



Worthington  
Creyssensac



**FILTERS D**



# D FILTER FOR COMPRESSED AIR PURITY

**Compressed air quality is related directly to the operating conditions of your compressor. Most compressor intake filters will remove particles larger than 2µm. Particles smaller than this will pass through the filter and will mix with the residual oil and water to form a contamination which can result in corrosion within the compressed air system.**

This contamination will cause downstream equipment to have an increased failure rate which will result in higher maintenance costs.

Contamination of raw material and processes (e.g. painting or pneumatic handling) can result in reduced quality of output goods and high product-spoilage.

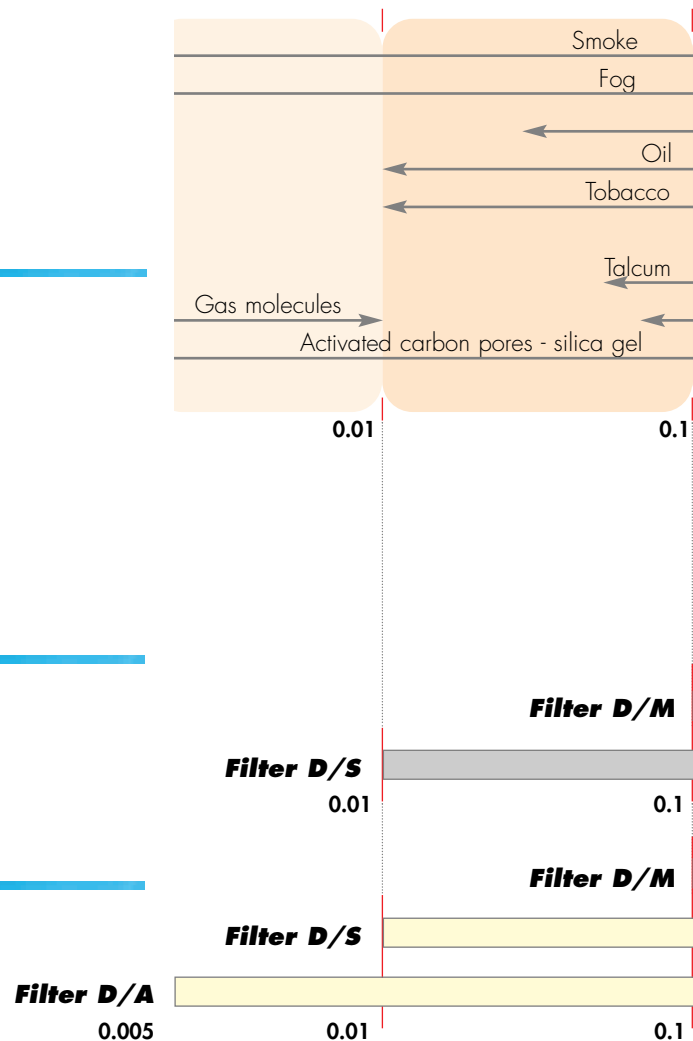
## FILTRATION CHOICE IS DEPENDANT ON THE TYPE OF CONTAMINATION

The choice of filtration grade will be decided by the quality of the air required by your application or process.

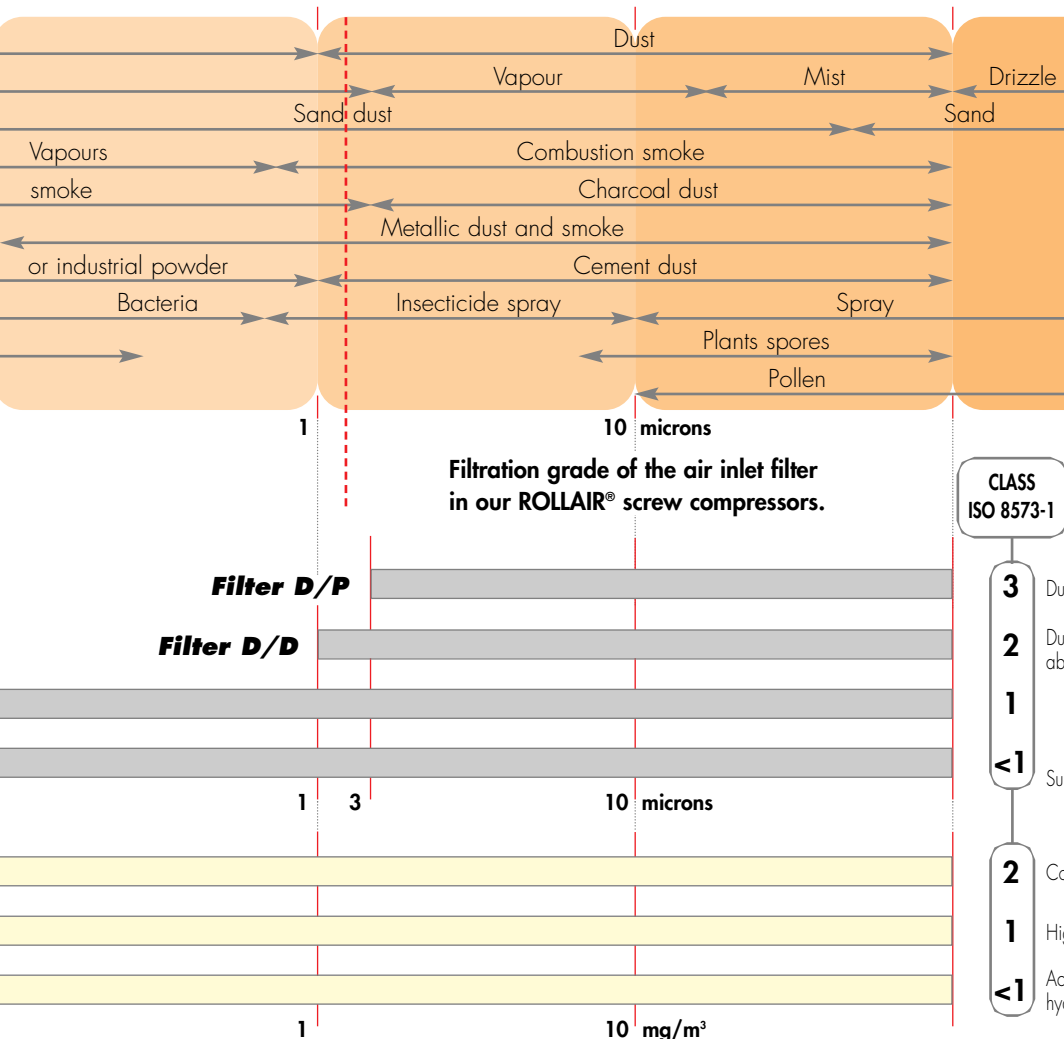
**Example of particles size and pollutants.**

**Filtration grade of solid particles.**

**Residual oil filtration grade.**



To protect your equipment and to ensure total quality, Worthington Creyssensac offers a complete range of compressed air filtration equipment. Using our specialist knowledge, we can ensure that you receive the most comprehensive solution to guarantee that you get superior air quality for the minimum operating cost.



A large number of pollutants are found in compressed air. The bulk of this contamination is in the form of oil vapour which requires a submicronic filter grade (0.01  $\mu\text{m}$ ) to effectively remove it.

**CLASS ISO 8573-1**

- 3** Dust protecting filter for solid particles of 3  $\mu\text{m}$
- 2** Dust protecting filter for solid particles of 1  $\mu\text{m}$  and above
- 1**
- <1** Sub micronic filter for particles of 0.01  $\mu\text{m}$  and
- 2** Coalescence filter
- 1** High efficiency coalescence filter
- <1** Activated carbon filter that eliminates hydrocarbon odours

# A COMPLETE RANGE OF FILTERS

***D filters can treat both solid and liquid contamination in the compressed air. Their simple design guarantees constant air quality for the lifetime of the filter element.***

High efficiency filter with low pressure drop ensures a low operating cost.

Optional magnetic pressure drop gauge that indicates when the filter is ready for change.

Safety device that indicates presence of pressure during filter element exchange.

Cast aluminium anti-corrosion filter body.

Robust element construction for high endurance in heavy working condition.

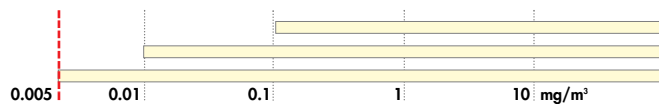
Quick cartridge exchange with integrated seals.

Float drain with safety manual drain device (D60-D2400).



## **Filter D/A**

Oil filtration: 0.005 mg/m<sup>3</sup>



## **Activated carbon filter**

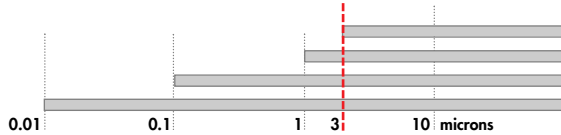
Filtration media is made of microfibre glass impregnated with activated carbon that not only captures oil vapour but also hydrocarbon odours.

The D/A filter must always be preceded by the D/M or D/S filter.



### **Filter D/P**

Solid filtration: 3  $\mu\text{m}$



### **Pre-filter**

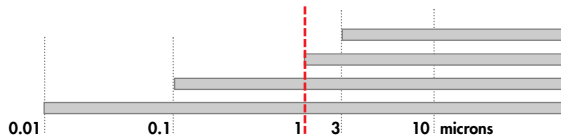
Solid particles are removed by several layers of filtration media: acrylic fibres/cellulose and polyester nonwoven fabric.

Due to this characteristic, this is the ideal first protection stage of the compressed air system.



### **Filter D/D**

Solid filtration: 1  $\mu\text{m}$



### **Dust filter**

Has the same features as the D/M filter, the only difference being the greater degree of filtration, which changes the flow direction.

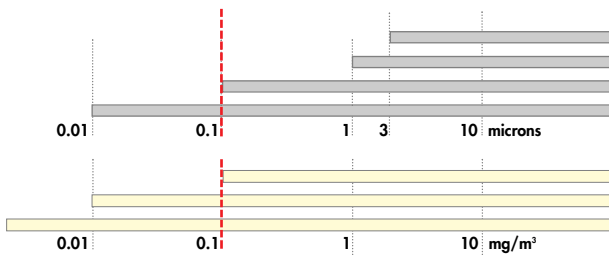
It is indicated as an additional filtration after the D/P pre-filter or as a pre-filter to the D/S series.



### **Filter D/M**

Solid filtration: 0.1  $\mu\text{m}$

Oil filtration: 0.1  $\text{mg}/\text{m}^3$



### **Coalescence filter**

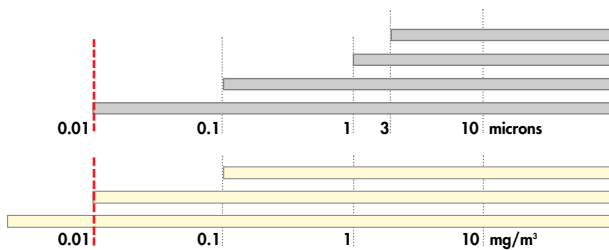
Several layers of filtration media made from oleophobic microfibre glass capture solid particles and oil vapour. Small oil droplets are coalesced to form larger droplets that then migrate to the bottom of the filter under the influence of gravity, where they can be discharged through the drain.



### **Filter D/S**

Solid filtration: 0.01  $\mu\text{m}$

Oil filtration: 0.01  $\text{mg}/\text{m}^3$



### **High efficiency coalescence filter**

The filter D/S uses an ultra high efficiency filter media to guarantee the removal of oil mist vapours.

It is similar to the D/M filter, the only difference being the degree of filtration.

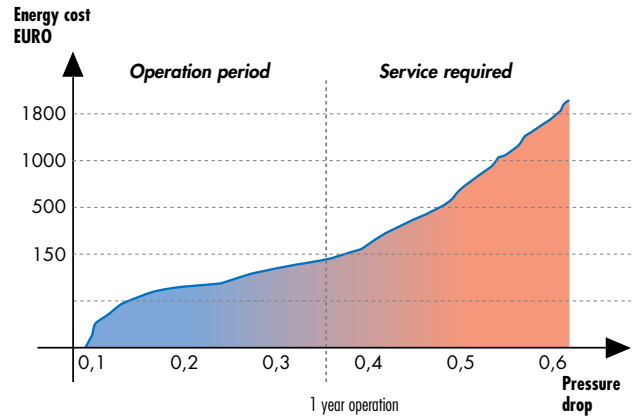
To avoid a reduction of the cartridge lifetime, we suggest to install before a D/M coalescence filter.

# LOW PRESSURE DROP FOR MINIMUM ENERGY COST

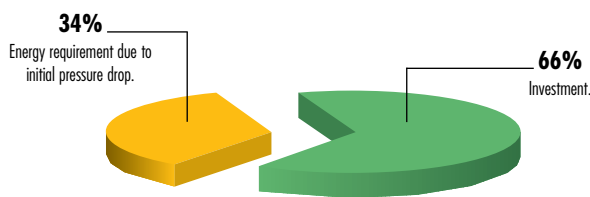
The operating cost of your filtration system rises significantly as the pressure drop across the filters increases.

An additional pressure drop of 0.1 bar will increase the energy consumption by 0.7%.

Regular maintenance is the key to keeping this pressure drop low. Delay in changing filter elements can result in high pressure drop and significantly increased energy costs. Note that maintenance is not only related to running hours; parameters such as compressed air temperature, air demand etc. have an impact on the filter element lifespan.

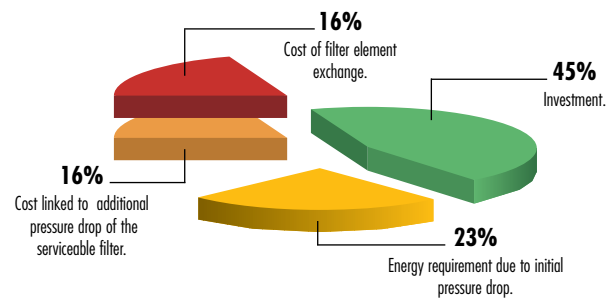


## New filter operation cost.



After a year of operation, the energy cost of overcoming the pressure drop can exceed the cost of a replacement filter cartridge.

## Cost of a filter before maintenance.



Regular replacement of the filter cartridge guarantees the safety and quality of your compressed air.

# FILTER RANGE OPTIONS

## Pressure drop indicator

Indication of the pressure drop is essential to precisely define when maintenance is required (not available for the type D/A).



**MB pressure indicator** with 360° visibility, that indicates when the delta pressure threshold is reached.



**MB magnetic pressure gauge**, calibrated to display the increase of the pressure drop along the lifetime of the filter element. It is also available for the version: **MB voltage – free contact gauge** for a remote alarm.



**MB magnetic pressure gauge** with LED that lights when the pressure drop limit is reached. The information is saved until the filter element exchange for a constant control satisfies the most stringent filtration requirements.



**MB aluminium pressure gauge** for the direct reading of the status of cartridge efficiency.



## Installation tools

Tools are available to make installation easy.

**MB wall mounting kit** for easy installation of the filter within your compressed air installation.  
SMALL: from D 60 to 120  
MEDIUM: from D 200 to 800



**MB connection kit** for two or three filters: to minimise the number of connections between filters and to avoid leakage.  
SMALL: from D 60 to 120  
MEDIUM: from D 200 to 800



Drain with timer, lets you adjust the frequency and duration of purge.

## Condensate drain

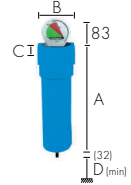
Reliability of condensate elimination is important to avoid risk of filter element damage. As standard, filters D 60-2400 are equipped with an internal float drain.



Our electronic level detection drain eliminates condensate and guarantees no compressed air loss. Several sizes are available depending on the capacity to be treated. A maintenance indicator is integrated.

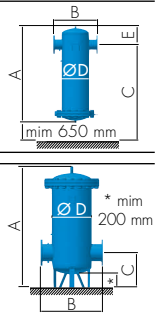
# TECHNICAL SPECIFICATIONS

	Air treatment capacity in m <sup>3</sup> /h at stated operating pressure <sup>(1)</sup>			Max. operation pressure		Inlet and outlet Connections	Dimensions mm					Weight kg	N. of cartridges
	7 bar	10 bar	12 bar	bar	psi		A	B	C	D	E		
<b>D 60</b>	60	83	99	16	232	1/2"	187	88	20	60	-	0,7	1
<b>D 80</b>	80	110	132	16	232	1/2"	187	88	20	60	-	0,7	1
<b>D 120</b>	120	166	198	16	232	1/2"	257	88	20	80	-	0,8	1
<b>D 200</b>	200	276	330	16	232	1"	263	125	32	100	-	1,8	1
<b>D 340</b>	340	469	561	16	232	1"	363	125	32	120	-	2,5	1
<b>D 510</b>	510	704	842	16	232	1 1/2"	461	125	32	140	-	2,5	1
<b>D 800</b>	800	1104	1320	16	232	1 1/2"	640	125	32	160	-	3,2	1
<b>D 1000</b>	1000	1380	1650	16	232	2"	684	163	42	520	-	5,1	1
<b>D 1500</b>	1500	2070	2475	16	232	2"	935	163	42	770	-	7,1	1
<b>D 2400</b>	2400	3312	3960	16	232	3"	1000	240	58	780	-	14	1



## Range of metal filter

<b>D 3200</b>	3200	4416	5280	16	232	DN 100	1340	560	1760	324	227	115	2
<b>D 4700</b>	4700	6486	7755	16	232	DN 125	1360	560	1780	324	227	123	3
<b>D 6300</b>	6300	8694	10395	16	232	DN 150	1425	620	1810	368	265	151	4
<b>D 9420</b>	9420	13000	15543	16	232	DN 150	1480	680	1850	419	650	218	6
<b>D 12600</b>	12600	17388	20790	16	232	DN 200	1835	792	510	508	280	320	8
<b>D 15700</b>	15700	21666	25905	16	232	DN 200	1880	918	535	610	-	455	10
<b>D 18800</b>	18800	25944	31020	16	232	DN 250	1950	955	555	610	-	500	12
<b>D 25100</b>	25000	34500	41250	16	232	DN 250	2060	1042	645	711	-	590	16



(1) The air treatment capacity of any model is a function of the operating pressure (7 bar and temperature 20°C).

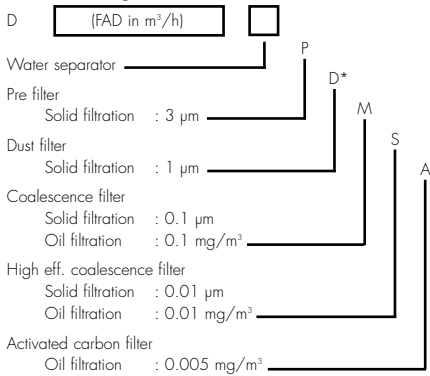
A float drain is delivered on filters D60-2400. No valves or drains are mounted at the bottom outlet of the filter vessel on filters D 3200 – 25100.

D 3200 – 25100: each filter is equipped with an MB aluminium pressure gauge.

Maximum operating temperature of 66°C for series D/M – D/S – D/D – D/P ; 35°C for series D/A.

Minimum operating temperature: 1°C.

## Product designation:



\* Not available for flanged filter (D3200 - 25100)

## Correction factor depending on operating pressure:

<b>1 bar</b>	<b>2 bar</b>	<b>3 bar</b>	<b>4 bar</b>	<b>5 bar</b>	<b>6 bar</b>	<b>7 bar</b>	<b>8 bar</b>
0.25	0.38	0.52	0.63	0.75	0.88	<b>1.00</b>	1.13
<b>9 bar</b>	<b>10 bar</b>	<b>11 bar</b>	<b>12 bar</b>	<b>13 bar</b>	<b>14 bar</b>	<b>15 bar</b>	<b>16 bar</b>
1.26	1.38	1.52	1.65	1.76	1.87	2.00	2.14

## Initial pressure drop of the element (bar)

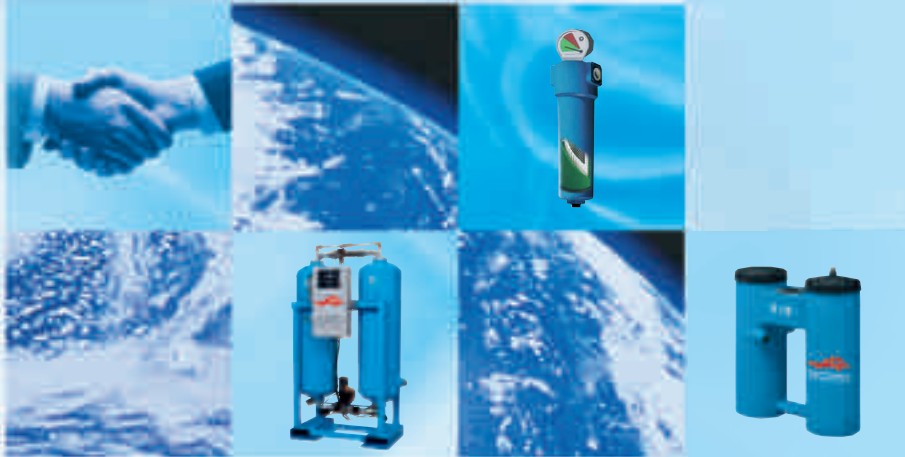
	D/P	D/D	D/M	D/S	D/A
Dry element	0.04	0.08	0.08	0.09	0.12

## Example of compressed air installation

APPLICATION			
Dry air, without oil	Dry air, without oil and hydrocarbon odours	Very dry air, without oil	Very dry air, without oil and hydrocarbon odours
RECOMMENDED EQUIPMENT			
<b>DW</b> refrigeration dryer		<b>DB</b> adsorption dryer	
<b>DW</b>	<b>DW</b>	<b>DB</b>	<b>DB</b>
D/M	D/S	D/M D/S	D/D D/M D/S D/D D/A
AIR QUALITY CLASS: ISO 8573-1			
1.4.1	<1.4.1	2.2.1 and 2.1.1	<2.2.1 and <2.1.1



# SHARING OUR VALUES



## **PARTNERSHIP**

Close working relationships form the foundation of our corporate culture. This has grown through our development of long term partnerships with our distributors, who provide a total compressed air service, tailored specifically to our customers' requirements. Our business approach has earned us a reputation of trust and loyalty, by achieving success through partnership.

## **COMPETENCE**

Personnel skill development is a vital part of our success. By a continuous improvement process we enhance the ability of our distributors to maintain and improve the service to our customers.

We carry this process through to our partner distributors, to ensure that we create a motivated and enthusiastic team, working together for the benefit of our customers.

## **EVOLUTION**

Our strategy on product and service development is based on the continuous improvement of our products and services, in order to meet the requirements of the market and our customers. Continued investment in the design of new products and the use of innovative technology, keeps our compressed air solutions amongst the most competitive in the industry. Our mission is to guarantee the satisfaction and trust of our customers.

**YOUR DISTRIBUTOR**



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