

TBH Health-Series

MEDICINE & AESTHETICS // EXPORT VN 2304



Ovlašćeni zastupnik i uvoznik:

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The patented InLine filter

- The InLine filter has been designed and developed specifically for your applications and needs.
- Fewer cases of illness due to clean air in the treatment room
- Ensures optimal capture.
- Minimizes internal contamination of the extraction arm.
- Reduces cleaning effort and maintenance costs.
- Extends the service life of the high-tech main filters.



- ✓ Optimal capture with the TBH InLine-Extraction-Hood



TBH InLine-Filter with extraction hood (ill. similar).

- ✓ Spot capture possible closer to the point of origin



TBH InLine-Filter without extraction hood (ill. similar).



InLine-Filters' hygiene features

- High-tech polycarbonate in medical quality
- High temperature stable - up to 121 ° C for autoclaving
- Improved durability for disinfectants
- Improved durability for alkaline and enzymatic cleaners
- Designed for cleaning in disinfection sink



The TBH hygiene concept

- ✓ Tested by the laboratory CleanControlling Medical GmbH & Co. KG



Final Report Validation of manual processing
Abschlussbericht manuelle Aufbereitungsvalidierung



TBH GmbH
Absaugtechnik und Filtertechnik
Heinrich-Hertz-Straße 8
75334 Straubenhardt

Project No.
16658
Date of testing
05.11.2020
End of testing
26.11.2020
Date of Report
05.01.2021
Customer No.
30756

Identification of test item / Identifikation des Prüfgegenstands

Test item name Reinigungs- und Desinfektionsmittel Alkohol	1. Alkohol	
Test item no. Name des Prüfgegenstands	2. Artikelnummer	
Date test item received / Order number Empfangs- / Auftragsnummer	3. Artikelnummer	
Batch No. Chargennummer	4. Artikelnummer	
Material Material	5. Artikelnummer	
Total surface of test item Gesamte Oberfläche des Prüfgegenstands	6. Artikelnummer	

Article No. Validation of processing
Artikelnummer Validierung
707713

The information about the test item and about the sponsor and has not been verified by the test facility.
Die Informationen zu dem Prüfgegenstand wurden vom Auftraggeber bestätigt und von der Prüfstation nicht verifiziert.

Product-specific feature
Produktspezifische Besonderheiten
Delivery: normal / normal zugestellt

Test results (summary) / Prüfergebnis (Zusammenfassung)

The test items could be successfully cleaned and disinfected in three independent cycles following the processing instructions of the test item's manufacturer.

Die Prüfgegenstände konnten unter Verwendung der vom Hersteller angegebenen Anleitung in drei unabhängigen Läufen erfolgreich gereinigt und desinfiziert werden.

FBM 166379, 05.01.2021

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To comply with the TBH hygiene concept, we recommend:



- Change InLine filter 1x daily
- Change the HEPA-main filter in the system only every six months



- Purify hood with clean cloth.



- Remove protective grid.



- Detach InLine filter, pack it safely into a closed, tear-proof bag and dispose of it.



Tip:

Only effective collection and filtration in combination with cleaning and disinfection of surfaces protects against the spread of viruses/bacteria between patients. Keeping the system on between treatments allows it to filter all the air in the treatment room several times an hour, significantly reducing the risk of contamination and infection.



Tool-free filter change in the system



- Fast and smooth change



- No special skills / tools required



- Easy handling



Cleaning instructions video



Adsorption of gaseous substances



TBH activated carbon granules (ill. similar)

The adsorption of the gaseous substances takes place with activated carbon granules (physical adsorption). It collects a very wide range of gases and odors. If requested, special mixtures are possible that are adapted to each customer's process. For more information ask your TBH sales partner.



Optional capture elements and accessories



TBH Suction tip (illustration similar)

The suction tip is generally used for smoke and particles where no grid cover is required. (Optional)



Foot switch (illustration similar)

The foot switch provides a hands-free Start/ Stopp operation. The foot switch is connected to the interface. (Optional)



TBH cleaning set (illustration similar)

The cleaning set includes a brush and ten disposal bags and enables easy cleaning of the extraction arm. (Optional)



TBH filter concept: operation principle

- InLine filter captures particles/bacteria/ aerosols.
- Protects the extraction arm from contaminants.
- HEPA Particle filter guarantees separation efficiency.
- Activated carbon filters gases/odors.

- Combined 2-stage filter:
- HEPA H13 particle filter ensures separation efficiency.
- Activated carbon filters gases/odors.



TBH Health Basic/ TBH Health Pro mit InLine-Filter & 2-Stage filter (Illustration similar).

TBH Health Basic

- Best price baseline model
- Suitable for occasional use:
Brush motor, for less than
1 operating hour a day
- Guarantee: 600 operating hours or 2 years

TBH Health Pro

- Compact model with powerful motor
- Suitable for daily use:
Brushless motor, for more than
1 operating hour a day
- Guarantee: 10000 operating hours or 2 years

TBH Health systems:

TECHNICAL DATA	UNIT	TBH HEALTH BASIC	TBH HEALTH PRO	TBH HEALTH PRO SILENCE
Effective air flow rate	m³/h	20-200	20-200	100-300
Motor input	kW	0.7	0.6	0.6
Drive type		brush motor	brushless	brushless
Sound level	db(A)	ca. 64	ca. 62	ca. 53
Weight	kg	ca. 24	25	45
Dimensions (HxWxD) System height without extraction arm	mm	510x300x300	510x300x300	700x350x440



TBH filter concept: operation principle

- InLine filter captures particles/bacteria/ aerosols
- Protects the extraction arm from contaminants.
- HEPA Particle filter guarantees separation efficiency.
- Activated carbon filters gases/odors.

- Larger filter area
- Lower follow-up costs of replacement filters: (HEPA Particle filter and activated carbon can be exchanged separately).
- HEPA particle filter H14



TBH Health Pro with InLine filter, particle filter HEPA H14 & activated carbon filter (Ill. similar)

TBH Health Pro Silence

- Quiet and pleasant
- Higher air volume and more power
- continuous running motor for more than 1 operating hour a day
- Garantee: 10000 operating hours or 2 years

TBH Health systems:



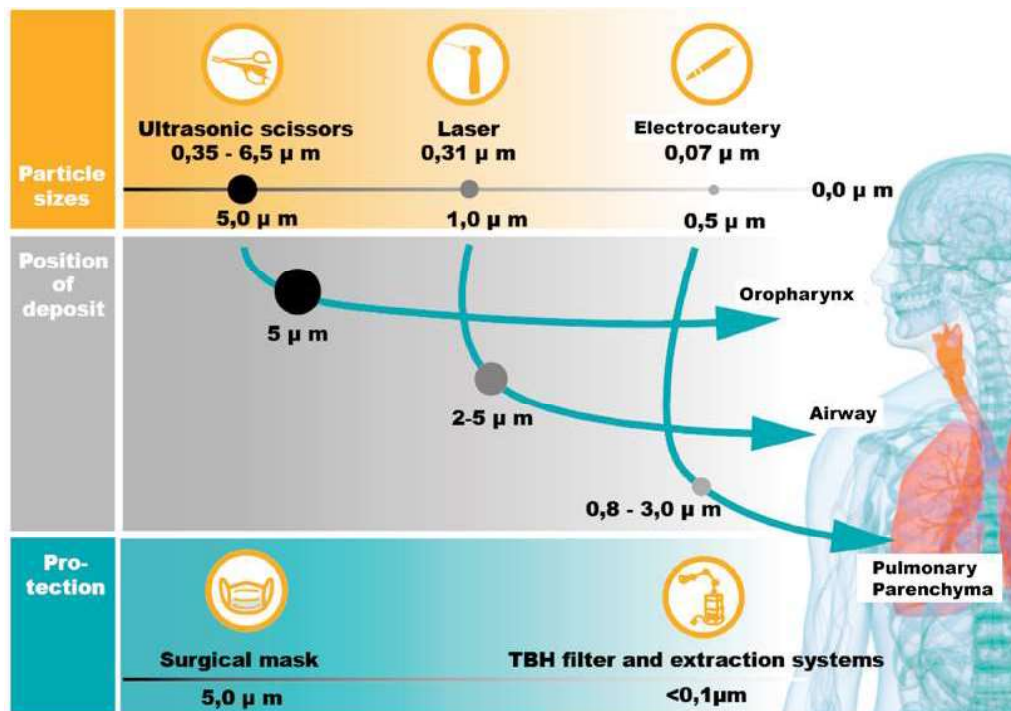
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Dangers in dermatology practices

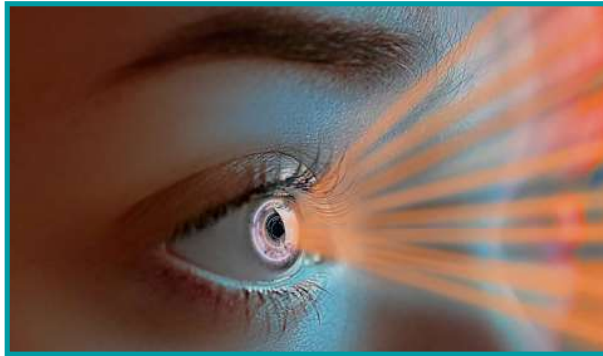
NOXIOUS GASES / GAS MOLECULES	IMPACTS
Benzene (classified as carcinogenic to humans by IARC)	Bone marrow aplasia, leukemia, nausea, dizziness, headache
Toluol and xylene	Depressive properties on nervous system, irritation of skin, eyes and respiratory mucosa
Formaldehyde	Irritation to airways, allergen to skin and respiratory system, carcinogen to sinuses
Acetaldehyde, acrolein	Irritation of the airways
Cresols	Affects nervous system, indigestions, damage to liver, kidneys and lungs
Phenol	Irritation of eyes and respiratory mucosa, difficulty swallowing, vomiting, diarrhea, hematuria, loss of appetite, headache, drowsiness
Hydrogen cyanide (HCN)	Do not cause acute symptoms, however, it is a chronic poisoning that shows in headache, weakness, dizziness, tremors, nausea, vomiting, stomach pain, weight loss and conjunctivitis, etc.

Which sizes have particles in laser smoke when removing hair or warts?





High protection against infection during laser treatment



Laser eye treatment (illustration similar)

Lasers are used in a variety of ways, for example in medical surgery, eye surgery and dermatological treatments. Laser surgery produces aerosols with a particle size of $0.1\mu\text{m}$ - $2\mu\text{m}$. These laser aerosols (LGAC = Laser Generated Airborne Contaminants) consist of various components of human tissue.



Laser treatment with TBH smoke evacuation (illustration similar)

Depending on the dose, surgical smoke can cause acute symptoms of poisoning in the form of headache, weakness, nausea, muscle weakness, and also irritation of the eyes and respiratory tract². The danger comes from microorganisms such as bacteria, viruses and fungi. These have a particle size of less than $2\mu\text{m}$. Humans can inhale them completely. In this case, the particles are deposited in the lungs.



Laser treatment without TBH smoke evacuation (illustration similar)

During the removal of warts, for example, papillomaviruses and multidrug-resistant pathogens have been detected in laser smoke¹. Please keep in mind that the surgical mask does not provide protection against airborne particles, as up to 25% of the respiratory air passes through the mask. Therefore, effective extraction is strongly recommended to protect patients and staff.

1: Ferenczy A, Bergeron C, Richart RM. Carbon dioxide laser energy disperses human papillomavirus deoxyribonucleic acid onto treatment fields. Am J Obstet Gynecol. 1990;163:1271-4

2: Eickmann U, Falcy M, Fokuhl I, Rügger M, Bloch M, Merz B. Chirurgische Rauchgase: Gefährdungen und Schutzmaßnahmen. Hrsg: Internationale Sektion der IVSS für die Verhütung von Arbeitsunfällen und Berufskrankheiten im Gesundheitswesen. 2011



Application areas



Removing skin tags (illustration similar)

Removing skin tags / skin care

Skin tags are small growths which tend to hang off the skin. Laser therapy removes specific skin layers in a controlled manner. The particles that arise in this process, should be extracted from the air completely.

Our filter and extraction systems collect all particles safely from the air.



Lasering eyes (illustration similar)

Lasering eyes

Laser eye surgery is one of the most common procedures in modern laser surgery. More and more patients have their eyes lasered to see well without glasses or contact lenses.



Pigment removal (illustration similar)

Pigment removal

Laser therapy is an effective way of removing pigments such as age spots. The selective destruction of tattoo pigments takes place by adsorption of laser radiation. The doctor and medical staff want themselves and their patients to be safe during the treatment.



Application areas



Dental treatment (illustration similar)

Aerosol/ Dental

Any treatment in a dental practice creates high aerosol concentrations. Oral suction only eliminates coarse particles. The smallest ones are lighter than air and thus continuously whirl around and disperse when they are not extracted from the air.



Birthmarks removal (illustration similar)

Removing birthmark with lasers

If a birthmark has to be removed, it can either be cut out completely or removed by laser treatment. All conspicuous moles that can potentially degenerate malignant should be completely removed. The birthmark removal takes place under local anesthesia.



Hair removal (illustration similar)

Hair removal

A laser eliminates hair follicles. Its light destroys the target structures. The generated heat can cause slight burns. This leads to smoke, unpleasant smells from burned skin and dangerous gases.