

Also which precautions can be taken?



Mouth-Nose-Protection

Protects against drops in the exhaled air of the person wearing the mask



Respiratory protective mask

Protects the person wearing the mask from inhaling the smallest airborne particles, filtrates at least 78% of viruses or bacteria



Extraction System

Protects against viruses and bacteria in the room air, filtrates them up to 99.95%



Illustration similier



Filter possibilities of Coronavirus

	 Mouth-Nose-Protection	 Respiratory protective mask	 Extraction system
Protection	Protects against drops in the exhaled air of the person wearing the mask; however, it does not reliably protect against viruses and bacteria	Protects the person wearing the mask from inhaling the smallest airborne particles, filtrates at least 78% of viruses or bacteria from the air breathed by the wearing person	Protects against viruses and bacteria in the room air, filtrates them up to 99.95%
Suitability	For medical and nursing staff to protect patients from respiratory emissions	Without exhalation valve: for medical and nursing staff, rescue and emergency services to protect against transmission of viruses/bacteria With exhalation valve: for non-medical use to protect against aerosols containing viruses/bacteria	For protection against persons in waiting or treatment rooms, offices, public facilities; Is no medical device according to §3 Art. 1 of the MPG
Usage	Comprehensible handling, Protection of other persons, if one's infected	Use of mask only after instruction, otherwise no sufficient protective effect	Comprehensible handling, greatly reduces the number of particles (=viruses, bacteria) in the room due to 4-times room air change and H13 filter
Period of usage	Have to be disposed after each use	Depending on classification up to 8 hours or suitable for reuse	System for continuous operation, filter change after status display
Tested	According to EN 14683, standard for "Surgical masks" by the manufacturer	According to EN 149, standard for "Particle filtering half masks" by independent testing body	According to EN 1822, standard for "HEPA filters with very high efficiency (EPA, HEPA, ULPA)" by the manufacturer

Source: PM DGV: "Mund-Nase-Schutz ist keine Atemschutzmaske" vom 27.03.2020 ("Mouth-Nose-Protection is not a respiratory protective mask" from March 27, 2020)



Filter possibilities of Corona virus

The virus SARS-CoV-2 (called corona virus in the media) can remain in the air for at least 180 minutes, which is more than 3 hours, according to studies by researchers at the US National Institutes of Health*. Transmission via air or through an infectious carrier is possible because the coronavirus can remain viable for several hours in aerosols and even up to several days on surfaces (up to 4 hours on copper, up to 24 hours on cardboard and up to 2-3 days on plastic and stainless steel). Air filtration can reduce the number of viruses in the air significantly, minimizing the risk of contact with the corona virus from airborne viruses.

TBH filter and extraction systems extract the contaminated air from the room or a medical treatment. The corona viruses remain in the integrated filters. The systems thus prevent the virus from spreading and settling on surfaces. A protective screen protect nurses, doctors and patients even better against infections via aerosols in the air. The screen also directs the airflow in a controlled way into the area between the doctor and patient, resulting in more effective, due to direct extraction.



Room air extraction



Illustration similiar

RF 10 Up to 15m²



Illustration similiar

RF 230 Up to 20m²

Heavily polluted and large rooms?

Please contact our TBH sales team. Together we will work out an individual solution for you.



Particle extraction at the patient BF9 - BF10 SET D



Illustration similiar



Room air extraction



Room air extraction with guided air flow along the protective screen

According to studies, corona viruses can remain in the air for several hours.

Air filtration helps to reduce the number of viruses in the air significantly. For this purpose, it's important to keep an air exchange rate in the room of around 4.



Fibroids removal



Removing birthmarks with lasers

With laser therapies or in laser eye surgery and in different laser treatments, harmful particles are created oder released - These and the corona viruses particles, have to be extracted..

This is the only way to efficiently protect doctors, nursing staff and patients. This can only be guaranteed by using a filter and extaction system.

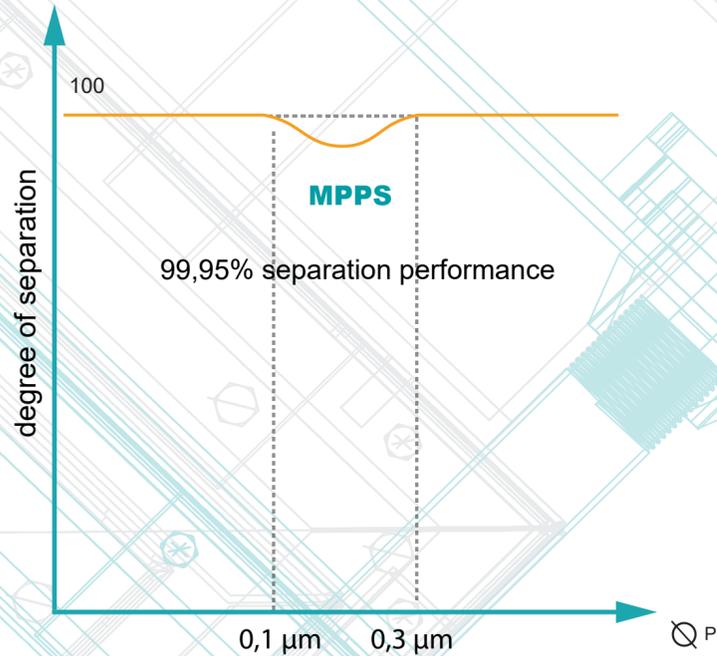
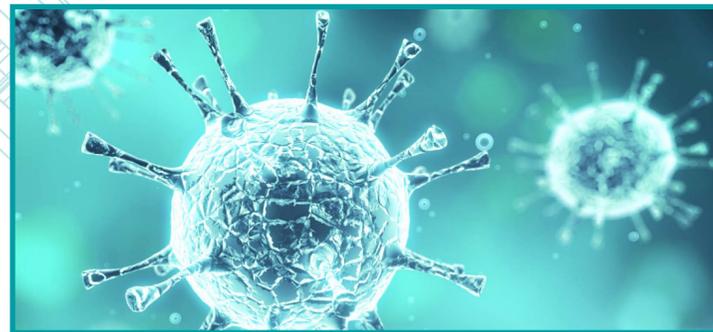
* Laboratory of Virology, Division of Intramural Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Hamilton, MT, USA and the Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ, USA.)



Safety through tested particle filters

MPPS = most penetrating particle size

Corona viruses have a size of 20 - 160nm, which is 0.02 - 0.16µm. Our systems extract and separate all particles <0.1µm and >0,3µm to 100%, and particles in between to 99.95%.



Corona viruses are easy to extract for this system. The integrated H13 filters are tested in accordance with ISO1822 criteria and their effectiveness in accordance with ISO 15012. High safety requirements are thus met. Awarded W3 and the DGUV seal, the system offers triple protection for humans, environment and machinery and is accordingly listed on the "IFA positive list". TBH is specialized in laser dusts with a confirmed separation efficiency of up to 1nm in laser processes.

W 3	ISO 15012-1 $\eta \geq 99\%$	W 3
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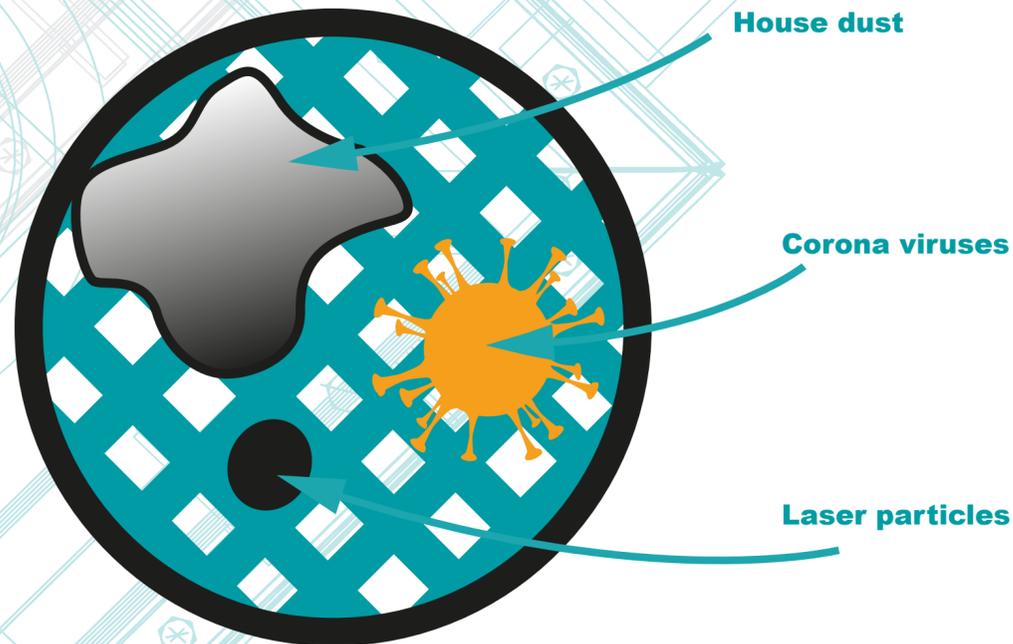


H13-Filter



H13-Filter = 99,95% separation efficiency
Influences on degree of separation:

- Larger filter surface
- Longer contact times
- Reducing volume flow
- Criteria in accordance with ISO 1822 approved efficiency tested in accordance with ISO 15012



Double adsorption power Absorbs odors due to integrated activated carbon filter



Active carbon



BAC granulate



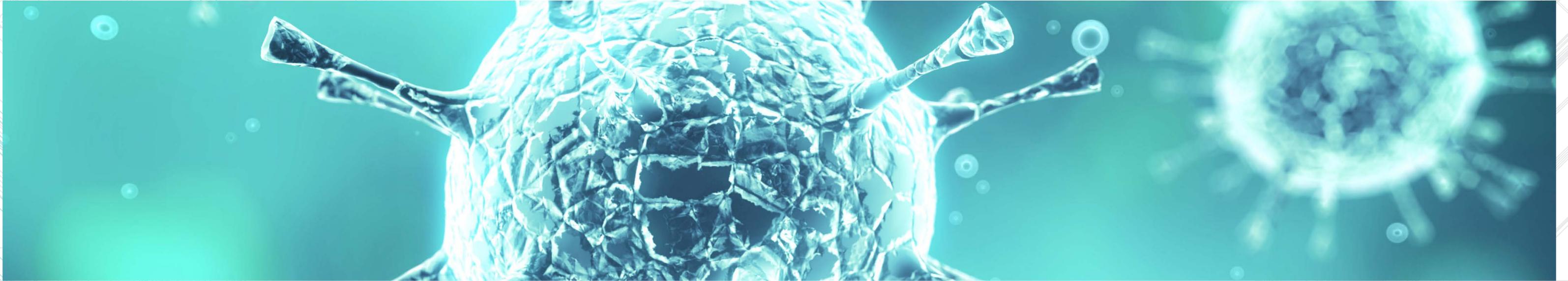
Active carbon / BAC

The adsorption of the gaseous substances takes place with activated carbon (physical adsorption) and BAC granulate (chemical adsorption). In addition, they take up a very broad spectrum

of gases and odours. -> Neutralization through chemical bonding with the reaction substance applied to the substrate material.



Recommendations



Recommendations for capturing and avoiding emissions that are hazardous to health

1. Place the extraction system or the detection element as close as possible to the patient or the treatment site.
2. If possible, place guiding elements such as Plexiglas panels or walls to limit the extracting area.
3. Use adequate PPE to change filters.
4. If possible, change the filters in a separate room.
5. Use a disposable pad when changing the filter.
6. Immediately, pack the used filter in a sealable packaging, such as a plastic bag, and seal it.
7. Have suitable practice and hospital standard cleaning agents available for cleaning the extraction system and the surrounding area.

General protective measures:

For personal protection, regular hand washing with soap for at least 20 seconds and keeping a distance of 1.5 to 2 meters from other people must be observed.

In particular, contact with persons of the (high) risk group such as persons over 60 years of age or with a weakened immune system should be avoided.

Coughing and sneezing into the crook of your arm and, if possible, stay at home, even if no symptoms of illness are obvious. Removing harmful particles from the air preferably with an extraction system with integrated H13 filters.

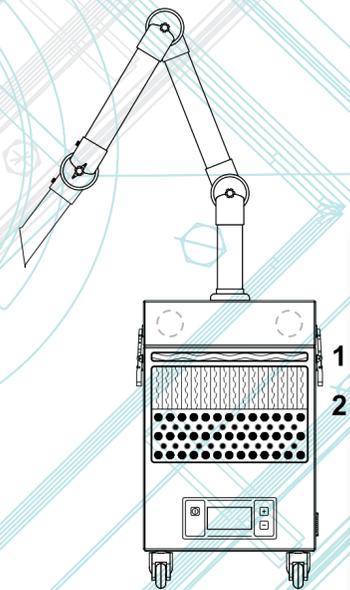
Wearing a mouth and nose protector in public can protect especially other people from a possible infection.



Technical data

	UNIT	BF 9 SET D	BF 10 SET D
Effective air flow rate	m ³ /h	20-200	20-200
Voltage	V	100-240	230/120
Frequency	Hz	50/60	50/60
Motor output	kW	0,6	0,7
Class of protection	-	1	1
Drive type		cont. running	brushless motor
Sound level	db(A)	ca. 62	ca. 64
Weight	kg	24	24
Dimensions (HxWxD)	mm	510x300x300	510x300x300
Color (housing)	RAL	7035	7035
Color (of lid)	RAL	7037	7037

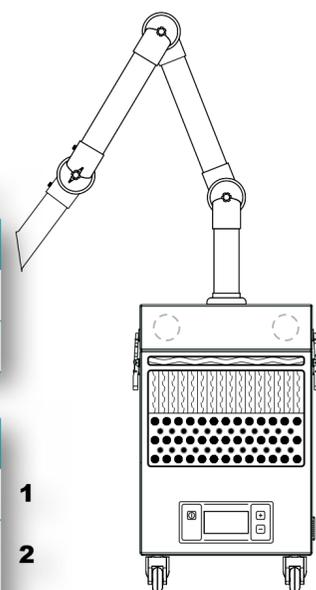
Particle extraction at the patient



BF9 SET-D

DESIGNATION	ART.-NO.
BF9 SET-D 230V	90389
BF9 SET-D 120V	90390

SPARE FILTER	ART.-NO.
Pre-filter mat (20 Pcs.)	11141
2-Stage-filter (Particle filter + activated carbon filter)	11140



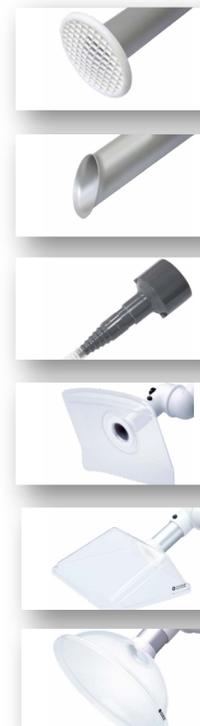
BF10 SET-D

DESIGNATION	ART.-NO.
BF10 Set-D 100-240V	90374

SPARE FILTER	ART.-NO.
Pre-filter mat (20 Pcs.)	11141
2-Stage-filter (Particle filter + activated carbon filter)	11140



Accessories



USE	DESCRIPTION	ART. NO.
BF9 / BF10 Set-D	suction tube with grid	12777
BF9 / BF10 Set-D	suction tip system 50 AL 210 mm	10199
BF9 Set-D	hose connecting laboratory tubing	15232
BF9 / BF10 Set-D	suction hood PETG 330x240 mm white	13279
BF9 / BF10 Set-D	suction hood PETG 245x220 mm white	10308
BF9 / BF10 Set-D	suction hood round 385 mm (polycarbonate)	10359