

## Adsorber VG-R

### Section 1: Information on the manufacturer

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### Section 2: Product overview



Sizes

Size 1	VG-R 1L
Size 2	VG-R 2L
Size 3	VG-R 3L
Size 5	VG-R 5L / VG-R 5XL

#### Materials used

Acrylic glass, aluminum, galvanized steel, polyamide (PA), polyvinyl chloride (PVC), FKM, activated carbon, Silica gel Colorless

#### REACH Note

No ingredients requiring disclosure under Regulation (EC) No 1907/2006.

## Section 3: Construction and materials

<b>Use</b>	Reusable
<b>Housing material</b>	Acrylic glass, PA, aluminium
<b>Adsorbents</b>	Activated carbon
<b>Particulate filter</b>	Glass fibre filter element with 3 µm separation efficiency
<b>Seal material</b>	FKM
<b>Operating temperature</b>	-30°C - +70°C
<b>Connection</b>	BSP / NPT / Metric / Slipfit

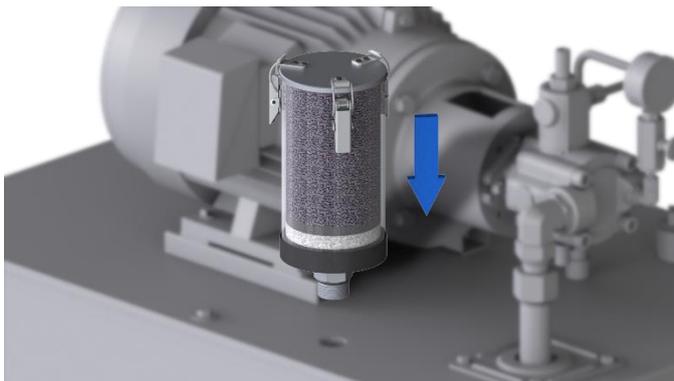
## Section 4: Technical data



	VG-R 1L	VG-R 2L	VG-R 3L	VG-R 5L	VG-R 5XL
Total weight [kg]	0,2	1,1	2,3	4,2	5,3
Weight activated carbon [kg]	0,1	0,3	0,9	2,2	3,0
Height [mm]	141	234	349	387	487
Housing diameter [mm]	60	90	110	150	150
Screw-in diameter [mm]	63	121	141	181	181
Connection	BSP, NPT, Metric	BSP, NPT, Metric, Slipfit	BSP, NPT, Metric Slipfit	BSP, NPT, Metric, Slipfit	BSP, NPT, Metric, Slipfit
Valves [IN-OUT]	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0

## Section 5: Assembly and commissioning

1. Remove the protective plug on the bottom of the adsorber.
2. Lightly oil the thread.
3. Screw the adsorber onto the system.  
The torque should be 5Nm and not exceed 10Nm. "hand-tight"



## Section 6: Maintenance

Once the activated carbon is completely saturated, a spare parts kit must be used.



0% → 100%

If the color of the indicator at the bottom has changed completely, the adsorber must be replaced.

1. Unscrew the adsorber from the system.
2. Open the lid using the clamps.
3. Remove the seal in the cover and replace it with the new one.
4. Remove the foam disk and empty the activated carbon.  
(For the VG-R 5 series, also remove the two carbon discs)
5. Pull out the filter element.
6. Remove the lower foam discs including silica gel colorless as well.
7. Insert a new foam disc, fill in silica gel colorless and insert another foam disc.
8. Insert a new filter element and then fill in fresh activated carbon. When filling in the activated carbon, lightly tap the housing with a soft object (e.g. the ball of your hand) to compress the filling.
9. Insert the foam disk and then reclose the lid using the clips.
10. Screw the adsorber back onto the system.



## Section 7: Spare parts and storage

Adsorber	Spare parts kit	Desiccant
VG-R 1L	ET VG-R 1	Spare Filling Carbon 0,5 kg
VG-R 2L	ET VG-R 2	Spare Filling Carbon 0,5 kg
VG-R 3L	ET VG-R 3	Spare Filling Carbon 2,5 kg
VG-R 5L VG-R 5XL	ET VG-R 5	Spare Filling Carbon 2,5 kg



*Exemplary representation  
of the spare parts set*

### Spare parts kit

- Color indicator
- Filter discs
- Filter element
- Seal kit



### Adsorbent

- Activated carbon
- Airtight packaging*

### Order of spare parts

For a constant operational readiness of the adsorber and thus of the plant, make sure that a spare parts kit is always in stock.

The time until the complete color change from colorless to brown and thus the service life of the adsorber depends on various factors:

- Number and duration of flow and loading intervals.
- Quantity of oil particles and mists emitted.

### Storage of adsorbers

This product can be stored for up to **two years** in dark and dry environments. The temperatures for storage should be between -10° and 30°C.

## Section 8: Disposal

At the end of its useful life, the device must be disposed of in accordance with the relevant legal regulations. Metal and plastic parts should be separated and disposed of separately.

The loaded activated carbon must be disposed of according to the absorbed substance (e.g. hydraulic or gear oil).

Activated carbon and silica gel are not classified as hazardous substances under European Union legislation (Regulation EC No 1272/2008). It is not subject to mandatory labelling according to EC Directive (67/548/EEC or 1999/45/EC). Activated carbon and silica gel are not classified as substances hazardous to health or the environment.

## Section 9: Risk and hazard analysis

### 1. Oil flows out of the plant

#### Porous seals

Air containing oil can flow from the adsorber into the environment at the porous points. This means that no protection against oil mist in the air is possible.

#### Saturated activated carbon

When the activated carbon is saturated, it can no longer absorb oil. As a result, oil particles from the system are released into the air.

#### Air flow rate too high

If the air flow is too high, the contact time between oil particles and activated carbon is too short. This allows oil to flow out of the system.

### 2. Positive or negative pressure builds up in the system

#### Air flow rate too high

Too high an air flow rate can cause over- or underpressure in the system.

#### Contaminated filter element

The filter unit can be clogged by dirt particles and can therefore build up pressure in the system.

## Activated carbon saturated

Once the activated carbon is completely saturated, oil can deposit and clog the adsorber.

## **3. Adsorber is damaged**

### Material resistance

When selecting the adsorber, the ambient and operating conditions should be considered. An aggressive environment or liquid in the container can damage the adsorber.

### Temperature range

The ambient and operating temperatures should not exceed or fall below the specified range, otherwise the adsorber may be damaged.

### Improper handling

Incorrect or improper handling can damage the adsorber. The recommended installation must be observed.

### Strong vibrations

Strong vibrations of the plant can damage the adsorber.

### Pressure range of the system

The adsorber should not be exposed to over- or underpressure above 0.5 bar, otherwise the housing may be damaged.

### Cleaning of the adsorber

For cleaning the adsorber, the use of a mild soap in combination with water is recommended. The use of brake cleaner will damage the adsorber and is no reason for complaint.

### Thread of the adsorber and accessories is damaged

When mounting the adsorber on the system, the threads must be slightly moistened with oil. If the threads are not oiled, this can lead to damages.



## Section 10: Maintenance plan

### 1. Check seals for wear

Check The O-rings installed in the adsorber and the flat gasket must be checked for perfect condition. For this purpose, the seals in the cover, on the filter and on the connection should be checked and examined for brittleness.

Cycle Half-yearly

Measures In case of existing damage, a new spare parts kit or a new adsorber should be used.

### 2. Visual inspection of the activated carbon

Check The loading condition of the activated carbon must be determined by visual inspection of the adsorber. The colour white indicates that the activated carbon can still adsorb oil and that air is cleaned. If the activated carbon is completely saturated, the colour changes from white to brown.

Cycle Half-yearly

Measures If the activated carbon is loaded, a new spare parts kit or a new adsorber with fresh activated carbon should be used.

### 3. Check filter unit for impurities

Check Remove the cover and remove the foam disk. Then empty the activated carbon. The filter unit can then be removed. This should be checked for impurities and should be free of dirt for smooth operation.

Cycle Half-yearly

Measures The filter element is part of the spare parts kit and should be replaced if it is contaminated.

### 4. Visual inspection of the adsorber

Check The adsorber, including the connection, must be visually checked for damage. Damage can occur due to various environmental or operating conditions.

Cycle Annually

Measures If the adsorber is damaged, it must be completely replaced to ensure full functionality.

## 5. Replacing the wearing parts

Check The wearing parts, in particular the seals, the activated carbon and the filter element, must be checked with regard to their condition.

Cycle Every two years

Measures Regardless of the result of the test, it is recommended to replace the wearing parts by using a spare parts kit or a new adsorber to ensure smooth operation.