

Gas phase filtration

CarboPleat, DuoPleat, activated-carbon cartridges,
ChemControl pellets, ChemControl modules



CarboPleat activated-carbon and DuoPleat combination filters improve indoor air quality and protect people as well as sensitive products, processes and equipment, by eliminating or reducing pollutant gases and unwanted odours.

Viledon® ChemControl pellets are used for the prevention of corrosion. They remove contaminant gases by means of adsorption, absorption and chemisorption.

Gas phase filters

CarboPleat / DuoPleat | Fine dust



Specifications	
Recommended duty temperature	< 30 °C
Thermal stability	70 °C
Recommended duty humidity	< 60% rel. hum.

Application

CarboPleat activated-carbon and DuoPleat combi filters improve the air quality in indoor environments and protect both, humans and sensitive products, processes and lines, by eliminating or reducing environmental pollutants and unwanted odours.

The activated-carbon media of both filters are fixed in place using a special bonding process, and provide a maximum of active surface area for efficient gas adsorption. DuoPleat combi filters simultaneously provide particle filtration of class M6, thanks to their additional 3-layered high-performance nonwoven on the face side. The large filtering area installed and the special structure of the filter media involved create not only a particularly high holding capacity and a long operational lifetime, but also very low pressure drop.

The filter capacities stated are referenced to DIN 71460, part 2.

Article number	Article	Dimensions (W x H x D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Average efficiency [%]	Recommended final pressure drop [Pa]	Filter capacity toluene [g]	Filter capacity SO ₂ [g]	Filter capacity n-butane [g]
53439756	CP 1 / 1	592 x 592 x 292		3,400	70			910	210	105
53439758	CP 5 / 6	592 x 491 x 292		2,700	70			740	170	85
53439770	CP 1 / 2	592 x 288 x 292		1,500	70			410	95	48
53438699	DP85 1 / 1	592 x 592 x 292	M6	3,400	130	85	450	715	165	85
53438701	DP85 5 / 6	592 x 491 x 292	M6	2,700	130	85	450	570	132	68
53438700	DP85 1 / 2	592 x 288 x 292	M6	1,500	130	85	450	310	72	37

Gas phase filters

Activated-carbon cartridges | Modules + individual elements

Specifications	
Adsorption medium	Activated-carbon, granulated
Operating temperature	≤ 50 °C
Thermal stability	70 °C
Moisture resistance	70% rel. hum.
Top plate	Steel, painted
Cartridge sheathing	Expanded metal
Seal	Flat seal



Application

The filters are used in air-conditioning systems in public buildings, at airports, in offices and industrial facilities, in order to eliminate unwanted odours.

Special features

- Stable construction
- Compact single elements for easy handling and installation with bayonet lock
- Two different cartridge diameters (140 mm and 160 mm)
- Thickness of each activated carbon layer is 35 mm

Module						
Article	Optimized for	Dimensions (W x H x D) [mm]	Number of cartridges	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Activated-carbon volume [dm³]
C bank B-0305x0610x430 / 08x140 odour	Odours organic solvents	305 x 610 x 430	8	1,700	200	32
C bank B-0507x0610x430 / 12x140 odour	Odours organic solvents	507 x 610 x 430	12	2,500	200	48
C bank B-0610x0610x430 / 16x140 odour	Odours organic solvents	610 x 610 x 430	16	3,400	200	64
C bank B-0305x0610x430 / 08x140 acid	Acidic gases	305 x 610 x 430	8	1,700	200	32
C bank B-0507x0610x430 / 12x140 acid	Acidic gases	507 x 610 x 430	12	2,500	200	48
C bank B-0610x0610x430 / 16x140 acid	Acidic gases	610 x 610 x 430	16	3,400	200	64
C bank B-0305x0610x430 / 08x140 iodine	Radioactive iodine	305 x 610 x 430	8	1,700	200	32
C bank B-0507x0610x430 / 12x140 iodine	Radioactive iodine	507 x 610 x 430	12	2,500	200	48
C bank B-0610x0610x430 / 16x140 iodine	Radioactive iodine	610 x 610 x 430	16	3,400	200	64
C bank B-0305x0610x430 / 05x160 odour	Odours organic solvents	305 x 610 x 430	5	1,500	150	30
C bank B-0507x0610x430 / 07x160 odour	Odours organic solvents	507 x 610 x 430	7	2,550	150	42
C bank B-0610x0610x430 / 09x160 odour	Odours organic solvents	610 x 610 x 430	9	3,000	150	54
C bank B-0305x0610x430 / 05x160 acid	Acidic gases	305 x 610 x 430	5	1,500	150	30
C bank B-0507x0610x430 / 07x160 acid	Acidic gases	507 x 610 x 430	7	2,550	150	42
C bank B-0610x0610x430 / 09x160 acid	Acidic gases	610 x 610 x 430	9	3,000	150	54
C bank B-0305x0610x430 / 05x160 iodine	Radioactive iodine	305 x 610 x 430	5	1,500	150	30
C bank B-0507x0610x430 / 07x160 iodine	Radioactive iodine	507 x 610 x 430	7	2,550	150	42
C bank B-0610x0610x430 / 09x160 iodine	Radioactive iodine	610 x 610 x 430	9	3,000	150	54
C plate B-0610x0610x40 / 09x160		610 x 610 x 40	9			

Individual elements (cartridges)		
Article	Optimized for	Nominal diameter / Nominal height [mm]
C cart B-0140x0400x035 odour	Odours organic solvents	140 x 400
C cart B-0140x0400x035 acid	Acidic gases	140 x 400
C cart B-0140x0400x035 iodine	Radioactive iodine	140 x 400
C cart B-0160x0400x035 odour	Odours organic solvents	160 x 400
C cart B-0160x0400x035 acid	Acidic gases	160 x 400
C cart B-0160x0400x035 iodine	Radioactive iodine	160 x 400

Individual elements (plates)		
Article	Abmessungen (B x H x T) [mm]	Number of cartridges
C plate B-0305x0610x40 / 08x140	305 x 610 x 40	8
C plate B-0507x0610x40 / 12x140	507 x 610 x 40	12
C plate B-0610x0610x40 / 16x140	610 x 610 x 40	16
C plate B-0305x0610x40 / 05x160	305 x 610 x 40	5
C plate B-0507x0610x40 / 07x160	507 x 610 x 40	7
C plate B-0610x0610x40 / 09x160	610 x 610 x 40	9

Gas phase filters

CCP Pellets | CCP Survey



Applications

Viledon® ChemControl Pellets are used in different areas for the prevention of corrosion caused by acidic gases. Special pellets are used for ammonia and chlorine.

- Paper and chemical pulp industrie
- Petrochemistry
- Mining
- Chemical industry
- Pharmaceutical industry
- Computer centre
- Labs
- Microelectronics
- Fertilizer

CCP 104

Used for the prevention of corrosion caused by acidic gases. Remove contaminant gases by adsorption, absorption and chemisorption. Contain a minimum of 4% potassium permanganate to eliminate contaminants via oxidation reaction to inactive solids.

CCP 108

Used for the prevention of corrosion caused by acidic gases. Remove contaminant gases by adsorption, absorption and chemisorption. Contain a minimum of 8% potassium permanganate to eliminate contaminants via oxidation reaction to inactive solids.

CCP 210

Designed to remove or destroy airborne acidic gases by oxidation. Especially high reactivities and removal capabilities, even at high contaminant concentrations. Contain a mix of sodium and potassium permanganate at minimum 10% by weight. Excellent performance, lifetime and reactivity.

CCP 310

Ideal for filtration of acidic gases in highly corrosive environments, e.g. pulp & paper industry. Very effective in removing hydrogen sulfide, sulfur dioxide and

chlorine. Porous structure based on activated alumina impregnated with activated carbon, evenly distributed to achieve high efficiency over long lifetimes.

CCP 510

Used especially for removal of gaseous halogens from airstreams. Capture chlorine, bromine and iodine by adsorption and absorption. Highly porous structure of activated alumina impregnated with active ingredients.

CCP 610

Used for the filtration of airborne contaminant gases e.g. hydrocarbons, VOCs, chlorine and nitrogen dioxide. Consist of virgin activated carbon with very high inner surface area to achieve excellent adsorption capacities. Very low resistance to airflow and long service life.

CCP 810

Blended pellets used for filtration of gaseous contaminants. 50:50 mix of CCP 108 and CCP 610 provides excellent adsorption, absorption and chemisorption. Ideal for restricted spaces or to provide effective filtration via oxidation of contaminants and adsorption of hydrocarbons, aldehydes and VOCs.

CCP 903

Specifically used for removal of gaseous ammonia from airstreams. They capture ammonia by means of adsorption and absorption inside their zeolite structure. High inner surface provides good removal capacity over a long service life.

Please note:

All application information provided are subject to on-site conditions, specific application requirements and potential alternating effects by combining several ChemControl pellets in multi-stage units. Please consult your local Viledon® partner for further information.

Delivery notes

Other ChemControl pellets are available on request – especially custom formulations with impregnations for specific contaminants gases.

Article	Diameter [mm]	Face velocity [m / s]	Ambient temperature [C°]	Removal capacity for Cl ₂ of own weight [%]	Removal capacity for H ₂ S of own weight [%]	Removal capacity for NH ₃ of own weight [%]	Removal capacity for SO ₂ of own weight [%]	Moisture content (approx.) [%]	Crush strength (minimum) [kg]
CCP 104	3.80	0.3 – 2.5	-20 ... +50 °C		7%		4%	20%	2
CCP 108	3.80	0.3 – 2.5	-20 ... +50 °C		14%		7%	20%	2
CCP 210	3.80	0.3 – 2.5	-20 ... +50 °C		25%		12%	20%	2
CCP 310	3.80	0.3 – 2.5	-20 ... +50 °C	10%	15%		10%	20%	2
CCP 510	3.80	0.3 – 2.8	-20 ... +50 °C	15%				15%	2
CCP 610	4 x 8	0.3 – 2.5	-20 ... +50 °C	10%	7%			3%	2
CCP 810	3.80	0.3 – 2.9	-20 ... +50 °C	4%	7%		3%		2
CCP 840	3.80	0.3 – 2.1	-20 ... +58 °C	10%	12%		6%		2
CCP 903	3.80	0.3 – 2.7	-20 ... +50 °C			10%			3

Subject to technical changes.

Gas phase filters

Modules | ChemControl modules



Application

Viledon® ChemControl Modules are the rugged plastic housings that contain our chemical filtration pellets. They come in a range of four sizes to suit all applications and are designed for easy handling and replacement. They can be supplied pre-filled, direct from our production facilities, or refilled via their easy-access removable caps.

The design of your system will determine which size of module you require. Factors that need to be taken into consideration include available space, airflow volumes, type and concentration of contaminants and desired media life.

Proven performance and low whole-life costs. As with all Viledon® products, our ChemControl Modules offer excellent airflow performance with low pressure drops. We have designed our modules to minimize maintenance time and reduce whole-life costs.

Delivery notes

Please consult your local Viledon® partner for further information.

Article	Dimensions (L x W x D) [mm]	Weight [kg]	Depth [mm]	Nominal volume flow [m³/h]	Initial pressure drop [Pa]
CCM 1810	598 x 438 x 144	3.4	25.4	600	35
CCM 1210	598 x 295 x 299	2.9	76	600	180
CCM 1805	299 x 438 x 144	2	25.4	300	35
CCM 1205	299 x 295 x 299	1.8	76	300	180

Subject to technical changes.