



# CAMCARB CG MOLECULAR FILTER



Clean air solutions

# CAMCARB CG

## MOLECULAR FILTER

### Description

CAMCARB CG filters are filled with high quality activated carbon or CamPure media and are used to remove molecular contaminants from supply air, recirculation air and exhaust air ventilation systems.

CAMCARB CG filters eliminate customer problems with different categories of airborne molecules, including; odours, irritants, toxic gases and corrosives (acidic gases).

The molecular filtration media is deployed in an annular pattern with uninterrupted 360 degree geometry along the entire length of the filter. This arrangement ensures even air distribution over the entire filter area and maximizes filter lifetime. Filters mount onto a dedicated baseplate using integrated bayonet fastenings without the need for specialized tools.

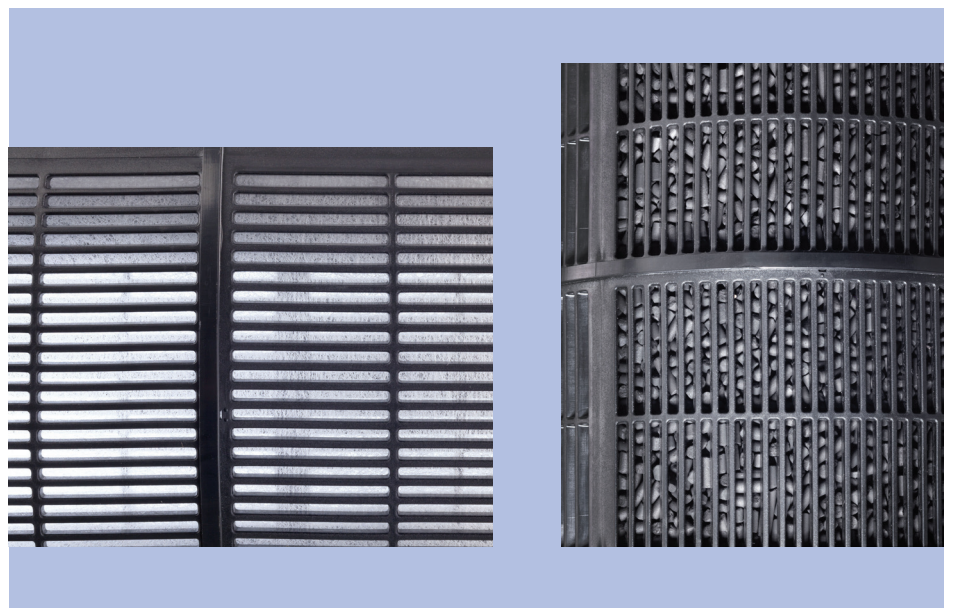
### Features and customer benefits

Features	Customer Benefits
Injection moulded filter body	Robust construction, completely corrosion resistant, may be disposed by incineration
May be filled with a wide range of molecular filtration medias	Flexibility to handle diverse gas challenges
3 standard filters sizes mount on a modular baseplate	Easy to configure to suit air flow and duct size
2 extremely effective thermo-elastic TEP gaskets seal between filter and baseplate	Zero internal leakage
Filled using vibratory technique	Media achieves maximum packing density and elimination of voids ensures very high efficiency
No adhesive used in construction	Zero degradation of media and negligible outgassing
No special tools needed for installation	Simple to install and maintain
Internal scrims	High level of product cleanliness

### CamCarb CG

Model	Dimensions Dia x L (mm)	Adsorbent Type	Rated Airflow (m <sup>3</sup> /hr)*	Pressure loss (Pa)*	Unit Weight (kg)	Unit Weight for CP8 (kg)	Unit volume unpacked (m <sup>3</sup> )
CamCarb CG 3500	148 x 595	CEX003*/LGS048/CP8	3400	175/165/175	3.75	5.70	0.013
CamCarb CG 2600	148 x 452	CEX003*/LGS048/CP8	2500	135/100/135	2.85	4.40	0.01
CamCarb CG 1300	148 x 240	CEX003*/LGS048/CP8	1250	80/60/80	1.55	2.40	0.005

\* Lower pressure loss may be achieved upon request without protective scrims.



# Molecular filtration media

CAMCARB CG filters may be filled with a range of “Broad Spectrum” or “Targeted” (chemically impregnated) molecular filtration medias.

Broad Spectrum activated carbons provide control of VOCs/organic molecules and are especially useful in applications where the precise nature of the contaminant(s) has not been determined.

A limited number of gases are not effectively controlled using Broad Spectrum grades of carbon. In such cases, chemically impregnated grades of carbon or other chemically treated adsorbents are used to provide targeted control of specific contaminants.

Examples of gases requiring special consideration include: hydrogen sulphide, ammonia, hydrogen cyanide, mercury vapour, and formaldehyde.

## Installation and pre-filtration

The preferred arrangement for CAMCARB CG cylinders is with airflow direction from inside to out. A reverse airflow configuration (outside to in) may be used to suit applications with restricted space or access. CamCarb filters are easily mounted using the standard baseplates in standard front and side access housings.

Camfil design engineers will provide engineering support for very large installations where weight and structural integrity may require special consideration.

Camfil recommend effective pre-filtration for all molecular filtration products. As a minimum, F7 level (EN779 2012) pre-filtration should be achieved to prevent the CAMCARB CG cylinders and carbon media becoming clogged with dust or particulate matter.



# Unique lifetime simulation software and lifetime testing

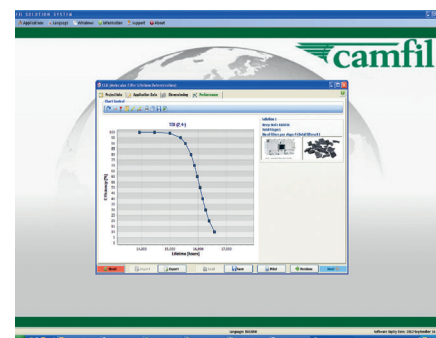
The lifetime of a CAMCARB CG installation can be simulated using the unique Camfil Carbon Lifetime Determination (CLD) software for molecular filtration. This software enables best estimates of the performance of molecular filtration products under selectable conditions that are chosen to mimic real applications. Predicting the performance of molecular filters in the real world is a complex issue.

This software takes account of the key factors that affect the performance of molecular filters; the gas/vapour to be controlled, concentration, type of adsorbent, amount of adsorbent (contact time), and temperature.

The software has been developed using a combination of; adsorption theory, 50 years application knowledge, field measurements and results of extensive product

testing in Camfil's unique molecular filtration test rig.

During normal operation, there is no external manifestation of the change in the condition of the carbon media. In particular, there is no change in pressure loss. Residual life values can be estimated using the Camfil Gigamonitor service. This procedure involves returning one CAMCARB cylinder or small samples of activated carbon (150 g) to the Camfil molecular filter laboratory. Analyses are made to compare the amount of adsorbed contamination and residual adsorptive capacity with those obtained from new material and with the values obtained from material considered to be exhausted.



A series of analyses over time allows the changing condition of the media to be tracked and media replacement to be scheduled in advance of a failure.



## **CAMFIL is the world leader in air filters and clean air solutions.**

Camfil is the global industry leader in clean air solutions with 50+ years of experience. Our solutions protect people, processes and the environment to benefit human health, increase performance, and reduce and manage energy consumption. Twenty-three manufacturing plants, six R&D sites and over 65 local sales offices worldwide provide service and support to our customers. The Camfil Group is headquartered in Sweden but more than 95% of sales are international. The Group has around 3,500 employees and sales in the range of SEK 4.9 billion.

[www.camfil.com](http://www.camfil.com)

For further information please contact your nearest Camfil office.