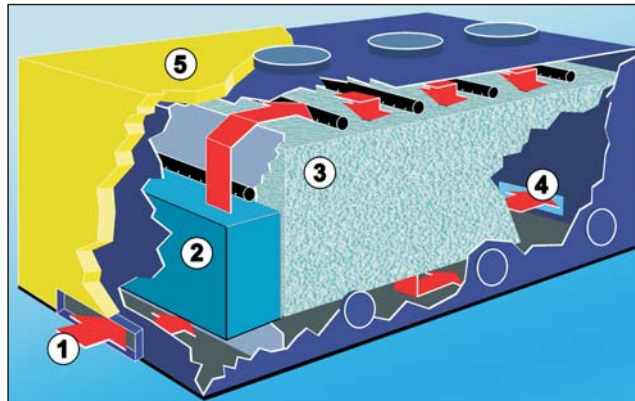


Biological purification of discharged air with the HERBST-Filter



Schematic presentation of a one-level HERBST-filter with integrated HERBST-conditioning

1. Raw gas
2. Humidification
3. HELATROP®-substrate
4. Clean gas
5. Isolation

Construction of the HERBST-Filter

The microorganisms grow in the HERBST-Biofilter on a special HELATROP®-substrate which is flown through by the discharged air that has to be purified. The high effectiveness of the HERBST-Biofilter at a low need of floor space can be achieved by an ideal process conduct of the biological decomposition. The growth of the microorganisms is e.g. advanced by the addition of custom-designed nutrients. The inner operating parameters such as micro-organism population, pH-value, nutrient accommodation and pollutant load are adjusted to each particular case at the same time. Despite the intensive biological decomposition in the HERBST-Biofilter the HELATROP®-substrate is not

subject to any aging. The usual change of the substrate can thus be omitted.

Application areas

- waste gas purification
- smell elimination
- purification of stripping air
- restoration of contaminated sites

Pollutants which can be decomposed with the HERBST-Biofilter:

- lightly and heavily water soluble hydrocarbons such as toluene, ethyl alcohol as well as mixed solvents
- mercaptans
- hydrosulphide
- vinyl chloride
- odours

The HERBST-conditioning station

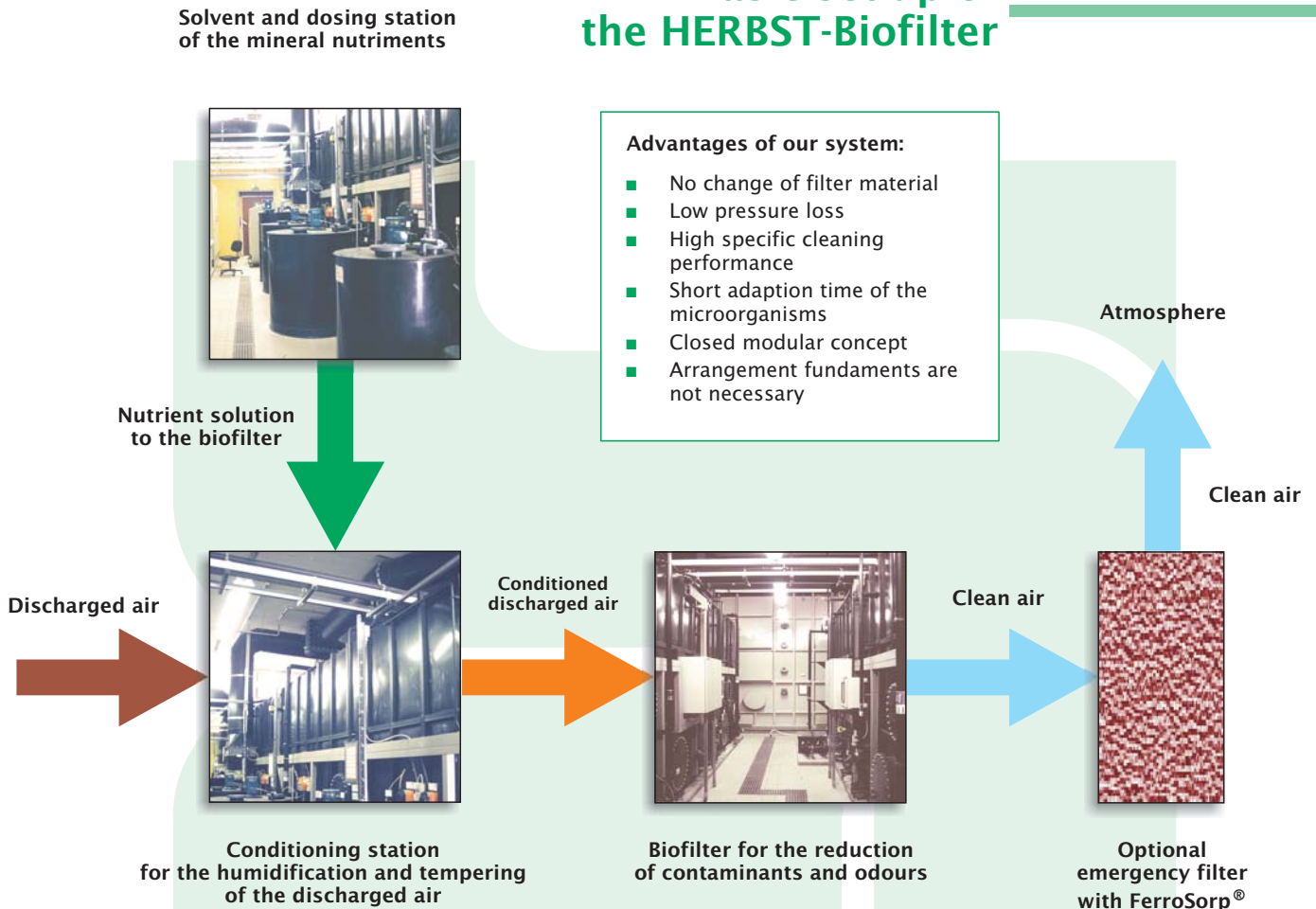
The values of discharged air with regard to temperature, humidity and pH-value have to be in the designated required area so that an undisturbed operation is guaranteed in the HERBST-Biofilter. Irregularities concerning these values could result in high fluctuations in performance. The HERBST-conditioning station ensures that all values are in the operation optimum. The conditioning station can either be integrated constructionally in the HERBST-Biofilter or it can be offered as a separate unit.

The nutrient solution

GoMet® is a nutrient solution which has been especially developed for the HERBST-Biofilter. GoMet® supplies the bioflora with all necessary mineral nutrients, micro elements and vitamins. The use of GoMet® guarantees a safe protection against parasites and fungi which endanger the active bioflora. GoMet® is offered in liquid and solid form. In liquid form GoMet® can be stored up to 4 months, in solid form up to 14 months.

Construction Concept

Basic set-up of the HERBST-Biofilter



Advantages of our system:

- No change of filter material
- Low pressure loss
- High specific cleaning performance
- Short adaption time of the microorganisms
- Closed modular concept
- Arrangement fundamentals are not necessary

Construction heights of the one-level HERBST-Biofilter* with integrated HERBST-conditioning and nutrient supply station

Type	Performance Nm ³ /h	Length mm	Width mm	Height mm	Inlet and Outlet flange width in mm x height in mm
BN1-A035	3.500	4.200	2.700	2.800	1.120 X 180
BN1-A060	6.000	6.100	2.700	2.800	1.120 X 250
BN1-A080	8.000	8.100	2.700	2.800	1.600 X 250
BN1-A100	10.000	10.100	2.700	2.800	2.000 X 250
BN1-A125	12.500	12.100	2.700	2.800	2.240 X 250
BN1-A150	15.000	12.100	3.100	2.800	2.800 X 250

*subject to technical alterations

Note: specific area load in operating status 700 kg/m²