METAL WORK PNEUMATIC

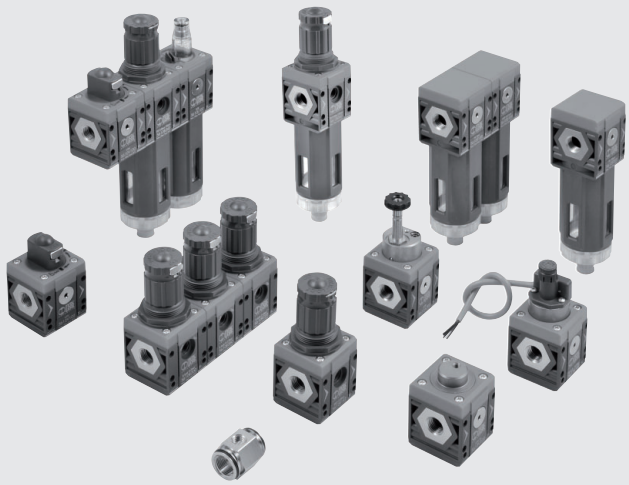
SYNTESI®

UNITS

SUMMARY SYNTESI®

AIR TREATMENT UNIT 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.

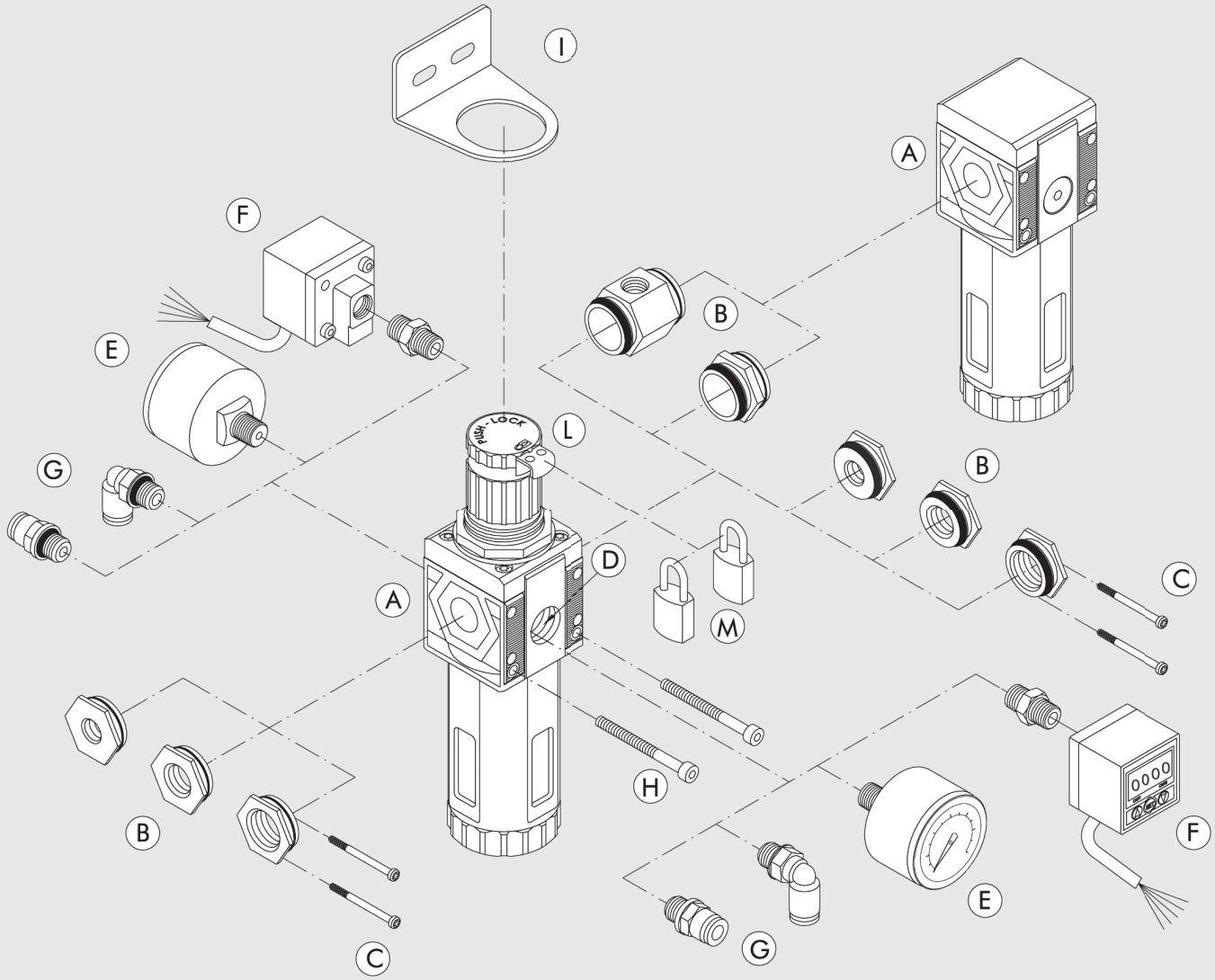


TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
Max. input pressure	bar	15		
	MPa	1.5		
	psi	217		
Flow rate		See catalogue of the various elements		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	from -20 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		
Wall fixing screws		No. 2 M4 screws		
Certification for potentially explosive atmosphere according to 94/9/CE		Ex II 2 GD c T5 T 100°C -20°C<Ta<50°C		

NOTES

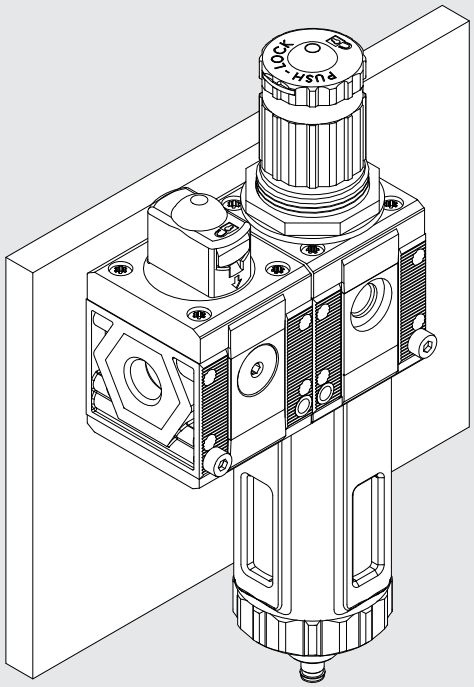
MODULARITY AND FLEXIBILITY



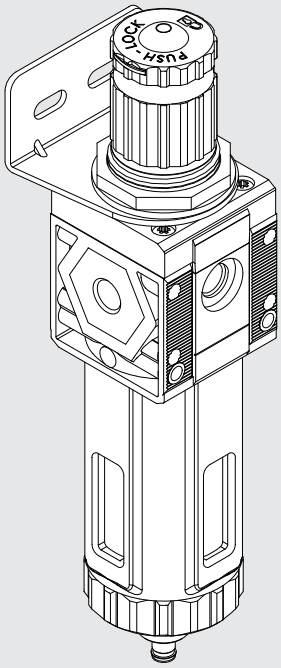
The various elements Ⓐ of Syntesi® can be fixed together and connected to the air feed and delivery circuit using nickel brass bushes Ⓑ. The bushes are easy to remove by unscrewing the two front screws Ⓒ. This solution has numerous advantages:
- Reduced overall dimensions.
- Free composition of multiple elements, without the need for brackets, stay bolts or yoke.
- The metal threads of the fittings, including taper thread, allow high torques.
- 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 pneumatic inlet port can be the same or different from the outlet port.

Standard ports for size 1 Syntesi® are: G 1/8", G 1/4", G 3/8", intermediate, air take-off.
Additional ports Ⓓ. On the front and back of all Syntesi® is an 1/8" port for use with pressure gauges Ⓔ or pressure switches Ⓕ or, considering 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 actived carbon filter and depurator).
Wall fixing. Only two through screws Ⓗ are needed. No bulky brackets or additional flanges are required.
Regulator fixing bracket. The regulators and filter regulators can be fixed in position using a steel bracket Ⓘ.
Padlockable knob Ⓛ. The knobs on the regulators, filter regulator and sectioning valves can all be padlocked. The steel plate is included in the supply. Either one or two padlocks Ⓜ can be applied.

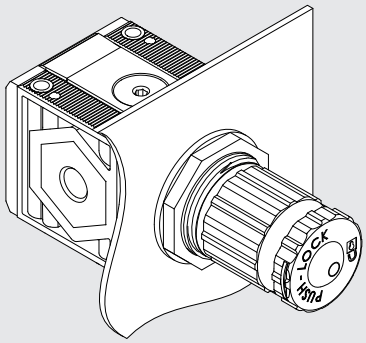
MOUNTING OPTIONS



On the wall, using two screws

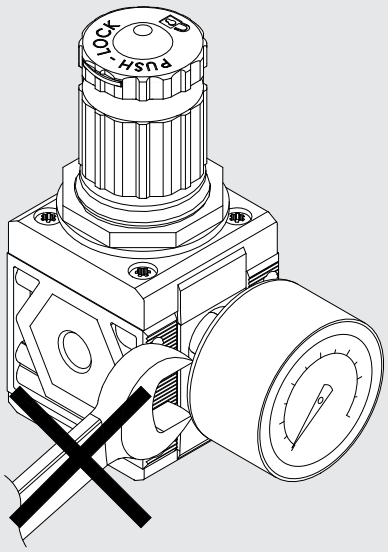


Using a bracket



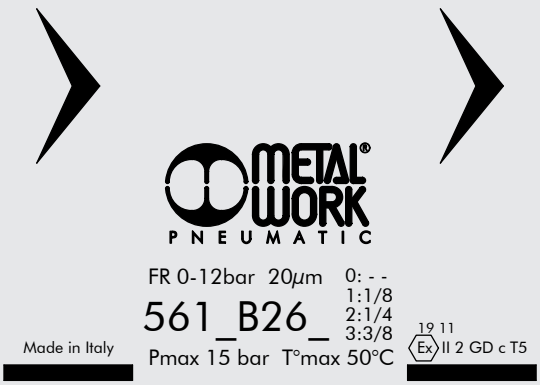
On a panel

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®).

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

KEY TO CODES SINGLE ELEMENT

56	1	1	F	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	**F** Filter **D** Depurator **C** Active carbon filter **R** Pressure regulator **B** Filter-regulator **L** Lubricator **V** Shut off valve **A** Progressive starter **S** Pressure switches **P** Air take-off	Varies from element to element	**0** Without bushing **1** 1/8" port **2** 1/4" port **3** 3/8" port

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	**1** Size 1	**1** 1/8" port **2** 1/4" port **3** 3/8" port	**F** Filter **D** Depurator **C** Active carbon filter **R** Pressure regulator **B** Filter-regulator **L** Lubricator **V** Shut off valve **A** Progressive starter **S** Pressure switches **P** Air Take-off	Varies from element to element	**F** Filter **D** Depurator **C** Active carbon filter **R** Pressure regulator **B** Filter-regulator **L** Lubricator **V** Shut off valve **A** Progressive starter **S** Pressure switches **P** Air Take-off	Varies from element to element	**F** Filter **D** Depurator **C** Active carbon filter **R** Pressure regulator **B** Filter-regulator **L** Lubricator **V** Shut off valve **A** Progressive starter **S** Pressure switches **P** Air Take-off	Varies from element to element	**1** 1/8" port **2** 1/4" port **3** 3/8" port

SYNTESI® FILTER

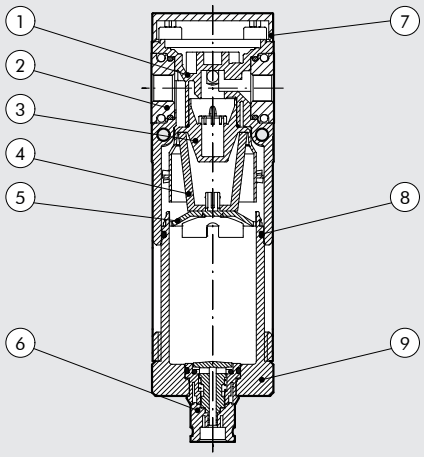
The job of the filter is to retain liquid or solid impurities present in the compressed air.
The incoming air is moved by the centrifuge unit, so that liquid particles, which are heavier, are projected against the walls of the container and force to adhere to it. As they accumulate, the create drops 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.
On the front and the back is an 1/8" port for use with pressure gauges or pressure switches or, considering the high flow rate, as additional filtered air take-off.

TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
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		
	MPa	1.5		
	psi	217		
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
	scfm	32	42	46
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1300	1650	1750
	scfm	46	58	62
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Weight	g	178	173	164
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		
		Note: the maximum input pressure for the RA version must not exceed 10 bar		
Fluid		Compressed air or other inert gases		
Condensate cup capacity	cm^3	30		
Mounting position		Vertical		
Port for additional air take-off		1/8", front and rear		
Additional air take-off flow rate at 6.3 bar	Nl/min	500		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18		
Wall fixing screws		No. 2 M4 screws		

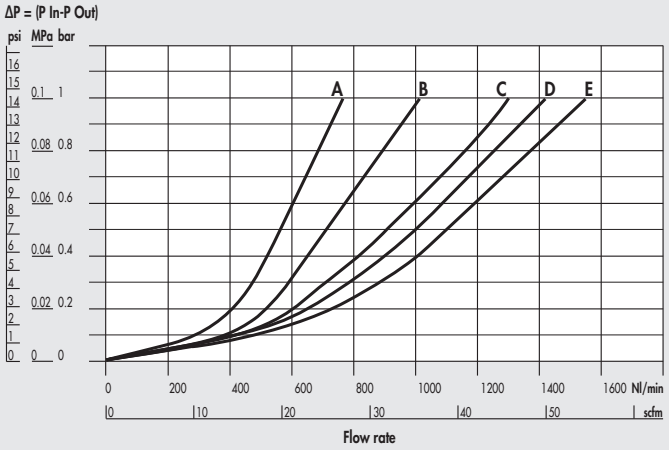
COMPONENTS

① Technopolymer filter body
② OT58 brass IN/OUT bushing
③ Technopolymer centrifuge
④ Sintered HDPE filter cartridge
⑤ Technopolymer screen
⑥ Drain (RMSA)
⑦ Technolpolymer plate
⑧ NBR o-ring gaskets
⑨ Clear technopolymer cup

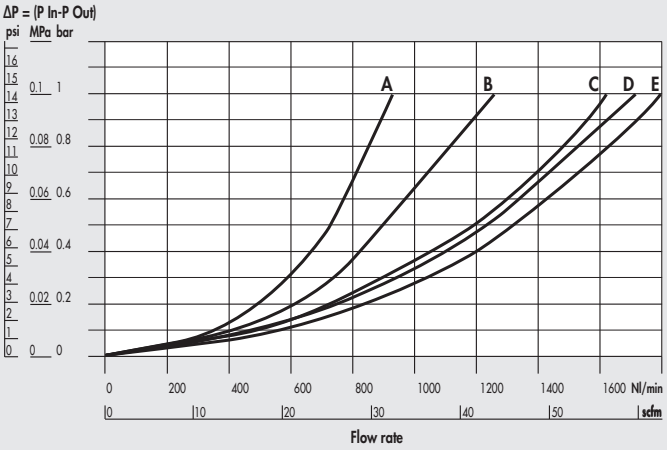


FLOW CHARTS

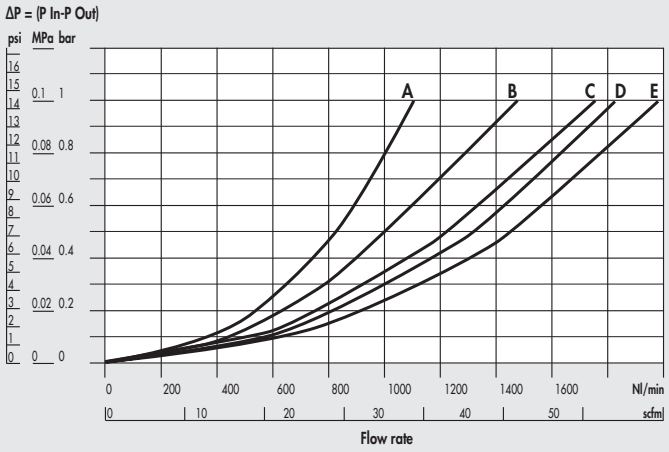
FIL Syntesi® 1/8"



FIL Syntesi® 1/4"

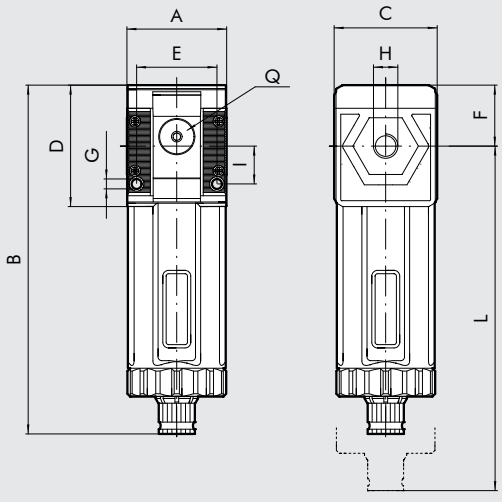


FIL Syntesi® 3/8"



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

DIMENSIONS



H (threaded port)	1/8"	1/4"	3/8"
A	42	42	44
B RMSA	148		
B RA	152		
C	44		
D	51.5		
E	33.5		
F	25.8		
G	Hole for M4 screws		
I	16		
L RMSA	202		
L RA	206		
Q (no. 2 additional air takes-off)	1/8"		

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 **1** 1/8" port **2** 1/4" port **3** 3/8" port	**F** Filter	**10** 5 µm RMSA **20** 20 µm RMSA **30** 50 µm RMSA **40** 5 µm RA **50** 20 µm RA **60** 50 µm RA	**0** Without bushing **1** 1/8" port **2** 1/4" port **3** 3/8" 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.

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
5610F100	FIL SY 5 RMSA without bushings
5610F200	FIL SY 20 RMSA without bushings
5610F400	FIL SY 5 RA without bushings
5610F500	FIL SY 20 RA without bushings
5611F101	FIL SY 1/8 5 RMSA
5611F201	FIL SY 1/8 20 RMSA
5611F401	FIL SY 1/8 5 RA
5611F501	FIL SY 1/8 20 RA
5612F102	FIL SY 1/4 5 RMSA
5612F202	FIL SY 1/4 20 RMSA
5612F402	FIL SY 1/4 5 RA
5612F502	FIL SY 1/4 20 RA
5613F103	FIL SY 3/8 5 RMSA
5613F203	FIL SY 3/8 20 RMSA
5613F403	FIL SY 3/8 5 RA
5613F503	FIL SY 3/8 20 RA

NOTES

SYNTESI® DEPURATOR

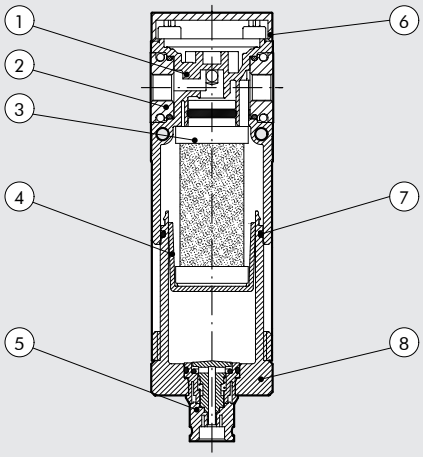
The job of the filter purifier is to separate liquid and solid particles dispersed in the compressed air with a high degree of efficiency.
This separation is achieved by means of a special filtering element called a "coalescence cartridge".
It is particularly indicated for eliminating traces of oil present 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.
There are two 1/8" ports, one on the front and one on the back, for use with pressure gauges or pressure switches or, considering the high flow rate, as additional air take-off. **The air taken from here is not purified**.

TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
Degree of filtration	µm	0.01 - output air purity class ISO8573-1: 1.7.2		
Max. input pressure	bar	15		
	MPa	1.5		
	psi	217		
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	550		
	scfm	9		
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 -20 to +50		
Weight	g	194	189	180
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure		
Fluid		Compressed air or other inert gases		
Cup capacity	cm^3	15		
Mounting position		Vertical		
Port for additional air take-off (not purified air)		1/8", front and rear		
Additional air take-off flow rate at 6.3 bar	Nl/min	500		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18		
Wall fixing screws		No. 2 M4 screws		
Notes on use		It is advisable to mount a 5 µm filter upstream of the purifier to retain solid particles		

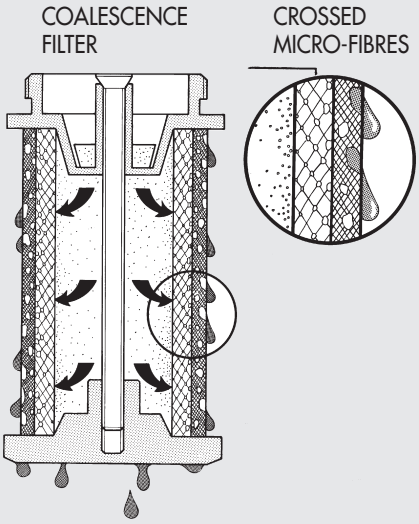
COMPONENTS

① Technopolymer depurator body
② OT58 brass IN/OUT bushing
③ Coalescence cartridge
④ Technopolymer cartridge support
⑤ Drain (RMSA)
⑥ Technolpolymer plate
⑦ NBR o-ring gaskets
⑧ Clear technopolymer cup



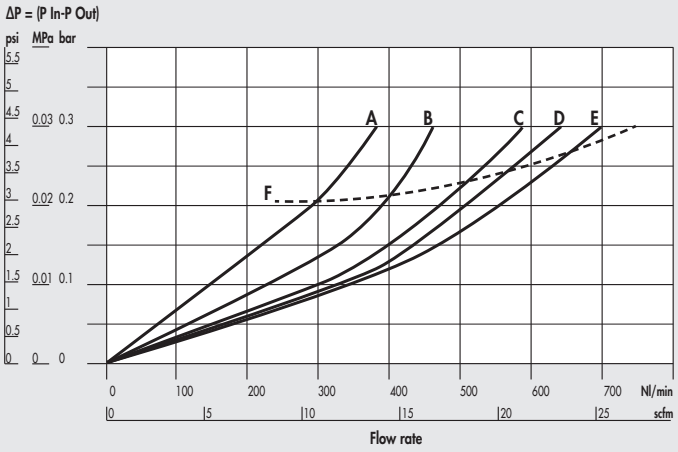
HOW THE COALESCENCE CARTRIDGE WORKS

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.

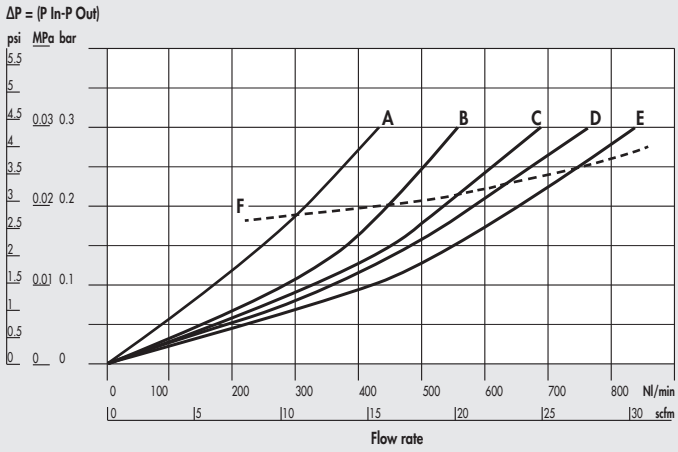


FLOW CHARTS

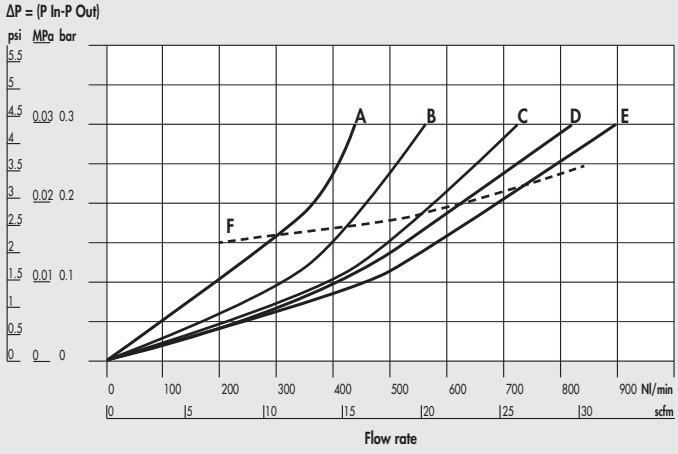
DEP Syntesi® 1/8"



DEP Syntesi® 1/4"

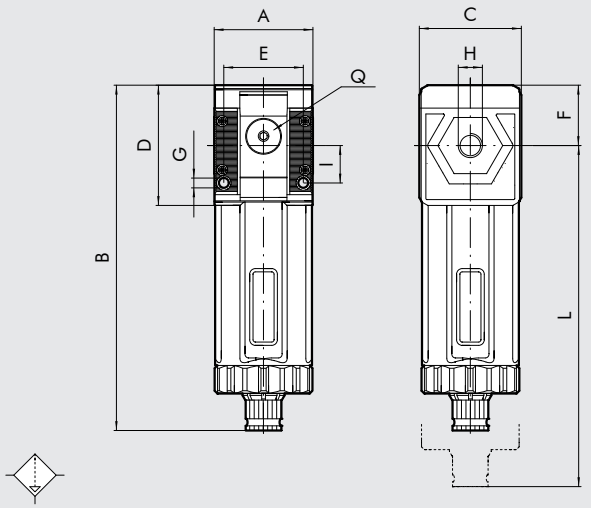


DEP Syntesi® 3/8"



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

DIMENSIONS



H (threaded port)		1/8″	1/4″	3/8″
A		42	42	44
B	RMSA	148		
	RA	152		
C		44		
D		51.5		
E		33.5		
F		25.8		
G		Hole for M4 screws		
I		16		
L	RMSA	202		
Q (no. 2 additional air takes-off)		1/8″		

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 **1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**D** Depurator	**10** RMSA	**0** Without bushing **1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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
5610D100	DEP SY RMSA without bushings
5611D101	DEP SY 1/8 RMSA
5612D102	DEP SY 1/4 RMSA
5613D103	DEP SY 3/8 RMSA

SYNTESI® ACTIVE CARBON FILTER

Activated-carbon filtering systems achieve the highest standard of purification possible in industrial applications. They eliminate all traces of oils, solvents and hydrocarbons, and remove unpleasant odours.
The operating principle uses activated carbon, which absorbs most of the polluting particles in the air thanks to minute holes in the granules of carbon.
There are two 1/8" ports, one on the front and one on the back, for use with pressure gauges or pressure switches or, considering the high flow rate, as additional air take-off. **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.

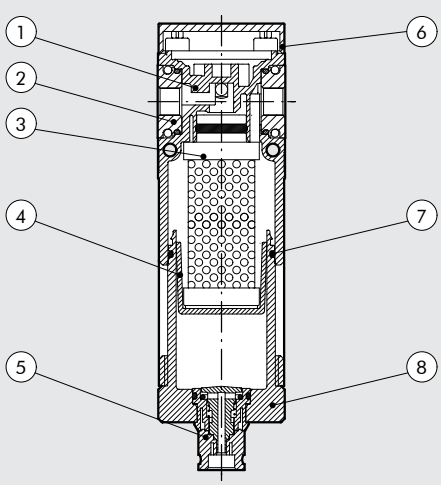
TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
Residual oil at 20°C *	mg/m^3	0.003 - output air purity class ISO8573-1: 1.7.1		
Duration of cartridge *	hours	4000		
Max. inlet pressure	bar	15		
	MPa	1.5		
	psi	217		
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	350		
	scfm	12		
		N.B.: flow rates higher than the recommended value reduces purification efficiency		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Weight	g	195	190	181
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		
Additional air take-off port (unfiltered air from cartridge CA)		1/8", front and rear		
Additional air take-off flow rate at 6.3 bar	Nl/min	500		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18		
Wall fixing screws		No. 2 M4 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

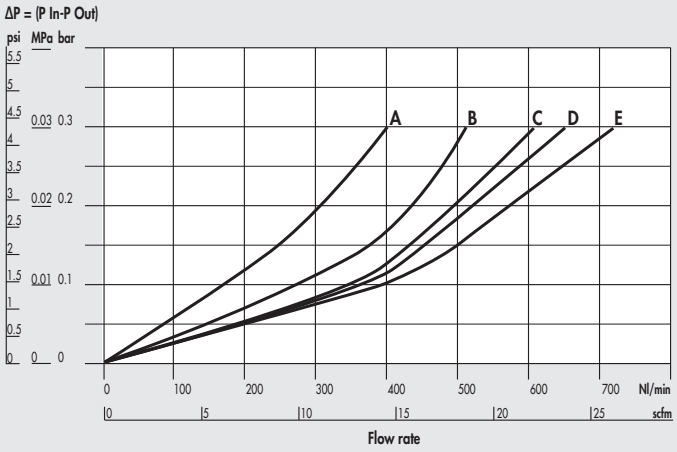
COMPONENTS

① Technopolymer depurator body
② OT58 brass IN/OUT bushing
③ Active carbon cartridge
④ Technopolymer cartridge support
⑤ Drain (RMSA)
⑥ Technolpolymer plate
⑦ NBR o-ring gasket
⑧ Clear technopolymer cup

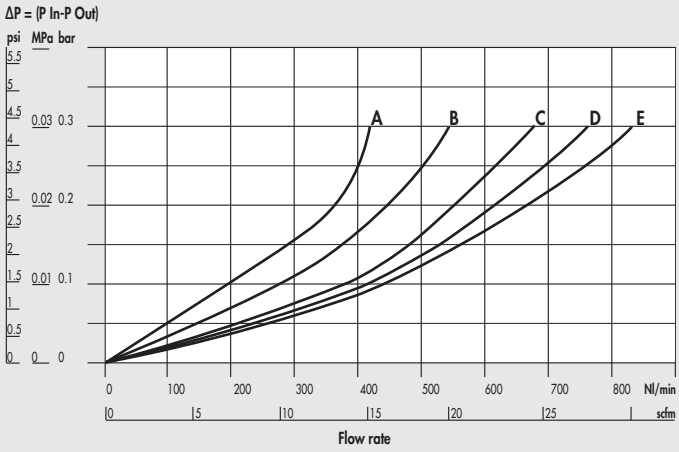


FLOW CHARTS

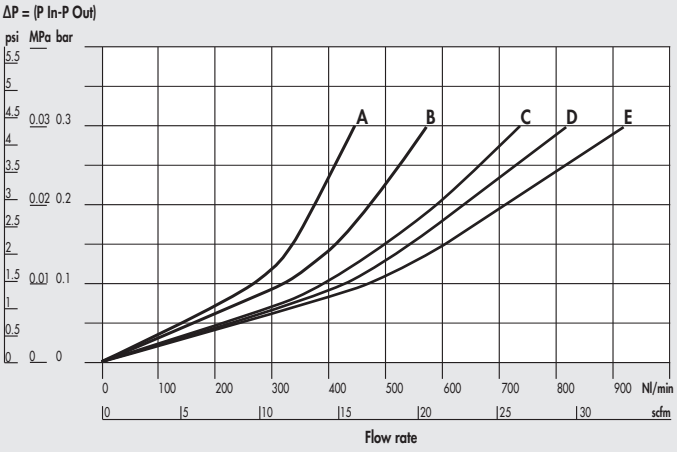
FIL CA Syntesi® 1/8"



FIL CA Syntesi® 1/4"

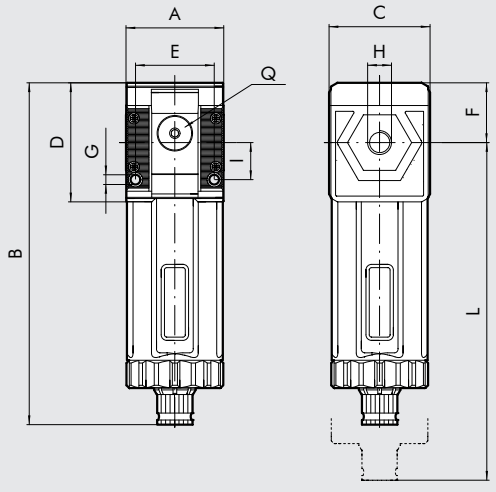


FIL CA Syntesi® 3/8"



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

DIMENSIONS



H (threaded port)	1/8"	1/4"	3/8"
A	42	42	44
B RMSA	148		
C	44		
D	51.5		
E	33.5		
F	25.8		
G	Hole for M4 screws		
I	16		
L RMSA	202		
Q (no. 2 additional air takes-off)	1/8"		

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 **1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**C** Active carbon filter	**10** RMSA	**0** Without bushing **1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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
5610C100	AC SY RMSA without bushings
5611C101	AC SY 1/8 RMSA
5612C102	AC SY 1/4 RMSA
5613C103	AC SY 3/8 RMSA

NOTES

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.

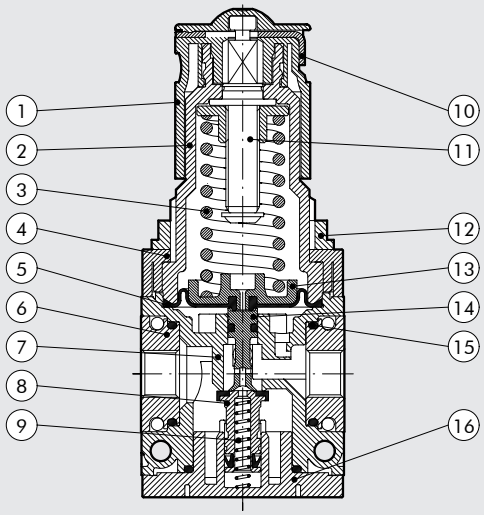
The regulator includes a compensation system that keeps the pressure setting virtually constant, even when the upstream pressure changes. This is achieved mainly by the design of the valve, which is pneumatically balanced.
If the downstream pressure rises above the threshold value, the air is discharged (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 one or two padlocks to prevent manipulation.
There are two 1/8" ports, one on the front and one on the back, for use with pressure gauges or pressure switches or, considering the high flow rate, as additional regulated air take-off.

TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
Max. inlet pressure	bar	15		
	MPa	1.5		
	psi	217		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.5 MPa; 7 psi)	Nl/min	570	1600	2900
(inlet pressure 10 bar)	scfm	20	57	103
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1200	2800	3350
(inlet pressure 10 bar)	scfm	42	99	119
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70		
	scfm	2.5		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Full outflow with zero inlet pressure		Included		
Padlockable knob		Included		
Upstream pressure compensation		Included, via balanced valve		
Weight	g	193	188	179
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		
Additional air take-off flow rate at 6.3 bar	Nl/min	500		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18		
Wall fixing screws		No. 2 M4 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		

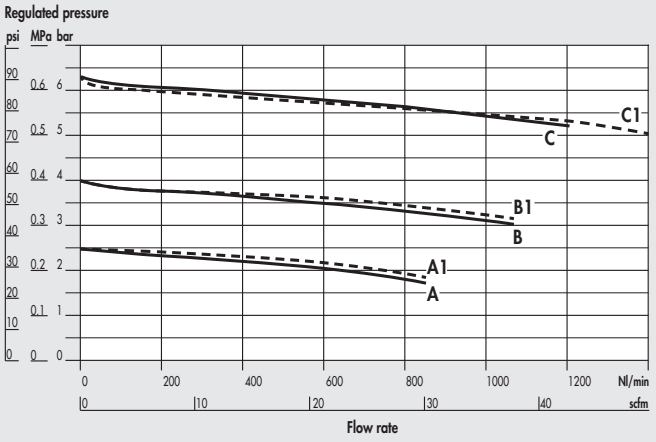
COMPONENTS

① Technopolymer adjusting knob
② Technopolymer bell
③ Steel adjusting spring
④ Technopolymer flange
⑤ Rolling diaphragm
⑥ OT58 brass IN/OUT bushing
⑦ Technopolymer regulator body
⑧ OT58 brass valve, with NBR vulcanized gasket
⑨ Stainless steel valve spring
⑩ Plate for knob locking
⑪ OT58 brass adjusting screw
⑫ Technopolymer ring nut
⑬ Technopolymer plate
⑭ Technopolymer rod
⑮ NBR o-ring gasket
⑯ Technopolymer plug

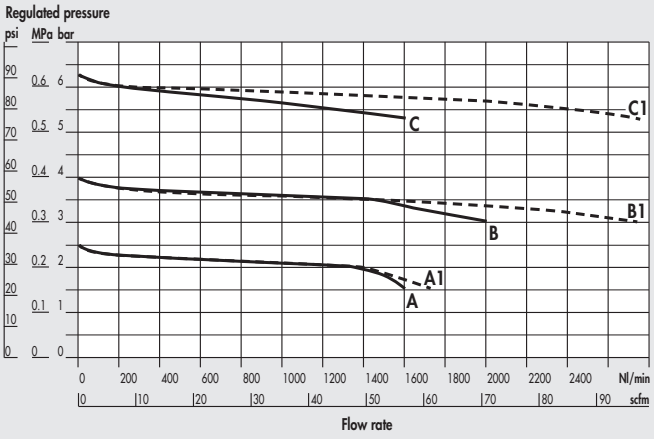


CURVE DI PORTATA

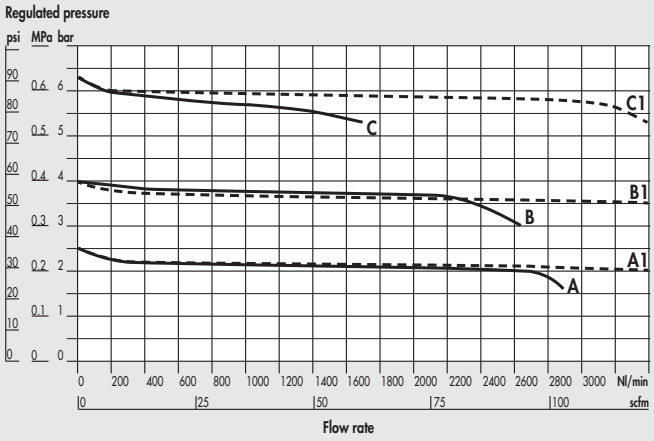
REG Syntesi® 1/8"



REG Syntesi® 1/4"

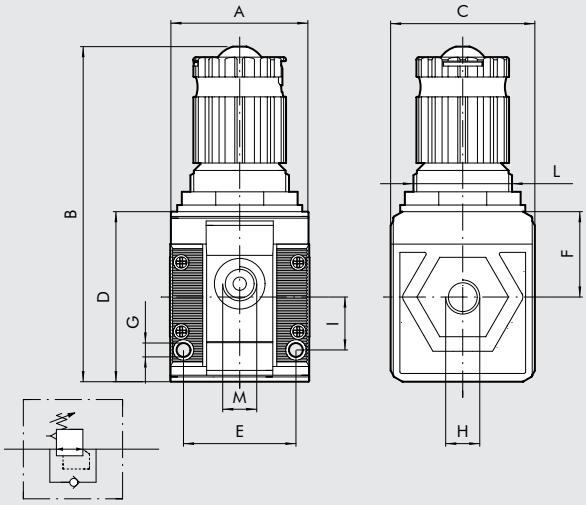


REG Syntesi® 3/8"



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

DIMENSIONS



H (threaded port)	1/8″	1/4″	3/8″
A	42	42	44
B	102		
C	44		
D	51.5		
E	33.5		
F	25.8		
G	Hole for M4 screws		
I	16		
L	M30x1.5		
M (pressure gauge port or additional air takes-off)	1/8″		

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 **1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**R** Pressure regulator	**10** 0 ÷ 2 bar **12** 0 ÷ 4 bar **14** 0 ÷ 8 bar **16** 0 ÷ 12 bar	**0** Without bushing **1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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
5610R140	REG SY 08 without bushings
5610R160	REG SY 012 without bushings
5611R141	REG SY 1/8 08
5611R161	REG SY 1/8 012
5612R142	REG SY 1/4 08
5612R162	REG SY 1/4 012
5613R143	REG SY 3/8 08
5613R163	REG SY 3/8 012

SYNTESI® IN-SERIES REGULATOR

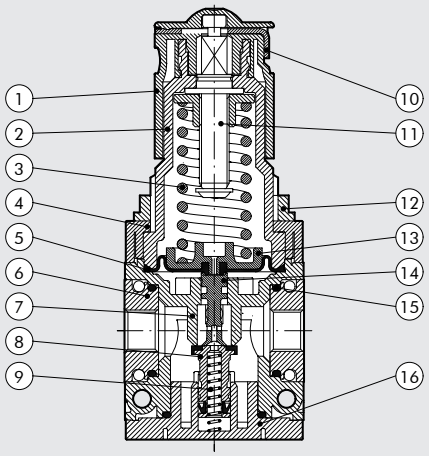
The in-series regulator is used to take air at a set pressure from the ports on the front and back of the body, while the pneumatic inlet and outlet ports are connected directly.
It is possible for instance to assemble several regulators side by side, all supplied at the same pressure, and obtain different regulated pressures, regardless of the pressure of the previous module.
The in-series regulator uses the same construction principles as the standard regulator, so the advantages are the same, such as compensation for upstream pressure changes, relief valve, rapid relief of the downstream pressure and a padlockable push-lock knob.

TECHNICAL DATA

Threaded inlet port, through		1/8"	1/4"	3/8"
Utility threaded port		1/8"		
Max. input pressure	bar	15		
	MPa	1.5		
	psi	217		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	330		
	scfm	12		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500		
	scfm	18		
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70		
	scfm	2.5		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Full outflow with zero inlet pressure		Included		
Padlockable knob		Included		
Upstream pressure compensation		Included, via balanced valve		
Weight	g	193	188	179
Fluid		Compressed air or other inert gases		
Mounting position		In any position		
Wall fixing screws		No. 2 M4 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		

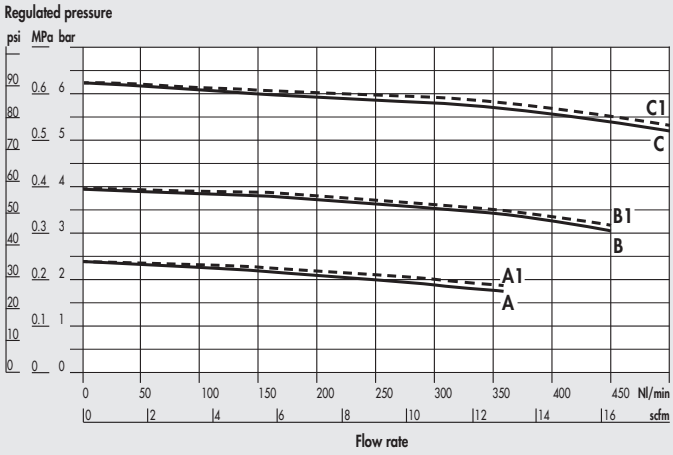
COMPONENTS

① Technopolymer adjusting knob
② Technopolymer bell
③ Steel adjusting spring
④ Technopolymer flange
⑤ Rolling diaphragm
⑥ OT58 brass IN/OUT bushing
⑦ Technopolymer body
⑧ OT58 brass valve, with NBR vulcanized gasket
⑨ Stainless steel valve spring
⑩ Plate for knob locking
⑪ OT58 brass adjusting screw
⑫ Technopolymer ring nut
⑬ Technopolymer plate
⑭ Technopolymer rod
⑮ NBR o-ring gaskets
⑯ Technopolymer plug



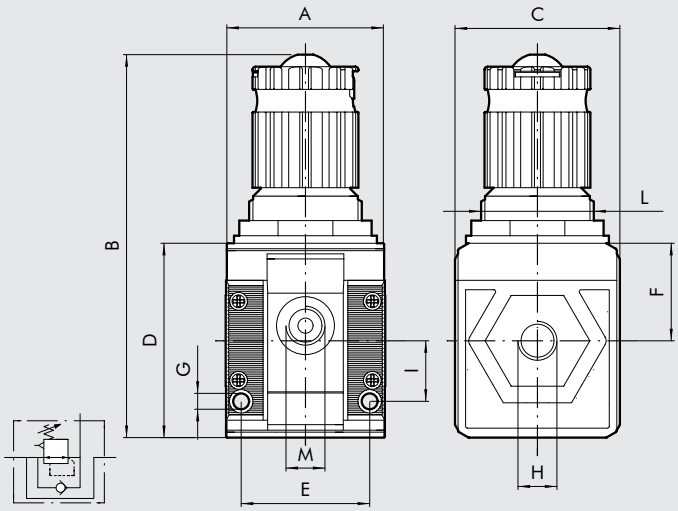
FLOW CHARTS

REG BATTERY Syntesi® 1/4"-1/8"-3/8"



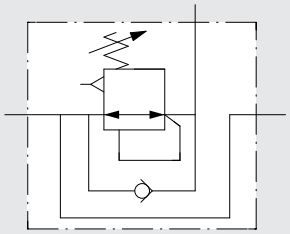
A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar
C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar
B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

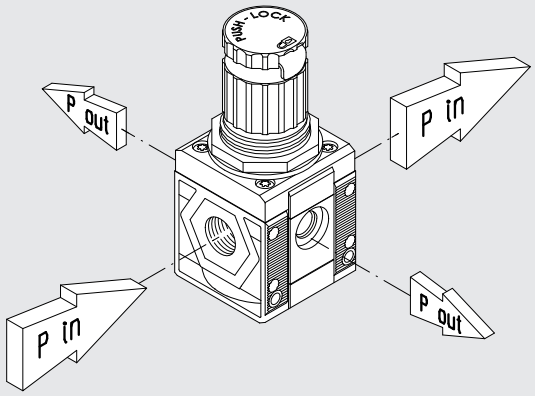
DIMENSIONS



H (threaded port)	1/8"	1/4"	3/8"
A	42	42	44
B	102		
C	44		
D	51.5		
E	33.5		
F	25.8		
G	Hole for M4 screws		
I	16		
L	M30x1.5		
M (use)	1/8"		

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 **1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**R** Pressure regulator	**20** 0 - 2 bar **22** 0 - 4 bar **24** 0 - 8 bar **26** 0 - 12 bar	**0** Without bushing **1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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
5610R240	In-series REG SY 08 without bushings
5610R260	In-series REG SY 012 without bushings
5611R241	In-series REG SY 1/8 08
5611R261	In-series REG SY 1/8 012
5612R242	In-series REG SY 1/4 08
5612R262	In-series REG SY 1/4 012
5613R243	In-series REG SY 3/8 08
5613R263	In-series REG SY 3/8 012

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:

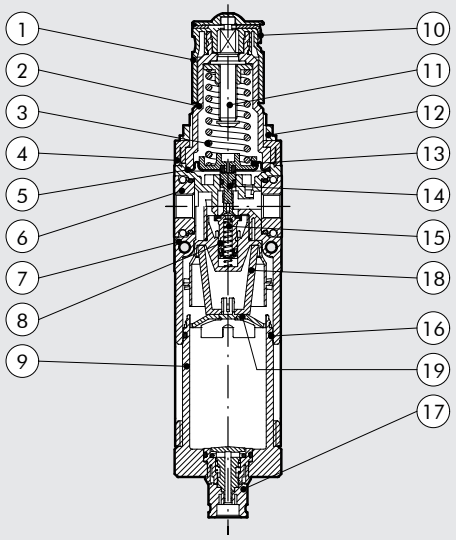
- Separation of condensate and larger liquid and solid particles by centrifugation.
- Two condensate drain options (RMSA and RA).
- 360° visually inspection of the condensate level, via transport spy-holes.
- Rolling diaphragm regulator, allowing maximum precision and flow rate, and minimal friction.
- 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

Threaded port		1/8"	1/4"	3/8"
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		
	MPa	1.5		
	psi	217		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.5 MPa; 7 psi)	Nl/min	500	800	2200
(inlet pressure 10 bar)	scfm	18	28	78
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1300	2000	3000
(inlet pressure 10 bar)	scfm	46	71	106
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70		
	scfm	2.5		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Full outflow with zero inlet pressure		Included		
Padlockable knob		Included		
Upstream pressure compensation		Included, via balanced valve		
Weight	g	244	239	230
Fluid		Compressed air or other inert gases		
Mounting position		Vertical		
Additional air take-off, for pressure gauges or fittings		1/8", front and rear		
Additional air take-off flow rate at 6.3 bar	Nl/min	500		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18		
Cup capacity	cm^3	15		
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		
		Note: the maximum input pressure for the RA version must not exceed 10 bar		
Wall fixing screws		No. 2 M4 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		

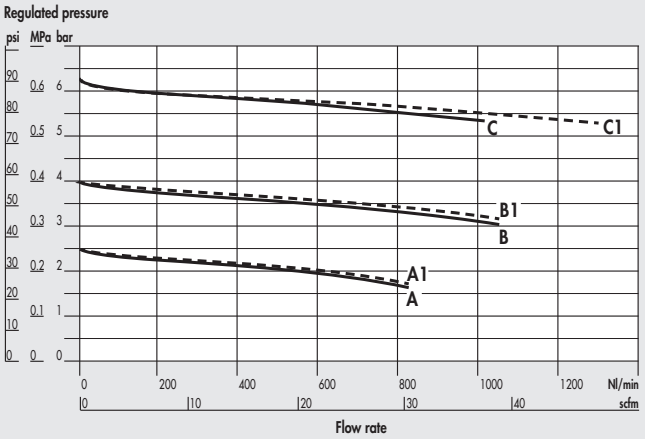
COMPONENTS

① Technopolymer adjusting knob
② Technopolymer bell
③ Steel adjusting spring
④ Technopolymer flange
⑤ Rolling diaphragm
⑥ OT58 brass IN/OUT bushing
⑦ Technopolymer body
⑧ OT58 brass valve, with NBR vulcanized valve
⑨ Clear technopolymer cup
⑩ Plate for knob locking
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

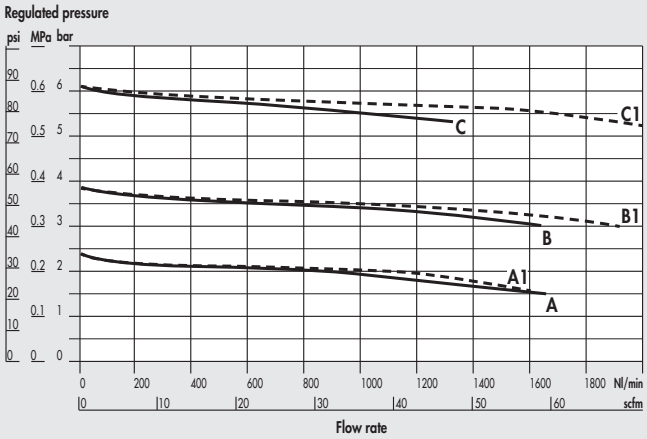


FLOW CHARTS

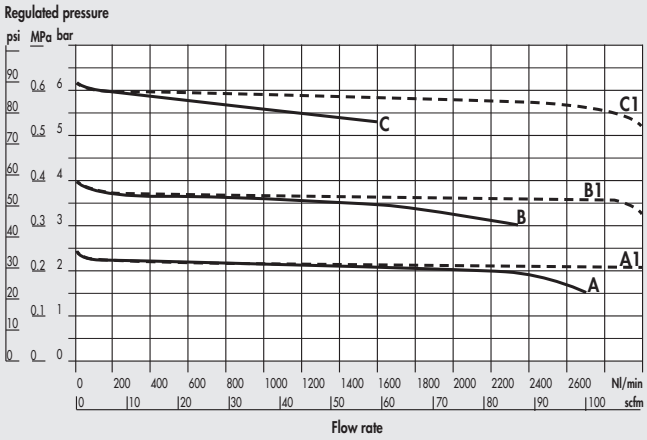
FR Syntesi® 1/8"



FR Syntesi® 1/4"

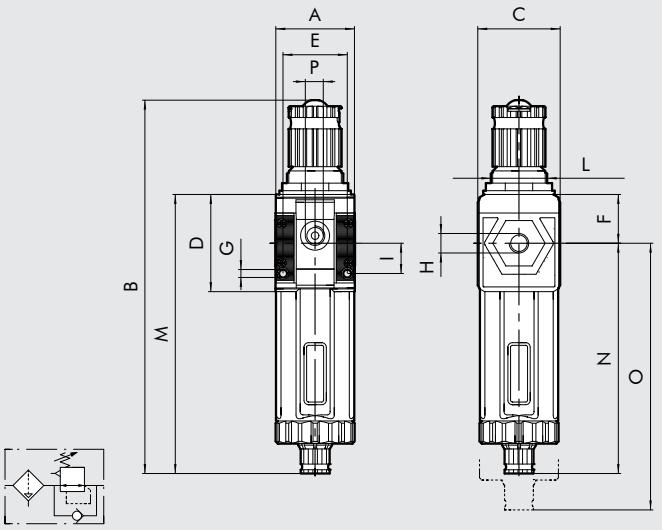


FR Syntesi® 3/8"



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

DIMENSIONS



H (threaded port)		1/8"	1/4"	3/8"
A		42	42	44
B	RMSA	198		
	RA	202		
C		44		
D		51.5		
E		33.5		
F		25.8		
G		Hole for M4 screws		
I		16		
L		M30x1.5		
M	RMSA	148		
	RA	152		
N	RMSA	122.2		
	RA	126.2		
O	RMSA	202		
	RA	206		
P (pressure gauge port or additional air takes-off)		1/8"		

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	**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 - 2 bar **20** 20 µm, RMSA, 0 - 2 bar **30** 50 µm, RMSA, 0 - 2 bar **40** 5 µm, RA, 0 - 2 bar **50** 20 µm, RA, 0 - 2 bar **60** 50 µm, RA, 0 - 2 bar **12** 5 µm, RMSA, 0 - 4 bar **22** 20 µm, RMSA, 0 - 4 bar **32** 50 µm, RMSA, 0 - 4 bar **42** 5 µm, RA, 0 - 4 bar **52** 20 µm, RA, 0 - 4 bar **62** 50 µm, RA, 0 - 4 bar **14** 5 µm, RMSA, 0 - 8 bar **24** 20 µm, RMSA, 0 - 8 bar **34** 50 µm, RMSA, 0 - 8 bar **44** 5 µm, RA, 0 - 8 bar **54** 20 µm, RA, 0 - 8 bar **64** 50 µm, RA, 0 - 8 bar **16** 5 µm, RMSA, 0 - 12 bar **26** 20 µm, RMSA, 0 - 12 bar **36** 50 µm, RMSA, 0 - 12 bar **46** 5 µm, RA, 0 - 12 bar **56** 20 µm, RA, 0 - 12 bar **66** 50 µm, RA, 0 - 12 bar	**0** Without bushing **1** 1/8" port **2** 1/4" port **3** 3/8" 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.

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
5610B140	FR SY 5 08 RMSA without bushings
5610B240	FR SY 20 08 RMSA without bushings
5610B440	FR SY 5 08 RA without bushings
5610B540	FR SY 20 08 RA without bushings
5610B160	FR SY 5 012 RMSA without bushings
5610B260	FR SY 20 012 RMSA without bushings
5610B460	FR SY 5 012 RA without bushings
5610B560	FR SY 20 012 RA without bushings

Code	Description
5612B142	FR SY 1/4 5 08 RMSA
5612B242	FR SY 1/4 20 08 RMSA
5612B442	FR SY 1/4 5 08 RA
5612B542	FR SY 1/4 20 08 RA
5612B162	FR SY 1/4 5 012 RMSA
5612B262	FR SY 1/4 20 012 RMSA
5612B462	FR SY 1/4 5 012 RA
5612B562	FR SY 1/4 20 012 RA

Code	Description
5611B141	FR SY 1/8 5 08 RMSA
5611B241	FR SY 1/8 20 08 RMSA
5611B441	FR SY 1/8 5 08 RA
5611B541	FR SY 1/8 20 08 RA
5611B161	FR SY 1/8 5 012 RMSA
5611B261	FR SY 1/8 20 012 RMSA
5611B461	FR SY 1/8 5 012 RA
5611B561	FR SY 1/8 20 012 RA

Code	Description
5613B143	FR SY 3/8 5 08 RMSA
5613B243	FR SY 3/8 20 08 RMSA
5613B443	FR SY 3/8 5 08 RA
5613B543	FR SY 3/8 20 08 RA
5613B163	FR SY 3/8 5 012 RMSA
5613B263	FR SY 3/8 20 012 RMSA
5613B463	FR SY 3/8 5 012 RA
5613B563	FR SY 3/8 20 012 RA

NOTES

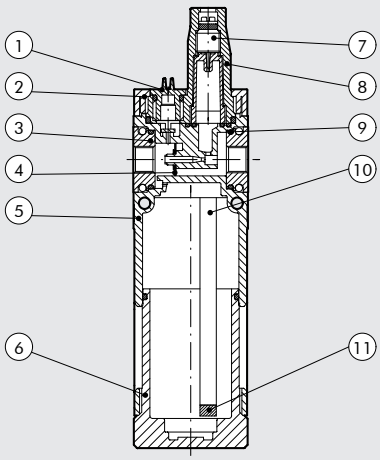
The pneumatic lubricator is the simplest way of efficiently lubricating the actuators linked to a circuit. As compressed air flows towards the lubricator, it encounters a flexible diaphragm which partially blocks the way, creating a small pressure difference between the inlet and outlet air. Being at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

TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
Type of lubrication		Oil mist		
Version		Manual filling from the top		
Max. input pressure	bar	15		
	MPa	1.5		
	psi	217		
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
	scfm	46	60	78
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1600	3000	3650
	scfm	57	106	129
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Weight	g	185	180	171
Fluid		Compressed air or other inert gases		
Quantity of filled oil	cm^3	60		
Mounting position		Vertical		
Port for additional air take-off		1/8", front and rear, lubricated air		
Additional air take-off flow rate at 6.3 bar	Nl/min	450		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	16		
Wall fixing screws		No. 2 M4 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		

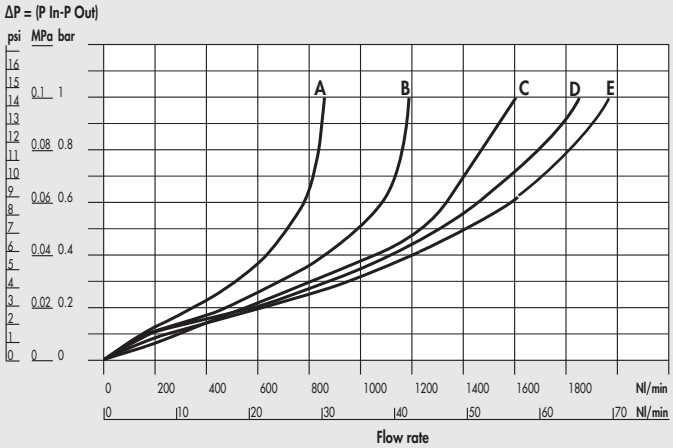
COMPONENTS

① Technopolymer oil filling plug
② Technopolymer flange
③ OT58 brass IN/OUT bushing
④ Venturi NBR diaphragm
⑤ Technopolymer body
⑥ Clear technopolymer cup
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

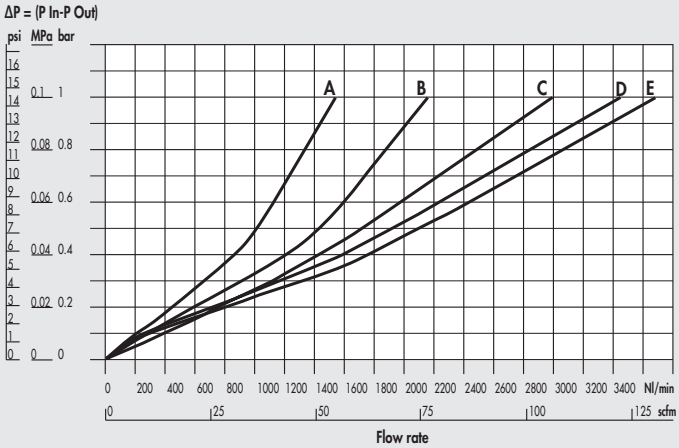


FLOW CHARTS

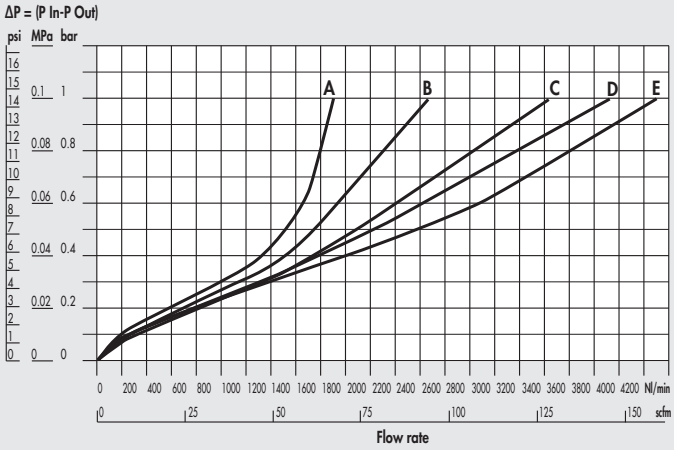
LUB Syntesi® 1/8"



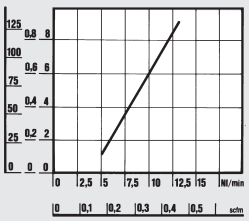
LUB Syntesi® 1/4"



LUB Syntesi® 3/8"

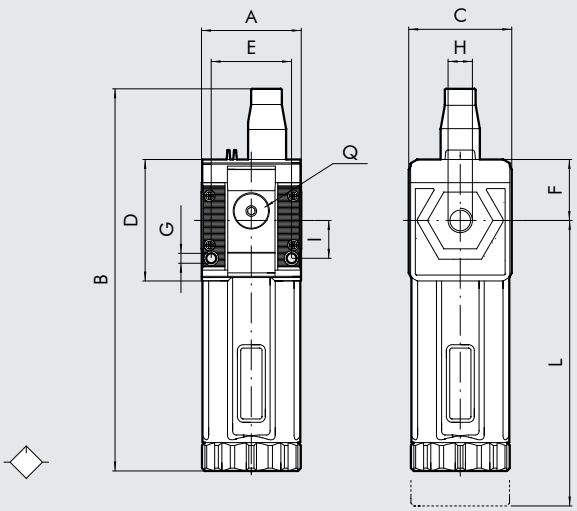


Minimum operating flow chart



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



H (threaded port)	1/8"	1/4"	3/8"
A	42	42	44
B	162		
C	44		
D	51.5		
E	33.5		
F	25.8		
G	Hole for M4 screws		
I	16		
L	158		
Q (no. 2 additional air takes-off)	1/8"		

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 **1** 1/8" port **2** 1/4" port **3** 3/8" port	**L** Lubricator	**10** Manual filling from the top	**0** Without bushing **1** 1/8" port **2** 1/4" port **3** 3/8" port

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
5610L100	LUB SY without bushings
5611L101	LUB SY 1/8
5612L102	LUB SY 1/4
5613L103	LUB SY 3/8

NOTES

SYNTESI® SHUT-OFF VALVE

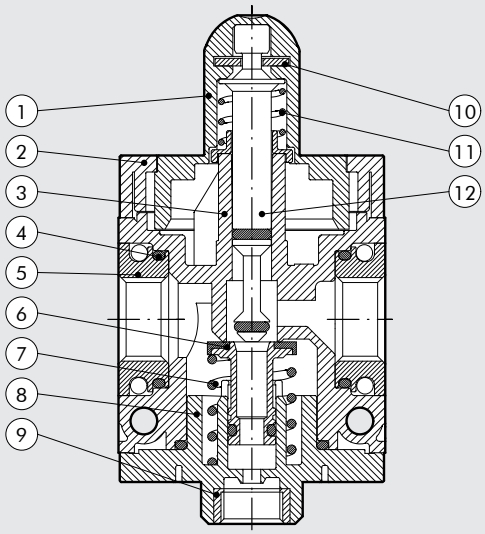
This device separates the compressed air circuit from the main air supply. It is a three-way valve that relieves the downstream system in the closed position. This makes it useful for maintenance operations or when the air supply to a machine or piece of equipment needs to be shut off.
Manual, pneumatic, 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 manual version can be locked when the valve is in the closed position, using one or two padlocks.
There are two 1/8" ports, one on the front and one on the back, for use with pressure gauges or pressure switches or, considering the high flow rate, as additional air take-off.

TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
Threaded discharge port		1/8"		
Type of control		Manual - pneumatic - solenoid - solenoid pilot - assisted		
Max inlet pressure for pneumatic and solenoid pilot-assisted versions	bar	15		
	MPa	1.5		
	psi	217		
Inlet pressure for solenoid version	bar	3-10		
	MPa	0.3-1		
	psi	43-145		
Pilot pressure for pneumatic and solenoid pilot-assisted versions	bar	3-10		
	MPa	0.3-1		
	psi	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
	scfm	28	35	39
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1100	1500	1600
	scfm	39	53	57
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	500		
	scfm	18		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Padlockable knob		Included		
Weight	g	197	192	183
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		
Additional air take-off flow rate at 6.3 bar	Nl/min	500		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18		
Wall fixing screws		No. 2 M4 screws		
Bobbin capacity for electro-pneumatic version	W	12VDC e 24VDC: 2W; 24VAC, 110VAC and 220 VAC: 3.5 VA		
Manual control of electro-pneumatic versions		Bistable, with screwdriver slot (horizontal = OFF, vertical = ON)		

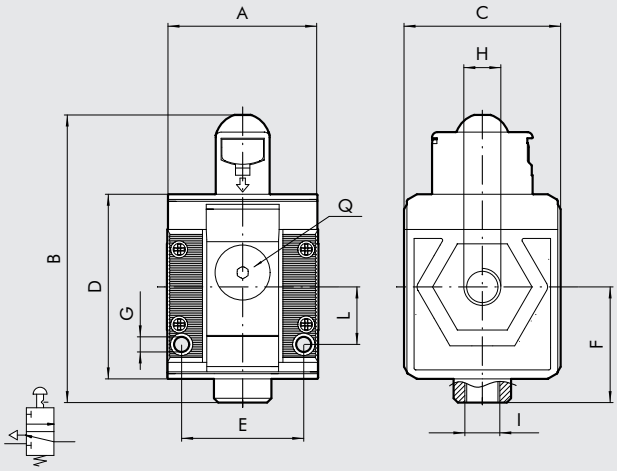
COMPONENTS

① Technopolymer knob
② Technopolymer hinge
③ Technopolymer body
④ NBR o-ring gasket
⑤ OT58 brass IN/OUT bushing
⑥ OT58 brass valve with NBR vulcanized gasket
⑦ Stainless steel valve spring
⑧ Technopolymer plug
⑨ OT58 brass threaded insert
⑩ Plate for knob locking
⑪ Stainless steel spring stem recovery
⑫ OT58 brass stem

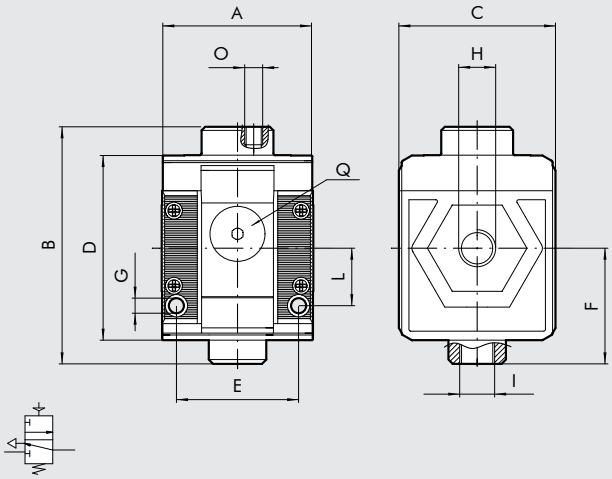


DIMENSIONS

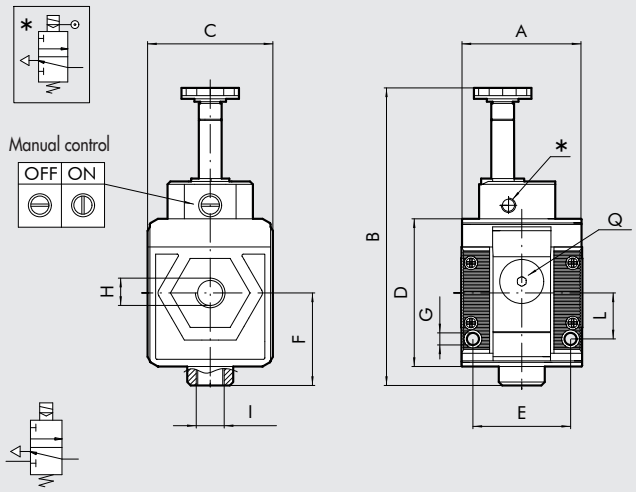
MANUAL



PNEUMATIC



SOLENOID/SOLENOID PILOT-ASSISTED*



	MANUAL			PNEUMATIC			SOLENOID/SOLENOID PILOT-ASSISTED		
H (threaded port)	1/8″	1/4″	3/8″	1/8″	1/4″	3/8″	1/8″	1/4″	3/8″
A	42	42	44	42	42	44	42	42	44
B	80			66			104		
C	44			44			44		
D	51.5			51.5			51.5		
E	33.5			33.5			33.5		
F	32.2			32.2			32.2		
G	Hole for M4 screws			Hole for M4 screws			Hole for M4 screws		
I (exhaust)	1/8″			1/8″			1/8″		
L	16			16			16		
O (pilot)	-			M5			-		
Q (no. 2 additional air takes-off)	1/8″			1/8″			1/8″		
* Pilot	-			-			M5		

KEY TO CODES

56	1	1	V	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	**V** Shut-off valve	**10** Manual **20** Pneumatic **30** Solenoid pilot-assisted **70** Solenoid	**0** Without bushing **1** 1/8″ port **2** 1/4″ port **3** 3/8″ port

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

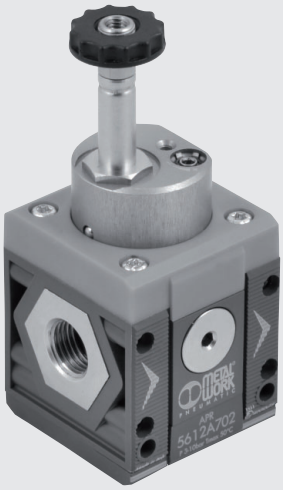
N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description
5610V100	V3V SY manuale without bushings
5611V101	V3V SY 1/8 manual
5612V102	V3V SY 1/4 manual
5613V103	V3V SY 3/8 manual
5610V200	V3V SY pneumatic without bushings
5611V201	V3V SY 1/8 pneumatic
5612V202	V3V SY 1/4 pneumatic
5613V203	V3V SY 3/8 pneumatic
5610V300	V3V SY solenoid pilot-assisted without bushings
5611V301	V3V SY 1/8 solenoid pilot-assisted
5612V302	V3V SY 1/4 solenoid pilot-assisted
5613V303	V3V SY 3/8 solenoid pilot-assisted

Code	Description
5610V700	V3V SY solenoid without bushings
5611V701	V3V SY 1/8 solenoid
5612V702	V3V SY 1/4 solenoid
5613V703	V3V SY 3/8 solenoid

NOTES

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÷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.

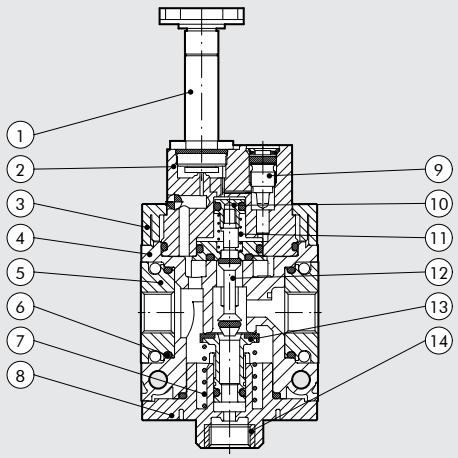


TECHNICAL DATA

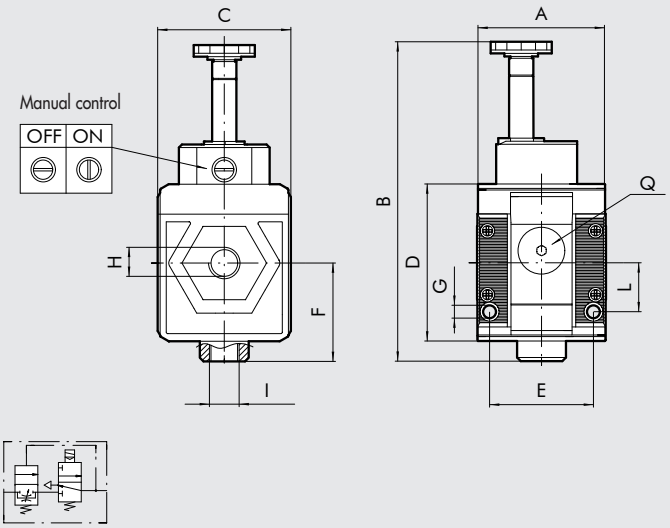
Threaded port		1/8"	1/4"	3/8"
Threaded discharge port			1/8"	
Type of control			Solenoid	
Inlet pressure	bar		3-10	
	MPa		0.3-1	
	psi		43-145	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	900	1000	1100
	scfm	32	39	39
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1250	1500	1600
	scfm	44	53	57
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min		500	
	scfm		18	
Maximum flow rate start-up, at 6.3 bar (0.63 MPa; 91 psi)	Nl/min		170	
with regulation pin completely unscrewed	scfm		6	
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C		From -20 to +50	
Weight	g	203	198	189
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	
Additional air take-off flow rate at 6.3 bar	Nl/min		500	
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm		18	
Wall fixing screws			No. 2 M4 screws	
Bobbin capacity for electro-pneumatic version	W	12VDC e 24VDC: 2W;	24VAC, 110VAC and 220 VAC: 3.5 VA	
Manual control of electro-pneumatic versions			Bistable, with screwdriver slot (horizontal = OFF, vertical = ON)	

COMPONENTS

① Sleeve ø8
② Anodized aluminium upper block
③ Technopolymer flange
④ Technopolymer body
⑤ OT58 brass IN/OUT bushing
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



H (threaded port)	1/8″	1/4″	3/8″
A	42	42	44
B	105		
C	44		
D	51.5		
E	33.5		
F	32.2		
G	Hole for M4 screws		
I (exhaust)	1/8″		
L	16		
Q (no. 2 additional air takes-off)	1/8″		

KEY TO CODES

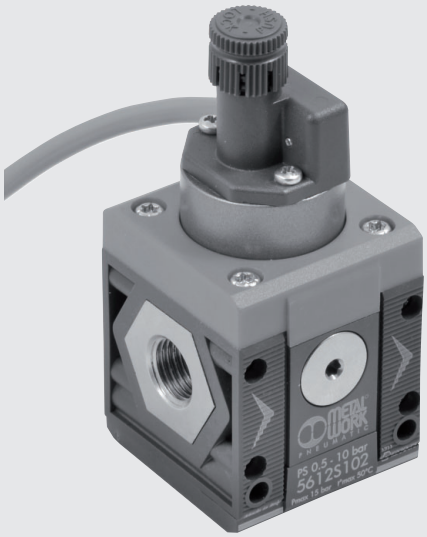
56	1	1	A	70	1
SYNTESI	**SIZE**	**THREADED INPUT CONNECTION**	**ELEMENT**	**TYPE**	**THREADED OUTPUT CONNECTION**
56 Syntesi	**1** Size 1	**0** Without bushing **1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**A** Progressive starter APR	**70** Solenoid	**0** Without bushing **1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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
5610A700	APR SY without bushings
5611A701	APR SY 1/8 elpn
5612A702	APR SY 1/4 elpn
5613A703	APR SY 3/8 elpn

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.

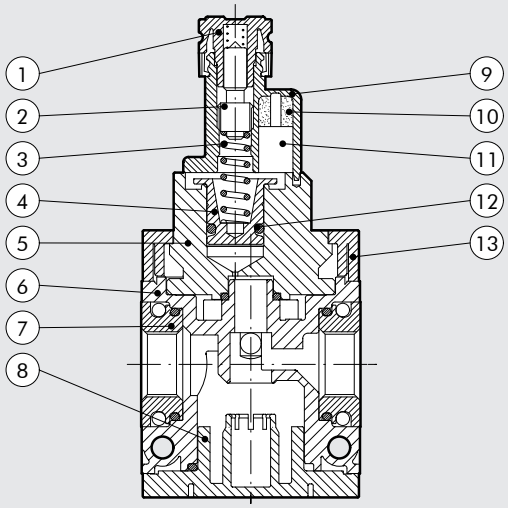


TECHNICAL DATA

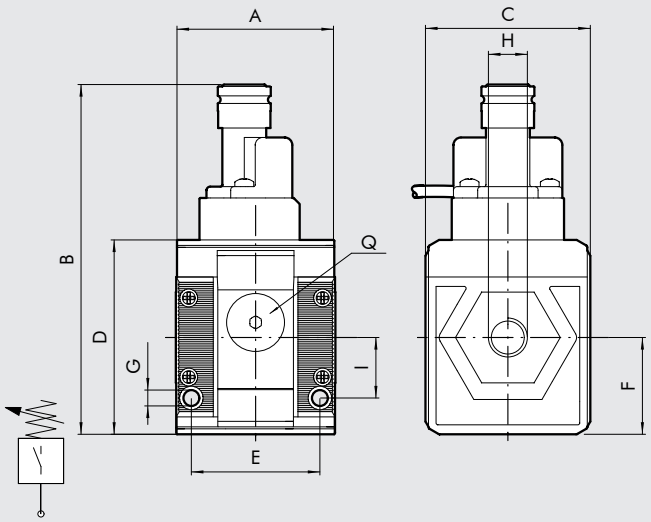
Threaded port		1/8"	1/4"	3/8"
Adjustable pressure interval	bar	From 0.5 to 10		
Hysteresis (not adjustable)	bar	From 0.4 to 0.8 (See diagram)		
Maximum pressure	bar	15		
	MPa	1.5		
	psi	217		
Operating temperature range at: 1 MPa; 10 bar; 145 psi	°C	50		
	°F	122		
Maximum current	A	2		
Maximum voltage	V	250		
Outside diameter of cable	mm	4.9		
Number of wires and cross section		3 x 0.5 mm^2		
Contacts		Normally-Open (NO) and Normally-Closed (NC)		
Protection		IP65		
Number of switchings		5 x 10^6		
Fluid		Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous		
Mounting position		In any position		
Weight	g	255	250	241

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 OT58 brass IN/OUT bushing
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



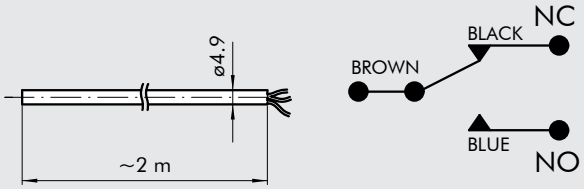
DIMENSIONS



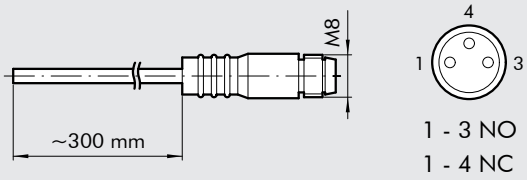
H (threaded port)	1/8″	1/4″	3/8″
A	42	42	44
B	93		
C	44		
D	51.5		
E	33.5		
F	25.6		
G	Hole for M4 screws		
I	16		
Q (no. 2 additional air takes-off)	1/8″		

WIRING DIAGRAM

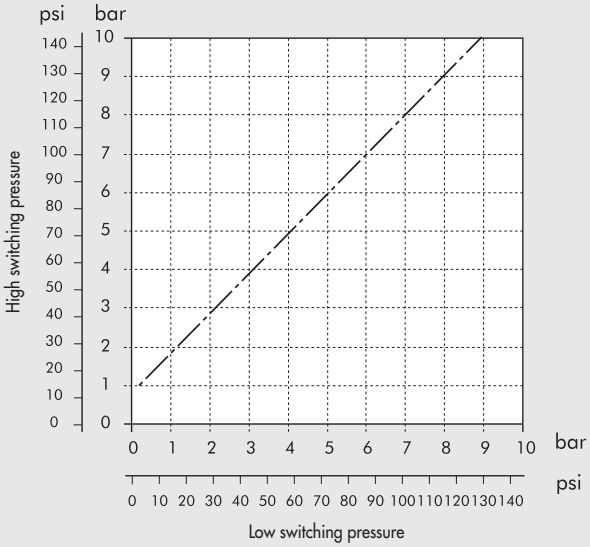
VERSION WITH CABLE



VERSION WITH M8 CONNECTOR



HYSTERESIS GRAPH

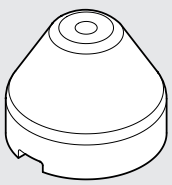


ORDERING CODES

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

SPARES

SECURITY KNOB



Code	Description
9200703	Security knob

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

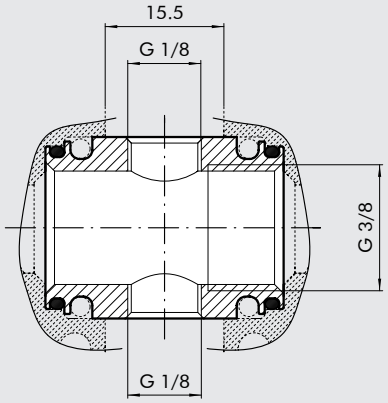
SYNTESI® AIR TAKE-OFF

The air take-off is a connecting element that is mounted between two Syntesi® modules. It has two threaded ports, one in the top and one underneath, giving two 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

Threaded port		No. 2 1/8" threads
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
	scfm	55
Mounting position		Between any of two Syntesi® modules
Usage temperature and pressure		Given by the Syntesi® modules it's connected to
Weight	g	62
Fluid		Compressed air or other inert gases

DIMENSIONS



ORDERING CODES

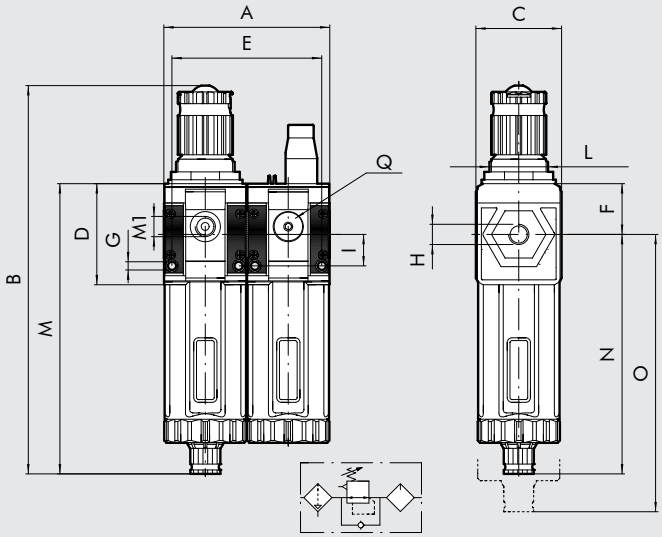
Code	Description
5610P100	PA SY

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

TECHNICAL DATA

Threaded port		1/8″	1/4″	3/8″
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		
	MPa	1.5		
	psi	217		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	350		
(P In=10 bar)	scfm	12		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1400		
(P In=10 bar)	scfm	50		
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70		
	scfm	2.5		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Padlockable knob		Included		
Upstream pressure compensation		Included, via balanced valve		
Weight	g	414	409	400
Fluid		Compressed air or other inert gases		
Mounting position		Vertical		
Additional air take-off, for pressure gauges or fittings		1/8″, front and rear		
Additional air take-off flow rate at 6.3 bar	Nl/min	500 - 450		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18 - 16		
Filter cup capacity (condensate)	cm^3	30		
Quantity of filled oil	cm^3	60		
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		
		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		

DIMENSIONS



H (threaded port)		1/8″	1/4″	3/8″
A		84	84	86
B	RMSA	198		
	RA	202		
C		44		
D		51.5		
E		75.3		
F		25.8		
G		Hole for M4 screws		
I		16		
L		M30x1.5		
M	RMSA	148		
	RA	152		
M1 (pressure gauge port)		1/8″		
N	RMSA	122.2		
	RA	126.2		
O	RMSA	202		
	RA	206		
Q (no. 2 additional air takes-off)		1/8″		

KEY TO CODES

56	1	1	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
56 Syntesi	**1** Size 1	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**B** Filter-regulator	**10** 5 µm, RMSA, 0 - 2 bar **20** 20 µm, RMSA, 0 - 2 bar **30** 50 µm, RMSA, 0 - 2 bar **40** 5 µm, RA, 0 - 2 bar **50** 20 µm, RA, 0 - 2 bar **60** 50 µm, RA, 0 - 2 bar **12** 5 µm, RMSA, 0 - 4 bar **22** 20 µm, RMSA, 0 - 4 bar **32** 50 µm, RMSA, 0 - 4 bar **42** 5 µm, RA, 0 - 4 bar **52** 20 µm, RA, 0 - 4 bar **62** 50 µm, RA, 0 - 4 bar **14** 5 µm, RMSA, 0 - 8 bar **24** 20 µm, RMSA, 0 - 8 bar **34** 50 µm, RMSA, 0 - 8 bar **44** 5 µm, RA, 0 - 8 bar **54** 20 µm, RA, 0 - 8 bar **64** 50 µm, RA, 0 - 8 bar **16** 5 µm, RMSA, 0 - 12 bar **26** 20 µm, RMSA, 0 - 12 bar **36** 50 µm, RMSA, 0 - 12 bar **46** 5 µm, RA, 0 - 12 bar **56** 20 µm, RA, 0 - 12 bar **66** 50 µm, RA, 0 - 12 bar	**L** Lubricator	**10** Manual filling from the top	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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

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
5611B24L101	FR+LUB SY 1/8 20 08 RMSA
5611B54L101	FR+LUB SY 1/8 20 08 RA

Code	Description
5612B24L102	FR+LUB SY 1/4 20 08 RMSA
5612B54L102	FR+LUB SY 1/4 20 08 RA

Code	Description
5613B24L103	FR+LUB SY 3/8 20 08 RMSA
5613B54L103	FR+LUB SY 3/8 20 08 RA

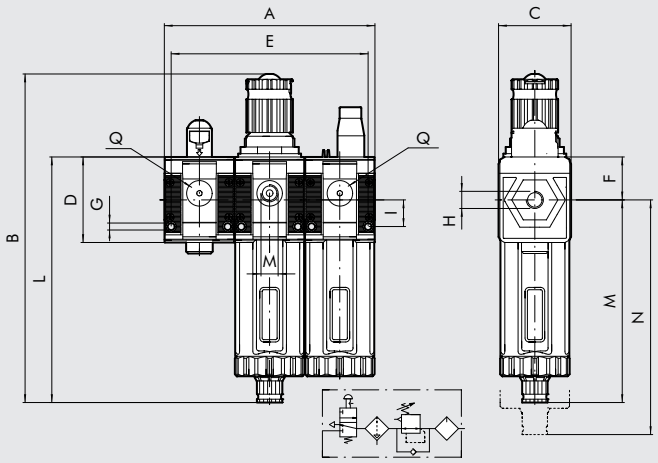
V3V + FR + LUB SYNTESI®

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

TECHNICAL DATA

Threaded port		1/8"	1/4"	3/8"
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		
	MPa	1.5		
	psi	217		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	250		
(P In=10 bar)	scfm	9		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1050		
(P In=10 bar)	scfm	37		
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	70		
	scfm	2.5		
Min/max temperature at10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Full outflow with zero inlet pressure		Included		
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	500		
	scfm	18		
Padlockable knob		Included with both V3V and regulator		
Upstream pressure compensation		Included, via balanced valve		
Weight	g	598	593	584
Fluid		Compressed air or other inert gases		
Mounting position		Vertical		
Additional air take-off, for pressure gauges or fittings		1/8", front and rear		
Additional air take-off flow rate at 6.3 bar	Nl/min	500 - 450		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18 - 16		
Filter cup capacity	cm^3	30		
Quantity of filled oil	cm^3	60		
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		
		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		

OVERALL DIMENSIONS



H (threaded port)		1/8″	1/4″	3/8″
A		126	126	128
B	RMSA	198		
	RA	202		
C		44		
D		51.5		
E		117.1		
F		25.8		
G		Hole for M4 screws		
I		16		
L		M30x1.5		
M	RMSA	148		
	RA	152		
M1 (pressure gauge port)		1/8″		
N	RMSA	122.2		
	RA	126.2		
O	RMSA	202		
	RA	206		
Q (no. 2 additional air takes-off)		1/8″		

KEY TO CODES

56	1	1	V	10	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
56 Syntesi	**1** Size 1	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**V** V3V	**10** Manual	**B** Filter-regulator	**10** 5 µm, RMSA, 0 - 2 bar **20** 20 µm, RMSA, 0 - 2 bar **30** 50 µm, RMSA, 0 - 2 bar **40** 5 µm, RA, 0 - bar **50** 20 µm, RA, 0 - 2 bar **60** 50 µm, RA, 0 - 2 bar **12** 5 µm, RMSA, 0 - 4 bar **22** 20 µm, RMSA, 0 - 4 bar **32** 50 µm, RMSA, 0 - 4 bar **42** 5 µm, RA, 0 - 4 bar **52** 20 µm, RA, 0 - 4 bar **62** 50 µm, RA, 0 - 4 bar **14** 5 µm, RMSA, 0 - 8 bar **24** 20 µm, RMSA, 0 - 8 bar **34** 50 µm, RMSA, 0 - 8 bar **44** 5 µm, RA, 0 - 8 bar **54** 20 µm, RA, 0 - 8 bar **64** 50 µm, RA, 0 - 8 bar **16** 5 µm, RMSA, 0 - 12 bar **26** 20 µm, RMSA, 0 - 12 bar **36** 50 µm, RMSA, 0 - 12 bar **46** 5 µm, RA, 0 - 12 bar **56** 20 µm, RA, 0 - 12 bar **66** 50 µm, RA, 0 - 12 bar	**L** Lubricator	**10** Manual filling from the top	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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.

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.

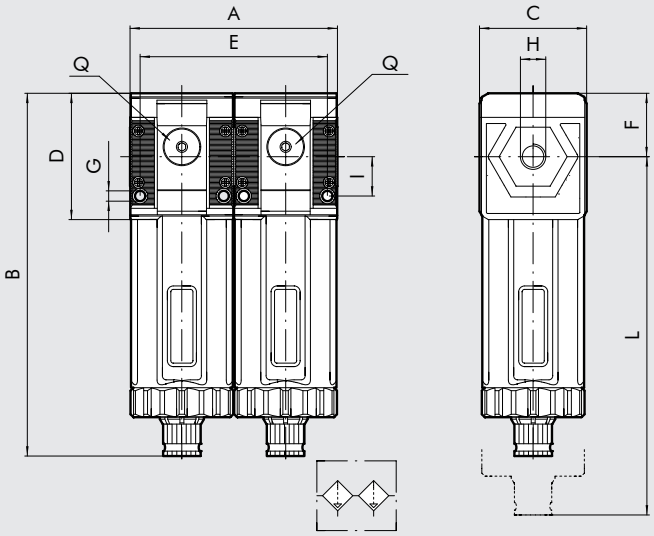
Code	Description	Code	Description
5611V10B24L101	V3V+FR+LUB SY 1/8 20 08 RMSA	**5613V10B24L103**	V3V+FR+LUB SY 3/8 20 08 RMSA
5611V10B54L101	V3V+FR+LUB SY 1/8 20 08 RA	**5613V10B54L103**	V3V+FR+LUB SY 3/8 20 08 RA
5612V10B24L102	V3V+FR+LUB SY 1/4 20 08 RMSA		
5612V10B54L102	V3V+FR+LUB SY 1/4 20 08 RA		

FIL + DEP SYNTESi®

For full details and list of components refer to the sections about filter and depurator.

TECHNICAL DATA				
Threaded port		1/8"	1/4"	3/8"
Purifier degree of filtration	µm	0.01 - output air purity class ISO8573-1: 1.7.2		
Filter degree of filtration	µm	5 (yellow)		
Max. inlet pressure	bar	15		
	MPa	1.5		
	psi	217		
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	550		
	scfm	9		
Maximun suggested flow rate		Look a the chart on the depurator page		
		NB: flow rates higher than the recommended value reduces purification efficiency		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Weight	Kg	358	353	344
Purifier condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure		
Filter 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		
		Note: the maximum input pressure for the RA version must not exceed 10 bar		
Fluid		Compressed air or other inert gases		
Cup capacity filter/depurator	cm^3	30/15		
Mounting position		Vertical		
Port for additional air take-off		1/8", front and rear		
Additional air take-off flow rate (not purified air)	Nl/min	500		
at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18		
Wall fixing screws		No. 2 M4 screws		

DIMENSIONS



H (threaded port)		1/8″	1/4″	3/8″
A		84	84	86
B	RMSA	148		
	RA	152		
C		44		
D		51.5		
E		75.3		
F		25.8		
G		Hole for M4 screws		
I		16		
L	RMSA	202		
	RA	206		
Q (no. 2 additional air takes-off)		1/8″		

KEY TO CODES

56	1	1	F	10	D	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi	**1** Size 1	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ port	**F** Filter	**10** 5 µm, RMSA **40** 5 µm, RA	**D** Depurator	**10** RMSA	**1** 1/8″ port **2** 1/4″ port **3** 3/8″ 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.

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.

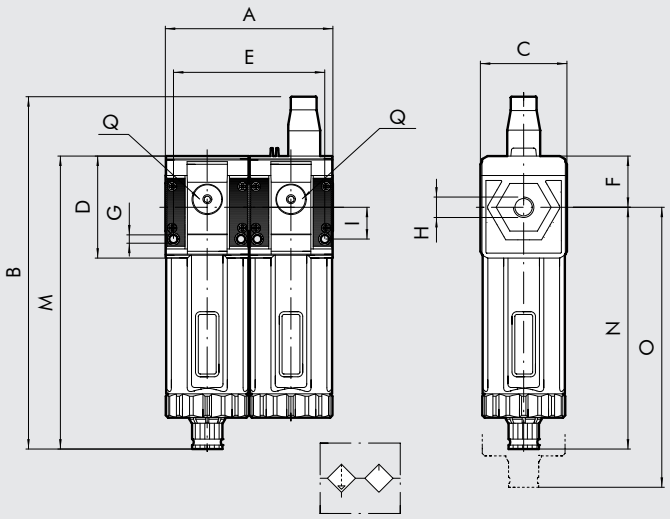
Code	Description
5611F10D101	FIL+DEP SY 1/8 05 RMSA
5611F40D101	FIL+DEP SY 1/8 05 RA
5612F10D102	FIL+DEP SY 1/4 05 RMSA
5612F40D102	FIL+DEP SY 1/4 05 RA
5613F10D103	FIL+DEP SY 3/8 05 RMSA
5613F40D103	FIL+DEP SY 3/8 05 RA

FIL + LUB SYNTESi®

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

TECHNICAL DATA				
Threaded port		1/8"	1/4"	3/8"
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		
	MPa	1.5		
	psi	217		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	860		
	scfm	30		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1450		
	scfm	51		
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Weight	g	349	344	355
Fluid		Compressed air or other inert gases		
Mounting position		Vertical		
Additional air take-off, for pressure gauges or fittings		1/8", front and rear		
Additional air take-off flow rate at 6.3 bar	Nl/min	500 - 450		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	scfm	18 - 16		
Filter cup capacity (condensate)	cm^3	30		
Quantity of filled oil	cm^3	60		
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		
		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		

DIMENSIONS



H (threaded port)	1/8"	1/4"	3/8"
A	84	84	86
B	117.5		
C	44		
D	51.5		
E	75.3		
F	25.8		
G	Hole for M4 screws		
I	16		
L RMSA	202		
RA	206		
Q (no. 2 additional air takes-off)	1/8"		

KEY TO CODES

56	1	1	F	10	L	10	1
SYNTESI	**SIZE**	**THREADED INPUT CONNECTION**	**ELEMENT**	**DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN**	**ELEMENT**	**OIL FILLING**	**THREADED OUTPUT CONNECTION**
56 Syntesi	**1** Size 1	**1** 1/8" port **2** 1/4" port **3** 3/8" port	**F** Filter	**10** 5 µm, RMSA **20** 20 µm, RMSA **30** 50 µm, RMSA **40** 5 µm, RA **50** 20 µm, RA **60** 50 µm, RA	**L** Lubricator	**10** Manual filling from the top	**1** 1/8" port **2** 1/4" port **3** 3/8" port

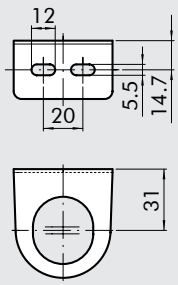
RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
RA: automatic drain with condensate discharge, independent of pressure and flow rate.

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.

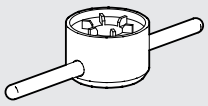
Code	Description
5611F20L101	FIL+LUB SY 1/8 20 RMSA
5611F50L101	FIL+LUB SY 1/8 20 RA
5612F20L102	FIL+LUB SY 1/4 20 RMSA
5612F50L102	FIL+LUB SY 1/4 20 RA
5613F20L103	FIL+LUB SY 3/8 20 RMSA
5613F50L103	FIL+LUB SY 3/8 20 RA

MOUNTING BRACKET FOR REG. AND FR



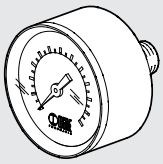
Code	Description
9200701	SF100- BIT-ND 1/4 - SY 1

BOWL DISASSEMBLY SPANNER



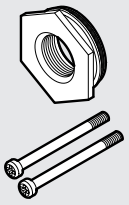
Code	Description
9170601	CS TF - TL BIT/SY 1

PRESSURE GAUGES



Code	Description
9700101	M 40 1/8 12
9700102	M 40 1/8 04
9800101	M 50 1/8 12
9800102	M 50 1/8 04

THREADED PORT

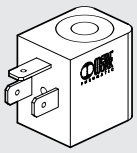


Code	Description
9210001	Kit IN OUT 1/8 SY 1
9210002	Kit IN OUT 1/4 SY 1
9210003	Kit IN OUT 3/8 SY 1

Note: no. 20 each box

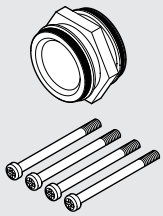
Max torque 0.4 Nm

COIL FOR APR AND V3V SOLENOID



Code	Description
W0215000101	Coil 22 Ø 8 BA 2W-24VDC
W0215000111	Coil 22 Ø 8 BA 3.5VA-24VAC
W0215000121	Coil 22 Ø 8 BA 3.5VA-110VAC
W0215000131	Coil 22 Ø 8 BA 3.5VA-220VAC

CONNECTING NIPPLE KIT

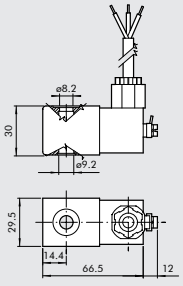


Code	Description
9210000	Connecting nipple kit SY 1

Note: no. 20 each box

Max torque 0.4 Nm

KIT FOR COIL EEXM



Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 3m
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 5m
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 3m
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 5m
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 3m
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 5m
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 3m
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 5m

Bobine a normativa Atex 94/9 CE, gruppo II, categoria 2 GD

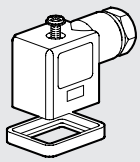
WALL-FIXING SCREW

Code	Description
9210030	M4x55 fixing screws SY 1

Note: no. 20 screws each box

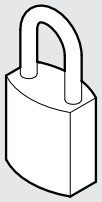
Max torque 0.8 Nm

ELECTRIC CONNECTOR FOR V3V-APR ELPN



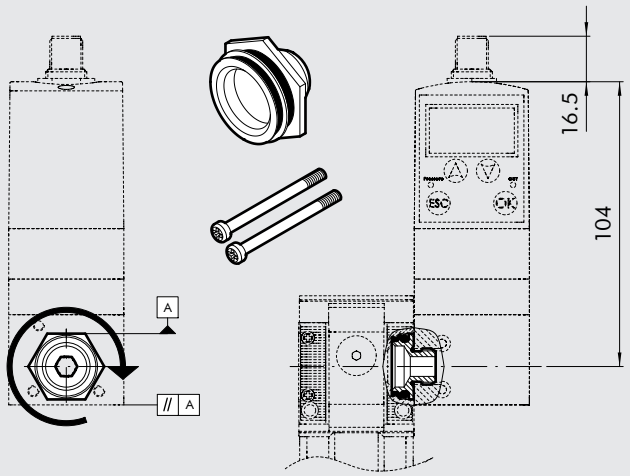
Code	Description
W0970510011	Connector standard
W0970510012	Connector 22 LED 24V
W0970510013	Connector 22 LED 110V
W0970510014	Connector 22 LED 220V
W0970510015	Connector 22 LED VDR 24V
W0970510016	Connector 22 LED VDR 110V
W0970510017	Connector 22 LED VDR 220V
W0970510070	Connector 22 standard ATEX

PADLOCK



Code	Description
9062401	Padlock

REGTRONIC CONNECTING KIT



Code	Description
9210004	Adaptor for REGTRONIC 1/4 SY 1

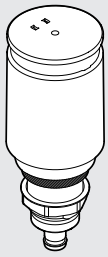
Max torque for screw, 0.4 Nm

Instructions:

1) Screw the connecting bushing onto the REGTRONIC 1/4 as far as it will go. Use sealant on the G1/4 thread to provide a further seal.
2) Unscrew the bushing slightly until two surfaces of the hexagon are parallel to the body of REGTRONIC 1/4 (see diagram).
3) Insert the bushing into the Syntesi® unit.
4) Tighten the two self-tapping screws in the Syntesi® unit to a torque of 0.4 Nm max.

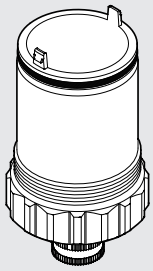
NOTES

AUTOMATIC DRAIN COCK (RA)



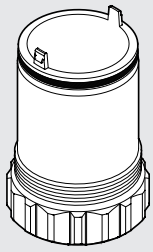
Code	Description
9000802	RA automatic drain spare part

CUP RMSA/RA



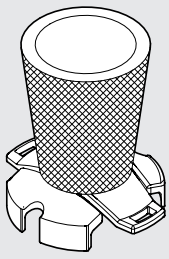
Code	Description
9210100	Cup FIL FR DEP RMSA SY 1
9210101	Cup FIL FR RA SY 1

LUBRICATOR CUP



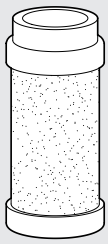
Code	Description
9210110	Cup LUB SY 1

FILTERING ELEMENT



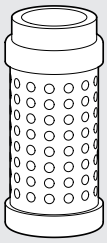
Code	Description
9210150	Filtering element 5 (yellow) µm SY 1
9210151	Filtering element 20 (white) µm SY 1
9210152	Filtering element 50 (blue) µm SY 1

PURIFIER FILTERING ELEMENT



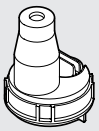
Code	Description
9210160	Cartridge DEP SY 1

AC FILTERING ELEMENT



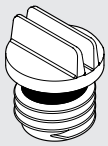
Code	Description
9210161	Cartridge AC SY 1

TRANSPARENT LUBRICATOR COVER



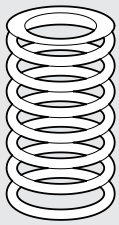
Code	Description
9210180	Transparent cover LUB SY 1

LUBRICATOR OIL-FILLING CAP



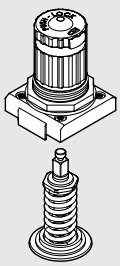
Code	Description
9210181	Oil-filling cap LUB SY 1

SPRINGS FOR REGULATORS AND FR



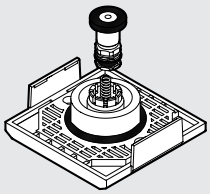
Code	Description
9210190	MO 02 SY 1
9210191	MO 04 SY 1
9210192	MO 08 SY 1
9210193	MO 012 SY 1

BELL FOR REG AND FR



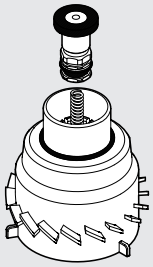
Code	Description
9210200	Bell 02 SY 1
9210201	Bell 04 SY 1
9210202	Bell 08 SY 1
9210203	Bell 012 SY 1

POPPET FOR REG



Code	Description
9210210	Poppet REG SY 1

POPPET FOR FR



Code	Description
9210211	Poppet FR 5 µm SY 1
9210212	Poppet FR 20 µm SY 1
9210213	Poppet FR 50 µm SY 1

NOTES

The dimensions shown in this catalogue are subject to variations at any time without prior notice