

The job of the filter is to retain liquid or solid impurities present in the compressed air. The incoming air is moved by the centrifuge unit, so that liquid particles, which are heavier, are projected against the walls of the container and force to adhere to it. As they accumulate, they create drops that deposit on the bottom by gravity. The remaining solid particles are held back by the porous filtering element. The condensate is maintained in a quiet state to prevent the deposited impurities from re-entering the circulation. The condensate drains out through the drain cock provided. The RMSA drain discharges when the pressure in the filter drops to zero. Alternatively the condensate can be drained by hand by pressing the button. The RA drain discharges condensate from the container automatically whenever necessary, regardless of the pressure level. The SAC tap drains the condensate only as the result of sudden changes in compressed air requests.

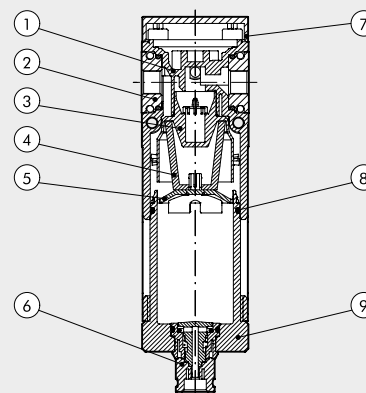


On the front and back there is a port (1/8" BSPP for size 1 and 1/4" BSPP for size 2) that can be used with pressure gauges, pressure switches or as an additional filtered air intake.

TECHNICAL DATA	FIL SY1			FIL SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port							
Degree of filtration	yellow: 5 (200 microinch) - output air purity class ISO8573-1: 3.7.4 white: 20 (790 microinch) - output air purity class ISO8573-1: 4.7.4 blue: 50 (2000 microinch) - output air purity class ISO8573-1: 5.7.4						
Max. input pressure	bar			bar			
	MPa			MPa			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	psi			psi			
	NL/min			NL/min			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	scfm			scfm			
	NL/min			NL/min			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			°C			
	°F			°F			
Weight	Pounds			Pounds			
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate Version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. Note: the maximum input pressure for the RA version must not exceed 145 psi Compressed air or other inert gases						
Fluid							
Condensate bowl capacity	fluid ounce oz			fluid ounce oz			
Mounting position	Vertical			Vertical			
Port for additional air take-off	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	NL/min			NL/min			
	scfm			scfm			
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			

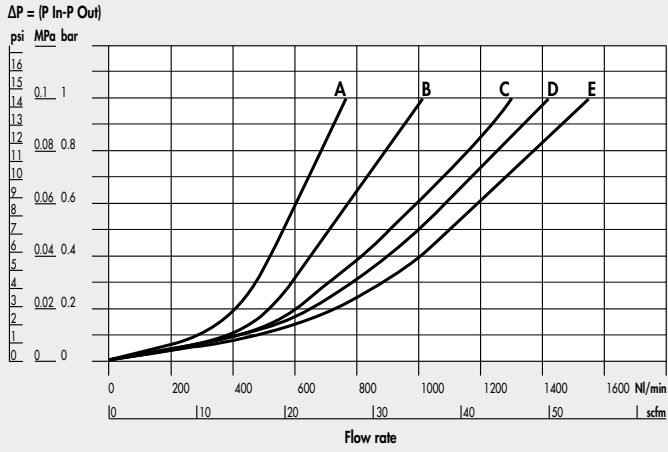
COMPONENTS

- ① Technopolymer filter body
- ② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- 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

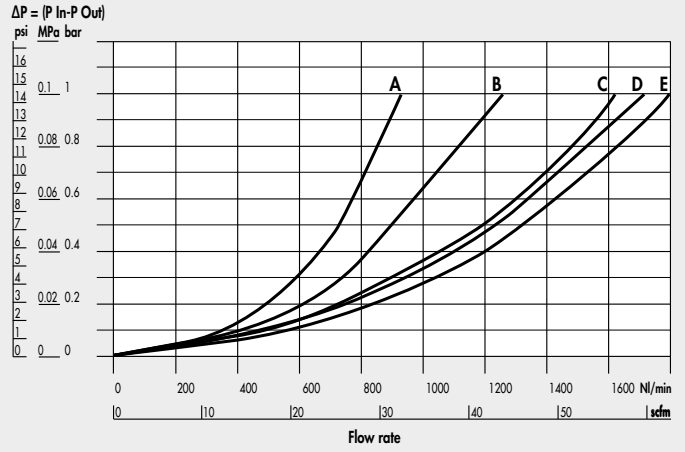


FLOW CHARTS

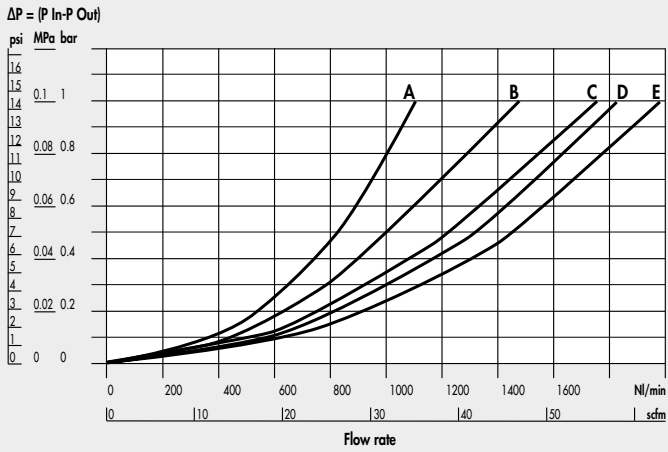
FIL Syntesi® SY1 1/8"



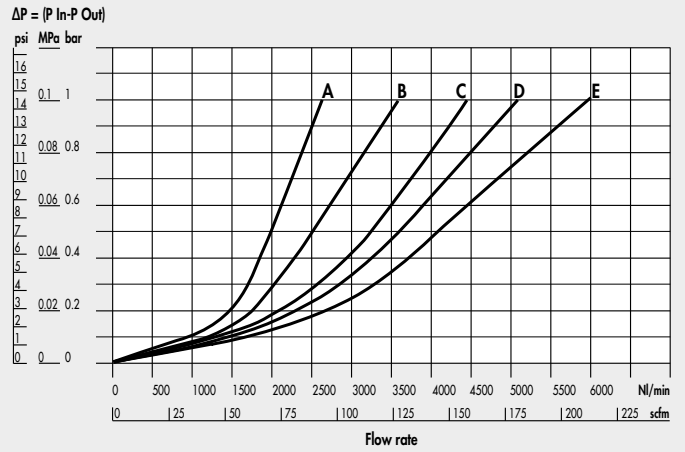
FIL Syntesi® SY1 1/4"



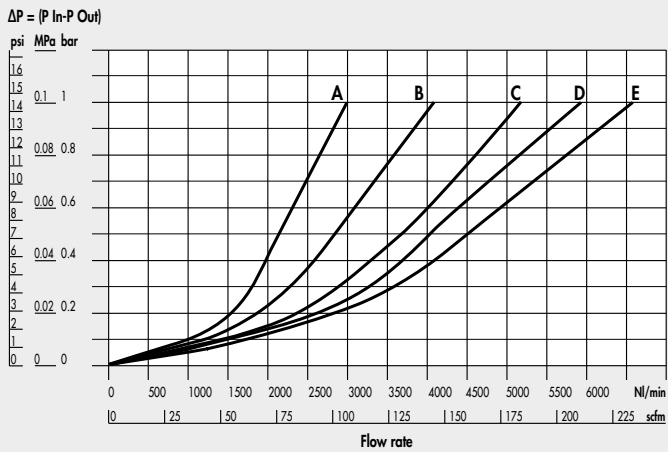
FIL Syntesi® SY1 3/8"



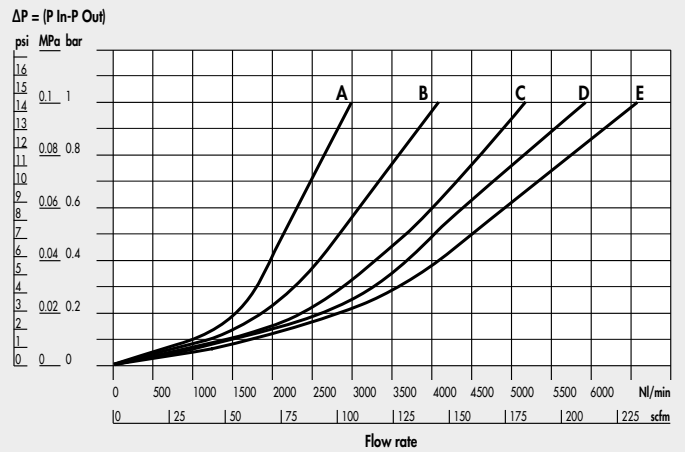
FIL Syntesi® SY2 3/8"



FIL Syntesi® SY2 1/2"



FIL Syntesi® SY2 3/4"-1"

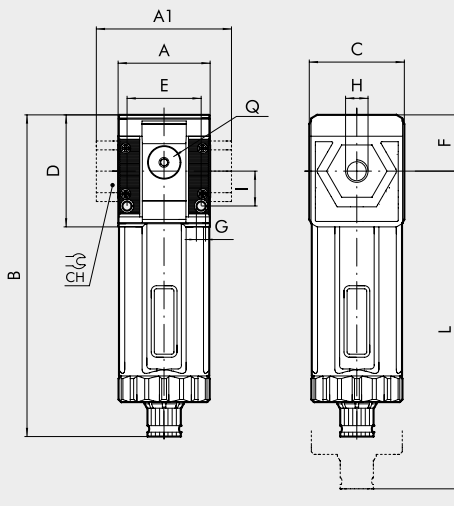


A = 2.5 bar - 0.25 MPa - 36 psi
B = 4 bar - 0.4 MPa - 58 psi

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

E = 10 bar - 1 MPa - 145 psi

DIMENSIONS



		SIZE 1			SIZE 2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
H (threaded port)	NPT							
A			1.65				2.38	
A1		-	-	1.73	-	-	3.74	3.74
B	RMSA		5.83				7	
	RA/SAC		5.99				7.16	
C			1.73				2.4	
CH			-		-	-	1.26	1.41
D			2.03				2.77	
E			1.32				1.87	
F			1.02				1.5	
G			0.165				0.21	
I			0.63				0.89	
L	RMSA		7.95				9.65	
	RA/SAC		8.11				9.8	
Q (no. 2 additional air take-offs)			1/8" BSPP				1/4" BSPP	

KEY TO CODES

5U	1	1	F	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	F Filter	10 5 µm (200 microinch) RMSA 20 20 µm (790 microinch) RMSA 30 50 µm (2000 microinch) RMSA 40 5 µm (200 microinch) RA 50 20 µm (790 microinch) RA 60 50 µm (2000 microinch) RA 11 5 µm (200 microinch) SAC 21 20 µm (790 microinch) SAC 31 50 µm (2000 microinch) SAC	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port
5Z Syntesi anti-corrosion NPT	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			

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

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	
5U10F100	FIL SY1 5 RMSA NPT without bushings	5U20F100	FIL SY2 5 RMSA NPT without bushings	5U26F106	FIL SY2 1 5 RMSA NPT
5U10F200	FIL SY1 20 RMSA NPT without bushings	5U20F200	FIL SY2 20 RMSA NPT without bushings	5U26F206	FIL SY2 1 20 RMSA NPT
5U10F400	FIL SY1 5 RA NPT without bushings	5U20F400	FIL SY2 5 RA NPT without bushings	5U26F406	FIL SY2 1 5 RA NPT
5U10F500	FIL SY1 20 RA NPT without bushings	5U20F500	FIL SY2 20 RA NPT without bushings	5U26F506	FIL SY2 1 20 RA NPT
5U11F101	FIL SY1 1/8 5 RMSA NPT	5U23F103	FIL SY2 3/8 5 RMSA NPT		
5U11F201	FIL SY1 1/8 20 RMSA NPT	5U23F203	FIL SY2 3/8 20 RMSA NPT		
5U11F401	FIL SY1 1/8 5 RA NPT	5U23F403	FIL SY2 3/8 5 RA NPT		
5U11F501	FIL SY1 1/8 20 RA NPT	5U23F503	FIL SY2 3/8 20 RA NPT		
5U12F102	FIL SY1 1/4 5 RMSA NPT	5U24F104	FIL SY2 1/2 5 RMSA NPT		
5U12F202	FIL SY1 1/4 20 RMSA NPT	5U24F204	FIL SY2 1/2 20 RMSA NPT		
5U12F402	FIL SY1 1/4 5 RA NPT	5U24F404	FIL SY2 1/2 5 RA NPT		
5U12F502	FIL SY1 1/4 20 RA NPT	5U24F504	FIL SY2 1/2 20 RA NPT		
5U13F103	FIL SY1 3/8 5 RMSA NPT	5U25F105	FIL SY2 3/4 5 RMSA NPT		
5U13F203	FIL SY1 3/8 20 RMSA NPT	5U25F205	FIL SY2 3/4 20 RMSA NPT		
5U13F403	FIL SY1 3/8 5 RA NPT	5U25F405	FIL SY2 3/4 5 RA NPT		
5U13F503	FIL SY1 3/8 20 RA NPT	5U25F505	FIL SY2 3/4 20 RA NPT		

NOTE
 Anti-corrosion version
5Z _____
Example
5Z11F101 FIL SY1 1/8 5 RMSA NPT anti-corrosion