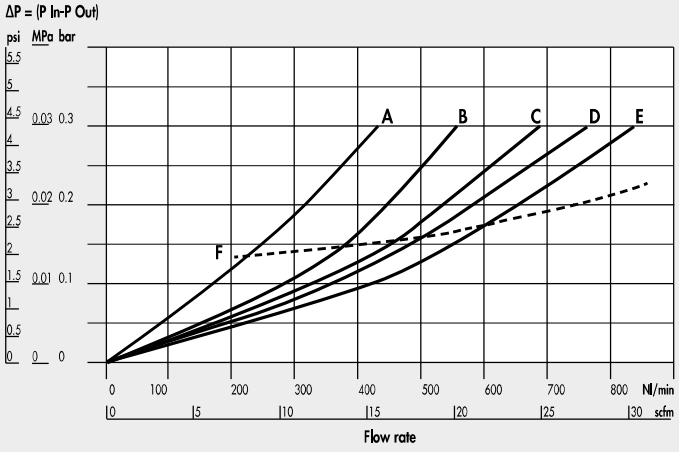


FLOW CHARTS

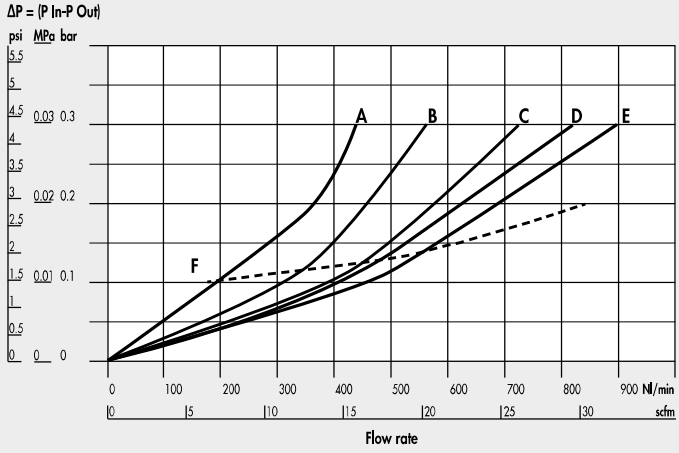
DEP Syntesi® **SY1** 1/8"



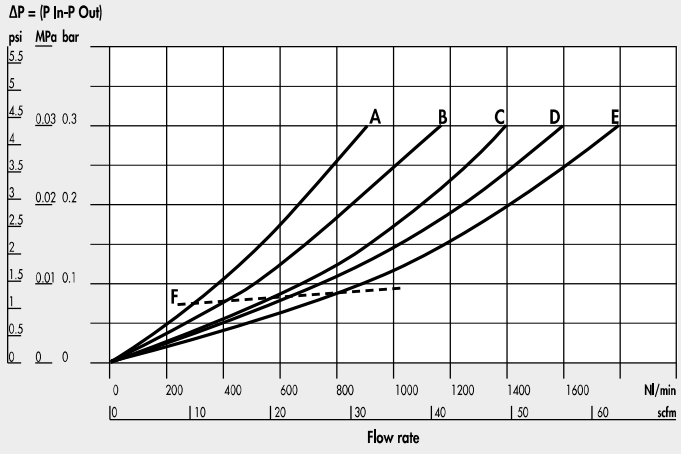
DEP Syntesi® **SY1** 1/4"



DEP Syntesi® **SY1** 3/8"

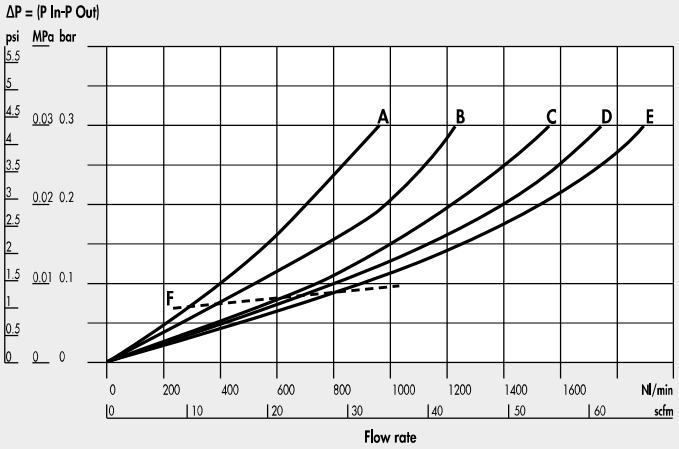


DEP Syntesi® **SY2** 3/8"

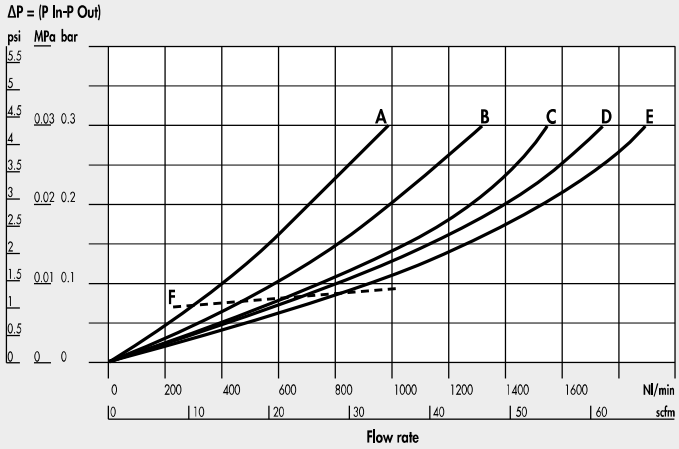


A = 2.5 bar - 0.25 MPa - 36 psi
B = 4 bar - 0.4 MPa - 58 psi
C = 6.3 bar - 0.63 MPa - 91 psi
D = 8 bar - 0.8 MPa - 116 psi
E = 10 bar - 1 MPa - 145 psi
F = max suggested flow

DEP Syntesi® **SY2** 1/2"

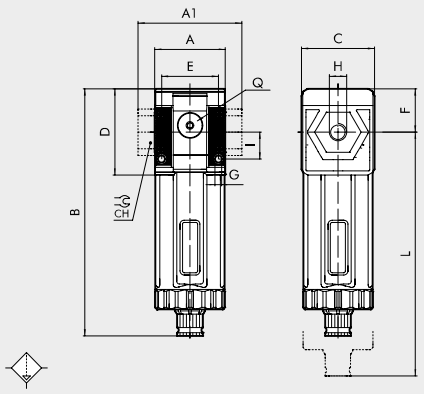


DEP Syntesi® **SY2** 3/4" - 1"



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

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** 0.01 µm RMSA	**0** Without bushing
5X Syntesi anti-corrosion		**1** 1/8" port		**11** 0.01 µm SAC	**1** 1/8" port
		2 1/4" port		**30** 1 µm RMSA	**2** 1/4" port
		3 3/8" port		**31** 1 µm SAC	**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 pressure drop – 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
Syntesi® SY1 DEPURATOR	
5610D100	DEP SY1 RMSA without bushings
5611D101	DEP SY1 1/8 RMSA
5612D102	DEP SY1 1/4 RMSA
5613D103	DEP SY1 3/8 RMSA

Code	Description
Syntesi® SY2 DEPURATOR	
5620D100	DEP SY2 RMSA without bushings
5623D103	DEP SY2 3/8 RMSA
5624D104	DEP SY2 1/2 RMSA
5625D105	DEP SY2 3/4 RMSA
5626D106	DEP SY2 1 RMSA

NOTE	
Anti-corrosion version	
5X_ _ _ _ _	
Example	
5X11D101	DEP SY1 1/8 RMSA anti-corrosion

SYNTESI® ACTIVE CARBON FILTER

METAL WORK PNEUMATIC

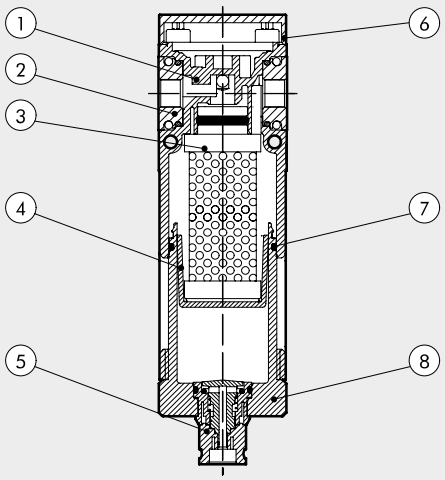
Activated-carbon filtering systems achieve the highest standard of purification possible in industrial applications. They eliminate all traces of oils, solvents and hydrocarbons, and remove unpleasant odours.
The operating principle uses activated carbon, which absorbs most of the polluting particles 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 filtred 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 0.01µm.						

* if the load loss of 75 mbar is not exceeded

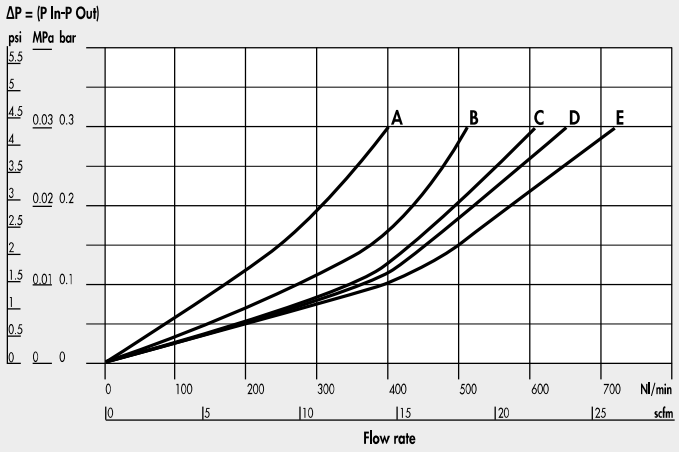
COMPONENTS

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

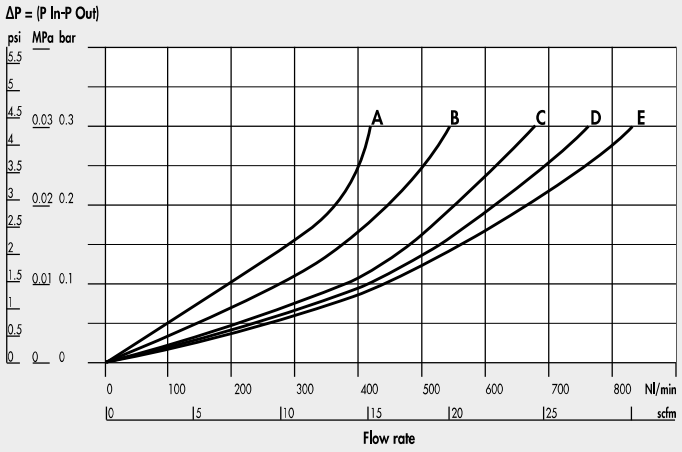


FLOW CHARTS

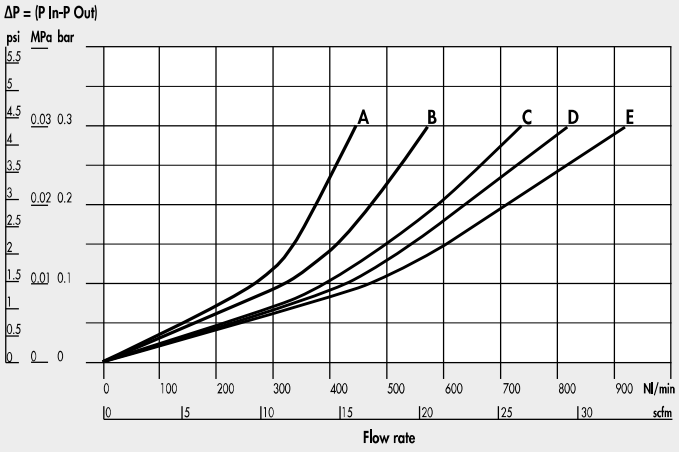
FIL CA Syntesi® **SY1** 1/8"



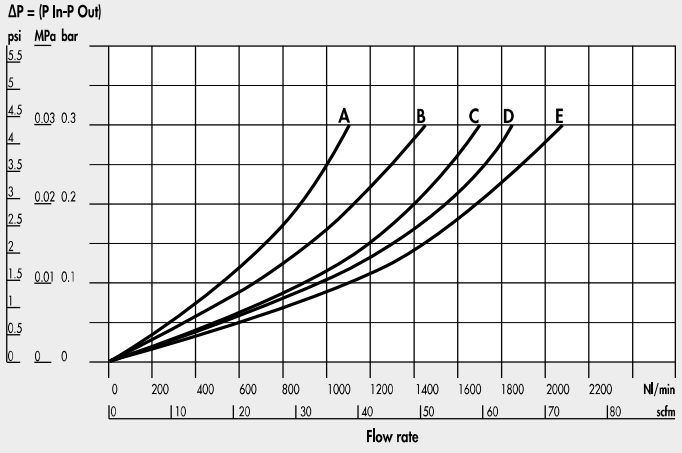
FIL CA Syntesi® **SY1** 1/4"



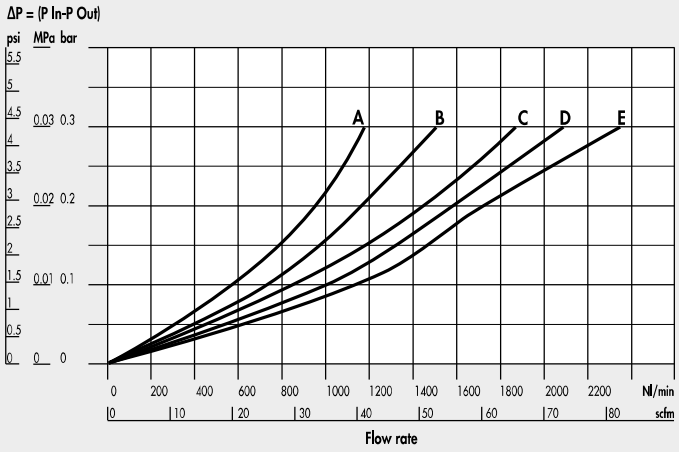
FIL CA Syntesi® **SY1** 3/8"



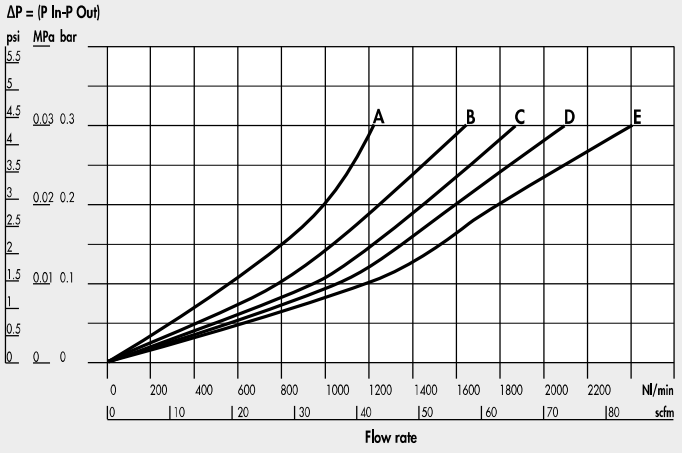
FIL CA Syntesi® **SY2** 3/8"



FIL CA Syntesi® **SY2** 1/2"

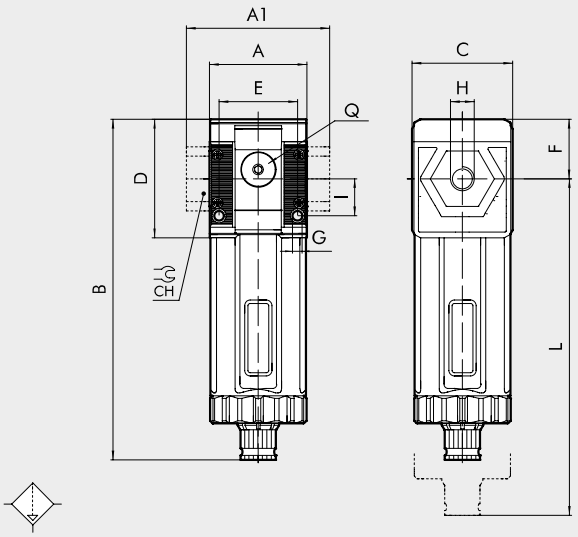


FIL CA Syntesi® **SY2** 3/4" - 1"



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			
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			
Q (no. 2 additional air takes-off)		1/8″			1/4″			

KEY TO CODES

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 anti-corrosion		**1** 1/8″ port			**1** 1/8″ port
		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.

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
FILTRO CARBONI ATTIVI Syntesi® SY1	
5610C100	AC SY1 RMSA without bushings
5611C101	AC SY1 1/8 RMSA
5612C102	AC SY1 1/4 RMSA
5613C103	AC SY1 3/8 RMSA

Code	Description
FILTRO CARBONI ATTIVI Syntesi® SY2	
5620C100	AC SY2 RMSA without bushings
5623C103	AC SY2 3/8 RMSA
5624C104	AC SY2 1/2 RMSA
5625C105	AC SY2 3/4 RMSA
5626C106	AC SY2 1 RMSA

NOTE	
Anti-corrosion version	
5X_ _ _ _ _ _	
Example	
5X11C101	AC SY1 1/8 RMSA anti-corrosion

SYNTESI® REGULATOR

Syntesi® 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.

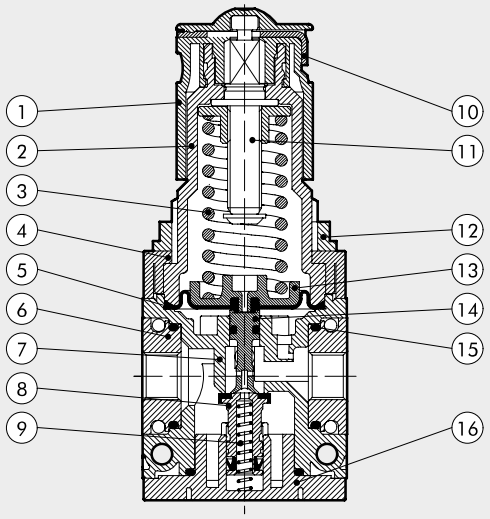
The regulator includes a compensation system that keeps the pressure setting virtually constant, even when the upstream pressure changes. This is achieved mainly by the design of the valve, which is pneumatically balanced.
If the downstream pressure rises above the threshold value, the air is discharged (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		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	570	1600	2900	3000	4300	4700	
(inlet pressure 10 bar)	scfm	20	57	103	106	152	166	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1200	2800	3350	5300	7400	7600	
(inlet pressure 10 bar)	scfm	42	99	119	188	261	267	
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						
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			
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 exaust						

METAL WORK PNEUMATIC

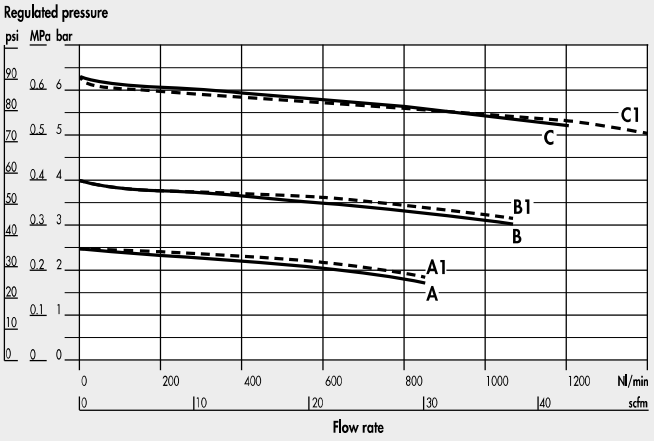
COMPONENTS

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

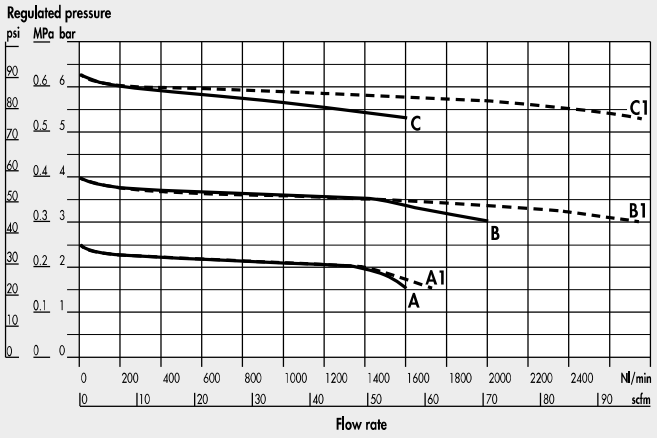


FLOW CHARTS

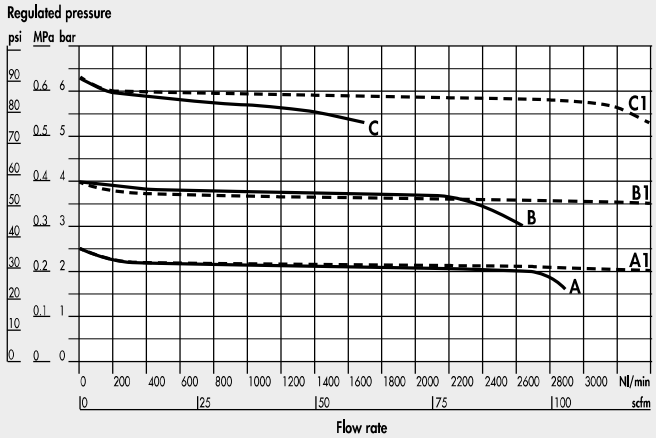
REG Syntesi® **SY1** 1/8"



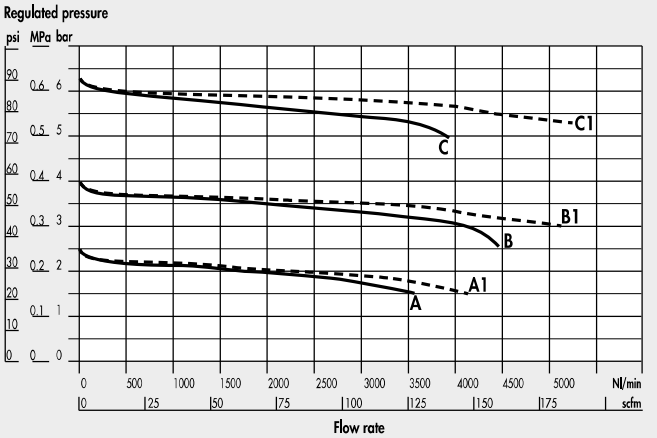
REG Syntesi® **SY1** 1/4"



REG Syntesi® **SY1** 3/8"

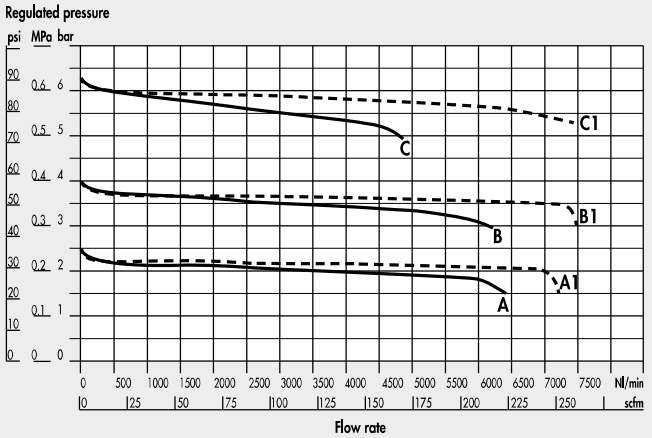


REG Syntesi® **SY2** 3/8"

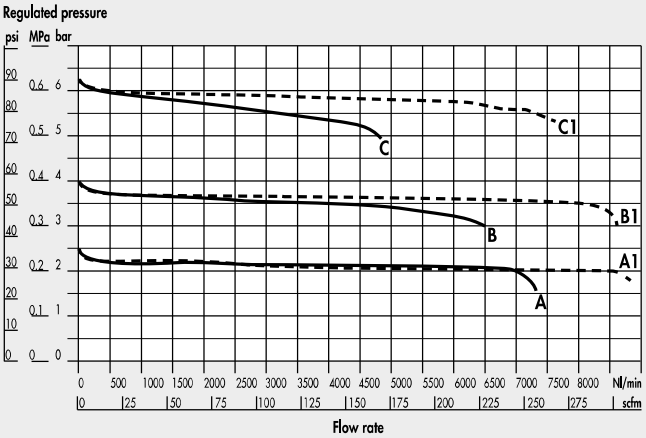


A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar
C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar
B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

REG Syntesi® **SY2** 1/2"

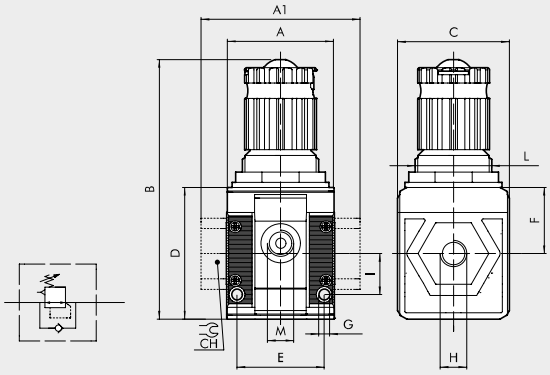


REG Syntesi® **SY2** 3/4" - 1"



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

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	**1** Size 1	**0** Without bushing	**R** Pressure regulator	● **10** 0 to 2 bar	**0** Without bushing
5X Syntesi anti-corrosion		**1** 1/8" port		✚ **12** 0 to 4 bar	**1** 1/8" port
		2 1/4" port		**14** 0 to 8 bar	**2** 1/4" port
		3 3/8" port		**16** 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

● 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		
5611R161	REG SY1 1/8 012	**5623R163**	REG SY2 3/8 012	**NOTE**	
5612R142	REG SY1 1/4 08	**5624R144**	REG SY2 1/2 08	**Anti-corrosion version**	
5612R162	REG SY1 1/4 012	**5624R164**	REG SY2 1/2 012	**5X**_ _ _ _ _	
5613R143	REG SY1 3/8 08	**5625R145**	REG SY2 3/4 08	**Example**	
5613R163	REG SY1 3/8 012	**5625R165**	REG SY2 3/4 012	**5X11R141**	REG SY1 1/8 08 anti-corrosion

SYNTESI® IN-SERIES REGULATOR

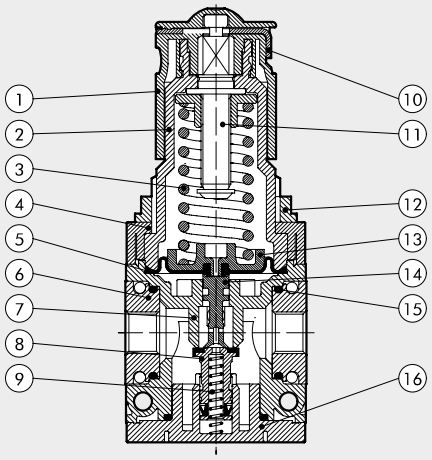
METAL WORK PNEUMATIC

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						

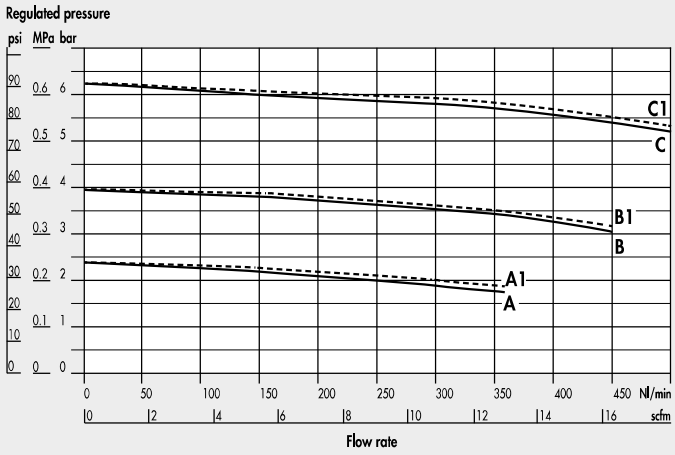
COMPONENTS

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

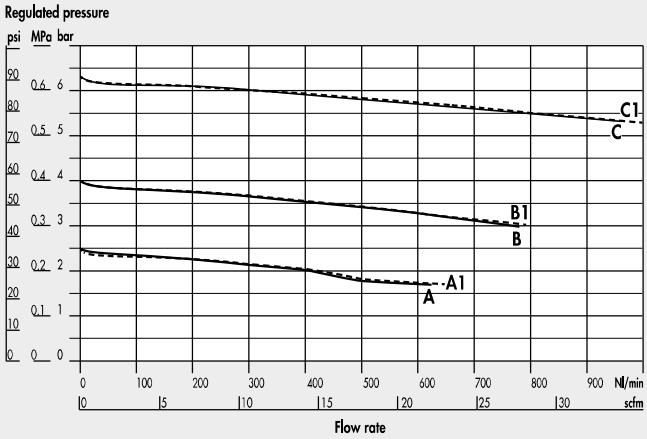


FLOW CHARTS

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



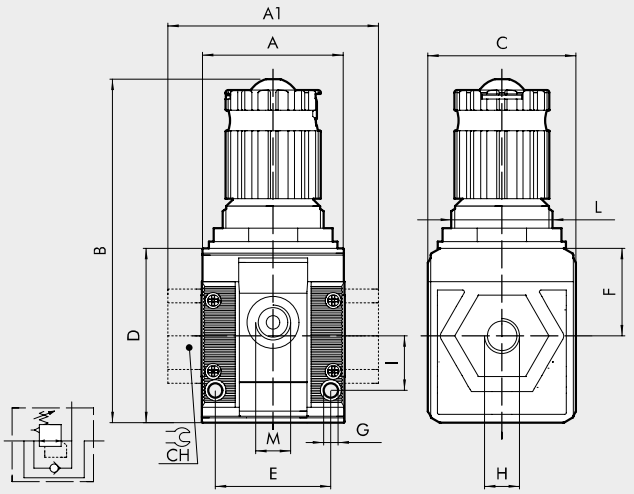
IN-SERIES REGULATOR Syntesi® **SY2** 3/8" - 1/2" - 3/4" - 1"



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

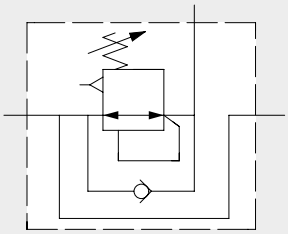
A1 = P In 10 bar - P Out 2.5 bar
B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

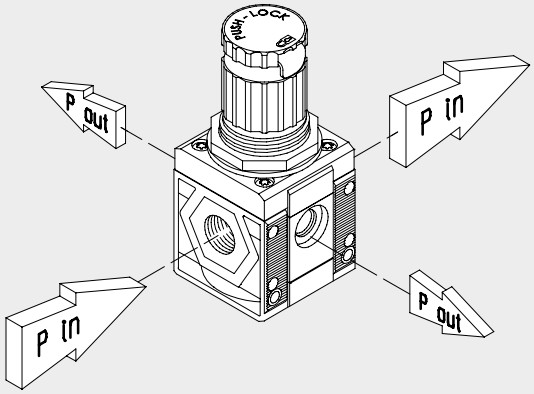
DIMENSIONS



	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





KEY TO CODES

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 anti-corrosion		**1** 1/8″ port		✚ **22** 0 to 4 bar	**1** 1/8″ port
		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

● 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	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

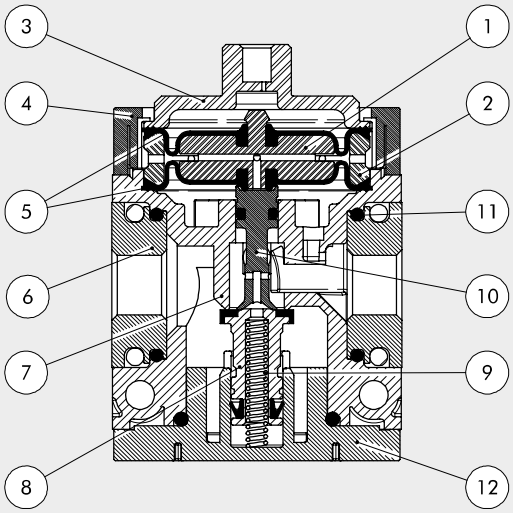
The pilot operated regulator can adjust pressure remotely via a pneumatic command.
The two rolling diaphragms offer several advantages:
- increased stroke, which allows greater opening of the valve and hence increased flow rate;
- reduced dynamic and pickup friction, which results in increased response 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		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.						

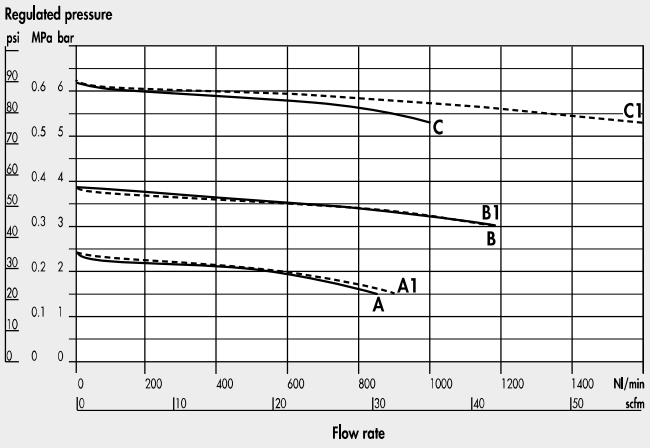
COMPONENTS

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

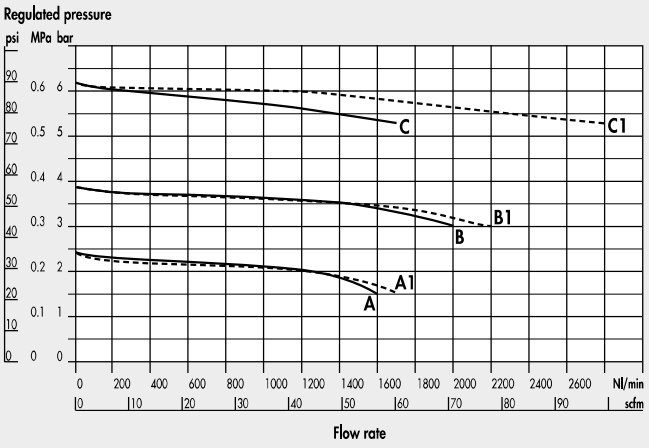


FLOW CHARTS

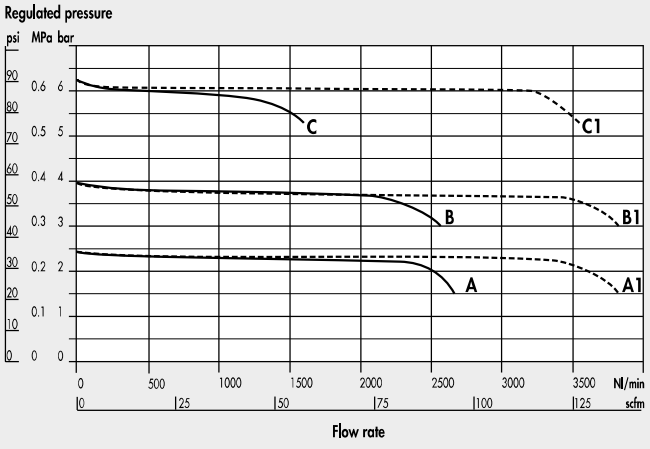
REG PIL Syntesi® **SY1** 1/8"



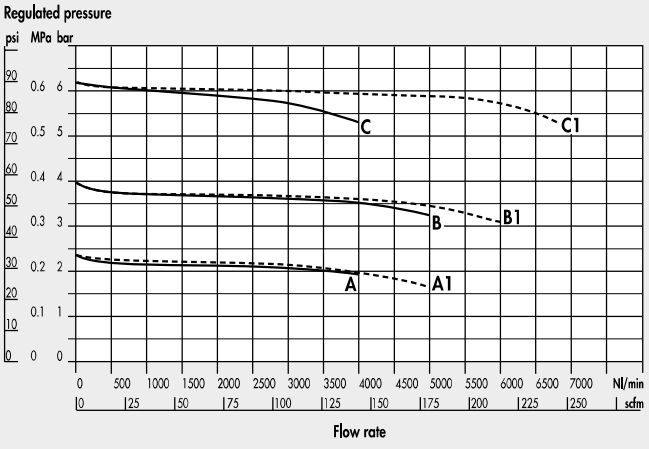
REG PIL Syntesi® **SY1** 1/4"



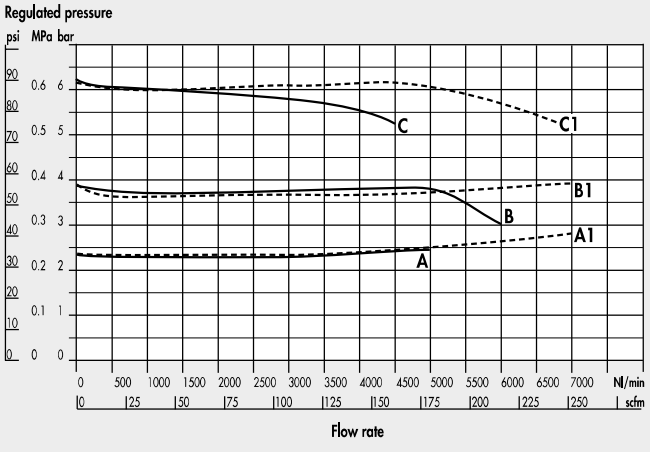
REG PIL Syntesi® **SY1** 3/8"



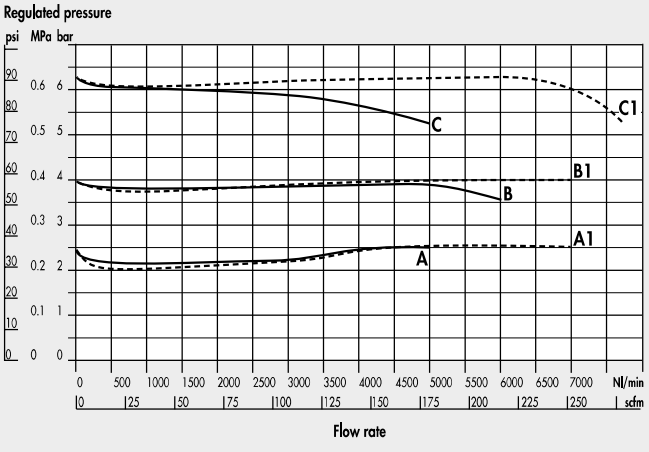
REG PIL Syntesi® **SY2** 3/8"



REG PIL Syntesi® **SY2** 1/2"



REG PIL Syntesi® **SY2** 3/4" - 1"

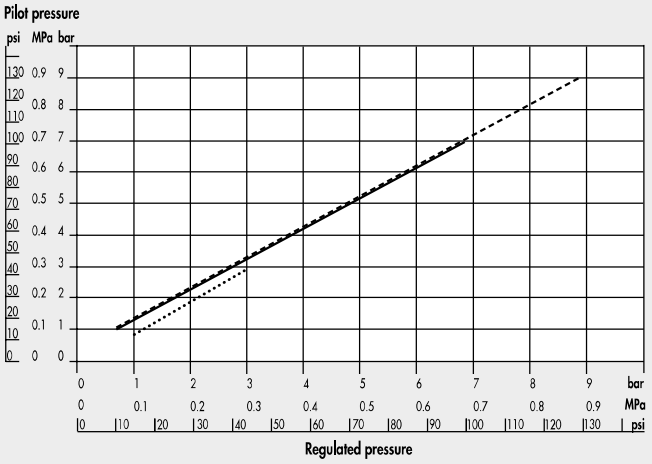


A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar
C = P In 7 bar - P Out 6.3 bar

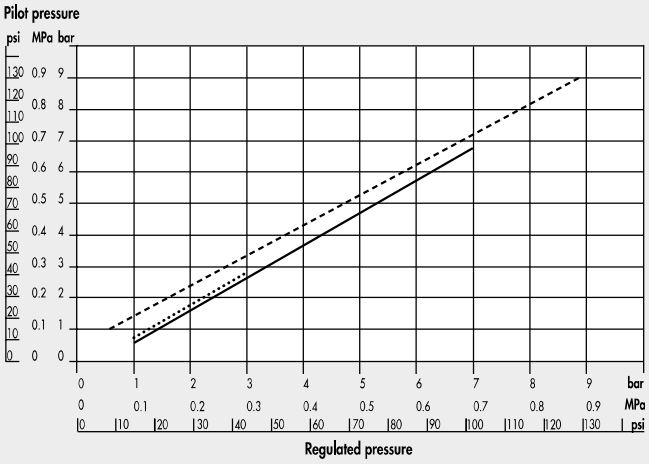
A1 = P In 10 bar - P Out 2.5 bar
B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

PILOTING CURVES

REG PIL Syntesi® **SY1**

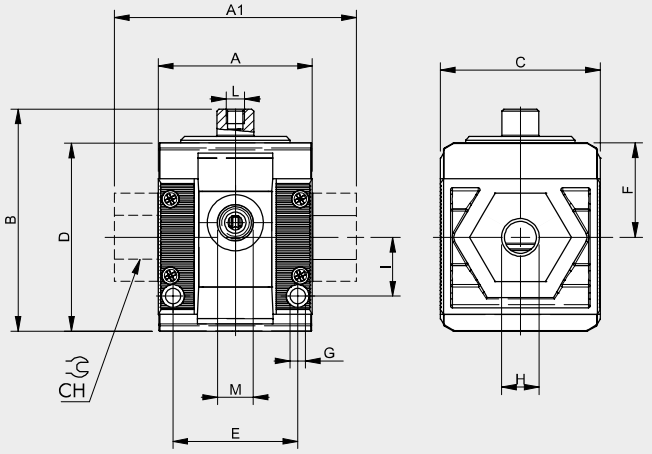


REG PIL Syntesi® **SY2**



..... 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	**1** Size 1	**0** Without bushing	**R** Pressure regulator	**00** Pilot operated	**0** Without bushing
5X Syntesi anti-corrosion		**1** 1/8″ port			**1** 1/8″ port
		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

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 PILOT OPERATED REGULATOR	
5610R000	REG PIL SY1 without bushings
5611R001	REG PIL SY1 1/8
5612R002	REG PIL SY1 1/4
5613R003	REG PIL SY1 3/8

Code	Description
Syntesi® SY2 PILOT OPERATED REGULATOR	
5620R000	REG PIL SY2 without bushings
5623R003	REG PIL SY2 3/8
5624R004	REG PIL SY2 1/2
5625R005	REG PIL SY2 3/4
5626R006	REG PIL SY2 1

NOTE	
Anti-corrosion version	
5X_ _ _ _ _ _	
Example	
5X11R001	REG PIL SY1 1/8 anti-corrosion

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:

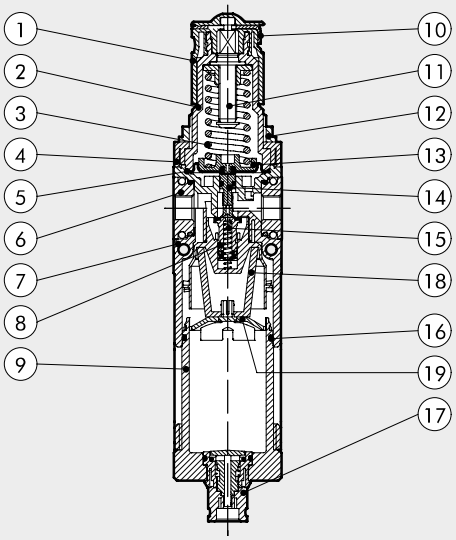
- Separation of condensate and larger liquid and solid particles by centrifugation.
- Three condensate drain options (RMSA, RA and SAC).
- 360° visually inspection of the condensate level, via transport spy-holes.
- Rolling diaphragm regulator, allowing maximum precision and flow rate, and minimal friction.
- 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		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	cm^3	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 pressure drop – requires variable air take-offs.**						
		Note: **the maximum input pressure for the RA version must not exceed 10 bar**						
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 exaust.						

METAL WORK PNEUMATIC

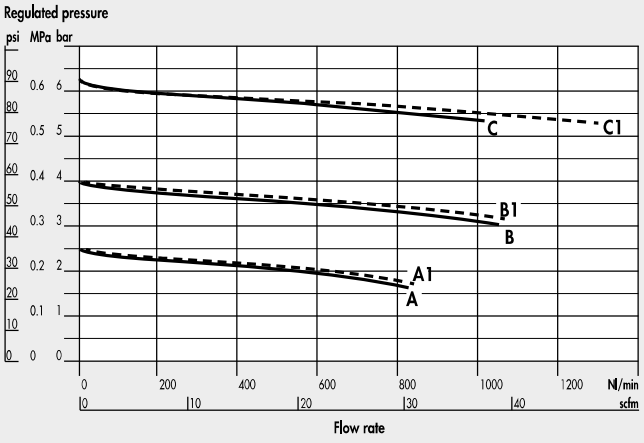
COMPONENTS

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

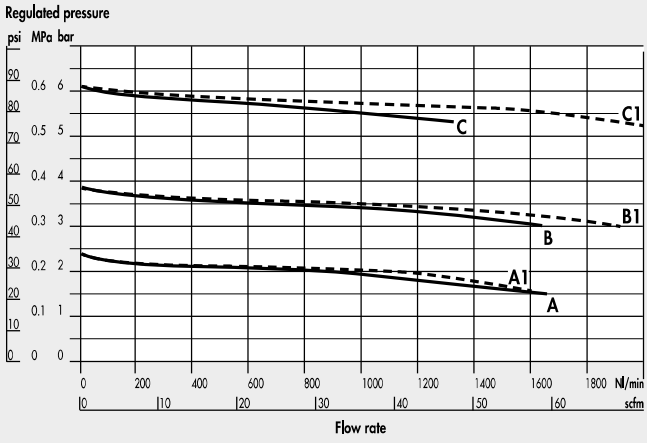


FLOW CHARTS

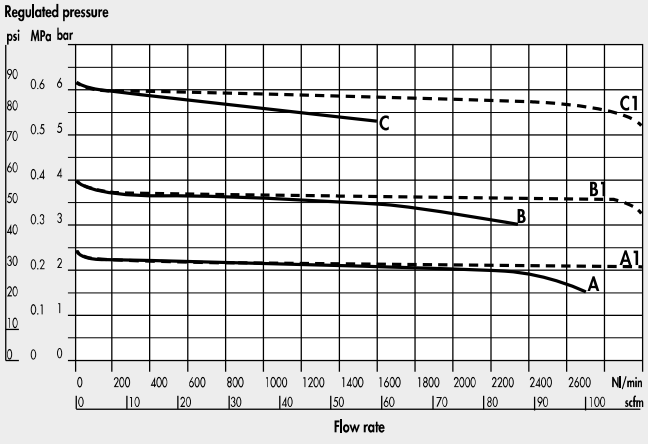
FR Syntesi® **SY1** 1/8"



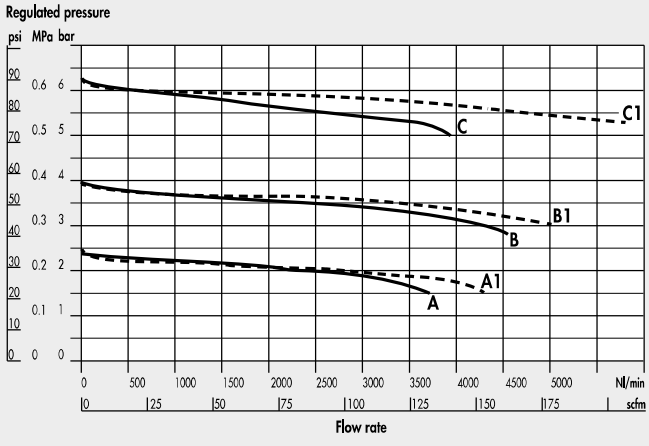
FR Syntesi® **SY1** 1/4"



FR Syntesi® **SY1** 3/8"

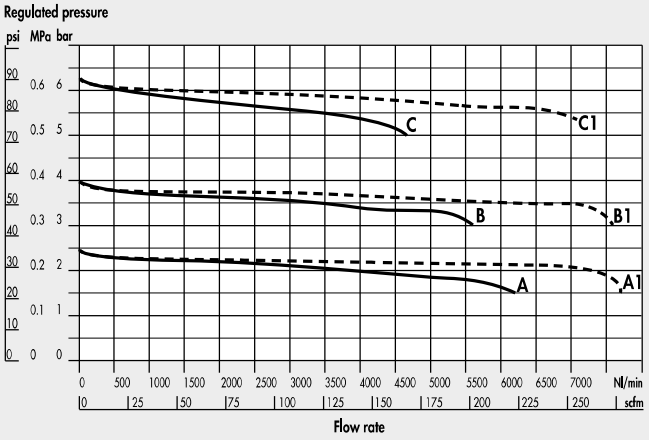


FR Syntesi® **SY2** 3/8"

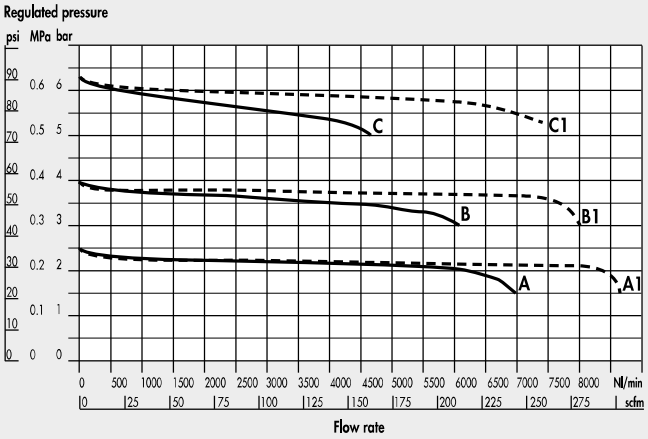


A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar
C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar
B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

FR Syntesi® **SY2** 1/2"

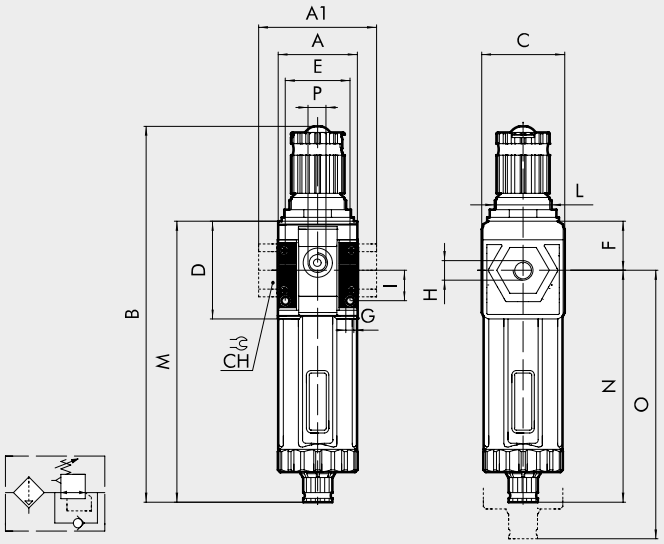


FR Syntesi® **SY2** 3/4" - 1"



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

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 **1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**B** Filter-regulator	● **10** 5 µm, RMSA, 0 to 2 bar ● **20** 20 µm, RMSA, 0 to 2 bar ● **30** 50 µm, RMSA, 0 to 2 bar ● **40** 5 µm, RA, 0 to 2 bar ● **50** 20 µm, RA, 0 to 2 bar ● **60** 50 µm, RA, 0 to 2 bar ● **11** 5 µm, SAC, 0 to 2 bar ● **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	**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
	2 Size 2	**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.
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 pressure drop – requires variable air take-offs.**

NOTES

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
FILTER-REGULATOR Syntesi® SY1		**FILTER-REGULATOR Syntesi® SY2**	
5610B140	FR SY1 5 08 RMSA without bushings	**5620B140**	FR SY2 5 08 RMSA without bushings
5610B240	FR SY1 20 08 RMSA without bushings	**5620B240**	FR SY2 20 08 RMSA without bushings
5610B440	FR SY1 5 08 RA without bushings	**5620B440**	FR SY2 5 08 RA without bushings
5610B540	FR SY1 20 08 RA without bushings	**5620B540**	FR SY2 20 08 RA without bushings
5610B160	FR SY1 5 012 RMSA without bushings	**5620B160**	FR SY2 5 012 RMSA without bushings
5610B260	FR SY1 20 012 RMSA without bushings	**5620B260**	FR SY2 20 012 RMSA without bushings
5610B460	FR SY1 5 012 RA without bushings	**5620B460**	FR SY2 5 012 RA without bushings
5610B560	FR SY1 20 012 RA without bushings	**5620B560**	FR SY2 20 012 RA without bushings
5611B141	FR SY1 1/8 5 08 RMSA	**5623B143**	FR SY2 3/8 5 08 RMSA
5611B241	FR SY1 1/8 20 08 RMSA	**5623B243**	FR SY2 3/8 20 08 RMSA
5611B441	FR SY1 1/8 5 08 RA	**5623B443**	FR SY2 3/8 5 08 RA
5611B541	FR SY1 1/8 20 08 RA	**5623B543**	FR SY2 3/8 20 08 RA
5611B161	FR SY1 1/8 5 012 RMSA	**5623B163**	FR SY2 3/8 5 012 RMSA
5611B261	FR SY1 1/8 20 012 RMSA	**5623B263**	FR SY2 3/8 20 012 RMSA
5611B461	FR SY1 1/8 5 012 RA	**5623B463**	FR SY2 3/8 5 012 RA
5611B561	FR SY1 1/8 20 012 RA	**5623B563**	FR SY2 3/8 20 012 RA
5612B142	FR SY1 1/4 5 08 RMSA	**5624B144**	FR SY2 1/2 5 08 RMSA
5612B242	FR SY1 1/4 20 08 RMSA	**5624B244**	FR SY2 1/2 20 08 RMSA
5612B442	FR SY1 1/4 5 08 RA	**5624B444**	FR SY2 1/2 5 08 RA
5612B542	FR SY1 1/4 20 08 RA	**5624B544**	FR SY2 1/2 20 08 RA
5612B162	FR SY1 1/4 5 012 RMSA	**5624B164**	FR SY2 1/2 5 012 RMSA
5612B262	FR SY1 1/4 20 012 RMSA	**5624B264**	FR SY2 1/2 20 012 RMSA
5612B462	FR SY1 1/4 5 012 RA	**5624B464**	FR SY2 1/2 5 012 RA
5612B562	FR SY1 1/4 20 012 RA	**5624B564**	FR SY2 1/2 20 012 RA
5613B143	FR SY1 3/8 5 08 RMSA	**5625B145**	FR SY2 3/4 5 08 RMSA
5613B243	FR SY1 3/8 20 08 RMSA	**5625B245**	FR SY2 3/4 20 08 RMSA
5613B443	FR SY1 3/8 5 08 RA	**5625B445**	FR SY2 3/4 5 08 RA
5613B543	FR SY1 3/8 20 08 RA	**5625B545**	FR SY2 3/4 20 08 RA
5613B163	FR SY1 3/8 5 012 RMSA	**5625B165**	FR SY2 3/4 5 012 RMSA
5613B263	FR SY1 3/8 20 012 RMSA	**5625B265**	FR SY2 3/4 20 012 RMSA
5613B463	FR SY1 3/8 5 012 RA	**5625B465**	FR SY2 3/4 5 012 RA
5613B563	FR SY1 3/8 20 012 RA	**5625B565**	FR SY2 3/4 20 012 RA
		5626B146	FR SY2 1 5 08 RMSA
		5626B246	FR SY2 1 20 08 RMSA
		5626B446	FR SY2 1 5 08 RA
		5626B546	FR SY2 1 20 08 RA
		5626B166	FR SY2 1 5 012 RMSA
		5626B266	FR SY2 1 20 012 RMSA
		5626B466	FR SY2 1 5 012 RA
		5626B566	FR SY2 1 20 012 RA

NOTE	
Anti-corrosion version	
5X_ _ _ _ _ _	
Example	
5X11B141	FR SY1 1/8 5 08 RMSA anti-corrosion

NOTES

SYNTESI® LUBRICATOR

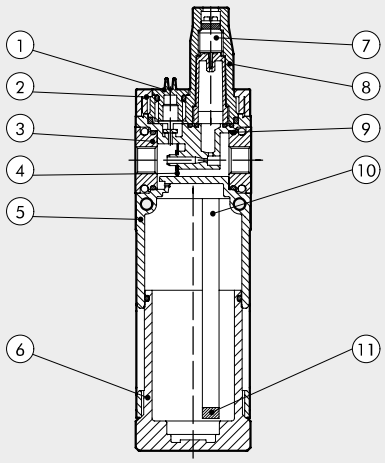
METAL WORK PNEUMATIC

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	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	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			From -10 to +50			
Weight	g	185	180	171	480	453	449	437
Fluid		Compressed air or other inert gases						
Quantity of filled oil	cm^3	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	Nl/min	450			800			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	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.						

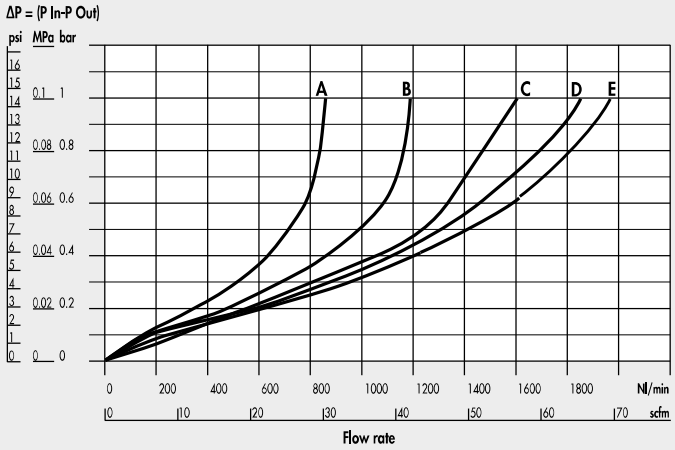
COMPONENTS

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

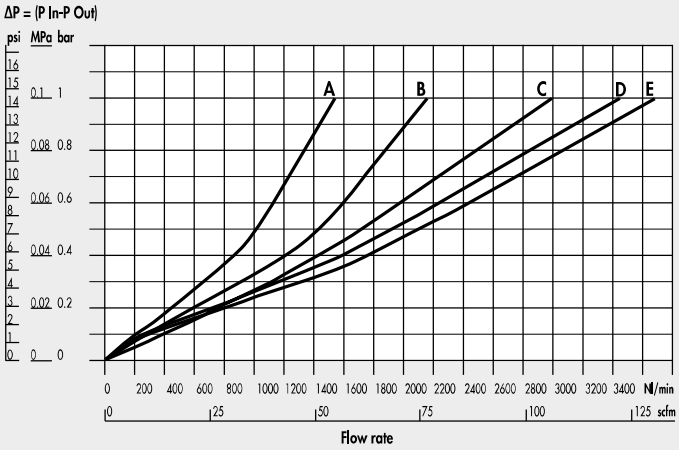


FLOW CHARTS

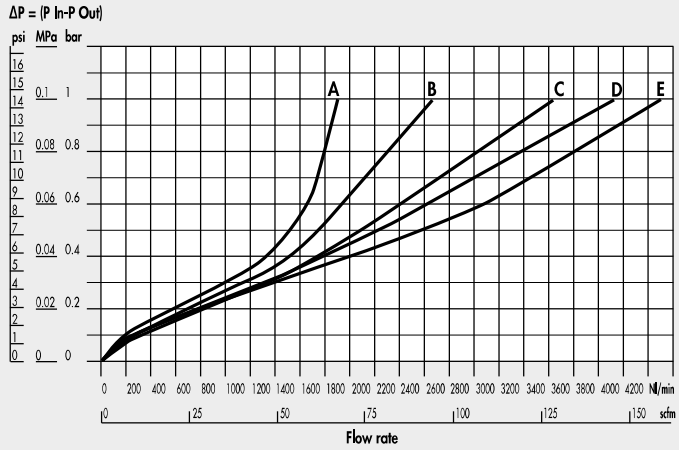
LUB Syntesi® **SY1** 1/8"



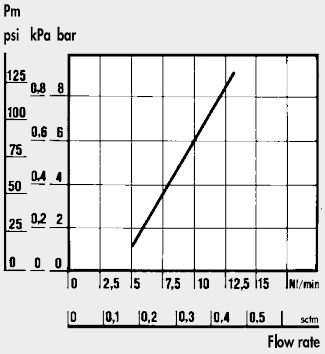
LUB Syntesi® **SY1** 1/4"



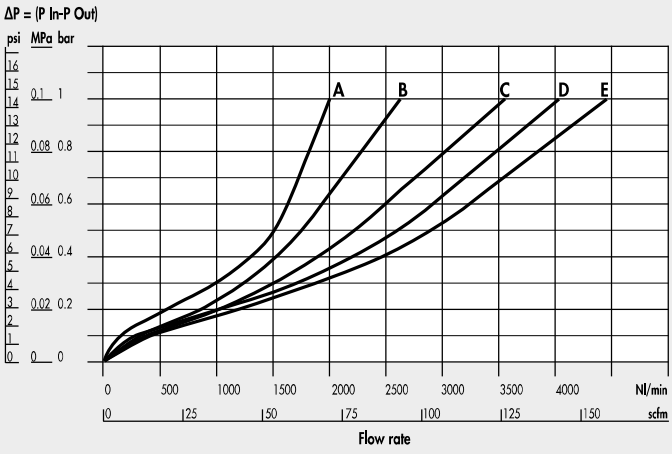
LUB Syntesi® **SY1** 3/8"



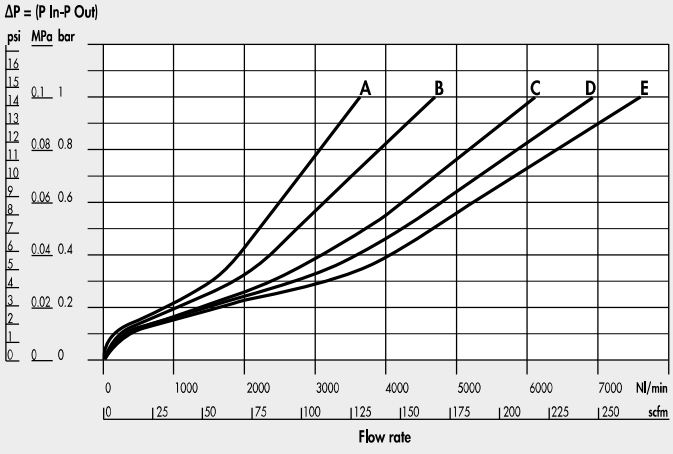
Minimum operating flow chart **SY1**



LUB Syntesi® **SY2** 3/8"



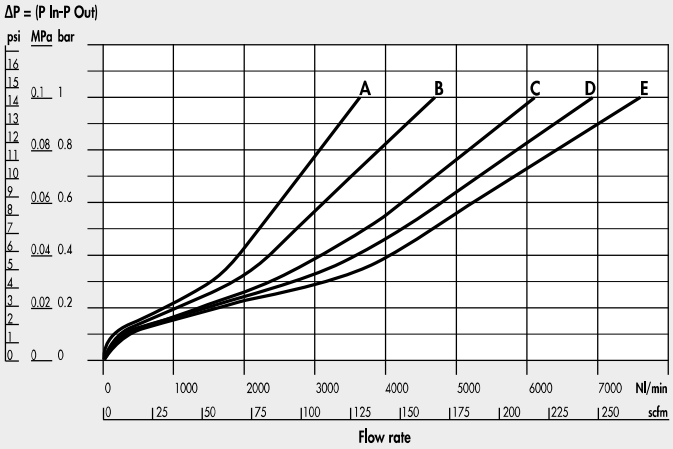
LUB Syntesi® **SY2** 1/2"



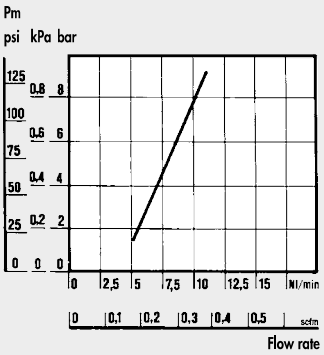
A = 2.5 bar - 0.25 MPa - 36 psi
B = 4 bar - 0.4 MPa - 58 psi
C = 6.3 bar - 0.63 MPa - 91 psi
D = 8 bar - 0.8 MPa - 116 psi
E = 10 bar - 1 MPa - 145 psi

METAL WORK PNEUMATIC

LUB Syntesi® **SY2** 3/4" - 1"

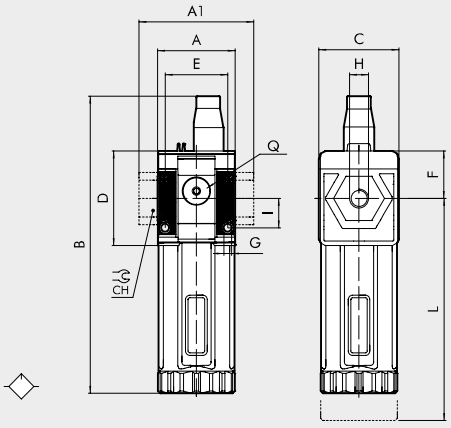


Minimum operating flow chart **SY2**



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

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
LUBRIFICATORE Syntesi® SY1	
5610L100	LUB SY1 without bushings
5611L101	LUB SY1 1/8
5612L102	LUB SY1 1/4
5613L103	LUB SY1 3/8

Code	Description
LUBRIFICATORE Syntesi® SY2	
5620L100	LUB SY2 without bushings
5623L103	LUB SY2 3/8
5624L104	LUB SY2 1/2
5625L105	LUB SY2 3/4
5626L106	LUB SY2 1

NOTE
Anti-corrosion version
5X_ _ _ _ _
Example
5X11L101 LUB SY1 1/8 anti-corrosion

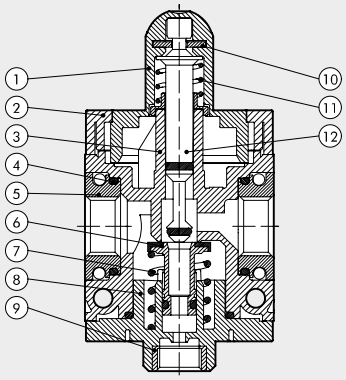
SYNTESI® SHUT-OFF VALVE

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			
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		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	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			
Coil capacity for electro-pneumatic version		12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA						
Hand operator of electro-pneumatic versions		Bistable: horizontal = OFF, vertical = ON (see drawing page **C1**.40)						

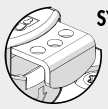
COMPONENTS

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

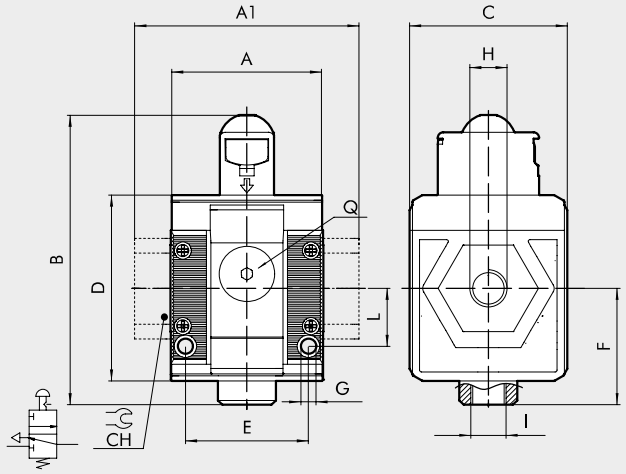

SY2

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).

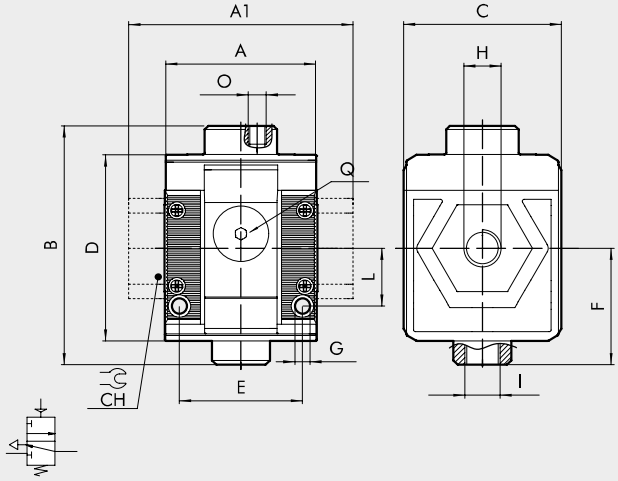
METAL WORK PNEUMATIC

DIMENSIONS

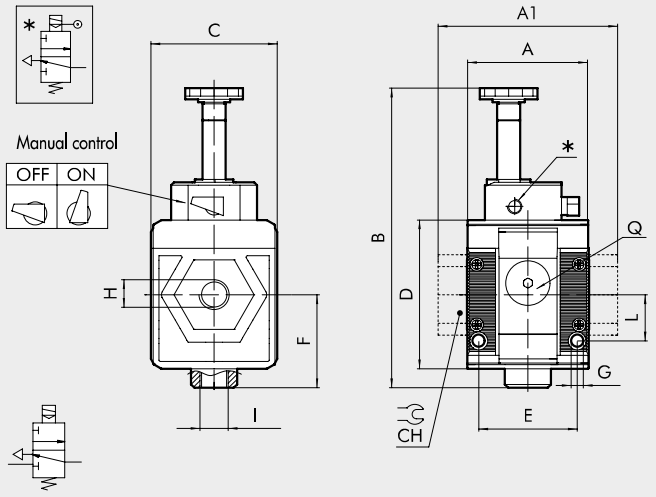
MANUAL **SY1-SY2**



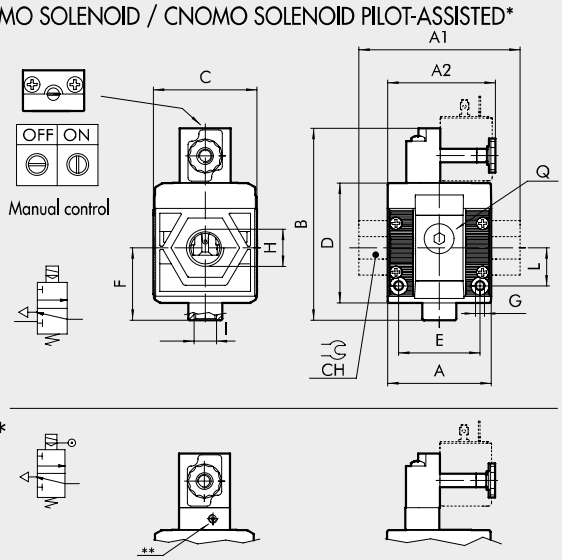
PNEUMATIC **SY1-SY2**



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				
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"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5				42			60.5				42			60.5				
A1	-	-	44	-	-	95	95	-	-	44	-	-	95	95	-	-	44	-	-	95	95	
A2	-			-				-			-				-			65				
B	80			109				66			94				104			-				
Cnomo	-			-				-			-				-			113				
Cnomo pilot ass.	-			-				-			-				-			126				
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				
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	1	1	V	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	**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
	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

* 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
Syntesi® SY1 SHUT-OFF VALVE	
5610V100	V3V SY1 manual without bushings
5611V101	V3V SY1 1/8 manual
5612V102	V3V SY1 1/4 manual
5613V103	V3V SY1 3/8 manual
5610V200	V3V SY1 pneumatic without bushings
5611V201	V3V SY1 1/8 pneumatic
5612V202	V3V SY1 1/4 pneumatic
5613V203	V3V SY1 3/8 pneumatic
5610V300	V3V SY1 elpn pilot-assisted without bushings
5611V301	V3V SY1 1/8 elpn pilot-assisted
5612V302	V3V SY1 1/4 elpn pilot-assisted
5613V303	V3V SY1 3/8 elpn pilot-assisted
5610V700	V3V SY1 elpn without bushings
5611V701	V3V SY1 1/8 elpn
5612V702	V3V SY1 1/4 elpn
5613V703	V3V SY1 3/8 elpn

Code	Description
Syntesi® SY2 SHUT-OFF VALVE	
5620V100	V3V SY2 manual without bushings
5623V103	V3V SY2 3/8 manual
5624V104	V3V SY2 1/2 manual
5625V105	V3V SY2 3/4 manual
5626V106	V3V SY2 1 manual
5620V200	V3V SY2 pneumatic without bushings
5623V203	V3V SY2 3/8 pneumatic
5624V204	V3V SY2 1/2 pneumatic
5625V205	V3V SY2 3/4 pneumatic
5626V206	V3V SY2 1 pneumatic
5620V300	V3V SY2 elpn pilot-assisted Cnomo without bushings
5623V303	V3V SY2 3/8 elpn pilot-assisted Cnomo
5624V304	V3V SY2 1/2 elpn pilot-assisted Cnomo
5625V305	V3V SY2 3/4 elpn pilot-assisted Cnomo
5626V306	V3V SY2 1 elpn pilot-assisted Cnomo
5620V700	V3V SY2 elpn Cnomo without bushings
5623V703	V3V SY2 3/8 elpn Cnomo
5624V704	V3V SY2 1/2 elpn Cnomo
5625V705	V3V SY2 3/4 elpn Cnomo
5626V706	V3V SY2 1 elpn Cnomo

NOTE	
Anti-corrosion version	
5X_ _ _ _ _	
Example	
5X11V101	V3V SY1 1/8 anti-corrosion

NOTES

SYNTESI® PROGRESSIVE STARTER

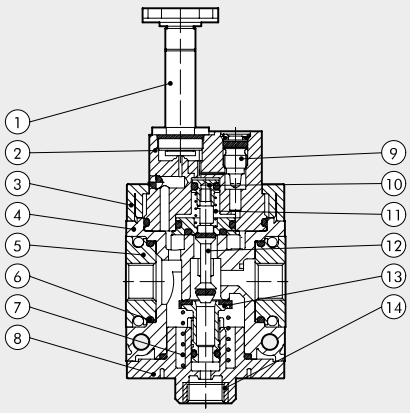
METAL WORK PNEUMATIC

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			
Coil capacity for electro-pneumatic version		12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA						
Hand operator		Bistable: horizontal = OFF, vertical = ON (see drawing page **C1**.40)						

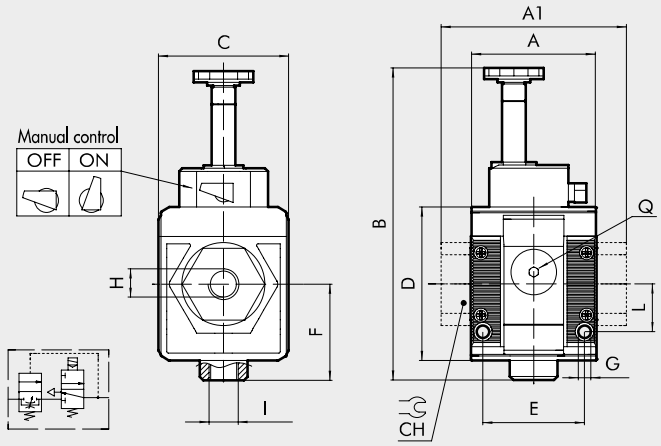
COMPONENTS

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

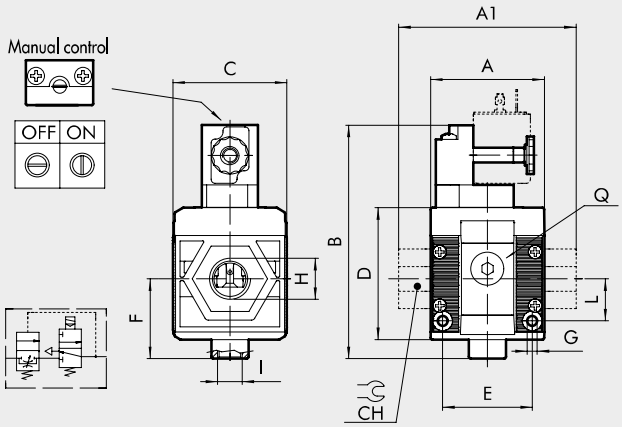


DIMENSIONS

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			
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	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
Syntesi® SY1 PROGRESSIVE STARTER	
5610A700	APR SY1 elpn without bushings
5611A701	APR SY1 1/8 elpn
5612A702	APR SY1 1/4 elpn
5613A703	APR SY1 3/8 elpn

Code	Description
Syntesi® SY2 PROGRESSIVE STARTER	
5620A700	APR SY2 elpn without bushings
5623A703	APR SY2 3/8 elpn
5624A704	APR SY2 1/2 elpn
5625A705	APR SY2 3/4 elpn
5626A706	APR SY2 1 elpn

Code	Description
Syntesi® SY2 PROGRESSIVE STARTER	
5620A710	APR SY2 elpn Cnomo without bushings
5623A713	APR SY2 3/8 elpn Cnomo
5624A714	APR SY2 1/2 elpn Cnomo
5625A715	APR SY2 3/4 elpn Cnomo
5626A716	APR SY2 1 elpn Cnomo

SYNTESI® PRESSURE SWITCHES

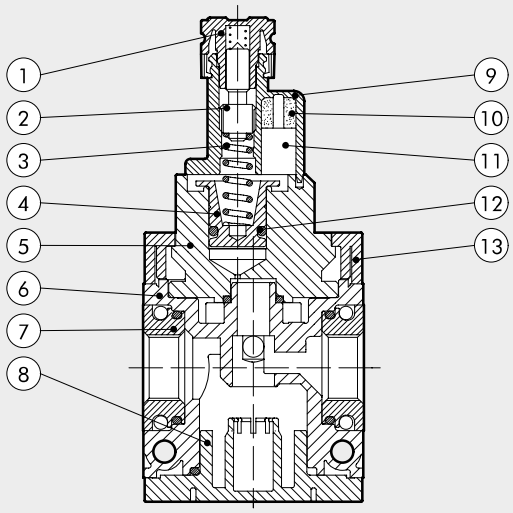
METAL WORK PNEUMATIC

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.

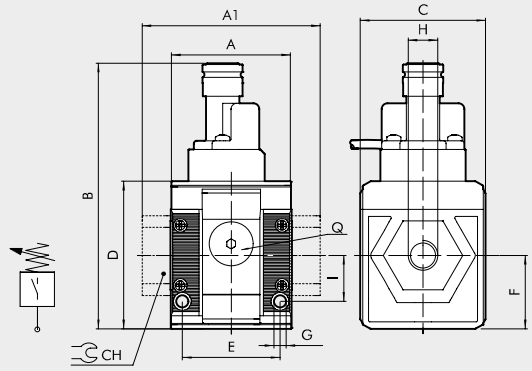
TECHNICAL DATA		SY1 PRESSURE SWITCHES			SY2 PRESSURE SWITCHES			
Threaded port		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Adjustable pressure interval	bar	0.5 to 10			0.5 to 10			
Hysteresis (not adjustable)	bar	From 0.4 to 0.8 (See diagram)						
Maximum pressure	bar	15			13			
	MPa	1.5			1.3			
	psi	217			188			
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

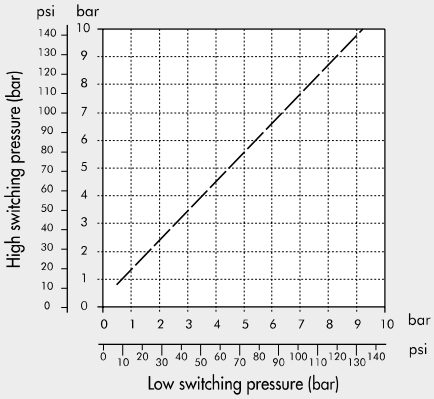


DIMENSIONS



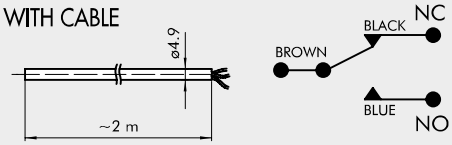
	SIZE 1			SIZE 2			
H (threaded port)	1/8″	1/4″	3/8″	3/8″	1/2″	3/4″	1″
A	42			60.5			
A1	-	-	44	-	-	95	95
B	93			101			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.6			32.5			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
Q (no. 2 additional air takes-off)	1/8″	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

HYSTERESIS GRAPH

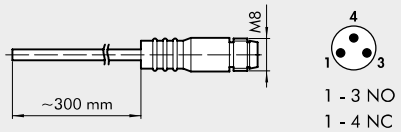


WIRING DIAGRAM

VERSION WITH CABLE



VERSION WITH M8 CONNECTOR



1 - 3 NO
1 - 4 NC

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

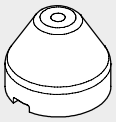
PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

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 APR / pressure switch

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.

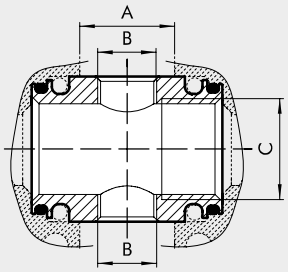
SYNTESI® AIR TAKE-OFF

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		AIR TAKE-OFF, SY1		AIR TAKE-OFF, SY2	
Version		PA 2-way	PA 4-way	PA 2-way	PA 4-way
Flow rate of the air take-off at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1550	500 - 2000	7000	1500 - 4500
	scfm	55	18 - 71	248	53 - 160
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	
Weight	g	62	100	75	306
Fluid		Compressed air or other inert gases			

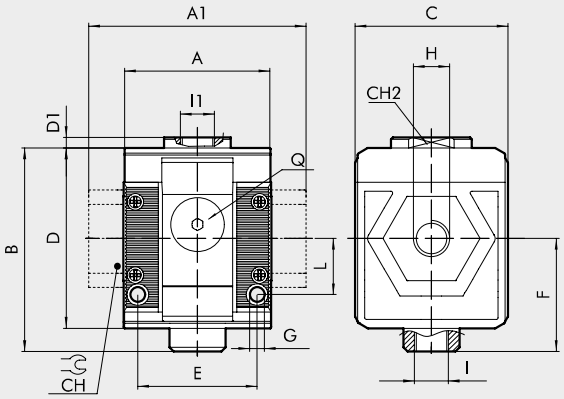
DIMENSIONS

2-WAY VERSION



	SIZE 1	SIZE 2
A	15.5	27
B	1/8"	3/8"
C	3/8"	1/2"

4-WAY VERSION



	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 take-offs)	1/8"			1/4"			

KEY TO CODE FOR 4-WAY VERSION

56	1	1	P	20	1
SYNTESI	**SIZE**	**THREADED INPUT CONNECTION**	**ELEMENT**	**TYPE**	**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	**P** Air take-off	**20** 4-way	**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.

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE CODES

Code	Description
AIR INTAKE, 2-way version	
5610P100	PA SY1
5X10P100	PA SY1 anti-corrosion
5620P100	PA SY2
5X20P100	PA SY2 anti-corrosion

Code	Description
AIR INTAKE, 4-way version	
5610P200	PA 4-way SY1 without bushing
5611P201	PA 4-way SY1 1/8
5612P202	PA 4-way SY1 1/4
5613P203	PA 4-way SY1 3/8
5620P200	PA 4-way SY2 without bushing
5623P203	PA 4-way SY2 3/8
5624P204	PA 4-way SY2 1/2
5625P205	PA 4-way SY2 3/4
5626P206	PA 4-way SY2 1

NOTE

Anti-corrosion version

5X_ _ _ _ _

Example

5X11P201 PA 4-way SY1 1/8 anti-corrosion

NOTES

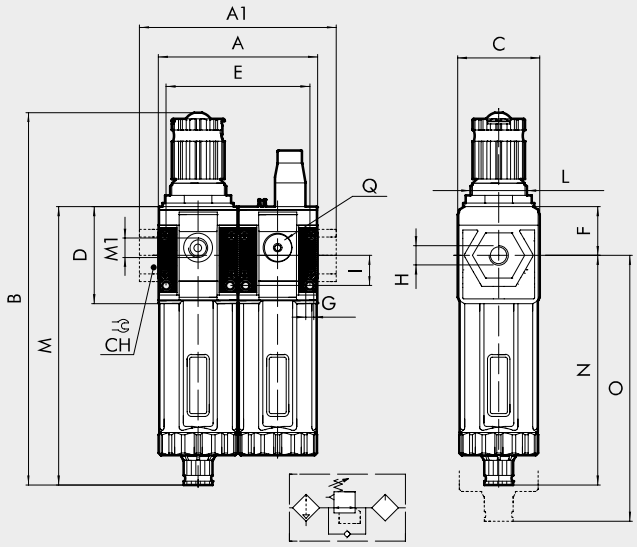
FR + LUB SYNTESI®

METAL WORK PNEUMATIC

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

TECHNICAL DATA		FR + LUB SY1			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	350			1200			
(P In=10 bar)	scfm	12			42.5			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1400			4000			
(P In=10 bar)	scfm	50			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			
Padlockable knob		Included						
Upstream pressure compensation		Included, via balanced valve						
Weight	g	414	409	400	1074	1047	1043	1031
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 (FR) - 450 (LUB)			1400 (FR) - 800 (LUB)			
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18 (FR) - 16 (LUB)			49.5 (FR) - 28 (LUB)			
Filter bowl capacity (condensate)	cm^3	30			70			
Quantity of filled oil	cm^3	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 pressure drop – 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			

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 **5X** Syntesi anti-corrosion	**1** Size 1 **2** Size 2	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ port **3** 3/8″ port **4** 1/2″ port **5** 3/4″ port **6** 1″ port	**B** Filter-regulator	● **10** 5 µm, RMSA, 0 to 2 bar ● **20** 20 µm, RMSA, 0 to 2 bar ● **30** 50 µm, RMSA, 0 to 2 bar ● **40** 5 µm, RA, 0 to 2 bar ● **50** 20 µm, RA, 0 to 2 bar ● **60** 50 µm, RA, 0 to 2 bar ● **11** 5 µm, SAC, 0 to 2 bar ● **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	**L** Lubricator	**10** Manual filling from the top	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ port **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.

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 pressure drop – 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
FR + LUB Syntesi® SY1	
5611B24L101	FR+LUB SY1 1/8 20 08 RMSA
5611B54L101	FR+LUB SY1 1/8 20 08 RA
5612B24L102	FR+LUB SY1 1/4 20 08 RMSA
5612B54L102	FR+LUB SY1 1/4 20 08 RA
5613B24L103	FR+LUB SY1 3/8 20 08 RMSA
5613B54L103	FR+LUB SY1 3/8 20 08 RA

Code	Description
FR + LUB Syntesi® SY2	
5623B24L103	FR+LUB SY2 3/8 20 08 RMSA
5623B54L103	FR+LUB SY2 3/8 20 08 RA
5624B24L104	FR+LUB SY2 1/2 20 08 RMSA
5624B54L104	FR+LUB SY2 1/2 20 08 RA
5625B24L105	FR+LUB SY2 3/4 20 08 RMSA
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

NOTE	
Anti-corrosion version	
5X_ _ _ _ _ _	
Example	
5X11B54L101	FR+LUB SY1 1/8 20 08 RA anti-corrosion

NOTES