

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:

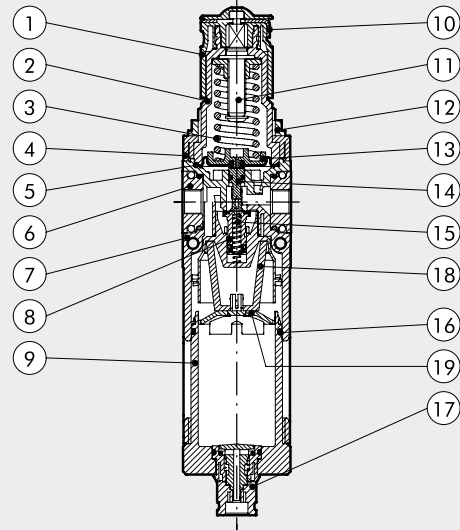
- Separation of condensate and larger liquid and solid particles by centrifugation.
- Three condensate drain options (RMSA, RA and SAC).
- 360° visually inspection of the condensate level, via transport spy-holes.
- Rolling diaphragm regulator, allowing maximum precision and flow rate, and minimal friction.
- 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				
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	
Threaded port								
Degree of filtration	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			13				
	MPa			1.3				
	psi			188				
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7 psi)	Nl/min	500	800	2200	3200	4300	5200	
	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	
	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				
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 (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500			1400			
	scfm	18			50			
Bowl capacity	cm³	30			70			
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. Nota d'uso: the maximum input pressure for the RA version must not exceed 10 bar No. 2 M4 screws No. 2 M5 screws 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.							
Wall fixing screws								
Notes on use								

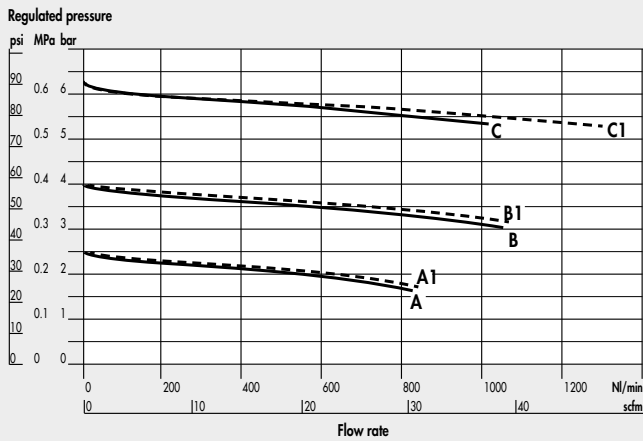
COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring (with Geomet® treatment for anti-corrosion version)
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
- ⑦ Technopolymer 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

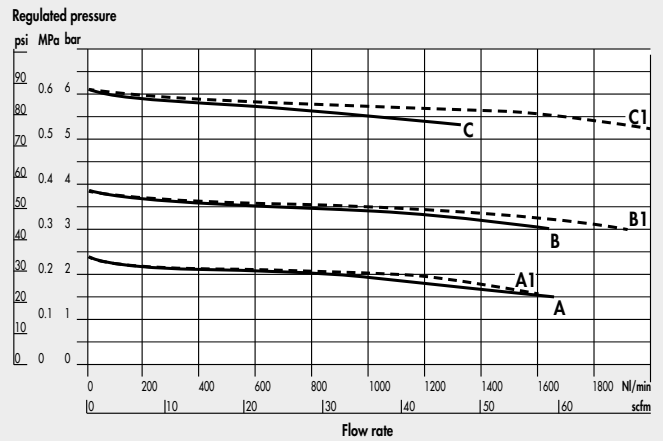


FLOW CHARTS

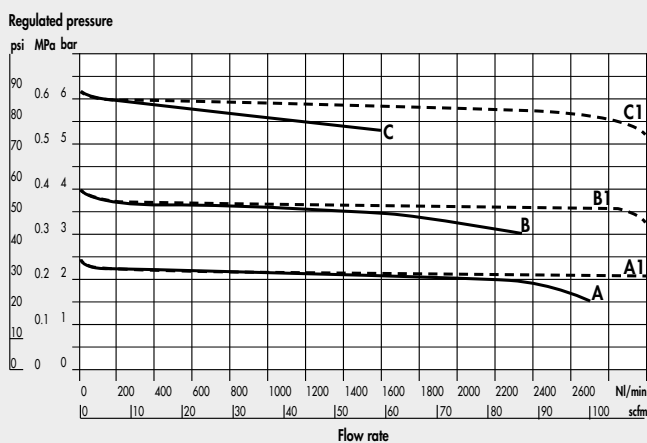
FR Syntesi® SY1 1/8"



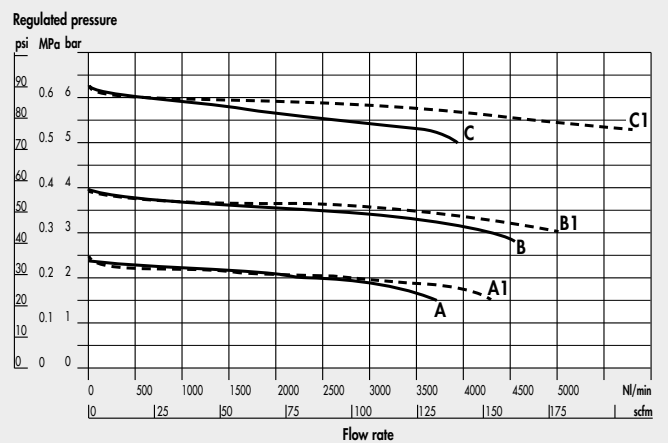
FR Syntesi® SY1 1/4"



FR Syntesi® SY1 3/8"



FR Syntesi® SY2 3/8"

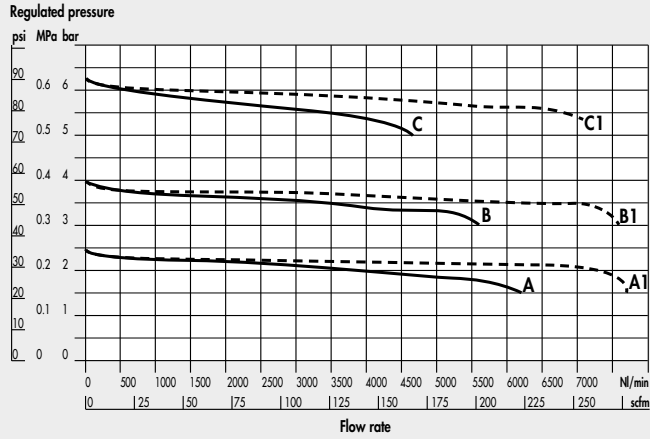


A = P In 7 bar - P Out 2.5 bar
 B = P In 7 bar - P Out 4 bar

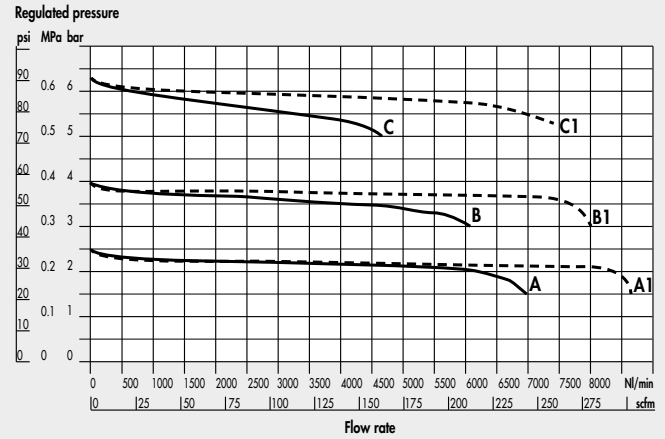
C = P In 7 bar - P Out 6.3 bar
 A1 = P In 10 bar - P Out 2.5 bar

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"

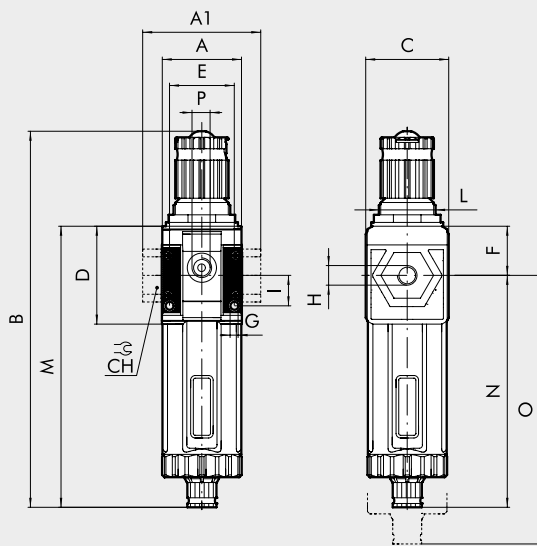


A = P In 7 bar - P Out 2.5 bar
 B = P In 7 bar - P Out 4 bar

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 RA/SAC 202			246 250		
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 RA/SAC 152			178 182		
N	RMSA 122.2 RA/SAC 126.2			139.8 143.8		
O	RMSA 202 RA/SAC 206			245 249		
P (pressure gauge port or additional air takes-off)	1/8"			1/4"		

NOTES

KEY TO CODES

56 SYNTESI	1 SIZE	1 THREADED INPUT CONNECTION	B ELEMENT	24 DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	1 THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	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
	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	

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

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

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

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

NOTES

