

SYNTESI® DEPURATOR

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

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

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

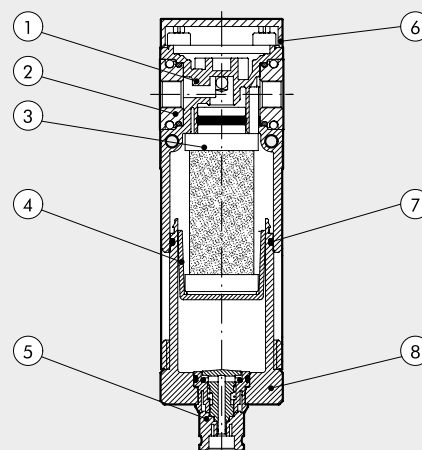


TECHNICAL DATA

	DEP SY1			DEP SY2			
	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Threaded port							
Degree of filtration	0.01 - output air purity class ISO8573-1: 1.7.2 1 - output air purity class ISO8573-1: 3.7.3						
Max. input pressure	15			13			
	MPa			1.3			
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	217			188			
	psi			620			
Maximun suggested flow rate	460			37			
	scfm			See graph on the next page			
Min/max temperature at 10 bar; 1 MPa; 145 psi	From -10 to +50			From -10 to +50			
Weight	194	189	180	483	456	452	440
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge. Operates by pressure drop – requires variable air take-offs.						
Fluid	Compressed air or other inert gases						
Bowl capacity	15			40			
Mounting position	Vertical			Vertical			
Port for additional air take-off (not purified air)	1/8", front and rear			1/4", front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	500			1500			
	scfm			53			
Wall fixing screws	No. 2 M4 screws			No. 2 M5 screws			
Notes on use	It is advisable to mount a 5 µm filter upstream of the purifier to retain solid particles						

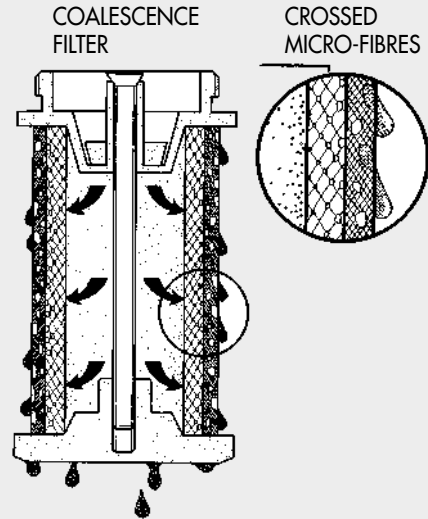
COMPONENTS

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



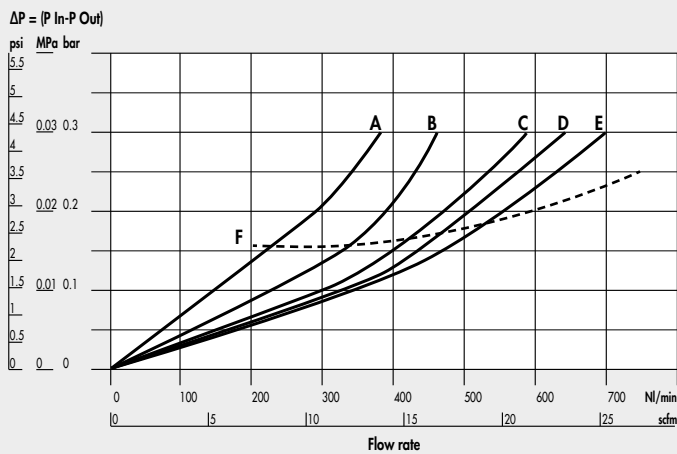
HOW THE COALESCENCE CARTRIDGE WORKS

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

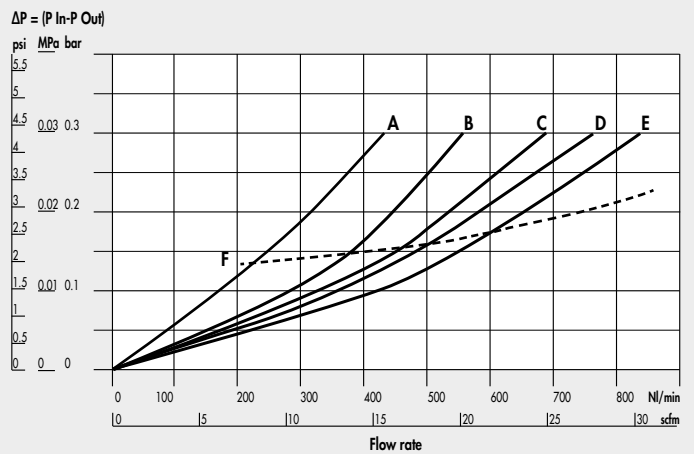


FLOW CHARTS

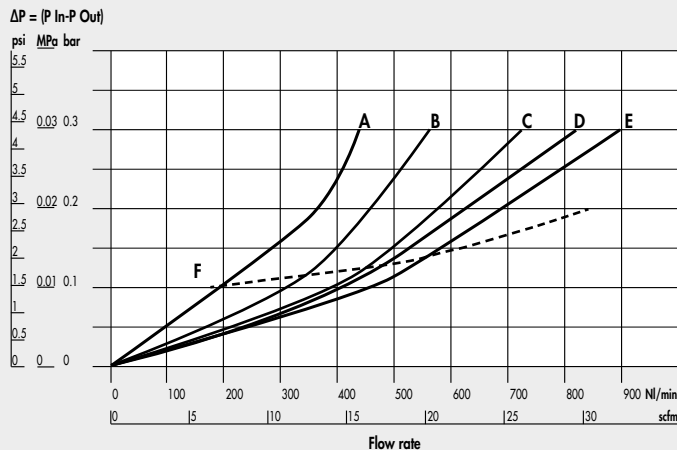
DEP Syntesi® SY1 1/8"



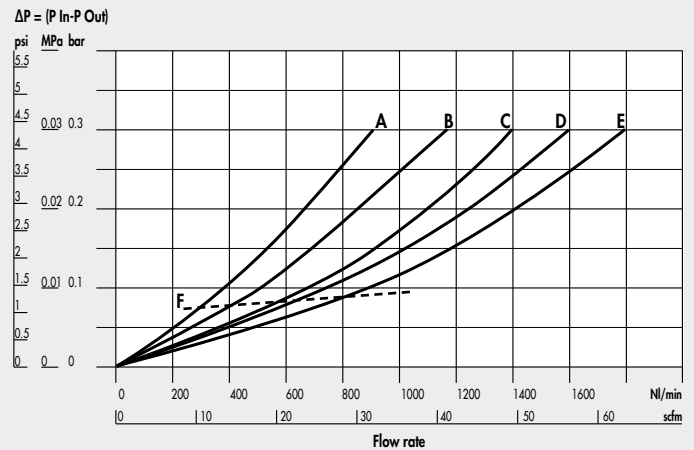
DEP Syntesi® SY1 1/4"



DEP Syntesi® SY1 3/8"



DEP Syntesi® SY2 3/8"

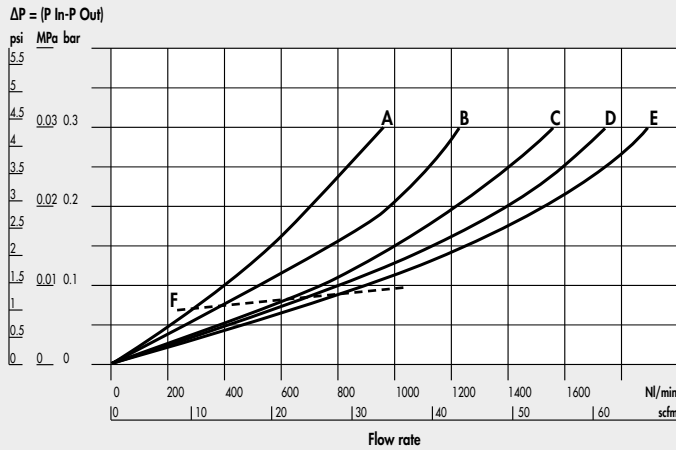


A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

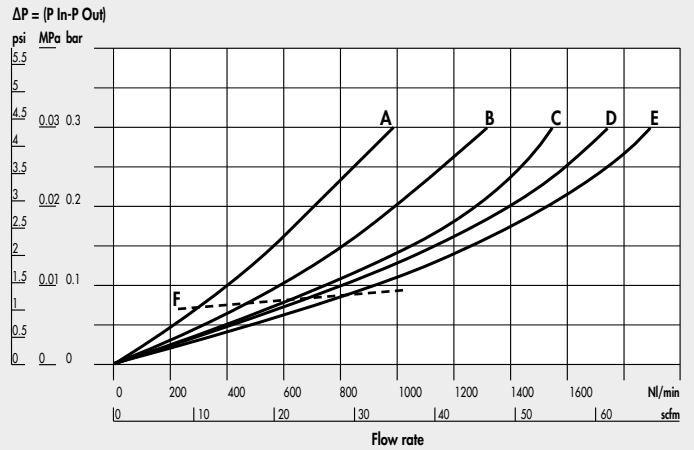
C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

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

DEP Syntesi® SY2 1/2"



DEP Syntesi® SY2 3/4" - 1"

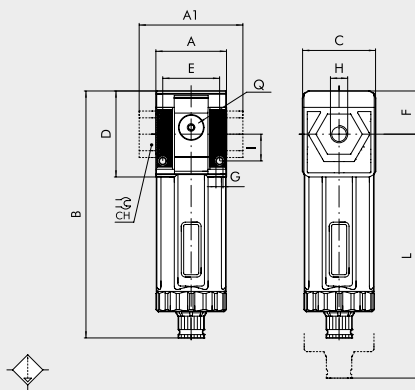


A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

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

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

DIMENSIONS



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

KEY TO CODES

56	1	1	D	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	D Depurator	10 0.01 µm RMSA 11 0.01 µm SAC 30 1 µm RMSA 31 1 µm SAC	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port
	2 Size 2	0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port			0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port

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

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

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

Code	Description	Code	Description
Syntesi® SY1 DEPURATOR		Syntesi® SY2 DEPURATOR	
5610D100	DEP SY1 RMSA without bushings	5620D100	DEP SY2 RMSA without bushings
5611D101	DEP SY1 1/8 RMSA	5623D103	DEP SY2 3/8 RMSA
5612D102	DEP SY1 1/4 RMSA	5624D104	DEP SY2 1/2 RMSA
5613D103	DEP SY1 3/8 RMSA	5625D105	DEP SY2 3/4 RMSA
		5626D106	DEP SY2 1 RMSA

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