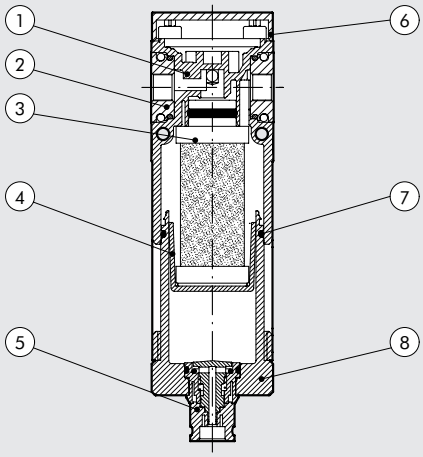
The job of the filter purifier is to separate liquid and solid particles dispersed in the compressed air with a high degree of efficiency.
This separation is achieved by means of a special filtering element called a "coalescence cartridge".
It is particularly indicated for eliminating traces of oil present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

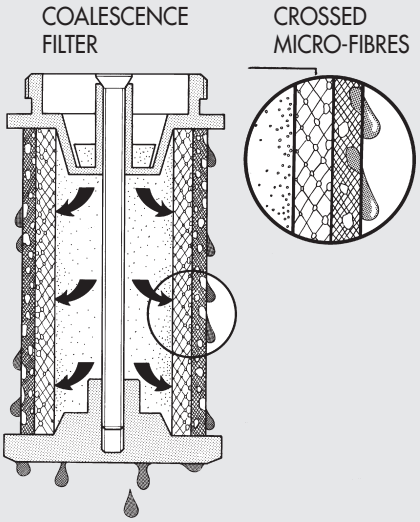
COMPONENTS

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



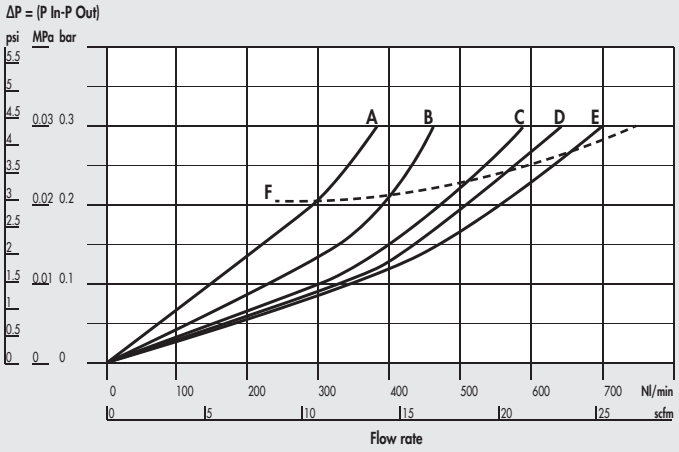
HOW THE COALESCENCE CARTRIDGE WORKS

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.

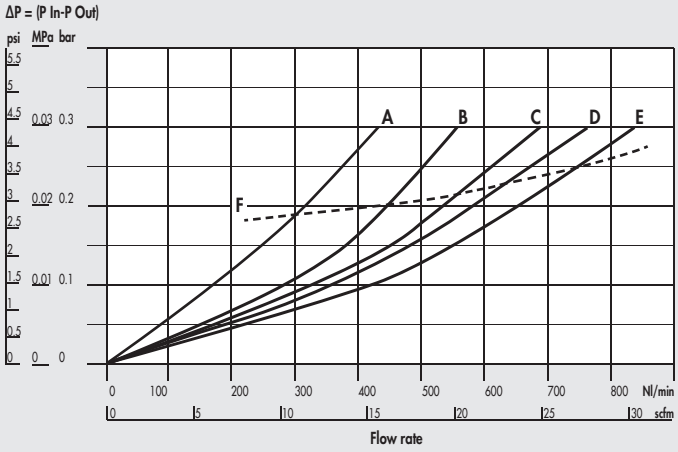


FLOW CHARTS

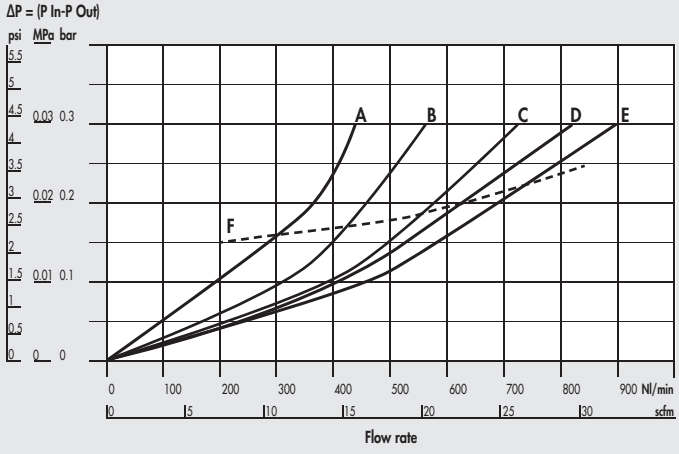
DEP Syntesi® 1/8"



DEP Syntesi® 1/4"

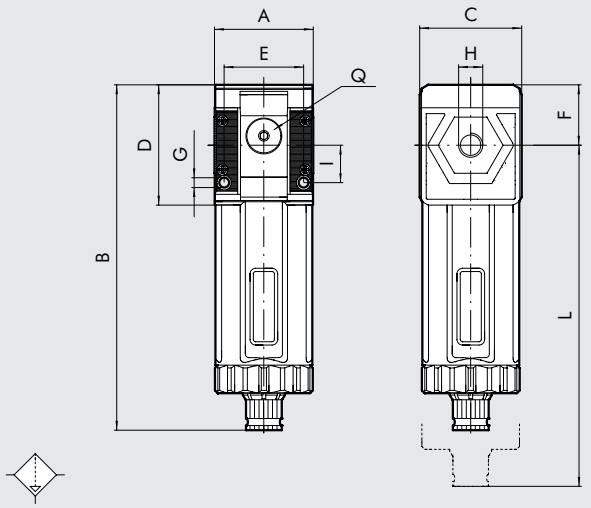


DEP Syntesi® 3/8"



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