



INDICAT FILTERS™

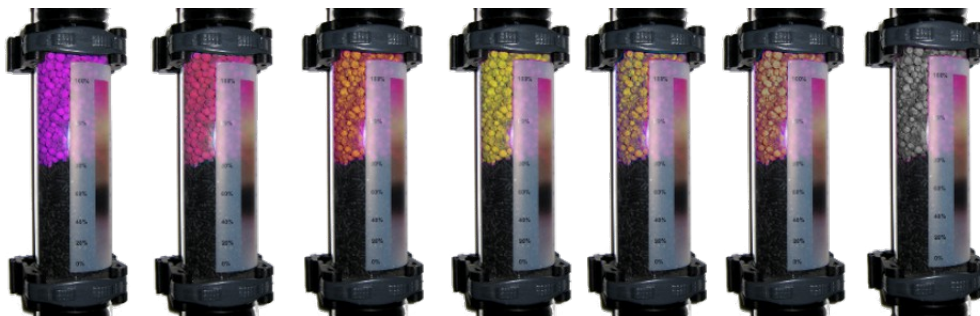
The INDICAT™ odor filters are known as the most powerful anti-odor filters in the market.

The user-friendly character of the INDICAT™ odor filter is characterized by a color change of the purple granules. During the reaction process, the purple color will change slowly. The grey/white phase means that the medium is completely saturated.

The INDICAT™ odor filters are filled with two different granules; Activated carbon and aluminiumoxide grains. The activated carbon will absorb gases. The high quality and durable activated carbon is characterized by the large number of micro pores and thereby gives the activated carbon an extremely large internal surface, which ensures a very high binding capacity of a wide variety of gasses.

The aluminiumoxide grains are impregnated with potassium permanganate (KMnO₄). These grains have a very open and porous structure. On the surface of the grains a two-phase process takes place. First, the contaminated molecules are absorbed on the microporous surface areas of the grains. Secondly the odor-causing and corrosive gases (such as H₂S, SO₂, NO_x, formaldehyde and mercaptans) will penetrate through the microporous surface into the grain, after which a chemical oxidation process starts.

The INDICAT™ odor filters are made of polycarbonate housing combined with HDPE treaded tops. *Viton* gaskets are used to ensure durable gas-tight seal under any circumstance.



VERSIONS

The INDICAT™ odor filters are available in two versions:

1. INDICAT- Duo

This filter contains a 50/50 mix of activated carbon and aluminiumoxide grains. The duo filters are especially suitable for systems with a low and continuous/steady load.

2. INDICAT- Single

This version is filled with the unique aluminiumoxide grains. The single filters are properly suited for systems with an irregular and periodically high load.

The INDICAT™ odor filters are available in two sizes:

The INDICAT - 400 for small wastewater systems, such as recreational boats & campers. These filters have a diameter of 50 mm and a length of 210 mm. The INDICAT- 400 filters are equipped with 2 x 1 "BSP female thread. Alternatively, the can be provided with make a straight and / or elbow hose fitting of respectively 13, 16, 19, 25 mm pipe work and / or 1/2 "to 1 1/2" fittings.

The INDICAT-1000 filters are suitable for larger wastewater systems. The INDICAT 1000 filters are used on large vessels, charters, housing boats, offshore and decentralised sanitation systems on land. These filters have a diameter of 90 mm and a length of 250 mm. The filters INDICAT-1000 are standard provided with 2 x 2 "BSP female thread. Alternatively, a straight and / or angled hose fitting to 25 mm – 75 mm can be realised, and/or 3/4" BSP – 3" BSP fittings. The INDICAT-1000 filters are also available with flanges (DN40, DN50 and DN65).

In addition we can adjust our filters to meet the special needs of our customers.

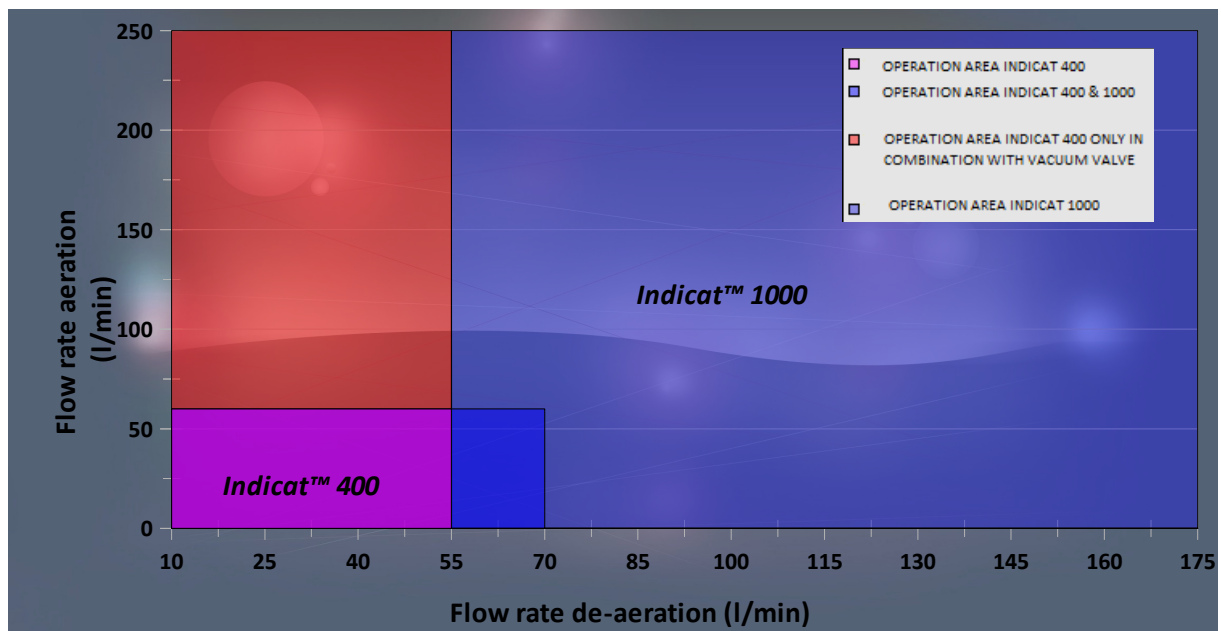


OPERATING RANGE

The filters have an ideal work area which depends of the flow of air which is passed through the filter. This air flow (flow rate) must not be too low, but certainly not too high. The following table can be used as a guidance to choose the right filter for a given circumstance.

The 'de-aeration flow rate ' (x-axis) represents the amount of air leaving the system is through the filter. In most of the cases, it enters the same as the maximum amount of waste water that the system per minute. For example; this is the sum of a toilet flush and wastewater from bathroom and kitchen water that can be pumped to the holding (septic) tank per minute.

The 'aeration flow rate " (y-axis) represents the amount of air which enters the tank through the filter when the tank is emptied by an external pump. Because the filter has a certain internal resistance there are limits to the aeration in order to prevent the implosion of the tank. In case of any doubt you should install an extra vacuum valve.



OPERATE & MAINTENANCE

The INDICAT™ odor filters should be fit along the vent in the highest possible location, preferable in a vertical position with the purple round grains above the black. The filters can be used as end of pipe ventilation or inline with pipework. Always avoid that water can enter the filter. The saturation rate of the filter can be read by means of the change in color. At the moment the color of the purple grains has changed into grey/white the filter should be refilled.

Each version of the INDICAT™ odor filters is equipped with retainer rings and stainless steel sieves. The filters can be emptied by simply removing one of the retainer rings and the stainless steel sieve. Emptying and filling the filter should be done in open air or a good ventilated room. The used (grey/white) grains are harmless and can be discharged with the normal household waste.



OPERATING CONDITIONS

TEMPERATURE -10°C – 50 °C
RELATIVE HUMIDITY 95%

TECHNICAL SPECIFICATIONS

RATIO GRANULATES (VOL/VOL)	50/50
DIAMETER GRANULATES	2-5 MM
SPECIFIC WEIGHT	600KG/M ³
IMPREGNATION	KmnO ₄
IMPREGNATION LEVEL	8%
ACTIVATED CARBON	60%



INDICAT™ 400 D (DUO) & INDICAT™1000 D odor filters