

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.

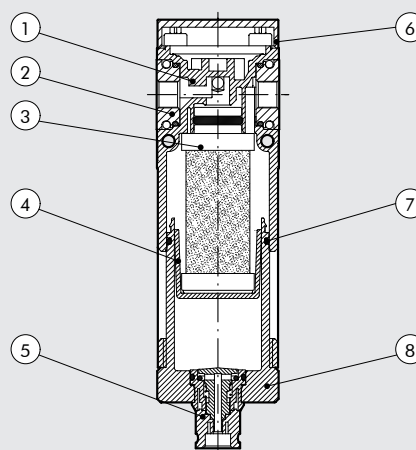
There are two 1/8" ports, one on the front and one on the back, for use with pressure gauges or pressure switches or, considering the high flow rate, as additional air take-off. **The air taken from here is not purified.**



| TECHNICAL DATA   |        | 1/8"  | 1/4" | 3/8" |
|--|--------|---|------|------|
| 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   |      |      |
| Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)  | psi    | 217   |      |      |
|  | Nl/min | 550   |      |      |
| Maximun suggested flow rate  | scfm   | 9   |      |      |
|  |        | See graph on the next page  |      |      |
| Min/max temperature at 10 bar; 1 MPa; 145 psi  | °C     | N.B.: flow rates higher than the recommended value reduces purification efficiency        |      |      |
| Weight   | g      | From -20 to +50   |      |      |
| Condensate drain   |        | 194   | 189  | 180  |
| Fluid  |        | RMSA: drain with manual condensate discharge and automatic discharge at zero pressure     |      |      |
| Cup capacity   | cm³    | Compressed air or other inert gases   |      |      |
| Mounting position  |        | 15  |      |      |
| Port for additional air take-off (not purified air)  |        | Vertical  |      |      |
| 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 | 1/8", front and rear  |      |      |
|  | scfm   | 500   |      |      |
| Wall fixing screws   |        | 18  |      |      |
| Notes on use   |        | No. 2 M4 screws   |      |      |
|  |        | It is advisable to mount a 5 µm filter upstream of the purifier to retain solid particles |      |      |

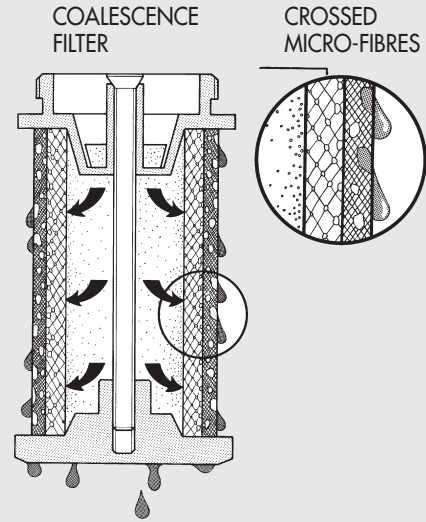
## COMPONENTS

- 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



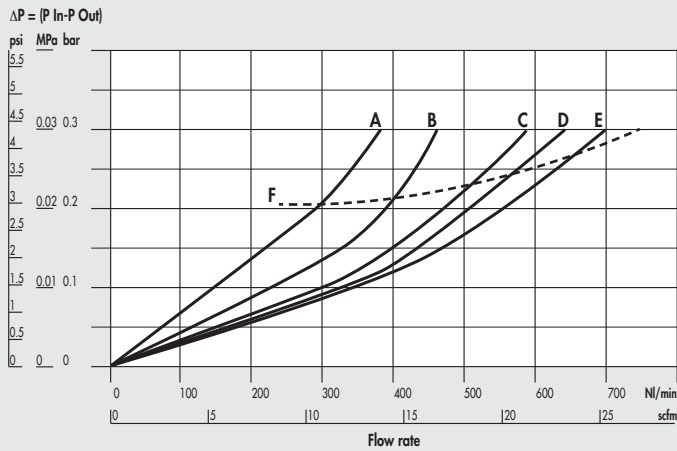
## HOW THE COALESCENCE CARTRIDGE WORKS

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.

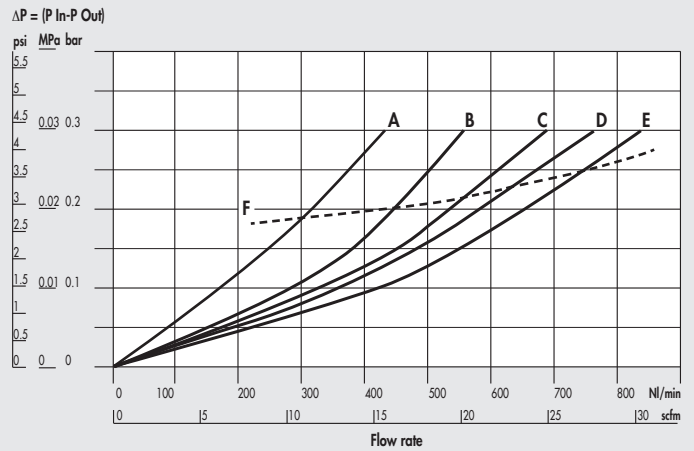


## FLOW CHARTS

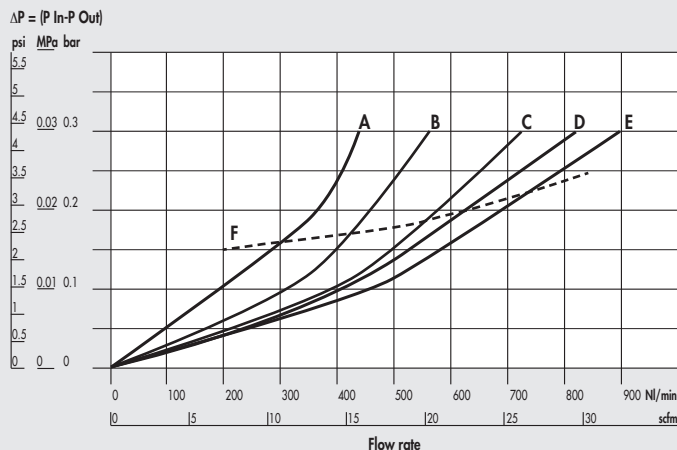
DEP Syntesi® 1/8"



DEP Syntesi® 1/4"

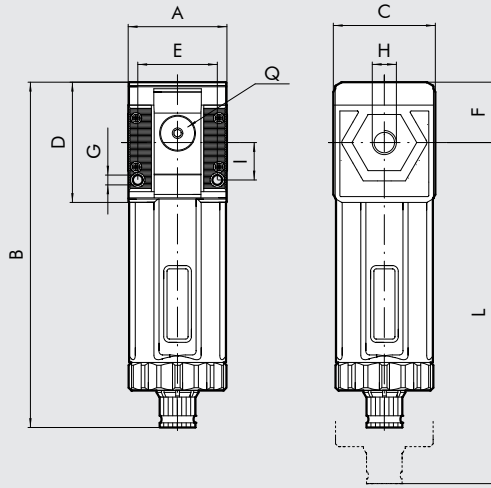


DEP Syntesi® 3/8"



- 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<br>1 1/8" port<br>2 1/4" port<br>3 3/8" port | D Depurator | 10 RMSA | 0 Without bushing<br>1 1/8" port<br>2 1/4" port<br>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              |